



MEADOWBANK COMPLEX
2024 Annual Report
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Prepared for:

Nunavut Water Board
Nunavut Impact Review Board
Fisheries and Oceans Canada
Crown-Indigenous Relations and Northern Affairs Canada
Kivalliq Inuit Association

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Sections identified by § are reported under NWB Mandate

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- Appendix 22: Meadowbank and Whale Tail Spill Contingency Plan Version 22[§]
- Appendix 23: Meadowbank 2024 GN Spill Reports[§]
- Appendix 24: Whale Tail 2024 GN Spill Reports[§]
- Appendix 25: Meadowbank OPEP and OPPP Version 18[§]
- Appendix 26: Meadowbank and Whale Tail 2024 CREMP Report[§]
- Appendix 27: Whale Tail 2024 Mercury Monitoring Program Report
- Appendix 28: Meadowbank Dewatering Dikes OMS Version 12[§]
- Appendix 29: Meadowbank Tailings Management OMS Version 13[§]
- Appendix 30: Whale Tail Water Management Infrastructure OMS Version 5[§]
- Appendix 31: Whale Tail 2024 Report on the Implementation of Measures to Avoid and Mitigate Serious Harm
- Appendix 32: Meadowbank and Whale Tail 2024 Marine Mammal and Seabird Report
- Appendix 33: Meadowbank and Whale Tail Blast Monitoring Program Version 10
- Appendix 34: Meadowbank and Whale Tail 2024 Blast Monitoring Report
- Appendix 35: Meadowbank 2024 Groundwater Monitoring Report[§]
- Appendix 36: Whale Tail 2024 Groundwater Management Monitoring Report[§]
- Appendix 37: Whale Tail 2024 Fish Habitat Offsets Monitoring Report
- Appendix 38: Meadowbank and Whale Tail Terrestrial Ecosystem Management Plan Version 9
- Appendix 39: Meadowbank and Whale Tail 2024 Wildlife Monitoring Summary Report
- Appendix 40: Meadowbank and Whale Tail 2024 Wildlife and Country Foods Screening Level Risk Assessment Report
- Appendix 41: Meadowbank and Whale Tail 2024 Noise Monitoring Report
- Appendix 42: Meadowbank and Whale Tail 2024 Air Quality and Dustfall Monitoring Report[§]
- Appendix 43: Meadowbank and Whale Tail Hazardous Materials Management Plan Version 8[§]
- Appendix 44: Meadowbank and Whale Tail Quality Assurance-Quality Control (QAQC) Plan Version 10[§]
- Appendix 45: Meadowbank and Whale Tail 2024 QAQC Results[§]
- Appendix 46: Meadowbank and Whale Tail Emergency Response Plan Version 20a[§]
- Appendix 47: Agnico Eagle Kivalliq Projects 2024 Socio-Economic Monitoring Program Report

Appendix 48: Meadowbank and Whale Tail 2024 Public Consultations
Appendix 49: Agnico Eagle's Training Management System and Learning Management System Reports
Appendix 50: Agnico Eagle 2024 Newsletter
Appendix 51: 2024 Kivalliq Labour Market Analysis
Appendix 52: Agnico Eagle Kivalliq Elders Advisory Committee 2024 Summary Report
Appendix 53: 2024 Meadowbank Conceptual Socio-Economic Closure Plan Update
Appendix 54: Meadowbank Landfarm Design and Management Plan Version 6^s
Appendix 55: Whale Tail Landfarm Design and Management Plan Version 4^s
Appendix 56: Meadowbank Landfill Design and Management Plan Version 7^s
Appendix 57: Whale Tail Landfill Design and Management Plan Version 6^s
Appendix 58: Meadowbank 2024 Quarry 22 Report^s
Appendix 59: Shipping Management Plan Version 5
Appendix 60: Baker Lake Bulk Fuel Storage Facility Environmental Performance Monitoring Plan Version 7^s
Appendix 61: Whale Tail Thermal Monitoring Plan Version 5^s
Appendix 62: Meadowbank and Whale Tail TEMP Version - 9 Approval Letters
Appendix 63: Meadowbank and Whale Tail Executive Summary Translation^s

ABBREVIATION

AANDC	Aboriginal Affairs and Northern Development Canada (now CIRNAC)
ABA	Acid base accounting
AEMP	Aquatic Ecosystem Monitoring Program
ARD	Acid Rock Drainage
AWAR, AWPAP	All-Weather Access Road
BACI	Before/after control/impact
BBS	Breeding Bird Survey
BGD	Bay-Goose Dike
BL	Baker Lake
BLDAG	Baker Lake Dust Advisory Group
BLHTO	Baker Lake Hunters and Trappers Organization
BV	Bureau Veritas
CAAQS	Canadian Ambient Air Quality Standards
CCBE	Cover with capillary barrier effects
CCME	Canadian Council of Ministers of the Environment
CD	Central Dike
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
CLO	Community Liaison Officers
COQ	Certificate of Qualification
COSEWIC	Committee on Status of Endangered Wildlife in Canada
CREMP	Core Receiving Environmental Monitoring Program
CRP	Closure and Reclamation Plan
CWQG	Canadian Council of Ministers of the Environment Water Quality Guidelines
CWS	Canadian Wildlife Service
DFO	Fisheries and Oceans Canada
DOC	Dissolved Organic Carbon
ECC	Employment and Culture Committee
ECCC, EC	Environment and Climate Change Canada
EDI	Estimated daily intake
EEM	Environmental Effect Monitoring
EI.	Elevation
ERP/CMP	Emergency Response Plan / Crisis Management Plan
ERT	Emergency Response Team
ETP	Environmental Technology Program
FDP	Final Discharge Point
FEIS	Final Environmental Impact Statement
FF	Far-Field
FMEA	Failure Mode & Effect Analysis
FTE	Full-time equivalent
F/T	Freeze/Thaw
GHG	Greenhouse gas
GHGRP	Greenhouse Gas Reduction Plan
GN	Government of Nunavut

GN-DOE	Government of Nunavut Department of Environment
GN-NWT	Government of the Northwest Territories
GPS	Global Positioning System
GSP	Groundwater Storage Pond
GST	Group Size Threshold
GWMP	Groundwater Monitoring Plan
HADD	Harmful Alteration, Disruption and Destruction
HCMP	Habitat Compensation Monitoring Plan
HDET	Heavy Duty Equipment Technician
HEP	Habitat Evaluation Procedure
HHRA	Human Health Risk Assessment
HHS	Hunter Harvest Study
HQ	Hazard quotient
HR	Human Resources
HIS	Habitat Sustainability Index
HTO	Hunter and Trappers Organizations
IC	Implementation Committee
ICMC	International Cyanide Management Code
ICRP	Interim Closure and Reclamation Plan
ICS	Incident Command System
IIBA	Inuit Impact and Benefit Agreement
INUG	Innuguguayalik Lake
IOC	Investigation of Cause
IPC	Instantaneous pressure change
IPD	In-pit tailings deposition
IQ	Inuit Qaujimajatuqangit
MIRB	Meadowbank Independent Review Board
IS	Invalid survey
ISV	Inuit Societal Values
IWBS	Inuit Work Barrier Study
KAN	Kangislulik Lake ([KAN]; formerly Mammoth Lake [MAM]; referred to as KAN or MAM)
KEAC	Kivalliq Elders Advisory Committee
KIA / KivIA	Kivalliq Inuit Association
KLMA	Kivalliq Labour Market Analysis
KPI	Key Performance Indicator
KvSEMC	Kivalliq Socio-economic monitoring committee
LDL	Lower Detection Limit
LHT	Long-Haul Truck
LIMS	Laboratory Information Management System
LMA	Labour market analysis
LMS	Learning Management System
LOM	Life of Mine
LSA	Local Study Area
MAC	Maximum average concentration
MAM	Mammoth Lake; referred to as Kangislulik Lake
Masl.	Meters above sea level
MBK	Meadowbank

MDL	Method Detection Limit
MDMER, MMER	Metal and Diamond Mining Effluent Regulations
MERS	Mine Effluent Reporting System
MIRB	Meadowbank Independent Review Board
MF	Mid-Field
MFRAG	Meadowbank Fisheries Research Advisory Group
MiHR	Mining Industry Human Resources
ML	Metal Leaching
MLA	Member of Legislative Assembly
MMMMP	Marine Mammal Management and Monitoring Plan
MMP	Mercury Monitoring Plan
MMSO	Marine Mammal & Seabird Observer Program
MOU	Memorandum of Understanding
MVLWB	Mackenzie Valley Land and Water Board
NA	Non-Applicable
NAC	Nunavut Arctic College
NC	North Cell
NEM	Nemo Lake
NIRB	Nunavut Impact Review Board
NF	Near-Field
NMHSF	Northern Mining Health and Safety Forum
NML	Non-metal leaching
NNLP	No Net Loss Plan
NP	Neutralization Potential
NPAG	Non-Potentially Acid Generating
NPC	Nunavut Planning Commission
NPR	Neutralization Potential Ratio
NRCan	Natural Resources Canada
NSERC-UQAT	National Science and Engineering Research Council – University of Quebec in Abitibi-Temiscamingue
NTI	Nunavut Tunngavik Inc.
NWB	Nunavut Water Board
OHF	Oil Handling Facility
OMS	Operation, Maintenance, and Surveillance
OPEP/OPPP	Oil Pollution Emergency Plan and Oil Pollution Prevention Plan
PAG	Potentially Acid Generating
PCB	Polychlorinated Biphenyls
PDL	Pipe Dream Lake
PEAMP	Post-Environmental Assessment Monitoring Program
PHC	Petroleum Hydrocarbon
POPC	Parameters of potential concern
PPE	Protective personnel equipment
PPL	Peak Pressure Level
PPV	Peak Particle Velocity
PRISM	Program for Regional and International Shorebird Monitoring
PTA	Product Transfer Area
QAQC	Quality Assurance Quality Control

RCMP	Royal Canadian Mounted Police
RIME	Research Institute in Mine and Environment
ROC	Receptors of concern
RPD	Relative Percent Difference
RSA	Regional Study Area
SAG	Semi-Autogenous Grinding
SAR	Search and Rescue
SARA	Species at Risk Act
SC	South Cell
SD	Saddle Dam
SEMP	Socio-Economic Monitoring Program
SMP	Stormwater Management Pond
SEMR	Socio-economic monitoring report
SEMWG	Socio-economic monitoring working group
SMP	Shipping Management Plan
SNC	SNC-Lavalin
SPL, SP	Second Portage Lake
SPLE	Second Portage Lake Exposure
SSWQO	Site Specific Water Quality Objective
ST, Sta.	Station
STI	Sexually Transmitted Infection
STP	Sewage Treatment Plant
SWTC	South Whale Tail Channel
TAG	Terrestrial Advisory Group
TARP	Trigger Action Response Plan
TASK	Trades, Awareness, Skills, Knowledge
TBD	To be determined
TDG	Transportation of Dangerous Goods
TDGA	Transportation of Dangerous Goods Act
TDS	Total Dissolved Solids
TEFF	Tehek Lake Far-Field
TEMP	Terrestrial Ecosystem Management Plan
TK	Traditional Knowledge
TKN	Total Kjeldahl Nitrogen
TMS	Training Management System
TOC	Total Organic Carbon
TOR	Term of Reference
TP	Total Phosphorus
TPL, TPN, TPE	Third Portage Lake
TRV	Toxicity reference values
TSM	Towards Sustainable Mining
TSF	Tailings Storage Facility
TSS	Total Suspended Solids
UG	Underground
VC	Valued Components
VEC	Valued Ecosystem Component
VSEC	Valued Socio-Economic Component

WAL, WL	Wally Lake
WBS	Work Barrier Study
WEP	Waste Extension Pool
WQG	Water Quality Guidelines
WRSF	Waste Rock Storage Facility
WSLRA	Wildlife Screening Level Risk Assessment
WT	Whale Tail
WTD	Whale Tail Dike
WTHR	Whale Tail Haul Road
WTN	Whale Tail North
WTP	Water Treatment Plan
WTS	Whale Tail South Lake
W/D	Wet/Dry

DOCUMENT CONTROL

Version	Date (YMD)	Section	Page	Comment
1	2025/03/31	All	All	This has been reviewed by Environmental Staff and will be incorporated into training for all mine staff on behalf of the Mine Manager and Senior Management

Prepared By: Meadowbank Environment Department

Approved By: 
Eric Haley
Environmental and Critical Infrastructures Superintendent

SECTION 1. INTRODUCTION§

The 100% owned Meadowbank Complex is located approximately 110 kilometres by road north of Baker Lake in the Kivalliq District of Nunavut, Canada. The complex consists of the Meadowbank mine and mill, and the Whale Tail mine, which is located 50 kilometres northwest of the Meadowbank mine.

The Meadowbank Project was first licensed by the Nunavut Water Board (NWB) in 2008. The project involved the construction, operation, maintenance, reclamation, closure, and monitoring of an open pit gold mine and milling facility at the Meadowbank mine site, and the processing plant achieved commercial production in March 2010. The original Water License was subsequently renewed by the Board in August 2015 and was amended in July 2018 to reflect changes to the Project associated with additional tailings deposition and ore processing at the Meadowbank mine site from Agnico Eagle's new mining undertaking at the Whale Tail mine site (Piquganiq). In March 2019, the Water License was amended for the third time to allow for tailings disposal in the mined-out Goose and Portage pits. In May 2020, the fourth amendment was granted to allow the activities for the Whale Tail Mine Expansion, i.e. the term of the Water License was extended by 4 years, now expiring in March 2030. The Meadowbank Mine is governed by current Water License 2AM-MEA1530.

At present, the project components included in the scope of the Water License consist of the Meadowbank mine site and the Vault mine site, a Marshalling Facility in Baker Lake, and a 110-kilometre All-Weather Access Road between Baker Lake and the Meadowbank mine site. There are also water retention dikes constructed from mined waste rock to allow for the mining of ore beneath shallow dewatered lakes and a tailings storage facility (Second Portage Lake's northwest dewatered arm), where tailings have been deposited sub-aerially as slurry and water from the ponds reclaimed during operation. No mining at Meadowbank occurred in 2024 since the mineral reserves were exhausted in 2019. Whale Tail ore continued to be processed at Meadowbank mill in 2024. As approved by the Water License, in-pit tailings disposal began in Goose Pit on July 5th, 2019, and in Portage Pit E on August 20th, 2020.

The Meadowbank mine is also governed by the NIRB Project Certificate No. 004 first issued in December 2006. The Project Certificate was then amended in November 2009 to reflect modification associated with the All-Weather Access Road and Proponent Project name change, and in August 2016 to allow expansion of Vault Pit operations into Phaser Lake and to allow for the development of two additional pits, Phaser Pit and BB Phaser Pit. A final third amendment was approved in December 2018 to reflect modification of in-pit tailings disposal.

In 2016, Agnico Eagle proposed to develop the Whale Tail Project to continue mine operations and milling at the Meadowbank Mine and extend the Meadowbank Mine to include development of resources from Whale Tail. The Whale Tail mining operation uses the existing infrastructure at the Meadowbank mine (mining equipment, mill, tailings, camp, and airstrip). Additional infrastructure has been built at the Whale Tail site (truck shop/warehouse, fuel storage and an additional camp facility). The deposit was mined as an open pit in 2019, and commercial production was achieved on September 30th, 2019. Whale Tail ore is transported using long haul off-road trucks to the mill at the Meadowbank site for processing.

In 2018, Agnico Eagle proposed to increase gold production from the original Whale Tail Project by expanding mining activities at the Whale Tail mine site as proposed in the Expansion Proposal. The Expansion Proposal proposes further developing the Whale Tail Pit open mine in addition to the development of the IVR open pit and Underground operations. The Whale Tail expansion started in

October 2018 with the application to NPC. The permitting process to amend the Whale Tail Project Certificate and Type A Water License to include the Whale Tail expansion was completed in early 2020. In a decision issued on October 18th, 2019, the NIRB concluded that if conducted in accordance with the NIRB's recommendations, this proposed amendment to the Whale Tail mine could proceed to the Type A Water License amendment phase with the NWB. The Minister of Northern Affairs approved the amended Project Certificate Report from the NIRB on January 20th, 2020, completing the NIRB process. The Project Certificate 008 amendment No. 1 was received on February 19th, 2020. The NWB Water License amendment process was completed on May 12th, 2020, and the Water License Amendment 2AM-WTP1830 was issued.

In 2024, Agnico Eagle proposed a Modification to the Whale Tail Mine (referred to as the 2024 Modification) operating to mid-2028 under the License approval to 2030. The project proposal was submitted to the Nunavut Planning Commission (NPC) on April 4th, 2024. On April 19th, 2024, the NPC determined that the proposed Modification was exempt from screening by the NIRB, as the activities did not change the general scope of the original or previously amended activities. On May 6th, 2024, Agnico Eagle submitted a 60-day notice to the NWB for a Modification to Type A Water License 2AM-WTP1830. The NWB provided its approval of the 2024 Modification on August 6th, 2024, indicating the modification proposed is consistent with the scope of activities considered under Type A Water License 2AM-WTP1830.

All ore at the Meadowbank Complex is now sourced from the Whale Tail mine. Mining at Whale Tail is by open pit and underground methods. The ore is extracted conventionally using drilling and blasting, then hauled by a long-haul off-road truck fleet to the mill at the Meadowbank facilities for processing. Commercial production was achieved on September 30th, 2019, at the Whale Tail pit. The IVR pit began pre-stripping activities in the third quarter of 2020 and achieved commercial production on December 31st, 2020. Commercial production from the underground activities was achieved on August 1st, 2022. Under current mine plans, Whale Tail mine is expected to be in production through 2028.

These various components and activities associated with the project require a number of different authorizations, leases and permits from regulatory agencies including the Nunavut Water Board (NWB), Environment and Climate Changes Canada (ECCC), Fisheries and Oceans Canada (DFO), Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), the Kivalliq Inuit Association (KivIA) and the Nunavut Impact Review Board (NIRB).

This report is written to address all of the 2024 annual reporting requirements of the project under these authorizations:

Meadowbank

- NWB Type A Water License 2AM-MEA1530;
- NIRB Project Certificate No. 004;
- DFO HADD Authorization NU-03-190 AWAR;
- DFO HADD Authorization NU-03-191.3 and NU-03-191.4 Mine Site;
- DFO Authorization NU-14-1046 Phaser Lake;
- CIRNAC Land Leases 66A/8-71-3 (AWAR) and 66A/8-72-6 (AWAR Quarries);
- KivIA Production Lease KVPL08D280;
- KivIA Quarry Lease KVCA06Q11, KVCA23Q01; and
- KivIA Right of Way KVRW06F04.

Whale Tail

- NWB Type A Water License 2AM-WTP1830;
- NIRB Project Certificate N0. 008;
- DFO HADD Authorization 16-HCAA-00370;
- DFO HADD Authorization 20-HCAA-00275;
- CIRNAC Land Leases 66H/8-02-1 (Whale Tail Haul Road) and 66H/8-01-5 (Whale Tail Haul Road Quarries);
- KivIA Production Lease KVPL17D01;
- KivIA Quarry Lease KVCA15Q01, KVCA15Q02, KVCA18Q01; and
- KivIA Right of Way KVRW15F01.

Reporting requirements under the Metal and Diamond Mining Effluent Regulations (MDMER) have been submitted directly to Environment and Climate Changes Canada; results are presented herein to comply with the NWB Type A Water License.

Table 1-1 to Table 1-6 outlines each requirement by authorization and report section. Table 1-7 and Table 1-8 presents the status of each sampling stations stipulated in Part I, Schedule I of Water License 2AM-MEA15230 and 2AM-WTP1830. Appendices 3 and 4 provide a list of commitments completed by Agnico Eagle, following review by regulators of the 2023 Annual Report, to be incorporated in the 2024 Annual Report.

Note for the Reader: Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM). The acronym MAM will still be used in some tables and figures in the document for consistency with previous reports.

Table 1-1 Meadowbank List of Reporting Requirements for NWB^s

Meadowbank Site - NWB		
Authorization Reference	Reporting Requirement	Report Section
NWB 2AM-MEA1530 Schedule B-1	Construction Details for dikes and dams.	3.1.1.1
NWB 2AM-MEA1530 Schedule B-2	Monthly and annual volume of fresh Water obtained from Third Portage Lake.	4.1.1.1
NWB 2AM-MEA1530 Schedule B-3	Monthly and annual volume of fresh Water obtained from Wally Lake.	4.1.1.2
NWB 2AM-MEA1530 Schedule B-4	Results of lake level monitoring conducted under the protocol developed as per Part D Item 5.	4.2.1
NWB 2AM-MEA1530 Schedule B-5	Summary of reporting results for the Water Balance Water Quality model and any calibrations as required in Part E Items 7-9.	4.4.2.1
NWB 2AM-MEA1530 Schedule B-6	The bathymetric survey(s) conducted prior to each year of shipping at the Baker Lake Marshalling Facility.	4.3
NWB 2AM-MEA1530 Schedule B-7	Geochemical monitoring results.	5.1.1
NWB 2AM-MEA1530 Schedule B-8	Volumes of waste rock used in construction and placed in the Rock Storage Facilities.	5.2.1
NWB 2AM-MEA1530 Schedule B-9	An update on the remaining capacity of the Tailings Storage Facility.	5.3.1
NWB 2AM-MEA1530 Schedule B-10	Summary of quantities and analysis of seepage and runoff monitoring from the Landfills, Waste Rock Storage facility and Central Dike.	8.5.7.1
NWB 2AM-MEA1530 Schedule B-11	A summary report of all general waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal.	6.1.1
NWB 2AM-MEA1530	Report of Incinerator test results including the materials burned and the efficiency of the	6.2.1

Meadowbank Site - NWB		
Authorization	Reporting Requirement	Report
Schedule B-12	Incinerator as they relate to water and the deposit of waste into water.	
NWB 2AM-MEA1530 Schedule B-13	A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken.	7.1.1
NWB 2AM-MEA1530 Schedule B-14	A summary of modifications and/or major maintenance work carried out on all water and waste related structures and facilities.	11.1.1
NWB 2AM-MEA1530 Schedule B-15	The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.	8.5
NWB 2AM-MEA1530 Schedule B-16	The results of monitoring under the AEMP including Core Receiving Monitoring Program (CREMP), Metal Mining Effluent Regulation (MMER) Monitoring, Mine Site Water Quality and Flow Monitoring (and evaluation of NP-2), visual AWAR water quality monitoring, Blast Monitoring and Groundwater Monitoring.	SECTION 8
NWB 2AM-MEA1530 Schedule B-17	A summary of any progressive closure and reclamation work undertaken including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling.	9.1.1.1
NWB 2AM-MEA1530 Schedule B-18	A summary of on-going field trials to determine effective capping thickness for the Tailings Storage Facility and Waste Rock Storage Facilities for the purpose of long-term environmental protection.	5.4.1
NWB 2AM-MEA1530 Schedule B-19	An updated estimate of the current restoration liability based on project development monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking.	9.2.1.1
NWB 2AM-MEA1530 Schedule B-20	A summary of any studies requested by the Board that relate to Water use, Waste disposal or Reclamation, and a brief description of any future studies planned.	10.1.1
NWB 2AM-MEA1530 Schedule B-21	Where applicable, revisions as Addendums, with an indication of where changes have been made, for Plans, Reports, and Manuals.	10.2.1
NWB 2AM-MEA1530 Schedule B-22	An executive summary in English, Inuktitut and French of all plans, reports, or studies conducted under this License.	10.3.1
NWB 2AM-MEA1530 Schedule B-23	A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.	11.5
NWB 2AM-MEA1530 Schedule B-24	A summary of public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events and information sessions.	11.9
NWB 2AM-MEA1530 Schedule B-25	Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.	4.6.1/6.3.1
NWB 2AM-MEA1530 Part B, Item 16	The Licensee shall review the Plans or Manuals referred to in this License as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made.	10.2.1
NWB 2AM-MEA1530 Part E, Item 7	The Licensee shall submit a Water Management Plan on an annual basis to the Board for review following the commencement of Operations. The Plan must include an updated Water Balance. The Water Management Plan shall include an action plan to be implemented if predicted re-flooded pit water quality indicates that treatment is necessary. The Licensee shall not breach dikes until the water quality in the re-flooded area meets CCME Water Quality Guidelines for the Protection of Aquatic Life, baseline concentrations, or appropriate site specific water quality objectives. Subject to the Board approval, if water quality parameters are above CCME Guidelines, a site specific risk assessment must be conducted to identify water quality objectives that are protective of the aquatic environment.	4.4.2.1
NWB 2AM-MEA1530 Part E, Item 8	The Licensee shall submit a Water Quality Model for pit re-flooding as part of the Water Management Plan which shall be re-calibrated as necessary and updated at a minimum of once every two (2) years following commencement of Operations. The results and implications of the predictive model shall be reported to the Board.	4.4.2.1
NWB 2AM-MEA1530 Part E Item 9	The Licensee shall, on an annual basis during Operations, compare the predicted water quantity and quality within the pits, to the measured water quantity and quality. Should the difference between the predicted and measured values be 20% or greater, then the cause(s) of the difference(s) shall be identified and the implications of the difference shall be assessed and reported to the Board	4.4.3.1
NWB 2AM-MEA1530	The Licensee shall carry out weekly inspections of all water management structures during	4.4.1.1

Meadowbank Site - NWB		
Authorization	Reporting Requirement	Report
Part E, Item 10	periods of flow and the records be kept for review upon request of an Inspector. More frequent inspections may be required at the request of an Inspector. This information is to be included in the annual Water Management Plan.	
NWB 2AM-MEA1530 Part I, Item 11	The Licensee shall submit to the Board as part of the Annual Report, the Geotechnical Engineer's Inspection Report. The Report shall include a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.	3.3.1
NWB 2AM-MEA1530 Part I Item 12	The Licensee shall submit to the Board as part of the Annual Report required under Part B Item 2, all reports and performance evaluations prepared by the Independent Geotechnical Expert Review Panel.	3.2.1
NWB 2AM-MEA1530 Part I Item 14	The Licensee shall submit the results and interpretation of the Seepage Monitoring program required in Part I, Item 13 in the Annual Report required under Part B, Item 2.	8.5.7.1
NWB 2AM-MEA1530 Part I, Item 17	The Licensee shall annually review the approved QA/QC Plan and modify the Plan as necessary. Proposed changes shall be submitted to an Accredited Laboratory for approval.	8.5.6

Table 1-2 Whale Tail List of Reporting Requirements for NWB^s

Whale Tail Site - NWB		
Authorization Reference	Reporting Requirement	Report Section
NWB 2AM-WTP1830, Schedule B, Item 1	For the dikes, dams and structures constructed to withhold water or waste:	3.1.2.1
	a. An overview of methods and frequency used to monitor deformations, Seepage and geothermal responses;	
	b. A comparison of measured versus predicted performance;	
	c. A discussion of any unanticipated observations including changes in risk and mitigation measures implemented to reduce risk;	
	d. As-built drawings of all mitigation works undertaken;	
	e. Any changes in the design and/or as-built condition and respective consequences of any changes to safety, water balance and water quality;	
	f. Data collected from instrumentation used to monitor earthworks and an interpretation of that data;	
	g. A summary of maintenance work undertaken as a result of settlement or deformation of dikes and dams; and	
	h. The monthly and annual quantities of Seepage from dikes and dams in cubic metres.	
NWB 2AM-WTP1830 Schedule B, Item 2	Monthly and annual volume of fresh Water obtained from Nemo Lake.	4.1.2.1
NWB 2AM-WTP1830 Schedule B, Item 3	Monthly and annual volume of fresh Water obtained from Mammoth Lake.	4.1.2.4
NWB 2AM-WTP1830 Schedule B, Item 4	Monthly and annual volume of fresh Water obtained from Whale Tail Lake.	4.1.2.2
NWB 2AM-WTP1830 Schedule B, Item 5	Monthly and annual volume of fresh Water obtained from Lakes A-P38, A46, A47, A49, A50, A51, A52, A53, A-P21, A-P10, A-P67, and A-P68.	4.1.2.5
NWB 2AM-WTP1830 Schedule B, Item 6	Monthly and annual volume of fresh Water obtained for drilling from sources proximal to drilling sites.	4.1.2.6
NWB 2AM-WTP1830 Schedule B, Item 7	Monthly and annual volume of fresh Water obtained from unnamed water bodies for Whale Tail Haul Road dust suppressant and for the Emulsion plant.	4.1.2.3
NWB 2AM-WTP1830 Schedule B, Item 8	Monthly and annual volume of fresh Water obtained from Lake D1.	4.1.2.7
NWB 2AM-WTP1830 Schedule B, Item 9	Summary of reporting results for the Water Balance and Water Quality model and any calibrations as required in Part E Items 5, 6, and 8.	4.1.2.2
NWB 2AM-WTP1830 Schedule B, Item 10	Geochemical monitoring results	5.1.2
NWB 2AM-WTP1830 Schedule B, Item 11	Volumes of Waste Rock used in construction and placed in the Waste Rock Storage Facility.	5.2.2.1
NWB 2AM-WTP1830 Schedule B, Item 12	Volumes of ore stockpiled, and overburden stored at Whale Tail Pit site.	5.2.2.1
NWB 2AM-WTP1830 Schedule B, Item 13	Summary of quantities and analysis of Seepage and runoff monitoring from the Landfill, Waste Rock Storage Facility and associated dikes/berms	8.5.7.2
NWB 2AM-WTP1830 Schedule B, Item 14	A summary report of all general waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal	6.1.2
NWB 2AM-WTP1830 Schedule	Reporting of Incinerator test results including the materials burned and the efficiency of the Incinerator in relation to effects on Water and the potential Deposit of Waste into Water	6.2.2

Whale Tail Site - NWB		
Authorization	Reporting Requirement	Report
B, Item 15		
NWB 2AM-WTP1830 Schedule B, Item 16	A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken.	7.1.2
NWB 2AM-WTP1830 Schedule B, Item 17	A summary of Modifications and/or major maintenance work carried out on all Water and Waste-related structures and facilities.	11.1.2
NWB 2AM-WTP1830 Schedule B, Item 18	The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.	8.5
NWB 2AM-WTP1830 Schedule B, Item 19	The results of monitoring related to the Aquatic Effects Monitoring Program (AEMP) including Core Receiving Environment Monitoring Program (CREMP); Metal Mining Effluent Regulation (MMER) Monitoring; Water Quality and Flow Monitoring; Visual Whale Tail Haul Road water quality monitoring; Blast Monitoring; and Groundwater Monitoring.	SECTION 8
NWB 2AM-WTP1830 Schedule B, Item 20	A summary of any progressive Closure and Reclamation work undertaken, including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling.	9.1.2.1
NWB 2AM-WTP1830 Schedule B, Item 21	A summary of on-going field trials to determine effective capping thickness for the Waste Rock Storage Facility for the purpose of long-term environmental protection.	5.4.2
NWB 2AM-WTP1830 Schedule B, Item 22	An updated estimate of the current restoration liability based on Project development monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking.	9.2.2.1
NWB 2AM-WTP1830 Schedule B, Item 23	A summary of any studies requested by the Board that relate to Water use, Waste disposal or Reclamation, and a brief description of any future studies planned.	10.1.2
NWB 2AM-WTP1830 Schedule B, Item 24	Where applicable, revisions as Addenda, with an indication of where changes have been made, for Plans, Reports, and Manuals.	10.2.2
NWB 2AM-WTP1830 Schedule B, Item 25	An executive summary in English, French and Inuktitut of all plans, reports, or studies conducted under this License.	10.3.2
NWB 2AM-WTP1830 Schedule B, Item 26	A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.	11.5
NWB 2AM-WTP1830 Schedule B, Item 28	Any other details on Water use or Waste Disposal requested by the Board by November 1 st of the year being reported.	4.6.2/6.3.2
NWB 2AM-WTP1830 Part B, Item 17	The Licensee shall review the Plans or Manuals referred to in this License as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made.	10.2.2
NWB 2AM-WTP1830 Part C, Item 7	The Licensee shall, within twelve (12) months following the commencement of Operations and when the Licensee files a Final Reclamation and Closure Plan as required under the License, submit to the Board for review an updated reclamation cost estimate, using the INAC RECLAIM Reclamation Cost Estimating Model (Version 7.0 or the most current version in use at the time the updated reclamation cost estimate is submitted to the Board).	9.2.2.1
NWB 2AM-WTP1830 Part D, Item 1	The Licensee shall submit to the Board for review, at least sixty (60) days prior to Construction, final design and Construction drawings accompanied, with a detailed report, for the following: a. Water works, including: Water Intake and causeway, Water control structures (dikes, berms, jetties, channels) and Water crossings (culverts, bridges); b. Waste disposal facilities including: Wastewater Treatment Plant, Sewage Treatment Plant, Discharge Diffuser, Waste Rock Storage Facility, Overburden stockpiles, and Landfill; and c. Whale Tail Bulk Fuel Storage Facility	3.5.2.1
NWB 2AM-WTP1830 Part D,	The Licensee shall submit to the Board for review, within ninety (90) days of completion of each facility designed to contain, withhold, divert or retain Waters or Wastes during the	3.5.2.2

Whale Tail Site - NWB		
Authorization	Reporting Requirement	Report
Item 16	construction phase, a Construction Summary Report prepared by a qualified Engineer(s) in accordance with Schedule D, Item 1.	
NWB 2AM-WTP1830 Part E, Item 5	The Licensee shall submit an updated Water Management Plan on an annual basis to the Board for review following the commencement of Operations. The Plan must include an updated Water Balance. The Water Management Plan shall include an action plan to be implemented if predicted re-flooded pit water quality indicates that treatment is necessary	4.4.2.2
NWB 2AM-WTP1830 Part E, Item 6	The Licensee shall submit a Water Quality Model for pit re-flooding and for WRSF contact water mixing into Mammoth Lake post-Closure as part of the Water Management Plan which shall be re-calibrated as necessary and updated annually following commencement of Operations. The results and implications of the predictive model shall be reported to the Board.	4.4.2.2
NWB 2AM-WTP1830 Part E, Item 8	The Licensee shall, on an annual basis during Closure, compare the predicted water quantity and quality within the pit and lake, to the measured water quantity and quality. Should the difference between the predicted base case values and measured values be 20% or greater, then the cause(s) of the difference(s) shall be identified, and the implications of the difference shall be assessed and reported to the Board.	4.4.3.2
NWB 2AM-WTP1830 Part E, Item 10	The Licensee shall carry out weekly inspections of all water management structures during periods of flow and the records of inspections shall be kept for review upon request of an Inspector. More frequent inspections may be required at the request of an Inspector. This information is to be included in the annual updated Water Management Plan.	4.4.1.2
NWB 2AM-WTP1830 Part I, Item 11	The Licensee shall submit to the Board as part of the Annual Report, the Geotechnical Engineer's Inspection Report. The Report shall include a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.	3.3.2
NWB 2AM-WTP1830 Part I, Item 12	The Licensee shall submit to the Board as part of the Annual Report required under Part B, Item 2, all reports and performance evaluations prepared by the Independent Geotechnical Expert Review Panel.	3.2.2
NWB 2AM-WTP1830 Part I, Item 14	The Licensee shall submit the results and interpretation of the Seepage monitoring required in Part I Item 15 in the Annual Report required under Part B, Item 2	3.1.2.1
NWB 2AM-WTP1830 Part I, Item 20	The Licensee shall annually review the approved QA/QC Plan and modify the Plan as necessary. Proposed changes shall be submitted to an Accredited Laboratory for approval.	8.5.6.2
NWB 2AM-WTP1830 Part J, Item 2	The Licensee shall submit to the Board for approval within twelve (12) months of Operations, an updated Interim Whale Tail Pit Closure and Reclamation Plan prepared in accordance with the "Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories", issued by the Mackenzie Valley Land and Water Board (MVLWB) and Aboriginal Affairs and Northern Development Canada (AANDC) in 2013 (MVLWB/AANDC 2013) and consistent with the INAC Mine Site Reclamation Policy for Nunavut, 2002. The Plan shall include all mine related facilities and Whale Tail Pit Haul Road.	9.1.2.1

Table 1-3 Meadowbank List of Reporting Requirements for NIRB

Meadowbank Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
NIRB Project Certificate No.004 Condition 1	The commitments in this Final Hearing Report as Appendix A: Cumberland's Commitments from the Final Hearing, are incorporated herein and must be met. In the event of a conflict between Appendix A and the Terms and Conditions of the Project Certificate, the Terms and Conditions of the Project Certificate prevail.	11.12.1
NIRB Project Certificate No.004 Condition 3	Cumberland must obtain all required federal and territorial permits and other approvals, and shall comply with the requirements of such regulatory instruments.	SECTION 1
NIRB Project Certificate No.004 Condition 4	Take prompt and appropriate action to remedy any noncompliance with environmental laws and regulations and/or regulatory instruments, and shall report any non compliance as required by law immediately and report the same to NIRB annually.	11.6.1
NIRB Project Certificate No.004 Condition 5	Cumberland shall meet with respective licensing authorities prior to the commencement of construction to discuss the posting of adequate performance bonding. Licensing authorities are encouraged to take every measure to require that sufficient security is posted before construction begins. This bonding should not duplicate other amounts of security required (e.g. the NWB).	9.2.1.1
NIRB Project Certificate No.004 Condition 6	All monitoring information collected pursuant to regulatory requirements for the Meadowbank Project shall contain the following information: a. The person(s) who performed the sampling or took the measurements including any accreditations; b. The date, time and place of sampling or measurement, and weather conditions; c. Date of analysis; d. Name of the person(s) who performed the analysis including accreditations; e. Analytical methods or techniques used; and f. Results of any analysis.	SECTION 8
NIRB Project Certificate No.004 Condition 7	Cumberland shall keep and maintain the records, including results, of any monitoring, data, or analysis, for a minimum of the life of the Project, including closure and post-closure monitoring. This time period shall be extended if requested by NIRB, GN, INAC, DFO, EC or the NWB.	SECTION 8
NIRB Project Certificate No.004 Condition 8	Continue to undertake semi-annual groundwater samples and re-evaluate the groundwater quality after each sample collection; report the results of each re-evaluation to NIRB's Monitoring Officer, INAC and EC	8.7.1
NIRB Project Certificate No.004 Condition 9	Cumberland shall provide detailed plans for water treatment for the tailings (reclaim pond) discharge, and on a contingency basis for the attenuation pond discharge(s) and for the pits, including estimates of treatment efficiency for each parameter of concern and the description of pH adjustments in the water license application to the NWB.	4.4.2.1
NIRB Project Certificate No.004 Condition 13	Cumberland shall not permit the water discharged into Wally Lake and Third Portage Lake to exceed receiving environment discharge criteria established by the NWB or as otherwise required by law.	8.5.2.1.5, 8.5.2.1.6
NIRB Project Certificate No.004 Condition 15	Within two (2) years of commencing operations re-evaluate the characterization of mine waste materials, including the Vault area, for acid generating potential, metal leaching and non-metal constituents to confirm FEIS predictions, and re-evaluate rock disposal practices by conducting systematic sampling of the waste rock and tailings in order to incorporate preventive and control measures into the Waste Management Plan to enhance tailing management during operations and closure; results of the re-evaluations shall be provided to the NWB and NIRB's Monitoring Officer	5.1.1
NIRB Project Certificate No.004, Condition 18	Commit to a pro-active tailings management strategy through active monitoring, inspection, and mitigation. The tailings management strategy will include the review and evaluation of any future changes to the rate of global warming, compliance with regulatory changes, and the ongoing review and evaluation of relevant technology developments, and will respond to studies conducted during the mine operation	5.3.1
NIRB Project Certificate No.004, Condition 19	Provide for a minimum of two (2) metres cover of tailings at closure, and shall install thermistor cables, temperature loggers, and core sampling technology as required to monitor tailing freezeback efficiency. Report to NIRB's Monitoring Officer for the annual reporting of freezeback effectiveness.	5.4.1
NIRB Project	Prior to construction, Cumberland shall identify mitigation measures that can be taken if	5.3.2

Meadowbank Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
Certificate No.004, Condition 20	groundwater monitoring around the tailings facility demonstrates that contamination from tailings has occurred through the fault. Upon drawdown of the North arm of Second Portage Lake, Cumberland shall conduct further tests to assess the permeability of any faults and provide the results to regulators. If doubt remains Cumberland shall seal the fault and conduct further permeability testing and monitoring. Following completion of the permitting process for the In-Pit Tailings Modification Proposal, the Proponent shall provide an update to the NIRB on any fault identified related to either Portage Pit A, Portage Pit E, and Goose Pit, any plans to address groundwater movement considering any fault, and how potential monitoring of tailings and groundwater movement would be undertaken to inform management plans.	
NIRB Project Certificate No.004 Condition 21	Shall fund and install a weather station at the mine site to collect atmospheric data, including air temperature and precipitation.	8.21.1
NIRB Project Certificate No.004 Condition 23	Ensure that water quality monitoring performed at locations within receiving waters that allow for an assimilative capacity assessment of concern to regulators, be carried out by an independent contractor and submitted to an independent accredited lab for analysis, on a type and frequency basis as determined by the NWB; results of analysis shall be provided to the NWB and NIRB's Monitoring Officer	8.5.7
NIRB Project Certificate No.004 Condition 24	Cumberland shall identify an area and design for a landfill for disposal of operational and closure non-salvageable materials, including a list of any nonsalvageable materials, and a procedural manual for preparation of location and placements of these materials, and incorporate the design into the final Waste Management Plan as instructed by the NWB.	6.1.1
NIRB Project Certificate No.004 Condition 25	Cumberland shall manage and control waste in a manner that reduces or eliminates the attraction to carnivores and/or raptors. Cumberland shall employ legal deterrents to carnivores and/or raptors at all landfill and waste storage areas. The deterrents are to be developed taking into consideration Traditional Knowledge and in consultation with the HTO, EC and INAC and incorporated into the final Waste Management Plan prior to filing the Plan with the NWB.	8.18.11
NIRB Project Certificate No.004 Condition 26	Cumberland shall ensure that spills, if any, are cleaned up immediately and that the site is kept clean of debris, including wind-blown debris.	7.1.1
NIRB Project Certificate No.004 Condition 27	Cumberland shall ensure that the areas used to store fuel or hazardous materials are contained using safe, environmentally protective methods based on practical, best engineering practices.	7.3
NIRB Project Certificate No.004, Condition 28	Cumberland shall become a signatory to the International Cyanide Management Code, communicate this to shippers, and do so prior to Cumberland storing or handling cyanide for the Project.	11.4
NIRB Project Certificate No.004 Condition 29	Report to NIRB if and when [Cumberland] develops plans for an expansion of the Meadowbank Gold Mine, and if those plans affect the selection of Second Portage Lake as the preferred alternative for tailings management	11.2
NIRB Project Certificate No.004 Condition 31	Cumberland shall provide detailed stream crossing design criteria, including consideration of the DFO Operational Statement for Clear-span bridges for all water crossings identified to have fish presence, final crossing designs, site specific mitigation procedures, an effects monitoring program, and a maintenance and closure plan for all water course crossings, to the DFO and the NWB for review and approval.	8.5.5.1
NIRB Project Certificate No.004 Condition 32e	Prior to opening of the road, and annually thereafter, advertise and hold at least one community meeting in the Hamlet of Baker Lake to explain to the community that the road is a private road with non-mine use of the road limited to approved, safe and controlled use by all-terrain vehicles for the purpose of carrying out traditional Inuit activities.	11.7.2.1
NIRB Project Certificate No.004 Condition 32f	Place notices at least quarterly on the radio and television to explain to the community that the road is a private road with non-mine use of road limited to authorized, safe and controlled use by all-terrain vehicles for the purpose of carrying out traditional Inuit activities.	11.7.2.1
NIRB Project Certificate No.004 Condition 32g	Record all authorized non-mine use of the road and require all mine personnel using the road to monitor and report unauthorized non-mine use of the road and collect and report this data to NIRB one (1) year after the road is opened and annually thereafter.	11.7.1.1
NIRB Project Certificate No.004	Report all accidents or other safety incidents on the road, to the GN, KivIA [KIA], and the Hamlet immediately, and to NIRB annually.	11.7.2.1

Meadowbank Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
Condition 32h		
NIRB Project Certificate No.004 Condition 33	Cumberland shall update the Access and Air Traffic Management Plan to:1. include an All-weather Private Access Road Management Plan, including a right-of-way policy developed in consultation with the KivIA, GN, INAC and the Hamlet of Baker Lake, for the safe operation of the all-weather private access road; and to facilitate monitoring of the environmental and socio-economic impacts of the private road and undertake adaptive management practices as required,including responding to any concerns regarding the locked gates.	11.7.1.1
NIRB Project Certificate No.004 Condition 34	Cumberland shall, in consultation with the Hamlet of Baker Lake, KivIA, and the Royal Canadian Mounted Police, facilitate the hiring of a full-time road safety, search and rescue position to respond to safety matters arising from mine and unauthorized non-mine use of the all-weather private access road, including consulting with Baker Lake and Chesterfield Inlet Elders to incorporate Traditional Knowledge into search and rescue operations.	11.7.1.1
NIRB Project Certificate No.004 Condition 36	Shall ensure the placement of local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet.	11.8.2
NIRB Project Certificate No.004 Condition 37	Cumberland will contract only Transport Canada certified shippers to carry cargo for the Project and will require shippers transporting cargo through Chesterfield Inlet to carry the most up-to date emergency response/spill handling equipment as recommended and accepted by the Government of Canada with the crew trained to deploy the equipment, including practice drills deploying spill equipment in remote locations within the Inlet.	11.8.4
NIRB Project Certificate No.004 Condition 38	Cumberland shall make every reasonable effort to minimize the number of ships and barges transporting cargo for the Project and require shippers transporting cargo for the Project through Chesterfield Inlet to be operated in accordance with safe shipping management policies, including using Canadian Hydrographic Service published detailed marine charts and nautical instructions, and be fitted with modern state-of-the-art navigation equipment.	11.8.4
NIRB Project Certificate No.004 Condition 39	Cumberland shall advertise and hold a community information meeting in Chesterfield Inlet to fully discuss the shipping program for the Project. Thereafter, Cumberland shall annually advertise and hold a community information meeting in Chesterfield Inlet to report on the Project and to hear from Chesterfield Inlet residents and respond to concerns. A consultation report shall be submitted to NIRB's Monitoring Officer within one month of the meeting.	11.9.1
NIRB Project Certificate No.004 Condition 40	Cumberland shall gather Traditional Knowledge from the local HTOs and conduct a minimum of a one-day workshop with residents of Chesterfield Inlet to more fully gather Traditional Knowledge about the marine mammals, cabins, hunting, and other local activities in the Inlet. Cumberland shall report to KivIA and NIRB's Monitoring Officer annually on the Traditional Knowledge gathered including any operational changes that resulted from concerns shared at the workshop.	11.9.1 11.9.2
NIRB Project Certificate No.004 Condition 41	Subject to vessel and human safety considerations, Cumberland shall require shippers carrying cargo to the Project through Chesterfield Inlet to follow the following mitigation procedures in the event that marine mammals are in the vicinity of the shipping activities: a. Wildlife will be given right of way; b. Ships will maintain a straight course, constant speed, and will avoid erratic behaviour; and c. When marine mammals appear to be trapped or disturbed by vessel movements, the vessel will stop until the mammals have moved away from the area.	11.8.1
NIRB Project Certificate No.004 Condition 42	Cumberland shall ensure all fuel transfer operations take place in accordance with the Arctic Waters Pollution Prevention Act and relevant oil transfer guidelines.	11.8.4
NIRB Project Certificate No.004 Condition 43	Lightering activities at Helicopter Island are not approved, except in case of emergency only, and in such case Cumberland shall explain why all other methods were not practical, meaning technically, logistically, and financially not feasible.	11.8.4
NIRB Project Certificate No.004 Condition 44	Within one (1) month of contracting with a shipper, Cumberland shall submit a comprehensive Spill Contingency and Emergency Response Plan to regulatory authorities.	7.3
NIRB Project Certificate No.004 Condition 45	[Cumberland] shall carry, and require contracted shippers to carry adequate insurance to fully compensate losses arising from a spill or accident, including but not limited to the loss of resources arising from the spill or accident; any claims are to be reported to proper	11.8.5

Meadowbank Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
	officials with a copy to NIRB's Monitoring Officer	
NIRB Project Certificate No.004 Condition 46	Cumberland shall apply for Fisheries Act approval for the freshwater intake pipe for the Project and submit for DFO approval a detailed plan of the proposed intake, including siting, design of intake screens in accordance with the DFO Freshwater End-of-Pipe Fish Screen Guidelines, construction and operation considerations, fish and fish habitat impacts, and mitigation and monitoring plans.	4.1.1.1, 4.1.1.3
NIRB Project Certificate No.004 Condition 51	Engage the HTOs in the development, implementation and reporting of creel surveys within waterbodies affected by the Project to the GN, DFO and local HTO	8.16
NIRB Project Certificate No.004, Condition 52	Cumberland shall enforce a no-fishing policy for employees while working on the job site.	8.17
NIRB Project Certificate No 004 Condition 53	Agnico Eagle Mines Ltd. shall, in consultation with the HTOs and DFO, develop a Fish Habitat Monitoring Plan, including augmenting baseline fisheries data in the period prior to operation, with the clear objective of demonstrating the success of the No Net Loss Plan approved by the DFO. The Fish Habitat Monitoring Plan should include Phaser Lake. The updated plan should be provided to the NIRB for review at least 30 days prior to commencement of construction activities. Results from the fisheries baseline data to be provided in the annual report to the NIRB	8.8.1.2
NIRB Project Certificate No.004 Condition 54	a. Updated terrestrial ecosystem baseline data; e. Details of a comprehensive hunter harvest survey to determine the effect on ungulate populations resulting from increased human access caused by the all-weather private access road, including establishing preconstruction baseline harvesting data, to be developed in consultation with local HTOs, the GN-DOE and the Nunavut Wildlife Management Board; f. Details of annual aerial surveys to be conducted to assess waterfowl densities in the regional study area during the construction phase and for at least the first three (3) years of operation, with the data analyzed and compared to baseline data to determine if significant effects are occurring and require mitigation. g. Details of an annual breeding bird plot surveys and transects along the all-weather road to be conducted during the construction phase and for at least the first three (3) years of operation. h. Details of a monitoring program, including recording the locations and frequency of observing caribou and carnivores and any actions taken to avoid contact with or disturbance, and a specific mitigation plan for Short eared owls and any other species of special concern pursuant to Schedule 3 of the Species at Risk Act located in the local study area or along the all-weather private access road.	8.18.2
NIRB Project Certificate No.004 Condition 55	Annual Wildlife Summary Monitoring Report	8.18.1
NIRB Project Certificate No.004 Condition 56	Maps of caribou migration corridors shall be developed in consultation with Elders and local HTOs, including Chesterfield Inlet and placed in site offices and upgraded as new information on corridors becomes available. Information on caribou migration corridors shall be reported to the GN, KIA and NIRB's Monitoring Officer annually.	8.18.3
NIRB Project Certificate No.004 Condition 57	Participate in a caribou collaring program as directed by the GN-DOE.	8.18.4
NIRB Project Certificate No.004 Condition 58	In consultation with Elders and the HTOs and subject to safety requirements, design the lighting and use of lights at the mine site to minimize the disturbance of lights on sensitive wildlife and birds	11.9.2
NIRB Project Certificate No.004 Condition 59	In consultation with Elders and the HTOs, design and implement means of deterring caribou from the tailing ponds, such as temporary ribbon placement or Inukshuks, with such designs not to include the use of fencing	8.18.11
NIRB Project Certificate No.004 Condition 60	Whenever practical, Cumberland shall implement a stop work policy when wildlife in the area may be endangered by the work being carried out.	8.18.9
NIRB Project	In consultation with EC, Cumberland shall incorporate into the Terrestrial Ecosystem	8.18

Meadowbank Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
Certificate No.004 Condition 61	Management Plan and the Air Traffic Management Plan a commitment for aircraft to maintain (whenever possible) a cruising altitude of at least 610 metres during point to point travel when in areas likely to have migratory birds, and 1000 metres vertical and 1500 metres horizontal distance from observed concentrations of migratory birds, and use flight corridors to avoid areas of significant wildlife importance.	
NIRB Project Certificate No.004 Condition 62	Cumberland shall develop and implement a noise abatement plan to protect people and wildlife from significant mine activity noise, including blasting, drilling, equipment, vehicles and aircraft. The noise abatement plan will be developed in consultation with Elders, GN, HC, and EC	8.13.1
NIRB Project Certificate No.004 Condition 63	GN and INAC shall form a Meadowbank Gold Mine Socio-Economic Monitoring Committee ("Meadowbank SEMC") to monitor the socio-economic impacts of the Project and the effectiveness of the Project's mitigation strategies; the monitoring shall supplement, not duplicate, the monitoring required pursuant to the IIBA negotiated for the Project, and on the request of Government or NPC, could assist in the coordination of data collection and tracking data trends in a comparable form to facilitate the analysis of cumulative effects; the terms of reference shall focus on the Project, include a plan for ongoing consultation with KivIA and affected local governments and a funding formula jointly submitted by GN, INAC and [Cumberland]; the terms of reference shall be submitted to NIRB for review and subsequent direction within six (6) months of the issuance of a Project Certificate; [Cumberland] is entitled to be included in the Meadowbank SEMC	11.10.1
NIRB Project Certificate No.004 Condition 64	[Cumberland] shall work with the GN and INAC to develop the terms of reference for a socio-economic monitoring program for the Meadowbank Project, including the carrying out of monitoring and research activities in a manner which will provide project specific data which will be useful in cumulative effects monitoring (upon request of Government or NPC) and consulting and cooperating with agencies undertaking such programs; [Cumberland] shall submit draft terms of reference for the socio-economic monitoring program to the Meadowbank SEMC for review and comment within six (6) months of the issuance of a Project Certificate, with a copy to NIRB's Monitoring Officer	11.10.1
NIRB Project Certificate No.004 Condition 65	Cumberland shall include in its socio-economic monitoring program for the Meadowbank Project the collection and reporting of data of community of origin of hired Nunavummiut	11.10.3
NIRB Project Certificate No.004 Condition 66	Cumberland shall establish a nursing station and hire a registered on-site nurse.	10.2.2.1
NIRB Project Certificate No.004 Condition 67	Develop and implement a program to monitor contaminant levels in country foods in consultation with HC; a copy of the plan shall be submitted to NIRB's Monitoring Officer	8.19
NIRB Project Certificate No.004, Condition 68	Cumberland shall, in consultation with Elders, local HTOs and the Meadowbank Gold Mine SEMC, demonstrate that they are working toward incorporating Inuit societal values into mine operation policies."	11.9.2
NIRB Project Certificate No.004 Condition 69	Carry out the Project to minimize the impacts on archeological sites, including conducting proper archeological surveys of the Project area (including the all-weather road and all quarry sites); [Cumberland] shall provide to the GN an updated baseline report for archeological sites in the Project area"	8.20
NIRB Project Certificate No.004 Condition 70	Shall report any archeological site discovered during the course of construction, including a burial site, immediately and concurrently to the GN and KivIA. Upon discovering an archeological site, Cumberland shall take all reasonable precautions necessary to protect the site until further direction is received from the GN. In the event that it becomes necessary to disturb an archaeological site, Cumberland shall consult with Elders, GN and KivIA to establish a site-specific mitigation plan, and obtain all necessary authorizations and comply with all applicable laws.	8.20
NIRB Project Certificate No.004 Condition 71	In consultation with EC, install and fund an atmospheric monitoring station to focus on particulates of concern generated at the mine site. The results of air-quality monitoring are to be reported annually to NIRB.	8.14.1
NIRB Project Certificate No.004 Condition 72	Conduct annual stack testing to demonstrate that the on-site incinerators are operating in compliance with these standards. The results of stack testing shall be contained in an annual monitoring report submitted to GN, EC and NIRB's Monitoring Officer.	6.2.1

Meadowbank Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
NIRB Project Certificate No.004 Condition 73	Cumberland shall undertake to conserve the Project's use of energy, monitor the Project's greenhouse gas emissions, and continuously review and, if possible, consider for adoption new technologies to ensure greenhouse gases meet the latest Canadian standards or criteria.	8.15
NIRB Project Certificate No.004 Condition 74	Shall employ environmentally protective method to suppress any surface road dust.	8.14.1
NIRB Project Certificate No.004 Condition 75	Provide a complete list of possible accidents and malfunctions for the Project; it must consider the all-weather road, shipping spills, cyanide and other hazardous material spills, and pitwall/dikes /dam failure, and include an assessment of the accident risk and mitigation developed in consultation with Elders and potentially affected communities	7.3
NIRB Project Certificate No.004 Condition 76	Cumberland shall develop an "Early Warning Monitoring Program" along the east boundary of the Project's local study area (mine and road) including the location where Third Portage Lake flows into Tehek Lake. The "Early Warning Monitoring Program" shall discuss how the communities of Baker Lake and Chesterfield Inlet will be actively involved and shall be submitted to NIRB's Monitoring Officer for review prior to Project construction. If adverse effects from the project to any VEC are detected along this boundary, then Cumberland shall notify the NIRB's Monitoring Officer for determination as to whether and to what extent additional monitoring is required.	8.1.1
NIRB Project Certificate No.004 Condition 78	Cumberland shall file a complete Closure and Reclamation Plan developed to comply with INAC's policy of full cost of restoration and any related NWB requirements such that the Inuit and taxpayers are not liable for any cost associated with the cleanup, modification, decommission, or abandonment.	9.2.1.1
NIRB Project Certificate No.004 Condition 80	File annually with NIRB's Monitoring Officer an updated report on progressive reclamation and the amount of security posted, as required by KivIA, INAC, and/or the NWB.	9.2.1.1
NIRB Project Certificate No.004 Condition 81	Beginning with mobilization, and for the life of the Project, Cumberland shall provide full 24 hour security, including surveillance cameras and a security office at the Baker Lake storage facility/marshalling area, and take all necessary steps to ensure the safe and secure storage of any hazardous or explosive components within the Hamlet of Baker Lake boundaries.	11.7.1.1
NIRB Project Certificate No.004 Condition 82	Monitor the ingress/egress of ship cargo at Baker Lake and report any accidents or spills immediately to the regulatory agencies as required by law and to NIRB's Monitoring Officer annually.	11.8.4
NIRB Project Certificate No.004 Condition 83	Cumberland shall ensure that the explosive mix-truck is only used to mix diesel and ammonia nitrate to form an explosive only at the blast site, and that when the explosive mix-truck is not in use it is stored with the strictest setback requirements as required or recommended by NRCan.	8.6.1
NIRB Project Certificate No.004 Condition 85	Develop a detailed blasting program to minimize the effects of blasting on fish and fish habitat, water quality, and wildlife and terrestrial VECs	8.6.1
NIRB Project Certificate No.004 Condition 87	The Proponent shall, prior to the deposition of tailings into the Portage or Goose Pits, file with the Nunavut Water Board (NWB) a report containing updated hydrogeological modelling addressing information gaps as per the NIRB recommendation in the Reconsideration Report and Recommendations to the satisfaction of the NWB. The Proponent shall not deposit tailings into the Portage or Goose pits until the Water Board is satisfied that the modelling addresses the specific information gaps, and that the proponent can manage any identified risks with existing designs and feasible management strategies. The Proponent shall file a report with the Nunavut Water Board, containing updated hydrogeological modelling addressing information gaps, prior to the deposition of tailings into the Portage or Goose pits. Confirmation of the report's filing, conclusions of this report, and any further updates to reporting requirements as determined under the water license, shall be provided to the NIRB in Agnico Eagle's Annual Report for the project.	5.3.2

Table 1-4 Whale Tail List of Reporting Requirements for NIRB

Whale Tail Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
NIRB Project Certificate No.008 Condition 1	The Proponent shall:	8.14.2
	a) Develop and implement an Air Quality Monitoring and Management Plan that includes clear objectives and that specifies air quality monitoring thresholds that will trigger adaptive management responses and actions;	
	b) In the implementation of the Plan, the Proponent shall demonstrate through active and passive monitoring of dustfall, for criteria air contaminant concentrations, incinerator stack testing, and vegetation, soil and snow chemistry sampling that dustfall and emissions of carbon monoxide (CO), nitrogen dioxide (NO ₂), ozone (O ₃), sulphur dioxide (SO ₂), suspended particulate matter, mercury, dioxins and furans, and other chemicals remain within predicted levels and, where applicable, within levels or limits established by all applicable guidelines and regulations;	
	c) The Proponent shall ensure continuous NO ₂ monitoring is undertaken downwind of mining activities to allow for comparison to relevant standards including the Canadian Ambient Air Quality Standards;	
	d) If exceedances occur, the Proponent shall provide an explanation for the exceedance, a description of planned mitigation, and shall conduct additional monitoring to evaluate the effectiveness of mitigative measures; and	
	e) The Proponent shall also develop, implement, and report on the quality assurance and quality control protocols used to ensure data reliability and proper functioning of equipment.	
NIRB Project Certificate No.008 Condition 2	Prior to commencing construction activities, the Proponent shall update the existing Dust Management and Monitoring Plan for the Meadowbank Mine site to address and/or include the following additional items:	8.14.2
	- Align plan requirements with commitments made in the Final Environmental Impact Statement and during the Final Hearing to monitor dust along the existing all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project.	
	- Verify commitments to the utilization of dust suppressants along the all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project, including a description of the type of suppressant to be utilized and the frequency and timing of applications to be made throughout the various seasons of road use.	
	- Outline the specific triggers, thresholds, and adaptive management measures that will apply if monitoring indicates that dust deposition is higher than predicted.	
NIRB Project Certificate No.008 Condition 3	The Proponent shall maintain a Greenhouse Gas Emissions (GHG) Reduction Plan which includes:	8.15
	- An estimate of the Project's GHG baseline emissions;	
	- A description of monitoring measures to be undertaken, including the methods, frequency, parameters, and a description the analysis that will be carried out on the monitoring data generated; and	
	- A description of mitigative and adaptive strategies planned, and taken, to reduce project-related greenhouse gas emissions over the Project lifecycle.	
NIRB Project Certificate No.008 Condition 5	Result of all noise monitoring undertaken by the Proponent shall be provided to the Nunavut Impact Review Board on an annual basis. The Proponent shall:	8.13.2
	a) Conduct noise monitoring at least once during each phase of the Project at four (4) locations in the vicinity of the Whale Tail Pit Project and at two (2) locations along the haul road to demonstrate that noise levels remain within predicted levels for all Project areas; and b) If monitoring identifies an exceedance, the Proponent shall provide an explanation for the exceedance, a description of planned mitigation, and shall conduct additional monitoring to evaluate the effectiveness of mitigative measures.	
NIRB Project Certificate No.008 Condition 6	The Proponent shall provide a summary of activities undertaken to address the requirements of this term and condition in annual report(s) to the NIRB. The Proponent shall:	4.5
	a) Conduct detailed hydrodynamic modelling during operations and closure to evaluate the mixing of the Waste Rock Storage Facility seepage into Mammoth Lake post-closure; and	
	b) Based on the results of the modelling implement monitoring programs and adaptive management strategies that minimize the need for active intervention, including long-term treatment of mine contact water.	

Whale Tail Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
NIRB Project Certificate No.008 Condition 7	Prior to commencement of mining of the Whale Tail deposit, and in consultation with applicable regulatory agencies, including Natural Resources Canada, the Proponent shall as part of a Mine Waste Rock and Tailings Management Plan that reflects site-specific geological and geochemical conditions. The Plan should be submitted to the NIRB at least 60 days prior to the start of construction of the Waste Rock Storage Facility, with subsequent updates or revisions to the Plan submitted annually thereafter or as may otherwise be required by the NIRB for the life of the Project.	5.2.2.2
	a) Develop and implement monitoring programs for the Tailings Storage Facility and the Waste Rock Storage Facility at the Whale Tail Pit;	
	b) Establish thresholds that will trigger the requirement for the Proponent to implement adaptive management strategies to minimize the potential for impacts from these Facilities; and	
	c) Identify the adaptive management strategies that will be used by the Proponent to minimize the potential for impacts from these Facilities.	
NIRB Project Certificate No.008, Condition 8	The Plan should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent updates or revisions to the Plan submitted annually thereafter or as may otherwise be required by the NIRB for the life of the Project. The Proponent shall submit a detailed Acid Rock Drainage and Metal Leaching Management Plan that includes the following items:	5.1.2
	- Waste rock segregation and testing;	
	- Thermal monitoring of waste rock;	
	- Seepage management and monitoring;	
	- A schedule for reporting of results and periodic updating of predictions for the WRSF pond quality;	
	- Planning for optimal cover conditions;	
	- Contingency measures that may be implemented if required;	
	- Plans for comparing monitoring results from receiving waters to model predictions; and	
NIRB Project Certificate No.008 Condition 9	The Proponent shall undertake the additional site-specific geotechnical investigations required to identify sensitive land features and to inform final engineering design prior to the construction of project components such as the waste rock storage facility and quarries. Results from these studies should be submitted to the NIRB at least 30 days prior to the start of construction of these facilities, with results or updates submitted annually thereafter as applicable.	5.2.2.3
NIRB Project Certificate No.008 Condition 10	Results of these studies should be submitted to the NIRB at least 30 days prior to the start of construction of these facilities, with subsequent updates submitted annually thereafter. In consultation with applicable regulatory agencies such as Indigenous and Northern Affairs Canada and Natural Resources Canada, the Proponent shall undertake additional site-specific permafrost monitoring, mapping and thermal analysis to: ▪ Document permafrost conditions, including seasonal thaw and amount of ground ice; ▪ Inform the detailed design of project infrastructure such as the Whale Tail pit, water management structures, mine site and haul roads, waste rock storage facility, tailings storage facility; and ▪ Ensure the integrity of such infrastructure is maintained after construction	5.4.2
NIRB Project Certificate No.008 Condition 11	The Proponent shall develop and implement an Erosion Management Plan to prevent or minimize erosion and its resulting effects from project-related land disturbance. The Plan should be submitted to the Nunavut Impact Review Board (NIRB) at least 30 days prior to the start of construction, with updates submitted annually thereafter or as may otherwise be required by the NIRB.	8.5.2.2.19
NIRB Project Certificate 008 Condition 12	The Proponent shall provide a summary of its progressive reclamation efforts and associated feedback received from communities with respect to aesthetic values solicited by the Proponent as part of its public engagement processes in its annual reporting to the NIRB. As part of the Closure and Reclamation Plan, the Proponent shall develop and implement a program to:	9.1.2.1
	a) Progressively reclaim disturbed areas within the project footprint, with an emphasis on restoring the natural aesthetics of the area through re-contouring to the extent practicable; and	

Whale Tail Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
	b) In a manner that demonstrates that the Proponent has considered the aesthetic values of local communities (e.g. information regarding the acceptability of the topography and landscape of the project areas following progressive reclamation efforts).	
NIRB Project Certificate 008 Condition 13	The Proponent shall explore the feasibility of topsoil/organic matter salvage as part of project development and provide updates to the Closure and Reclamation Plan based on this investigation. The Proponent shall provide a summary of its management of topsoil in annual reports to the NIRB.	9.3
NIRB Project Certificate No.008 Condition 14	The Proponent shall develop and implement a Thermal Monitoring Plan to identify potential changes in talik distribution and flow paths that may result from the development of project infrastructure, including the Whale Tail pit, dikes, and water impoundments. The Plan should be submitted to the NIRB at least 60 days prior to the start of construction of these facilities, with subsequent updates submitted annually thereafter or as may otherwise be required by the NIRB	5.4.2
NIRB Project Certificate No.008 Condition 15	The required Groundwater Monitoring Plan should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent plan revisions or updates submitted annually thereafter. Subject to the additional direction and requirements of the Nunavut Water Board, the Proponent shall prepare and implement a Groundwater Monitoring Plan that, at a minimum includes: ▪ The collection of additional site-specific hydraulic data (e.g., from new monitoring wells) in key areas during the pre-development, construction and operation phases; ▪ Definition of vertical and horizontal groundwater flows in the project development areas; ▪ Delineates monitoring plans for both vertical and horizontal ground water; and ▪ Thresholds that will trigger the implementation of adaptive management strategies that reflect site specific conditions encountered at the project site.	8.7.2
NIRB Project Certificate No.008 Condition 16	An updated Groundwater Monitoring Plan that outlines the Proponent's plans to fulfill this term and condition should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent plan revisions or updates submitted annually thereafter. Within two years of commencing operations, the Proponent shall: - Conduct additional analyses to determine the approximate fill time for the Whale Tail Pit at closure; - Undertake a hydrogeological characterization study to assess the potential for arsenic and phosphorous diffusion from submerged Whale Tail pit walls; - If the results of the characterization study indicate a moderate to high potential for arsenic and/or phosphorous diffusion, perform detailed hydrodynamic modelling of the flooded pit lake prior to closure to evaluate meromictic conditions and flooded pit water quality; and - Add these required activities to the site Groundwater Monitoring Plan.	8.7.2
NIRB Project Certificate No.008 Condition 17	The plan should be submitted to the NIRB at least 30 days prior to the start of construction, with results submitted annually thereafter. The Proponent shall: - Monitor the effects of project activities and infrastructure on surface water quality conditions; - Ensure the monitoring data is sufficient to compare the impact predictions in the Environmental Impact Statement (EIS) for the Project with actual monitoring results; - Ensure that the sampling locations and frequency of monitoring is consistent with and reflects the requirements of the Water Quality and Flow Plan and the Core Receiving Environmental Monitoring Program; and - On an annual basis, the Proponent will compare monitoring results with the impact assessment predictions in the EIS and will identify any significant discrepancies between impact predictions and monitoring results	8.1.2
NIRB Project Certificate No 008 Condition 18	The Proponent shall, reflecting any direction from the Nunavut Water Board, maintain a Site Water Monitoring and Management Plan designed to: Minimize the amount of water that contacts mine ore and wastes; Appropriately manage all contact water and discharges to protect local aquatic resources; and Implement water conservation and recycling to maximize water reuse and minimize the use of natural waters. The Plan should include monitoring that demonstrates contact water (runoff and shallow groundwater) from the ore storage and waste rock storage areas is captured and managed, as per the Waste Rock Facility Management Plan. The plan should be submitted to the NIRB at least 60 days prior to the start of construction, with results submitted annually thereafter.	SECTION 8
NIRB Project Certificate No.008,	The Proponent shall, reflecting any direction from responsible authorities such as the Nunavut Water Board, Fisheries and Oceans Canada and Environment and Climate Change Canada,	8.1.2

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Authorization Reference	Reporting Requirement	Report Section
Condition 19	maintain a Core Receiving Environment Monitoring Program (CREMP) designed to: - Determine the short and long-term effects in the aquatic environment resulting from the Project; - Evaluate the accuracy of Project effect predictions; - Assess the effectiveness of mitigation and management measures on Project effects; - Identify additional mitigation measures to avert or reduce environmental effects due to Project activities; - Comply with Metal Mining Effluent Regulations requirements, should an Environmental Effects Monitoring program be triggered; - Reflect site-specific water quality conditions; - Include details comparing the watershed features in the Whale Tail watershed to those watersheds used as reference lakes; and - Evaluate the mixing and non-mixing portion of the pit. The CREMP should include sufficient sampling and monitoring programs to appropriately characterize the receiving environment to ensure that adequate data is available to assess impact predictions made within the Environmental Impact Statement for the Whale Tail Pit Project. The updated plan should be submitted to the Nunavut Impact Review Board at least 60 days prior to the start of construction, with results submitted annually thereafter.	
NIRB Project Certificate No.008, Condition 20	Unless otherwise authorized, the Proponent shall maintain an appropriate setback distance between project quarries and borrow pits from fish-bearing or permanent waterbodies as required to prevent acid rock drainage or metal leaching into such waterbodies. Throughout quarry development and operation, the Proponent shall, on an annual basis, provide information regarding quarry setback distances maintained and/or mitigation measures implemented by the Proponent in fulfillment of this term and condition in the Proponent's annual report to the NIRB.	3.4.2.2
NIRB Project Certificate No.008, Condition 21	The Proponent shall ensure that all project infrastructures in watercourses are designed and constructed in such a manner that they do not unduly prevent or limit the movement of water or fish species in fish bearing streams and rivers, unless otherwise authorized by Fisheries and Oceans Canada. Throughout the life of the Project, the Proponent shall report on how the Proponent has maintained and/or implemented mitigation measures in fulfillment of this term and condition in the Proponent's annual report to the Nunavut Impact Review Board.	8.5.6.2
NIRB Project Certificate No.008 Condition 22	The Proponent shall engage with Fisheries and Oceans Canada to develop project specific thresholds, mitigation and monitoring for any blasting activities that would exceed the requirements of Fisheries and Oceans Canada's Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters. If project-specific thresholds, mitigation and monitoring requirements are developed, the Proponent shall identify these requirements in the annual report provided to the NIRB.	8.6.2
NIRB Project Certificate No.008 Condition 23	The Proponent shall, reflecting any direction from Environment and Climate Change Canada and Fisheries and Oceans Canada: a) Conduct additional analysis to support the conclusions that a change in trophic status in Mammoth Lake would not impact fish productivity; b) Undertake additional site-specific studies to assess the predicted trophic change on lake ecosystem productivity to monitor potential changes to downstream environments; and c) Monitor actual loadings/concentrations in the receiving environment, identify trends in downstream chemistry and productivity, and track trophic status of Mammoth Lake	8.10
NIRB Project Certificate No.008 Condition 24	The Proponent shall engage Fisheries and Oceans Canada, and other interested parties to further assess: Whether the increased surface area of Whale Tail Lake is a viable offset to habitat losses resulting from development of the Project; and Whether Whale Tail end pit would support fish in the post closure scenario.	8.8.2.1
NIRB Project Certificate No.008 Condition 25	At least 30 days prior to first shipment of equipment and supplies to the site, the Proponent's mitigation plans, protocols, monitoring and inspection program required in fulfillment of this term and condition shall be provided to the NIRB for review. Subsequently, information regarding inspections, monitoring results, and any reports as referenced above shall be	8.18.17

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	included in the Proponent's annual report to the NIRB. The Proponent shall: a) Ensure that equipment and supplies brought to the project sites are clean and free of soils that could contain plant seeds or organic matter not naturally occurring in the area b) Ensure that vehicle tires and treads are inspected prior to initial use in project areas; c) Incorporate protocols for monitoring for the potential introduction of invasive vegetation species (e.g. surveys of plant populations in previously disturbed areas) into relevant monitoring and management plans for the terrestrial environment; and d) Ensure any introductions of non-indigenous plant species must be promptly reported to the Government of Nunavut Department of Environment.	
NIRB Project Certificate No.008 Condition 26	The Proponent shall include revegetation strategies within its Mine Closure and Reclamation Plan that support progressive reclamation, and promote natural revegetation and recovery of disturbed areas compatible with the surrounding natural environment. These strategies should include exploration of the feasibility and practicality of topsoil/organic matter salvage through Project development. Consideration for the results of similar reclamation efforts at other northern projects, including the Meadowbank Gold Mine Project, must be demonstrated. Within three (3) years from the commencement of construction, information regarding the revegetation strategies developed and implemented by the Proponent in fulfillment of this Term and Condition shall be included in the Proponent's annual report to the NIRB. Subsequently, information regarding the Proponent's progress in fulfillment of this Term and Condition shall be provided annually in the Proponent's annual report to the NIRB.	9.3
NIRB Project Certificate No.008 Condition 27	The Proponent shall participate in a Terrestrial Advisory Group with the Government of Nunavut, the Baker Lake Hunters and Trappers Organization, the Kivalliq Inuit Association, and other parties as appropriate to continually review and refine mitigation and monitoring details within the Terrestrial Ecosystem Management Plan. Additional caribou collar data, results from associated studies, Inuit Qaujimajatuqangit shared by knowledge holders, and other monitoring data as available should be considered for incorporation as appropriate. Finalized Terms of Reference for the Terrestrial Advisory Group shall be provided to the NIRB within six (6) months of issuance of the Project Certificate. A summary of outcomes from Terrestrial Advisory Group meetings shall be provided to the NIRB on an annual basis in the Proponent's Annual Report.	8.18.12
NIRB Project Certificate No.008, Condition 28	The Proponent shall maintain a Terrestrial Ecosystem Management Plan (TEMP) throughout all phases of the Project. The Plan shall include detailed monitoring, mitigation, and adaptive management measures for wildlife, with consideration for each Project activity predicted to affect wildlife, and with inclusion of specific triggers for mitigation and adaptive management intervention. The TEMP shall demonstrate consideration for all relevant commitments made by the Proponent throughout the Nunavut Impact Review Board's review of the Project. Updates to the TEMP may be required when there are significant changes in project development plans, monitoring results indicating biologically-meaningful changes, significant updates to the scientific understanding of management methods relevant to wildlife at the project site, Inuit Qaujimajatuqangit, Traditional Knowledge, changes in climatic conditions that might subject wildlife to unexpected impacts, or as otherwise necessary. The Proponent shall submit a revised TEMP to the Nunavut Impact Review Board (NIRB) within one (1) year of issuance of the Project Certificate, with subsequent versions provided as appropriate. Results of the TEMP shall be reported to the NIRB annually, including details of how Inuit Qaujimajatuqangit contributed by knowledge holders has been considered and utilized in associated activities and updates.	8.18
NIRB Project Certificate No.008 Condition 29	The Proponent shall, in collaboration with the Government of Nunavut, collect additional caribou collar data and conduct analyses of this data to quantify the zone of influence and associated effects of project components on caribou movement for a study area that includes the Whale Tail mine site, the haul road, the Meadowbank Gold Mine and its All-Weather Access Road. A summary of the analyses and associated effects shall be provided annually in the Proponent's annual report to the Nunavut Impact Review Board.	8.18.4
NIRB Project Certificate No.008 Condition 30	The Proponent shall work with the Government of Nunavut, the Baker Lake Hunters and Trappers Organization and the Kivalliq Inuit Association through the Terrestrial Advisory Group to develop and update thresholds to trigger implementation of mitigation measures on both the AWAR and Whale Tail Haul Road, up to and including temporary road closures. The Proponent shall consider how these thresholds and mitigation measures reflect caribou life	8.18.12

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	cycle sensitivities as well as demonstrate how Inuit Qaujimajatuqangit was incorporated throughout the development of these criteria and procedures. The Proponent shall ensure the Terrestrial Ecosystem Management Plan is updated to reflect the thresholds agreed upon in accordance with the Terrestrial Advisory Group Terms of Reference, and that this Plan along with a summary of consultation with the Terrestrial Advisory Group are submitted on an annual basis or as thresholds are otherwise modified in the Proponent's annual report to the to the Nunavut Impact Review Board.	
NIRB Project Certificate No.008, Condition 31	The Proponent shall develop and implement a Road Access Management Plan and maintain traffic monitoring logs along the haul road between the Whale Tail Pit project and the Meadowbank mine. Where traffic exceeds levels predicted within the Environmental Impact Statement, the Proponent shall develop and implement appropriate modifications to its wildlife protection measures. The Road Access Management Plan shall be provided to the Nunavut Impact Review Board (NIRB) 90 days prior to operations commencing. An annual summary of the monthly maximum, minimum and average traffic levels shall be provided to the NIRB in the Proponent's annual report.	11.7.1.2
NIRB Project Certificate No.008 Condition 32	The Proponent shall engage with the Baker Lake Hunters and Trappers Organization and other relevant parties to ensure that safety barriers, berms, and designed crossings associated with project infrastructure, including the haul road, are constructed and operated as necessary to allow for the safe passage of caribou and other terrestrial wildlife. Summaries of engagement with the Baker Lake Hunters and Trappers Organization regarding implementation of this condition shall be provided to the Nunavut Impact Review Board along with details of the selected crossings in the Proponent's annual report to the Nunavut Impact Review Board.	8.18.13
NIRB Project Certificate No.008 Condition 33	A summary regarding all wildlife incidents reported, including a reference to whether compensation was or will be provided by the Proponent for direct mortalities, as well as a description of any other steps taken in fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board. The Proponent shall provide wildlife incident reports to the appropriate authorities in a timely fashion. Wildlife incident reports should include the following information:	8.18.14
	a) Locations (i.e., latitude and longitude), species, number of animals, a description of the animal activity, and a description of the gender and age of animals if possible;	
	b) Prior to conducting project activities, the Proponent should map the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites, and raptor nests in the project area, and identify the timing of critical life history events (i.e., calving, mating, denning and nesting); and	
	c) Additionally, the Proponent should indicate potential impacts from the project, and ensure that operational activities are managed and modified to avoid impacts on wildlife and sensitive sites	
NIRB Project Certificate No.008 Condition 34	Results of implementation of the Migratory Birds Protection Plan shall be reported to the Nunavut Impact Review Board on an annual basis in the Proponent's annual report. The Proponent will maintain a Migratory Birds Protection Plan for the Project in consultation with Environment and Climate Change Canada and other interested parties. The plan should include and/or demonstrate that the Proponent give consideration to the following	8.18.15
	- Information obtained from baseline characterization of migratory bird and vegetation communities within the predicted flood area;	
	- Results of field tests and/or the thorough literature review of the effectiveness of preferred deterrence prior to actual flooding; and	
	- Details regarding monitoring the effectiveness of mitigation measures during flooding.	
NIRB Project Certificate No.008 Condition 35	The Proponent shall ensure that the mitigation and monitoring strategies developed for Species at Risk are updated as necessary to maintain consistency with any applicable status reports, recovery strategies, action plans, and management plans that may become available through the duration of the Project. Information regarding development, implementation and monitoring of the measures developed by the Proponent in fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.	8.18.16
NIRB Project Certificate No.008 Condition 36	Prior to removal or deterrence of raptors, the Proponent will contact the Government of Nunavut – Department of Environment to discuss proposed mitigation options and, if required, will obtain the necessary permits. The Proponent shall include summaries of any mitigation	8.18.11

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Authorization Reference	Reporting Requirement	Report Section
	measures implemented and permits obtained in fulfillment of this term and condition in the Proponent's annual report to the Nunavut Impact Review Board.	
NIRB Project Certificate No.008, Condition 37	The Proponent shall maintain a Shipping Management Plan in coordination and consultation with applicable regulatory authorities and the Kivalliq Inuit Association, and the Hunters and Trappers Organizations of the Kivalliq communities. The updated plan should be submitted to the Nunavut Impact Review Board at least 90 days prior to the start to commencement of shipping activities, with subsequent updates submitted annually thereafter in the Proponent's annual report or as may otherwise be required by the NIRB.	11.8
NIRB Project Certificate No.008 Condition 38	The Proponent shall ensure that marine shipping activities avoid sensitive wildlife habitat and species along the shipping route and use a routing south of Coats Island as the primary shipping route, subject to vessel and human safety considerations. Confirmation that the requirements of this term and condition are being effectively implemented by shipping companies contracted by the Proponent should be submitted as part of annual reporting to the Nunavut Impact Review Board.	11.8.1
NIRB Project Certificate No.008 Condition 39	The Proponent shall ensure that, subject to vessel safety requirements, a setback distance of at least 500 metres is maintained from colonies and aggregations of seabirds and marine mammals during Project shipping transiting through Hudson Strait, Hudson Bay, and Chesterfield Inlet. Confirmation that the requirements of this term and condition are being effectively implemented by shipping companies contracted by the Proponent should be submitted as part of annual reporting to the Nunavut Impact Review Board.	11.8.1
NIRB Project Certificate No.008 Condition 40	The Proponent shall develop and implement a ship-based marine mammal monitoring program, as part of a Marine Mammal Management and Monitoring Plan, in consultation with Fisheries and Oceans Canada, communities, and other interested parties. The Proponent shall report any accidental contact by project vessels with marine mammals or seabird colonies to applicable responsible authorities including Fisheries and Oceans Canada and Environment and Climate Change Canada. The Plan should be submitted to the Nunavut Impact Review Board at least 90 days prior to commencement of shipping activities, with subsequent updates submitted annually thereafter. Confirmation that the requirements of the Plan are being effectively implemented by shipping companies contracted by the Proponent should be provided with annual reporting.	11.8.2
NIRB Project Certificate No.008 Condition 41	The Proponent shall provide notification to communities regarding scheduled ship transits throughout the regional study area, including Hudson Bay and Chesterfield Inlet. The Proponent shall provide a summary of public consultation undertaken to address this term and condition in its annual report to the Nunavut Impact Review Board.	11.8.3
NIRB Project Certificate No.008 Condition 42	The Proponent shall design monitoring programs to ensure that local users of the marine area along the shipping route have the opportunity to provide feedback and input in relation to monitoring and evaluating potential project-induced impacts and changes in marine mammal distributions. The Proponent shall demonstrate how feedback received from community consultations has been incorporated into the most appropriate mitigation or management plans. The Proponent shall provide a summary of public consultation undertaken to address this term and condition in its annual report to the Nunavut Impact Review Board.	11.9.1
NIRB Project Certificate No.008 Condition 43	The Proponent shall contract only certified vessels to carry cargo for the Project and will ensure shippers are aware of the requirements of the Shipping Management Plan, the Risk Management and Emergency Response Plan, and the Oil Pollution Emergency Plan. Evidence of meeting the requirements of this term and condition should be submitted as part of annual reporting to the Nunavut Impact Review Board.	11.8.4
NIRB Project Certificate No 008, Condition 44	The Proponent is strongly encouraged to continue to participate in the work of the Kivalliq Socio-Economic Monitoring Committee along with other agencies and the communities of the Kivalliq region, and to identify areas of mutual interest and priority for inclusion into a collaborative monitoring framework that includes socio-economic priorities related to the Project, communities, and the Kivalliq region as a whole. Information regarding the Proponent's efforts in fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.	11.10.1
NIRB Project Certificate No.008, Condition 45	The Proponent shall work in collaboration with other socio-economic stakeholders including, the Government of Nunavut, Indigenous and Northern Affairs Canada, the Kivalliq Inuit Association, and communities of the Kivalliq region, to establish a socio-economic working group for the Project to develop and oversee a Kivalliq Projects AEM Socio-Economic Monitoring Program. The working group will develop a Terms of Reference, which outlines	11.10.2

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	each member's roles and responsibilities with regards to, where applicable, project specific socio-economic monitoring throughout the life of the projects. The Proponent shall work with the other parties to use the updated Kivalliq Projects Socio-Economic Monitoring Program to monitor the predicted impacts outlined in the projects' respective environmental impact statements as well as regional concerns identified by the Kivalliq Socio-Economic Monitoring Committee. The Proponent shall work in collaboration with all other socio-economic stakeholders such as the Government of Nunavut, Indigenous and Northern Affairs Canada, Kivalliq Inuit Association, and the communities of the Kivalliq region in developing this program, which should include a process for adaptive management and mitigation in the event unanticipated impacts are identified. The Terms of Reference for this multi-party, multi-project Working Group are to be provided to the Nunavut Impact Review Board (NIRB) upon completion, and within one (1) year of issuance of the Project Certificate. The Proponent shall produce annual joint "AEM Kivalliq Projects" Socio-Economic Monitoring reports throughout the life of the Projects that are submitted to the NIRB and discussed with the wider Kivalliq Socio-Economic Monitoring Committee. Details of the Kivalliq Projects Socio-Economic Monitoring Program are to be provided to the NIRB upon finalization, and within one (1) year of issuance of the Project Certificate. Information regarding the Proponent's efforts in fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.	
NIRB Project Certificate No 008, Condition 46	The Proponent should develop a Project-specific Whale Tail Pit Socio-Economic Monitoring Program designed to:	11.10.2
	- Monitor for project-induced effects, including the impacts predicted in the Environmental Impact Statement through indicators presented in the Whale Tail Pit Socio-Economic Monitoring Plan;	
	- Reflect regional socio-economic concerns identified by the Kivalliq Socio-Economic Monitoring Committee (KivSEMC);	
	- Work in collaboration with all other socio-economic stakeholders such as the Kivalliq Inuit Association, the Government of Nunavut, and Indigenous and Northern Affairs Canada, and the communities of the Kivalliq region to develop the program;	
	- Include a process for adaptive management and mitigation to respond if unanticipated impacts are identified; and.	
	- Monitor the success of existing and newly implemented gender-specific initiatives to determine their success and why they were considered successful or to identify any challenges to their implementation.	
	Details of the Whale Tail Pit Socio-Economic Monitoring Program should be submitted to the Nunavut Impact Review Board (NIRB) within one (1) year of issuance of the Project Certificate. The Proponent should produce annual Whale Tail Pit socio-economic monitoring reports throughout the life of the Project that are submitted to the NIRB and shared with the wider KivSEMC.	
NIRB Project Certificate No.008 Condition 47	The Proponent should undertake an analysis of the risk of temporary mine closure, giving particular consideration to how communities in the Kivalliq region may be affected by temporary closure of the mine, including consideration of the measures that can be taken to mitigate the potential for adverse effects (e.g. development of programs that provide transferable skills, identification of employment options that can include transfers amongst Agnico Eagle operations, etc.) This analysis is required to be updated as necessary to reflect significant changes to the Project or the socio-economic conditions in the region that may increase the risks and potential effects of temporary mine closures. These initial results of the Proponent's analysis should be provided to the Nunavut Impact Review Board (NIRB) within six (6) months of the issuance of the Project Certificate. Any updates to the analyses should be provided to the NIRB within three (3) months following completion of updated analyses by the Proponent.	9.4
NIRB Project Certificate No.008, Condition 48	The Proponent is strongly encouraged to submit staff schedule forecasts that should, at a minimum, include the following:	11.10.3 11.11.1.1
	- Title of positions required by department and division;	
	- Quantity of positions available by project phase and year;	
	- Transferable skills, both certified and uncertified which may be required for, or gained during, employment within each position;	

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Authorization Reference	Reporting Requirement	Report Section
	- The National Occupational Classification code for each individual position. The Proponent should also identify and register all trades occupations, journeypersons, and apprentices working with the Project and make this information available to the Government of Nunavut to assist in delivery of training initiatives and programs. The Staff Schedule should be submitted to the Nunavut Impact Review Board six (6) months prior to each phase of the Project (construction, operations, closure).	
NIRB Project Certificate No.008, Condition 49	The Proponent shall make best efforts to collaborate with the Government of Nunavut's Career Development Officer, Regional Manager of Career Development, and Director of Career Development. Semi-annual calls, at a minimum, should be initiated by the Proponent to address: - Hiring procedures and policies - Issues regarding employee recruitment and retention - AEM policies regarding career pathways and opportunities for advancement - Internal and/or partnered training and development of employees - Long-term labour market plans to facilitate training in communities	11.11.1.2
NIRB Project Certificate No 008, Condition 50	The Terms of Reference for this multi-party, multi-project Working Group are to be provided to the Nunavut Impact Review Board (NIRB) upon completion, and within one (1) year of issuance of the Project Certificate. Details of the Kivalliq Projects Socio-Economic Monitoring Program are to be provided to the NIRB upon finalization, and within one (1) year of issuance of the Project Certificate. The Proponent shall produce annual joint "AEM Kivalliq Projects" Socio-Economic Monitoring reports throughout the life of the Projects that are to be submitted as part of the Proponent's annual report to the NIRB. The Proponent will report the results of its Labour Market Analysis (LMA) and Inuit Work Barrier Study (WBS) to the Kivalliq Socio-Economic Monitoring Committee upon completion in 2018, which should integrate the findings into its ongoing work identifying gaps between the Kivalliq labour market and mining market needs, and how to activate latent labour pool in the Kivalliq region to maximize labour "capture" from mining for the region. The Proponent shall report the results and implications of the LMA and WBS within its first year's Annual Report to the Nunavut Impact Review Board (NIRB) and show how the results have been integrated into an updated Socio-Economic Monitoring Plan for the Whale Tail Pit Project.	11.10.2
NIRB Project Certificate 008 Condition 51	The Proponent shall develop a conceptual Socio-economic Closure Plan that: -Links the socio-economic closure plans for Meadowbank and Whale Tail; -Identifies regular update and multi-party review requirements; - Shows evidence of consideration of socio-economic lessons learned from other northern mine closure experiences; -Includes evidence of consultation with Kivalliq communities and governance bodies on socio-economic objectives/goals related to closure planning; -Emphasizes plans, policies, and programs to increase transferable skills of Inuit workers, including into trades and other skilled positions; -Includes all plans, policies and programs related to socioeconomic factors in a temporary closure situation; and - Includes a Workforce Transition Plan between the Whale Tail Project and other production mines owned and operated by the Proponent in the Kivalliq region. The Proponent shall advance the recommendations of the Conceptual Socio-economic Closure Plan through the development of a Final Socio-economic Closure Plan that will be part of the Whale Tail Pit Project Final Closure and Reclamation Plan.	9.5
NIRB Project Certificate No.008, Condition 52	The Proponent should develop and maintain an easily referenced listing of formal certificates and licenses that may be acquired via on-site training or training during project employment. The listing shall indicate which of these certifications and licenses would be transferable to a similar job site within Nunavut. The initial listing should be provided to the Nunavut Impact Review Board within six (6) months of the Project Certificate being issued. Updates to the list should be included in the Proponent's annual reports submitted to the Nunavut Impact Review Board and shared with the wider Kivalliq Socio-Economic Monitoring Committee throughout the life of the Project.	11.11.1.3
NIRB Project Certificate No.008,	Provided the collection and sharing of such information is consistent with and not limited by any Inuit Impact and Benefit Agreement with the Kivalliq Inuit Association and that employees	11.10.2 11.10.3

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Authorization Reference	Reporting Requirement	Report Section
Condition 53	are willing to voluntarily provide this information, the Proponent should collect and provide project-specific data concerning employee community of residence and number of employees that relocated from the year prior (where available, to and from, for Arviat, Baker Lake, Chesterfield Inlet, Coral Harbour, Nauyasat, Rankin Inlet and Whale Cove). The details of this process will be captured in the terms of reference for the project specific Whale Tail Pit Socio-Economic Monitoring Committee. Summaries of this information should be included in the annual Whale Tail Pit socio-economic monitoring reports submitted to the Nunavut Impact Review Board and shared with the wider Kivalliq Socio-Economic Monitoring Committee throughout the life of the Project.	
NIRB Project Certificate No.008, Condition 54	Proponent should ensure that the development of all project monitoring plans and associated reporting and updates are undertaken with active engagement of Kivalliq communities, land users, and harvesters. The Proponent should work with the Kivalliq Inuit Association, the local Hunters and Trappers Organizations and the Kivalliq Socio-Economic Monitoring Committee to report on the collection and integration of Inuit Qaujimaningit through its monitoring programs for the Project. To the extent that the sharing of such information is consistent with, and not limited by, any confidentiality or other agreements, summaries addressing the Proponent's fulfillment of this term and condition should be included in the Proponent's annual report to the Nunavut Impact Review Board.	11.10.1
NIRB Project Certificate No.008 Condition 55	The Proponent shall conduct archaeological surveys prior to land disturbance related to the Project and report survey results to applicable parties, including the Government of Nunavut – Department of Culture and Heritage. Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.	8.20
NIRB Project Certificate No.008 Condition 56	The Proponent shall report any archaeological site discovered during the construction, operation, and closure phases to the Government of Nunavut – Department of Culture and Heritage and the Kivalliq Inuit Association. Upon discovering an archeological site, the Proponent shall:	8.20
	a) Take all reasonable precautions necessary to protect the site until further direction is received from the Government of Nunavut – Department of Culture and Heritage; and	
	b) If it becomes necessary to disturb an archaeological site, the Proponent shall consult with the Government of Nunavut – Department of Culture and Heritage, the Kivalliq Inuit Association, and potential impacted communities to establish a site specific mitigation plan, and obtain all necessary authorizations and comply with all applicable laws.	
NIRB Project Certificate 008 Condition 57	The Proponent shall update its Occupational Health and Safety Plan to include sexual health and well-being information in its employee orientation programming. In addition, the Proponent shall undertake an education program to inform workers of the range of health services available onsite. The updated plan shall be provided to the Nunavut Impact Review Board (NIRB), once completed within six (6) months of issuance of the Project Certificate. Summaries of the education programs undertaken and any future updates or modifications to the Occupational Health and Safety Plan and the education program shall be included in the Proponent's annual report to the NIRB.	10.2.2.1
NIRB Project Certificate No.008, Condition 58	The Proponent is encouraged to form a subcommittee which includes Government of Nunavut representatives to reach consensus decisions on health related issues that the Proponent or the Government of Nunavut bring forward (e.g. programs and services to address sexually transmitted infections, a process for the treatment and transport of workers that may require medical services beyond that which the mine provides, monitoring and reporting on the impacts of the Project on health services within the potentially impacted communities and particularly, Baker Lake. etc.). Information regarding the Proponent's fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.	11.11.1.5
NIRB Project Certificate No.008, Condition 59	The Proponent is encouraged to work with the Kivalliq Inuit Association to establish cross-cultural training initiatives, which promote respect and consideration for the importance of Inuit Qaujimajatuqangit to the Inuit identity and to make this training available to Project employees and on-site sub-contractors. The Proponent should actively monitor the implementation of these initiatives, including the following items:	11.10.3.2.3
	- Descriptions of the goals of each program offered;	
	- Language of instruction;	
	- Schedules and location(s) of when each program was offered;	

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	- Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit participation rates; and - Completion rates for enrolled participants, noting Inuit and non-Inuit participation rates. Summaries of the cross-cultural training initiatives implemented by the Proponent in fulfillment of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.	
NIRB Project Certificate No.008, Condition 60	The Proponent shall engage with the Government of Nunavut to develop a process to ensure that any conditions first treated at the mine site and requiring ongoing care is appropriately accommodated in a timely manner at community health centres as required. Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.	11.11.1.5
NIRB Project Certificate No.008, Condition 61	The Proponent, in collaboration with the Government of Nunavut and the Nunavut Housing Corporation, is encouraged to investigate measures and programs designed to assist Project employees with pursuing home ownership or accessing affordable housing options in the Kivalliq region. The Proponent should provide access to financial literacy, financial planning, and personal budgeting as part of the regular Life Skills Training and/or Career Path Program. Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.	11.10.3
NIRB Project Certificate No.008, Condition 62	The Proponent should work with the Government of Nunavut to develop an effects monitoring program that identifies Project-related pressures to community infrastructure such as airport and transportation infrastructure, policing, health and social services, in Baker Lake and all the point-of-hire communities of the Kivalliq Region. Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.	11.10.3
NIRB Project Certificate No.008, Condition 63	The Proponent shall conduct additional studies as part of its freshwater aquatic effects analyses to ensure that methylmercury concentrations anticipated to increase during operations in the aquatic environment (including in fish tissue) do not exceed regulatory requirements. In addition, the Proponent shall consider assessing potential risks from consumption of fish containing methylmercury by using Health Canada's hazard quotients as a descriptive tool. A summary of the results of these additional studies, including the assessment of the potential risk to people from consumption of fish, shall be included in the Proponent's annual report to the Nunavut Impact Review Board.	8.2
NIRB Project Certificate No.008, Condition 64	Within its annual reporting, the Proponent is encouraged to include detailed updates on the status of ongoing exploration programs associated with the Project and associated implications for future phase developments of the Amaruq property. Status updates in fulfillment of this Term and Condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.	11.3.1
NIRB Project Certificate No.008, Condition 65	The Proponent shall, in consultation with the Terrestrial Advisory Group, develop a construction plan for the widening of the Whale Tail haul road which includes - Design features of the Whale Tail haul road intended to facilitate caribou movement across the road; - Identified sections of the roadside that will be constructed with slopes and top-dressing material appropriate for caribou crossing. The plan must incorporate available Inuit Qaujimagatuqangit in the selection of caribou crossing locations. The final construction plan shall be provided to the Nunavut Impact Review Board (NIRB) prior to widening the Whale Tail haul road. Within three months of completion of construction to widen the Whale Tail haul road, the Proponent shall file an 'as-built report' with the NIRB, which includes the backfill height, slope and top-dressing material specifications of designed wildlife crossing sections.	3.5.2.3
NIRB Project Certificate No.008, Condition 66	The Proponent shall operate the Whale Tail haul road as a private access road, implement any reasonable measures to limit public access to the road, and develop strategies that account for unauthorized use. These measures must include, but are not limited to, the following: a) The posting of signs in English and Inuktitut at the gate, each major bridge crossing, and each 10 kilometres of road, stating that public use of the road is prohibited; b) Annually advertise and hold at least one community meeting in the Hamlet of Baker Lake to	11.7.2.2

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Authorization Reference	Reporting Requirement	Report Section
	explain to the community that the road is restricted to mine use only: c) Place local notices (e.g., radio, television, social media) at least quarterly to explain to the community that the road is restricted to mine use only; d) Record all unauthorized non-mine use of the road, and require all mine personnel using the road to e) Develop management strategies to ensure public and operator safety in the event of unauthorized public use. Report unauthorized Whale Tail haul road use and accidents or other safety incidents on the road to the Government of Nunavut, the Kivalliq Inuit Association, Crown-Indigenous Relations and Northern Affairs Canada, the Baker Lake Hunters and Trappers Organization and the Hamlet of Baker Lake immediately, and to the Nunavut Impact Review Board annually.	
NIRB Project Certificate No.008, Condition 67	Subject to the additional direction and requirements of the Nunavut Water Board (NWB), the Proponent shall: a) Conduct an evaluation of the potential aquatic effects to Lakes D1 and D5 and downstream that may result from the discharge of treated effluent. The evaluation will include: ▪ Additional water quality and phytoplankton baseline data in Lakes D1 and D5 ▪ Updated water balance and water quality forecast ▪ Updated near field and far field effluent discharge modelling ▪ Updated Water Management Plan, Water Quality and Flow Monitoring Plan, b) Provide adequate rationale for the need to use the alternative discharge contingency, based on the thresholds established as per the Whale Tail Pit Expansion Project water management decision tree. c) In the event that discharge to Lakes D1 and/or D5 is not approved to proceed by the NWB, the Proponent will develop alternative effluent management plans as part of the Water Management Plan. At least 90 days prior to any decision to use the effluent discharge alternatives, the Proponent shall submit the requested evaluation, and rationale for use of the effluent discharge alternatives to the Nunavut Water Board, the Nunavut Impact Review Board (NIRB) and relevant regulatory authorities, for approval to proceed with discharge to one or both of Lakes D1 and D5. If the alternative discharge contingency is approved to proceed, the Proponent will submit the results of its monitoring annually to the NIRB.	4.4.4
NIRB Project Certificate No.008, Condition 68	The Proponent shall maintain an up-to-date listing of the status of implementation for its commitments made during the Nunavut Impact Review Board's (NIRB) assessment of the Whale Tail Pit Project Proposal and the Whale Tail Pit Expansion Project Proposal through engagement of parties and active monitoring of associated implementation. The Proponent shall provide a status report on the implementation of all its commitments within three (3) months of issuance of the Project Certificate for the Whale Tail Pit Expansion Proposal and annually thereafter within its annual report to the NIRB.	11.12
NIRB Project Certificate No.008 Item 5	The Proponent must obtain all required federal and territorial permits and other approvals, and shall comply with the requirements of such regulatory instruments.	SECTION 1
NIRB Project Certificate No.008 Item 6	The Proponent shall take prompt and appropriate action to remedy any occasion of non-compliance with environmental laws and regulations and/or regulatory instruments, and shall report any non-compliance as required by law immediately. A description of all instances of non-compliance and associated follow up is to be reported annually to the NIRB.	11.6.2
NIRB Project Certificate No.008 Item 7	The Proponent shall meet with respective licensing authorities prior to the commencement of construction to discuss the posting of adequate performance bonding. Licensing authorities are encouraged to take every measure to require that sufficient security is posted before construction begins.	9.2.2
NIRB Project Certificate No.008 Item 8	All monitoring information collected pursuant to the Project Certificate and various regulatory requirements for the Project shall, if appropriate, given the type of monitoring conducted, contain the following information: a) The name of the person(s) who performed the sampling or took the measurements including	SECTION 8

Whale Tail Site - NIRB		
Authorization Reference	Reporting Requirement	Report Section
	any relevant accreditations;	
	b) The date, time and place of sampling or measurement, and weather conditions;	
	c) The date of analysis;	
	d) The name of the person(s) who performed the analysis including any relevant accreditations;	
	e) A description of the analytical methods or techniques used; and	
	f) A discussion of the results of any analysis.	
NIRB Project Certificate No.008, Item 9	The Proponent shall make significant monitoring results and/or summaries of significant results available in English, Inuinnaqtun, and Inuktitut, to the extent feasible.	10.3.2
NIRB Project Certificate No.008 Item 10	The Proponent shall keep and maintain the records, including results, of all Project-related monitoring data and analysis for the life of the Project, including closure and post-closure monitoring.	SECTION 8
NIRB Project Certificate No.008 Item 11	The Proponent shall maintain the Environmental Impact Statement and the environmental monitoring programs developed for the Project, with predictions updated as new baseline data is collected. If the results of monitoring programs necessitate updates to effects predictions, the Proponent shall update the associated management programs and plans as required to address or reflect the updated assessment of effects.	SECTION 12
NIRB Project Certificate No.008, Item 12	The Proponent shall establish a publicly-accessible Project-specific web portal or web page to make available in a central location all significant non-confidential monitoring and reporting information submitted to regulatory authorities pursuant to the Project Certificate and other territorial or federal permits issued for the Project. For clarity, posting on the Project-specific site does not replace any reporting obligation of the Proponent pursuant to the Project Certificate or any territorial or federal permit.	11.9.7
NIRB Project Certificate No.008, Item 13	The Proponent is encouraged to provide on-going opportunities for consultation and comment on any substantive revisions to the Project-specific monitoring program, modelling, studies, management plans, management measures, and reporting under the Project Certificate.	10.2.2

Table 1-5 Meadowbank List of Reporting Requirements for DFO, CIRNAC and KivIA

Meadowbank Site – DFO, CIRNAC and KivIA		
Authorization Reference	Reporting Requirement	Report Section
DFO Authorizations NU-03-0191.3 Condition 3.1, NU-03-0191.4 Condition 3.1; NU-03-0190 Condition 5, NU-14-1046 Condition 3	Submit written report summarizing monitoring results and photographic record of works and undertakings.	8.5
DFO Authorization NU-03-0191.3 Condition 3.1	The Proponent shall undertake monitoring and report to DFO annually, by March 31 st , whether works, undertakings, activities, or operations for the mitigation of potential impacts to fish and fish habitat were conducted according to the conditions of this Authorization.	8.5.1.1
DFO Authorization NU-03-0191.4 Condition 3.1	The Proponent shall undertake monitoring and report to DFO annually, by December 31 st , whether works, undertakings, activities, or operations for the mitigation of potential impacts to fish and fish habitat were conducted according to the conditions of this Authorization.	8.5.1.1
DFO Authorization 14-HCAA-01046 Condition 3.1	The Proponent shall monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization and report to DFO, by March 31 annually and indicate whether the measures and standards to avoid and mitigate serious harm to fish were conducted according to the conditions of this authorization.	8.5.1.1
DFO Authorizations NU-03-0190 Condition 5.3	A photographic record of before, during and after construction, during decommissioning and after restoration, showing that all works and undertakings have been completed according to the approved Plan and conditions of this authorization [...]	8.5.5.1
DFO NU-03-0190	Creel survey results.	8.16

Meadowbank Site – DFO, CIRNAC and KivIA		
Authorization Reference	Reporting Requirement	Report Section
AWPAR Condition 5.2.4		
DFO Authorizations NU-03-0191.3 Condition 3 and 6 (Second and Third Portage Lakes), NU-03-0191.4 (Vault Lake) Condition 3 and 6; NU-03-0190 Condition 5 (AWPAR), NU-14-1046 (Phaser Lake) Condition 3 and 5	Submit written report summarizing monitoring results and photographic record of works and undertakings.	8.8.1
CIRNAC Land Lease 66A/8-71-3 Condition 23	The Lessee shall submit to the Minister no later than November 1 st , 2025, and every three (3) years thereafter, an updated Closure and Reclamation Plan and cost estimates thereof.	9.2.1.2
CIRNAC Land Lease 66A/8-71-3 Condition 35	The Lessee shall file annually a progress report for the preceding year outlining the ongoing reclamation completed in conformance with the approved Closure and Reclamation Plan.	9.1.1.2
CIRNAC Land Lease 66A/8-72-6 Condition 8	The lessee shall file a report, annually ...	3.4.1.1
	i. Quantity of material removed and location of removal, for the immediately preceding calendar year	
	ii. Such other data as are reasonably required by the Minister from time to time.	
CIRNAC Land Lease 66A/8-72-6 Condition 25	The lessee shall file, annually, a report for the preceding year, outlining the ongoing borrow area operations completed in conformity with the approved Borrow Management Plan, as well as any variations from the Plan.	3.4.1.1
CIRNAC Quarry Lease 66A/8-72-6 Condition 33	The lessee shall file annually a report for the preceding year, outlining ongoing restoration completed in conformity with C&R Plan, as well as any variations from the said Plan.	9.1.1.3
CIRNAC Land Lease 66A/8-72-6 Condition 37	The lessee shall submit to the Minister every 2 years after the commencement date of this lease, a report describing cumulative variations from the C&R Plan with updated cost estimates.	9.2.1.2
KivIA ROW KVRW06F04 Condition 16	Agnico Eagle shall submit to KIA on March 31, 2009, and no later than March 31 st of every second year thereafter, a report describing any variations from the Closure and Reclamation Plan and updated cost estimates.	9.2.1.2
KivIA ROW KVRW06F04 Condition 28	Agnico Eagle shall file annually, no later than March 31 st of each year, a progress report for the preceding year, outlining any ongoing restoration completed, in conformity with the Closure and Reclamation Plan.	9.1.1.2
KivIA Quarry Lease KVCA06Q11, Condition 14	AEM shall conduct reclamation activities during the first 12 months of the term of this Permit in accordance with the Reclamation Plan attached as Schedule 3. AEM shall annually thereafter submit to KIA a Reclamation Plan detailing the proposed reclamation activities for the upcoming year. Such Plans shall be subject to the approval of KIA and will form part of this Permit. AEM shall conduct reclamation in accordance with the approved Reclamation Plans.	9.1.1.3
KivIA Quarry Lease KVCA23Q01, Condition 19	The Permittee shall conduct reclamation activities during the first twelve (12) months of the term of this Permit in accordance with the Meadowbank Interim Closure and Reclamation Plan attached in Schedule 3. The Permittee shall annually thereafter submit to the Association an Interim Closure and Reclamation Plan detailing the proposed reclamation activities for the upcoming year. Such plans shall be subject to the approval of the Association and will form part of this Permit. The Permittee shall conduct reclamation in accordance with the approved Plans.	9.1.1.3
KivIA KVPL08D280 Condition 6.01 (9)	Plan detailing the activities taken in the last year and to be undertaken in the next year and planned for the balance of the Term, that includes, but is not limited to the proposed methods and procedures for progressive reclamation.	9.1.1.1

Table 1-6 Whale Tail List of Reporting Requirements for DFO, CIRNAC and KivIA

Whale Tail Site - DFO, CIRNAC and KivIA		
Authorization Reference	Reporting Requirement	Report Section
DFO Authorization 16-HCAA-00370 Condition 2.3.5, 20-HCAA-00275 Condition 2.3.9	As per the NIRB Project Certificate No. 008 Condition 21, the Proponent shall ensure that all project infrastructure in watercourses is designed and constructed in such a manner that it does not unduly prevent or limit the movement of water or fish species in fish streams and rivers, unless otherwise authorized by Fisheries and Oceans Canada.	3.5.2.1
DFO Authorization 16-HCAA-00370 Condition 2.3.3, 20-HCAA-00275 Condition 2.3.8	The proponent shall develop a blasting mitigation plan in consultation with DFO to ensure effects on fish and fish habitat are minimized, as per Nunavut Impact Review Board Project Certificate No. 008 Condition 22. The Blasting mitigations plan shall be submitted to DFO prior to construction for approval, and shall adhere to the guidance provided in the Monitoring Explosive-Based Winter Seismic Exploration in Waterbodies, NWT 2000-2002	8.6.2
DFO Authorization 16-HCAA-00370 Condition 2.4, 20-HCAA-00275 Clause 2.3.7	The proponent shall provide a final fish-out plan to DFO at least three weeks prior to commencing the fish-out program to allow for review and approval	8.11.2
DFO Authorization 16-HCAA-00370, Condition 2.4.1, 20-HCAA-00275 Condition 2.3.5	The Proponent shall provide detailed engineering plans to DFO for review and approval, for construction works that have potential to impact fish and fish habitat, at least 3 months prior to commencement of the works. This includes dikes (e.g., Northeast dike), diversion/realignment channels, and freshwater jetty.	3.5.2.1
DFO Authorization 16-HCAA-00370 and 20-HCAA-00275 Condition 3.1	The Proponent shall monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization, and provide a stand-alone report to DFO, by March 31, annually and indicate whether the measures and standards to avoid and mitigate serious harm to fish were conducted according to the conditions of this authorization	8.5.1.2
DFO Authorization 16-HCAA-00370 Condition 3.1.1	The report in addition to the above shall summarize the monitoring results related to fish and fish habitat contained in the documents listed in section 2.3. The report shall include a description of the implementation as well as an evaluation of the effectiveness of those monitoring programs in validating the changes to fish and fish habitat predicted in the Proponent's Environmental Impact Statement	8.5.1.2
DFO Authorization 20-HCAA-00275 Condition 3.1.1	Demonstration of effective implementation and functioning: Providing dated photographs and inspection reports to demonstrate effective implementation and functioning of mitigation measures and standards described above to limit the impacts to fish and fish habitat to what is covered by this authorization.	8.5.1.2
DFO Authorization 20-HCAA-00275 Condition 3.1.2	Contingency measures: Providing details of any contingency measures that were followed, to prevent impacts greater than those covered by this authorization in the event that mitigation measures did not function as described.	8.5.1.2
DFO Authorization 16-HCAA-00370 Condition 3.1.2, 20-HCAA-00275 Condition 3.2.1	Each year, following the submission of the annual monitoring report to DFO, the Proponent shall arrange to meet with DFO and interested parties (e.g. Kivalliq Inuit Association) to review the results of the previous year's monitoring programs. The results of the meetings and any mutually agreed upon modifications aimed at improving the effectiveness of the monitoring programs shall be incorporated into the upcoming year of the monitoring programs. The Proponent shall update the monitoring programs/plans to reflect the changes, and the programs/plans shall be approved in writing by DFO prior to implementation.	8.5.1.2
DFO Authorization 16-HCAA-00370 Condition 3.1.3	The annual monitoring report shall provide dated photographs with GPS coordinates and description of locations and inspection reports to demonstrate effective implementation and functioning of mitigation measures and standards described above to limit the serious harm to fish to what is covered by this authorization.	8.5.1.2
DFO Authorization 16-HCAA-00370 Condition 3.1.4	The annual monitoring report shall also provide details of any contingency measures that were followed to prevent impacts greater than those covered by this authorization in the event that mitigation measures did not function as described.	8.5.1.2
DFO Authorization 16-HCAA-00370 Condition 3.2.1	All fish-out results shall be provided to DFO in a fish-out monitoring report within 2 months of the completion of a fish-out program. In addition, the Proponent shall provide DFO with photocopies of all field data/notes, copies of photographs with GPS coordinates and an electronic database of data collected and result of all sample analyses. This condition shall be followed in accordance with the General Fish-out Protocol for Lakes and Impoundments in the	8.11.2

Whale Tail Site - DFO, CIRNAC and KivIA		
Authorization Reference	Reporting Requirement	Report Section
	Northwest Territories and Nunavut.	
DFO Authorization 16-HCAA-00370 Condition 4.2.1.2	The Proponent shall provide updated research plans with detailed methodologies for projects listed under conditions 4.2.2.1a, b, c and d. Each updated plan shall be provided to DFO for approval on or before December 31, 2018, and at least 60 days prior to commencement of research.	8.8.2.4
DFO Authorization 16-HCAA-00370 Condition 4.2.1.3	The proponent shall initiate a literature review no later than November 2018, and provide the results of this review to DFO no later than February 28, 2019. This shall include an outline of the proposed studies by February 28, 2019, and a complete detailed research plans by December 31, 2019.	8.8.2.4
DFO Authorization 16-HCAA-00370 Condition 4.2.1.4	To serve as an advisory group for the complementary measures that shall be undertaken as listed under condition 4.2.2.1, the Proponent shall establish a Meadowbank Fisheries research Advisory Group (MFRAG). The MFRAG membership shall include DFO and the Proponent, an independent third-party research advisor, any interested Inuit organizations within the Kivalliq Region, and other agencies or interested parties considered appropriate by MFRAG members. The proponent shall develop a draft terms of reference and participant list for this advisory group which shall be provided to DFO by September 1, 2018.	8.9
DFO Authorization 16-HCAA-00370 Condition 4.2.1.6	The proponent shall make all effort to ensure that the results from the research projects conducted for the complementary measures are published in peer-reviewed scientific journals	8.8.2.4
DFO Authorization 16-HCAA-00370 Condition 5.1.1.2	The proponent shall provide an updated Whale Tail Pit Fish Habitat Offset Monitoring Plan, prepared by Agnico Eagle Mines Ltd. To DFO for review and approval on or before December 31, 2018. This update shall include, but is not limited to, details on the monitoring methods, frequency of monitoring, sampling location and criteria for success.	8.8.2.2
DFO Authorization 16-HCAA-00370 Condition 5.1.1.3	The proponent shall develop a schedule for the implementation of the offsetting measures and shall provide this schedule to DFO no later than December 31, 2019.	8.8.2.2
DFO Authorization 16-HCAA-00370 Condition 5.1.1.4:	The Proponent shall provide an annual Whale Tail Pit Fish Habitat Offset Monitoring Report to DFO (and interested parties) following the construction of the offsetting habitat by March 31. The Proponent is required to provide the Whale Tail Pit Fish Habitat Monitoring Report until DFO indicates this requirement has been met	8.8.2.2
DFO Authorization 16-HCAA-00370 Condition 5.1.1.5 and 20-HCAA-00275 Condition 5.2.2	As part of the annual Whale Tail fish Habitat Offset Monitoring Report, the Proponent shall include, but not limited to:	8.8.2.2
	- a digital photographic record with GPS coordinates of pre-construction, during construction and post construction conditions shall be compiled using the same vantage points and direction to show that the approved works have been completed in accordance with the offsetting plan	
	- a summary of field observations for each respective year as well as as-built survey	
	- a detailed analysis report summarizing the effectiveness of the offsetting measures	
DFO Authorization 16-HCAA-00370 Condition 5.1.1.6	Each year, following the submission of the annual Whale Tail Pit Fish Habitat Offset Monitoring Report to DFO, the Proponent shall arrange to meet with DFO and interested parties (e.g., KIA) to review the results of the previous year of the monitoring program. The results of the meetings and any mutually agreed upon modifications aimed at improving the effectiveness of the offsetting monitoring program shall be incorporated into the upcoming year of the monitoring programs. The Proponent shall update the Whale Tail Pit Fish Habitat Offset Monitoring Plan, to reflect the changes, and the plans shall be approved in writing by DFO prior to implementation	8.8.2.3
DFO Authorization 16-HCAA-00370 Condition 5.2.1	As required by DFO Authorization 16HCAA-00370 Condition 5.2.1: The Proponent shall monitor to validate Agnico Eagle Mines Ltd.'s Habitat Suitability Index (HSI). The monitoring shall be conducted to the satisfaction of DFO. Where appropriate, the HSI will incorporate additional knowledge generated by the complementary measures research projects under section 4.2.2, in particular research project 4.2.2.1c, and adjust the Habitat Evaluation Procedure (HEP) model according to the results generated. The HSI will be used to refine, as necessary, the performance end-points in habitat units for offsetting	8.8.2.1
DFO Authorization 20-HCAA-00275 Condition 5.2.1	The Proponent shall provide a Whale Tail Expansion Fish Habitat Offset Monitoring Report to DFO including geotechnical and biological and ecological monitoring as per section 5.1.1. The Proponent is required to provide the Report by March 31 of 2027 and update annually for 10 years or until DFO indicates requirements of this Authorization have been met	8.8.2.2

Whale Tail Site - DFO, CIRNAC and KivIA		
Authorization Reference	Reporting Requirement	Report Section
DFO Authorization 20-HCAA-00275 Condition 5.2.3	The Proponent shall provide a summary report of all Whale Tail Expansion Fish Habitat Offset Monitoring Reports described in section 5.2.1 before March 31, 2036, to DFO (and interested parties) which shall analyse results from the offsetting measures of the Whale Tail Expansion Project following the construction of the offsetting habitat. DFO reserves the right to request additional Summary Report if annual reporting were to continue until requirement has been met.	8.8.2.2
DFO Authorization 20-HCAA-00275 Condition 5.3.2	The Proponent shall monitor to validate Agnico Eagle Mines Ltd.'s Habitat Suitability Index (HSI). The monitoring shall be conducted to the satisfaction of DFO. Where appropriate, the HSI will incorporate additional knowledge generated by the monitoring plans and complementary measures research projects of the Approved Project (PATH No.: 16-HCAA-00370) and adjust the Habitat Evaluation Procedure (HEP) model according to the results generated. The HSI will be used to refine, as necessary, the performance endpoints in habitat units for offsetting	8.8.2.1
CIRNAC Land Lease 66H/8-1-5, Condition 9	The lessee shall file, annually, with the Minister in the manner and format stipulated, no later than sixty (60) days following the anniversary date of the effective date of this lease. The report shall include:	3.4.2.1
	i. Quantity of material removed and location of removal, for the immediately preceding calendar year; and	
	ii. Such other data as are reasonably required by the Minister from time to time.	
CIRNAC Land Lease 66H/8-1-5, Condition 27	The lessee shall file, annually, a report for the preceding year, outlining the ongoing borrow area operations completed in conformity with the approved Borrow Management Plan, as well as any variations from the Plan.	3.4.2.1
CIRNAC Land Lease 66H/8-1-5 Condition 66	If an archaeological site is discovered with the Land, the lessee shall immediately advise the Minister and the Territorial Archaeologist in writing.	8.20.1
CIRNAC Land Lease 66H/8-1-5, Condition 35	The lessee shall file annually a report for the preceding year, outlining ongoing restoration completed in conformity with the approved Abandonment and Restoration Plan, as well as any variations from the said Plan.	9.1.2.3
CIRNAC Land Lease 66H/8-2-1, Condition 25	The lessee shall file annually a report for the preceding year, outlining ongoing restoration completed in conformity with the approved Abandonment and Restoration Plan, as well as any variations from the said Plan.	11.7.1.2
CIRNAC Road lease 66H/8-2-1 Condition 60	The lease shall before the first (1 st) day of September in each and every year during the term of the lease, provide to the Minister, a report of that year's road activities. The report shall include, but not limited to:	11.7.1.2
	(a) total number of loads hauled in that year	
	(b) total road operating cost for that year	
CIRNAC Road lease 66H/8-2-1 Condition 63	The lessee agrees to monitor and report unauthorized non-mine use of the road, and collect and report this data to the Minister, who shall make this report accessible to the Nunavut Impact Review board, one (1) year after the road is opened and annually thereafter.	11.7.1.2
CIRNAC Road lease 66H/8-2-1 Condition 64	The lessee agrees to report any information received, including accidents or others safety incidents on the road, including the locked gates, to the minister, who shall make this information accessible to the GN, KIA a, the Hamlet of Baker Lake immediately.	11.7.2.2
CIRNAC Road lease 66H/8-2-1 Condition 65	The lessee shall give notice of any closure of the road to the Minister and the reasons thereof and post any notice of closure at the access point and along the road.	11.7.2.2.1
KivIA Production Lease KVPL17D01 Condition 6.01 (10)	Deliver to KIA, not later than March 31, 2022, and not later than March 31 st every three (3) years thereafter, a Conceptual Reclamation and Closure Plan and Reclamation Estimate, detailing the reclamation and remediation activities taken in the last three (3) years and to be undertaken in the next three (3) years and planned for the balance of the Term. That includes, but not is not limited to the proposed methods and procedure for the progressive [...]	9.1.2.1
KivIA Quarry Lease KVCA15Q02, Condition 14	AEM shall conduct reclamation activities until November 22, 2018, in accordance with the Reclamation Plan attached Schedule 3. AEM shall annually thereafter submit to KIA a Reclamation Plan detailing the proposed reclamation activities for the upcoming year.	9.1.2.3
KivIA Quarry Lease KVCA18Q01,	The permittee shall conduct reclamation activities during the first twelve months of the term of this Permit in accordance with the Reclamation Plan attached as Schedule 3. The permittee	9.1.2.3

Whale Tail Site - DFO, CIRNAC and KivIA		
Authorization Reference	Reporting Requirement	Report Section
Condition 20	shall annually thereafter submit to the Association a Reclamation Plan detailing the proposed reclamation activities for the upcoming year.	
KivIA Quarry Lease KVCA15Q01, Condition 13	The permittee shall conduct reclamation activities during the first twelve months of the term of this Permit in accordance with the Reclamation Plan attached as Schedule 3. The permittee shall annually thereafter submit to the Association a Reclamation Plan detailing the proposed reclamation activities for the upcoming year.	9.1.2.3

Table 1-7 Meadowbank Site Summary of Samples Stations^s

Meadowbank Site			
NWB Station	Description	Phase	2024 Reporting Status
ST-DC-1 to TBD	Monitoring stations during DiKE Construction as defined in Part D Item 5	Construction	Not applicable in 2024
ST-DD-1 to TBD	Monitoring stations during DiKE Dewatering as defined in Part D Item 5	Construction	Not applicable in 2024
ST-1	Water Intake for camp, mill and re-flooding	Water Intake for camp, mill and re-flooding	Section 4.1.1
ST-1W	Water Intake for re-flooding	Water Intake for camp, mill and re-flooding	Not applicable in 2024
ST-3	Water Intake for Emulsion Plant	Late operation, closure	Section 4.1.1.3
ST-4	Water reclaimed from Tailings Storage Facility	Late operation, closure	Section 4.1.1
ST-5	Portage Area (east) diversion ditch	Late operation, closure	Section 8.5.2.1.2
ST-6	Portage Area (west) diversion ditch	Late operation, closure	Section 8.5.2.1.2
ST-8	East DiKE Seepage Discharge	Late operation, closure	Section 8.5.2.1.3
ST-9	Portage Attenuation Pond prior to discharge through Third Portage Lake Outfall Diffuser	Early operation	Not applicable in 2024
ST-10	Vault Attenuation Pond prior to discharge through Wally Lake Outfall Diffuser	Late operation	Not applicable in 2024
ST-11	Tailings Storage Facility	Post closure	Not applicable in 2024
ST-12	Portage/ Goose Pit Lake	Post closure	Not applicable in 2024
ST-13	Vault Pit Lake	Post closure	Not applicable in 2024
ST-14	Discharge to the land from Landfarm sump at mine site	Late operation, closure	Section 8.5.2.1.23
ST-16	Portage Rock Storage Facility	Late operation, closure	Section 8.5.2.1.7
ST-17	North Portage Pit Sump	Operations	Not applicable in 2024
	Portage Pit Lake Reclaim Water	Late operation, closure	Section 8.5.2.1.8
ST-19	South Portage Pit Sump	Early operations	Not applicable in 2024
	Portage Pit Lake Reclaim Water	Late operations	Section 8.5.2.1.9
ST-20	Goose Island Pit Sump	Early operations	Section 8.5.2.1.10
	Goose Pit Lake Reclaim Water	Late operations, closure	Section 8.5.2.1.10
ST-21	Tailings Storage Facility	Late operations	Section 8.5.2.1.11
ST-22	Tailings Storage Facility	Closure (drainage runoff)	Not Applicable in 2024
ST-23	Vault Pit Sump	Late operations	Not Applicable in 2024
ST-24	Vault Rock Storage Facility	Late operation, closure	Section 8.5.2.1.13
ST-25	Vault Attenuation Pond	Late operation	Section 8.5.2.1.14
ST-26	Vault Pit Lake	Closure	Section 8.5.2.1.12
ST-30	WEP 1	Late operations, closure	Section 8.5.2.1.15
ST-31	WEP 2	Late operations, closure	Section 8.5.2.1.15
ST-32	Saddle Dam 3	Late operations, closure	Section 8.5.2.1.16
ST-S-1 to TBD	Seeps (to be determined)	Late operations, closure	Sections 8.5.2.1.4, 8.5.2.1.17, 8.5.2.1.18

Meadowbank Site			
NWB Station	Description	Phase	2024 Reporting Status
ST-GW-1 to TBD	Groundwater wells (to be determined)	Late operations, closure	Section 8.7.1
ST-AEMP-1 to TBD	Receiving AEMP	Late operations, closure	Section 8.12
ST-MMER-1 to TBD	Vault, East dike and Portage effluent outfall	Late operations	Section 8.3.1
ST-37	Secondary containment sump at the Bulk Fuel Storage Facility at Meadowbank	Late operation, closure	Sections 8.5.4.1
ST-37.1	Secondary containment sump at the Bulk Fuel Storage Facility at Meadowbank	Late operation, closure	Sections 8.5.4.1
ST-38	Secondary containment at the Bulk Fuel Storage Facility in Baker Lake - Jet-A containment	Late operation, closure	Sections 8.5.4.2
ST-40.1	Secondary containment sump at the Bulk Fuel Diesel Storage Facility in Baker Lake (Fuel tanks 5&6)	Late operation, closure	Sections 8.5.4.2
ST-40.2	Secondary containment sump at the Bulk Fuel Diesel Storage Facility in Baker Lake (Fuel tanks 1-4)	Late operation, closure	Sections 8.5.4.2
ST-40.3	Secondary containment sump at the Bulk Fuel Diesel Storage Facility in Baker Lake (Fuel tanks 7-8)	Late operation, closure	Sections 8.5.4.2
ST-41 Lake	Phaser Pit Lake	Late operations	Section 8.5.2.1.19
ST-42 Lake	BB Phaser Pit Lake	Late operations	Section 8.5.2.1.20
ST-43	Phaser Attenuation Pond	Late operations	Section 8.5.2.1.21
ST-44	AWAR KM87	Late operation, closure	Section 8.5.2.1.22

Table 1-8 Whale Tail Site Summary of Samples Stations^s

Whale Tail Site			
NWB Station	Description	Phase	2024 Reporting Status
ST-WT-DC-1 to TBD	Monitoring stations during Dike Construction as defined in Part D Item 5	Construction	Not applicable in 2024
ST-WT-DD-1 to TBD	Monitoring stations during Dike Dewatering as defined in Part D Item 5	Construction	Not applicable in 2024
ST-WT-S-1 to TBD	Seeps (to be determined)	Operations	Not applicable in 2024
		Closure	Not applicable in 2024
ST-WT-GW-1 to TBD	Groundwater wells (to be determined) as required under Groundwater Monitoring Plan	Operations	Section 8.7.2
		Closure	Not applicable in 2024
ST-WT-1	Attenuation Pond, pre-treatment	Operations	Section 8.5.2.2.1
ST-WT-2	Attenuation Pond, post-treatment; last point of control before discharge to Kangislulik Lake via the West Diffuser	Operations	Not applicable in 2024
ST-WT-2a	Attenuation Pond, post-treatment; last point of control before discharge to Kangislulik Lake via the East Diffuser	Operations	Section 8.5.2.2.15.1
ST-WT-2b	Attenuation Pond, post-treatment; last point of control before discharge to Kangislulik Lake via the Winter Diffuser	Operations	Not applicable in 2024
		Operations	Not applicable in 2024
ST-WT-3	Waste Rock Storage Facility (WRSF) Pond prior to pumping to Attenuation Pond	Operations	Section 8.5.2.2.3
	Waste Rock Storage Facility (WRSF) Pond prior to discharge to Kangislulik Lake	Closure	Not applicable in 2024
ST-WT-4	Whale Tail Pit or pit sump	Post-Closure	Not applicable in 2024
ST-WT-5	Water Intake from Nemo Lake	Operations	Section 8.5.2.2.4
ST-WT-6	Lake A47	Construction	Sections 4.1.2.1
		Operations	Section 8.5.2.2.6
		Closure	

Whale Tail Site			
NWB Station	Description	Phase	2024 Reporting Status
ST-WT-7	East diversion channel	Operations	Not applicable in 2024
ST-WT-8	Water Intake from Whale Tail Lake	Closure	Not applicable in 2024
ST-WT-9	North Whale Tail Lake (as the basin fills and when it is connected to the south basin and prior to or when connected to the downstream environment)	Closure Post-Closure	Not applicable in 2024
ST-WT-10	Pit Lake (as the Pit fills)	Closure Post-Closure	Not applicable in 2024
ST-WT-11	Sewage Treatment Plant	Operations Closure	Section 8.5.3.2
ST-WT-12	Secondary containment at Whale Tail Bulk Fuel Storage Facility	Operations Closure	Section 8.5.4.3
ST-WT-13	Lake A45	Operations Closure	Section 8.5.2.2.7
ST-WT-14	Lake A16 outlet	Construction Operations Closure	Section 8.5.2.2.8
ST-WT-15	Lake A15	Construction Operations Closure	Section 8.5.2.2.9
ST-WT-16	Secondary containment at Whale Tail Bulk Fuel Storage Facility Power Plant	Operations Closure	Section 8.5.4.3
ST-WT-17	Whale Tail Dike Seepage	Operations Closure	Section 8.5.2.2.10
ST-WT-18	IVR Pit or IVR Pit sump	Operations	Section 8.5.2.2.5
ST-WT-19	IVR Pit Lake (as the pit fills)	Closure and post-closure	Not applicable in 2024
ST-WT-20	Groundwater Storage Pond 1 (GSP-1)	Operations	Section 8.5.2.2.16
ST-WT-21	Groundwater Storage Pond 2 (GSP-2)	Operations	Not applicable in 2024
ST-WT-22	Groundwater Storage Pond 3 (GSP-3)	Operations	Not applicable in 2024
ST-WT-23	IVR Attenuation Pond, pre-treatment	Operations Closure	Section 8.5.2.2.2
ST-WT-24	IVR Attenuation Pond, post-treatment; last point of control before discharge to Whale Tail South Basin via the Permanent Diffuser	Operations	Section 8.5.2.2.15.2
ST-WT-24a	Whale Tail Attenuation Pond, post-treatment; last point of control before discharge to Whale Tail South Basin via the Temporary Diffuser	Operations	Not applicable in 2024
ST-WT-25	Whale Tail Pit Lake (North Wall)	Closure	Not applicable in 2024
ST-WT-26	Whale Tail South Water Transfer to Kangislulik Lake Permanent Diffuser	Construction	Not applicable in 2024
ST-WT-26a	Whale Tail South Water Transfer to Kangislulik Lake Temporary Diffuser	Construction	Not applicable in 2024
ST-WT-27	Discharge from Landfarm	Operations Closure	Section 8.5.2.2.17
ST-WT-28	IVR WRSF Pond prior to pumping to Attenuation Pond	Operations Closure	Section 8.5.3.2.13
ST-WT-29	Water intake from Lake D1	Closure	Not applicable in 2024
ST-WT-30	Water Ponding around Whale Tail WRSF	Operations Closure Post-closure	Section 8.5.3.2.12
ST-WT-31	Water Ponding around Whale Tail WRSF	Operations Closure Post-closure	Section 8.5.2.2.12
ST-WT-32	Water Ponding around Whale Tail WRSF	Operations Closure Post-closure	Section 8.5.2.2.12
ST-WT-33	Water Ponding around Whale Tail WRSF	Operations Closure	Section 8.5.2.2.12

Whale Tail Site			
NWB Station	Description	Phase	2024 Reporting Status
		Post-closure	
ST-WT-34	Water Ponding around IVR WRSF	Operations Closure Post-closure	Section 8.5.2.2.13
ST-WT-35	Water Ponding around IVR WRSF	Operations Closure Post-closure	Section 8.5.2.2.13
ST-WT-36	Water Ponding around IVR WRSF	Operations Closure Post-closure	Section 8.5.2.2.13
ST-WT-37	IVR Diversion Channel	Operations	Section 8.5.2.2.14
ST-WT-38	Whale Tail Underground GenSet	Operations	Section 8.5.4.3

SECTION 2. SUMMARY OF ACTIVITIES

2.1 2024 ACTIVITIES^{\$}

Agnico Eagle's strategy is to deliver high quality growth while maintaining high performance standards in health and safety, environmental matters and social responsibility; build a strong pipeline of projects to drive future production; and employ the best people and motivate them to reach their potential. These three pillars – performance, pipeline, and people – form the basis of Agnico Eagle's success and competitive advantage. By delivering on them, the Company strives to continue to build its production base and generate increased value for shareholders, while making meaningful contributions to its employees and communities.

In 2024, Meadowbank produced 504,719 ounces of gold at total cash costs per ounce of \$938. In 2025, the Company expects production at Meadowbank to be between 485,000 and 505,000 ounces at total cash costs per ounce of approximately \$1,022. Despite the delays related to an extended caribou migration and excessive rainfall, the open pit operation continued to deliver solid performance during the fourth quarter of 2024. The Company continues to account for the caribou migration in its production plan as this migration can affect the ability to move materials on the roads between Whale Tail and the Meadowbank mine sites and between the Meadowbank mine site and Baker Lake. The Company expects that Whale Tail underground will contribute approximately 160,000 ounces of gold to Meadowbank's production in 2025. In the full year 2024, gold production increased when compared to 2023 primarily due to higher gold grades as expected under the mine sequence and higher throughput, as the comparative period was affected by unplanned downtime at the SAG mill and unplanned shutdowns of the Whale Tail Haul Road due to caribou migration patterns.

Production costs per tonne decreased when compared to the prior-year periods due to a higher volume of ore milled and a build-up in stockpiles, partially offset by higher royalty costs. Production costs per ounce decreased when compared to the prior-year periods due to the same reasons outlined above for lower production costs per tonne and more ounces of gold being produced in the current period.

Minesite costs per tonne decreased when compared to the prior-year periods due to the same reasons as for the lower production costs per tonne. Total cash costs per ounce decreased when compared to the prior-year periods due to the same reasons outlined above for the lower production costs per ounce.

At Meadowbank Complex, the production forecast in 2025 and 2026 aligns with Previous Guidance. Production in 2027 is expected to decline as the open pit depletes, with Whale Tail's end of mine life currently expected to be in 2028. With the operational improvements realized over the last two years, the contribution from Whale Tail underground has increased and is now forecast to be approximately 160,000 ounces of gold in 2025, and approximately 130,000 ounces of gold in 2026 and 2027. The Company is exploring the possibility of extending the mine's operational life beyond 2028, focusing solely on underground production. Preliminary findings from this evaluation are expected in the first half of 2026.

The 2024 highlights for the Meadowbank Complex include:

- Ore tonnes from both open pit and underground operations were in line with forecast despite challenging conditions with heavy rainfall in October, which affected haulage productivity. The steady mine performance is a result of the productivity gains achieved through the full mining

cycle and increased adherence and compliance to plan in 2024. Production also continues to benefit from positive reconciliation on ore tonnage.

- Diamond drilling is used for exploration and conversion at Meadowbank Complex. In 2024, drilling conducted on the Amaruq property totalled 30,696 metres of conversion drilling at the Whale Tail and IVR deposits. In regional exploration drilling in 2024, a total of 10,184 metres were drilled on the Meadowbank property

Quarterly progress reports, providing further details of activities throughout the 2024 year, were prepared for the Kivalliq Inuit Association as required by Production Lease KVPL08D280 and KVPL17D01.

Agnico Eagle infrastructure locations can be found in Figures 1, 2, 3, 4, 5 and 6.

2.2 NIRB SCREENING DECISION NO. 11EN010

As requested by NIRB in the screening decision File No.11EN010, Agnico Eagle included within this annual report (Appendix 5), a comprehensive annual report of the activities associated with the project.

Figure 1 Meadowbank Site 2024 Sampling Locations^s



Figure 2 EEM Receiving Environment 2024 Sampling Locations[§]

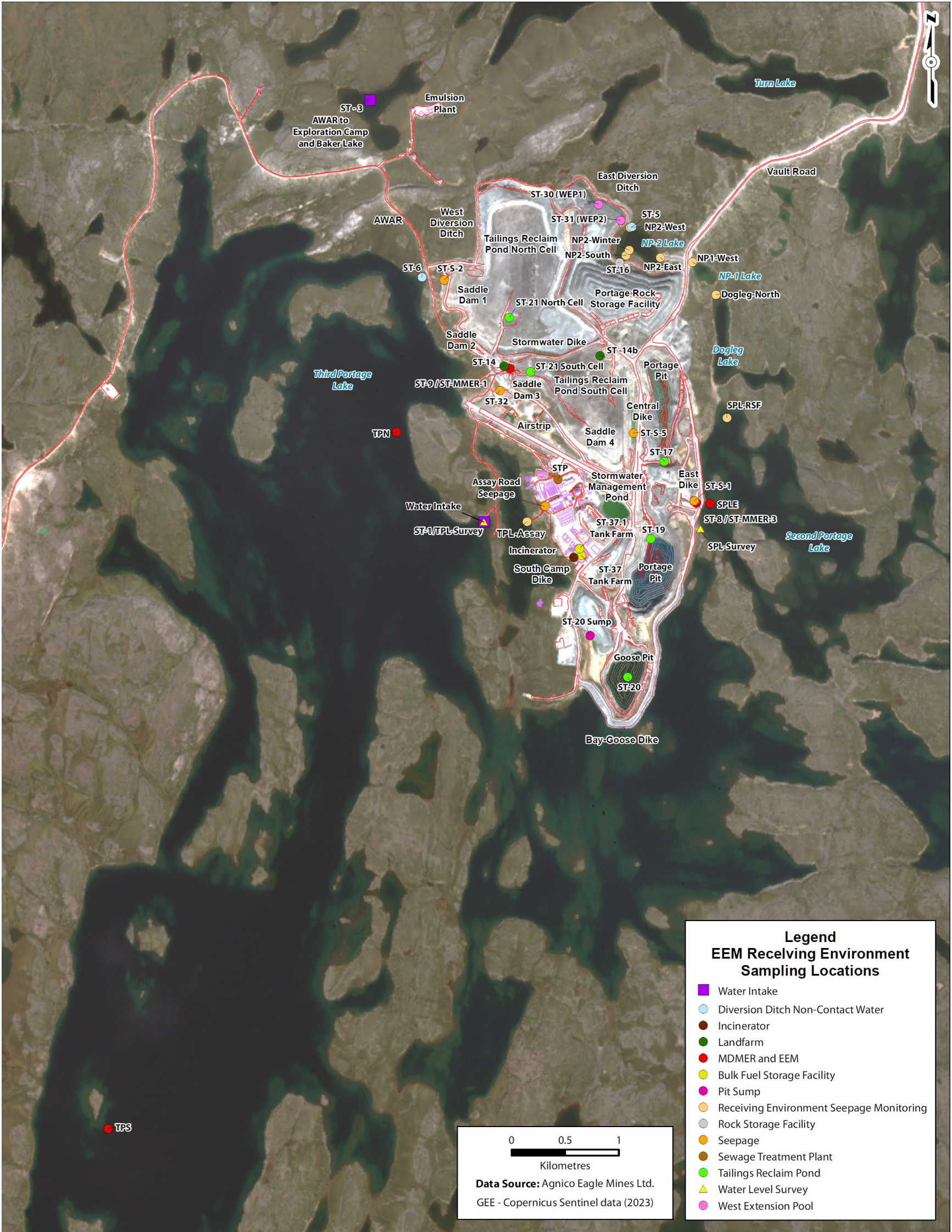


Figure 3 Vault Area 2024 Sampling Locations^s



Figure 4 Whale Tail Site 2024 Sampling Locations^s

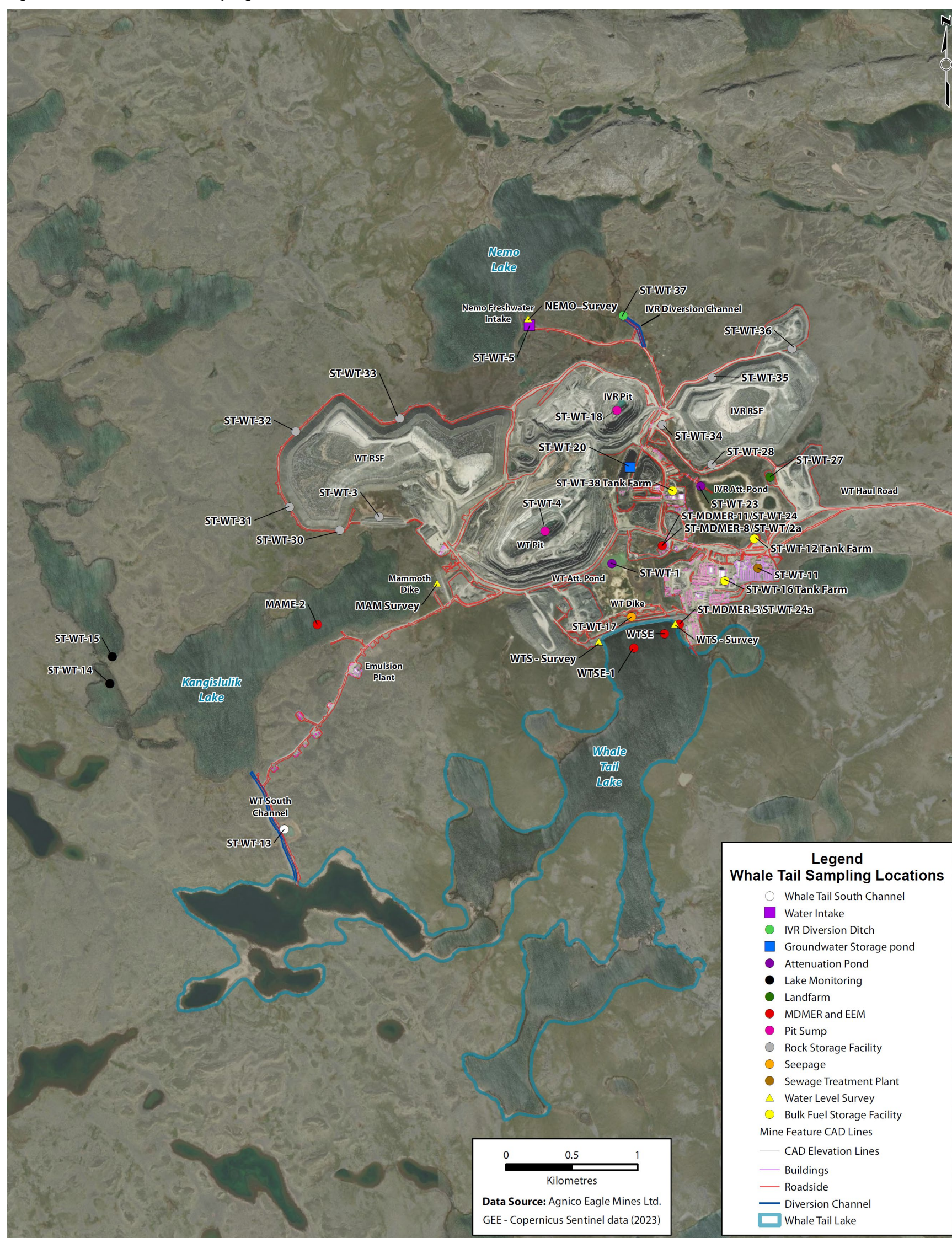


Figure 5 General View from Baker Lake to Whale Tail Site^s

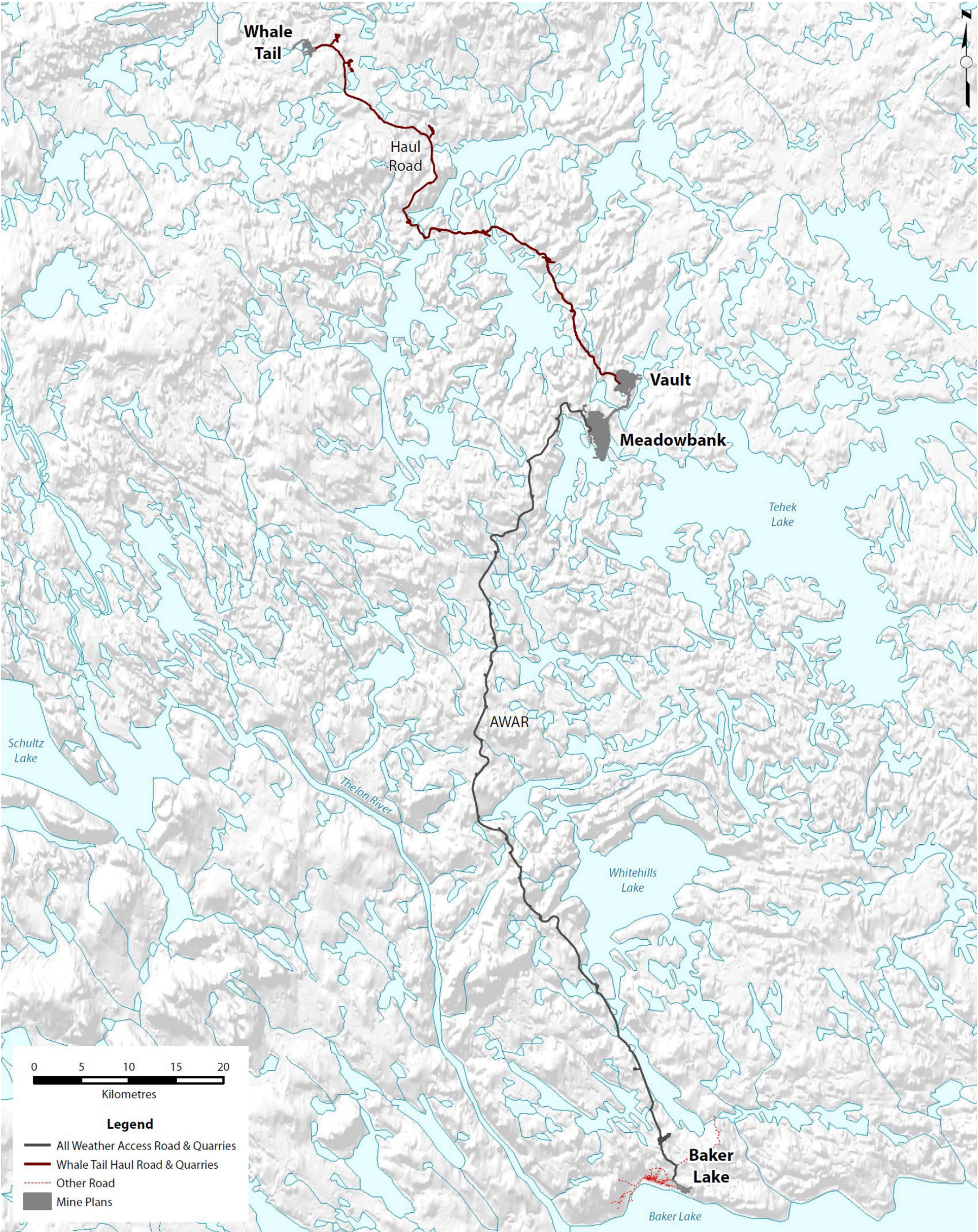


Figure 6 Baker Lake Marshalling Area 2024 Sampling Locations^s



SECTION 3. CONSTRUCTION / EARTHWORKS

The following sections discuss reporting requirements related to site construction and earthworks activities associated with dikes, dams and quarries.

3.1 DIKES AND DAMS^s

3.1.1 Meadowbank Site^s

3.1.1.1 Performance Evaluation^s

As required by NWB Water License 2AM-MEA1530, Schedule B, Item 1:

a. An overview of methods and frequency used to monitor deformations, seepage and geothermal responses;

The surveillance program for the dewatering dikes and the tailings storage facility structures includes site observation, inspection, and instrument monitoring. Details of these surveillance programs and their frequencies are presented in the surveillance section of the Tailings Storage Facility (TSF) Operation Maintenance and Surveillance (OMS) Manual (Appendix 29) and in the Dewatering Dike OMS Manual (Appendix 28).

The main surveillance activities are:

- Site observation – conducted by personnel working near or on the structure and occur as part of their daily activities;
- Routine visual inspection – conducted on a pre-defined schedule and targeting specific activities;
- Instruments monitoring – includes the review of instrumentation data including thermistors, piezometers, inclinometers, blast monitoring, seepage flow monitoring, and settlement monitoring. Instruments data are checked on a pre-determined frequency and reported on a pre-determined frequency based on the structure performance;
- Annual geotechnical inspection – comprehensive technical inspection integrating inspections and results of monitoring instruments. Done by an external geotechnical engineer on a yearly basis. Results are presented to the Independent reviewer (Meadowbank Independent Review Board);
- Independent Review Board Meeting (MIRB) - an annual MIRB meeting is held every year. The following topics are part of the annual meeting scope of work:
 - Site visit of all infrastructure covered by the scope of the MIRB;
 - Review of tailings management strategy;
 - Review water management infrastructure designs and performance;
 - Review of on-going construction works and monitoring data; and
 - Provide opinions and guidance to the operation on the physical integrity, safety, behavior, and performance of the confinement systems for tailings and water retaining infrastructures.

b. A comparison of measured versus predicted performance;

A detailed comparison and analysis of the measured versus predicted performance can be found in the 2024 Annual Geotechnical Inspection Report presented in Appendix 7. This assessment is based on visual inspection and analysis of instrumentation monitoring.

Table 3-1 presents the updated Trigger Action Response Plan (TARP) level of each dike at Meadowbank which is an indicator of measured versus predicted performance. A green level means that the performance of the structure is per normal operating condition while yellow means that performance has started to deviate from the normal operating condition. Surveillance will continue to assess the performance of the structures as per OMS practice and the surveillance data are used to evaluate the TARP level of each structure and the required action.

Table 3-1 Operating Condition of Dikes at Meadowbank[§]

Structure	Type	TARP Level	Comments
East Dike	Dewatering Dike	Green (normal operating condition)	Presence of seepage but still within normal operating condition
Bay-Goose Dike	Dewatering Dike	Yellow (deviation from normal operating condition)	Increase of temperature along the Center Line and Presence of seepage within normal operating condition
South Camp Dike	Dewatering Dike	Green (normal operating condition)	
Vault Dike	Dewatering Dike	Green (normal operating condition)	
Saddle Dam 1	Tailings Dike North Cell Periphery	Green (normal operating condition)	
Saddle Dam 2	Tailings Dike North Cell Periphery	Green (normal operating condition)	
RF1	Tailings Dike North Cell Periphery	Green (normal operating condition)	
RF2	Tailings Dike North Cell Periphery	Green (normal operating condition)	
North Cell Internal Structure	Tailings Dike North Cell Internal Structure	Green (normal operating condition)	Presence of small erosion feature on the upstream slope. Situation is stable
Stormwater Dike	Tailings Dike Internal Structure	Green (normal operating condition)	Presence of healed tension crack. Situation is stable
Saddle Dam 3	Tailings Dike South Cell Periphery	Green (normal operating condition)	
Saddle Dam 4	Tailings Dike South Cell Periphery	Green (normal operating condition)	
Saddle Dam 5	Tailings Dike South Cell Periphery	Green (normal operating condition)	
Central Dike	Tailings Dike South Cell Periphery	Yellow (deviation from normal operating condition)	Due to historically high seepage rate through bedrock foundation

More details are available in the 2024 Annual Geotechnical Inspection available in Appendix 7 and in the 2024 Meadowbank Water Management Plan Version 14 (Appendix 13).

c. A discussion of any unanticipated observations including changes in risk and mitigation measures implemented to reduce risk;

Goose Dike

The TARP level at BGD was raised to Yellow on February 27th for temperature variation along the centerline. An increase in temperature was noted in thermistor string T24 at Sta. 31+880, located within the cutoff wall of the dike. The sharp warming trends observed around elevation 130.5 to 132 were potentially indicative of seepage path development across the cutoff wall. Per the Meadowbank Dewatering Dikes OMS, (Appendix 28) inspections and monitoring frequency were carried out according to the Yellow TARP level. Thermal conditions have returned to normal conditions related to the seepage regime and movement, however, to validate the conclusions, TARP level was maintained at Yellow to have another season of increased monitoring.

d. As-built drawings of all mitigation works undertaken;

No mitigation work was performed on any dikes in 2024.

e. Any changes in the design and/or as-built condition and respective consequences of any changes to safety, water balance and water quality;

No change in design or as-built condition was done on any dikes in 2024.

f. Data collected from instrumentation used to monitor earthworks and an interpretation of that data;

Sections 3.0 and 5.0 of the 2024 Annual Geotechnical Inspection by WSP Golder, provided in Appendix 7, presents the instrumentation data collected in 2024 and their interpretation.

g. A summary of maintenance work undertaken as a result of settlement or deformation of dikes and dams; and

No maintenance work was performed on any dikes in 2024.

h. The monthly and annual quantities of seepage from dikes and dams in cubic metres;

Section 8.5.7.1 and Section 8.5.2.1 below presents the monthly quantities of seepage from dikes. More information can be found in the 2024 Meadowbank Water Management Plan Version 14 (Appendix 13).

3.1.2 Whale Tail Site^s

3.1.2.1 Performance Evaluation^s

As required by NWB Water License 2AM-WTP1830 Part I, Item 14: *The Licensee shall submit the results and interpretation of the Seepage monitoring required in Part I Item 13 in the Annual Report required under Part B, Item 2.*

And

As required by Water License 2AM-WTP1830, Schedule B, Item 1:

a. An overview of methods and frequency used to monitor deformations, Seepage and geothermal responses;

The surveillance program for the water management infrastructure includes site observation, inspection, and instrument monitoring. Details of these surveillance programs and their frequencies are presented in the surveillance section of the Whale Tail Water Management Infrastructures Operation, Maintenance, and Surveillance (OMS) Manual (Appendix 30).

The main surveillance activities are:

- Site observation – conducted by personnel working near or on the structure and occur as part of their daily activities;
- Routine visual inspection – conducted on a pre-defined schedule and targeting specific activities;
- Instruments monitoring – includes the review of instrumentation data including thermistors, piezometers, inclinometers, blast monitoring, seepage flow monitoring, and settlement monitoring. Instruments data are checked on a pre-determined frequency and reported on a pre-determined frequency based on the structure performance;
- Annual geotechnical inspection – comprehensive technical inspection integrating inspections and results of monitoring instruments. Done by an external geotechnical engineer on a yearly basis. Results are presented to the Independent reviewer (Meadowbank Independent Review Board);
- Independent Review Board Meeting (MIRB) - An annual MIRB meeting will be held every year. The following topics are part of the annual MIRB scope of work:
 - Site visit of all infrastructure covered by the scope of the MIRB;
 - Review water management infrastructure designs and performance;
 - Review of on-going construction works and monitoring data; and
 - Provide opinions and guidance to the operation on the physical integrity, safety, behavior, and performance of the confinement systems for water retaining infrastructures.

b. A comparison of measured versus predicted performance;

A detailed comparison and analysis of the measured versus predicted performance can be found in the 2024 Annual Geotechnical Inspection report presented in Appendix 7. This assessment is based on visual inspection and analysis of instrumentation monitoring.

Table 3-2 presents the updated Trigger Action Response Plan (TARP) level of each dike at the Whale Tail Site which is an indicator of measured versus predicted performance. A green level means that the performance of the structure is per normal operating condition while yellow means that performance has started to deviate from the normal operating condition. Surveillance will continue to assess the performance of the structures as per OMS practice and the surveillance data are used to evaluate the TARP level of each structure and the required action.

Table 3-2 Operating Condition of Dikes at Whale Tail^s

Structure	Type	TARP Level	Comments
Mammoth Dike	Dewatering Dike	Green (normal operating condition)	
Whale Tail Dike	Dewatering Dike	Yellow (deviation from normal operating condition)	Due to high seepage rate underneath the embankments in the foundation
WRSF Dike	Dewatering Dike	Green (normal operating condition)	
IVR Dike D1	Dewatering Dike	Green (normal operating condition)	

At Whale Tail Dike (WTD), the performance of the structure is deviating from normal operating condition due to a high seepage rate underneath the embankments in the foundation. This condition started in May 2019. Further discussion on the risk and mitigation measures is included in Section c) below.

More details are available in the 2024 Annual Geotechnical Inspection available in Appendix 7 and in the 2024 Whale Tail Water Management Plan Version 14 (Appendix 14).

c. A discussion of any unanticipated observations including changes in risk and mitigation measures implemented to reduce risk;

IVR-D1 Dike

In September 2022, the TARP level of IVR-D1 Dike was increased to yellow due to the observation of a bulk settlement zone 0.2-0.3 m in magnitude from Sta. 0+100 to Sta. 0+300. The settlement zone was 6-8 m wide and located in the esker material approximately 14m upstream of the centerline (i.e. upstream side of the key trench above the hinge point).

The settlement mechanism has been examined further and seems to be related to a surficial mechanism linked to the thawing of the esker material placed above the liner. Deformation of this esker zone will not impact the liner or the key trench. This mechanism is supported by the thermistor data indicating that the key trench and bedrock remained frozen in 2023-2024 while only the esker material within the active layer thawed. The settlement zone has not progressed since 2022 as indicated by the end of October 2023 and

June 2024 drone scan data. Following these observations the TARP level of the structure was decreased in November 2022. In 2024, the depression zone did not show further sign of settlement throughout the season, it will be levelled with material to prevent water ponding and ease the detection of any further deformation in the area in 2025.

d. As-built drawings of all mitigation works undertaken;

No mitigation work was performed on any infrastructures in 2024.

e. Any changes in the design and/or as-built condition and respective consequences of any changes to safety, water balance and water quality;

No change in design or as-built condition was done on any dikes in 2024.

f. Data collected from instrumentation used to monitor earthworks and an interpretation of that data;

Section 4.0 of the 2024 Annual Geotechnical Inspection by WSP Golder provided in Appendix 7, presents the instrumentation data collected in 2024 and their interpretation.

g. A summary of maintenance work undertaken as a result of settlement or deformation of dikes and dams; and

A small section of the downstream crest of Whale Tail Dike in the Eastern abutment zone was resurfaced in 2024 to fill tension cracks and compensate a small localized settlement zone.

h. The monthly and annual quantities of Seepage from dikes and dams in cubic metres.

This information can be found in the Whale Tail Water Management Plan Version 14 (Appendix 14) and in Sections 8.5.2.2 and 8.5.7.2 of this report.

3.2 MEADOWBANK DIKE REVIEW BOARD^s

3.2.1 Meadowbank Site^s

As required by NWB Water License 2AM-MEA1530 Part I, Item 12: The Licensee shall submit to the Board as part of the Annual Report required under Part B Item 2, all reports and performance evaluations prepared by the Independent Geotechnical Expert Review Panel.

The annual meeting of the Meadowbank Dike Review Board (now renamed MIRB for Meadowbank Independent Review Board) was held in December 2024 (MIRB 32). The MIRB No.32 report, along with Agnico Eagle's response to the recommendations are included in Appendix 15. This Appendix includes a summary table of all recommendations and the Agnico Eagle implementation plan.

3.2.2 Whale Tail Site^s

As required by NWB Water License 2AM-WTP1830 Part I, Item 12: *The Licensee shall submit to the Board as part of the Annual Report required under Part B, Item 2, all reports and performance evaluations prepared by the Independent Geotechnical Expert Review Panel.*

The annual meeting of the Meadowbank Dike Review Board (now renamed MIRB for Meadowbank Independent Review Board) was held in December 2024 (MIRB 32). The MIRB No.32 report, along with Agnico Eagle's response to the recommendations are included in Appendix 15. This Appendix includes a summary table of all recommendations and the Agnico Eagle implementation plan.

3.3 GEOTECHNICAL ENGINEER'S INSPECTION REPORT^s

3.3.1 Meadowbank Site^s

As required by NWB Water License 2AM-MEA1530 Part I, Item 11: *The Licensee shall submit to the Board as part of the Annual Report, the Geotechnical Engineer's Inspection Report. The Report shall include a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.*

The Meadowbank 2024 annual geotechnical inspection was performed by WSP in July 2024. The report, along with Agnico Eagle's implementation plan are included in Appendices 7 and 10. In order to keep the whole interpretation and understanding of the recommendations and responses, Agnico Eagle will refer the reader to the Appendices which contains a summary table of all recommendations and the implementation strategy.

3.3.2 Whale Tail Site^s

As required by NWB Water License 2AM-WTP1830 Part I, Item 11: *The Licensee shall submit to the Board as part of the Annual Report, the Geotechnical Engineer's Inspection Report. The Report shall include a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.*

The Whale Tail 2024 annual geotechnical inspection was performed by WSP in July 2024. The report, along with Agnico Eagle's implementation plan are included in Appendices 7 and 10. In order to keep the whole interpretation and understanding of the recommendations and responses, Agnico Eagle will refer the reader to the Appendices which contains a summary table of all recommendations and the implementation strategy.

3.4 QUARRIES

3.4.1 Meadowbank Site

3.4.1.1 Material Usage

The annual reporting requirements listed in the following sections apply only to quarries located along the All-Weather Access Road (AWAR).

As required by CIRNAC Land Lease 66A/8 72-6, Condition 8: *The lessee shall file a report, annually, with the Minister in the manner and format stipulated by the Minister. The report shall include:*

i. Quantity of material removed and location of removal, for the immediately preceding calendar year; and

ii. Such other data as are reasonably required by the Minister from time to time.

And

As required by CIRNAC Land Lease 66A/8 72-6, Condition 25: *The lessee shall file, annually, a report for the preceding year, outlining the ongoing borrow area operations completed in conformity with the approved Borrow Management Plan, as well as any variations from the Plan.*

In 2024, no new material was taken from the All-Weather Access Road quarries on Crown Land. The 2024 Annual Quarry Report was sent to CIRNAC on February 21st, 2025. There was no new material removed from quarries on KivIA leased land. A quarry report for leases KVCA06Q11 and KVCA23Q01 was submitted to KivIA on a monthly basis. All material required for construction/maintenance activities in 2024 was from material paid for in previous years.

Regular inspections of the quarries were performed during the year to document the presence/absence of flow, erosional concerns, and turbidity plumes and to ensure that runoff, if any, would be free of any contaminants and would not impact the environment. No issues with runoff water inside the quarries to the environment were noted in 2024.

3.4.1.2 Quarry 22^s

The following is a summary of the 2024 All-Weather Access Road Quarry 22 Report and Agnico Eagle will refer the reader to the report in Appendix 58 for more context and information.

Quarry 22 was historically used as a temporary storage area for contaminated materials generated as a result of petroleum hydrocarbon (PHC) spill clean-up activities.

Following the CIRNAC inspection report received in 2012 (formally the AANDC), this report has been prepared to provide information regarding remediation of Quarry 22, including but not limited to the cause of contamination, the quantity of contaminated material transferred to the Meadowbank Landfarm, results from soil sampling campaigns, and further decontamination actions.

Since 2012, Agnico Eagle has submitted annual updates on the Quarry 22 remediation status as part of the Meadowbank Complex Annual Report. Agnico Eagle intended to scarify and sample the quarry on a yearly basis, however some sampling campaigns were postponed due to peregrine falcon nesting activities to minimize mining disturbance to wildlife.

Based on the degradation history of PHC's in the Meadowbank Landfarm, and upon analyzing results from the Quarry 22 soil sampling campaign (2014, 2016, 2018, 2020, 2021, 2022 & 2024), Agnico Eagle is confident that the natural degradation of Petroleum Hydrocarbon-related products is an effective remediation method for the Quarry 22.

The 2024 sample results indicate a significant reduction in contaminated PHC remnants remaining in the Q22 soil (parcels Q22-1 & Q22-2). Results were compared to the Canadian Council of Ministers of the Environment (CCME) remediation criteria for industrial use of coarse material, which is determined to be in line with the definition of industrial land detailed in the Government of Nunavut Environmental Guidelines for the Management of Contaminated Sites Remediation. The results have met all requirements for industrial use. More details are provided in the 2024 All-Weather Access Road Quarry 22 Report in Appendix 58.

As results for all parcels are below CCME Guidelines, there is no further sampling planned to track the PHC degradation at Quarry 22 in any of the parcels. The final reclamation of the quarries along AWAR will be done during the closure phase of the Meadowbank mine site as described in the Meadowbank Interim Reclamation and Closure Plan.

3.4.2 Whale Tail Site

3.4.2.1 Material Usage

The annual reporting requirements listed in the following sections apply only to quarries located along the Whale Tail Haul Road.

As required by CIRNAC Land Lease 66H/8-1-5, Condition 9: *The lessee shall file, annually, with the Minister in the manner and format stipulated, no later than sixty (60) days following the anniversary date of the effective date of this lease. The report shall include:*

- i. Quantity of material removed and location of removal, for the immediately preceding calendar year; and*
- ii. Such other data as are reasonably required by the Minister from time to time.*

And

As required by CIRNAC Land Lease 66H/8-1-5, Condition 27: *The lessee shall file, annually, a report for the preceding year, outlining the ongoing borrow area operations completed in conformity with the approved Borrow Management Plan, as well as any variations from the Plan.*

In 2024, no new material was taken from the Whale Tail Haul Road eskers/quarries on Crown Land. The 2024 Annual Quarry Report was sent to CIRNAC on February 21st, 2025. There was no new material removed from eskers/quarries on KivIA leased land. A quarry report for leases KVCA15Q01, KVCA15Q02, KVCA18Q01 was submitted to KivIA on a monthly basis. All material required for construction/maintenance activities in 2024 was from material paid for in previous years.

Regular inspections of the eskers/quarries were performed during the year to document the presence/absence of flow, erosional concerns, and turbidity plumes and to ensure that runoff, if any, would be free of any contaminants and would not impact the environment. No issues with runoff water inside the eskers/quarries to the environment were noted in 2024.

3.4.2.2 Setback Distance

As required by NIRB Project Certificate 008, Condition 20: *Unless otherwise authorized, the Proponent shall maintain an appropriate setback distance between project quarries and borrow pits from fish-bearing or permanent waterbodies as required to prevent acid rock drainage or metal leaching into such waterbodies. Throughout quarry development and operation, the Proponent shall, on an annual basis, provide information regarding quarry setback distances maintained and/or mitigation measures implemented by the Proponent in fulfillment of this term and condition in the Proponent's annual report to the NIRB.*

The setback distance chosen was 31 metres from any waterbody high water mark. All eskers/quarries along the Whale Tail Haul Road were designed and excavated respecting this 31 metres setback distance.

3.5 CONSTRUCTION

3.5.1 Meadowbank Site^s

In 2024, construction projects at Meadowbank site included:

- Construction of infrastructures related to the site progressive closure were completed. Aerator systems were installed in Goose Pit with a new compressor system;
- Floor leveling and sealing of the leach tank containment area and the secondary crusher floor;
- Bridge #2 & #3 repairs completed on AWAR. Bridge #1 flooring was replaced;
- Baker Lake Water Management infrastructure improvements;
- New Meadowbank warehouse was commissioned and put in operation; and
- New Pit A Tailings line was installed to deposit tailings into Pit A;

3.5.2 Whale Tail Site^s

In 2024, construction projects at the Whale Tail site included:

- Construction of the new composter building was ongoing. Commissioning expected to be completed in 2025;
- Construction and commissioning of the new Orbit Maintenance shop was completed;
- Construction of Road 35 widening occurred in 2024; and
- Metal sorting plant removal.

3.5.2.1 Design Report and Construction Drawings^s

As required by NWB Water License 2AM-WTP1830 Part D, Item 1: *The Licensee shall submit to the Board for review, at least sixty (60) days prior to Construction, final design and Construction drawings accompanied, with a detailed report, for the following:*

- *Water works, including: Water Intake and causeway, Water control structures (dikes, berms, jetties, channels) and Water crossings (culverts, bridges);*

- *Waste disposal facilities including: Wastewater Treatment Plant, Sewage Treatment Plant, Discharge Diffuser, Waste Rock Storage Facility, Overburden stockpiles, and Landfill; and*
- *Whale Tail Bulk Fuel Storage Facility*

And

As required by DFO Authorization 16-HCAA-00370 Condition 2.3.5 and 20-HCAA-00275 Condition 2.3.9: *As per the NIRB Project Certificate No. 008 Condition 21, the Proponent shall ensure that all project infrastructure in watercourses is designed and constructed in such a manner that it does not unduly prevent or limit the movement of water or fish species in fish streams and rivers, unless otherwise authorized by Fisheries and Oceans Canada.*

And

As required by DFO Authorization 16-HCAA-00370, Condition 2.4.1 and 20-HCAA-00275 Condition 2.3.5: *The Proponent shall provide detailed engineering plans to DFO for review and approval, for construction works that have potential to impact fish and fish habitat, at least 3 months prior to commencement of the works. This includes dikes (e.g., Northeast dike), diversion/realignment channels, and freshwater jetty.*

In 2024, there were no Design Reports submitted to NWB for approval prior to construction. Design Reports from previous years, along with regulator's comment and Agnico Eagle's response can be found on the NWB Public Registry site (<https://public.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-WTP1830%20Agnico/3%20TECH/D%20CONSTRUCTION/D1,%20D2/>).

To address DFO Authorization 16-HCAA-00370 Condition 2.3.5 and 2.4.1 and 20-HCAA-00275 Condition 2.3.5 and 2.3.9, when designs are submitted to NWB they are also made available for DFO review. These reports, with the potential to impact waters frequented by fish, are also provided directly to DFO for review. In 2024, no design report with the potential to impact waters frequented by fish were submitted.

Construction summary reports, including photographs, continue to be provided to NWB 90 days after the construction completion, as required according to the Water License 2AM-WTP1830 Part D Item 16. Agnico Eagle will continue to construct infrastructures in such a manner that it does not unduly prevent or limit the movement of water or fish species in fish streams and rivers.

3.5.2.2 Construction Summary Report^s

As required by NWB Water License 2AM-WTP1830 Part D, Item 16: *The Licensee shall submit to the Board for review, within ninety (90) days of completion of each facility designed to contain, withhold, divert or retain Waters or Wastes during the construction phase, a Construction Summary Report prepared by a qualified Engineer(s) in accordance with Schedule D, Item 1.*

In 2024, there were no Construction Summary Reports submitted to NWB following the completion of the facilities/infrastructures construction. Construction Summary Reports from previous years can be found on the NWB Public Registry site (<https://public.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-WTP1830%20Agnico/3%20TECH/D%20CONSTRUCTION/D16/>).

3.5.2.3 Whale Tail Haul Road Construction Plan

As required by Project Certificate No. 008 Condition 65: *The Proponent shall, in consultation with the Terrestrial Advisory Group, develop a construction plan for the widening of the Whale Tail Haul Road which includes:*

- *Design Features of the Whale Tail haul road intended to facilitate caribou movement across the road;*
- *Identified sections of the roadside that will be constructed with slopes and top-dressing material appropriate for caribou crossing.*

The plan must incorporate available Inuit Quajimajatuqangit in the selection of caribou crossing locations.

The final construction plan shall be provided to the Nunavut Impact Review Board (NIRB) prior to widening the Whale Tail haul road. Within three months of completion of construction to widen the Whale Tail haul road, the Proponent shall file an ‘as-built report’ with the NIRB, which includes the backfill height, slope and top-dressing material specifications of designed wildlife crossing sections.

There was no widening to the permitted limit of the Whale Tail Haul Road in 2024.

SECTION 4. WATER MANAGEMENT ACTIVITIES

The following section addresses reporting requirements related to water management activities.

4.1 FRESH WATER USAGE^{\$}

4.1.1 Meadowbank Site^{\$}

Sections 4.1.1.1 to 4.1.1.3 and Table 4-1 below details the freshwater consumption per sources. The total volume of freshwater pumped from the surrounding lakes and used for the Meadowbank Mine in 2024 was 1,003,965 m³.

Table 4-1 Meadowbank 2024 Freshwater Usage (m³)^{\$}

Water Location	Source Lake	Jan	Feb	Mar	Apr	May	Jun
Camp	Third Portage	3,070	2,607	2,996	3,056	2,996	3,122
Mill (freshwater tank)	Third Portage	67,195	67,265	68,740	73,895	78,772	93,042
Emulsion plant	Unnamed Lake	0	0	0	0	0	0
Total Freshwater Usage (m³)		70,265	69,872	71,736	76,951	81,768	96,164

Water Location	Source Lake	Jul	Aug	Sept	Oct	Nov	Dec	Total
Camp	Third Portage	2,976	2,848	2,708	2,877	2,515	2,717	34,488
Mill (freshwater tank)	Third Portage	77,779	87,857	81,290	80,540	73,860	119,242	969,477
Emulsion plant	Unnamed Lake	0	0	0	0	0	0	0
Total Freshwater Usage (m³)		80,755	90,705	83,998	83,417	76,375	121,959	1,003,965

4.1.1.1 Third Portage Lake^{\$}

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 2: *Monthly and annual volume of fresh Water obtained from Third Portage Lake.*

And

As required by NIRB Project Certificate No.004 Condition 46: *Cumberland shall apply for Fisheries Act approval for the freshwater intake pipe for the Project, and submit for DFO approval a detailed plan of the proposed intake, including siting, design of intake screens in accordance with the DFO Freshwater End-of-Pipe Fish Screen Guidelines, construction and operation considerations, fish and fish habitat impacts, and mitigation and monitoring plans.*

A total volume of 1,003,965 m³ of freshwater was used from Third Portage Lake for the site in 2024, which was in compliance with the Water License Freshwater maximum usage volume of 4,935,000 m³ (Water License 2AM-MEA1530 Part E, Item 1). The monthly breakdown usage is provided in Table 4-1 above.

On October 24th, 2024, Agnico Eagle submitted to DFO a notification for the potential use of the End of pipe fish screens (Interim) Code of practice. This preventive notification was for the installation of a new temporary freshwater intake in Third Portage Lake during some repairs/maintenance works required at the main freshwater intake barge. The maintenance works were completed without the need to install the new temporary freshwater intake and thus there have been no changes to the freshwater intake in 2024.

4.1.1.2 Wally Lake^s

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 3: *Monthly and annual volume of fresh Water obtained from Wally Lake.*

As per Type A Water License 2AM-MEA1530 Part E Item 2, Agnico Eagle is authorized to withdraw from Wally Lake a total of 4,185,000 m³ per year starting in 2018.

There was no freshwater obtained from Wally Lake for re-flooding activities and associated use in 2024.

4.1.1.3 Unnamed Lake^s

As required by NIRB Project Certificate No.004 Condition 46: *Cumberland shall apply for Fisheries Act approval for the freshwater intake pipe for the Project, and submit for DFO approval a detailed plan of the proposed intake, including siting, design of intake screens in accordance with the DFO Freshwater End-of-Pipe Fish Screen Guidelines, construction and operation considerations, fish and fish habitat impacts, and mitigation and monitoring plans.*

Agnico Eagle is authorized as per Part E Item 3 of the Water License 2AM-MEA1530 for a maximum usage of 2,400 m³ per year.

There was no freshwater obtained from unnamed lake for explosive mixing and associated use in 2024. The freshwater intake has been removed from the unnamed lake.

4.1.2 Whale Tail Site^s

Section 4.1.2.1 to 4.1.2.7 and Table 4-2 below details the freshwater consumption per source. The total volume of freshwater pumped from the surrounding lakes and used for the Whale Tail Mine in 2024, under Water License 2AM-WTP1830, was 117,032 m³.

Table 4-2 Whale Tail 2024 Freshwater Usage (m³)^s

Water Location	Source Lake	Jan	Feb	Mar	Apr	May	Jun
Camp	Nemo	3,910	3,509	3,711	3,733	3,746	3,413
Construction/Operation	Nemo	7,034	7,485	7,624	6,205	6,615	4,720
Dust Suppression	WTHR Pond	0	0	0	0	1,514	712
Explosive	Kangislulik Lake	0	0	0	0	0	0
Drilling	Proximal Sources	0	0	0	0	0	0
Total Freshwater Usage (m³)		10,944	10,994	11,335	9,938	11,875	8,845

Water Location	Source Lake	Jul	Aug	Sep	Oct	Nov	Dec	Total
Camp	Nemo	3,448	3,178	3,520	3,604	3,287	3,359	42,418
Construction/Operation	Nemo	4,023	3,260	3,757	4,576	6,488	4,412	66,199
Dust Suppression	WTHR Pond	3,560	2,539	90	0	0	0	8,415
Explosive	Kangislulik Lake	0	0	0	0	0	0	0
Drilling	Proximal Sources	0	0	0	0	0	0	0
Total Freshwater Usage (m³)		11,031	8,977	7,367	8,180	9,775	7,771	117,032

4.1.2.1 Nemo Lake^s

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 2: *Monthly and annual volume of fresh Water obtained from Nemo Lake.*

Agnico Eagle is authorized as per Part E Item 1 of the Water License 2AM-WTP1830 to take 209,544 m³ of water per year from Nemo Lake during operations. Total freshwater consumption in 2024 from Nemo Lake was 108,617 m³. The monthly breakdown usage is provided in Table 4-2 above.

4.1.2.2 Whale Tail Lake^s

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 4: *Monthly and annual volume of fresh Water obtained from Whale Tail Lake.*

No freshwater obtained from Whale Tail Lake in 2024.

4.1.2.3 Unnamed Lake^s

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 7: *Monthly and annual volume of fresh Water obtained from unnamed water bodies for Whale Tail Haul Road dust suppressant.*

Agnico Eagle is authorized as per Part E Item 1 of the Water License 2AM-WTP1830 to take 109,135 m³ of water per year from sources proximal to the Whale Tail Haul Road for dust suppression.

In 2024, 8,415 m³ of water was taken from ponds along the Whale Tail Haul Road for dust suppression. The monthly breakdown usage is provided in Table 4-2 above.

4.1.2.4 Kangislulik Lake^s

As required by NWB Water License 2AM-WTP1830 Schedule, B Item 3: *Monthly and annual volume of fresh Water obtained from Mammoth Lake.*

Agnico Eagle is authorized as per Part E Item 1 of the Water License 2AM-WTP1830 Item 1 to take 2,500 m³ from Kangislulik Lake for explosives mixing and associated uses. In 2024 no water was taken from Kangislulik Lake.

4.1.2.5 Lakes in the IVR Footprint^s

As required by NWB Water License 2AM-WTP1830 Schedule, B Item 5: *Monthly and annual volume of fresh Water obtained from Lakes A-P38, A46, A47, A49, A50, A51, A52, A53, A-P21, A-P10, A-P67, and A-P68.*

Dewatering of the IVR area waterbodies was completed in September 2020. Please refer to the Meadowbank Complex 2020 Annual Report Section 8.5.2.2.2 for more information.

4.1.2.6 Freshwater for Drilling^s

As required by NWB Water License 2AM-WTP1830 Schedule, B Item 6: *Monthly and annual volume of fresh Water obtained for drilling from sources proximal to drilling sites.*

Agnico Eagle is authorized as per Part E Item 1 of the Water License 2AM-WTP1830 to use 109,135 m³ from proximal sources for drilling activities. No water was taken from proximal sources in 2024 for drilling activities.

4.1.2.7 Lake D1^s

As required by NWB Water License 2AM-WTP1830 Schedule, B Item 8: *Monthly and annual volume of fresh Water obtained from Lake D1.*

In 2024, no water was withdrawn from Lake D1.

4.2 LAKE LEVEL MONITORING^s

4.2.1 Meadowbank Site^s

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 4: *Results of lake level monitoring conducted under the protocol developed as per Part D Item 5 (Water Quality Monitoring and Management Plan for Dike Construction and Dewatering).*

In 2024, as in previous years (2015 to 2023), water levels were similar to when monitoring began for Third Portage, Second Portage and Wally lakes. Refer to PEAMP Section 12.4.1.1 and Table 12-3 for a complete discussion of the impacts of discharge on water level in the receiving environment. Figure 37 - 40 in Section 12 presents historical trending up to 2024.

Overall, modeling predicted the natural range of water levels in Third Portage Lake to be 133.82 – 134.19 masl and the impact assessment indicated that this range would not be exceeded (Physical Environment Impact Assessment Report, 2005). Although these values accounted for 1-in-100-year precipitation or drought events, prior to operation, water levels were already below this range when monitoring began (prior to any significant freshwater consumption) in 2009 and continue to be as of now. The elevation, in metres above sea level (masl), of Third Portage Lake continued to be monitored in 2024 and measured values ranged from 133.53 – 133.79 masl. Pumping rates of freshwater from Third Portage Lake have remained well within license limits, and water levels do not appear to have changed significantly since monitoring began (2009). No water was discharged in Third Portage Lake in 2024. The location of the lake level survey monitoring is identified as TPL-survey on Figure 1. The lake level monitoring results are presented in Table 4-3 and Figure 7.

Water from the East Dike Seepage was discharged into Second Portage Lake in 2024. The elevation (masl) of Second Portage Lake continued to be monitored in 2024. The location of the lake level survey monitoring is identified as SPL-survey on Figure 1. The lake level monitoring results are presented in Table 4-3 and Figure 7. In 2024, the water level ranged from 132.47 – 133.16 masl, similar to the baseline of 133.1 masl.

No water was discharged from the Vault Attenuation Pond into Wally Lake in 2024. The elevation (masl) measurement of Wally Lake was continued in 2024. The location of the lake level survey monitoring station is identified as WL-survey on Figure 3. The lake level monitoring results are presented in Table 4-3 and Figure 7. In 2024, the lake level remained within the range of naturally occurring levels, with a water level range from 139.20 - 139.64 masl.

Following recommendation from CIRNAC, starting 2019, Turn Lake water level monitoring during open water season was completed. The lake level monitoring results are presented in Table 4-3 and Figure 7. For Turn Lake, no baseline water levels were provided in the 2005 FEIS or 2015 FEIS Addendum for Turn Lake so 2019 was the first year for which measurements are available. Similar water levels were observed since 2019.

Following this analysis, Agnico Eagle concluded the water level in Third Portage, Second Portage and Wally Lakes still remain within the range of naturally occurring levels. Natural seasonal variation comparison is not completed, as water elevation surveys are only taken during open water periods. Table 4-4 below provide the 2013 -2024 water level monitoring average.

Table 4-3 Meadowbank 2024 Lake Water Level Monitoring^s

Date	Third Portage Lake (masl)	Second Portage Lake (masl)	Turn Lake (masl)	Wally Lake (masl)
2/9/2024	133.53	132.47	N/A	139.44
3/3/2024	133.65	132.50	N/A	139.46
6/2/2024	133.69	N/A	N/A	N/A
6/4/2024	N/A	132.92	N/A	N/A
6/7/2024	N/A	N/A	139.37	139.64
7/28/2024	N/A	N/A	N/A	139.31
7/30/2024	133.64	132.93	N/A	N/A
8/26/2024	133.56	132.86	N/A	N/A
8/30/2024	N/A	N/A	N/A	139.20
9/18/2024	N/A	N/A	N/A	139.56
9/26/2024	133.73	133.16	N/A	N/A
9/29/2024	133.79	N/A	N/A	N/A
10/27/2024	133.72	133.05	N/A	N/A

Figure 7 Meadowbank 2024 Lake Water Level Monitoring^s

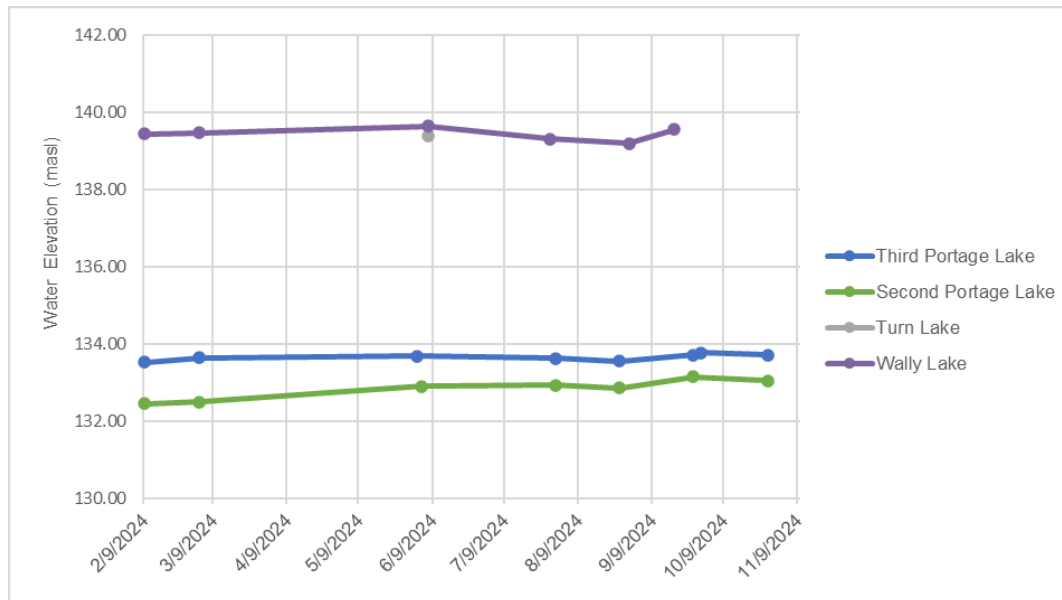


Table 4-4 Meadowbank 2013-2024 Lake Water Level Monitoring Average^s

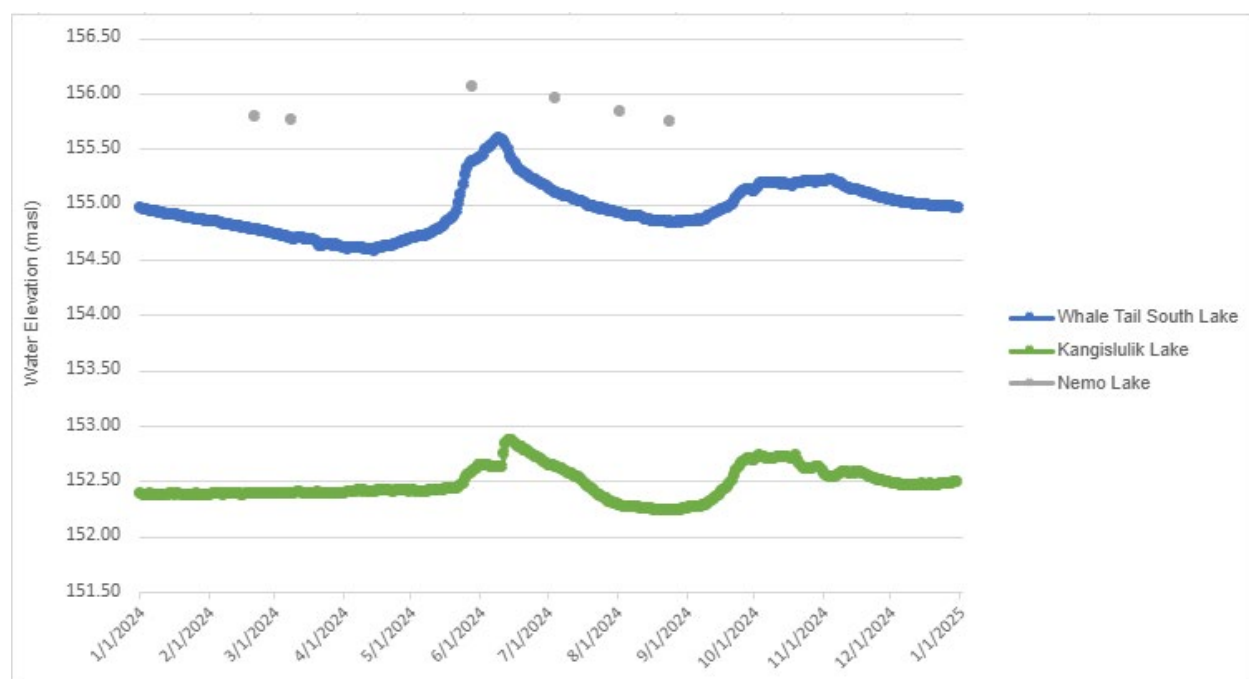
Date	Third Portage Lake (masl)	Second Portage Lake (masl)	Turn Lake (masl)	Wally Lake (masl)
2013	133.57	132.94	N/A	139.38
2014	133.53	133.26	N/A	139.42
2015	133.65	133.12	N/A	139.47
2016	133.64	132.95	N/A	139.47
2017	133.58	132.92	N/A	139.52
2018	133.67	132.96	N/A	139.41
2019	133.61	132.94	139.17	139.50
2020	133.68	132.97	139.13	139.48
2021	133.74	133.12	139.59	139.55
2022	133.69	132.99	139.20	139.48
2023	133.63	132.97	139.10	139.41
2024	133.66	132.84	139.37	139.43

4.2.2 Whale Tail Site^s

In 2024, the elevation (masl) of Whale Tail Lake South Basin (ranged from 154.58 – 155.59 masl) and Kangislulik Lake (ranged from 152.23 – 152.87) were monitored daily. The elevation for Nemo Lake (ranged from 155.75 – 156.07) was monitored periodically during open water season, weather permitting, except for the months of January, April, June, September, October, November and December. Results are presented in Table 4-5 and Figure 8. The locations of the lake level survey monitoring are provided on Figure 4 Whale Tail Lake South Basin identified as WTS-Survey, Kangislulik Lake identified as KAN-Survey, and Nemo Lake identified as NEMO-Survey. The lake level average results 2018-2024 are presented in Table 4-6. For a complete discussion and comparison to FEIS, please refer to Section 12.5.1.1.

Table 4-5 Whale Tail 2024 Lake Water Level Monitorings^s

Date	Whale Tail South (masl)	Kangislulik Lake (masl)	Nemo Lake (masl)	Date	Whale Tail South (masl)	Kangislulik Lake (masl)	Nemo Lake (masl)	Date	Whale Tail South (masl)	Kangislulik Lake (masl)	Nemo Lake (masl)	Date	Whale Tail South (masl)	Kangislulik Lake (masl)	Nemo Lake (masl)
1/1/2024	154.96	152.38		4/1/2024	154.60	152.39		7/1/2024	155.14	152.65		10/1/2024	155.11	152.68	
1/2/2024	154.96	152.38		4/2/2024	154.60	152.40		7/2/2024	155.13	152.64		10/2/2024	155.14	152.72	
1/3/2024	154.95	152.38		4/3/2024	154.60	152.40		7/3/2024	155.12	152.64		10/3/2024	155.18	152.74	
1/4/2024	154.95	152.38		4/4/2024	154.61	152.41		7/4/2024	155.11	152.63	155.96	10/4/2024	155.19	152.72	
1/5/2024	154.94	152.38		4/5/2024	154.61	152.41		7/5/2024	155.10	152.63		10/5/2024	155.20	152.72	
1/6/2024	154.94	152.38		4/6/2024	154.61	152.40		7/6/2024	155.09	152.61		10/6/2024	155.19	152.71	
1/7/2024	154.93	152.38		4/7/2024	154.61	152.41		7/7/2024	155.08	152.61		10/7/2024	155.19	152.70	
1/8/2024	154.93	152.38		4/8/2024	154.61	152.41		7/8/2024	155.07	152.59		10/8/2024	155.19	152.70	
1/9/2024	154.93	152.38		4/9/2024	154.60	152.41		7/9/2024	155.07	152.58		10/9/2024	155.19	152.70	
1/10/2024	154.92	152.38		4/10/2024	154.60	152.41		7/10/2024	155.07	152.57		10/10/2024	155.19	152.70	
1/11/2024	154.92	152.38		4/11/2024	154.59	152.41		7/11/2024	155.05	152.57		10/11/2024	155.19	152.72	
1/12/2024	154.91	152.38		4/12/2024	154.59	152.41		7/12/2024	155.05	152.56		10/12/2024	155.19	152.72	
1/13/2024	154.91	152.38		4/13/2024	154.59	152.41		7/13/2024	155.04	152.54		10/13/2024	155.18	152.72	
1/14/2024	154.91	152.38		4/14/2024	154.58	152.41		7/14/2024	155.03	152.53		10/14/2024	155.18	152.71	
1/15/2024	154.91	152.38		4/15/2024	154.59	152.41		7/15/2024	155.03	152.52		10/15/2024	155.18	152.71	
1/16/2024	154.91	152.38		4/16/2024	154.61	152.42		7/16/2024	155.02	152.51		10/16/2024	155.18	152.71	
1/17/2024	154.90	152.38		4/17/2024	154.61	152.41		7/17/2024	155.01	152.48		10/17/2024	155.18	152.70	
1/18/2024	154.90	152.38		4/18/2024	154.61	152.41		7/18/2024	154.99	152.46		10/18/2024	155.17	152.71	
1/19/2024	154.89	152.38		4/19/2024	154.62	152.42		7/19/2024	154.99	152.44		10/19/2024	155.19	152.73	
1/20/2024	154.89	152.38		4/20/2024	154.62	152.41		7/20/2024	154.98	152.43		10/20/2024	155.18	152.69	
1/21/2024	154.88	152.38		4/21/2024	154.63	152.41		7/21/2024	154.98	152.41		10/21/2024	155.19	152.66	
1/22/2024	154.88	152.38		4/22/2024	154.63	152.41		7/22/2024	154.97	152.40		10/22/2024	155.20	152.63	
1/23/2024	154.88	152.38		4/23/2024	154.63	152.41		7/23/2024	154.97	152.38		10/23/2024	155.20	152.61	
1/24/2024	154.87	152.38		4/24/2024	154.64	152.41		7/24/2024	154.96	152.37		10/24/2024	155.21	152.61	
1/25/2024	154.87	152.38		4/25/2024	154.65	152.41		7/25/2024	154.96	152.36		10/25/2024	155.21	152.61	
1/26/2024	154.87	152.38		4/26/2024	154.65	152.41		7/26/2024	154.95	152.35		10/26/2024	155.20	152.61	
1/27/2024	154.86	152.38		4/27/2024	154.66	152.41		7/27/2024	154.95	152.34		10/27/2024	155.20	152.62	
1/28/2024	154.86	152.38		4/28/2024	154.67	152.41		7/28/2024	154.94	152.32		10/28/2024	155.20	152.63	
1/29/2024	154.86	152.38		4/29/2024	154.68	152.41		7/29/2024	154.93	152.31		10/29/2024	155.20	152.62	
1/30/2024	154.85	152.38		4/30/2024	154.69	152.41		7/30/2024	154.94	152.31		10/30/2024	155.21	152.63	
1/31/2024	154.84	152.38		5/1/2024	154.69	152.41		7/31/2024	154.93	152.30		10/31/2024	155.20	152.60	
2/1/2024	154.84	152.38		5/2/2024	154.70	152.41		8/1/2024	154.92	152.29		11/1/2024	155.21	152.57	
2/2/2024	154.84	152.38		5/3/2024	154.70	152.41		8/2/2024	154.92	152.28	155.83	11/2/2024	155.21	152.55	
2/3/2024	154.84	152.39		5/4/2024	154.71	152.41		8/3/2024	154.91	152.27		11/3/2024	155.22	152.54	
2/4/2024	154.84	152.39		5/5/2024	154.71	152.41		8/4/2024	154.90	152.27		11/4/2024	155.22	152.54	
2/5/2024	154.83	152.39		5/6/2024	154.71	152.41		8/5/2024	154.90	152.27		11/5/2024	155.22	152.54	
2/6/2024	154.83	152.38		5/7/2024	154.72	152.41		8/6/2024	154.89	152.27		11/6/2024	155.21	152.55	
2/7/2024	154.82	152.38		5/8/2024	154.72	152.41		8/7/2024	154.89	152.27		11/7/2024	155.20	152.56	
2/8/2024	154.82	152.38		5/9/2024	154.73	152.42		8/8/2024	154.89	152.27		11/8/2024	155.19	152.57	
2/9/2024	154.82	152.38		5/10/2024	154.75	152.42		8/9/2024	154.89	152.27		11/9/2024	155.18	152.58	
2/10/2024	154.81	152.39		5/11/2024	154.76	152.42		8/10/2024	154.89	152.27		11/10/2024	155.16	152.58	
2/11/2024	154.81	152.38		5/12/2024	154.77	152.42		8/11/2024	154.88	152.26		11/11/2024	155.15	152.58	
2/12/2024	154.81	152.39		5/13/2024	154.77	152.42		8/12/2024	154.88	152.26		11/12/2024	155.14	152.58	
2/13/2024	154.80	152.39		5/14/2024	154.79	152.42		8/13/2024	154.87	152.25		11/13/2024	155.13	152.57	
2/14/2024	154.80	152.38		5/15/2024	154.81	152.42		8/14/2024	154.86	152.25		11/14/2024	155.13	152.58	
2/15/2024	154.79	152.38		5/16/2024	154.83	152.43		8/15/2024	154.86	152.25		11/15/2024	155.12	152.57	
2/16/2024	154.79	152.38		5/17/2024	154.85	152.43		8/16/2024	154.85	152.25		11/16/2024	155.13	152.58	
2/17/2024	154.79	152.39		5/18/2024	154.86	152.43		8/17/2024	154.85	152.24		11/17/2024	155.12	152.58	
2/18/2024	154.78	152.39		5/19/2024	154.88	152.43		8/18/2024	154.85	152.24		11/18/2024	155.12	152.57	
2/19/2024	154.78	152.39		5/20/2024	154.90	152.43		8/19/2024	154.84	152.24		11/19/2024	155.11	152.56	
2/20/2024	154.77	152.39		5/21/2024	154.93	152.44		8/20/2024	154.85	152.24		11/20/2024	155.10	152.55	
2/21/2024	154.77	152.39	155.80*	5/22/2024	155.01	152.45		8/21/2024	154.85	152.24		11/21/2024	155.10	152.54	
2/22/2024	154.77	152.39		5/23/2024	155.09	152.46		8/22/2024	154.84	152.24		11/22/2024	155.09	152.53	
2/23/2024	154.76	152.38		5/24/2024	155.18	152.49		8/23/2024	154.84	152.24		11/23/2024	155.08	152.53	
2/24/2024	154.76	152.39		5/25/2024	155.26	152.52		8/24/2024	154.84	152.24	155.75	11/24/2024	155.07	152.52	
2/25/2024	154.76	152.39		5/26/2024	155.33	152.55		8/25/2024	154.84	152.23		11/25/2024	155.06	152.51	
2/26/2024	154.75	152.39		5/27/2024	155.37	152.57		8/26/2024	154.83	152.24		11/26/2024	155.06	152.51	
2/27/2024	154.75	152.39		5/28/2024	155.38	152.58	156.07	8/27/2024	154.84	152.24		11/27/2024	155.06	152.51	
2/28/2024	154.74	152.38		5/29/2024	155.39	152.60		8/28/2024	154.84	152.24		11/28/2024	155.05	152.50	
3/1/2024	154.73	152.38		5/30/2024	155.40	152.62		8/29/2024	154.84	152.25		11/29/2024	155.05	152.49	
3/2/2024	154.73	152.39		5/31/2024	155.42	152.64		8/30/2024	154.84	152.25		11/30/2024	155.04	152.49	
3/3/2024	154.72	152.38		6/1/2024	155.43	152.64		8/31/2024	154.84	152.25		12/1/2024	155.04	152.48	
3/4/2024	154.72	152.38		6/2/2024	155.45	152.65		9/1/2024	154.84	152.25		12/2/2024	155.03	152.48	
3/5/2024	154.72	152.38		6/3/2024	155.48	152.64		9/2/2024	154.85	152.26		12/3/2024	155.03	152.48	
3/6/2024	154.71	152.39		6/4/2024	155.50	152.64		9/3/2024	154.84	152.27		12/4/2024	155.02	152.48	
3/7/2024	154.70	152.38		6/5/2024	155.52	152.63		9/4/2024	154.84	152.27		12/5/2024	155.02	152.47	
3/8/2024	154.70	152.39	155.76*	6/6/2024	155.54	152.63		9/5/2024	154.84	152.27		12/6/2024	155.02	152.47	
3/9/2024	154.68	152.38		6/7/2024	155.56	152.63		9/6/2024	154.86	152.27		12/7/2024	155.01	152.47	
3/10/2024	154.68	152.39		6/8/2024	155.58	152.63		9/7/2024	154.85	152.27		12/8/2024	155.01	152.47	
3/11/2024	154.70	152.40		6/9/2024	155.59	152.63		9/8/2024	154.86	152.28		12/9/2024	155.01	152.47	
3/12/2024	154.70	152.40		6/10/2024	155.59	152.63		9/9/2024	154.86	152.29		12/10/2024	155.01	152.47	
3/13/2024	154.69	152.39		6/11/2024	155.57	152.75		9/10/2024	154.90	152.30		12/11/2024	155.00	152.47	
3/14/2024	154.69	152.39		6/12/2024	155.54	152.84		9/11/2024	154.90	152.32		12/12/2024	155.00	152.47	
3/15/2024	154.69	152.39		6/13/2024	155.49	152.87		9/12/2024	154.90	152.33					

Figure 8 Whale Tail 2024 Lake Water Level Monitoring[§]**Table 4-6 Whale Tail 2018-2024 Lake Water Level Average[§]**

Date	Whale Tail Lake South Basin (masl)	Kangislulik Lake (masl)	Nemo Lake (masl)
2018	152.71	152.53	-
2019	154.85	152.49	156.16
2020	155.26	152.57	156.04
2021	155.21	152.33	155.74
2022	155.05	152.31	155.94
2023	155.08	152.45	155.87
2024	154.96	152.47	155.86

4.3 BATHYMETRIC SURVEYS BAKER LAKE MARSHALLING FACILITY[§]

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 6: *The bathymetric survey(s) conducted prior to each year of shipping at the Baker Lake Marshalling Facility.*

The bathymetric survey in Baker Lake was completed on July 17th, 2024, and is included in Appendix 6. The survey was done before the shipping season.

4.4 WATER MANAGEMENT PLAN^s

4.4.1 Water Management Structure Inspection^s

4.4.1.1 Meadowbank Site^s

As required by NWB Water License 2AM-MEA1530 Part E, Item 10: *The Licensee shall carry out weekly inspections of all water management structures during periods of flow and the records be kept for review upon request of an Inspector. More frequent inspections may be required at the request of an Inspector. This information is to be included in the annual Water Management Plan.*

Agnico Eagle has an inspection program in place to inspect water management infrastructures. Site inspections on the dewatering dikes and tailings facility are performed every week and are documented during periods of flow or if changing conditions are observed as detailed in the Freshet Action Plan (Appendix D of the Meadowbank 2024 Water Management Plan Version 14 (Appendix 13)). Detailed visual inspections are performed and documented as per the Dewatering Dike OMS frequency (Appendix 28).

4.4.1.2 Whale Tail Site^s

As required by NWB Water License 2AM-WTP1830 Part E, Item 10: *The Licensee shall carry out weekly inspections of all water management structures during periods of flow and the records of inspections shall be kept for review upon request of an Inspector. More frequent inspections may be required at the request of an Inspector. This information is to be included in the annual updated Water Management Plan.*

Agnico Eagle has an inspection program in place to inspect water management infrastructures. Site inspections on the dewatering dikes are performed every week and are documented during periods of flow or if changing conditions are observed as detailed in the Freshet Action Plan (Appendix D of the Whale Tail 2024 Water Management Plan Version 14 (Appendix 14)). Detailed visual inspections are performed and documented as per the Water Management Infrastructure OMS frequency (Appendix 30).

4.4.2 Water Balance Water Quality Model Reporting Summary^s

4.4.2.1 Meadowbank Site^s

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 5: *Summary of reporting results for the Water Balance Water Quality model and any calibrations as required in Part E Items 7-9.*

And

As required by NWB Water License 2AM-MEA1530 Part E, Item 7: *The Licensee shall submit a Water Management Plan on an annual basis to the Board for review following the commencement of Operations. The Plan must include an updated Water Balance. The Water Management Plan shall include an action plan to be implemented if predicted re-flooded pit water quality indicates that treatment is necessary. The Licensee shall not breach dikes until the water quality in the re-flooded area meets CCME Water Quality Guidelines for the Protection of Aquatic Life, baseline concentrations, or appropriate site specific water quality objectives. Subject to the Board approval, if water quality parameters are above CCME Guidelines, a site specific risk assessment must be conducted to identify water quality objectives that are protective of the aquatic environment.*

And

As required by NWB Water License 2AM-MEA1530 Part E, Item 8: *The Licensee shall submit a Water Quality Model for pit re-flooding as part of the Water Management Plan which shall be re-calibrated as necessary and updated at a minimum of once every two (2) years following commencement of Operations. The results and implications of the predictive model shall be reported to the Board.*

And

As required by NIRB Project Certificate No.004 Condition 9: *Cumberland shall provide detailed plans for water treatment for the tailings (reclaim pond) discharge, and on a contingency basis for the attenuation pond discharge(s) and for the pits, including estimates of treatment efficiency for each parameter of concern and the description of pH adjustments in the water license application to the NWB.*

A water balance, water quality forecast, and water management plan update for 2024 was completed. This information is included in Appendix 13.

The water management objectives for the Meadowbank Site are:

- Keep the different water types (i.e. contact, non-contact, and freshwater) separated to the extent practical;
- Control and minimize contact water through diversion and containment;
- Minimize freshwater usage by reclaiming the contact water to the extent practical;
- Meet discharge criteria before any site contact water is released to the downstream environment;
- Reduction in freshwater intake per tonne mined;
- Implement in-pit semi-passive treatment to enhance the degradation of nitrogen compounds in reclaim water; and
- No events of non-compliance:
 - Regulatory/Water License water quality criteria (effluent loading limits); and
 - Regulatory/Water License freshwater withdrawal criteria.

The water management targets and achieved data for 2024 are summarized in Table 4-7. Slightly more freshwater was used than targeted. However, the performance and reliability of the main reclaim system in operated in Pit E has been successful throughout the year. In 2024 more water was reclaimed than planned.

Targets for 2025 are also presented in Table 4-7. These targets are aligned with the water objectives of the Meadowbank Complex and go beyond the License limit. These targets strive to minimize risk, conserve freshwater, and minimize water usage. They assume continued improvements of the amount of reclaim water withdrawn from the pits to reuse in the Mill which will also decrease the amount of

freshwater used per tonne processed and increase the amount of water in recirculation. Targets are set to ensure continuous effort is made to improve water management and to encourage all groups to find and pursue opportunities to reduce freshwater consumption.

Table 4-7 Meadowbank Water Management Targets^s

Water Objective	Target 2024	Achieved 2024	Target 2025
Fresh Water Withdrawn from Third Portage Lake (Mill and Camp)	900,000 m ³	1,003,965 m ³	1,105,000 m ³
Contact Water Withdrawn from Pit (reclaim water to Mill)	3,300,000 m ³	3,507,197 m ³	3,400,000 m ³
Freshwater per tonne processed	0.20 m ³ /t	0.25 m ³ /t	0.20 m ³ /t
Water discharge (treated)	0 m ³	0 m ³	0 m ³
Water discharge (fresh)	35,000 m ³ (East Dike to Second Portage Lake)	21,163 m ³ (East Dike to Second Portage Lake)	35,000 m ³ (East Dike to Second Portage Lake)
Water in recirculation (water recycled / total water use)	80.0%	78.6%	80.0%

To avoid and minimize water related impacts and risks and to help achieve the water management targets above Agnico Eagle implemented several initiatives in 2024. These initiatives are summarized in Table 4-8. Additionally, new water quality modelling methodologies were implemented for the Annual Report Water Quality Forecast to further refine the understanding and forecasting of water quality on site. Review of optimal water management strategies are ongoing to improve water quality on site for closure.

Table 4-8 Initiatives Taken to Decrease Water Management Risks^s

Initiative	Description
Continuous Reclaim System Improvement	Modification of reclaim pumping system in 2024 to increase reclaim flow to process plant (i.e. decrease freshwater usage)
Process Plant Freshwater Reduction	Continuation of the implementation of the 2022 action plan to understand and decrease freshwater consumption at process plant

The life-of-mine (LOM) considered for the water balance reflects the mining plan summarized in the 2024 Water Management Plan, as it pertains to the activities within the current approved license for the Meadowbank mine. Revisions and modifications to the Water Balance and Water Quality Forecast are discussed in detail in the Meadowbank 2024 Water Management Plan Version 14 (Appendix 13).

Revisions and modifications to the Water Balance and Water Quality Forecast are discussed in detail in the 2024 Water Management Plan Version 14 (Appendix 13).

4.4.2.2 Whale Tail Site^s

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 9: *Summary of reporting results for the Water Balance and Water Quality model and any calibrations as required in Part E Items 5, 6, and 8.*

And

As required by NWB Water License 2AM-WTP1830 Part E, Item 5: *The Licensee shall submit an updated Water Management Plan on an annual basis to the Board for review following the commencement of Operations. The Plan must include an updated Water Balance. The Water Management Plan shall include an action plan to be implemented if predicted re-flooded pit water quality indicates that treatment is necessary.*

And

As required by NWB Water License 2AM-WTP1830 Part E, Item 6: *The Licensee shall submit a Water Quality Model for pit re-flooding and for WRSF contact water mixing into Mammoth Lake post-Closure as part of the Water Management Plan which shall be re-calibrated as necessary and updated annually following commencement of Operations. The results and implications of the predictive model shall be reported to the Board.*

A water balance, water quality forecast, and water management plan update for 2024 was completed. This information is included in Appendix 14.

The water management targets and achieved data for 2024 are summarized in Table 4-9.

Targets for 2025 are also presented in Table 4-9. These targets are aligned with the water objectives of the Meadowbank Complex (see the section above) and go beyond the License limit. These targets strive to minimize risk, conserve freshwater, and minimize water usage. Higher underground production rates in 2024 had required slightly more fresh water withdrawn from Nemo Lake, more contact water withdrawn from underground as the works expand, but altogether less water discharged from site due to lesser rain quantity for the year. Additionally, new water quality modelling methodologies were implemented for the Annual Report Water Quality Forecast to further refine the understanding and forecasting of water quality on site. Review of optimal water management strategies are ongoing to improve water quality on site for closure.

Table 4-9 Whale Tail Water Management Targets^s

Water Objective	Target 2024	Achieved 2024	Target 2025
Fresh Water Withdrawn from Nemo Lake (Mining and Camp)	88,000 m ³	108,616 m ³	120,000 m ³
Contact Water Withdrawn from Pit (pit inflow)	1,320,000 m ³	1,152,838 m ³	1,320,000 m ³
Contact Water Withdrawn from Underground (inflow)	19,600 m ³	3,190 m ³	19,600 m ³
Water discharge from site (WTS / Kangislulik Lake)	2,500,000 m ³	2,889,844 m ³	2,500,000 m ³
Water in recirculation (water recycled / total water use)	0%	0%	0%

The life-of-mine considered for the water balance reflects the mining plan summarized in the 2024 Water Management Plan Version 14, as it pertains to the activities within the current approved license for the Whale Tail mine.

Revisions and modifications to the Water Balance and Water Quality Forecast are discussed in detail in the 2024 Water Management Plan Version 14 (Appendix 14).

As per comments received on the 2020 Annual Report, Agnico Eagle is providing the quantification use of explosive relative FEIS. In 2024, approximately 10.5k tonnes of explosives were used at the Whale Tail mine for open pit and underground. Water quality predictions outlined in the Appendix 6H of the FEIS Addendum for the Whale Tail Pit – Expansion Project (Agnico Eagle, 2018) related to explosive usage are specified for residual explosives in WRSF's, pit sumps, and underground sumps. Applied concentrations for nitrate and ammonia in operations for WRSF and pit sump runoff flows are 12 mg/L-N (NO_3) and 0.3 mg/L-N (NH_4) while applied concentrations for nitrate and ammonia in underground sumps are 321 mg/L-N (NO_3) and 321 mg/L-N (NH_4). The concentration of explosives by-products (ammonia and nitrate) in site contact water is sensitive to the management of blasting agents during their use. Given the proximity and similarity both in setting and operation of the Whale Tail Mine to the Meadowbank Mine (similar mining rate, explosives type and explosives usage rate), it was assumed that similar nitrogen and ammonia contents would occur in the waste rock, and open pit drainages. Similarly, average ammonia and nitrate concentrations observed in the underground sumps at the Meliadine Mine were used as input chemistry to the model for underground sump concentrations.

Analysis of 2024 water chemistry results for the WT WRSF Pond (ST-WT-3), WT WRSF Pond (ST-WT-30, 31, 32, and 33), IVR WRSF Pond (ST-WT-28, ST-WT-34, 35, and 36) all exhibit annual average of nitrate less than the predicted 12 mg/L-N outlined in the FEIS with combined average nitrate values of 3.03 mg/L-N in 2024. Analysis of total ammonia-N results for these stations results in an average of 0.122 mg/L-N which is lower than the concentrations outlined in the FEIS predictions, however the more toxic un-ionized ammonia concentration averages out to a result of 0.00078 mg/L-N.

Analysis of 2024 water chemistry results for both the Whale Tail Pit (ST-WT-4) and IVR Pit (ST-WT-18) Sumps exhibit annual average of nitrate of 4.09 mg/L-N and 3.83 mg/L-N respectively, with a combined average nitrate results of 3.96 mg/L-N which are less than the predicted 12 mg/L-N as outlined in the FEIS. Analysis of total ammonia-N results for these stations results in an average of 1.95 mg/L-N, which is higher than the FEIS predictions, however the more toxic un-ionized ammonia concentration averages out to a result 0.02 mg/L-N.

Analysis of 2024 water chemistry results for the Whale Tail Groundwater Storage Pond (GSP-1) (ST-WT-20) exhibit average nitrate results of 74.26 mg/L-N and average total ammonia-N results 15.8 mg/L-N, both of which are well below the average of 321 mg/L-N for both nitrate and ammonia concentrations outlined in the predictions.

All results for the aforementioned monitoring stations can be found in Section 8.5.2.2 of this report. It is important to note that none of the monitoring stations, aside for ST-WT-20, exhibited results for total ammonia-N that exceeded the maximum authorized monthly mean of 15 mg/L-N as included in the effluent quality limits found in the Whale Tail Water License 2AM-WTP1830. None of the monitoring stations exhibited results over the maximum authorized grab concentration of 30 mg/L-N.

Additionally, as mentioned in the FEIS predictions, if explosives waste management differs from that which is practiced at Meliadine, the sump concentrations at the Whale Tail mine may differ from the model predictions. Ammonia is expected to be attenuated through the water treatment plan (WTP). Agnico Eagle will continue to monitor the residual explosive concentrations and how they correlate to FEIS predictions in future annual reports.

4.4.3 Predicted Vs Measured Water Quality^s

4.4.3.1 Meadowbank Site^s

As required by NWB Water License 2AM-MEA1530 Part E, Item 9: *The Licensee shall, on an annual basis during Operations, compare the predicted water quantity and quality within the pits, to the measured water quantity and quality. Should the difference between the predicted and measured values be 20% or greater, then the cause(s) of the difference(s) shall be identified and the implications of the difference shall be assessed and reported to the Board. The comparison of predicted water quality in reflooded pits also addresses Water License 2AM-MEA1530 Part E, Item 7.*

As per NIRB Comments to 2014 Annual Report: “[...] provides comparisons between originally predicted and measured water quantity and quality in 2014. This comparison only uses the current year, but a year over year comparison would help identify trends.” In the 2015 and 2016 Annual Report, the predicted water quantity and quality within the pits was compared to the measured water quantity and quality. This comparison used a year over year comparison. Since 2017, the predicted water quantity and quality within the pits will be compared to the measured water quantity and quality values that were sampled in the same year.

The comparison between the predicted water quantity and quality within the pits will be compared to the measured water quantity and quality done from 2012 to 2024. Because the Portage Pit was not deep enough to collect sufficient data from the sumps in 2011, this comparison used 2012 as a start point.

Appendix 16 provides a comparison between predicted (originally predicted in support of the NWB license) and measured water quantity and quality within Portage, Goose and Vault Pits for 2024. Refer to previous Annual Reports for comparisons for 2012 to 2023. The life-of-mine (LOM) at Meadowbank has been updated since the 2007 application for the NWB license and includes the Whale Tail extension project (past 2018). Consequently, the prediction model year originally presented in 2007 are no longer in sync with the current LOM. In order to account for this discrepancy, Table 4-10 presents the predicted model year used for comparison of the measured data collected in the current LOM calendar year.

Percent difference between the predicted and measured values for water quantity and quality was calculated using the following formula:

$$\% \text{ difference} = ((A-B) / B) * 100;$$

where: A = measured value and B = predicted

Table 4-10 Predicted Model Year used for Comparison against Current Life of Mine Calendar Year[§]

Calendar Year	Current Life of Mine Year	Predicted Model Year Used for Comparison				
		Third Portage Open Pit (Pit E)	North Portage Pit Sump (Pit A)	Goose Island Pit	Vault Pit Sump	Phaser Pit Sump
2012	3	3	not in operation	3	not in operation	not in operation
2013	4	4		3		
2014	5	4	4	3	5	
2015	6	4	4	3	6	
2016	7	4	4	3	7	
2017	8	4	4	3	7	
2018	9	4	4	3	7	7
2019	10	4**	4**	3**	8	8
2020	11	4**	4**	3**	9	9
2021	12	4**	4**	3**	10	10
2022	13	4**	4**	3**	11	11
2023	14	4**	4**	3**	12	12
2024	15	4**	4**	3**	13	13
2025	16	4**	4**	3**	13	13
2026	17	4**	4**	3**	13	13
2027	18	4**	4**	3**	13	13
2028	19	4**	4**	3**	13	13
2029-2036	Closure	5 to 13	5 to 13	5 to 13	13	13
Note: ** As of 2019, measured data are compared against the predicted model year presented in 2007 and the predicted values presented in the Meadowbank Interim Closure and Reclamation Plan, updated in 2019 which include in-pit deposition.						

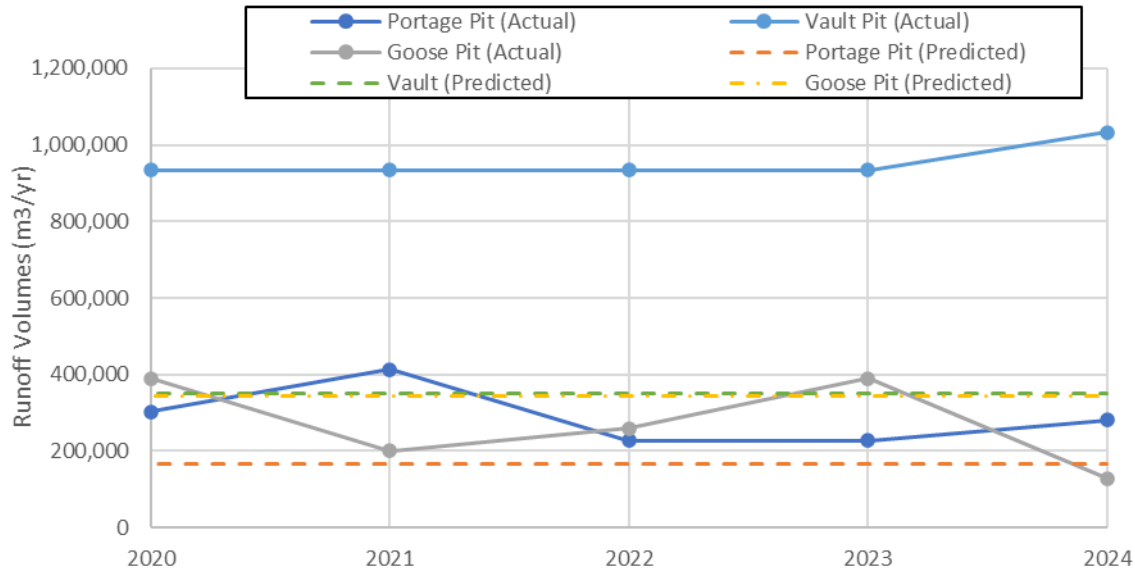
Water Quantity

The tables presented in Appendix 16 provides a comparison between predicted (originally predicted in support of the NWB license) and measured water quantity within Portage, Goose and Vault Pit for 2024.

Table 4-11 summarizes the key differences between the predicted water quantity in Golder (2007) against the measured estimated volumes in Portage Pit, Goose Pit and Vault Pit and also provides general comments and explanations for these discrepancies. Figure 9 summarizes the runoff to the different pits measured from 2020 to 2024 and compares them against the forecasted values. It should be noted that, the volume of precipitations accumulating directly in the Vault Pit and that infiltrating from the Vault Attenuation Pond have been adjusted to attain a projected pit level close to the level measured in 2024.

Table 4-11 Summary of Key Differences Between Predicted and Measured Water Quantity[§]

Pits	Difference between Predicted Water Quantity and Measured Water Quantity	Comments/Explanation
Portage	- In 2012, the measured water quantity was higher than the predicted water quantity by only 10%. - From 2013 to 2018, the measured water quantity was lower than the predicted water quantity by more than 20%. - From 2019 to 2024, the measured water quantity was higher than the predicted water quantity by more than 20% (between 30 to 68%).	- From 2013 to 2018, the quantities of seepage and groundwater sources and volumes that collectively make up the water in the pit, were less than what was originally predicted. - Furthermore, between 2014 and 2018, water from the East Dike Seepage was pumped back to Second Portage Lake which contributes to significantly decrease the water quantity in Portage Pit - As of 2019, operations continued in Portage Pit with in-pit deposition activities. The site did not go into closure as originally planned and thus any clean water diversion structure required at closure were not put in place.
Goose	- The % difference between the predicted water quantity and the measured quantity were lower by more than 20% from 2012 to 2018, 2021 and 2022. - In 2019, the % difference between the predicted water quantity and the measured quantity was not significant (i.e. -5%). - In 2020, the % difference between the predicted water quantity and the measured quantity was higher by 13%. - In 2022, the % difference between the predicted water quantity and the measured quantity was lower by 24%. - In 2023, the % difference between the predicted water quantity and the measured quantity was higher by 13%. - In 2024, the % difference between the predicted water quantity and the measured quantity was lower by 63%.	- Since 2012, the quantities of seepage and groundwater sources and volumes that collectively report to Goose Pit were less than what was originally predicted. - Differences in measured quantities can also be attributed to either lower or higher runoff and infiltration rates reporting to this area.
Vault	- The % differences were significantly higher than 20% in 2014 (commencement of mining operations), 2015, 2017 and 2018 between the predicted water quantity and the measured quantity. - In 2016, and 2019 to 2022, there was no significant difference between the predicted and measured volume (i.e. less than -10%). - In 2018, the estimated runoff volume reporting to Vault and Phaser Pits was 64% above the predicted value. - As of 2019, Vault Pit is undergoing natural reflooding. It also receives infiltration water from the Vault Attenuation Pond. The % difference between 2019 to 2024 is more than 20%.	- The higher differences in measured quantities can be attributed to higher freshet and rainfall volumes reporting to this specific area. - In 2018, a large ice wall was formed in the Vault pit over the winter months. This phenomenon indicates a higher seepage flow rate entering the pit that was not accounted for in the original water balance. The main implication of the higher volumes of water to manage at the Vault Pit area is the requirement for longer pumping period than anticipated. - Since 2019, no activity is occurring at the Vault site. The Vault Pit is allowed to naturally reflood over time. Furthermore, the Vault Attenuation Pond is also allowed to naturally reflood. Based on field observation, the Vault Attenuation Pond water level is more or less constant at 136.7 masl since 2019. Water exfiltrate out of the Vault Attenuation Pond toward Vault Pit.

Figure 9 Meadowbank Summary of Runoff Volumes to the Pits^s

Water Quality

According to the original NWB application documents (Golder, 2007- Water Quality Predictions), a Probable scenario and a Possible Poor End scenario for predicted water quality results were evaluated. These models were developed to anticipate a representative range of water quality that would be used for management and mitigative decisions. The Probable scenario used input values that simulate predicted observed field conditions and added realistic scaling factors related to explosives management and pit operations. The Possible Poor End scenario input values simulated probable variance on observed field characteristics and selected input parameters to capture possible, conservative variance. The predicted values in the Probable scenario and the Possible Poor End scenario represented the summer averages.

The measured values for 2024 are summarized in tables presented in Appendix 16. Each table includes the following information:

- The yearly mean and lower 25th percentile of all the data available throughout the year at Portage Pit (ST-17 and ST-19), Goose Pit (ST-20), Vault Pit (ST-23) and Phaser Pits (ST-41) were compared to the predicted values where data were available.
- The lower 25th percentile values were calculated and compared to the predicted values when 3 or more samples were taken during the year.
- The predicted values for Portage and Goose pits were based on the water quality forecast considered in the Meadowbank Interim Closure and Reclamation Plan, updated in 2019 since in-pit deposition has started in Goose Pit.

- The measured values were also compared to the predicted values obtained in the water quality prediction model developed in 2007 to ensure continuity with previous years analysis (refer to Table 4-10 for predicted model year used for comparison).
- The measured data was also compared to the Water License discharge criteria to Third Portage Lake and Wally Lake, the Metal and Diamond Mining Effluent Regulations (MDMER) and the CCME water quality guidelines for the protection of aquatic life.
 - With regard to the MDMER, the discharge criteria were updated as of June 2021 and thus, the measured data was compared to these updated values.
 - Sulphate concentrations were compared to a guideline value based on a threshold value from BC Environment guideline for the protection of aquatic life for very soft water (0-30 mg/L) (April 2013).
 - It is understood that the Water License, MDMER and CCME criteria apply to mining effluents discharged to the environment and are as such not applicable to the pit water since it is managed within the site and undergoes a treatment step if required prior to discharge to the environment. These criteria are used as a guide to identify potential parameters of concern.

The laboratory services selected by Agnico are conducted by accredited facilities and reach the analysis lower detection limits (LDL) where the results can be compared to the CCME guidelines. Agnico Eagle will continue to ensure that the accredited laboratory can reach the required detection limits.

Table 4-12 summarizes the key differences between the predicted and the measured water quality data at the Third Portage Open Pit Sump (i.e., Portage Pit E), Goose Island Open Pit Sump (i.e., Goose Pit), North Portage Pit Sumps, Vault Pit Sumps and Phaser Pit Sumps presented in Appendix 16. Comparison to the guidelines (CCME Guidelines, MDMER and Water License criteria) to be used as a guide only to identify potential parameters of concern.

Figures 10 to 13 on the following pages show monitoring data plotted alongside the ICRP (2019) and NWB Application (2007) water quality predictions. In general, the NWB Application results do not reflect pit chemistry over this time period as in-pit tailings deposition was not incorporated into these model predictions. The ICRP 2019 model predictions are more closely aligned with observed data, with variations between observed and 2019 model results mainly caused by changes in tailings deposition schedule and water management.

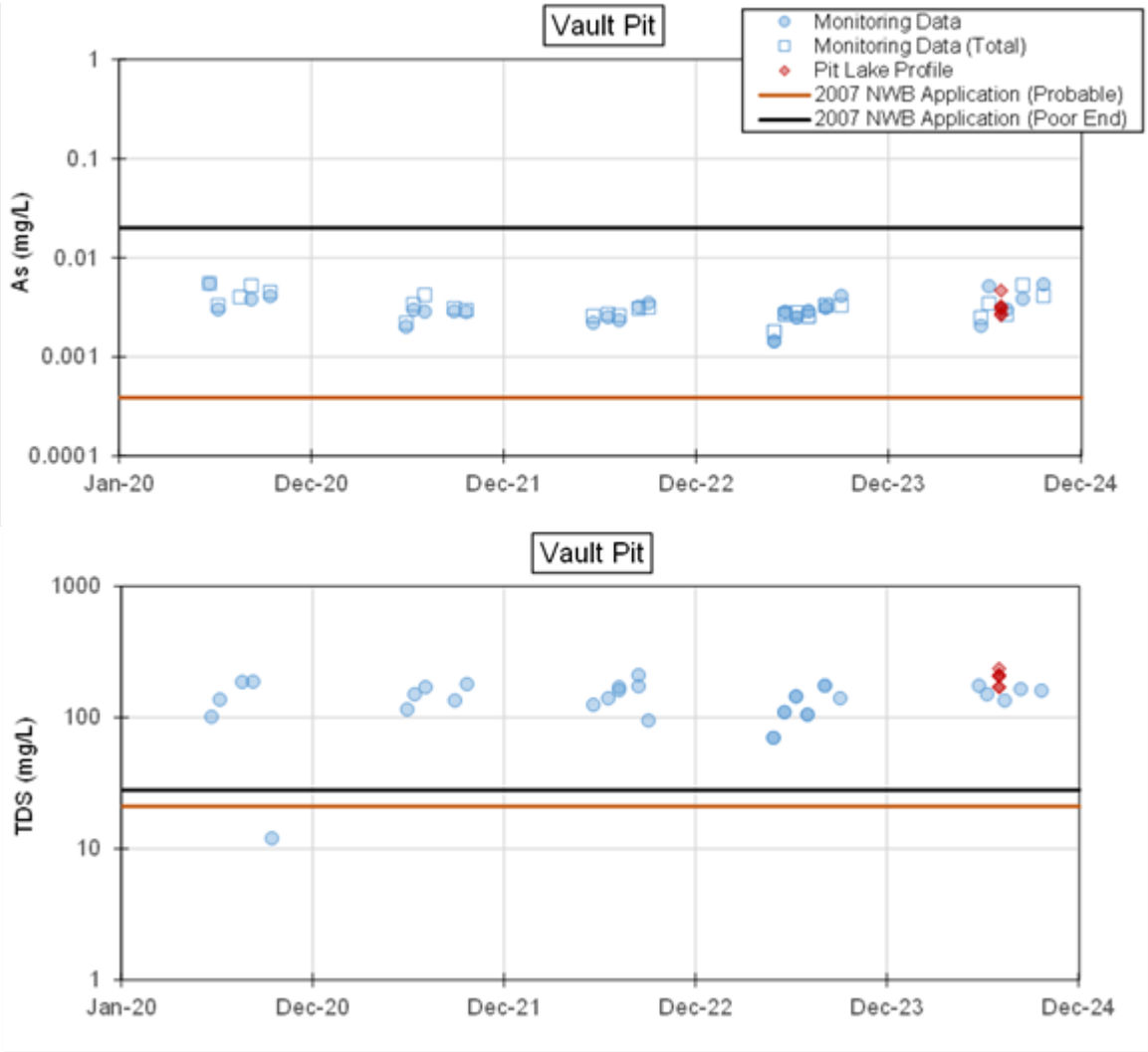
Table 4-12 Summary of Key Differences Between Predicted and Measured Water Quality[§]

Pits	Difference between Predicted Water Quality and Measured Water Quality	Comparison to CCME Guidelines, MDMER and Water License
Third Portage Pit Sump (Pit E)	- From 2012 to 2018 the difference between the measured and predicted values were generally greater than +/- 20% for many parameters, for both probable and possible poor scenarios assessed in 2007. - The parameters with difference much greater than 20% vary from year to year. Notable parameters include unionized ammonia, copper, arsenic cadmium, selenium and thallium. - From 2019, the difference between the measured and predicted values continues to be generally greater than +/- 20% for many parameters, for both probable and possible poor scenarios assessed in 2007. - However, when comparing the measured data to the 2019 annual average water quality forecasted values, the % difference are generally lower when comparing to the 2007 predicated values. This is expected since the 2007 predicated values did not consider in-pit deposition. - In 2022, for many parameters the measured values were higher by 9% than the same values in 2021. - In 2023 and 2024, for many parameters, the measured values were higher by +/- 30% than the predicted values.	- From 2012 to 2022, the following recurring parameters were found to be higher than the CCME guidelines: un-ionized ammonia, ammonia nitrogen, fluoride and nitrate. - Sulphate was found to be higher than the threshold value as of 2015. - From 2020 (i.e. start of in-pit deposition), most of the metals were found to be higher than the CCME guidelines, except for lead, barium, iron, manganese and thallium. - Generally, no parameters exceeded the Water License and MDMER criteria prior to the start of in -pit deposition. - From 2020, certain parameters exceeded the Water License criteria: ammonia nitrogen (as of 2021) arsenic (only in 2020), copper and nickel (as of 2021). - From 2020, the following parameters exceeded the MDMER criteria: copper and nickel. - In 2022: certain parameters exceeded the Water License criteria: ammonia nitrogen, copper and nickel (as of 2021). - In 2023: certain parameters exceeded the Water License criteria: ammonia nitrogen, copper, nickel (as of 2021 and 2022) and nitrate. - In 2024: the same parameters exceeded the Water License criteria: ammonia nitrogen, copper, nickel and nitrate. Copper and nickel also exceeded the MDMER criteria.
North Portage Pit Sump (Pit A)	- The difference between the measured and predicted values were generally greater than 20% for all parameters, for both probable and possible poor scenarios assessed in 2007. - The parameters with difference much greater than 20% vary from year to year. Notable parameters include unionized ammonia, chloride, fluoride, molybdenum, and sulphate. - When comparing the measured data to the 2019 annual average water quality forecasted values, the % difference are generally lower when comparing to the 2007 predicated values. This is expected since the 2007 predicated values did not consider in-pit deposition. - Note that no tailings were deposited in Pit A. Pit A was used since 2019/2020 as a storage basin for Reclaim Water.	- From 2015 to 2022, the following recurring parameters were found to be higher than the CCME guidelines: un-ionized ammonia, ammonia nitrogen, arsenic, fluoride, and nickel. - Sulphate was found to be higher than the threshold value as of 2015. - From 2020 (i.e. start of in-pit deposition in Pit E), the following additional parameters were found to be higher than CCME guidelines: copper, manganese, molybdenum and selenium. - Generally, no parameters exceeded the Water License and MDMER criteria prior to the start of in -pit deposition. - From 2020, certain parameters exceeded the Water License criteria: ammonia (as of 2021) arsenic (only in

Pits	Difference between Predicted Water Quality and Measured Water Quality	Comparison to CCME Guidelines, MDMER and Water License
	- In general, measured values in 2022 were higher by +/-30% than the measured values in 2021. Moreover, in 2022, measured values exceeded the predicted values by more than 30%. - In 2023 and 2024, the measured values were higher by more 20% than the predicted values. Note that Pit A began to receive tailings slurry and process water directly from the mill in 2024, contributing to the difference with 2007 predicted values which did not consider in-pit tailings.	2020), copper and nickel (only of 2021). - From 2020, the following parameters exceeded the MDMER criteria: copper (2020 and 2021). - In 2022, no parameters exceeded the MDMER criteria. However, ammonia nitrogen and copper exceeded the Water License criteria. - In 2023: certain parameters exceeded the Water License criteria: ammonia nitrogen, copper and nickel. However, no parameters exceeded the MDMER criteria. - In 2024: Certain parameters exceeded the Water License criteria: ammonia nitrogen, copper and nickel. However, no parameters exceeded the MDMER criteria.
Goose Island Pit Lake (Goose Pit)	- From 2012 to 2018 the difference between the measured and predicted values were generally greater than +/- 20% for many parameters, for both probable and possible poor scenarios assessed in 2007. - From 2019, the difference between the measured and predicted values continues to be generally greater than +/- 20% for many parameters, for both probable and possible poor scenarios assessed in 2007. This is to be expected since in-pit deposition took place in Goose Pit in 2019. - However, when comparing the measured data to the 2019 annual average water quality forecasted values, the % difference are generally lower when comparing to the 2007 predicated values. This is to be expected since the 2019 model considered in-pit deposition. - Note that no tailings were deposited in Goose Pit other than in 2019. As of 2020, only natural runoff is reporting to the pit, with occasional transfer to Pit A - For 2022, predicted values were lower than the measured values by +/- 30%. - In 2023 and 2024, measured values were higher by +/- 30% than the predicted values.	- From 2015 to 2022, the following recurring parameters were found to be higher than the CCME guidelines: fluoride and nitrate (up to 2020). - Sulphate was found to be higher than the threshold value as of 2015. - In 2019, tailings were deposited in Goose Pit. From that moment, the following additional parameters were found to be higher than CCME guidelines: unionized ammonia, ammonia, arsenic, copper, nickel and selenium. - Generally, no parameters exceeded the Water License and MDMER criteria prior to the start of in -pit deposition in 2019, except for cadmium and mercury in 2012 and nitrate in 2013. - From 2019, certain parameters exceeded the Water License criteria: ammonia (as of 2020), arsenic (as of 2020) and copper (2019 to 2020). - From 2020, the following parameters exceeded the MDMER criteria: copper (2019 to 2020) and arsenic (as of 2020). - In 2022, ammonia nitrogen and arsenic exceeded the water License criteria (as 2020). Compared to 2020, only arsenic exceeded the MDMER criteria. - Similarly to 2022, in 2023, ammonia nitrogen and arsenic exceeded the Water License criteria and only arsenic exceeded the MDMER criteria. - In 2024, only ammonia nitrogen exceeded the Water License criteria.
Vault Pit	From 2014 to 2018, the difference between the measured and predicted values were generally greater than +/- 20% for many parameters, for both probable and possible poor scenarios assessed in	From 2014 to 2019 the following recurring parameters were found to be higher than the CCME guidelines: unionized ammonia, ammonia, fluoride and nitrate.

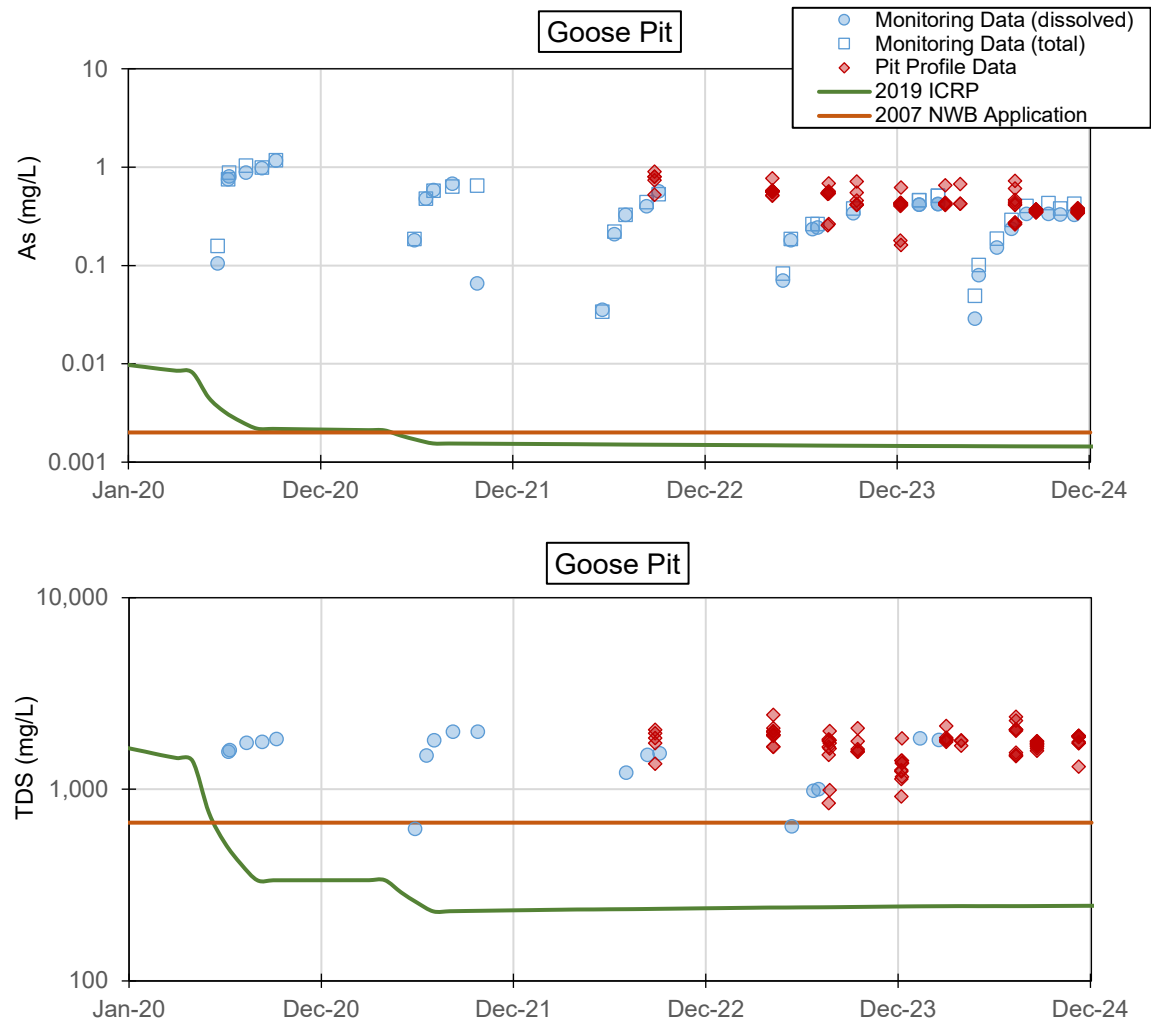
Pits	Difference between Predicted Water Quality and Measured Water Quality	Comparison to CCME Guidelines, MDMER and Water License
	2007. - The parameters with difference much greater than 20% vary from year to year. Notable parameters include alkalinity, fluoride, iron, manganese and sulphate. - From 2019, once the mining activity has stopped in the area, the difference between the measured and predicted values continued to be generally greater than +/- 20% for many parameters for both probable and possible poor scenarios assessed in 2007, but to a lesser extent. - For 2022, the difference between the measured and predicted values continued to be generally greater than +/- 20% for many parameters (except ammonia nitrogen and nitrate) for both probable and possible poor scenarios assessed between 2016-2022. - In 2023 and 2024, for many parameters, measured values were higher by +/- 20 % than the predicted values.	- Sulphate was found to be higher than the threshold value from 2014 to 2019. - Once operation ceased in 2019 and the pit was allowed to naturally reflood, most parameters were below the CCME guidelines as of 2020, except for selenium in 2020 that was slightly higher than the guideline. - No parameters exceeded the Water License, except for ammonia in 2015. - No parameters exceeded the MDMER criteria. - In 2022, no parameters exceeded all criteria guidelines. - From 2021 to 2023, no parameters exceeded any of the criteria guidelines. - In 2024, no parameters exceeded the Water License and MDMER criteria. With the exception of fluoride, which was at the CCME guideline, all parameters were also below CCME guidelines.
Phaser Pit	- In 2018, the difference between the measured and predicted values were generally greater than +/- 20% for many parameters, for both probable and possible poor scenarios assessed in 2007. - The parameters with difference much greater than 20% vary from year to year. Notable parameters include fluoride, manganese and sulphate. - From 2019, once the mining activity has stopped in the area, the difference between the measured and predicted values continued to be generally greater than +/- 20% for many parameters for both probable and possible poor scenarios assessed in 2007, but to a lesser extent. The difference between the measured and predicted values continued to be generally greater than +/- 20% for many parameters (except ammonia nitrogen and nitrate) for both probable and possible poor scenarios assessed between 2016-2022. - In 2023 and 2024, for many parameters, the measured values were higher by +/- 30% than the predicted values.	- From 2018 to 2019 the following recurring parameters were found to be higher than the CCME guidelines: unionized ammonia, ammonia, copper, fluoride and nitrate. - Sulphate was found to be higher than the threshold value from 2018 to 2019. - Once operation ceased in 2019 and the pit was allowed to naturally reflood, most parameters were below the CCME guidelines as of 2020, except for copper in 2021 and 2022 that was slightly higher than the guideline. - In 2022, no parameters exceeded the Water License and MDMER criteria. - In 2023, no parameters exceeded the Water License and MDMER criteria. Moreover, most of the parameters were below the CCME guidelines, except for copper and cadmium, that were slightly higher than the guidelines. - In 2024, no parameters exceeded the Water License and MDMER criteria. With the exception of copper, all parameters were also below the CCME guidelines.

Figure 10 Meadowbank Mean Annual Water Quality - Vault Open Pit Sumps*§



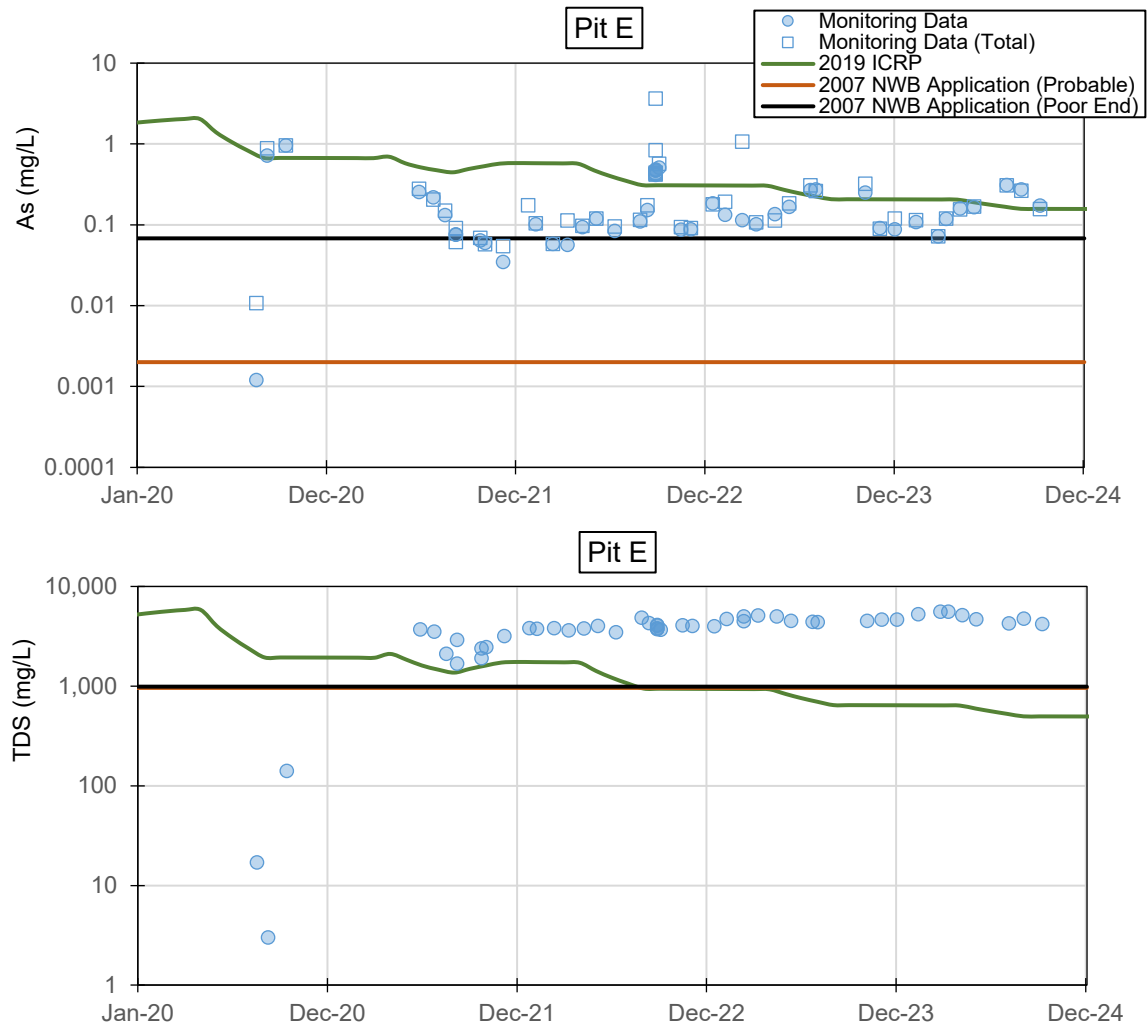
*Comparison of arsenic (top) and total dissolved solids (bottom) concentrations at Vault Pit Sumps with original NWB Application (Golder, 2007- Water Quality Predictions) probable scenario (orange) and possible poor end scenario (black). Note Meadowbank Interim Closure and Reclamation Plan (ICRP 2019) are not available for Vault Pit Sumps.

Figure 11 Meadowbank Mean Annual Water Quality – Goose Open Pit Sumps*§



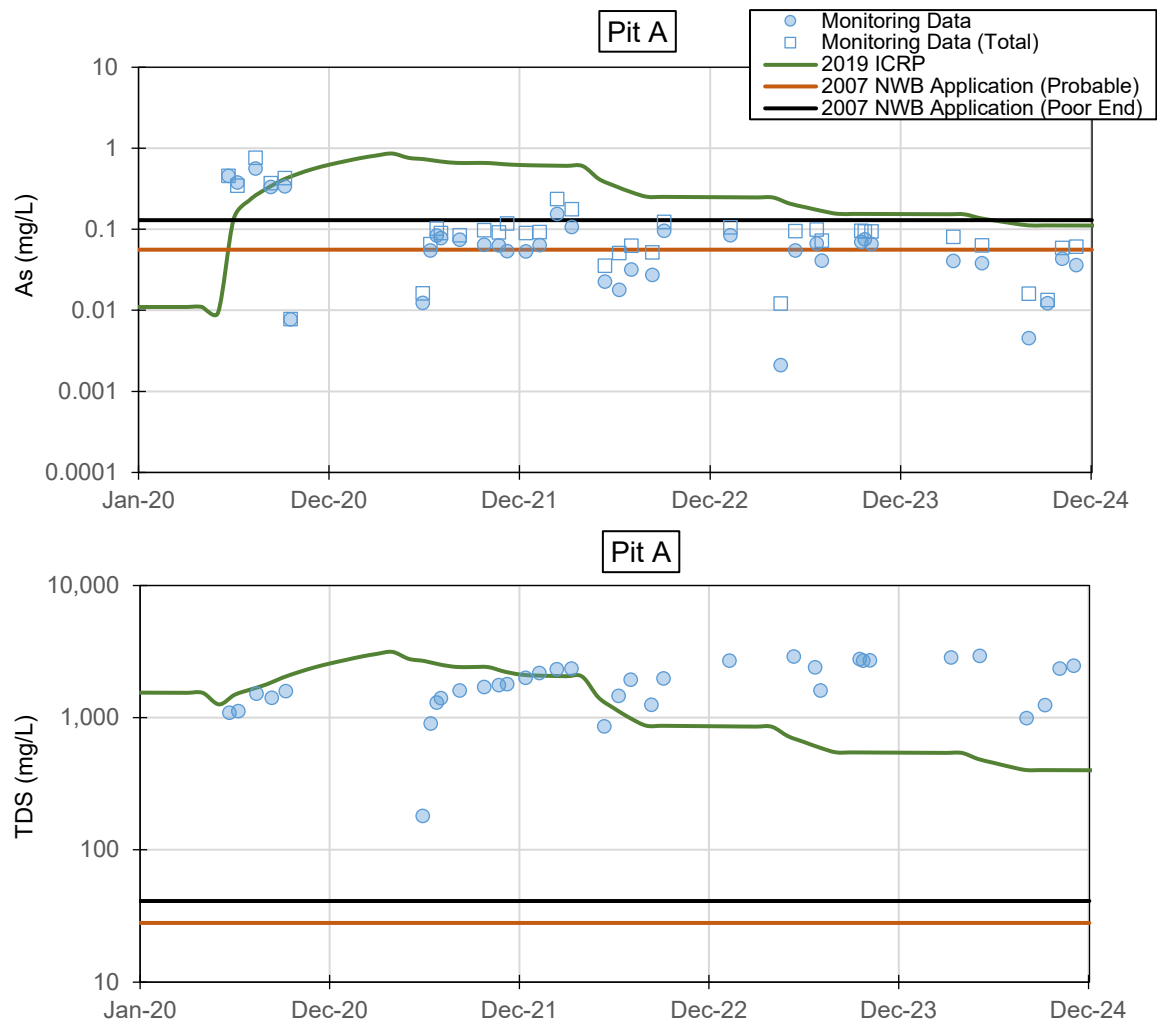
*Comparison of arsenic (top) and total dissolved solids (bottom) concentrations at Goose Island Pit Lake with Meadowbank Interim Closure and Reclamation Plan (ICRP 2019) (green) and original NWB Application (Golder, 2007- Water Quality Predictions) (black). Note for Goose Island Pit Lake original NWB Application the probable scenario and possible poor end scenario are equivalent.

Figure 12 Meadowbank Mean Annual Water Quality – Third Portage Pit (Pit E) Sumps*§



*Comparison of arsenic (top) and total dissolved solids (bottom) concentrations at Third Portage Pit (Pit E) Sumps with Meadowbank Interim Closure and Reclamation Plan (ICRP 2019) (green) and original NWB Application (Golder, 2007- Water Quality Predictions) probable scenario (orange) and possible poor end scenario (black).

Figure 13 Meadowbank Mean Annual Water Quality – North Portage Pit (Pit A) Sumps*§



*Comparison of arsenic (top) and total dissolved solids (bottom) concentrations at North Portage Pit (Pit A) Sumps) Sumps with Meadowbank Interim Closure and Reclamation Plan (ICRP 2019) (green) and original NWB Application (Golder, 2007- Water Quality Predictions) probable scenario (orange) and possible poor end scenario (black).

Based on this analysis, many of the predicted values for water quality and quantity for the Probable and Probable Poor End scenarios and Annual Average and 25% Percentile Water Quality Forecast have differences greater than +/- 20% when compared to the measured values. There are several potential causes that could contribute to these differences:

- For Portage and Goose Pits, the measured water volumes were significantly less than what was originally predicted, specifically from 2012 to 2018. This reflects the fact that seepage, ground water and local runoff volumes were being managed and less water than what was originally predicted was reporting to the pit sumps. Consequently, there was less volume of water to attenuate any contaminant loads that may accumulate in the pit sump water body.
- For Portage Pit, the measured water volumes from 2019 to 2023 were higher than what was originally predicted. This can be explained by the higher observed precipitation at the site and more runoff being directed toward Portage Pit and possibly a higher infiltration rate. Consequently, there was more volume of water to attenuate contaminant loads that may accumulate in the pit sump water body.
- For Goose Pit, the predicted water volumes from 2019 to 2023 remained stable and were close to the measured values.
- For Vault Pit, the measured water volumes from 2014 to 2018 exceeded the original predictions. From 2019 to 2024, during the period of natural pit reflooding, the estimated measured water volumes continued to be higher than the predicted values. The estimated measured values include direct runoff into Vault Pit and the infiltration of water from Vault Attenuation Pond.
- Higher contaminant loads observed in Portage Pit could be the result from additional transfer of reclaim water from the Central Dike Downstream Pond.
- Higher contaminant loads of arsenic and nickel could also be the results of processing ore from Whale Tail Pit. This ore was shown to leach out higher concentration for certain metals, such as arsenic.
- Since 2019, in-pit deposition activities in Goose and Portage Pit contribute the main contaminant loading to the pit water.
- For North Portage Pit, the higher load could originate from water transfer from South Cell TSF, Downstream Pond and Goose Pit and transfer from Third Portage Pit.
- Higher observed load in the seepages flowing into the pits also contribute in part to the contaminant loads observed in Goose and Portage pits.
- The contaminant loads measured in Vault and Phaser Pits water were generally higher than the prediction. However, there has been a continued improvement in pit water quality year after year since the end of mining at Vault and natural re-flooding was allowed to take place in the pits.
- Some accredited laboratory water quality measurements have detection limits that are higher than the predicted values. This is particularly true for dissolved metal analysis, such as cadmium, iron, lead, nickel, molybdenum, selenium, thallium and zinc.
- The pH measured in Portage and Goose pits is generally higher than the predicted values. A possible cause for this phenomenon is that the groundwater infiltrating into the pits and the

influence of mill process water which both have a higher alkalinity concentration and pH when compared against the background water quality of the surrounding Third Portage Lake.

- Un-ionized ammonia concentration in water is greatly influenced by the pH. The higher the pH, the higher the fraction of un-ionized ammonia in the water. The predicted pH of the Portage and Goose pit water is between 6.1 and 6.3, while the measured values are generally between 7.4 and 8.4.

Furthermore, there are many parameters in the pit water from Goose Pit, Third Portage Pit and North Portage Pit that are slightly higher or higher than the CCME water quality guidelines for the protection of aquatic life. Some parameters, such as ammonia and nitrate, are present in the pit water from the use of explosive during the pit development and from natural degradation of cyanate, the by-product produced from the cyanide destruction process. Other parameters found in the pit water could originate from the natural groundwater seepage into the pit (i.e. fluoride, sulphates, etc.), from contact of runoff water and seepage water with potentially acid generating (PAG) rock surfaces of the pit wall and/or from loads coming from the reclaim water that is deposited with the tailings in the pits.

However, it is important to note that the water from all the pits is extensively monitored and is not discharged directly into the environment:

- For Portage and Goose Pit sump water, no water was discharged to the environment from these pits. Up until November 2014, the pit water was transferred to the former Attenuation Pond. The water accumulated in the Attenuation Pond was sent to the Tailings Storage Facility or treated by the Water Treatment Plant (WTP) before being discharged in the Third Portage Lake. No discharge limits were exceeded in 2012, 2013 and 2014 as all the results are below the maximum value required by NWB (Water License 2AM-MEA1526) and Environment and Climate Change Canada (MDMER). It should also be noted that since the South Cell Tailings Storage Facility was put into operation (November, 2014), no additional water from the former Portage Attenuation Pond has been discharged into the receiving environment during mining operations. In-pit tailings deposition in Goose Pit was started in July 2019 and finished in August 2020. It continued in Portage Pit as of August 2020 and will project to finish in June 2028. Reclaim water from the South Cell TSF Reclaim Pond and Central Dike Downstream Pond was also transferred to North Portage Pit in 2020, 2021, 2022, 2023 and 2024.
- Prior to 2019, Vault and Phaser Pits sump water was pumped to Vault Attenuation Pond. The water accumulated in the Vault Attenuation Pond could be treated by the WTP, if required, until the end of 2017 for Total Suspended Solids (TSS) removal before discharge into the receiving environment (Wally Lake). No discharge limits were exceeded in 2014, 2015, 2016 and 2017, as all the results are below the maximum average concentration value required by NWB (Water License 2AM-MEA1526) and Environment and Climate Change Canada (MDMER). From 2019 to 2024, Vault Pit has been passively flooding and there was no discharge to the environment.

The sample results from Portage, Goose, Vault and Phaser Pits will continue to be monitored in the future and the results will be considered in the water quality modelling, revised yearly, to assist in informing management of water quality in the pits during closure. All factors including the proportional volume of pit water and reclaim water in the TSF, as well as possible implementation of mitigative measures during operation and closure, will be considered when deciding if water treatment will be required at closure. All of this information including the applicable parameters are integrated into the water quality model and is discussed in the subsequent section.

Water Quality Forecast model - Pit Water Quality

The Water Quality Forecast model is completed yearly with the updated, measured data from site, as well as the water balance used on site. The most recent version can be found in Appendix C of the 2024 Water Management Plan (Appendix 13). The report includes water quality predictions for each mine pit through operations and closure, validated against historic monitoring data and screened against relevant water quality criteria.

At the end of operations process water in Goose Pit, Pit A and Pit E will be treated for nitrogen species with in-situ aeration and for metals with a WTP prior to transfer to the base of Vault Pit, where process water will be permanently stored under meromictic conditions. The Portage pits will be actively reflooded by pumping water from Third Portage Lake at a maximum rate of 4,935,000 m³ per year, and the remainder of Vault Pit above the treated Portage Pit water will be reflooded by pumping water from Wally Lake at a maximum rate of 4,185,000 m³ per year, as specified in License 2AM-MEA1530.

Vault Pit has been receiving runoff from the surrounding natural catchment, which includes the Vault Attenuation Pond, Vault WRSF, Phaser Pit and BB Phaser Pits. This water is generally of good quality due to minimal ML/ARD potential associated with the closed mine facilities in the Vault area. No treatment will be required for water currently accumulating in Vault Pit during operations or closure. All parameters are expected to meet the CCME guidelines or other site-specific criteria developed during the closure process and/or baseline criteria per the Water License in the surface waters of Vault Pit prior to dike removal and reconnection with Wally Lake in closure.

For the Vault area, ammonia and nitrate are the parameters of concern identified by Environment and Climate Change Canada, but no actual or forecasted concentration exceeds the Type A Water License discharge requirements for this area. The primary source of these parameters in the Vault area is flushing of explosive residues used during open pit mining. The concentrations are currently below CCME guidelines and are expected to continue to decline as explosive residues are flushed from mine rock surfaces.

It is important to note that the water quality in the pits will be subject to CCME guidelines or site-specific criteria and/or baseline criteria per the Water License at closure once the water level in the Goose and Portage Pits are equal to the water level in the Third Portage Lake, following reclaim water treatment and natural and active pit reflooding. The dikes will only be breached once the water quality in the pits meets CCME guidelines or site-specific criteria and/or baseline criteria per the Water License developed during the closure plan approval process. This applies also for the Vault area.

4.4.3.2 Whale Tail Site^s

As required by NWB Water License 2AM-WTP1830 Part E, Item 8: *The Licensee shall, on an annual basis during Closure, compare the predicted water quantity and quality within the pit and lake, to the measured water quantity and quality. Should the difference between the predicted base case values and measured values be 20% or greater, then the cause(s) of the difference(s) shall be identified and the implications of the difference shall be assessed and reported to the Board.*

As per the NWB requirement, this comparison will be provided once in closure.

4.4.4 Alternative Effluent Discharge Locations

As required by Project Certificate No. 008 Condition 67: *Subject to the additional direction and requirements of the Nunavut Water Board (NWB), the Proponent shall:*

a) Conduct an evaluation of the potential aquatic effects to Lakes D1 and D5 and downstream that may result from the discharge of treated effluent. The evaluation will include:

- *Additional water quality and phytoplankton baseline data in Lakes D1 and D5*
- *Updated water balance and water quality forecast*
- *Updated near field and far field effluent discharge modelling*
- *Updated Water management Plan, Water Quality and Flow Monitoring, and Core-receiving Environment Monitoring Plan*

b) Provide adequate rationale for the need to use the alternative discharge contingency, based on the thresholds established as per the Whale Tail Pit Expansion Project water management decision tree.

c) In the event that discharge to Lakes D1 and/or D5 is not approved to proceed by the NWB, the Proponent will develop alternative effluent management plans as part of the Water Management Plan.

Discharge to Lakes D1 and D5 are not planned at this point; therefore, no information is required to be provided under this Term and Condition.

4.5 HYDRODYNAMIC STUDIES WHALE TAIL SITE

As required by NIRB Project Certificate No.008 Condition 6: *The Proponent shall provide a summary of activities undertaken to address the requirements of this term and condition in annual report(s) to the NIRB. The Proponent shall:*

a) Conduct detailed hydrodynamic modelling during operations and closure to evaluate the mixing of the Waste Rock Storage Facility seepage into Mammoth Lake post-closure; and

b) Based on the results of the modelling implement monitoring programs and adaptive management strategies that minimize the need for active intervention, including long-term treatment of mine contact water.

This condition was fulfilled with the submission of the Hydrodynamic Modelling of Kangislulik Lake report found in Appendix 16 of the 2018 Annual Report. Agnico Eagle will review the hydrodynamic model during operation, if needed, and during closure.

4.6 ADDITIONAL INFORMATION[§]

4.6.1 Meadowbank Site[§]

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 25: *Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.*

No additional information was requested in 2024.

4.6.2 Whale Tail Site^s

As required by Water License 2AM-WTP1830 Schedule B, Item 28: *Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.*

No additional information was requested in 2024.

SECTION 5. WASTE ROCK AND TAILINGS MANAGEMENT ACTIVITIES

5.1 GEOCHEMICAL MONITORING^s

5.1.1 Meadowbank Site^s

As required by NIRB Project Certificate No.004 Condition 15: Within two (2) years of commencing operations re-evaluate the characterization of mine waste materials, including the Vault area, for acid generating potential, metal leaching and non-metal constituents to confirm FEIS predictions, and re-evaluate rock disposal practices by conducting systematic sampling of the waste rock and tailings in order to incorporate preventive and control measures into the Waste Management Plan to enhance tailing management during operations and closure; results of the re-evaluations shall be provided to the NWB and NIRB's Monitoring Officer.

And

In accordance with NWB Water License 2AM-MEA1530 Schedule B, Item 7: Geochemical monitoring results including:

a. Operational acid/base accounting and paste pH test work used for waste rock designation (PAG and NPAG rock);

As no mining occurred at Meadowbank mine in 2024, no blast holes were analyzed for sulphur and carbon. Agnico Eagle will refer to previous annual reports for historical information.

b. As-built volumes of waste rock used in construction and sent to the Waste Rock Storage Facilities with estimated balance of acid generation to acid neutralization capacity in a given sample as well as metal toxicity;

Refer to Section 5.2.1 of this report.

c. All monitoring data with respect to geochemical analyses on site and related to roads, quarries, and the All Weather Access Road;

Surface water quality in quarries monitoring has not been completed since 2012. Previous water sampling results showed no evidence of geochemical issues in the quarries. Agnico Eagle will refer to the 2012 and previous Annual Reports. The water chemistry in quarries remains consistent between years and due to the isolated nature of the pool, the water collected in the quarry does not likely pose a risk to the aquatic environment. It was recommended that unless turbidity issues are visually observed, surface water quality sampling is not deemed necessary at non-HADD crossings or contact pools. In 2024, no turbidity issues were visually observed so surface water quality sampling was not deemed necessary at quarry contact water pool. Similar to previous years, Quarries 4, 13, and 14 were flooded and Quarries 15 contained minor water accumulation, as noted in the 2024 Annual Geotechnical Inspection (Appendix 7). The water ponding at freshet or during the summer period in the quarries does not drain to any nearby watercourse. The quarry reclamation along the AWAR will form part of the Meadowbank Final Closure and Reclamation Plan. Reclamation activities for some quarries may occur during operations. The remaining reclamation activities for the quarries will occur during the closure period.

Pre-freshet and freshet inspections were conducted at crossings along the AWAR and quarries in 2024. These inspections are conducted to document the presence/absence of flow, erosional concerns and turbidity plumes and to ensure that runoff, if any, would be free of any contaminant and would not impact the environment. No turbidity issues were visually observed so surface water quality sampling was not deemed necessary at non-HADD crossings or quarry contact water pools. Agnico Eagle considers the planned monitoring approach sufficient. As described in the 2012 Annual Report: *‘HADD crossings R02, R06, R09 and R15 water quality monitoring results continue to suggest an improvement from post AWAR construction (complete March 2008) as mine related road activity did not cause any observable effects on the receiving environment from the field observations and water chemistry data collected in 2012. Consistent with 2011, the AWAR surface water quality results did not present concerns to the receiving environment as none of the parameters exceeded CCME (2007) in 2012. Based on the monitoring results, the road construction material appears to be stable; therefore, Agnico did not conduct any surface water chemistry sampling in 2013 unless visual turbidity observed. If in the future, an erosion issue occurs, detailed monitoring will be conducted in response to the event.’*

d. Leaching observations and tests on pit slope and dike exposure;

No recorded observation of leaching was observed on the pit slope or dike faces in 2024.

e. Any geochemical outcomes or observations that could imply or lead to environmental impact;

In 2024, Agnico Eagle continued to conduct inspections around the Waste Rock Storage Facilities (WRSF) to determine if there is seepage at the base of the WRSF. In 2024, as in previous years, surface runoff has been observed. Samples are taken in accordance with the NWB Water License 2AM-MEA1530 and reported in the annual report. Refer to Section 8.5.2.1.7 regarding the seepage event; mitigation and monitoring that occurred in NP-2 Lake and other downstream lakes (i.e. NP-1, Dogleg, and SPL).

The waste rock storage facility at Portage includes a sector with only Non-Potentially Acid Generating (NPAG) material, and a sector for Potentially Acid Generating (PAG) material, capped with NPAG material during operations. Inspection and monitoring around the Portage waste rock storage facility report minimal water accumulation around the facility, mostly related to melt and runoff water in the spring. Thermistors installed in the Portage WRSF also indicate that freeze back is occurring within the rock pile; freeze back of the pile and the 4.0 m layer of NPAG rock will provide geochemical stability and to act as a thermal barrier to control acid rock drainage potential.

The waste rock mined at Vault is largely NPAG. As a mitigative measure any PAG or uncertain waste rock material were placed in the middle of the Vault Waste Rock Storage Facility while NPAG material is placed on the perimeter to encapsulate the PAG material. Runoff or seepage water monitoring analysis confirms the effectiveness of this abatement measure. To date water monitoring analysis from runoff indicates no concerns related to ARD. The water seepage from the Vault WRSF area is expected to be of suitable quality to allow discharge to the environment without treatment and capping of this facility is therefore not proposed. Agnico Eagle initiated water quality monitoring at Vault in 2014 and results confirm the prediction. An adaptive management plan will include continued monitoring of water quality during operations to confirm modelling predictions, and to allow adjustments to the closure plan as required. As discussed in Section 8.5.2.1.13, in 2024, ponded water was observed at the base of the WRSF (sampling station ST-24) and was sampled in June, July, August, September and October. As per

NWB Water License, samples were collected to assess water quality and the results are presented in Table 8-22. No water was pumped from this location as it is mainly a ponding area without flow.

f. Geochemical data associated with tailings solids, tailings supernatant, cyanide leach residue, and bleed from the cyanide destruction process including an interpretation of the data;

Agnico Eagle takes throughout the year monthly samples of tailings (as per the Pore Water Quality Monitoring Program – Section 5.1.1.1 below) that are sent to an accredited laboratory to analyse for ABA and Metal Leaching. Table 5-1 below presents the results of tailings solids. These sample results, along with the tailings liquid results, are also integrated in the Water Quality Forecast updated yearly.

Table 5-1 Meadowbank 2024 Tailings Solids Monitoring[§]

Analysis	Date	2024											
	Units	2-Jan	19-Feb	13-Mar	9-Apr	24-May	6-Jun	3-Jul	6-Aug	3-Sep	3-Oct	4-Nov	3-Dec
NP	t CaCO ₃ /1000t	88.0	89.2	74.2	66.8	62.9	63.5	142.0	70.4	77.8	73.4	66.4	79.0
AP	t CaCO ₃ /1000t	49.7	77.8	57.5	52.2	79.4	48.1	39.1	71.2	65.6	66.6	84.0	36.8
Net NP	t CaCO ₃ /1000t	38.3	11.4	16.7	14.6	-16.48	15.4	103.0	-0.85	12.2	6.84	-17.66	42.2
NP/AP	ratio	1.77	1.15	1.29	1.28	0.79	1.32	3.64	0.99	1.19	1.10	0.79	2.15
Sulphur	%	1.83	2.37	2.12	2.08	2.70	2.28	1.36	2.29	2.10	2.07	2.93	1.41
Acid Leachable SO ₄ -S	%	0.24	< 0.04	0.28	0.41	0.16	0.74	0.11	< 0.04	< 0.04	< 0.04	0.24	0.24
Sulphide	%	1.59	2.49	1.84	1.67	2.54	1.54	1.25	2.28	2.10	2.13	2.69	1.18
C	%	1.19	1.16	0.965	0.991	1.01	1.00	0.993	0.989	1.07	0.93	0.948	1.01
CO ₃	%	5.16	4.64	3.79	3.63	3.29	3.57	4.14	3.43	4.21	3.63	3.15	4.03
Final pH	pH units	1.57	1.50	1.72	1.86	1.70	1.72	1.51	1.6	1.61	1.57	1.54	1.87
As	µg/g	1,100	1,600	1,800	2,000	1,600	1,800	1,200	2000	1,800	1,300	2,000	1,300
Cu	µg/g	150	100	99	130	260	140	110	130	110	120	110	95
Ni	µg/g	620	490	670	460	440	420	730	600	680	600	400	740
Zn	µg/g	130	110	91	86	110	97	110	94	88	110	98	88

g. Results related to the road quarries and the All Weather Private Access Road.

As mentioned in Section 5.1.1c, no quarries geochemical water analysis was performed in 2024.

5.1.1.1 Pore Water Quality[§]

On May 24th, 2019, Agnico Eagle received the Ministers Approval from NWB regarding the Amendment No.3 to Water License 2AM-MEA1526 to authorize Water Uses and Waste Deposits associated with the In-Pit Tailings Disposal Proposal. As part of their decisions, Agnico Eagle was required to submit a Tailings Pore Water Quality Monitoring Program for the Board review and approval (Section IV, Part B:

General Conditions). The approved Pore Water Quality Monitoring Program is attached in Appendix 23 of the 2019 Annual Report.

The chemical composition of the mill effluent process water has significant influence on the quality of supernatant water above the tailings surface (i.e. reclaim water) as well as the exfiltration from the tailings. The chemical composition of the tailings pore water is expected to be controlled by the chemical composition of the mill effluent and the reclaim water, which is a mixture of mill effluent process water and any other direct inputs to the pit (i.e. precipitation, runoff, etc.). Geochemical reactions within the tailings solids themselves are not expected to influence pore water chemistry.

In-Pit disposal in Goose Pit started on July 5th, 2019, and stopped on August 19th, 2020. In-pit disposal in Portage Pit E started on August 20th, 2020, and stopped on December 19th, 2024. In-pit disposal in Portage Pit A started on December 19th, 2024, and is ongoing. As part of this program, Agnico Eagle collected on a monthly basis, one sample of plant effluent slurry representative of the end of pipe prior to tailings disposal in Goose/Portage pits (collected in the mill). Tailings samples were taken each month in 2024. Samples of reclaim water from the Pits where tailings are actively being deposited were also taken, if possible, to be done safely, and the results are provided in Section 8.5.2.1 below.

Agnico Eagle completed sampling for in-pit tailings and porewater for three (3) subsequent years. A sampling program was conducted in August 2022 to characterize the tailings and porewater in Goose Pit. Additional sampling was completed in 2023 and again in 2024. Monitoring pore water quality from Goose Pit will provide insights on the behavior of the pore water quality over time as the tailings self-consolidate. The data collected from Goose Pit should be representative of the behavior within Portage Pits since similar tailings are deposited in these pits. Upon data review and analysis, subsequent sampling of tailings pore water may be completed if deemed required to provide additional information on the chemistry of the pore water and to support the closure and post-closure monitoring plan for Meadowbank. The pore water data will be included in the closure studies to be presented in the Closure and Reclamation Plan.

5.1.2 Whale Tail Site^s

As required by NIRB Project Certificate No.008, Condition 8: *The Plan should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent updates or revisions to the Plan submitted annually thereafter or as may otherwise be required by the NIRB for the life of the Project. The Proponent shall submit a detailed Acid Rock Drainage and Metal Leaching Management Plan that includes the following items:*

- *Waste rock segregation and testing;*
- *Thermal monitoring of waste rock;*
- *Seepage management and monitoring;*
- *A schedule for reporting of results and periodic updating of predictions for the WRSF pond quality;*
- *Planning for optimal cover conditions;*
- *Contingency measures that may be implemented if required;*
- *Plans for comparing monitoring results from receiving waters to model predictions; and*
- *The identification of thresholds that will trigger management actions if trends analysis indicates water quality objectives may be exceeded.*

And

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 10: *Geochemical monitoring results including:*

In 2020, after one year of mining activity in Whale Tail Pit and accumulating substantial information and knowledge of the Whale Tail deposit, Agnico Eagle reviewed the waste sampling default ratios defined by the Operational ARD-ML Sampling and Testing. An updated Operational ARD-ML Sampling Testing and Plan (Appendix 21 of the 2020 Meadowbank Annual Report) which included new sampling frequency in Whale Tail Pit was provided to and approved by the NWB on January 22nd, 2021. A subsequent update to the plan which included new sampling frequency in IVR Phase 1 Pit was provided to and approved by the NWB on March 8th, 2023 (Appendix 31 of the 2022 Meadowbank Complex Annual Report).

The objectives of the Plan are to define the sampling, analysis, and testing procedures that are to be implemented to define the acid generating and metal leaching potential of waste rock for the Mine. This characterization is to be used by mine staff to ensure that waste rock, overburden (till), and lake sediments are identified, managed, segregated and disposed of in an environmentally appropriate manner, as designated in the Plan. The Plan also defines if waste rock, overburden, and lake sediment can be used as construction/closure material. This Plan does not discuss thermal monitoring of waste rock, which is covered in the Thermal Monitoring Plan (Appendix 61).

a. Operational acid/base accounting and paste pH test work used for Waste Rock designation (PAG and NPAG rock);

In 2024, Agnico Eagle sampled approximately 25% of the blast holes and analyzed the percentages of sulphur and carbon. The results from these analyses are used to differentiate Non-Potentially Acid Generating (NPAG) from Potentially Acid Generating (PAG) materials. For detailed process regarding the ARD-ML for Whale Tail waste rock and overburden classification, please refer to the Operational ARD-ML Sampling and Testing Plan Section 3.2 (Appendix 31 of the 2022 Meadowbank Complex Annual Report). See Table 5-2 below for a summary of Acid Rock Drainage (ARD) Guidelines used to classify Whale Tail waste rock. The plan also described the frequency of sampling. Once characterized by the geology team, the waste rock material is segregated and placed in an appropriate location.

Table 5-2 Summary of ARD Guidelines used to classify waste^s

Initial Screening Criteria	ARD Potential
NPR < 1	Potentially Acid Generating (PAG)
1 < NPR < 2	Uncertain or low acid generating
2 < NPR, As < 75 ppm	Non-Potentially Acid Generating (NPAG)
2 < NPR, As > 75 ppm	Potentially Acid Generating (PAG)

The mine geology staff uses the derived Neutralization Potential Ratio (NPR) and arsenic (As) values to characterize the rock in the blast pattern. Mine surveyors and grade control technicians use this information to delineate and place the dig limits within the blasted rock to guide the shovel and loader operators in directing where the rock is to be mined. See Section 5.2.2 and Table 5-4 for a discussion of the use and location of waste rock.

Segregation of ore, waste rock as potentially acid generating (PAG) or non-potentially acid generating (NPAG) material based on operational testing during mining activity to differentiate waste rock type is part of the Whale Tail Waste Rock Management Plan. Sampling and testing of waste materials for acid rock

drainage (ARD) is conducted during mine operations to segregate PAG waste from NPAG waste rock material, so that waste material can be assigned to specific locations or use. This practice has been ongoing since the beginning of the mining operations at Meadowbank and continues to be applied at the Whale Tail Mine. Operational sampling and analysis are completed on site during mining activities to identify and delineate the material type in the pits during mining.

The geochemical properties of all mining wastes have been confirmed with duplicates samples sent to a certified laboratory, through both static and kinetic testing on numerous representative samples, by various test methods and through multiple project development stages. In 2024, to validate the method used by Agnico Eagle, 308 samples from Whale Tail and IVR Pits were sent to an accredited commercial lab (external lab) for acid base accounting (ABA) analysis using the Modified Sobek Method for determination of the NPR, which is Neutralization Potential / Acid Potential (NP/AP), metal leaching using the Shake Flask Method, bulk metals analysis, and for whole rock analysis. The results from the external laboratory confirmed Agnico Eagle's methodology and results to differentiate PAG/NPAG rock. In 2024, on the basis of NAG/PAG determination using ABA based on sulphur and NPR content, 95% of samples analyzed at the Meadowbank and SGS laboratories were classified as the same material (NPAG or PAG). Of the 5% that did not result in the same classification, the Meadowbank lab provides a more conservative result and classifies the sample as PAG, where SGS classifies the sample as NPAG in 100% of the analyses.

The results of the NPAG-PAG classification confirmation are logged in the Meadowbank LIMS database and also stored as models in MineTrust. Due to the large volume of data, the results are not included in this annual report. These results can be provided upon request.

Information regarding the waste rock characterization is also managed and recorded by the mine dispatch in Wenco system, tracking loads of material in real time, including waste rock, and their respective destination. The system and the dispatcher in charge guides the operators and ensures the ore and waste rock material is transported to the appropriate destination. The system displays real time information about equipment location and destination, as well as pit development information. All production data, including all waste rock haulage to the PAG and NPAG waste rock storage facilities, as well as construction use are recorded into a database.

In 2024, Agnico Eagle analyzed 14,763 samples from blast holes at Whale Tail Pit and 13,995 samples from IVR Pit at its on-site laboratory. Refer to Table 5-3 below for the percentage of PAG, uncertain and NPAG per pit.

Table 5-3 Whale Tail Site Geochemical ARD determination 2018-2024 (including all waste types) §

Year	Whale Tail Pit			IVR Pit		
	PAG (%)	Uncertain (%)	NPAG (%)	PAG (%)	Uncertain (%)	NPAG (%)
2018	28	11	61	NA	NA	NA
2019	42	11	47	NA	NA	NA
2020	30	11	58	2	1	93
2021	30	13	57	2	2	96
2022	20	13	66	9	8	82
2023	18	7	74	13	12	75
2024	19	5	76	20	17	63

The Whale Tail and IVR WRSF's is constructed to encapsulate potentially acid generating (PAG) and metal leaching (ML) waste rock inside a layer of NPAG material as a control measure for ARD and ML. The NPAG rock that is placed on the top and sides of the storage pile is needed in the long term to host the thawed layer and prevent liquids from contacting the center of the pile that contains PAG and ML waste rock. Presently, it is anticipated that the cover design will be similar to the Meadowbank Portage WRSF. The cover will consist of a 4.7 m thick NPAG/NML waste rock layer on the top and edges of the facility. The cover is expected to maintain freezing conditions in the pile in the long-term. This rationale is based on results to date on thermal modelling that considers thermistor readings at the Portage WRSF. Rock oxidation can still occur in frozen material but will proceed at a slower rate than predicted by laboratory testing because of the cold temperatures prevalent for much of the year. Permafrost will retain water as ice, so it was predicted that contaminants will not be transported away from the core of the WRSF in the long-term. Further information of the Whale Tail and IVR WRSF are provided in the Whale Tail Waste Rock Management Plan (Appendix 18).

Sampling and testing of waste materials for ARD and ML are conducted during mine operation in order to segregate suitable waste for use in construction and for closure from that which will report directly to the Whale Tail and IVR WRSFs.

If ponding water is found at the base of the Whale Tail WRSF (ST-WT-30, ST-WT-31, ST-WT-32, and ST-WT-33) this water reports to the WRSF Pond (ST-WT-3), and ponding water at the base of the IVR WRSF (ST-WT-28, ST-WT-34, ST-WT-35, and ST-WT-36) reports to the IVR Attenuation Pond. As per NWB Water License, samples are to be collected to assess water quality. Refer to Sections 8.5.2.2.12 and 8.5.2.2.13 for a complete discussion of the results. An adaptive management plan will include continued monitoring of water quality during operations to confirm modelling predictions, and to allow adjustments to the closure plan as required.

b. As-built volumes of Waste Rock used in construction and sent to the Waste Rock Storage Facility with estimated balance of acid generation to acid neutralization capacity in a given sample as well as metal toxicity;

Refer to Section 5.2.2 of this report.

c. All monitoring data with respect to geochemical analyses on site and related to roads, quarries, and the Whale Tail Haul Road;

There are no issues to report for 2024.

Pre-freshet and freshet inspections were conducted at crossings along the Whale Tail Haul Road, eskers and quarries in 2024. These inspections are conducted to document the presence/absence of flow, erosional concerns and turbidity plumes and to ensure that runoff, if any, would be free of any contaminants and would not impact the environment. In 2024, no erosion and turbidity concerns that required mitigation actions were identified during visual inspections for Whale Tail Haul Road water management infrastructure. Refer to Section 8.5.2.2.19 for more information.

d. Leaching observations and tests on pit slope and dike exposure; and

No recorded observation of leaching was observed on the pit slope or dike faces in 2024.

e. Any geochemical outcomes or observations that could imply or lead to environmental impact.

There are no geochemical outcomes or observations that could lead to an environmental impact in 2024.

5.2 WASTE ROCK AND ORE VOLUME

5.2.1 Meadowbank Site^s

In accordance with NWB Water License 2AM-MEA1530 Schedule B, Item 8: *Volumes of waste rock used in construction and placed in the Rock Storage Facilities.*

There is no more mining at Meadowbank therefore no waste rock was generated in 2024.

The Mine Waste Rock and Tailings Management Plan (Version 15) was revised in February 2025 and can be found in Appendix 17. Details of all waste rock deposition and tailings management are contained in the revised plan.

5.2.2 Whale Tail Site^s

5.2.2.1 Waste and Ore Stockpile Volume^s

In accordance with NWB Water License 2AM-WTP1830 Schedule B, Item 11 *Volumes of Waste Rock used in construction and placed in the Waste Rock Storage Facility.*

And

In accordance with NWB Water License 2AM-WTP1830 Schedule B, Item 12: *Volumes of ore stockpiled and overburden stored at Whale Tail Pit site.*

The total volume of waste rock generated by Whale Tail, IVR Pits and Underground in 2024 was 27,302,721 tonnes. The use and location of all of the rock, by volume, is presented in Table 5-4 and is identified by the following categories:

- Dike – use for thermal berm abutment construction;
- Roads – used for road construction and maintenance;
- WRSF – stored in the Waste Rock Storage Facilities;
- Stockpiles – stored in stockpile for later usage for construction purposes;
- Construction;
 - Crushers – taken to the mobile crusher and used for construction or maintenance purposes;
 - Miscellaneous uses;
 - Pads construction.

The Whale Tail Waste Rock Management Plan (Version 14) was revised in March 2025 and can be found in Appendix 18. Details of all waste rock deposition and tailings management are contained in the plan.

Table 5-4 Whale Tail 2024 Rock Volume[§]

Month	Whale Tail and IVR Pits								Ore Processed in Mill (tonnes) ⁵
	Ore ¹ (tonnes)	Waste Rock (tonnes)						Overburden (tonnes)	
		Dikes	Roads ²	WRSF ³	Stockpiles	Construction ⁴	Total		
January	384,530	0	6,139	2,677,688	127,194	5,808	2,816,829	0	355,587
February	508,118	0	7,047	2,073,607	120,266	0	2,200,920	0	349,036
March	451,138	0	604	2,056,388	138,402	2963	2,198,356	53,336	365,996
April	342,576	0	87	1,488,707	40971.6	652	1,530,418	5,328	289,171
May	485,170	0	37,069	2,273,760	105,959	0	2,416,787	16,255	365,996
June	447,798	0	36,692	2,246,679	109,350	10366	2,403,087	102,874	357,985
July	364,242	0	3,229	2,335,379	126,486	0	2,465,095	6,784	351,216
August	387,088	0	47,075	2,463,517	91,381	2022	2,603,995	0	373,920
September	556,668	0	2,486	1,891,458	133,456	31,033	2,058,434	89	358,414
October	385,629	0	6,008	1,665,072	120,046	81,803	1,872,929	369	297,568
November	466,854	0	0	2,269,544	99,520	0	2,369,063	0	349,314
December	427,420	0	0	2,276,222	90585	0	2,366,807	0	351,456
Total	5,207,232	0	146,437	25,718,021	1,303,615	134,647	27,302,721	185,035	4,165,659

1 All ore mined is stockpiled before it is long hauled to the Mill;

2 Includes road construction and maintenance; excludes Whale Tail Haul Road

3 Includes the waste rock that is stored in temporary locations

4 Earthworks excluding road and Dike construction

5 Includes underground ore processed

5.2.2.2 Monitoring Program

In accordance with NIRB Project Certificate No.008 Condition 7: Prior to commencement of mining of the Whale Tail deposit, and in consultation with applicable regulatory agencies, including Natural Resources Canada, the Proponent shall as part of a Mine Waste Rock and Tailings Management Plan that reflects site-specific geological and geochemical conditions. The Plan should be submitted to the NIRB at least 60 days prior to the start of construction of the Waste Rock Storage Facility, with subsequent updates or revisions to the Plan submitted annually thereafter or as may otherwise be required by the NIRB for the life of the Project.

- a) Develop and implement monitoring programs for the Tailings Storage Facility and the Waste Rock Storage Facility at the Whale Tail Pit;*
- b) Establish thresholds that will trigger the requirement for the Proponent to implement adaptive management strategies to minimize the potential for impacts from these Facilities; and*
- c) Identify the adaptive management strategies that will be used by the Proponent to minimize the potential for impacts from these Facilities.*

The Whale Tail Mine Waste Rock Management Plan was initially submitted in January 2017 (Version 1) with subsequent updates. Version 13_NWB (May 2024) was submitted to the NWB alongside the 2024 Modification and approved on August 6th, 2024. Version 14 (March 2025) (Appendix 18) was updated to align with the current operation. More information on the modification can be found in Section 11.2.2. Agnico Eagle will continue to update the plan on an annual basis during the operation phase of the Whale Tail Mine.

5.2.2.3 Site-specific geotechnical investigations

In accordance with NIRB Project Certificate No.008 Condition 9: The Proponent shall undertake the additional site-specific geotechnical investigations required to identify sensitive land features and to inform final engineering design prior to the construction of project components such as the waste rock storage facility and quarries. Results from these studies should be submitted to the NIRB at least 30 days prior to the start of construction of these facilities, with results or updates submitted annually thereafter as applicable.

Agnico Eagle have submitted to NIRB on June 4th, 2018, the memorandum Site Specific Geotechnical Studies (Appendix 18 of the 2018 Annual Report) as required by Condition 9. Please refer to this document in for a complete overview of the investigations completed.

Geotechnical investigations (test pits and boreholes) were conducted in 2019 and 2020 in the area of the projected IVR D-1 Dike, which will form part of the IVR attenuation pond. The information available indicates that the bedrock depth varies between 2.1 m and 6.7 m below ground surface, hence no major sensitive land features have been identified at these locations. The design report of the IVR D-1 Dike contains all the required information on the field investigations carried out at the IVR D-1 Dike and should be referred to for all the implications of geotechnical investigations for construction (SNC, 2020).

5.3 TAILINGS STORAGE FACILITY MEADOWBANK SITE

5.3.1 Tailings Storage Facility Capacity[§]

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 9: *An update on the remaining capacity of the Tailings Storage Facility.*

And

As required by NIRB Project Certificate No.004, Condition 18: *commit to a pro-active tailings management strategy through active monitoring, inspection, and mitigation. The tailings management strategy will include the review and evaluation of any future changes to the rate of global warming, compliance with regulatory changes, and the ongoing review and evaluation of relevant technology developments, and will respond to studies conducted during the mine operation.*

From 2010 to 2024 a total of 52 Mt of dry tailings slurry from the mill had been deposited in the Tailings Storage Facilities (TSF) and the In-Pit Tailings Deposition sites as indicated in Table 5-5. In 2024, a total of 4.1 Mt of dry tailings slurry was deposited in the In-Pit Tailings Deposition sites. A monthly summary of the tailings produced in 2024 is provided in Table 5-6.

Agnico Eagle revised the tailings deposition plan (available in the 2024 Mine Waste Rock and Tailing Management Plan Version 15 presented in Appendix 17. The deposition model completed is valid until the end of milling operations in 2028. The model is based on the data collected during previous years of operation. The filling scheme for the two cells of the tailings storage facility and the In-Pit Tailings Deposition sites is designed for end of pipe discharge.

Table 5-7 presents the summary of the tailings management strategy for 2025-2028. More information on the tailings deposition modeling is presented in the Waste Rock and Tailings Management Plan.

The main conclusions from the modeling results are:

- The total maximum capacity of the In-Pit Tailings Deposition sites up to 124.7 masl is estimated at 34.8 Mm³;
- All tailings deposition for the remainder of the LOM is to be done in Portage Pits, with minimal placement of tailings in the North Cell and South Cell.

Table 5-5 Meadowbank Deposition location (realized)[§]

Date	Deposition location	Tailings deposited (dried tonnes)
February 2010 to November 2014	North Cell	16.0M tonnes
November 2014 to July 2015	South Cell	2.7M tonnes
July 2015 to October 2015	North Cell	1.0M tonnes
October 2015 to August 2018	South Cell	10.8M tonnes
August 2018 to October 2018	North Cell	0.5M tonnes
October 2018 to April 2019	South Cell	1.4M tonnes
April 2019 to July 2019	North Cell	0.6M tonnes
July 2019 to December 2019	Goose Pit	1.4M tonnes
January 2020 to August 2020	Goose Pit	1.4M tonnes

Date	Deposition location	Tailings deposited (dried tonnes)
August 2020 to July 2021	Pit E	3.1M tonnes
July 2021 to August 2021	North Cell	0.4M tonnes
August 2021 to December 2022	Pit E	5.0M tonnes
January 2023 to August 2023	Pit E	2.5M tonnes
August 2023 to September 2023	South Cell	0.3M tonnes
September 2023 to December 2023	Pit E	0.8M tonnes
January 2024 to December 2024	Pit E	3.9M tonnes
December 2024	Pit A	0.2M tonnes

Table 5-6 Meadowbank 2024 Processed Tailings Volume^s

Month	Total Dry Tailings (tonnes)
January	355,587
February	349,036
March	365,996
April	289,171
May	343,090
June	357,985
July	351,216
August	373,920
September	358,426
October	297,568
November	349,314
December	351,456
TOTAL	4,142,766

Table 5-7 Meadowbank Deposition plan and infrastructure construction – summary^s

Date	Discharge location	Dry tonnes deposited	Comments
January 2025 to May 2025	Pit A	1.7 Mt	- Reclaim water from Pit E and Pit A - Goose to Vault Pit transfers planned - Pit A to Goose Pit transfers planned
June 2025 to September 2025	SC	1.4 Mt	
October 2025 to May 2026	Pit A	2.8 Mt	
June 2026 to August 2026	NC	1.1 Mt	
September 2026 to June 2028	Pit E	7.4 Mt	

5.3.2 Tailings In-Pit Disposal Meadowbank Site

As required by NIRB Project Certificate No.004, Condition 87: The Proponent shall, prior to the deposition of tailings into the Portage or Goose Pits, file with the Nunavut Water Board (NWB) a report containing updated hydrogeological modelling addressing information gaps as per the NIRB recommendation in the Reconsideration Report and Recommendations to the satisfaction of the NWB. The Proponent shall not deposit tailings into the Portage or Goose pits until the Water Board is satisfied that the modelling addresses the specific information gaps, and that the proponent can manage any identified risks with existing designs and feasible management strategies. The Proponent shall file a report with the Nunavut Water Board, containing updated hydrogeological modelling addressing information gaps, prior to the deposition of tailings into the Portage or Goose pits. Confirmation of the report's filing, conclusions of this report, and any further updates to reporting requirements as determined under the water license, shall be provided to the NIRB in Agnico Eagle's Annual Report for the project.

And

As required by NIRB Project Certificate No.004, Condition 20: Prior to construction, Cumberland shall identify mitigation measures that can be taken if groundwater monitoring around the tailings facility demonstrates that contamination from tailings has occurred through the fault. Upon drawdown of the North arm of Second Portage Lake, Cumberland shall conduct further tests to assess the permeability of any faults and provide the results to regulators. If doubt remains Cumberland shall seal the fault and conduct further permeability testing and monitoring. Following completion of the permitting process for the In-Pit Tailings Modification Proposal, the Proponent shall provide an update to the NIRB on any fault identified related to either Portage Pit A, Portage Pit E, and Goose Pit, any plans to address groundwater movement considering any fault, and how potential monitoring of tailings and groundwater movement would be undertaken to inform management plans.

As per Condition 87 (Project Certificate 008), Agnico Eagle has submitted the requested study in advance of the Meadowbank In-pit disposal. Thermal modeling was carried out in early 2018 for the in-pit tailings deposition detailed engineering study at the Goose Pit, Portage Pit A and Portage Pit E up to a 100-year period after closure. The modeling details and results were presented in the "In Pit Tailings Deposition Thermal Modeling Report", dated April 16th, 2018 (Appendix 19 of the 2018 Annual Report). To address NRCAN's outstanding comments from the meeting on September 25th, 2018, additional long term thermal modeling beyond 100 years and up to 20,000 years after closure was carried out to evaluate the long-term thermal regime/permafrost conditions for the three pits. Modeling summary of this work is presented in the report 'Meadowbank In-Pit Tailings Disposal - Thermal and Hydrogeological Modeling Update to Address NRCAN's Comments' and can be found in Appendix 20 of the 2018 Annual Report. Agnico Eagle have received the Minister approval for the NWB Water License 2AM-MEA1526 Amendment no.3 on May 24th, 2019.

To ensure the environment protection and evaluate potential risks for tailing migration into groundwater, a feasibility study was conducted by SNC-Lavalin professionals in 2016-2017. The feasibility study included a complementary characterization of the geological structures and permafrost extent on site and the development of a detailed hydrogeological numerical 3D model. Main geological structures (Bay Fault, Second Portage Lake Fault, and geological contact with quartzite formation) were identified and implemented in the 3D model with defined hydraulic conductivity and porosity to simulate potential reclaim water seepages out from in-pit tailings pore water. The numerical simulations were designed to

represent the worst-case scenarios in terms of contaminant transport within the aquifers. Therefore, a groundwater monitoring program was designed in relation to the groundwater flow and contaminant transport simulation results. The hydrogeological model and solute transport simulations were updated to version 4 during the detailed engineering study completed by SNC-Lavalin and following Natural Resources Canada (NRCan) recommendations addressed during In-Pit Tailings Deposition Project approval process.

In 2018, the latest version of the groundwater numerical model was used to forecast the post closure evolution of chloride concentrations at existing wells, including the four new wells installed in 2018. Breakthrough chloride concentration curves (predicted concentrations of chloride over time at a specific point of the 3D model) were extracted from the model at each monitoring well. Concentration increases over time showed that monitoring wells could intercept the contaminant plume from Pit A, Pit E and Goose Pit after closure over different periods and at different concentrations.

As the in-pit deposition will continue, updates of the hydrogeological model will be performed at closure period using the gathered site data such as ground temperature, hydraulics heads, in-pit tailings pore water quality, etc. Breakthrough curves will be reviewed at this time if required to adapt the Groundwater Monitoring Plan. The thermal and hydrogeological modelling during operation will be used as a predictive tool, along with field observations, to adapt the closure and post-closure groundwater monitoring program. The details of the thermal and hydrogeological modelling, as well as the closure and post-closure groundwater monitoring program, will be presented in the Final Closure and Reclamation Plan, to be submitted twelve (12) months prior to the expected end of planned mining (Water License No: 2AM-MEA1530, Part J, condition 1).

It should be noted that hydrogeology and groundwater are monitored on site during operation as per the Groundwater Monitoring Plan (Version 11, March 2020), and that in-pit tailings pore water is also monitored as per the Pore Water Monitoring Plan (Version 2, March 2020). Data collected during operation will support the in-pit hydrogeological modelling post-deposition and the groundwater monitoring program for closure and post-closure.

The Groundwater Management Plan (Version 11, March 2020 – Appendix 60 of the 2019 Annual Report) is considered to be compliant with the above term and condition.

Geotechnical and geomechanical data for the Portage and Goose pits have been collected during the mining period, prior to in-pit tailings deposition. Relevant data from rock mechanics inspections, pit wall stability analysis, geotechnical drilling for instrumentation or groundwater wells, as well as the geology rock core database gathered prior to in-pit deposition will be integrated to the revised hydrogeological modelling, to be presented in the Final Closure and Reclamation Plan.

5.4 FREEZEBACK, PERMAFROST, THERMAL MONITORING AND CAPPING THICKNESS[§]

5.4.1 Meadowbank Site[§]

As required by NIRB Project Certificate No.004, Condition 19: Provide for a minimum of two (2) metres cover of tailings at closure, and shall install thermistor cables, temperature loggers, and core sampling technology as required to monitor tailing freezeback efficiency. Report to NIRB's Monitoring Officer for the annual reporting of freezeback effectiveness.

And

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 18: *A summary of on-going field trials to determine effective capping thickness for the Tailings Storage Facility and Waste Rock Storage Facilities for the purpose of long term environmental protection.*

Since 2015, progressive capping has been ongoing in the TSF North Cell. Progressive closure for the TSF cover continued in 2024 as presented in Section 9 of the Annual Report.

A study is ongoing to advance the engineering level of the TSF cover landform with the objective of reviewing alternative concepts applicable for the closure of the TSF, reaffirming the applicability of the technology and the control mechanisms retained for the cover design. The study will also clarify the configuration and geometry of the landform with the NPAG quantities associated and define the details of the water management system required. Final cover configuration and details for the TSF will be subject to modification depending on the results obtained from tailings and water geochemistry, from in-situ tests as well as from data provided from the Monitoring Program. The final landform design is still in development and progress will be presented in the next Closure and Reclamation Plan to be completed in 2025, as well as the next steps for progressive closure.

To monitor the long-term environmental effects of the TSF on the aquatic receiving environment, geotechnical monitoring and water quality monitoring are ongoing and will continue throughout closure, based on the TSF monitoring plan for the final TSF cover design. The Meadowbank Thermal Monitoring Report contains detailed information about the thermal monitoring at the TSF and is available in Appendix 19.

The current concept for the WRSF landform is to place 4 m of NAG cover to maintain geochemical stability of the facility. Agnico Eagle completed a study to confirm the design of the Portage WRSF landform and the cover performance. The scope of this study included: reviewing the closure concept, updating the concept design based on information gathered through operation, updating the landform water balance and updating the monitoring plan. This report can be found in Appendix 21 of the 2022 Annual Report and the information contained within will be integrated in the next update of the Closure and Reclamation Plan to be completed in 2025. The conclusions from this study reinforce the confidence in the current design of the Portage WRSF landform. The report puts in context the available monitoring data and models the predicted behaviour of the landform while explaining the mechanisms that will ensure that the closure objectives are met. The updated adaptive monitoring plan included in this report provides additional tools to measure the performance of the current cover and feed the final design report of the landform that will be submitted as part of the Final Closure and Reclamation Plan.

Thermal monitoring will continue to take place at the WRSFs using the current thermistors installed at the Portage WRSF as well as using additional thermistors installed in future years if required. Thermal monitoring results are and will be used to monitor the WRSFs temperature as freezing progresses. The Meadowbank Thermal Monitoring Report is available in Appendix 19 and contains detailed information about the thermal monitoring at the Portage WRSF.

Update on Field Trials

A research project in collaboration with the Research Institute of Mines and Environment (RIME) was initiated in 2014 at Meadowbank. The Research Institute on Mines and Environment, through the NSERC-UQAT Chair on Mine Site Reclamation, is mandated to evaluate the performance of three field experimental cells constructed in 2014 and 2015 on Meadowbank's North Cell TSF. The three experimental cells that were built on Meadowbank's TSF are two insulation covers and one thermal cover with capillary barrier effects (CCBE).

The tested experimental cells are a 2m and a 4m thick insulation cover as well as a 2m thick cover with capillary barrier effects. The cells were built with coarse and fine non-potentially acid generating (NAG) ultramafic waste rock (soapstone) and are instrumented in order to follow their thermal and hydrogeological behaviors.

Also, in collaboration with the RIME, in 2016 a laboratory testing program was developed to obtain a good overview of the effects of freeze/thaw (F/T) and wet/dry (W/D) cycles on the soapstone. The developed experimental program is primarily focused towards the evaluation of the resistance to F/T and W/D of the soapstone to be used as cover materials for the TSF and WRSF. Testing was completed to evaluate the effects of F/T and W/D on rock cores and rock slabs, the effects of F/T on various soapstone grain size fractions, and the effects of F/T on the permeability of a compacted soapstone layer.

In 2019 the RIME finished collecting and analysing the data on the cover field trial and on the long-term performance of ultramafic rockfill as a cover material. Research papers on this subject were published in 2020 and 2021.

The memorandum made by O'Kane on the Meadowbank Portage WRSF landform closure strategy (948-228-002) attached to the 2022 Meadowbank Thermal Monitoring Report (Appendix 24 of the 2022 Annual Report) has a section that summarizes the study made by the RIME and how the information will be useful to re-affirm or update the design of the WRSF landform. A similar literature review exercise is ongoing as part of the project to update the TSF cover concept.

The full list of all publications produced by the RIME related to the TSF and WRSF covers is listed below.

RIME Publication List

Conference papers and abstracts

Awoh, A.S., Bruno, B., Batzenschlager, C., Boulanger-Martel, V., Lépine, T. & Voyer, É. 2016. Design, construction and preliminary results of two insulation covers at the Meadowbank mine. Geo-Chicago 2016: Sustainability, Energy, and the Geoenvironment. American Society of Civil Engineers, Chicago, IL, 12. (TSF)

Boulanger-Martel, V., Bussière, B., Côté, J. & Gagnon, P. 2017. Design, construction, and preliminary performance of an insulation cover with capillary barrier effects at Meadowbank mine, Nunavut. 70th Canadian Geotechnical Conference, Ottawa, Ontario, Canada. (TSF)

Boulanger-Martel, V., Bussière, B. & Côté, J. 2018. Évaluation de modes de restauration pour le parc à résidus miniers de la mine Meadowbank. Rouyn-Noranda 2018 Symposium on mines and the

environment. Canadian Institute of Mining, Metallurgy and Petroleum, Rouyn-Noranda, Québec, Canada. (TSF)

Boulanger-Martel, V., Poirier, A., Côté, J. & Bussière, B. 2018. Thermal conductivity of Meadowbank's mine waste rocks and tailings. 71th Canadian Geotechnical Conference, Edmonton, Alberta, Canada. (TSF + WRSF)

Boulanger-Martel, V., Bussière, B. & Rossit, M. 2020. Determination of the water retention curve of large particle sizes–high water retention capacities materials. 73th Canadian Geotechnical Conference, Calgary, Alberta, Canada. Abstract no. 300 (TSF)

Special presentations

Boulanger-Martel, V. 2019. Thermal performance of two insulation covers to control sulfide oxidation at Meadowbank mine, Nunavut. Canadian Geotechnical Society graduate presentation award, 72th Canadian Geotechnical Conference, St- John's, Newfoundland and Labrador, Canada. October 1st, 2019. (TSF)

Journal papers

Poirier, A., Bussière, B., Côté, J., & Boulanger-Martel, V. 2019. Thermal behaviour of a waste rock pile located in the Arctic: case study of Meadowbank mine, Nunavut. Paper to be resubmitted to the Canadian Geotechnical Journal in 2021. (WRSF)

Boulanger-Martel, V., Bussière, B. & Côté, J. 2021. Resistance of a waste rock unit to freeze-thaw and wet-dry cycles: implications for use in a reclamation cover in the Canadian Arctic. Bulletin of Engineering Geology and the Environment, 80: 41-54. (TSF + WRSF)

Boulanger-Martel, V., Bussière, B. & Côté, J. 2021. Thermal behaviour and performance of two field experimental insulation covers to control sulfide oxidation at Meadowbank mine, Nunavut. Canadian Geotechnical Journal. 58(3): 427–440. doi:10.1139/cgj-2019-0616. (TSF)

Boulanger-Martel, V., Bussière, B. & Côté, J. 2021. Insulation covers with capillary barrier effects to control sulfide oxidation in the Arctic. Canadian Geotechnical Journal. doi:10.1139/cgj-2019-0684. (TSF)

Thesis

Boulanger-Martel, V. 2019. Évaluation de la performance de recouvrements miniers pour contrôler le drainage minier acide en climat nordique. Ph. D. thesis, Département des génies civil, géologique et des mines, Polytechnique Montréal. 446 pp. (TSF)

Poirier, A. 2019. Étude du comportement thermique d'une halde à stérile située en conditions nordiques. M.S.A. thesis, Département des génies civil, géologique et des mines, Polytechnique Montréal. 196 pp. (WRSF)

Published dataset

Boulanger-Martel, V. 2019. Evolution of the physical and mechanical properties of NPAG waste rock cores with respect to freeze-thaw and wet-dry cycles. Mendeley data, v1, <http://dx.doi.org/10.17632/2kzf6grgvb.1> (TSF and WRSF)

5.4.2 Whale Tail Site^s

As required by Water License 2AM-WTP1830 Schedule B, Item 21: *A summary of on-going field trials to determine effective capping thickness for the Waste Rock Storage Facility for the purpose of long term environmental protection.*

And

As required by NIRB Project Certificate No.008 Condition 10: *Results of these studies should be submitted to the NIRB at least 30 days prior to the start of construction of these facilities, with subsequent updates submitted annually thereafter. In consultation with applicable regulatory agencies such as Indigenous and Northern Affairs Canada and Natural Resources Canada, the Proponent shall undertake additional site-specific permafrost monitoring, mapping and thermal analysis to:*

- *Document permafrost conditions, including seasonal thaw and amount of ground ice;*
- *Inform the detailed design of project infrastructure such as the Whale Tail pit, water management structures, mine site and haul roads, waste rock storage facility, tailings storage facility; and*
- *Ensure the integrity of such infrastructure is maintained after construction.*

And

As required by NIRB Project Certificate No.008 Condition 14: *The Proponent shall develop and implement a Thermal Monitoring Plan to identify potential changes in talik distribution and flow paths that may result from the development of project infrastructure, including the Whale Tail pit, dikes, and water impoundments. The Plan should be submitted to the NIRB at least 60 days prior to the start of construction of these facilities, with subsequent updates submitted annually thereafter or as may otherwise be required by the NIRB.*

In 2018, studies were initiated with a consultant (O’Kane) to develop the detailed engineering design for the capping of the Whale Tail WRSF. This mandate included thermal modelling to re-assess the capping thickness. This information was also used to inform the instrumentation program to ensure that the WRSF cover performs according to its design intent. These studies were completed in 2019 and provided to the regulators (Landform Water Balance Modelling of Whale Tail and IVR WRSF under RCP8.5., O’Kane Reference No. 948-011-015 rev4 and Amaruq Waste Rock Storage Facility Thermal Cover System Design Basis. O’Kane Reference No. 948-011-M-007 Rev3).

The study “Landform Water Balance Modelling of Whale Tail and IVR WRSF under RCP8.5” completed a landform water balance including estimates of runoff, interflow, and basal seepage rates for different slopes and aspects of the WRSF under the Representative Concentration Pathway 8.5 (RCP8.5) climate change condition. The results of the study provided effective precipitation for the 150-year climate database, provided a surface water balance, concluded that basal seepage will be negligible, determined

the interflow distribution by month, and forecasted trends in pore space temperature. Results of the surface water balance support the conceptual model that the hydraulic regimes are expected to be different based on the North and South aspect. Generally, higher net radiation results in greater evaporation and soil heating. With more evaporation, less water is available to runoff and/or infiltrate. Higher net radiation will also result in more sublimation, as more energy is available to convert snow into water vapour.

The study “Amaruq Waste Rock Storage Facility Thermal Cover System Design Basis” goes over the cover system design, the surface water management design, design drawings, construction specifications, and the Operations, Maintenance and Surveillance Manual for the WRSF cover systems.

Agnico Eagle has documented permafrost conditions on site with thermistors placed at strategic locations recommended by the different designers and consultants involved in the project. The Whale Tail Thermal Monitoring Report (Appendix 20) presents a summary of the thermal monitoring program at Whale Tail Mine from the period of 2016 to 2024 along with interpretation of the thermistor results.

Agnico Eagle updated the Whale Tail Thermal Monitoring Plan (Version 5) in February 2025, and it is presented in Appendix 61 of this Annual Report.

The data presented in Appendix A of the Whale Tail Thermal Monitoring Report informed and will continue to inform the detailed design of the project infrastructure such as the Whale Tail and IVR pits, water management structures, mine site and haul roads, and the waste rock storage facility.

At the WRSFs, thermistors are showing thermal behaviour along the expected trend (permafrost aggradation) and the instruments are now covered by waste rock. The analysis of this data against adaptive monitoring triggers indicates that the current thermal performance of the WRSF is as expected.

Refer to the 2024 Whale Tail Thermal Monitoring Report (Appendix 20) for a complete discussion and interpretation of the thermal data for the dike and pit areas.

The detailed analysis of the thermal monitoring of the dikes is presented in the 2024 Annual Geotechnical Inspection Report (Appendix 7). Table 5-8 below presents the sections of this report associated with each structure. Agnico Eagle will refer the reader to the 2024 Annual Geotechnical Inspection Report for a complete review of the results.

Table 5-8 Whale Tail Thermal Data Interpretation Sections in the 2024 Annual Geotechnical Inspection^s

Structure	Section in the 2024 Annual Geotechnical inspection
Whale Tail Dike	4.1.2.2
WRSF Dike	4.2.2
Mammoth Dike	4.4.2
IVR Dike D1	4.3.2

SECTION 6. WASTE MANAGEMENT ACTIVITIES[§]

6.1 GENERAL WASTE DISPOSAL ACTIVITY[§]

6.1.1 Meadowbank Site[§]

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 11: *A summary report of general waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal.*

And

NIRB Project Certificate No.004 Condition 24: *Cumberland shall identify an area and design for a landfill for disposal of operational and closure non-salvageable materials, including a list of any nonsalvageable materials, and a procedural manual for preparation of location and placements of these materials, and incorporate the design into the final Waste Management Plan as instructed by the NWB.*

6.1.1.1 Incinerator[§]

Operation of the incinerator ceased on November 27th, 2022, and thus, no waste was burned into the incinerator in 2024.

6.1.1.2 Landfill[§]

Agnico Eagle estimated from the engineering surveys that approximately 4,825 m³ of waste was landfilled at Meadowbank in 2024. Landfill #11b is currently in use. Table 6-1 below indicates the volume of waste in cubic metres (m³) disposed of in each sub-landfill from 2012 to 2024 and Figure 14 indicates the location of each sub-landfill used to date. The volume of waste landfilled from the start of the project is approximately 130,369 m³. This volume is based on the engineering surveys done at each sub-landfill. It should be noted that this amount is overestimated as some of the surveys were completed once the sub-landfill capping was completed. The waste was not always compacted in the landfill when surveyed, causing volumes to be overestimated.

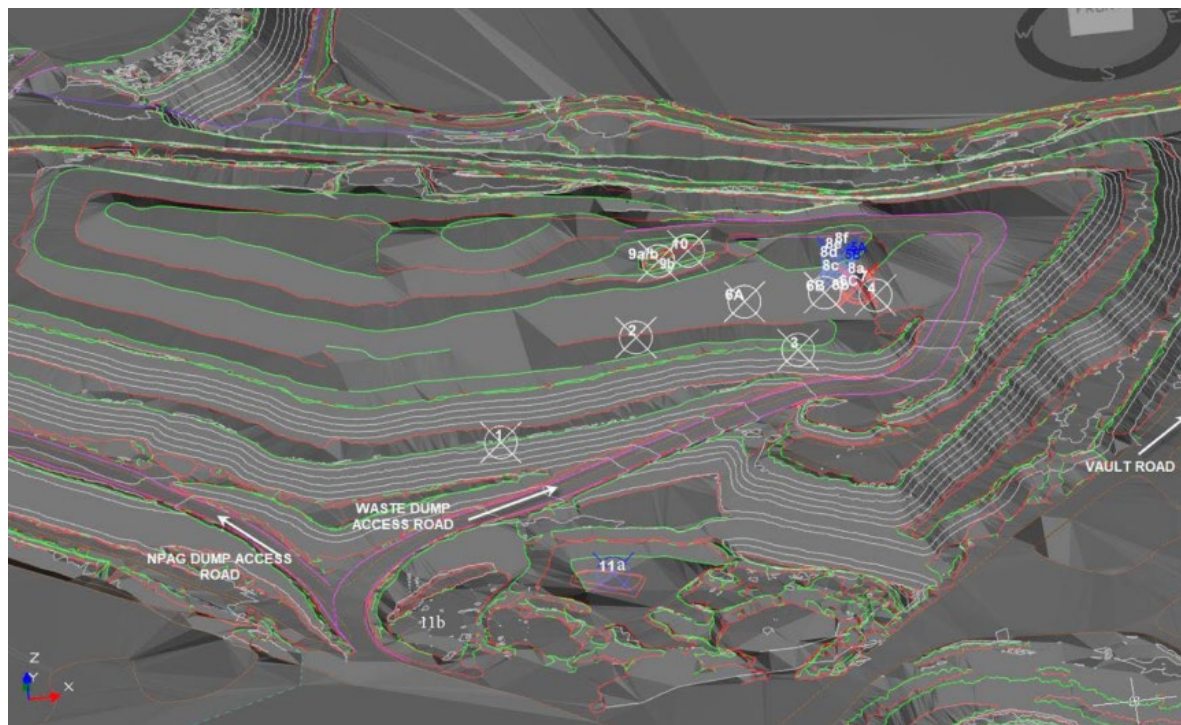
In December 2021, the Meadowbank landfill burned from an undetermined cause. The volume of waste from landfill #11a at the end of 2020 (1,691 m³) and 2021 (4,905 m³) were added to the table below as indicative purpose to obtain the total volume disposed over the years, as those volumes no longer exist due to the fire event. In 2023, all waste from landfill #11a was compacted and relocated to Landfill #11b.

Table 6-1 Meadowbank volume of waste disposed in each sub-landfill (from survey)[§]

Landfill	Coordinates (UTM)			Volume (m³)	Date covered
	Northing	Easting	Elevation		
#1	7215715.6	638601.6	160	3,650	December 12, 2012
#2	7215795.8	638711.4	186	840	February 27, 2013
#3	7215743.1	638827.8	195	1,656	May 14, 2013
#4	7215796.5	638890.9	200	9,507	January 19, 2014
#5A	7206586.1	643115.9	210	3,870	November 30, 2014
#5B	7206586.1	643115.9	210	2,768	March 13, 2015
#6A	7215788.8	638793.3	212	278	March 21, 2015
#6B	7215789.3	638853.1	212	3,260	September 5, 2015
#6C	7215790.8	638878.1	212	9,290	May 20, 2016
#7	7215790.8	638878.1	214	4,560	December 20, 2016
#8a	7215790.1	638878.1	217	17,864	November 30, 2017
#8b	7215790.1	638878.4	217	2,709	January 27, 2018
#8b	7215790.1	638878.4	217	13,019	June 1, 2018
#8c	7215800.7	638865.4	221	2,800	October 1, 2018
#8d	7215800.7	638865.4	227	9,377	April 4, 2019
#8e	7215800.7	638865.4	232	8,482	August 1, 2019
#8f	7215800.7	638865.4	235	12,175	September 2, 2019
#9a	7215823.5	638733.9	233	350	March 28, 2020
#9b	7215823.5	638733.9	235	4,079	March 28, 2020
#10	7215829.7	638756.6	235	1,350	November 17, 2020
#11	7215539.9	638667.8	150	1,691*	Burned in 2021
#11	7215539.9	638667.8	150	4,905*	Burned in 2021
#11a	7215539.9	638667.8	150	7,440**	NA – Relocated to Landfill 11b
#11b	7215498.1	638540.6	150	11,889**	Active
			Total	130,369	

*Volume added to the volume of waste disposed to the landfill. See text above for more information.

**All waste from landfill #11a was compacted and relocated to Landfill #11b.

Figure 14 Meadowbank sub-landfill location^s

6.1.1.3 Hazardous and Non-Hazardous Waste^s

In 2024, approximately 553 sea cans comprising hazardous waste, used tires, scrap metal, domestic waste, and construction debris were transported to registered companies or disposal facilities located in the Province of Quebec.

The sea cans were shipped from the spud barge at Agnico Eagle's Baker Lake marshalling facilities to Bécancour (Quebec) by sealift. These materials were transported under Waste Manifest #'s ES71242-2 (Appendix 21), in accordance with the GN Guidelines for the shipment of such waste.

A description of the types of waste, packaging and volume is provided in Table 6-2. Table 6-3 provides a summary of waste generated per type along with their disposal/recycling location. The volume of hazardous and non-hazardous waste disposed by sealift in 2024 are for the Meadowbank and Whale Tail sites. The waste to be disposed off-site from Whale Tail site is transported to Meadowbank site during the year, there is no possibility to make a distinction between the two sites.

In 2024, Agnico Eagle generated approximately 16,291 tonnes of waste for Meadowbank and Whale Tail sites. This represents 75.7% of general waste disposed in the landfills, 3.2% of domestic waste disposed in the composter or off-site, 5.3 % of industrial/hazardous waste sent to an approval facility off-site, 4.6 % of waste (waste oil, batteries, and tires) recycled on site and off-site and 11.2% of steel recycled off site. Table 6-3 below provided the quantity of waste recycled, disposed on site or off-site.

Table 6-2 Meadowbank and Whale Tail 2024 waste shipped to licensed hazardous waste companies[§]

Description	UN	Class	P. G. ¹	Regulated under T.D.G.A. ²	Quantity	Container Type and Capacity	Unit Capacity	Volume (L)	Weight (Kg)	Disposal Method
Waste, Aerosol, Flammable	UN 1950	2.1	-	yes	10	Quatrex	765 L	7,650	1,010	Metal Recycling
Waste, Batteries	UN 2794	8	-	yes	1	Quatrex	400 L	400	455	Metal Recycling
Waste, Corrosive Liquid, Acidic, Inorganic, N.O.S. (Aluminum Sulphate Solution)	UN 3264	8	III	yes	35	Drum	205 L	7,175	3,885	Reuse as additive for water treatment
Residue Last Contained, Waste Hydrochloric Acid - empty drum	UN 1789	8	II	yes	80	Drum	205 L	16,400	880	Cleaning and drum recycling
Residue Last Contained, Waste Nitric Acid - empty drum	UN 2031	8	II	yes	136	Drum	205 L	27,880	1,496	Cleaning and drum recycling
Residue Last Contained, Waste Fuel, Aviation, Turbine Engine - empty Jet A drum	UN 1863	3	III	yes	387	Drum	205 L	79,335	6,037	Cleaning and drum recycling
Environmentally Hazardous Substances, Solid, N.O.S.(Lead) - Lab Sample	UN 3077	9	III	yes	39	Quatrex	765 L	29,835	10,802	Secure landfill
Waste, Petroleum Distillates, N.O.S.	UN 1268	3	II	yes	1	Drum	205 L	185	205	Energy recovery
Waste, Toxic Liquid, Organic, N.O.S. (Methylene Diisocyanate)	UN 2810	6.1	II	yes	1	Drum	205 L	205	198	Incineration
Residue Last Contained Waste, Oil/Antifreeze/Dust Suppression - empty drum	N/R ³	N/R	-	no	40	Drum	205 L	8,200	720	Cleaning and drum recycling
Residue last contained Waste, Oil/Grease/ Kitchen Grease - empty plastic pails	N/R	N/R	-	no	4160	Pail (20L)	20 L	83,200	8,320	Cleaning and plastic recycling
Residue Last Contained Waste, Oil/Antifreeze/Dust Suppression - empty tote	N/R	N/R	-	no	768	Tote	1000 L	761,390	53,865	Cleaning and tote recycling
Waste, Antifreeze or Glycol - Concentration more than 30%	N/R	N/R	-	no	40	Drum	205 L	8,200	4,895	Antifreeze recycling
Waste, Antifreeze or Glycol - Concentration more than 30%	N/R	N/R	-	no	136	tote	1000 L	136,000	151,191	Antifreeze recycling
Waste, Diesel Exhaust Fluid, D.E.F.	N/R	N/R	-	no	3	Tote	1000 L	3,000	3,160	Incineration
Waste, Grease	N/R	N/R	-	no	44	Drum (68 L)	68 L	2,992	1,380	Solidification and secure landfill
Waste, Grease	N/R	N/R	-	no	212	Drum	205 L	39,730	24,562	Solidification and secure landfill
Waste, Hydrocarbon Contaminated Soil	N/R	N/R	-	no	6	Quatrex	765 L	4,590	4,590	Soil treatment and reuse
Waste, Hydrocarbon Contaminated Water	N/R	N/R	-	no	15	Drum	205 L	2,683	2,945	Water treatment and energy recovery
Waste, Hydrocarbon Contaminated Water	N/R	N/R	-	no	35	Tote	1000 L	34,990	33,115	Water treatment and energy recovery
Waste, Kitchen Grease	N/R	N/R	-	no	45	Drum	205 L	9,225	9,596	Energy recovery
Waste, Kitchen Grease	N/R	N/R	-	no	1	Tote	1000 L	1,000	1,100	Energy recovery
Waste, Oil ⁴	N/R	N/R	-	no	106	Drum	205 L	255,467	246,222	Oil recycling or energy recovery
	N/R	N/R	-	no	264	tote	1000 L			
Waste, Oil Filters	N/R	N/R	-	no	20	Quatrex	765 L	12,850	10,045	Energy recovery and metal recycling

Description	UN	Class	P. G. ¹	Regulated under T.D.G.A. ²	Quantity	Container Type and Capacity	Unit Capacity	Volume (L)	Weight (Kg)	Disposal Method
Waste, Oil Filters	N/R	N/R	-	no	41	tote	1000 L	41,000	23,621	Energy recovery and metal recycling
Waste, Oily Contaminated Solid	N/R	N/R	-	no	30	Drum	205 L	6,150	3,851	Energy recovery
Waste, Oily Contaminated Solid	N/R	N/R	-	no	613	Quatrex	765 L	468,945	152,070	Energy recovery
Waste, Oily Contaminated Solid	N/R	N/R	-	no	9	tote	1000 L	9,000	2,874	Energy recovery
Waste, Oily Sludge and Debris	N/R	N/R	-	no	5	Drum	205 L	1,025	1,125	Energy recovery
Waste, Oily Sludge and Debris	N/R	N/R	-	no	14	Tote	1000 L	13,735	15,491	Energy recovery
Waste, Oily Water	N/R	N/R	-	no	3	Drum	205 L	615	561	Water treatment and energy recovery
Waste, Oily Water	N/R	N/R	-	no	7	tote	1000 L	7,000	6,410	Water treatment and energy recovery
Waste, Polyol - Part A of Urethane Mix	N/R	N/R	-	no	1	Drum	205 L	205	198	Energy recovery
Waste, Paint Labpack	N/R	N/R	-	no	8	Quatrex	765 L	6,120	5,315	Consolidation and energy recovery
Mixed Waste Labpack	N/R	N/R	-	no	1	Quatrex	765 L	765	400	Consolidation and energy recovery
Waste, Resin Cartridges containing Organic Peroxide Hardener	N/R	N/R	-	no	8	pallet	1200 L	11,200	9,216	Solidification and secure landfill
Waste, S.T.P. Sewage Treatment Solid	N/R	N/R	-	no	18	Quatrex	765 L	13,770	7,982	Solidification and secure landfill
Waste, Sump Water	N/R	N/R	-	no	3	Tote	1000 L	3,000	3,310	Water treatment
Waste, Titan Fuel Phase Concentrate	N/R	N/R	-	no	1	Tote	1000 L	1,000	350	Energy recovery
Total								2,116,112	813,448	

¹Packaging Group as per TDGA
²Transportation of Dangerous Good Act, Canada 1992, S.C. 1992, c. 34
³Not regulated under TDGA
⁴As per Schedule 6 of Regulation Respecting Hazardous Materials (CQLR, Q-2, r. 32)

Table 6-3 Percentage of waste disposed from 2015-2024[§]

Waste	2015 Weight (Tonnes)	2016 Weight (Tonnes)	2017 Weight (Tonnes)	2018 Weight (Tonnes)	2019 ⁴ Weight (Tonnes)	2020 Weight (Tonnes)	2021 Weight (Tonnes)	2022 Weight (Tonnes)	2023 Weight (Tonnes)	2024 Weight (Tonnes)	2015 Total waste (%)	2016 Total waste (%)	2017 Total waste (%)	2018 Total waste (%)	2019 Total waste (%)	2020 Total waste (%)	2021 Total waste (%)	2022 Total waste (%)	2023 Total waste (%)	2024 Total waste (%)	Disposal Recycling location
General ¹	8,561	8,672	8,403	11,073	24,339	7,505	6,325	7,960	10,469	12,333	74.9	76.5	78.7	75.7	87.8	69.4	67.5	58.8	75.9	75.7	Landfill On-site disposal
Domestic ²	545	541	557	924	810	700	796	1,367	522	522	4.8	4.8	5.2	6.3	2.9	6.5	8.5	10.1	3.8	3.2	Incinerator ⁵ Composter ⁵ on-site or off-site disposal
Industrial/ Hazardous ³	289	161	243	483	470	622	600	856	471	858	2.5	1.4	2.3	3.3	1.7	5.8	6.4	6.3	3.4	5.3	Off-site disposal and recycling
Waste oil	358	280	280	337	210	162	263	152	266	420	3.1	2.5	2.6	2.3	0.8	1.5	2.8	1.1	1.9	2.6	On-site recycling
Steel	1,449	1,550	1,097	1,690	1,813	1,657	1,132	2,858	1,696	1,827	12.7	13.6	10.3	11.5	6.5	15.3	12.1	21.1	12.3	11.2	Off-site recycling
Wood	88	55	0	0	0	0	0	0	0	0	0.8	0.5	0	0	0	0	0	0	0	0	Baker Lake recycling
Batteries	38	17	17	19	19	31	11	29	5	0.5	0.3	0.1	0.2	0.1	0.1	0.3	0.1	0.2	0.04	0.003	Off-site recycling
Tires	97	67	81	110	63	136	243	309	355	331	0.9	0.6	0.8	0.8	0.2	1.3	2.6	2.3	2.6	2.0	Off-site recycling
TOTAL	11,425	11,343	10,678	14,636	27,724	10,813	9,370	13,530	13,785	16,291	100	100	100	100	100	100	100	100	100	100	

1. 2024 - Volume of general waste sent to Meadowbank Landfill is 3,378 tonnes and to Whale Tail Landfill is 8,955 tonnes.

2. 2024 - Volume of domestic waste sent to the Meadowbank composter (130 tonnes) and to a registered down south company (392 tonnes).

3. Industrial/ Hazardous waste does not include weight of batteries. Does include waste oil sent off-site.

4. Higher volume of general waste disposed of in 2019 compared to previous years are mainly due to the construction and development of the Whale Tail Mine and to the fact the that volume reported is from October 2018 to January 2020.

5. Composter in use starting 2020. No incineration on site starting in 2023.

Several projects for waste reduction/recycling were undertaken or were ongoing in 2024 at the Meadowbank Complex:

- Recycling of used protective personnel equipment (PPE)
 - The objective of the Used PPE Project is to provide a second life to reusable PPE. With the collaboration of all departments, Agnico Eagle collected used PPE around the Meadowbank Complex to create a used PPE inventory. This used PPE is now reused instead of ordering new equipment and disposing of reusable materials in the landfill. This initiative has been successful in reducing waste sent to landfill and as an overall cost saving measure.
- Waste oil recycling plan
 - Agnico Eagle has an existing waste oil reuse plan. In 2024, Agnico Eagle reused approximately 477 m³ of waste oil as a fuel source in waste oil heaters. Table 6-5 provides a breakdown of the waste oil incinerated by month. Agnico Eagle is planning on continuing to reuse waste oil produced in 2025.
- Steel Recycling
 - A total of 1,827 tonnes of steel was packaged and transported south for recycling. This material was removed from our solid waste stream and not landfilled on site.
- Battery recycling
 - In 2024, 0.5 tonnes of batteries were shipped south and recycled in an accredited facility.
- Tire recycling
 - In 2024, 331 tonnes of scrap tires were shipped south and recycled in an accredited facility.

6.1.1.4 Composter^s

The Meadowbank composter was in operation in 2024 and continues to contribute to optimizing waste management by reducing the amount of waste to be managed off site.

In 2024, 29,122 kg of cardboard and 101,021 kg of food waste were loaded into the composter. A total of 128 totes of compost were produced and transferred to the Meadowbank landfill as per the approved Incinerator Waste Management Plan.

6.1.2 Whale Tail Site^s

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 14: *A summary report of all general waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal*

As detailed in Section 6.1.1 above, all hazardous and non-hazardous waste that required an off-site disposal to an accredited facilities for recycling or disposal according to regulations are sent to the Meadowbank site via the Whale Tail Haul Road. From there, the hazardous and non-hazardous waste are segregated along with the waste generated by the Meadowbank site. There is no distinction possible

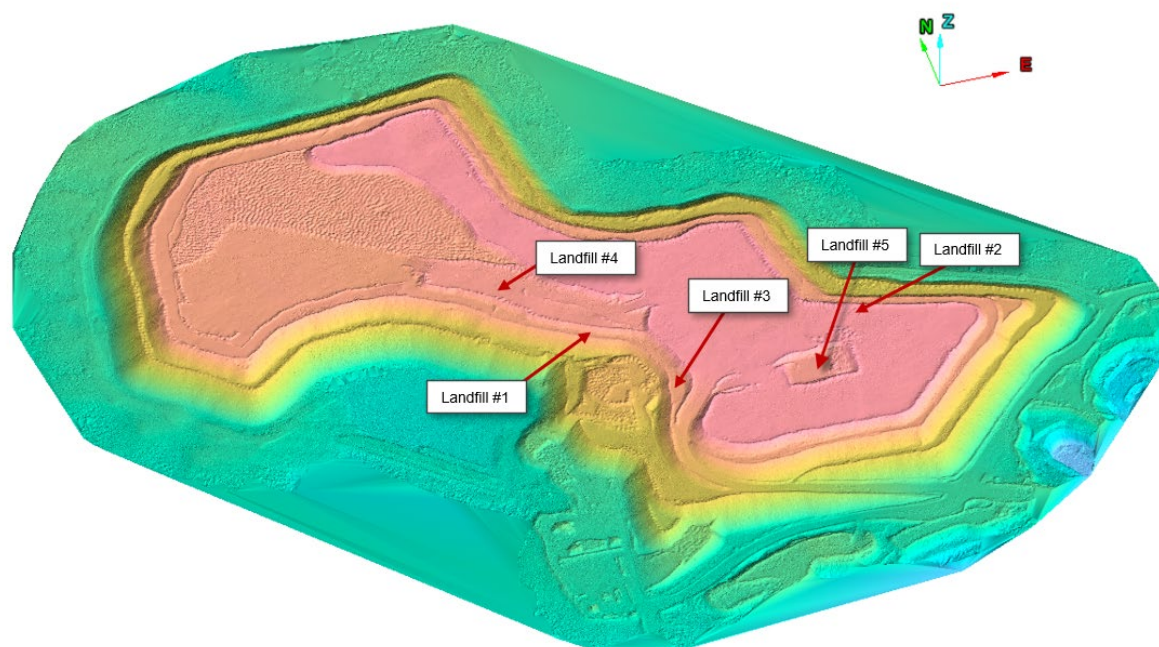
between the site provenance of the waste. A description of the types of waste, packaging and volume is provided in Table 6-2.

All inert waste that can be landfilled consists primarily of plastics, fiberglass, wood, cardboard, rubber, clothing, and some metal that was not recycled. Landfillable waste was transported via the Whale Tail Haul Road to the Meadowbank Landfill until October 2019. After October 2019 and following the approval from the NWB to operate a landfill at Whale Tail, waste was no longer sent to Meadowbank and was disposed of directly on site.

Table 6-4 below indicates the volume of waste in cubic metres disposed in the Whale Tail Landfill starting in October 2019 and Figure 15 indicates the locations used to date. The volume of waste landfilled since 2019 is 43,344 m³. This is based on the engineering survey done at each landfill. It should be noted that this amount could be overestimated as some of the surveys were completed once the sub-landfills capping were done. The waste was not always compacted in the landfill when surveyed causing volumes to be overestimated. From that amount, Agnico Eagle landfilled approximately 12,793 m³ in 2024. Landfill #5 is currently in use.

Table 6-4 Whale Tail Volume of waste disposed in landfill (from survey)[§]

Landfill	Coordinates (UTM)			Volume (m ³)	Date Covered
	Northing	Easting	Elevation		
#1	7256069.1	605637.6	168	6,151	December 6, 2020
#2	7256087.5	606021.1	171	8,553	October 2, 2022
#3	7255858.1	605863.8	197	11,552	September 19, 2023
#4	7255980.9	605525.4	216	11,424	July 15, 2024
#5	7255973.8	606084.1	225	5,664	Active
			Total	43,344	

Figure 15 Whale Tail landfill location^s

There was no incinerator at Whale Tail in 2024 and thus all domestic wastes were sent to the Meadowbank composter or shipped down south, as previously described. There is no distinction possible between the volume site provenance of domestic waste in 2024.

NWB's approval for the construction of a Composter at Whale Tail site was received in 2023. Construction started in 2023 and was completed at the beginning of 2025. Composter infrastructure has been commissioned in 2025.

6.2 INCINERATOR^s

6.2.1 Meadowbank Site^s

As per NWB Water License 2AM-MEA1530 Schedule B, Item 12: *Report of Incinerator test results including the materials burned and the efficiency of the Incinerator as they relate to water and the deposit of waste into water.*

And

NIRB Project Certificate No.004 Condition 72: *On-site incinerators shall comply with Canadian Council of Ministers of Environment and Canada-Wide Standards for dioxins and furan emissions, and Canada-wide Standards for mercury emissions, and AEM shall conduct annual stack testing to demonstrate that the on-site incinerators are operating in compliance with these standards. The results of stack testing shall be contained in an annual monitoring report submitted to GN, EC and NIRB's Monitoring Officer.*

Operation of the incinerator ceased on November 27th, 2022. No waste was burned at the Meadowbank Complex in 2024; therefore no stack testing was required.

6.2.1.1 Ash Monitoring^{\$}

The incinerator was not operational in 2024, as such, no ash monitoring was required.

6.2.1.2 Waste Oil Monitoring^{\$}

In 2024, a total of approximately 477 m³ of waste oil was burned in furnaces. Volumes of waste oil reused as fuel in 2024 are presented in Table 6-5.

Table 6-5 Meadowbank 2024 volume of waste oil consumed^{\$}

Month	Consumption (m ³)
January	38
February	73
March	66
April	45
May	38
June	23
July	10
August	0
September	21
October	42
November	54
December	67
Total	477

There is no sampling frequency for waste oil specified in the GN Environmental Guideline for Used Oil and Waste Fuel (2012). To ensure compliance with the Guideline parameters, Agnico Eagle will minimally sample the waste oil feedstock twice a year.

In 2024, Agnico Eagle collected one waste oil sample per month. All metals and polychlorinated biphenyls (PCB) parameters have met the GN Environmental Guideline. This data is presented in Table 6-6.

Table 6-6 Meadowbank 2024 Waste Oil monitoring[§]

Parameters	Maximum Allowable Concentration*	Unit	1/15/2024	2/5/2024	3/10/2024	4/7/2024	5/6/2024	6/3/2024
Flash Point	≥ 37.7	°C	>80	>80	>80	66	63	73
Total Halogen	1,000	mg/kg	79	137	192	53	< 1	49
Cadmium	2	mg/kg	< 1	< 1	< 1	< 1	< 1	< 1
Chromium	10	mg/kg	< 1	< 1	< 1	< 1	< 1	< 1
Lead	100	mg/kg	< 5	< 5	< 5	< 5	< 5	< 5
Polychlorinated Biphenyls	2	mg/kg	< 1	< 1	< 1	< 1	< 1	< 1

Parameters	Maximum Allowable Concentration*	Unit	7/3/2024	8/17/2024	9/15/2024	10/5/2024	11/7/2024	12/3/2024
Flash Point	≥ 37.7	°C	>80	77	>80	>80	65	>80
Total Halogen	1,000	mg/kg	103	61	< 1	< 1	88	61
Cadmium	2	mg/kg	< 1	< 1	< 1	< 1	< 1	< 1
Chromium	10	mg/kg	< 1	< 1	< 1	< 1	< 1	< 1
Lead	100	mg/kg	< 5	< 5	< 5	< 5	< 5	< 5
Polychlorinated Biphenyls	2	mg/kg	< 1	< 1	< 1	< 1	< 1	< 1

* GN Environmental Guideline for Used Oil and Waste Fuel (GN, 2012)

6.2.2 Whale Tail Site[§]

As per Water License 2AM-WTP1830 Schedule B, Item 15: *Reporting of Incinerator test results including the materials burned and the efficiency of the Incinerator in relation to effects on Water and the potential Deposit of Waste into Water.*

There is currently no incinerator constructed at Whale Tail site.

6.3 ADDITIONAL INFORMATION[§]

6.3.1 Meadowbank Site[§]

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 25: *Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.*

The Board did not request any additional details on waste disposal in 2024.

6.3.2 Whale Tail Site[§]

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 28: *Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.*

The Board did not request any additional details on waste disposal in 2024.

SECTION 7. SPILL MANAGEMENT

7.1 SPILL SUMMARY[§]

The number of spills in 2024 for both Meadowbank and Whale Tail sites are summarized in Table 7-1 below. The construction of the Whale Tail Mine started in 2016 with the construction of the Amaruq Exploration Access Road (Whale Tail Haul Road). For this reason, there are no spills to report from the Whale Tail site prior to 2016. Spills that occurred along the Amaruq Exploration Access Road were reported in 2016 and 2017 in the report submitted as part of the NWB Water License 8BC-AEA1525, which was cancelled as of November 2018 and are reported in the Table 7-1 below.

To be consistent with previous years, Agnico Eagle will continue to present spills for the Meadowbank Mine site, AWAR and Bake Laker infrastructures (Section 7.1.1) and the ones for Whale Tail Mine site and Whale Tail Haul Road (Section 7.1.2) separately.

Table 7-1 Total reportable and non-reportable spills for the Meadowbank and Whale Tail Sites from 2011 to 2024[§]

Year	Meadowbank Site			Whale Tail Site			Total Spills for both Sites
	Number Reportable Spills	Number Non-Reportable Spills	Total	Number Reportable Spills	Number Non-Reportable Spills	Total	
2011	12	68	80	N/A	N/A	N/A	80
2012	16	82	98	N/A	N/A	N/A	98
2013	7	85	92	N/A	N/A	N/A	92
2014	9	63	72	N/A	N/A	N/A	72
2015	18	148	166	N/A	N/A	N/A	166
2016	34	374	408	0	14	14	422
2017	28	383	411	0	34	34	445
2018	26	217	243	15	114	129	372
2019	22	97	119	43	177	220	339
2020	11	38	49	21	204	225	274
2021	20	48	68	14	148	162	230
2022	14	45	59	20	134	154	213
2023	15	46	61	22	105	127	188
2024	19	39	58	16	94	110	168

With the main mining operations shifted from Meadowbank to Whale Tail mine in 2019, it was expected to observe a significant decrease in spills internally and externally reported at Meadowbank and an increase at the Whale Tail site.

In 2022, as part of the Spill reduction action plan, a thorough review of the spills that occurred in 2021 and 2022 was performed to identify common causes. The maintenance department launched an equipment spill root cause analysis, which included a failure mode & effect analysis (FMEA) on the equipment models with the highest spill frequency. The findings of the FMEA identified hoses, fittings,

and clamps as the main equipment parts of concern to address and highlighted the importance of following proper equipment warm-up procedures. To address these concerns, presentations on the replacement of hoses, hardware, and fittings were conducted with maintenance mechanics along with an inventory adjustment to ensure better parts availability. The warm-up procedure on heavy equipment was revised with the training department to align with the manufacturers' standard operating procedure. Since the inception of the spill reduction plan, the number of non-negligible events has decreased annually.

Agnico Eagle continued to address environmental incidents by conducting spill investigations on reportable spills or any non-reportable spill when deemed necessary. The investigation process aids in identifying and addressing root causes of spills. Corrective measures are tracked for completeness, with the help of the Intelex database. Examples of corrective measures include update to procedures, review of work methods, implementation of engineered controls, fixing mechanical issues, etc. Additionally, the environmental awareness training program that was developed in 2022 was launched at the beginning of 2023. The training is mandatory for all supervisors on site, and open to all site personnel. The training includes a refresher of spill management, and reporting requirements, in addition to many other environmental topics. A dashboard was also created for employees/departments to view environmental incidents (reportable and non-reportable spill events), as well as review corrective and preventive actions tracking.

An analysis of non-reportable spills in 2024 for both Meadowbank and Whale Tail sites continues to highlight that the majority of spills (92%) are caused by mechanical / equipment failure / malfunction and that they occur primarily in high production areas: Pits and WRSF (27%), Pads, Parking Areas, Laydowns (22%), and Mine Haul Roads (20%).

Agnico Eagle operates Meadowbank and Whale Tail under extreme cold conditions during winter, thus adding extra stress on equipment that can lead to more frequent equipment failures even if thorough inspections and maintenance are conducted. In 2024, as per previous years, particular attention was paid to operating practices on sites. The stand-down of equipment during extreme cold temperatures was fully integrated within mining operations and reduced overall pressures on hydraulic systems. The most common spills at the Meadowbank Complex are Hydraulic Oil, Diesel Fuel, and Coolant/Glycol. Ethylene glycol is a type of coolant used by Agnico Eagle and is primarily used as an anti-freeze component in motor vehicles and heating buildings. Agnico Eagle continues to look for alternatives to Ethylene glycol, however assessments from the Government of Canada conclude that Ethylene glycol is not presently a concern for the environment or human health at current levels of exposure.

Mandatory spill training is included in the Meadowbank and Whale Tail sites induction and the Environmental Department is working with a collaborative approach to ensure field personnel are reminded consistently on best practices in spill management. Refresher training was developed to be specifically focused on key departments, operators, and supervisors. By continuing education and awareness within our sites, Agnico Eagle is confident that the overall environmental impacts are limited. Measures put in place were found to be effective as a decrease in spill overall was observed in 2024.

All internal reported spills and spills reported to regulators are managed according to the Spill Contingency Plan provided in Appendix 22. Spills are contained and cleaned, contaminated material is disposed to the appropriate area and the clean-up actions are monitored by the Environment team.

In addition to the spill reduction plan, spill investigations, environmental awareness and spill training mentioned above, Agnico Eagle completed the following spill response and training activities in 2024:

- Three (3) members of the Emergency Response Team (ERT) completed one (1) spill response training scenarios in 2024.
- A mock spill exercise was completed on July 20th, 2024, at the Baker Lake Marshalling Facility. The scenario was: while conducting the hourly ship to shore inspection during the transfer of fuel at the Baker Lake Marshalling facility, an employee observed a pool of diesel fuel located next to the fuel transfer pipe flowing towards the shoreline. The worker confirmed the main connection flange was leaking and upon further inspection discovered a tear in the secondary containment berm where the fuel had seeped out and onto the ground. The ship had been offloading for two hours. This scenario simulates a spill with a high potential environmental impact on a water body. The team had to manage their resources and workforce to contain the leaks by replacing the secondary containment berm, and ensuring the spill does not reach the lake by digging a trench on the beach and installing spill booms within the trench as well as assembling and installing maritime curtain along the shoreline. Overall, the reaction of participants was satisfactory, and lessons learned from the event will ensure a more efficient future response, if needed. The mock spill exercise report can be found in Appendix K of the Spill Contingency Plan, Version 22 (Appendix 22).
- An Environmental Emergency (E2) drill for the Baker Lake Oil Handling Facility (OHF) was completed in October 2024. The drill involved evaluating the Product Transfer Area (PTA) Assessment documentation for the Baker Lake Oil Handling Facility to ensure that the risk assessment and standard operating procedure were valid. Stakeholders from various departments were involved in the process to ensure that all information was valid. The updated PTA Assessment (Version 5) can be found in Appendix L of the Spill Contingency Plan, Version 22 (Appendix 22).
- An E2 Full-Scale Simulation Exercise for the Meadowbank Complex was performed on September 8th, 2024. Agnico Eagle hired SWAT Consulting Inc. to facilitate a simulation exercise based on the Alternate Worst-Case scenario, for Meadowbank. This simulation involved Agnico Eagle's Emergency Response Team, Emergency Management Team, and Environment personnel. The exercise involved a tanker carrying approximately 40,000L of diesel fuel overturning on the AWAR at a location proximal to a freshwater body. The release of fuel was simulated by a water truck pumping freshwater onto the surface of the road. The simulation exercise report can be found in Appendix K of the Spill Contingency Plan, Version 22 (Appendix 22).

In 2024, Agnico Eagle continued to raise worker awareness to the importance of including full details in spill report regarding contaminated material disposal. In 2025, Agnico Eagle will continue the spill investigation process as well as continue to apply learnings from equipment spill root cause analysis. Review of the spill reporting procedure as well as individual toolbox meetings with all departments will continue in 2025.

7.1.1 Meadowbank Site^s

As per NWB Water License 2AM-MEA1530 Schedule B, Item 13 *A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken.*

And

As required by NIRB Project Certificate No.004 Condition 26: *Cumberland shall ensure that spills, if any, are cleaned up immediately and that the site is kept clean of debris, including wind-blown debris.*

A summary of all unauthorized discharges that were reported to the GN Spill hotline in 2024 are presented in Table 7-2. A summary of all non-reportable spills can be found in Table 7-3. This data was also included in monthly monitoring reports submitted to the NWB 2AM-MEA1530 and quarterly via the KivIA Production Lease Report. GN Spill Reporting Forms and the follow up reports as requested by the Water License 2AM-MEA1530 Part H, Item 8 for reported spills are included in Appendix 23. The spills presented in Table 7-2 and Table 7-3 below include spill events related to the Meadowbank Site, AWAR and Baker Lake infrastructures.

In 2024, nineteen (19) spills were reported to the GN Spill hotline and thirty-nine (39) non-reportable spills occurred on site Table 7-1 above provides a summary of the reportable and non-reportable spills from 2011 -2024.

In 2024, zero (0) non-compliances related to the MDMER and one (1) non-compliance related to the Meadowbank Water License 2AM-MEA1530 occurred.

- On September 20th, during a regular freshet inspection of the West Diversion Ditch, a turbid plume of water was observed at the exit of the diversion ditch where it connects to shore of Third Portage Lake at the registered sampling point ST-6. The plume extended ~2 m into the lake and ~20m along the immediate shoreline area, with no observable impact further into the lake. A spill report #2024-365 was submitted on September 21st.

Upon observation of the runoff into the lake, the environmental personnel deployed additional woodchip-log in areas of concern and turbid inflows from the land to control the transportation of sediments. A Maritime curtain was installed along the shore of the lake to contain the plume and minimize further transportation of sediments. Over the next week, inspections and monitoring of the area was performed by environmental staff. During the monitoring, the TSS control measures were monitored, repaired and added, as needed. Samples of the water quality (total suspended solids) of the lake outside of the barrier were collected to ensure it was functioning as intended. Acute Lethality samples were also collected, and results show no toxicity.

The identified cause for the turbid runoff is the heavy rains received from September 20th to September 27th where above average volumes of water reported through the diversion ditch without sufficient control measures in place. The volume of water flows over the land and from the road which transported sediments into the ditch and towards the lake.

ST-6 exceeded the maximum allowable grab sample concentration (30 mg/L), and the maximum average concentration (15 mg/L) permitted by the Water License, Part F, Item 7. The average monthly TSS concentration was 27.25 mg/L. More information on water quality results can be found in Section 8.5.2.1.2.

Table 7-2 Meadowbank 2024 spills reported to the GN 24-Hour Spill HotLine^s

Date of spill	Hazardous material	Quantity	Units (L/Kg/m³)	Location	Cause of spill	Clean-up action taken	GN Spill Number
1/10/2024	Waste Oil	500	L	LHT Dome	Human Error	Spill pads were immediately placed on the ground. Approximately 2 m³ of material was collected and brought to the Meadowbank landfarm. The absorbent material was disposed of at the Meadowbank Hazmat facility.	2024-011
2/20/2024	Coolant	2	L	AWAR Bridge 2	Human Error	An ice chisel and shovel were used to extract the contaminated snow and ice. Around 0.2 m³ of contaminated material was gathered and disposed of at the Meadowbank Tailings site.	2024-045
2/28/2024	Engine Oil	1	L	Unnamed Lake	Human Error	Hand shovels were used to retrieve approximately 0.5 m³ of contaminated snow, which was then brought to the Meadowbank Tailings Storage Facility.	2024-055
3/24/2024	Tailings	2	m³	Powerhouse	Blocked Pipe	Approximately 60 m³ of contaminated snow was removed and disposed of at the Tailings Storage Facility. High-pressure hoses were utilized to clean the adjacent infrastructure. Additionally, the tailings slurry and contaminated material remaining in the ditch was removed and disposed of in the Tailings Storage Facility.	2024-077
5/8/2024	Engine Oil	1	L	Unnamed Lake	Human Error	Hand shovels were used to retrieve the contaminated snow, which was then brought to the Meadowbank Tailings Storage Facility.	2024-143
5/9/2024	Sewage	50	L	Wing 6	Mechanical Failure	A plumber replaced the defective manual valve. Approximately 0.5 m³ of contaminated material was collected and brought to the Tailings Storage Facility at Meadowbank.	2024-145
5/19/2024	Tailings	2	m³	Mill Facilities	Blocked Pipe	The contaminated ditch was initially pumped dry using a vacuum truck. Approximately 8 m³ of contaminated soil was then removed and disposed of at the Tailings Storage Facility. Pressure washing the nearby contaminated infrastructure was completed for remediation purposes.	2024-170
5/20/2024	Tailings	10	m³	Mill Facilities	Punctured Line	The mill operations were halted immediately after the spill was discovered. A berm was constructed on the adjacent road to prevent the contaminated material from spreading and to contain it on the mill pad. Part of the spilled material was pumped back into the secondary containment of the leaching pad, while the solid material was excavated. Areas inaccessible to heavy equipment were cleaned using a combination of manual labor, water pressure, and a vacuum truck. Remediation operations removed approximately 700 m³ of contaminated soil and 220 m³ of a tailings sediment and water mixture which have been disposed of at the Tailings Storage Facility.	2024-171
5/20/2024 and 5/22/2024	Contaminated Water	Unknown	m³	Mill Facilities	Secondary Containment Integrity	Upon discovering the water inflow, an investigation was launched to identify potential sources. Samples were collected to pinpoint the source of the seepage, and a red dye test was conducted at the mill leach pad containment. The dye test conclusively determined that the source of the spill was the leach pad secondary containment. The contaminated water was contained and managed within the existing water management infrastructure. The pumping system in place directed the contaminated water back to the mill system. Additional samples were collected from the downstream environment (Third Portage Lake) and sent to external labs for analysis.	2024-207 2024-232

Date of spill	Hazardous material	Quantity	Units (L/Kg/m³)	Location	Cause of spill	Clean-up action taken	GN Spill Number
5/28/2024	Engine Oil	5	L	Unnamed Lake	Mechanical Failure	Hand shovels were used to retrieve approximately three 20 L bags of contaminated snow and ice, which was then brought to the Meadowbank Tailings Storage Facility. Spill absorbent material was used to collect the oil from on top of the ice and brought to the Meadowbank Hazmat facility.	2024-194
6/12/2024	TSS	Unknown	Kg	Baker Lake Marshalling Facilities	Natural Event	Wood-chip booms and maritime barriers were deployed and are present in the field. Following the observation of localized seepage paths through ditch 1 downstream berm, a review and evaluation of the performance of the entire infrastructure is being conducted. If maintenance and remediation work is required as per recommendations of the water management infrastructure performance review, it will be planned accordingly.	2024-222
8/1/2024	Diesel Fuel-Water Mixture	500	L	Baker Lake Marshalling Facilities	Human Error	The spill was immediately contained, and a loader was called to remove the contaminated material. Approximately 3 m³ of material was collected and brought to the Meadowbank Landfarm.	2024-294
9/8/2024	TSS	Unknown	Kg	Baker Lake Spud Barge	Turbid Runoff caused by Heavy Rain	Upon observation of the runoff into the lake, the environmental personnel deployed, woodchip-log or straw-log booms and rock fill berm in the flow path of the runoff, to control the transportation of sediments. Over the next week, inspections and monitoring of the area was performed by environmental staff. During the monitoring, the TSS control measures were monitored, repaired and added, if needed. Samples of the water quality (total suspended solids) of the lake adjacent to the dock facilities were taken.	2024-340
9/13/2024	Diesel Fuel	1,000	L	Meadowbank Fuel Farm	Human Error	Spill response materials were deployed, and heavy equipment was brought to the scene to contain the spill. Approximately 20 m³ of contaminated material was collected into a roll-off container and transported to the Meadowbank Landfarm.	2024-356
9/20/2024	TSS	Unknown	Kg	ST-6/Third Portage Lake	Turbid Runoff caused by Heavy Rain	Upon observation of the runoff into the lake, the environmental personnel deployed additional woodchip-log in areas of concerns and turbid inflows from the land to control the transportation of sediments. A Maritime curtain was installed along the shore of the lake to contain the plume and minimize further transportation of sediments. Over the next week, inspections and monitoring of the area was performed by environmental staff. During the monitoring, the TSS control measures were monitored, repaired and added, as needed. Samples of the water quality (total suspended solids) of the lake outside of the barrier to ensure its was functioning as intended.	2024-365
9/20/2024	TSS	Unknown	Kg	ST-5/NP2 Lake	Turbid Runoff caused by Heavy Rain	Upon observation of the runoff into the lake, the environmental personnel deployed, additional woodchip-turbidity logs in areas of concerns and turbid inflows from the land to control the transportation of sediments. A silt curtain was installed along the shore of the lake to contain the plume and minimize further transportation of sediments. Over the next week, inspections and monitoring of the area was performed by environmental staff. During the monitoring, the TSS control measures were monitored, repaired and added, as needed. Samples of the water quality (total suspended solids) of the lake outside of the barrier were collected to ensure the control measure were functioning as intended. Sample results show no exceedance of water license parameters.	2024-364
12/12/2024	Sewage Water	5	L	Sewage Treatment Plant	Equipment failure due to regular wear and freezing conditions.	The operator stopped offloading and siphoned the remaining sewage back into the sewage truck. A plumber replaced the defective piping/fitting. Approximately 0.1 m³ of contaminated material was collected and returned to the sewage circuit for disposal. A visual inspection of	2024-463

Date of spill	Hazardous material	Quantity	Units (L/Kg/m³)	Location	Cause of spill	Clean-up action taken	GN Spill Number
						the sewage transfer piping will be carried out by the operators prior to transferring future waste into the sewage treatment plant. Portable secondary containments will be carried on sewage trucks and utilized during the transfer process.	
12/26/2024	Tailings	15	m³	Tailings Storage Facility Area	Equipment Failure	The process plant was immediately shut down to stop the spill, and recovery of the contaminant began. Approximately 175 m³ of contaminated snow and tailings were removed and disposed of within the Tailings Storage Facility. Additionally, the tailings slurry and contaminated material remaining in the area will be removed and disposed of in the TSF. These operations will be carried out during favorable weather conditions.	2024-480
12/29/2024	Tailings	900	m³	Tailings Storage Facility Area	Equipment Failure	The process plant immediately switched to water before proceeding with the complete shut down of the circuit to stop the spill. Approximately 692 m³ of contaminated snow and tailings were removed and disposed of within the Tailings Storage Facility. Additionally, the tailings slurry and contaminated material remaining in the area will be removed and disposed of in the TSF. These operations will be carried out during favorable weather conditions.	2024-482

Table 7-3 Meadowbank 2024 non-reportable spills^s

Date of spill	Hazardous material	Quantity	Units (L/Kg/m³)	Location	Cause of spill	Clean-up action taken
1/13/2024	Coolant	20	L	Winter Parking	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the MBK TSF
1/15/2024	Waste Oil	20	L	Incinerator Yard	Natural Event	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the MBK Landfarm
1/25/2024	Glycol	2	L	Bay Goose Dike	Human Error	Contaminated snow and material was picked up and placed in a bucket for disposal at the MBK TSF
1/27/2024	Coolant	5	L	AWAR Km 44	Mechanical Failure	Contaminated snow and material was picked up and placed in a bucket for disposal at the MBK TSF
2/19/2024	Coolant	5	L	Vault Coverall	Mechanical Failure	Contaminated snow and material was picked up and brought to the MBK TSF
2/21/2024	Engine Oil	2	L	Winter Parking	Mechanical Failure	Contaminated snow and material was picked up and brought to the MBK Landfarm
3/2/2024	Oil	1	L	Vault Area Exploration Trail	Mechanical Failure	Contaminated snow and material was collected and brought to the MBK Landfarm
3/3/2024	Hydraulic Oil	48	L	Iron pad	Mechanical Failure	Contaminated snow and material was collected and brought to the MBK Landfarm
3/7/2024	Coolant	30	L	Fuel Farm	Mechanical Failure	Contaminated snow and material was picked up and brought to the MBK TSF
3/19/2024	Engine Oil	30	L	Crusher Ramp	Mechanical Failure	Contaminated snow and material was collected and brought to the MBK Landfarm
3/28/2024	Hydraulic Oil	40	L	Vault Stockpile	Mechanical Failure	Contaminated snow and material was collected and brought to the MBK Landfarm
5/3/2024	Transmission Oil	20	L	Vault Coverall	Mechanical Failure	Contaminated material was collected and brought for disposal at the MBK Landfarm
5/3/2024	Waste Oil	20	L	Cat Dome	Human Error	Contaminated material was collected and placed in roll off bin for disposal at the MBK Landfarm
5/5/2024	Hydraulic Oil	10	L	AWAR Km 57	Mechanical Failure	Contaminated material was collected and brought for disposal at the MBK Landfarm
5/8/2024	Waste Oil	5	L	Truck Shop	Mechanical Failure	Contaminated material was collected and brought for disposal at the MBK Landfarm
5/18/2024	Jet-A Fuel	50	L	Tarmac	Human Error	Contaminated material was collected and placed in roll off bin for disposal at the MBK Landfarm
5/24/2024	Hydraulic Oil	8	L	Crusher Building	Mechanical Failure	Absorbents were placed on the ground and disposed off in the Hazmat Storage area
5/26/2024	Waste Oil	40	L	Waste Oil Seacan	Human Error	Contaminated material was collected and placed in roll off bin for disposal at the MBK Landfarm
5/26/2024	Diesel Fuel	50	L	LHT Fueling Station	Equipment Malfunction	Contaminated material was collected and placed in roll off bin for disposal at the MBK Landfarm
6/5/2024	Engine Oil	4	L	AWAR Km 15	Human Error	Contaminated material was collected and disposed at the Baker Lake Hazmat
6/8/2024	Hydraulic Oil	30	L	Transit laydown	Mechanical Failure	Contaminated material was collected and brought for disposal at the MBK Landfarm
6/12/2024	Hydraulic Oil	50	L	Crusher Pad	Mechanical Failure	Contaminated material was collected and brought for disposal at the MBK Landfarm
6/13/2024	Hydraulic Oil	30	L	Transit Laydown	Mechanical Failure	Contaminated material was collected and brought for disposal at the MBK Landfarm
6/25/2024	Diesel Fuel	5	L	Baker Lake Marshalling Facilities	Unknown	Contaminated material was collected and placed in a Quatrex bag for disposal for at the MBK Hazmat Storage area

Date of spill	Hazardous material	Quantity	Units (L/Kg/m³)	Location	Cause of spill	Clean-up action taken
7/16/2024	Nitrate	1	Kg	Spud Barge	Mechanical Failure	The hole that led to the spill was immediately blocked to contain the nitrate inside the seacan. Nitrate was then clean-up and disposed of at the Hazmat
7/25/2024	Waste Oil	30	L	Transit Laydown	Human Error	Spill pad put in place to contain the leak. Seacan was emptied and cleaned
8/18/2024	Waste Oil	30	L	Hazmat Seacan	Contaminated Seacan	Contaminated material was collected and brought for disposal at the MBK Landfarm
8/20/2024	Diesel Fuel	20	L	Fuel Farm	Human Error	Contaminated material was collected and brought for disposal at the MBK Landfarm
9/13/2024	Hydraulic Oil	15	L	Freshwater Barge Road	Equipment failure	Contaminated material was collected and brought for disposal at the MBK Landfarm
9/26/2024	Water Mixed with Spray Paint	20	L	Outside Warehouse	Human Error	Contaminated material was collected and brought for disposal at the MBK TSF
9/28/2024	Coolant	50	L	Main Truck Shop	Punctured Tote	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF
9/30/2024	Diesel Fuel	25	L	Meadowbank Fuel Farm	Human Error	Contaminated material was collected and brought for disposal at the MBK Landfarm
10/22/2024	Diesel Fuel	20	L	Baker Lake Spud Barge Laydown	Equipment Failure	Contaminated soil disposed of at the disposal site
11/20/2024	Diesel Fuel	20	L	AWAR Km 22	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the MBK landfarm
12/12/2024	Engine Oil	2	L	Carpenter Shop Parking Lot	Equipment Failure	Contaminated snow was collected and placed in roll off bin for disposal at the MBK Landfarm
12/15/2024	Coolant	20	L	AWAR Km 108	Equipment Failure	Contaminated material was collected and brought for disposal at the MBK TSF
12/27/2024	Glycol	5	L	Transit Pad	Improper Storage	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF
12/28/2024	Glycol	5	L	Transit Pad	Improper Storage	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF
12/28/2024	Diesel Fuel	2	L	AWAR Km 43	Human Error	Contaminated snow was collected and placed in roll off bin for disposal at the MBK Landfarm

7.1.2 Whale Tail Site^s

As per NWB Water License 2AM-WTP1830 Schedule B, Item 16: *A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken.*

A summary of all unauthorized discharges that were reported to the GN Spill hotline in 2024 is presented in Table 7-4. A summary of all non-reportable spills can be found in Table 7-5. This data was included in monthly monitoring reports submitted to the NWB 2AM-WTP1830 and also reported quarterly via the KivIA Production Lease Report. GN Spill Reporting Forms and the follow up report as requested by the Water License 2AM-WTP1830 Part H, Item 8 for reported spills are included in Appendix 24. The spills presented in Table 7-4 and Table 7-5 below only include spills related to the Whale Tail Site and Whale Tail Haul Road.

In 2024, sixteen (16) spills were reported to the GN Spill hotline and ninety-four (94) non-reportable spills occurred on site. Table 7-1 above provides a summary of the reportable and non-reportable spills from 2016 -2024.

In 2024, zero (0) non-compliances related to the MDMER and Whale Tail Water License 2AM-WTP1830 occurred.

Table 7-4 Whale Tail 2024 spills reported to the GN 24Hr spill HotLine^s

Date of spill	Hazardous material	Quantity	Units (L/Kg/m³)	Location	Cause of spill	Clean-up action taken	GN Spill Number
3/25/2024	Hydraulic Oil	200	L	Whale Tail WRSF	Mechanical Failure	The operator promptly parked the equipment and powered it down upon noticing the spill. The contaminated material was collected and transported to the Whale Tail Landfarm.	2024-079
4/7/2024	Potassium Permanganate	50	L	Water Treatment Plan	Human Error	The operator quickly closed the valve and informed their supervisor of the spill. The contaminated material was collected and was transported to the Meadowbank Tailings Storage Facility for disposal.	2024-088
4/9/2024	Transmission Oil	220	L	Warehouse Transit	Human Error	Spill pads were placed on the ground, the sea can was moved, and a loader was used to scrape and remove the contaminated material. The contaminated material was collected and disposed at the proper facility.	2024-098
4/15/2024	Grease	10	m³	Whale Tail Camp	Equipment Damage	Upon discovery workers immediately cleared the overburden of snow using hand shovels. The contaminated material that was accessible was disposed of at the Meadowbank tailings area. Additional remediation work was completed during the Spring/Summer of 2024.	2024-105
4/23/2024	Hydraulic Oil	150	L	Underground Genset	Mechanical Failure	Spill pads were placed on the ground and a loader was used to scrape and remove the contaminated material. The contaminated snow was collected and disposed of at the Whale Tail Landfarm.	2024-120
5/3/2024	Sewage	25	m³	Lift Station	Human Error	Upon discovery workers immediately collected the excess sewage contained in the building and repaired the transfer tank. The contaminated material that was accessible was collected with a sewage truck and disposed of at the Meadowbank tailings area. Approximately 10 m³ of contaminated snow and ice was also disposed of at the Meadowbank tailings area. Additional remediation work was completed during the Spring/Summer of 2024.	2024-132
5/11/2024	Sewage	2	m³	Underground Office	Mechanical Failure	A vacuum truck was deployed to extract as much liquid as possible. The contaminated snow and material were collected and brought to the Tailings Storage Facility at Meadowbank.	2024-150
5/24/2024	Engine Oil	20	L	WTHR Km 173	Mechanical Failure	Spill containment booms and pads were used to contain and collect the spill. Oil was skimmed off the surface using a combination of a vacuum pump and shop vac. In total ~2 m³ of contaminated water was collected and ~2.5 m³ of contaminated soil was collected. All contaminated water and spill containment material was disposed of at the Whale Tail Hazmat area. All contaminated soil was brought to the Whale Tail Landfarm for treatment.	2024-186
7/12/2024	Anti-Washout Admixture	150	L	Warehouse Pad	Incorrect Storage and Handling of Product	All nearby sea cans were relocated to allow a loader to scrape and remove the contaminated material. Approximately 5 m³ of contaminated material was collected and be disposed of at the Meadowbank Tailings Storage Facility.	2024-267
8/1/2024	Diesel Fuel and Coolant	70	L	WTHR Km 124	Human Error	Following the retrieval of the equipment, material was collected and separated between the ore and the contaminated material. Approximately 1 m³ of contaminated material was collected and brought to the Meadowbank landfarm. Absorbents were collected and brought to the Meadowbank Hazmat storage area.	2024-293

Date of spill	Hazardous material	Quantity	Units (L/Kg/m³)	Location	Cause of spill	Clean-up action taken	GN Spill Number
8/6/2024	Sewage	50	L	Lift Station between Wings 15 & 16	Mechanical Failure	The contaminated material was collected with a sewage truck, scraped clean and disposed of at the Meadowbank tailings area.	2024-300
8/25/2024	Diesel Fuel, Hydraulic Oil, and Coolant	260	L	WTHR Km 166	Human Error	Following the retrieval of the equipment, approximately 20 m³ of contaminated material was collected and brought to the Whale Tail landfarm. Absorbents were collected and brought to the Whale Tail Hazmat storage area.	2024-321
9/8/2024	Engine Oil	500	L	Warehouse Area	Equipment Failure	Spill pads were placed on the ground, and the pooled oil on the ground was pumped into another tote. The area was then scraped clean with an excavator and the contaminated material brought to the Whale Tail Landfarm.	2024-338
11/4/2024	Hydraulic Oil	2,000	L	Whale Tail Pit	Equipment Failure	A large portion of the spilled oil was burned in the fire. The oil that spilled onto the ground was within an ore pattern. The ore and contaminated material was collected and will be processed through the Milling facilities.	2024-513
12/20/2024	Sewage	1	L	Emulsion Facility Offices	Human Error	The contaminated snow and material was immediately collected and brought to the Whale Tail Landfarm. The outlet pipe was modified to prevent the event from reoccurring. Portable secondary containments will be carried on sewage trucks and utilized during the transfer process.	2024-476
12/30/2024	Sewage	35	L	Lift Station between Wings 15 & 16	Human Error	The contaminated snow and ice was collected and brought to the Tailings Storage Facility at Meadowbank. The pump was repaired and float switches adjusted. Regular inspections and preventative maintenance will continue to be completed on all lift stations.	2024-487

Table 7-5 Whale Tail 2024 non-reportable spills^{\$}

Date of spill	Hazardous material	Quantity	Units (L/Kg/m³)	Location	Cause of spill	Clean-up action taken
1/4/2024	Transmission Oil	80	L	Whale Tail Pit Ramp	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
1/4/2024	Diesel Fuel	85	L	WTHR Km 171	Human Error	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
1/9/2024	Diesel Fuel	40	L	Whale Tail Fuel Farm	Mechanical Failure	Contaminated material was picked up and brought to the WT Landfarm
1/9/2024	Coolant	5	L	Orbit Shop	Human Error	Contaminated snow was collected and brought to the Hazmat area for disposal
1/14/2024	Coolant	10	L	Underground Fuel Farm	Mechanical Failure	Contaminated snow was collected and brought to the Underground Hazmat area for disposal
1/15/2024	Engine Oil	5	L	IVR Ramp	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
1/16/2024	Coolant	25	L	WTHR Km 171	Mechanical Failure	Contaminated snow and material was picked up and brought to the MBK TSF for disposal
1/16/2024	Coolant	25	L	WTHR Km 141	Mechanical Failure	Contaminated snow and material was picked up and brought to the MBK TSF for disposal
1/19/2024	Diesel Fuel	20	L	Underground Fuel Farm	Mechanical Failure	Contaminated snow was collected and brought to the Underground Hazmat area for disposal
1/21/2024	Compressor Oil	2	L	Whale Tail Pit	Mechanical Failure	Spill pads were placed on the ground. Contaminated pads were brought to the Hazmat area for disposal
1/22/2024	Diesel Fuel	20	L	Whale Tail Pit Parking	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
1/23/2024	Diesel Fuel	40	L	Whale Tail Fuel Farm	Human Error	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
1/24/2024	Coolant	20	L	Whale Tail Pit	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the MBK TSF
1/25/2024	Coolant	4	L	WTHR Km 126	Mechanical Failure	Contaminated snow and material was picked up and brought for disposal at the MBK TSF
1/26/2024	Coolant	6	L	WTHR Km 174	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the MBK TSF
1/28/2024	Coolant	2	L	WTHR Km 160	Human Error	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the MBK TSF
1/30/2024	Coolant	2	L	Maintenance Shop	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the MBK TSF
2/8/2024	Coolant	20	L	Maintenance Shop Yard	Unknown	Contaminated snow was picked up and placed in a roll off bin for disposal at the MBK TSF
2/9/2024	Diesel Fuel	25	L	Pit Washroom Parking	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
2/10/2024	Coolant	8	L	WTHR Km 126	Mechanical Failure	Spill pads were placed on the ground. Contaminated pads were brought to the WT Hazmat area for disposal
2/11/2024	Coolant	20	L	Maintenance Shop Yard	Mechanical Failure	Contaminated snow was picked up and placed in a roll off bin for disposal at the MBK TSF
2/12/2024	Coolant	50	L	Whale Tail Pit	Mechanical Failure	Contaminated snow and material was picked up and placed in a roll off bin for disposal at the MBK TSF
2/14/2024	Compressor Oil	25	L	IVR Pit	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
2/16/2024	Hydraulic Oil	20	L	Whale Tail WRSF	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
2/18/2024	Diesel Fuel	15	L	WTHR Km 136	Mechanical Failure	Contaminated snow and material was picked up and brought to the WT Landfarm

Date of spill	Hazardous material	Quantity	Units (L/Kg/m ³)	Location	Cause of spill	Clean-up action taken
2/21/2024	Hydraulic Oil	11	L	FGL/Sana Yard	Mechanical Failure	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
2/22/2024	Coolant	1	L	UG Maintenance Yard	Mechanical Failure	Contaminated area was cleaned
2/26/2024	Coolant	10	L	UG Maintenance Yard	Mechanical Failure	Contaminated snow and material was picked up and placed in a roll off bin for disposal at the MBK TSF
3/3/2024	Coolant	50	L	WTHR Km 136	Mechanical Failure	Contaminated snow and material was picked up and brought to the MBK TSF
3/6/2024	Coolant	6	L	WTHR Km 166	Mechanical Failure	Contaminated snow and material was picked up and brought to the MBK TSF
3/12/2024	Diesel Fuel	30	L	WTHR Km 175	Human Error	Contaminated snow and material was picked up and placed in the roll off bin for disposal at the WT Landfarm
3/23/2024	Coolant	20	L	UG Genset	Mechanical Failure	Contaminated snow and material was picked up and placed in a roll off bin for disposal at the MBK TSF
3/25/2024	Coolant	50	L	Phase 2 Pad	Mechanical Failure	Contaminated snow and material was picked up and placed in a roll off bin for disposal at the MBK TSF
3/28/2024	Hydraulic Oil	25	L	IVR Pit	Mechanical Failure	Contaminated material was picked up and placed in the roll off bin for disposal at the WT Landfarm
4/13/2024	Coolant	20	L	Whale Tail WRSF	Mechanical Failure	Contaminated material was collected and placed in the roll off bin for disposal at the MBK TSF
4/14/2024	Diesel Fuel	10	L	UG Genset	Maintenance	Contaminated material was collected and placed in Quatrex bags and brought to the WT Hazmat
4/15/2024	Coolant	2	L	WTHR Km 173	Human Error	Contaminated material was collected and placed in the roll off bin for disposal at the MBK TSF
4/25/2024	Hydraulic Oil	70	L	WRSF Ramp	Mechanical Failure	Contaminated material was collected and placed in the roll off bin for disposal at the WT Landfarm
4/26/2024	Diesel Fuel	40	L	LHT Parking	Mechanical Failure	Contaminated material was collected and placed in the roll off bin for disposal at the WT Landfarm
4/28/2024	Hydraulic Oil	20	L	Drill Pad	Mechanical Failure	Spill pads were placed on the ground. Contaminated material was collected in Quatrex Bags and brought to the WT Hazmat
4/30/2024	Hydraulic Oil	80	L	IVR Pit	Mechanical Failure	Contaminated material was collected and placed in the roll off bin for disposal at the WT Landfarm
5/2/2024	Hydraulic Oil	5	L	WTHR Km 150	Mechanical Failure	Spill pads were placed on the ground. Contaminated material was collected for disposal at the MBK Landfarm
5/3/2024	Oil	80	L	Pit Ramp	Mechanical Failure	Contaminated material was collected and brought for disposal at the WT Landfarm
5/5/2024	Hydraulic Oil	25	L	IVR WRSF	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
5/5/2024	Coolant	55	L	Whale Tail Pit	Mechanical Failure	Contaminated material was collected and placed in a roll off bin for disposal at the MBK TSF
5/6/2024	Hydraulic Oil	40	L	IVR WRSF	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
5/12/2024	Engine Oil	20	L	Transit Office	Mechanical Failure	Contaminated material was collected and brought for disposal at the WT Landfarm
5/14/2024	Calcium	200	Kg	Underground Dome	Human Error	Contaminated material was collected and brought to the Underground Waste Pad
5/15/2024	Coolant	7	L	Surface Shop	Mechanical Failure	Absorbents were placed on the ground and disposed off in the Hazmat Storage area
5/19/2024	Oil	20	L	Surface Shop	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm

Date of spill	Hazardous material	Quantity	Units (L/Kg/m ³)	Location	Cause of spill	Clean-up action taken
5/25/2024	Hydraulic Oil	45	L	Whale Tail Pit	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
5/29/2024	Hydraulic Oil	30	L	Whale Tail Pit	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
6/1/2024	Hydraulic Oil	10	L	IVR Pit	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
6/1/2024	Hydraulic Oil	20	L	Fuel Farm	Mechanical Failure	Contaminated material was disposed at the WT landfarm. Absorbent matting was brought to the WT Hazmat
6/8/2024	Hydraulic Oil	10	L	Pad K	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
6/14/2024	Hydraulic Oil	5	L	Warehouse Area	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
6/20/2024	Hydraulic Oil	20	L	Pad K	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
6/22/2024	Hydraulic Oil	45	L	Whale Tail Pit	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
6/27/2024	Coolant	0.5	L	WTHR Km 118	Mechanical Failure	Absorbent pads were placed on the spill and disposed at the Meadowbank Hazmat
7/2/2024	Hydraulic Oil	25	L	Whale Tail Pit	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
7/8/2024	Hydraulic Oil	30	L	Phase 2	Mechanical Failure	The operator stopped the truck and informed dispatch. Contaminated material was collected and disposed at the WT Landfarm
7/8/2024	Diesel Fuel	1	L	Quarry at Km 150	Improper Storage	Contaminated material was collected and disposed at the WT Landfarm
7/9/2024	Engine Oil	10	L	WTHR Km 114	Mechanical Failure	Driver called their supervisor immediately and placed spill pads down to cleanup the oil. Contaminated material was collected and disposed at the Landfarm
7/13/2024	Hydraulic Oil	15	L	IVR Ext. Pit	Mechanical Failure	Spill was contained. Contaminated material was collected and disposed at the WT Landfarm
7/14/2024	Diesel Fuel	5	L	Camp Genset	Human Error	Contaminated material was collected and disposed at the WT Landfarm
7/22/2024	Coolant	8	L	Shovel Pad Top Phase 2 Ramp	Human Error	Contaminated material was collected and placed in a roll off bin for disposal at the MBK TSF
8/12/2024	Coolant	80	L	WT WRSF	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF
8/15/2024	Oil	8	L	IVR Pit	Equipment Damage	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm.
8/17/2024	Hydraulic Oil	5	L	Surface Maintenance Shop	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm.
8/20/2024	Diesel Fuel	50	L	Underground Fuel Farm	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm.
8/29/2024	Coolant	20	L	IVR North	Mechanical Failure	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF
9/4/2024	Hydraulic Oil	20	L	Whale Tail Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
9/6/2024	Coolant	12	L	WTHR Km 164	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF

Date of spill	Hazardous material	Quantity	Units (L/Kg/m³)	Location	Cause of spill	Clean-up action taken
9/8/2024	Coolant	22	L	Whale Tail Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF
9/12/2024	Diesel Fuel	50	L	Orbit Garant Garage	Human Error	Contaminated material was collected and brought for disposal at the MBK Landfarm
9/12/2024	Hydraulic Oil	55	L	Whale Tail Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
9/17/2024	Hydraulic Oil	25	L	Whale Tail Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
9/30/2024	Hydraulic Oil	20	L	Whale Tail Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
10/7/2024	Hydraulic Oil	20	L	Whale Tail Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
11/21/2024	Coolant	24	L	WTHR Km 138	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF
11/24/2024	Diesel fuel	1	L	Whale Tail Pit	Human Error	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
11/28/2024	Hydraulic Oil	60	L	Whale Tail Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
11/29/2024	Hydraulic Oil	70	L	Underground Stockpile	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
12/1/2024	Hydraulic Oil	40	L	IVR Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
12/2/2024	Hydraulic Oil	55	L	Maintenance Pad	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
12/5/2024	Hydraulic Oil	10	L	Dispatch Parking	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
12/5/2024	Hydraulic Oil	30	L	IVR WRSF	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
12/7/2024	Steering Oil	50	L	Truck Shop	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
12/10/2024	Hydraulic Oil	15	L	Whale Tail Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
12/13/2024	Hydraulic Oil	50	L	Whale Tail Pit	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
12/19/2024	Coolant	20	L	Main Maintenance Equipment Laydown	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF
12/25/2024	Diesel Fuel	15	L	WTHR Km 120	Human Error	Contaminated material was collected and brought for disposal at the MBK TSF
12/30/2024	Transmission Oil	2	L	Underground Shop	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the WT Landfarm
12/31/2024	Coolant	25	L	WTHR Km 134	Equipment Failure	Contaminated material was collected and placed in roll off bin for disposal at the MBK TSF

7.2 LANDFARM ACTIVITIES^{\$}

As per the Meadowbank Landfarm Design and Management Plan (Appendix 54), and Whale Tail Landfarm Design and Management Plan (Appendix 55) the below section presents the 2024 landfarm activities at the Meadowbank Complex.

7.2.1 Meadowbank Site^{\$}

The first landfarm at Meadowbank (Landfarm 1) was constructed in 2012, located on the north-west side of the South Tailings Cell within the Tailings Storage Facility. As this area was planned to eventually become flooded with reclaim water, Agnico Eagle constructed a new landfarm (Landfarm 2) in 2016. In 2019, the Landfarm 1 area flooded with reclaim water and was deemed no longer operational.

Based on surveys conducted by the Engineering Department, the volume of Landfarm 2 in December 2024 was 6,630 m³. In 2024, an estimated 696 m³ of soil was added to Landfarm 2 from spill events occurring around the Meadowbank Site. The remaining capacity of Landfarm 2 is estimated at 4,815 m³. A summary of spills that occurred during 2024, including those for which excavated material was deposited in the Meadowbank Landfarm, is provided in Section 7 above.

In 2024, screening of coarse material was completed in Q3. Approximately 552 m³ of coarse material was removed from the Meadowbank Landfarm and will be placed according to the approved Landfarm Design and Management Plan. During freshet, ponded water was observed within the landfarm area, and one (1) sample was collected in May 2024, results are provided in Table 8-34 below. Water in or around the landfarm naturally flows towards the adjacent Tailing Storage Facilities. Forty-five (45) visual inspections of the landfarm were conducted during the year, indicating that the berm and pad appeared to be structurally intact, and that no maintenance was required.

7.2.2 Whale Tail Site^{\$}

The construction of the landfarm at Whale Tail Mine was approved by the NWB on October 27th, 2021. The landfarm at Whale Tail Mine was built and commissioned in Q4 2022.

Based on surveys conducted by the Engineering Department, the volume of the landfarm in December 2024 was 700 m³. In 2024, an estimated 278 m³ of soil was added to landfarm from spill events occurring around the Whale Tail Site. The remaining capacity of the landfarm is estimated at 4,800 m³. A summary of spills that occurred during 2024, including those for which excavated material was deposited in the Whale Tail Landfarm, is provided in Section 7 above.

Material management occurred periodically throughout the summer at the landfarm. The material was placed into a windrow following freshet and the windrow was maintained throughout the summer.

In 2024, screening occurred in Q3, however the coarse material was not removed from the landfarm prior to freeze-up. Ponded water was observed within the landfarm area and five (5) samples were collected during the year, results are provided in Table 8-56 below. No runoff water outside the area was observed in 2024. Fifty-one (51) visual inspections of the landfarm were conducted during the year, indicating that the berm and pad appeared to be structurally intact, and that no maintenance was required.

7.3 POSSIBLE ACCIDENT AND MALFUNCTIONS AT MEADOWBANK SITE

NIRB Project Certificate No.004 Condition 27: *Cumberland shall ensure that the areas used to store fuel or hazardous materials are contained using safe, environmentally protective methods based on practical, best engineering practices.*

And

As required by NIRB Project Certificate No.004 Condition 44: *Within one (1) month of contracting with a shipper, Cumberland shall submit a comprehensive Spill Contingency and Emergency Response Plan to regulatory authorities.*

And

As required by NIRB Project Certificate No.004 Condition 75: *Provide a complete list of possible accidents and malfunctions for the Project; it must consider the all-weather road, shipping spills, cyanide and other hazardous material spills, and pitwall/dikes /dam failure, and include an assessment of the accident risk and mitigation developed in consultation with Elders and potentially affected communities.*

A list of possible accidents and malfunctions are included in the following Meadowbank Complex management plans:

- Hazardous Materials Management Plan, Version 8, March 2024 (Appendix 43);
- Spill Contingency Plan, Version 22, March 2025 (Appendix 22);
- Emergency Response Plan (ERP), Version 20a, March 2025 (Appendix 46);
- Oil Pollution Emergency Plan and Oil Pollution Prevention, Version 18, March 2025 (Appendix 25);
- Meadowbank OMS Manual for Dewatering Dikes, Version 12, March 2025 (Appendix 28);
- Meadowbank OMS Manual for Tailings Management, Version 13, February 2025 (Appendix 29);
- Whale Tail OMS Manual for Water Management Infrastructure, Version 5, February 2025 (Appendix 30).

Agnico Eagle complied with this condition, including the provision of a list of possible accidents and malfunctions. These Plans were originally reviewed as part of the NIRB and NWB License application process. As such there was extensive public review which included elders' participation at the associated hearings.

Road Spills

Tables 7-2 to 7-5 show all spills related to the Meadowbank Complex, including the AWAR/WTHR, and other spills related to mine activities.

International Cyanide Management Code (ICMC)

As part of the International Cyanide Management Code (ICMC), Agnico Eagle is required to inform the community of Baker Lake and Chesterfield, details regarding the cyanide shipping and transportation along the All-Weather Access Road (AWAR), along with associated restrictions that apply to Hamlet residents regarding the usage of the AWAR.

Agnico Eagle held an information session in Baker Lake in June 2024 to ensure community first responders were well-informed about the safe transportation of cyanide from Baker Lake to the Meadowbank mine site. The session, led by Meadowbank representatives, covered critical safety procedures and fostered an engaging discussion where participants shared questions and insights on safety protocols and potential road closures during transport operations.

In October 2024, Agnico Eagle organized in person information session in Chesterfield Inlet. The cyanide and shipping information was presented and delivered to local community members via a community open house engagement. Participants were referred to Agnico Eagle Nunavut website where they can find Cyanide Transportation and Management pamphlet. During the transportation, the community of Chesterfield Inlet were kept informed about the Cyanide transportation through Meadowbank Complex Facebook page.

More information on the ICMC and community involvement can be found in Section 11.4.

Community information meetings

Ahead of the 2024 barge season, Agnico Eagle conducted a community engagement tour in Coral Harbour, Chesterfield Inlet, Rankin Inlet, and Baker Lake. These meetings provided an opportunity to share key information about the upcoming shipping season and gather community feedback that could help refine adaptive management practices.

Representatives from Agnico Eagle's Community Relations, Environment, and Logistics teams, alongside Nunavut Sealink & Supply Inc.–Desgagnés Transarctik, participated in these discussions. As part of regulatory requirements, Fisheries and Oceans Canada (DFO) was invited to attend the meetings. Discussions covered a range of topics, tailored to the interests of each audience, including:

- Routing plans for the 2024 barge season;
- Review of the 2023 sealift season, including vessel traffic and material shipments;
- Hauling procedures and logistical considerations;
- Overview of the Marine Mammal & Seabird Observer Program (MMSO); and
- Findings from the 2023 MMSO season.

These discussions provided valuable insights that will help inform ongoing efforts to align shipping operations with community expectations, environmental considerations, and logistical best practices.

Accidents and malfunctions

To prevent and ensure accidents and malfunctions are dealt with appropriately the following activities were held in 2024:

- Emergency Plans and crisis management training to superintendents and supervisors.
- Various training to the rescue team members combined with active scenarios: Incident Command System (ICS), Confined Space, Explosive Risk Spill Response, Hazardous Materials, Fire force entry, High Angle Tower and Rescue, Aircraft scenario, Mass Casualty, Heavy Vehicle Extrication, Search and Rescue, Barricade and Fire Assessment, and Medical Scenarios.
- Debriefings were held after each emergency call to learn from events.
- Participation to the Northern Mining Health and Safety Forum (NMHSF) Mine Rescue competition in Yellowknife (June 2024) and Participation with other Nunavut divisions to the International Mine Rescue Competition in Colombia (September 2024) with first place overall finish.
- Cyanide awareness and scenarios were held with all our Emergency response team members.
- Environmental Incident Reduction Action Plan which includes different items such as Environmental Awareness, an Environmental Incident Investigation Process, Corrective and Preventative Measures Tracking, and a Mechanical Performance Review and Improvement Plan, as mentioned in Section 7.1.
- Additional spill training and mock exercises as mentioned in Section 7.1.

Agnico Eagle will continue to explore methods to incorporate Inuit Qaujimajatuqangit into Accident and Malfunction operations in consultation with Elders and potentially affected communities, if needed.

SECTION 8. MONITORING^s

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 16: *The results of monitoring under the Aquatic Effects Management Plan (AEMP) including:*

- *Core Receiving Monitoring Program (CREMP);*
- *Metal Mining Effluent Regulation (MMER) Monitoring;*
- *Mine Site Water Quality and Flow Monitoring (and evaluation of NP-2);*
- *Visual AWA water quality monitoring;*
- *Blast Monitoring;*
- *Groundwater Monitoring.*

And

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 19: *The results of monitoring related to the Aquatic Effects Monitoring Program (AEMP) including:*

- *Core Receiving Environment Monitoring Program (CREMP);*
- *Metal Mining Effluent Regulation (MMER) Monitoring;*
- *Water Quality and Flow Monitoring;*
- *Visual Whale Tail Haul Road water quality monitoring;*
- *Blast Monitoring; and*
- *Groundwater Monitoring.*

And

As required by NIRB Project Certificate No.004 Condition 6: *All monitoring information collected pursuant to regulatory requirements for the Meadowbank Project shall contain the following information:*

- a) *The person(s) who performed the sampling or took the measurements including any accreditations;*
- b) *The date, time and place of sampling or measurement, and weather conditions;*
- c) *Date of analysis;*
- d) *Name of the person(s) who performed the analysis including accreditations;*
- e) *Analytical methods or techniques used; and*
- f) *Results of any analysis.*

And

As required by NIRB Project Certificate No.008 Item 8: *All monitoring information collected pursuant to the Project Certificate and various regulatory requirements for the Project shall, if appropriate, given the type of monitoring conducted, contain the following information:*

- a) *The name of the person(s) who performed the sampling or took the measurements including any relevant accreditations;*
- b) *The date, time and place of sampling or measurement, and weather conditions;*
- c) *The date of analysis;*
- d) *The name of the person(s) who performed the analysis including any relevant accreditations;*
- e) *A description of the analytical methods or techniques used; and*
- f) *A discussion of the results of any analysis.*

And

As required by NIRB Project Certificate No.004 Condition 7: *Cumberland shall keep and maintain the records, including results, of any monitoring, data, or analysis, for a minimum of the life of the Project, including closure and post-closure monitoring. This time period shall be extended if requested by NIRB, GN, INAC, DFO, EC or the NWB.*

And

As required by NIRB Project Certificate No.008 Item 10: *The Proponent shall keep and maintain the records, including results, of all Project-related monitoring data and analysis for the life of the Project, including closure and post-closure monitoring.*

And

As required by NIRB Project Certificate No 008 Condition 18: *The Proponent shall, reflecting any direction from the Nunavut Water Board, maintain a Site Water Monitoring and Management Plan designed to:*

- *Minimize the amount of water that contacts mine ore and wastes;*
- *Appropriately manage all contact water and discharges to protect local aquatic resources; and*
- *Implement water conservation and recycling to maximize water reuse and minimize the use of natural waters.*
- *The Plan should include monitoring that demonstrates contact water (runoff and shallow groundwater) from the ore storage and waste rock storage areas is captured and managed, as per the Waste Rock Facility Management Plan. The plan should be submitted to the NIRB at least 60 days prior to the start of construction, with results submitted annually thereafter.*

Following sections describe the water monitoring as required by the Meadowbank and Whale Tail Water Quality and Flow Monitoring Plan and AEMP. These plans were both approved by the NWB.

Given the elevated number of certificates of analysis related to both Meadowbank and Whale Tail sites in 2024, Agnico Eagle will provide them on request. The certificate of analysis is detailed as follow:

- name of the person(s) who performed the sampling;
- date, time and place of sampling or measurement;
- date of analysis;
- name of the person(s) who performed the analysis including any relevant accreditations;
- description of the analytical methods or techniques used; and
- sample and QAQC results.

For all samples collected under the Meadowbank and Whale Tail Water Quality and Flow Monitoring Plan, trending is presented for 2020 up to 2024. For historical water management transfer volume, refer the Water Management Plan for Meadowbank and Whale Tail include in Appendix 13 and Appendix 14, respectively.

8.1 CORE RECEIVING ENVIRONMENT MONITORING PROGRAM (CREMP)[§]

The Core Receiving Environment Monitoring Program (CREMP) was updated and approved by NWB in 2022 and can be found in Appendix 33 of the 2022 Meadowbank Complex Annual Report.

The purpose of the CREMP is to determine if activities at Meadowbank, Whale Tail, and Baker Lake 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. The assessment uses early warning triggers and action thresholds to support management decisions within the Aquatic Effects Management Program (AEMP). The AEMP is the overarching ‘umbrella’ program that integrates results of individual, but related, monitoring programs to implement management actions before unacceptable adverse impacts occur to aquatic life.

8.1.1 Meadowbank Site[§]

NIRB Project Certificate No.004 Condition 76: *Cumberland shall develop an “Early Warning Monitoring Program” along the east boundary of the Project’s local study area (mine and road) including the location where Third Portage Lake flows into Tehek Lake. The “Early Warning Monitoring Program” shall discuss how the communities of Baker Lake and Chesterfield Inlet will be actively involved and shall be submitted to NIRB’s Monitoring Officer for review prior to Project construction. If adverse effects from the project to any VEC are detected along this boundary, then Cumberland shall notify the NIRB’s Monitoring Officer for determination as to whether and to what extent additional monitoring is required.*

Take note that the following is a summary of the CREMP report and Agnico Eagle will refer the reader to the report in Appendix 26 for an exhaustive comprehension of the program and results for 2024. Agnico Eagle will also refer the reader to Table ES-1 of the 2024 CREMP report for a summary of key findings with temporal and spatial trend assessment and annual CREMP results compared to Final Environmental Impact Statement (FEIS) predictions, where applicable.

The 2024 CREMP summarized results for the Meadowbank and Baker Lake study areas are presented below.

Meadowbank Study Area

There are nine sampling areas included in the Meadowbank CREMP. Third Portage Lake East Basin and North Basin (TPE and TPN), Second Portage Lake (SP), and Wally Lake (WAL) are the Near-Field (NF) areas monitored annually for changes related to operations at the Meadowbank mine and mill. Starting in 2023, Mid-Field (MF) areas Tehek Lake (TE), the South Basin of Third Portage Lake (TPS), and Far-Field (FF) area Tehek Lake far-field (TEFF) are monitored only if moderate changes are detected upstream at the NF locations. Two reference areas are shared for the Meadowbank and Whale Tail programs: Inuggugayualik Lake (INUG) and Tasirjuaraajuk Lake (aka Pipedream Lake [PDL]). INUG has been the core reference area since formal monitoring began in 2006. PDL was added to was added to the Meadowbank CREMP in 2009. Refer to the map provided in the 2024 CREMP report for locations.

Water Quality (Limnology & Water Chemistry)

[§] TSM- Biodiversity Conservation

Water quality monitoring for limnology and chemistry was completed in March, April, July, August, and September 2024 according to the CREMP study design. Limnology profiles were taken at the Near-Field areas—Third Portage Lake (TPN, TPE), Second Portage Lake (SP), and Wally Lake (WAL)—in the winter months when ice conditions were safe (January, February, November, and December).

The NF areas close to the mine have higher concentrations of dissolved solids and constituent major ions such as calcium and magnesium compared to baseline/reference conditions. This observation is consistent with previous findings. While these changes to water quality are mine-related, the observed concentrations are still relatively low and there is no evidence to suggest concentrations are increasing year-over-year or that the observed concentrations would result in adverse ecological effects. Consistent with previous reporting cycles, there were no trigger exceedances in 2024 for any water quality parameters with Canadian Council of Ministers of the Environment (CCME) water quality guidelines (WQG), including metals. In the context of the assessment framework outlined in the Final Environmental Impact Statement, the magnitude of potential effect on water quality in each of the near-field lakes in 2024 was considered low (i.e., less than the CCME WQGs) and consistent with the original predictions. Routine water quality monitoring is recommended for 2025.

Phytoplankton Community

Water samples for phytoplankton taxonomy were collected during each sampling event. From the 2024 BACI analysis, the phytoplankton community showed reductions relative to baseline for biomass at all Meadowbank stations in 2024, though the reductions were only significant at WAL. This reduction was greater than the 20% trigger. Phytoplankton richness decreased at all locations, and were significant in the BACI analysis at all locations, though the results were above the 20% trigger at TPE, SP, and WAL. The observed fluctuations in phytoplankton richness and biomass fall within the range of historical baseline/reference conditions and are likely due to natural variability. Ultimately, the long-term phytoplankton monitoring data demonstrates that mining operations have not contributed to pervasive changes in primary productivity among the NF areas. The trends in phytoplankton biomass and richness will be reviewed again in 2025.

Sediment Chemistry

The 2024 sediment program focused on NF and reference areas only and consisted of routine grab sampling (particle size, total organic carbon [TOC], and organics analysis on the top 3–5 cm of sediment). Sediment grab sampling was conducted at the NF and reference areas to support the benthic invertebrate community monitoring component of the CREMP. Sediment was analyzed for grain size and TOC. Remaining sediment was archived for chemistry analysis as per the CREMP Plan Update. The next sediment coring program will be conducted in August 2026 to review trends in chemistry. In 2025, grab samples will be collected to support the benthic invertebrate community sampling program.

Benthos Community

There were no statistically significant changes to the benthic invertebrate community at Meadowbank relative to baseline/reference conditions identified by the 2024 BACI assessment, except for an increase in richness at SP during the 2021–2024 time period. Richness at SP was within the range of reference area INUG in 2024. The trends in benthos abundance and richness will be reviewed again in 2025.

Baker Lake Study Area

CREMP monitoring at Baker Lake started in 2008. Mine-related activities in Baker Lake include barge/shipping traffic and general land-based activities associated with the tank farm area. Water quality sampling was conducted at two NF areas (BBD, BPJ) and one reference area (BAP) in Baker Lake in July, August, and September 2024.

Water Quality

In 2024, the mean annual concentrations for all parameters were less than their respective triggers. There was no evidence of any barge-related impacts to water quality at impact areas in Baker Lake. Monitoring in 2025 will follow the scope and schedule of the CREMP Plan.

Phytoplankton Community

There were no statistically significant changes in total biomass or taxa richness at any areas in 2024. Monitoring in 2025 will follow the scope and schedule of the CREMP Plan.

Sediment Chemistry

No sediment coring year was required at Baker Lake in 2024. The next sediment coring program will be conducted in August 2026 to review trends in chemistry.

Benthic Community

No benthic sampling was required at Baker Lake in 2024. The next benthic sampling program will be conducted in August 2026.

8.1.2 Whale Tail Site*^s

As required by NIRB Project Certificate No.008, Condition 19: *The Proponent shall, reflecting any direction from responsible authorities such as the Nunavut Water Board, Fisheries and Oceans Canada and Environment and Climate Change Canada, maintain a Core Receiving Environment Monitoring Program (CREMP) designed to:*

- *Determine the short and long-term effects in the aquatic environment resulting from the Project;*
- *Evaluate the accuracy of Project effect predictions;*
- *Assess the effectiveness of mitigation and management measures on Project effects;*
- *Identify additional mitigation measures to avert or reduce environmental effects due to Project activities;*
- *Comply with Metal Mining Effluent Regulations requirements, should an Environmental Effects*
- *Monitoring program be triggered;*
- *Reflect site-specific water quality conditions;*
- *Include details comparing the watershed features in the Whale Tail watershed to those watersheds used as reference lakes; and*
- *Evaluate the mixing and non-mixing portion of the pit.*

* TSM- Biodiversity Conservation

The CREMP should include sufficient sampling and monitoring programs to appropriately characterize the receiving environment to ensure that adequate data is available to assess impact predictions made within the Environmental Impact Statement for the Whale Tail Pit Project. The updated plan should be submitted to the NIRB at least 60 days prior to the start of construction, with results submitted annually thereafter.

And

As required by NIRB Project Certificate No.008 Condition 17: *The plan should be submitted to the NIRB at least 30 days prior to the start of construction, with results submitted annually thereafter. The Proponent shall:*

- a) Monitor the effects of project activities and infrastructure on surface water quality conditions;*
- b) Ensure the monitoring data is sufficient to compare the impact predictions in the Environmental Impact Statement (EIS) for the Project with actual monitoring results;*
- c) Ensure that the sampling locations and frequency of monitoring is consistent with and reflects the requirements of the Water Quality and Flow Plan and the Core Receiving Environmental Monitoring Program; and*
- d) On an annual basis, the Proponent will compare monitoring results with the impact assessment predictions in the EIS and will identify any significant discrepancies between impact predictions and monitoring results.*

Take note that the following is a summary of the CREMP report and Agnico Eagle will refer the reader to the report in Appendix 26 for an exhaustive comprehension of the program and results for 2024. Agnico Eagle will also refer the reader to Table ES-2 of the 2024 CREMP report for a summary of key findings with temporal and spatial trend assessment and annual CREMP results compared to FEIS prediction.

The 2024 CREMP summarized results for the Whale Tail study area are presented below.

Whale Tail Study Area

There are six lakes currently included in the Whale Tail CREMP study design. Whale Tail Lake South Basin (WTS) and Kangislulik Lake (KAN) are NF areas designed to detect changes related to dike construction in Whale Tail Lake and Kangislulik Lake and discharge of treated water during operations. Nemo Lake (NEM) is also considered a NF area because of its proximity to the site, even though it is situated in a different watershed. MF areas are Lake A20 (upstream from WTS but joined to WTS after flooding) and Lake A76 located downstream from KAN. Lake A76 is situated at the junction of the two flow paths leading to Lake DS1. Given its morphology and location, it represents an ideal MF exposure area for both flow paths. Lake DS1 is the FF location to provide additional context for characterizing spatial extent of effects. Refer to the map provided in the 2024 CREMP report for locations.

Water Quality

Surface water monitoring for limnology and water chemistry were completed in March, May, July, August, and September according to the CREMP study design for the Whale Tail study area. Supplemental limnology profiles were taken at Whale Tail South (WTS), Kangislulik Lake (KAN), Nemo Lake (NEM), and Lake A20 in select winter months to verify that water quality is broadly within the range of expected values, particularly for conductivity and dissolved oxygen.

Changes in water quality in lakes downstream from the mine were predicted to occur during construction and operations. Water quality within the Whale Tail study area lakes exhibited fairly stable conditions during the baseline period. Consequently, when interpreting time series plots to examine spatial-temporal

trends in water quality, the signal of development-related inputs was expected to be easily observed relative to the low noise levels of the baseline period. The following parameters have increased relative to baseline/reference conditions:

- **Ionic Compounds** – Total dissolved solids and constituent ions such as calcium, magnesium, potassium, and sodium were elevated in the NF lakes and downstream of KAN to Lake A76.
- **Nutrients** – Total Kjeldahl nitrogen, total organic carbon, and dissolved organic carbon were elevated at all areas except NEM and A76. In addition, total phosphorus was elevated at WTS. The elevated parameters are likely the result of inputs from flooded terrestrial habitats following impoundment, dewatering inputs from WTN, and the joining of WTS to A20.
- **Metals/metalloids** – Total and dissolved lithium were elevated at WTS and KAN, while total and dissolved silicon were elevated at DS1, similar to observations in 2023. These parameters do not have an effects-based guideline for the protection of freshwater aquatic life.

Of the parameters with trigger exceedances, FEIS predictions were exceeded for total alkalinity, TDS, total lithium, and several ionic compounds at WTS and KAN in one or more sampling events. Importantly, the absolute concentrations of these parameters remain low. Total phosphorus and arsenic at WTS and KAN were within the normal operating ranges and Level 0 water management strategy is in effect in 2025 as per the Adaptive Management Plan. Routine water quality monitoring will continue in 2025 to track emerging spatial and temporal trends.

Phytoplankton Community

Phytoplankton community sampling was completed at the same time as the water chemistry sampling program in 2024. Phytoplankton communities vary naturally throughout the year in total biomass (and density) and community composition (taxa richness). The primary stressors for the phytoplankton community include nutrients and metals in surface contact water discharged to KAN and WTS. Nutrient loading can manifest as an increase in total biomass or a change in community structure, while increasing metals concentrations would be expected to cause lower biomass and taxa diversity.

In 2024, the BACI analysis showed no significant changes in biomass relative to baseline/reference conditions at the Whale Tail area lakes. Observed trends were variable across the areas and likely driven by natural variability. The increases in biomass observed at the NF areas in the first few years after mining, which were consistent with predictions made in the FEIS regarding increasing nutrient concentrations in these lakes, appear to have corrected and stabilized.

Taxa richness has been fairly stable at the NF areas over the past few years and generally within the historical range for each area. While statistically significant apparent decreases in phytoplankton richness were identified in the BACI analyses, these are driven in part by the stable trends at reference area INUG. PDL, the other reference area, is more consistent with the Whale Tail study area lakes.

Nutrient levels in 2024 were similar to 2023 as observed in the water chemistry data. Nutrient levels and phytoplankton responses appear to roughly align over both temporal and spatial scales. However, phytoplankton communities respond to a host of seasonal factors such as sunlight and water temperature and therefore it is difficult to distinguish between seasonal fluctuations and influence of nutrients from mining activities.

Phytoplankton productivity, biomass and richness, as well as associated patterns in key nutrients will continue to be tracked in 2025. Phytoplankton community monitoring is scheduled for 2025 according to the CREMP Plan.

Sediment Chemistry

In the Whale Tail study area, sediment is naturally elevated in several metals and their concentrations can be quite variable due to spatial heterogeneity. Sediment grab sampling was conducted at the NF and reference areas to support the benthic invertebrate community monitoring component of the CREMP. Sediment was analyzed for grain size and TOC. Remaining sediment was archived for chemistry analysis as per the CREMP Plan.

TOC proportions, though naturally different across the Whale Tail area lakes, have remained stable within each lake. KAN consistently has the highest proportions of TOC, while the reference lakes (INUG, PDL) have the lowest. These results reflect differences in productivity levels across the lakes. Grain size results were similar to previous years, with generally finer-grained sediment often dominated by the silt fraction

A supplemental sediment coring program was conducted in WTS in August 2024 to assess whether chromium concentrations have increased compared to the baseline period. While sediment cores from 2023 and 2024 suggest higher chromium concentrations compared to 2017, substantial spatial heterogeneity within the basin makes any temporal trend indistinguishable. Spatial and temporal trends for sediment chromium will be reassessed in the 2026 coring program.

The next sediment coring program will be conducted in August 2026 to review trends in chemistry. In 2025, grab samples will be collected for chemistry and to support the benthic invertebrate community sampling program.

Benthos Community

Benthic invertebrate (benthos) community structure (taxa richness) and function (abundance) in the Whale Tail study area lakes is typical of northern headwater lakes in the region (i.e., relatively low abundance and few taxa).

In 2024, total abundance in all NF areas remained within historical ranges and was generally consistent with baseline/reference conditions. Despite that, the lower abundance seen at INUG this year translated into substantial apparent increases at WTS and KAN. Similar results were observed for the longer time periods. While INUG experienced its two lowest abundance years in the past three years, the NF areas generally had higher abundance years.

Total taxa richness in most NF areas remained within historical ranges and was generally consistent with baseline/reference conditions. The main exception is KAN, which has had progressively higher taxa richness. Similar to abundance, the relatively lower richness seen at INUG over the last three or four years also translates to relatively higher richness at the Whale Tail study lakes for the corresponding time periods. The apparent increases in taxa richness in 2024 were statistically significant at KAN and NEM, as were some of the longer time periods (e.g., 47% rise at KAN, 28% rise at A20, and a 49% rise at NEM over the last 4 years).

Evidence for causality is stronger for natural variability versus mining activity. Mining activity can lead to two types of effects: adverse changes (e.g., due to direct toxicity) or stimulatory effects (e.g., due to nutrient enrichment). The apparent changes described above reflect stimulatory responses to abundance

and richness, which could be related to nutrient enrichment. Mining-related nutrient enrichment should result in higher sediment TOC due to higher primary productivity. However, no increases in sediment TOC have been observed at the Whale Tail study area lakes. Instead, the substantial differences in sediment TOC among lakes likely reflect their natural capacity to respond to environmental changes. While we cannot rule out a contribution from mining activity, the evidence provides little support for mining as the main driver of the observed stimulatory effects to the benthic invertebrate community.

Additional monitoring data should help understand the cause of the increased densities observed in 2024. Benthos community monitoring will be conducted in 2025 according to the CREMP Plan

8.2 METHYLMERCURY STUDIES WHALE TAIL SITE*

As required by NIRB Project Certificate No.008, Condition 63: The Proponent shall conduct additional studies as part of its freshwater aquatic effects analyses to ensure that methylmercury concentrations anticipated to increase during operations in the aquatic environment (including in fish tissue) do not exceed regulatory requirements. In addition, the Proponent shall consider assessing potential risks from consumption of fish containing methylmercury by using Health Canada's hazard quotients as a descriptive tool. A summary of the results of these additional studies, including the assessment of the potential risk to people from consumption of fish, shall be included in the Proponent's annual report to the Nunavut Impact Review Board.

The Mercury Monitoring Plan was updated in March 2023 and can be found in Appendix 54 of the 2022 Annual Report.

The 2024 Mercury Monitoring Program (MMP) was completed according to the study design outlined in the Mercury Monitoring Plan (Version 4). The purpose of the MMP is to assess changes in mercury concentrations caused by the creation of the Whale Tail Impoundment ("Impoundment") following the construction of the Whale Tail Dike in September 2018. Construction of the dike raised the elevation of the south basin of Whale Tail Lake (WTS) and connected WTS with Lake A20, Lake A65, and other small waterbodies adjacent to WTS.

One of the effects of newly formed reservoirs is an increase in the production of methylmercury. Methylmercury bioaccumulates in aquatic food webs with the highest concentrations of methylmercury typically observed in large-bodied fish species like Lake Trout. Predictions for the expected increase of methylmercury concentrations in Lake Trout were included in the Final Environmental Impact Statement in anticipation of this situation. Mercury concentrations in Lake Trout were predicted to increase between 2-3 times above baseline concentrations. Total mercury concentrations in surface water were predicted to peak at 50-100 ng/L. No predictions were made for methylmercury in surface water or sediment.

The MMP was designed to monitor mercury dynamics in key components of the ecosystem to verify the FEIS predictions and manage methylmercury-related risks should those predictions be exceeded. The scope of the 2024 program included:

- Large-bodied (Lake Trout) and small-bodied fish from the Impoundment;
- Surface water from the Impoundment, downstream lakes, and reference lakes; and
- Sediment from the Impoundment, one downstream lake, and reference lakes.

* TSM- Biodiversity Conservation

Take note that the following is just a summary of the MMP report and Agnico Eagle will refer the reader to the report in Appendix 27 for an exhaustive comprehension of the program and results for 2024.

Water

Current concentrations of mercury in surface water are less than predictions in the FEIS and less than the CCME water quality guidelines for the protection of aquatic life (26 ng/L for total mercury and 4 ng/L for methylmercury). There was a noticeable increase in both total and methylmercury in WTS from 2018 (baseline) to 2020 and concentrations remained elevated through the fourth-year post-impoundment (2022). Concentrations of methylmercury in filtered samples decreased in 2023 (0.11 ng/L) and continued to decrease in 2024 (0.054 and 0.067 ng/L). While results suggest concentrations peaked in 2022 and are now declining, annual surface water sampling in 2025 will help confirm that methylmercury concentrations are decreasing in the Impoundment. Evidence of downstream transport of methylmercury to Kangislulik Lake and beyond is weak, suggesting that any contributions from WTS are minor relative to variability in baseline/reference conditions.

Mercury concentrations in surface water will continue to be monitored in 2025 as per the Mercury Monitoring Plan.

Sediment

In 2024, sediment samples were collected from the depositional areas in the MMP lakes. Total mercury concentrations were below the CCME sediment quality guidelines at all areas. In 2024, total mercury concentrations in the depositional zone of the Impoundment and in downstream exposure areas were similar to baseline/reference conditions.

In 2025, sediment grabs will be collected from depositional zones in the MMP area lakes and analyzed for total mercury as per the CREMP 2022 Plan Update. Trends in methylmercury in depositional zones will be reviewed during the next sediment coring program planned for 2026. Sediment sampling within the inundation zone is planned for 2026.

Small-bodied Fish

Small-bodied fish (Slimy Sculpin [*Cottus cognatus*] and Ninespine Stickleback [*Pungitius pungitius*]) were included in the MMP to track temporal and spatial patterns in mercury at a key step in the food chain that ultimately leads to large-bodied fish. Lake Trout are the primary focus of the MMP, but the mercury results for small-bodied fish provide valuable insight into mercury bioaccumulation within the aquatic food web in the Impoundment. This is particularly important for understanding the timing of the 'reservoir effect' and predicting when fish mercury concentrations are expected to begin decreasing.

Small-bodied fish sampling is not required under the Mercury Monitoring Plan. However, Slimy Sculpin and Ninespine Stickleback were collected from WTS and A20 in August 2024 to improve temporal resolution when assessing changes in total mercury concentrations in small-bodied fish. Due to delays at the analytical laboratory with preparing and analyzing the samples, the results of the small-bodied fish sampling program were not available to include in this year's report.

For 2025, the supplemental small-bodied fish mercury study is not planned as per the Mercury Monitoring Plan.

Large-bodied fish – Lake Trout

Lake Trout (*Salvelinus namaycush*) is the target species to monitor mercury bioaccumulation in the food web because piscivorous fish such as Lake Trout typically have the highest concentrations of mercury in high-latitude lakes. Lake Trout sampling for the MMP occurs every three years (2020, 2023, 2026). However, a targeted sampling program was conducted in the Impoundment in August 2024 to verify the 2023 study results, which indicated that mercury concentrations in Lake Trout were consistent with predictions in the FEIS. The mercury concentrations in Lake Trout samples from 2024 were similar to the results from 2023.

The MMP has committed to implementing further risk-based analyses if fish tissue mercury concentrations in the Impoundment exceed the predicted peak mercury concentration for Lake Trout. The estimated mean tissue mercury concentration for a 550-mm Lake Trout in 2024 from Whale Tail Lake remained within the confidence levels of the peak mercury concentration predicted in the FEIS. Therefore, no MMP-related risk management measures are required at this time.

The next large-bodied fish sampling event is planned for August 2026 as per the Mercury Monitoring Plan.

8.3 MDMER AND EEM SAMPLING

8.3.1 Meadowbank Site

This section includes the results of the monitoring programs conducted under the Metal and Diamond Mining Effluent Regulations (MDMER) and its Schedule 5 Environmental Effects Monitoring (EEM) Studies. Figures 1, 2, and 3 illustrate the location of sampling stations at the Meadowbank mine site, EEM receiving environment monitoring program and the Vault Site.

8.3.1.1 Vault Attenuation Pond Discharge

The Vault final discharge point (FDP) became subject to the MDMER Regulation on June 27th, 2013, at the commencement of the dewatering of Vault Lake. In 2024, no water was discharged from the final effluent Vault Discharge (ST-MMER-2) into the receiving environment Wally Lake. This discharge is however still active in ECCC's Mine Effluent Reporting System (MERS).

8.3.1.2 East Dike Discharge

The East Dike Seepage Discharge became subject to the MDMER on January 6th, 2014. In 2024, Agnico Eagle continued to pump water from the two collection points, South and North seepage and discharged through a common header through a diffuser into Second Portage Lake. The seepage water was released into the environment, prior to contact with mining activity, without treatment as it is compliant with Section 4 (1) of the regulation.

East Dike Seepage discharge is in reduced frequency for the testing of Ra226 since March 2016. The discharge is also in reduced frequency since September 2016 for Item 1 to 6 [arsenic, copper, cyanide, lead, nickel, zinc] of column 1 of the MDMER Schedule 4 and for Rainbow Trout acute lethality. Discharge monitoring samples are provided in Table 8-1.

East Dike Seepage (sampling station ST-8, also named ST-MMER-3) was discharged into the receiving environment, Second Portage Lake (SPL), October 13th to 31st, November 1st to 30th, December 1st to

17th, and December 20th to 31st. The total volume discharged to SPL in 2024 was 21,163 m³. Table 8-2 provides a daily breakdown of volumes of water pumped. There were no (0) exceedances of the MDMER/Water License limits in 2024.

Sublethal toxicity samples are collected directly after the effluent characterization samples, from the same location (ST-MMER-3-EEM, East Dike Discharge). In 2024, there was only one discharge to the receiving environment. For this reason, the East Dike discharge (ST-MMER-3-EEM) is the mine's FDP that has potentially the most adverse environmental impact on the environment as per Schedule 5 Section 5. In 2024, two (2) sub-lethal toxicity samples were collected from ST-MMER-3-EEM in compliance with Schedule 5 Section 6. The sub-lethal toxicity samples were collected on October 21st and November 25th. The water quality samples were taken from the discharge location (ST-MMER-3), the receiving environment exposure area (SPLE or ST-MMER-3-EEM-SPLE) and reference area (TPS or ST-MMER-1-EEM-TPS). These sampling locations are highlighted in Figures 1 and 2. Results of the EEM water quality monitoring program is presented in Tables 8-3. These data were previously reported to Environment Canada via the MERS electronic database

Table 8-1 Meadowbank 2024 East Dike MDMER Monitoring

Month	As	Cu	CN	Pb	Ni	NH ₃	Zn	TSS	Ra 226	pH	Results for Rainbow Trout Acute Lethality Tests (mean percentage mortality in 100% effluent test concentration)	Results for Daphnia magna Monitoring Tests (mean percentage mortality in 100% effluent test concentration)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
January												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
February												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
March												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
April												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
May												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
June												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
July												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
August												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
September												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
October												
14-Oct-24	0.00169	0.00189	< 0.00050	< 0.00020	0.0169	< 0.00043	0.0069	2	< 0.0050	7.90	0	0
21-Oct-24	0.00129	0.00570	< 0.00050	< 0.00020	0.0022	< 0.0025	< 0.0050	3	< 0.0050	8.67	NMR	NMR
28-Oct-24	NMR	NMR	NMR	NMR	NMR	< 0.0021	NMR	< 1	NMR	8.68	NMR	NMR
31-Oct-24	NMR	NMR	NMR	NMR	NMR	NMR	NMR	< 1	NMR	8.90	NMR	NMR
November												
4-Nov-24	0.00128	0.00170	< 0.00050	< 0.00020	< 0.0010	< 0.0029	< 0.0050	1	< 0.0050	8.84	NMR	0
11-Nov-24	NMR	NMR	NMR	NMR	NMR	0.0110	NMR	< 1	NMR	9.32	NMR	NMR
19-Nov-24	NMR	NMR	NMR	NMR	NMR	< 0.0031	NMR	2	NMR	8.83	NMR	NMR
25-Nov-24	0.00124	0.00142	< 0.00050	< 0.00020	< 0.0010	< 0.0044	< 0.005	< 1	< 0.005	9.04	NMR	NMR
December												
2-Dec-24	0.00111	0.00133	< 0.00050	< 0.00020	< 0.0010	< 0.0035	< 0.0050	< 1	< 0.0050	8.94	NMR	0
9-Dec-24	NMR	NMR	NMR	NMR	NMR	< 0.0080	NMR	2	NMR	9.33	NMR	NMR
16-Dec-24	NMR	NMR	NMR	NMR	NMR	< 0.0012	NMR	1	NMR	8.44	NMR	NMR
28-Dec-24	NMR	NMR	NMR	NMR	NMR	< 0.0017	NMR	2	NMR	8.63	NMR	NMR
30-Dec-24	NMR	NMR	NMR	NMR	NMR	< 0.0017	NMR	3	NMR	8.64	NMR	NMR

NDEP: No Deposit
NMR: No Measurement Required

Table 8-2 Meadowbank 2024 East Dike MDMER Volume

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
1	0	0	0	0	0	0	0	0	0	0	270	268	
2	0	0	0	0	0	0	0	0	0	0	272	268	
3	0	0	0	0	0	0	0	0	0	0	283	269	
4	0	0	0	0	0	0	0	0	0	0	270	267	
5	0	0	0	0	0	0	0	0	0	0	269	268	
6	0	0	0	0	0	0	0	0	0	0	268	268	
7	0	0	0	0	0	0	0	0	0	0	267	264	
8	0	0	0	0	0	0	0	0	0	0	268	269	
9	0	0	0	0	0	0	0	0	0	0	260	269	
10	0	0	0	0	0	0	0	0	0	0	267	265	
11	0	0	0	0	0	0	0	0	0	0	263	268	
12	0	0	0	0	0	0	0	0	0	0	266	266	
13	0	0	0	0	0	0	0	0	0	108	265	266	
14	0	0	0	0	0	0	0	0	0	396	269	266	
15	0	0	0	0	0	0	0	0	0	392	266	265	
16	0	0	0	0	0	0	0	0	0	391	266	265	
17	0	0	0	0	0	0	0	0	0	376	266	65	
18	0	0	0	0	0	0	0	0	0	404	265	0	
19	0	0	0	0	0	0	0	0	0	384	265	0	
20	0	0	0	0	0	0	0	0	0	325	265	51	
21	0	0	0	0	0	0	0	0	0	305	265	252	
22	0	0	0	0	0	0	0	0	0	299	265	265	
23	0	0	0	0	0	0	0	0	0	288	263	265	
24	0	0	0	0	0	0	0	0	0	278	265	265	
25	0	0	0	0	0	0	0	0	0	275	266	256	
26	0	0	0	0	0	0	0	0	0	281	267	262	
27	0	0	0	0	0	0	0	0	0	280	267	265	
28	0	0	0	0	0	0	0	0	0	281	268	264	
29	0	0	0	0	0	0	0	0	0	279	268	264	
30	0		0	0	0	0	0	0	0	263	269	264	
31	0		0		0		0	0		273		264	
Total (m³)	0	0	0	0	0	0	0	0	0	5,876	8,012	7,275	21,163

Table 8-3 Meadowbank 2024 East Dike EEM Monitoring (ST-MMER-3)

	Alkalinity	Aluminum	Cadmium	Chloride	Chromium	Cobalt	Hardness	Iron	Manganese	Mercury	Molybdenum	Nitrate	Phosphorus	Selenium	Sulphate	Thallium	Uranium	Conductivity	T°	Sub-Lethal Toxicity			
	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg N/L	mg P/L	mg/L	mg/L	mg/L	mg/L	µS/cm	°C	<i>Ceriodaphnia dubia</i>	<i>Fathead minnow</i>	<i>Lemna minor</i>	<i>Pseudokirchneriella subcapitata</i>
Effluent characterization (65°01'11.21"N 96°02'32.00" W) (ST-MMER-3-EEM)																							
14-Oct-24	36	0.0509	0.000033	< 1.0	< 0.0010	0.00227	88.5	0.057	0.0654	< 0.00001	0.0014	1.10	< 0.0010	0.00013	60.0	< 0.00001	0.00289	243.0	3.4	NMR	NMR	NMR	NMR
21-Oct-24	33	0.0291	< 0.000010	< 1.0	< 0.0010	< 0.00020	56.3	0.027	0.0073	< 0.00001	0.0013	0.63	0.0020	< 0.00010	35.0	< 0.00001	0.00203	162.4	3.6	without SE and without AL	without SE and without AL	without SE	without SE
25-Nov-24	28	0.0277	< 0.000010	1.2	< 0.0010	< 0.00020	31.9	0.016	< 0.0010	< 0.00001	< 0.0010	0.11	< 0.0010	< 0.00010	8.7	< 0.00001	0.00051	77.5	0.9	with SE and without AL	without SE and without	with SE	without SE
30-Dec-24	29	0.0508	< 0.000010	2.2	< 0.0010	< 0.00020	30.6	0.059	0.0015	< 0.00001	< 0.0010	< 0.10	0.0018	< 0.00010	8.9	< 0.00001	0.00035	85.2	0.0	NMR	NMR	NMR	NMR
*Annual Average										0.000005				0.000007									

*Annual average calculated using half the detection limit
SE: Sub-Lethal effects
AL: Acute Lethality
NMR: No measurement requirement

	Unionized Ammonia	Alkalinity	Aluminum	Cadmium	Chloride	Chromium	Cobalt	Hardness	Iron	Manganese	Mercury	Molybdenum	Nitrate	Phosphorus	Selenium	Sulphate	Thallium	Uranium
	mg N/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg N/L	mg P/L	mg/L	mg/L	mg/L	mg/L
Water Quality Monitoring Exposure Area (65°01' 10.81" N 96°02' 22.64"W) (ST-MMER-3-EEM-SPLE)																		
24-Nov-24	< 0.0004	11.0	0.01780	< 0.000005	1.1	< 0.0001	0.0000420	19.0	0.0202	0.00147	< 0.00001	0.000137	< 0.10	< 0.0010	< 0.000040	7.4	0.000002	0.0000820
29-Dec-24	< 0.0004	12.0	0.00686	< 0.000005	1.2	< 0.0001	0.0000229	19.7	0.0134	0.00084	< 0.00001	0.000141	< 0.10	< 0.0010	< 0.000040	6.5	< 0.000002	0.0000509
Water Quality Monitoring Reference Area (64°58 '10.90" N 96°09' 51.37" W) (ST-MMER-1-EEM-TPS)																		
24-Nov-24	< 0.0004	7.5	0.00902	< 0.000005	1.0	< 0.00010	0.0000410	12.0	0.0122	0.001200	< 0.00001	0.000105	< 0.10	< 0.0010	< 0.000040	4.3	< 0.000002	0.0000520
29-Dec-24	< 0.0004	9.0	0.00422	< 0.000005	1.0	< 0.00010	0.0000201	11.6	0.0058	0.000763	< 0.00001	0.000115	< 0.10	< 0.0010	< 0.000040	4.3	< 0.000002	0.0000443

	Conductivity	T°	pH	O ₂	O ₂	Arsenic	Copper	Cyanide	Lead	Nickel	Ra226	TSS	Zinc
	µS/cm	°C		%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Bq/L	mg/L	mg/L
Water Quality Monitoring Exposure Area (65°01' 10.81" N 96°02' 22.64"W) (ST-MMER-3-EEM-SPLE)													
24-Nov-24	42.8	0.27	6.79	115.3	15.67	0.000408	0.000793	< 0.0005	0.0000520	0.000729	< 0.0050	< 1	0.00034
29-Dec-24	40.5	0.28	6.39	112.9	15.85	0.000354	0.000675	< 0.0005	0.0000225	0.000711	< 0.0050	< 1	0.00024
Water Quality Monitoring Reference Area (64°58' 10.90" N 96°09' 51.37" W) (ST-MMER-1-EEM-TPS)													
24-Nov-24	86.8	0.27	7.32	113.5	15.38	0.000230	0.000489	< 0.0005	0.0000120	0.000644	< 0.0050	< 1	0.00022
29-Dec-24	28.2	0.18	6.35	120.5	16.91	0.000190	0.000424	< 0.0005	0.0000315	0.000599	< 0.0050	5	0.00026

8.3.2 Whale Tail Site

8.3.2.1 ST-MDMER-5

During the dewatering of the Whale Tail North Basin, a FDP was created in 2019 - ST-MDMER-5 WT North Basin Dewatering Phase 1. The dewatering of Whale Tail North was completed on May 20th, 2020; however, the FDP name continues to remain the same in MERS. This FDP was subject to the MDMER on March 5th, 2019. In 2024, no water was discharged from this FDP. This FDP is however still active in MERS.

8.3.2.2 ST-MDMER-8

ST-MDMER-8 FDP is the Attenuation Ponds discharged to Kangislulik Lake via the submerged diffuser to control erosion and disturbance to bottom sediments. The sampling point for this FDP is at the header after the Water Treatment Plant (WTP). Discharge from this FDP occurred from July 1st to 16th, August 4th to 31st, and September 1st to 30th. The results are presented in Table 8-4. No non-compliances were observed in 2024 for this FDP. The total volume of water discharge in 2024 was 1,185,833 m³. Table 8-5 presents the daily discharge volumes.

Sublethal toxicity samples are collected directly after the effluent characterization samples, from the same location (ST-MDMER-8-EEM, Kangislulik Lake Discharge). ST-MDMER-8 has been determined to be the mine's final discharge point that has potentially the most adverse environmental impact on the environment as per Schedule 5 Section 5. In 2024, three (3) sub-lethal toxicity samples were collected from the ST-MDMER-8-EEM in compliance with Schedule 5 Section 6. The sub-lethal toxicity samples were collected on July 8th, August 5th, and September 9th. The water quality samples were taken from the discharge location (ST-MDMER-8), the receiving environment exposure area (EEM-7-MAME-2) and reference area (TPS or ST-MMER-1-EEM-TPS). These sampling locations are highlighted on Figures 2 and 4. Results of the EEM water quality monitoring program is presented in Tables 8-6. This data was previously reported to Environment Canada via the MERS electronic database.

8.3.2.3 ST-MDMER-11

FDP is ST-MDMER-11 represents the discharge from the Attenuation Ponds to Whale Tail South via the permanent diffuser to control erosion and disturbance to bottom sediments. The sampling point for this FDP is at the header after the WTP. Discharge from this FDP occurred from April 14th to 30th May 1st to 31st, June 1st to 8th, June 10th to 29th, October 1st to 8th, October 21st to 31st, and November 1st to 16th. The results are presented in Table 8-7. The total volume of water discharge from the FDP in 2024 was 1,704,011 m³, the daily discharge volumes are presented in Table 8-8. No non-compliances were observed in 2024 for this FDP. The water quality samples were taken from the discharge location (ST-MDMER-11), the receiving environment exposure area (WTSE-1) and reference area (TPS or ST-MMER-1-EEM-TPS). These sampling locations are highlighted in Figures 2 and 4. Results of the EEM water quality monitoring program is presented in Tables 8-9. This data was previously reported to Environment Canada via the MERS electronic database.

Table 8-4 ST-MDMER-8 2024 MDMER Monitoring

Month	As	Cu	CN	Pb	Ni	NH ₃	Zn	TSS	Ra 226	pH	Results for Rainbow Trout Acute Lethality Tests (mean percentage mortality in 100% effluent test concentration)	Results for Daphnia magna Monitoring Tests (mean percentage mortality in 100% effluent test concentration)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
January												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
February												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
March												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
April												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
May												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
June												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
July												
1-Jul-24	0.0356	0.00095	0.00221	< 0.00020	0.0146	0.0022	0.0132	4	< 0.0050	7.55	NMR	NMR
8-Jul-24	0.0151	0.00071	0.00252	< 0.00020	0.0124	0.0017	0.0059	1	< 0.0050	7.31	0	0
15-Jul-24	0.0168	0.00065	0.00473	< 0.00020	0.0097	0.0018	0.0060	2	0.0060	7.60	NMR	NMR
August												
5-Aug-24	0.00681	0.00170	0.00668	< 0.00020	0.0108	0.0081	0.0117	1	< 0.0050	7.94	0	0
12-Aug-24	0.00962	0.00082	0.00261	< 0.00020	0.0078	0.0019	0.0050	1	< 0.0050	7.41	NMR	NMR
19-Aug-24	0.01390	0.00087	0.00094	< 0.00020	0.0090	0.0005	0.0095	2	< 0.0050	7.24	NMR	NMR
26-Aug-24	0.02670	0.00097	0.00065	< 0.00020	0.0106	0.0007	0.0075	1	0.0060	7.49	NMR	NMR
September												
2-Sep-24	0.0123	0.00129	< 0.00050	0.00032	0.0090	0.0004	0.0060	1	0.0080	7.46	0	0
9-Sep-24	0.0152	0.00064	0.00090	< 0.00020	0.0110	< 0.0004	< 0.0050	2	0.0070	7.23	NMR	NMR
16-Sep-24	0.1710	0.00094	0.00122	< 0.00020	0.0146	0.0005	0.0077	7	0.0110	7.52	NMR	NMR
23-Sep-24	0.1680	0.00140	0.00822	0.00025	0.0264	0.0028	0.0069	10	0.0120	7.53	NMR	NMR
24-Sep-24	0.1530	0.00137	0.00594	0.00022	0.0210	0.0021	0.0070	9	0.0070	7.49	NMR	NMR
25-Sep-24	0.0230	0.00103	0.00540	< 0.00020	0.0204	0.0010	0.0135	2	0.0070	7.20	NMR	NMR
29-Sep-24	0.0278	0.00102	0.00975	< 0.00020	0.0219	0.0022	0.0064	2	< 0.0050	7.38	NMR	NMR
October												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
November												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
December												
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP

NDEP: No Deposit
NMR: No Measurement Required

Table 8-5 ST-MDMER-8 2024 Volume

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
1	0	0	0	0	0	0	16,343	0	9,522	0	0	0	
2	0	0	0	0	0	0	27,068	0	9,611	0	0	0	
3	0	0	0	0	0	0	27,972	0	9,815	0	0	0	
4	0	0	0	0	0	0	26,613	14,112	9,811	0	0	0	
5	0	0	0	0	0	0	20,385	16,331	9,809	0	0	0	
6	0	0	0	0	0	0	14,370	16,291	3,862	0	0	0	
7	0	0	0	0	0	0	14,380	16,309	9,012	0	0	0	
8	0	0	0	0	0	0	14,350	14,291	9,500	0	0	0	
9	0	0	0	0	0	0	14,373	13,466	8,396	0	0	0	
10	0	0	0	0	0	0	14,378	12,041	7,881	0	0	0	
11	0	0	0	0	0	0	14,369	12,340	11,502	0	0	0	
12	0	0	0	0	0	0	14,365	11,114	11,536	0	0	0	
13	0	0	0	0	0	0	14,348	12,042	12,831	0	0	0	
14	0	0	0	0	0	0	14,505	10,565	19,655	0	0	0	
15	0	0	0	0	0	0	14,488	9,476	28,648	0	0	0	
16	0	0	0	0	0	0	4,900	4,830	27,892	0	0	0	
17	0	0	0	0	0	0	0	9,235	30,882	0	0	0	
18	0	0	0	0	0	0	0	10,350	26,801	0	0	0	
19	0	0	0	0	0	0	0	10,307	30,279	0	0	0	
20	0	0	0	0	0	0	0	10,341	27,798	0	0	0	
21	0	0	0	0	0	0	0	10,036	36,209	0	0	0	
22	0	0	0	0	0	0	0	10,234	37,207	0	0	0	
23	0	0	0	0	0	0	0	10,354	37,191	0	0	0	
24	0	0	0	0	0	0	0	10,294	29,767	0	0	0	
25	0	0	0	0	0	0	0	10,282	28,709	0	0	0	
26	0	0	0	0	0	0	0	10,289	28,194	0	0	0	
27	0	0	0	0	0	0	0	10,256	28,757	0	0	0	
28	0	0	0	0	0	0	0	10,338	28,712	0	0	0	
29	0	0	0	0	0	0	0	10,104	21,481	0	0	0	
30	0		0	0	0	0	0	9,585	12,681	0	0	0	
31	0		0		0		0	9,462		0		0	
Total (m³)	0	0	0	0	0	0	267,208	314,675	603,950	0	0	0	1,185,833

Table 8-6 ST-MDMER-8 2024 EEM Monitoring

	Alkalinity	Aluminum	Cadmium	Chloride	Chromium	Cobalt	Hardness	Iron	Manganese	Mercury	Molybdenum	Nitrate	Phosphorus	Selenium	Sulphate	Thallium	Uranium	Conductivity	T°	Sub-Lethal Toxicity			
	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg N/L	mg P/L	mg/L	mg/L	mg/L	mg/L	µS/cm	°C	<i>Ceriodaphnia dubia</i>	<i>Fathead minnow</i>	<i>Lemna minor</i>	<i>Pseudokirchneriella subcapitata</i>
Effluent characterization (65°24'9.84" N 96°41' 05.32" W) (ST-MDMER-8-EEM)																							
08-Jul-24	43.0	0.0050	< 0.000010	40	< 0.0010	0.00093	99.2	0.266	0.1030	< 0.00001	0.0059	2.74	< 0.0010	0.00018	51	0.000018	0.00067	372	10.4	Without SE and Without AL	Test not valid	Without SE	Test not valid
05-Aug-24	49.0	0.0036	< 0.000010	53	< 0.0010	0.00087	124.0	0.151	0.0526	< 0.00001	0.0079	3.13	0.0011	0.00017	57	0.000020	0.00126	401	11.7	Without SE and Indeterminate AL	Without SE and Without AL	Without SE	Test not valid
09-Sep-24	47.0	0.0042	< 0.000010	62	< 0.0010	0.00080	157.0	0.232	0.0639	< 0.00001	0.0075	3.04	0.0040	0.00021	64	0.000017	0.00142	479	9.0	Without SE and Without AL	Without SE and Indeterminate AL	Without SE	Without SE
*Annual Average										0.000005				0.00019									

*Annual average calculated using half the detection limit
SE: Sub-Lethal effects
AL: Acute Lethality

	Unionized Ammonia	Alkalinity	Aluminum	Cadmium	Chloride	Chromium	Cobalt	Hardness	Iron	Manganese	Mercury	Molybdenum	Nitrate	Phosphorus	Selenium	Sulphate	Thallium	Uranium
	mg N/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg N/L	mg P/L	mg/L	mg/L	mg/L	mg/L
Water Quality Monitoring Exposure Area (65°23' 54.4" N 96°44' 21.6" W) (EEM-7-MAME-2)																		
14-Jul-24	< 0.00065	24.0	0.01280	< 0.0000050	19	0.00020	0.0000978	57.7	0.0404	0.01030	< 0.00001	0.00113	0.54	< 0.0010	0.000044	22	0.0000048	0.000188
13-Aug-24	< 0.00040	23.0	0.18100	0.0000113	19	0.00056	0.0001260	63.8	0.0490	0.00973	< 0.00001	0.00156	0.45	< 0.0010	0.000065	19	0.0000054	0.000225
17-Sep-24	< 0.00040	43.0	0.00403	< 0.0000050	24	0.00013	0.0000750	79.5	0.0511	0.00566	< 0.00001	0.00196	0.89	0.0022	0.000077	31	0.0000040	0.000469
Water Quality Monitoring Reference Area (64°58'10.90" N 96°09' 51.37" W) (ST-MMER-1-EEM-TPS)																		
14-Jul-24	< 0.00040	7.4	0.00568	< 0.0000050	< 1.0	< 0.00010	0.0000118	9.19	0.0102	0.00155	< 0.00001	0.000105	< 0.10	< 0.0010	< 0.000040	4.3	< 0.0000020	0.0000349
13-Aug-24	< 0.00040	6.6	0.04140	0.0000135	< 1.0	0.00014	0.0000369	12.80	0.0197	0.00263	< 0.00001	0.000473	< 0.10	< 0.0010	< 0.000040	3.7	< 0.0000020	0.0000415
17-Sep-24	< 0.00040	6.7	0.00641	< 0.0000050	< 1.0	< 0.00010	0.0000110	9.60	0.0105	0.00136	< 0.00001	0.000085	< 0.10	< 0.0010	< 0.000040	4.2	< 0.0000020	0.0000410

	Conductivity	T°	pH	O ₂	O ₂	Arsenic	Copper	Cyanide	Lead	Nickel	Ra226	TSS	Zinc
	µS/cm	°C		%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Bq/L	mg/L	mg/L
Water Quality Monitoring Exposure Area (65°23'54.4" N 96°44' 21.6" W) (EEM-7-MAME-2)													
14-Jul-24	181.4	11.6	7.80	102.6	10.02	0.00192	0.000447	0.00242	0.0000533	0.00187	< 0.0050	2	0.00095
13-Aug-24	103.5	15.6	7.42	97.3	9.36	0.00191	0.001480	0.00062	0.0008280	0.00209	< 0.0050	< 1	0.02100
17-Sep-24	213.7	7.8	7.53	94.2	10.36	0.01250	0.000491	0.00052	0.0000170	0.00281	< 0.0050	< 1	0.00039
Water Quality Monitoring Reference Area (64°58'10.90" N 96°09 '51.37" W) (ST-MMER-1-EEM-TPS)													
14-Jul-24	31.20	6.57	7.40	114.0	11.68	0.000202	0.000387	0.00252	0.0000083	0.000491	< 0.0050	< 1	0.00028
13-Aug-24	28.10	12.65	7.53	101.4	10.09	0.000225	0.001170	< 0.00050	0.0001280	0.000916	< 0.0050	< 1	0.01080
17-Sep-24	26.30	9.38	6.40	100.9	11.16	0.000170	0.000380	< 0.00050	0.0000100	0.000407	< 0.0050	< 1	0.00030

Table 8-7 ST-MDMER-11 2024 MDMER Monitoring

Month	As	Cu	CN	Pb	Ni	NH ₃	Zn	TSS	Ra 226	pH	Results for Rainbow Trout Acute Lethality Tests (mean percentage mortality in 100% effluent test concentration)	Results for Daphnia magna Monitoring Tests (mean percentage mortality in 100% effluent test concentration)				
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L							
January																
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP				
February																
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP				
March																
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP				
April																
15-Apr-24	0.00386	0.00148	0.0125	<	0.00020	0.0044	0.003	0.0089	1	<	0.0050	7.52	0	0		
22-Apr-24	0.00153	0.00105	0.0102		0.00023	0.0063	0.0014	<	0.0050	<	1	0.0070	7.24	NMR	NMR	
29-Apr-24	0.00197	0.00094	0.0110	<	0.00020	0.0070	0.0009	<	0.0050		2	0.0150	7.02	NMR	NMR	
May																
6-May-24	0.00230	0.00115	0.01020	<	0.00020	0.0079	0.0034	0.0094	<	1	0.0140	7.69	0	0		
13-May-24	0.00440	0.00081	0.00858	<	0.00020	0.0104	0.0009	0.0078		2	0.0080	6.92	NMR	NMR		
20-May-24	0.00490	0.00108	0.00739	<	0.00020	0.0098	0.0010	0.0082		1	<	0.0050	7.15	NMR	NMR	
27-May-24	0.00148	0.00063	<	0.00050	<	0.00020	0.0060	<	0.0004	0.0114	3	<	0.0050	7.2	NMR	NMR
June																
3-Jun-24	0.00176	0.00064	0.00059	<	0.00020	0.0053	0.0006	0.0091	3	<	0.0050	7.21	0	0		
10-Jun-24	0.00171	<	0.00050		0.00020	0.0064	0.0012	0.0084		2	<	0.0050	7.41	NMR	NMR	
17-Jun-24	0.00296	0.00093	0.00128	<	0.00020	0.0068	0.0019	0.0071		1	0.0060	7.75	NMR	NMR		
24-Jun-24	0.01080	0.00086	0.00443	<	0.00020	0.0125	0.0028	0.0076		2	0.010	7.50	NMR	NMR		
July																
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		
August																
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		
September																
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		
October																
1-Oct-24	0.0297	0.00144	0.01280		0.00045	0.0260	0.0051	<	0.0050		4	0.0120	7.65	NMR	NMR	
7-Oct-24	0.0279	0.00208	0.00435	<	0.00020	0.0234	0.0004	0.0086		1	0.0090	6.82	0	0		
22-Oct-24	0.0310	0.00088	0.00269	<	0.00020	0.0196	<	0.0004	0.0061		2	<	0.0050	7.18	NMR	NMR
28-Oct-24	0.0229	0.00108	0.01560	<	0.00020	0.0346	0.0021	0.0055		1	0.0130	7.33	NMR	NMR		
November																
1-Nov-24	0.0411	0.00134	0.01020	<	0.00020	0.0353	0.0009	0.0105	3	0.0080	7.19	NMR	NMR			
4-Nov-24	0.0490	0.00106	0.01090	<	0.00020	0.0425	0.0010	0.0069	2	0.0090	7.16	0	0			
11-Nov-24	0.0924	0.00101	0.00803	<	0.00020	0.0512	0.0008	0.0086	3	0.0110	7.06	NMR	NMR			
December																
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		

NDEP: No Deposit
NMR: No Measurement Required

Table 8-8 ST-MDMER-11 2024 Volume

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
1	0	0	0	0	9,069	11,958	0	0	0	14,175	24,161	0	
2	0	0	0	0	9,033	11,938	0	0	0	26,206	24,083	0	
3	0	0	0	0	9,185	11,440	0	0	0	28,635	24,983	0	
4	0	0	0	0	9,073	11,664	0	0	0	29,592	24,612	0	
5	0	0	0	0	6,244	11,637	0	0	0	33,904	24,497	0	
6	0	0	0	0	8,152	11,560	0	0	0	33,867	19,934	0	
7	0	0	0	0	8,255	11,542	0	0	0	33,874	9,480	0	
8	0	0	0	0	9,503	9,123	0	0	0	15,192	9,507	0	
9	0	0	0	0	11,692	0	0	0	0	0	9,485	0	
10	0	0	0	0	13,537	8,636	0	0	0	0	9,474	0	
11	0	0	0	0	13,398	11,698	0	0	0	0	9,452	0	
12	0	0	0	0	13,566	11,113	0	0	0	0	9,389	0	
13	0	0	0	0	9,845	15,494	0	0	0	0	11,249	0	
14	0	0	0	5,204	19,397	15,487	0	0	0	0	15,400	0	
15	0	0	0	9,483	19,416	15,505	0	0	0	0	16,341	0	
16	0	0	0	9,273	19,430	14,251	0	0	0	0	13,032	0	
17	0	0	0	9,382	19,425	13,590	0	0	0	0	0	0	
18	0	0	0	9,252	19,406	13,535	0	0	0	0	0	0	
19	0	0	0	9,201	19,355	13,536	0	0	0	0	0	0	
20	0	0	0	8,940	17,381	13,527	0	0	0	0	0	0	
21	0	0	0	8,989	18,966	14,420	0	0	0	6,006	0	0	
22	0	0	0	9,129	18,683	16,975	0	0	0	18,480	0	0	
23	0	0	0	8,963	18,891	16,985	0	0	0	17,611	0	0	
24	0	0	0	9,206	18,908	16,528	0	0	0	24,287	0	0	
25	0	0	0	9,501	18,924	16,978	0	0	0	24,270	0	0	
26	0	0	0	9,432	18,957	16,965	0	0	0	24,249	0	0	
27	0	0	0	9,401	18,858	16,204	0	0	0	23,903	0	0	
28	0	0	0	9,426	16,614	12,824	0	0	0	24,185	0	0	
29	0	0	0	9,412	17,862	15,934	0	0	0	24,208	0	0	
30	0		0	9,216	16,194	0	0	0	0	24,239	0	0	
31	0		0		16,201		0	0		24,176		0	
Total (m³)	0	0	0	153,410	463,421	381,044	0	0	0	451,056	255,079	0	1,704,011

Table 8-9 ST-MDMER-11 2024 EEM Monitoring

	Alkalinity	Aluminum	Cadmium	Chloride	Chromium	Cobalt	Hardness	Iron	Manganese	Mercury	Molybdenum	Nitrate	Phosphorus	Selenium	Sulphate	Thallium	Uranium	Conductivity	T°
	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg N/L	mg P/L	mg/L	mg/L	mg/L	mg/L	µS/cm	°C
Effluent characterization (65°24' 9.84" N 96°41' 05.32" W) (ST-MDMER-11-EEM)																			
15-Apr-24	57.0	0.0066	< 0.000010	33	< 0.0010	0.00084	104.0	0.261	0.255	< 0.00001	0.0075	1.45	< 0.0010	< 0.00010	47.0	0.000012	0.00069	297.0	0.5
10-Jun-24	30.0	0.0088	< 0.000010	32	< 0.0010	0.00103	69.0	0.163	0.210	< 0.00001	0.0010	0.97	< 0.0010	< 0.00010	29.0	0.000011	0.00013	220.0	3.1
7-Oct-24	44.0	0.0120	< 0.000010	73	< 0.0010	0.00142	196.0	0.392	0.107	< 0.00001	0.0066	6.16	0.0027	0.00033	120.0	0.000017	0.00243	620.0	2.3
4-Nov-24	57.0	0.0079	0.000014	67	< 0.0010	0.00244	200.0	0.398	0.186	< 0.00001	0.0094	5.52	< 0.0010	0.00040	110.0	0.000024	0.00277	566.0	0.7
*Annual Average										0.000005				0.00021					

*Annual average calculated using half the detection limit

	Unionized Ammonia	Alkalinity	Aluminum	Cadmium	Chloride	Chromium	Cobalt	Hardness	Iron	Manganese	Mercury	Molybdenum	Nitrate	Phosphorus	Selenium	Sulphate	Thallium	Uranium
	mg N/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg N/L	mg P/L	mg/L	mg/L	mg/L	mg/L
Water Quality Monitoring Exposure Area (65°23'45.88" N 96°41' 16.21" W) (WTSE-1)																		
15-Apr-24	< 0.00040	29.0	0.00333	< 0.0000050	17.0	0.00010	0.0000353	51.0	0.0094	0.000951	< 0.00001	0.000670	0.42	0.0013	< 0.000040	18.0	< 0.0000020	0.0000636
20-May-24	< 0.00040	27.0	0.00610	< 0.0000050	19.0	0.00021	0.0001690	64.0	0.0404	0.03120	< 0.00001	0.001610	0.56	0.0011	0.000042	21.0	< 0.0000020	0.0001530
6-Oct-24	< 0.00040	21.0	0.11100	< 0.0000050	14.0	0.00049	0.0002070	49.5	0.2470	0.01520	< 0.00001	0.000932	0.48	0.0022	0.000040	18.0	0.0000049	0.0002220
15-Nov-24	< 0.00040	24.0	0.06590	< 0.0000050	18.0	0.00031	0.0001990	55.8	0.1460	0.01530	< 0.00001	0.001200	0.71	0.0030	0.000062	25.0	0.0000047	0.0003020
Water Quality Monitoring Reference Area (64°58'10.90" N 96°09' 51.37" W) (ST-MMER-1-EEM-TPS)																		
15-Apr-24	< 0.00040	11.0	0.00202	< 0.0000050	< 1.0	< 0.00010	< 0.0000050	11.2	0.0013	0.000253	< 0.00001	0.000114	< 0.10	< 0.0010	< 0.000040	5.6	< 0.0000020	0.0000421
20-May-24	< 0.00040	7.2	0.00377	< 0.0000050	< 1.0	< 0.00010	0.0000065	11.1	0.0020	0.000322	< 0.00001	0.000110	< 0.10	< 0.0010	< 0.000040	5.1	< 0.0000020	0.0000412
6-Oct-24	< 0.00040	7.7	0.03440	< 0.0000050	< 1.0	0.00013	0.0000435	11.2	0.0462	0.002250	< 0.00001	0.000105	< 0.10	< 0.0010	< 0.000040	4.4	< 0.0000020	0.0000602
24-Nov-24	< 0.00040	7.5	0.00902	< 0.0000050	1.0	< 0.00010	0.0000410	12.0	0.0122	0.001200	< 0.00001	0.000105	< 0.10	< 0.0010	< 0.000040	4.3	< 0.0000020	0.0000520

	Conductivity	T°	pH	O ₂	O ₂	Arsenic	Copper	Cyanide	Lead	Nickel	Ra226	TSS	Zinc
	µS/cm	°C		%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Bq/L	mg/L	mg/L
Water Quality Monitoring Exposure Area (65°23'45.88" N 96°41' 16.21" W) (WTSE-1)													
15-Apr-24	132.3	0.1	7.67	93.2	12.04	0.000534	0.000537	< 0.00050	0.0000524	0.00159	< 0.0050	< 1	0.00076
20-May-24	173.4	2.0	7.15	92.1	10.95	0.000830	0.000638	0.00185	0.0001310	0.00255	< 0.0050	< 1	0.00293
6-Oct-24	128.4	1.1	6.76	105.0	11.77	0.001620	0.000572	0.00090	0.0001400	0.00250	< 0.0050	6	0.00077
15-Nov-24	160.2	0.1	7.41	102.6	12.08	0.001340	0.000586	0.00087	0.0000877	0.00395	< 0.0050	3	0.00099
Water Quality Monitoring Reference Area (64°58'10.90" N 96°09' 51.37" W) (ST-MMER-1-EEM-TPS)													
15-Apr-24	59.6	-0.10	6.49	115.6	15.15	0.000178	0.000390	< 0.00050	0.0000188	0.000466	< 0.0050	< 1	0.00020
20-May-24	34.8	0.56	7.85	120.7	12.87	0.000201	0.000441	< 0.00050	0.0002210	0.000482	< 0.0050	< 1	0.00064
6-Oct-24	19.7	6.33	6.77	99.5	11.86	0.000209	0.000432	< 0.00050	0.0000484	0.000551	< 0.0050	1	0.00049
24-Nov-24	86.8	0.27	7.32	113.5	15.38	0.000230	0.000489	< 0.00050	0.0000120	0.000644	< 0.0050	< 1	0.00022

8.4 ENVIRONMENTAL BIOLOGICAL STUDY

8.4.1 Meadowbank Site - EEM Study Design Cycle 5

Seepage water is collected along the East Dike and discharged to Second Portage Lake via outfall MMER-3, but during Cycles 1, 2 and 3, this Final Discharge Point (FDP) has been determined as not being the effluent with the greatest potential to have an adverse effect on the receiving environment than discharges to Third Portage or Wally Lakes, and so EEMs focused on those other discharges. Since the effluent discharge to Wally Lake and Third Portage Lake ceased, the seepage water discharged to Second Portage Lake is the only final discharge point and, therefore, the Cycle 4 was conducted in 2020 at this FDP.

As required under the Metal and Diamond Mining Effluent Regulations, Agnico Eagle was required to conduct in 2023 the Cycle 5 study on East Dike Discharge. The Cycle 5 study design was submitted to ECCC on February 24th, 2023. Comments on the study design were received on April 13th, 2023 and Agnico Eagle's response was submitted on May 18th. ECCC's approval for this EEM Cycle 5 study design, consisting of an Investigation of cause, was received on June 14th, 2023. The Cycle 5 Interpretative Report was submitted to ECCC on June 28th, 2024. At the time of writing this report, no comments from ECCC were received. Documents submitted to ECCC can be provided upon request.

8.4.2 Whale Tail Site - EEM Study Design Cycle 2

During the Whale Tail dike construction, water was pumped from the area enclosed by sediment curtains to create an inflow and thus minimize dispersal of water from within the enclosed area, with increased suspended sediment concentrations, into the rest of Whale Tail Lake. That pumping began on July 27th, 2018, at which time Whale Tail Mine was deemed by Environment and Climate Change Canada to be subject to the Metal and Diamond Mining Effluent Regulations (MDMER) under the *Fisheries Act*. The MDMER requires that the first study design for biological studies be submitted to the Minister of the Environment not later than 12 months after the day on which a mine becomes subject to Section 7 of the MDMER. Final Discharge Point discharge to Kangislulik Lake has been determined as being the effluent with the greatest potential to have an adverse effect on the receiving environment per regulation. The Cycle 1 was conducted in 2020.

As required under the Metal and Diamond Mining Effluent Regulations, Agnico Eagle was required to conduct, in 2023, the Cycle 2 study on discharge to Kangislulik Lake. The Cycle 2 study design was submitted to ECCC on February 24th, 2023. Comments on the study design were received on April 27th, 2023 and Agnico Eagle's response was submitted on May 18th, 2023. ECCC's approval for this EEM Cycle 2 Study Design was received on June 5th, 2023 and field work started in August 2023. The Cycle 2 Interpretative Report was submitted to ECCC on July 26th, 2024. At the time of writing this report, no comments from ECCC were received. Documents submitted to ECCC can be provided upon request.

8.5 MINE SITE WATER QUALITY AND FLOW MONITORING^s

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 15: *The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.*

And

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 18: *The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.*

And

As required by DFO Authorizations NU-03-0191.3 Condition 3.1 (Second and Third Portage Lakes), NU-03-0191.4 (Vault Lake) Condition 3.1; NU-03-0190 Condition 5 (AWPAR), NU-14-1046 (Phaser Lake) Condition 3; *Submit written report summarizing monitoring results and photographic record of works and undertakings.*

This section includes the aquatic monitoring requirements as detailed under the Meadowbank Water Quality and Flow Monitoring Plan and the Whale Tail Water Quality and Flow Monitoring Plan. Summaries of associated aquatic monitoring reports are presented in the following section of this report and supporting documents are located in the listed appendices. Figures 1, 2, 3, 4 and 6 illustrate the location of sampling stations at the Meadowbank and Whale Tail mine sites, EEM receiving environment monitoring program, Vault Site, and Baker Lake marshalling facilities respectively. Certificates of Analysis will be made available on request for Meadowbank and Whale Tail. All tables from this section include historical data since 2020, if available.

8.5.1 Construction Activities^s

8.5.1.1 Meadowbank Site^s

As required by DFO Authorization NU-03-0191.3 Condition 3.1: *The Proponent shall undertake monitoring and report to DFO annually, by March 31st, whether works, undertakings, activities or operations for the mitigation of potential impacts to fish and fish habitat were conducted according to the conditions of this Authorization.*

And

As required by DFO Authorization NU-03-0191.4 Condition 3.1: *The Proponent shall undertake monitoring and report to DFO annually, by December 31st, whether works, undertakings, activities or operations for the mitigation of potential impacts to fish and fish habitat were conducted according to the conditions of this Authorization.*

And

As required by DFO Authorization NU-14-1046 Condition 3.1: *The Proponent shall monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization and report to DFO, by March 31 annually and indicate whether the measures and standards to avoid and mitigate serious harm to fish were conducted according to the conditions of this authorization.*

In 2024, there were no occurrences where runoff water from any work, undertaking, activity, or operation would flow directly or indirectly into a water body at the Meadowbank mine site. No mitigation action was necessary.

8.5.1.2 Whale Tail Site^s

As required by DFO Authorization 16-HCAA-00370 Condition 3.1: *The Proponent shall monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization, and provide a stand-alone report to DFO, by March 31, annually and indicate whether the measures and standards to avoid and mitigate serious harm to fish were conducted according to the conditions of this authorization.*

And

As required by DFO Authorization 20-HCAA-00275 Condition 3.1: *The Proponent shall monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization, and provide a stand-alone report to DFO, by March 31, annually and indicate whether the measures and standards to avoid and mitigate serious harm to fish were conducted according to the conditions of this authorization.*

And

As required by DFO Authorization 16-HCAA-00370 Condition 3.1.1: *The report in addition to the above shall summarize the monitoring results related to fish and fish habitat contained in the documents listed in section 2.3. The report shall include a description of the implementation as well as an evaluation of the effectiveness of those monitoring programs in validating the changes to fish and fish habitat predicted in the Proponent's Environmental Impact Statement.*

And

As required by DFO Authorization 20-HCAA-00275 Condition 3.1.1: *Demonstration of effective implementation and functioning: Providing dated photographs and inspection reports to demonstrate effective implementation and functioning of mitigation measures and standards described above to limit the impacts to fish and fish habitat to what is covered by this authorization.*

And

As required by DFO Authorization 20-HCAA-00275 Condition 3.1.2: *Contingency measures: Providing details of any contingency measures that were followed, to prevent impacts greater than those covered by this authorization in the event that mitigation measures did not function as described.*

And

As required by DFO Authorization 16-HCAA-00370 Condition 3.1.2: *Each year, following the submission of the annual monitoring report to DFO, the Proponent shall arrange to meet with DFO and interested parties (e.g. Kivalliq Inuit Association) to review the results of the previous year's monitoring programs. The results of the meetings and any mutually agreed upon modifications aimed at improving the effectiveness of the monitoring programs shall be incorporated into the upcoming year of the monitoring programs. The Proponent shall update the monitoring programs/plans to reflect the changes, and the programs/plans shall be approved in writing by DFO prior to implementation.*

And

As required by DFO Authorization 20-HCAA-00275 Condition 3.2.1: *Each year, following the submission of the annual monitoring report to DFO, the Proponent shall arrange to meet with DFO and interested parties (e.g. Kivalliq Inuit Association) to review the results of the previous year's monitoring programs. The results of the meetings and any mutually agreed upon modifications aimed at improving the effectiveness of the monitoring programs shall be incorporated into the upcoming year of the monitoring programs. The Proponent shall update the monitoring programs/plans to reflect the changes, and the programs/plans shall be approved in writing by DFO prior to implementation.*

And

As required by DFO Authorization 16-HCAA-00370 Condition 3.1.3: *The annual monitoring report shall provide dated photographs with GPS coordinates and description of locations and inspection reports to demonstrate effective implementation and functioning of mitigation measures and standards described above to limit the serious harm to fish to what is covered by this authorization.*

And

As required by DFO Authorization 16-HCAA-00370 Condition 3.1.4: *The annual monitoring report shall also provided details of any contingency measures that were followed to prevent impacts greater than those covered by this authorization in the event that mitigation measures did not function as described.*

By March 31st, 2025, Agnico Eagle will provide to DFO the 2024 Report on the Implementation of Measures to Avoid and Mitigate Serious Harm to Fish to address the above Conditions of the Whale Tail Fisheries Act Authorization 16-HCAA-00370 and 20-HCAA-00275. The complete report is also provided as Appendix 31.

This report was developed in fulfillment of Condition 3 of these FAAs, which relates to the monitoring and reporting of measures and standards to avoid and mitigate serious harm to fish. In fulfillment of Condition 3.1, the report summarizes the implementation of the specified measures and standards to avoid and mitigate serious harm to fish. Photos and/or figures of the mitigation measures are included, as applicable (according to Condition 3.1.3 of 16-HCAA-00370 and Condition 3.1.1 of 20-HCAA-00275), along with a commentary on effectiveness based on relevant monitoring results, and any required contingency measures in the event that the mitigation did not function successfully (according to Condition 3.1.4/3.1.2).

As required by FAA 16-HCAA-00370 Condition 3.1.1, an evaluation of the effectiveness of the FAA-listed monitoring programs (and other relevant monitoring programs) in validating changes to fish and fish habitat predicted in the Project FEIS is provided in Section 12.5.1.3 below as a component of the Post-Environmental Assessment Monitoring Program.

In summary, all measures and standards to avoid and mitigate serious harm to fish identified in Condition 2 of FAA 16-HCAA-00370 and 20-HCAA-00275 were implemented as required in 2024 for Whale Tail Mine infrastructure and activities. The need for contingency mitigation and remedial actions was identified in relation to observed deposition of gravel/road material at bridge crossings along the WTHR (and AWAR), where gravel entrained by passing vehicles has fallen through the bridge deck. Agnico Eagle has advised DFO of plans to implement corrective measures. In addition, contingency mitigation was required to be implemented in response to one blast monitoring exceedance. Otherwise, the FAA-listed and FEIS-planned mitigation measures and standards were considered effective in limiting impacts of construction activities to fish and fish habitat to those authorized.

In fulfillment of 16-HCAA-00370 Condition 3.1.2 and 20-HCAA-00275 Condition 3.2.1, Agnico Eagle organized a conference call with DFO on December 13th, 2024, to review the results of the previous year's program (2023 Report on the Implementation of Measures to Avoid and Mitigate Serious Harm – Whale Tail Mine). KivlA was invited but was unable to assist. Meeting presentation was circulated, and no comments were received.

8.5.2 Mine Site Water Collection System^s

8.5.2.1 Meadowbank Site^s

A water collection system comprised of the Stormwater Management Pond, attenuation ponds, tailings storage facilities, diversion ditches and sumps has been developed to control surface and groundwater at the Meadowbank Mine. The following section reviews the water quality monitoring conducted around the mine site. Specific details regarding water transfers can be found in the 2024 Water Management Plan Version 14 (Appendix 13).

8.5.2.1.1 Stormwater Management Pond^s

The Stormwater Management Pond collects runoff water as well as the Sewage Treatment Plan treated effluent. A total of 410,717 m³ of water was transferred from the Stormwater Management Pond to the Portage Pit in May, June, July, August, and September. No water was released into the environment.

8.5.2.1.2 East and West Diversion Ditches (ST-5 / ST-6)^s

The East and West Diversion ditches were constructed in 2012 around the North Cell TSF and the Portage WRSF. The diversion ditches are designed to redirect the freshwater from the northern area watershed away from the tailings pond and WRSF and direct it to Second (via NP-2 South) and Third Portage Lakes. Water from the East diversion ditch (sampling station ST-5) and the West diversion ditch (sampling station ST-6) were sampled monthly during open water as per the requirements in the NWB Water License. Results are presented in Table 8-10 and Table 8-11 respectively; the sampling location is illustrated on Figure 1.

In 2024, Portage Area East (ST-5) diversion ditch water quality results did not exceed the maximum allowable grab sample concentration (30 mg/L) and the maximum monthly average concentration (15 mg/L), permitted by the Water License, Part F, Item 7.

In 2024, during the month of September, Portage Area West (ST-6) diversion ditch water quality results exceeded both the maximum allowable grab sample concentration (30 mg/L) and the maximum monthly average concentration (15 mg/L), permitted by the Water License, Part F, Item 7. The average monthly TSS concentration was 27.25 mg/L.

On September 20th, during a regular freshet inspection of the West Diversion Ditch, a turbid plume of water was observed at the exit of the diversion ditch where it connects to shore of Third Portage Lake at the registered sampling point ST-6. The plume extended ~2 m into the lake and ~20m along the immediate shoreline area, with no observable impact further into the lake. A spill report #2024-365 was submitted on September 21st.

Upon observation of the runoff into the lake, the environmental personnel deployed additional woodchip-log in areas of concern and turbid inflows from the land to control the transportation of sediments. A maritime curtain was installed along the shore of the lake to contain the plume and minimize further

transportation of sediments. Over the next week, inspections and monitoring of the area was performed by environmental staff. During the monitoring, the TSS control measures were monitored, repaired and added, as needed. Samples of the water quality (total suspended solids) of the lake outside of the barrier were collected to ensure it was functioning as intended. Acute Lethality samples were also collected, and results show no toxicity.

The identified cause for the turbid runoff is the heavy rains received from September 20th to September 27th where above average volumes of water reported through the diversion ditch without sufficient control measures in place. The volume of water flows over the land and from the road which transported sediments into the ditch and towards the lake.

Table 8-10 Meadowbank 2024 Non-Contact Water East Diversion Ditch Water Quality Monitoring (ST-5)[§]

ST-5 Parameter	Max Grab	Monthly Mean	Unit	Annual Average					5/27/2024	6/2/2024	7/1/2024	8/11/2024	9/15/2024	9/21/2024	9/22/2024	9/23/2024
				2020	2021	2022	2023	2024								
Field Measured																
Temperature			°C	12.0	5.5	7.6	8.2	6.3	3.2	4.0	13.3	16.4	4.6	5.0	5.6	7.3
pH			pH units	7.67	7.87	7.93	7.67	7.65	7.17	7.31	7.63	7.78	7.74	7.77	7.63	7.71
Conductivity			uS/cm	193.1	120.9	134.0	151.7	202.5	45.7	63.5	174.3	203.3	232.0	396.0	85.1	218.1
Turbidity			NTU	5.36	2.94	5.78	3.72	8.05	14.20	6.35	1.65	2.69	1.74	15.80	7.25	6.12
Conventional Parameters																
TSS	30	15	mg/L	6	2	4	1	4	8	3	2	2	2	7	5	4
Major Ions																
Cyanide			mg/L	0.003	0.005	0.008	0.001	0.001	< 0.00050	0.00072	< 0.00050	0.00095	0.00100	-	< 0.00050	-
Sulfate			mg/L	23.6	20.1	19.0	20.3	26.3	4.7	6.3	25.0	30.0	40.0	-	37.0	-
Total Metals																
Aluminum			mg/L	0.1064	0.0633	0.1084	0.0356	0.1518	0.2850	0.3310	0.0246	0.0287	0.1420	-	0.1210	-
Arsenic			mg/L	0.0018	0.0023	0.0025	0.0021	0.0052	0.00731	0.00650	0.00221	0.00210	0.00872	-	0.00418	-
Copper			mg/L	0.0040	0.0040	0.0034	0.0026	0.0039	0.00352	0.00391	0.00254	0.00208	0.00711	-	0.00332	-
Lead			mg/L	0.0003	0.0003	0.0005	0.0002	0.0005	0.00102	0.00098	< 0.00020	< 0.00020	0.00050	-	0.00027	-
Nickel			mg/L	0.0084	0.0052	0.0073	0.0097	0.0092	0.0037	0.0065	0.0062	0.0066	0.0029	-	0.0195	-
Zinc			mg/L	0.004	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	< 0.0050	-
Radionuclides																
Radium-226			Bq/l	0.004	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0070	-	< 0.0050	-

ST-5 Parameter	Max Grab	Monthly Mean	Unit	Annual Average					9/24/2024	9/25/2024	9/26/2024	9/27/2024	9/28/2024	9/30/2024	10/1/2024	10/7/2024
				2020	2021	2022	2023	2024								
Field Measured																
Temperature			°C	12.0	5.5	7.6	8.2	6.3	4.2	4.1	5.8	8.0	7.5	6.3	4.3	1.2
pH			pH units	7.67	7.87	7.93	7.67	7.65	7.53	7.83	7.37	7.79	7.94	7.77	7.92	7.51
Conductivity			uS/cm	193.1	120.9	134.0	151.7	202.5	199.2	216.0	208.7	227.0	232.0	225.0	223.0	291.0
Turbidity			NTU	5.36	2.94	5.78	3.72	8.05	19.50	8.09	14.20	11.60	5.08	4.52	6.23	3.74
Conventional Parameters																
TSS	30	15	mg/L	6	2	4	1	4	9	3	5	2	5	3	1	9
Major Ions																
Cyanide			mg/L	0.003	0.005	0.008	0.001	0.001	-	-	-	-	-	-	-	0.00122
Sulfate			mg/L	23.6	20.1	19.0	20.3	26.3	-	-	-	-	-	-	-	41.0
Total Metals																
Aluminum			mg/L	0.1064	0.0633	0.1084	0.0356	0.1518	-	-	-	-	-	-	-	0.1300
Arsenic			mg/L	0.0018	0.0023	0.0025	0.0021	0.0052	-	-	-	-	-	-	-	0.00547
Copper			mg/L	0.0040	0.0040	0.0034	0.0026	0.0039	-	-	-	-	-	-	-	0.00490
Lead			mg/L	0.0003	0.0003	0.0005	0.0002	0.0005	-	-	-	-	-	-	-	0.00030
Nickel			mg/L	0.0084	0.0052	0.0073	0.0097	0.0092	-	-	-	-	-	-	-	0.0187
Zinc			mg/L	0.004	0.005	0.005	0.005	0.005	-	-	-	-	-	-	-	< 0.0050
Radionuclides																
Radium-226			Bq/l	0.004	0.005	0.005	0.005	0.005	-	-	-	-	-	-	-	< 0.0050

Table 8-11 Meadowbank 2024 Non-Contact Water West Diversion Ditch Water Quality Monitoring (ST-6)^s

ST-6 Parameter	Max Grab	Monthly Mean	Unit	Annual Average					5/27/2024	5/30/2024	5/31/2024	6/2/2024	7/1/2024	8/11/2024	9/15/2024	9/21/2024	9/22/2024
				2020	2021	2022	2023	2024									
Field Measured																	
Temperature			°C	7.5	5.8	6.1	5.6	5.4	3.1	1.5	1.3	0.1	5.2	13.7	6.3	4.0	5.2
pH			pH units	7.47	7.62	7.05	7.34	7.56	7.31	7.45	7.50	7.12	7.47	7.30	7.38	6.74	7.77
Conductivity			uS/cm	33.0	51.1	49.3	89.6	98.7	67.5	45.8	38.6	58.1	29.5	36.7	264.0	183.3	214.0
Turbidity			NTU	8.00	2.50	1.75	5.44	22.58	29.20	2.85	2.66	2.80	1.71	3.38	11.90	224.00	4.09
Conventional Parameters																	
TSS	30	15	mg/L	7	1	1	6	18	23	< 10	< 10	< 1	1	5	6	81.5*	1
Major Ions																	
Cyanide			mg/L	0.001	0.005	0.005	0.001	0.001	0.00154	-	-	0.00103	< 0.00050	< 0.00050	0.00091	-	< 0.00050
Sulfate			mg/L	5.5	9.4	4.7	16.2	10.2	9.9	-	-	10.0	4.2	5.5	29.0	-	6.2
Total Metals																	
Aluminum			mg/L	0.2360	0.0352	0.0114	0.1056	0.1460	0.5730	-	-	0.0443	0.0071	0.0937	0.2290	-	0.0447
Arsenic			mg/L	0.0009	0.0005	0.0002	0.0009	0.0014	0.00623	-	-	0.00116	0.00024	0.00075	0.00096	-	0.00037
Copper			mg/L	0.0016	0.0011	0.0005	0.0017	0.0016	0.00347	-	-	0.00175	< 0.00050	0.00083	0.00279	-	0.00076
Lead			mg/L	0.0002	0.0002	0.0002	0.0003	0.0005	0.00254	-	-	< 0.00020	< 0.00020	0.00020	0.00021	-	< 0.00020
Nickel			mg/L	0.0025	0.0016	0.0010	0.0038	0.0029	0.0073	-	-	0.0032	< 0.0010	0.0014	0.0049	-	0.0012
Zinc			mg/L	0.004	0.005	0.005	0.006	0.008	0.0121	-	-	0.0105	< 0.0050	< 0.0050	0.0116	-	< 0.0050
Radionuclides																	
Radium-226			Bq/l	0.002	0.005	0.006	0.006	0.005	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	< 0.0050

ST-6 Parameter	Max Grab	Monthly Mean	Unit	Annual Average					9/23/2024	9/24/2024	9/25/2024	9/26/2024	9/27/2024	9/28/2024	9/30/2024	10/1/2024	10/7/2024
				2020	2021	2022	2023	2024									
Field Measured																	
Temperature			°C	7.5	5.8	6.1	5.6	5.4	4.0	6.0	6.0	7.3	8.6	8.4	7.9	5.5	3.0
pH			pH units	7.47	7.62	7.05	7.34	7.56	7.81	7.70	8.06	6.91	7.91	8.38	8.26	7.68	7.33
Conductivity			uS/cm	33.0	51.1	49.3	89.6	98.7	80.6	127.5	137.7	207.3	119.1	33.1	41.1	34.1	58.6
Turbidity			NTU	8.00	2.50	1.75	5.44	22.58	7.48	18.30	32.80	9.22	25.10	19.30	3.83	2.14	5.61
Conventional Parameters																	
TSS	30	15	mg/L	7	1	1	6	18	6	10	62	5	49	49	3	3	3
Major Ions																	
Cyanide			mg/L	0.001	0.005	0.005	0.001	0.001	-	-	-	-	-	-	-	-	< 0.00050
Sulfate			mg/L	5.5	9.4	4.7	16.2	10.2	-	-	-	-	-	-	-	-	6.6
Total Metals																	
Aluminum			mg/L	0.2360	0.0352	0.0114	0.1056	0.1460	-	-	-	-	-	-	-	-	0.0301
Arsenic			mg/L	0.0009	0.0005	0.0002	0.0009	0.0014	-	-	-	-	-	-	-	-	0.00035
Copper			mg/L	0.0016	0.0011	0.0005	0.0017	0.0016	-	-	-	-	-	-	-	-	0.00078
Lead			mg/L	0.0002	0.0002	0.0002	0.0003	0.0005	-	-	-	-	-	-	-	-	< 0.00020
Nickel			mg/L	0.0025	0.0016	0.0010	0.0038	0.0029	-	-	-	-	-	-	-	-	0.0015
Zinc			mg/L	0.004	0.005	0.005	0.006	0.008	-	-	-	-	-	-	-	-	< 0.0050
Radionuclides																	
Radium-226			Bq/l	0.002	0.005	0.006	0.006	0.005	-	-	-	-	-	-	-	-	< 0.0050

TSS result from September 21st is from internal lab. All other results are from an accredited lab

8.5.2.1.3 East Dike Discharge (ST-8, ST-MMER-3) §

In 2024, water was discharged from October 13th to December 17th and December 20th to December 31st. A total of 21,163 m³ of water collected from the seepage at the East dike was pumped to Second Portage Lake through the diffuser.

Results from samples collected in 2024 at the final discharge point (ST-8) can be found in Table 8-12. Effluent water is analyzed as per NWB Water License Schedule I. The sampling location is illustrated on Figure 1. In 2024, all the results were in compliance with the Water License Part F Item 7 and with MDMER regulations. Refer to previous Section 8.3.1.2 East Dike Discharge for complete information.

8.5.2.1.4 East Dike Seepage (ST-S-1) §

East Dike Seepage was not discharged into the receiving environment Second Portage Lake until October 13th. As done in the past, when the discharge was stopped, water was directed to the Portage Pits. A total of 80,731 m³ was transferred in the Portage Pits in 2024. During that period of time, samples were taken on a monthly basis as per the requirements of the NWB Water License. The ST-S-1 location is presented on Figure 1. Results are presented in Table 8-13. There are no applicable license limits.

8.5.2.1.5 Portage Attenuation Pond (ST-9, ST-MMER-1) §

As required by NIRB Project Certificate 004 Condition 13: Cumberland shall not permit the water discharged into Wally Lake and Third Portage Lake to exceed receiving environment discharge criteria established by the NWB or as otherwise required by law.

As of November 19th, 2014 when tailings deposition began in the South Cell TSF, the Portage Attenuation Pond ceased operation as an effluent discharge pond. There was no discharge from ST-9 into Third Portage Lake in 2024. The location of sampling station ST-9 is illustrated on Figure 1.

Channel crossing inspections were not undertaken in 2024 as no further discharge occurred from the Portage Attenuation Pond into Third Portage Lake.

8.5.2.1.6 Vault Discharge (ST-10, ST-MMER-2) §

As required by NIRB Project Certificate 004 Condition 13: Cumberland shall not permit the water discharged into Wally Lake and Third Portage Lake to exceed receiving environment discharge criteria established by the NWB or as otherwise required by law.

There was no discharge (sampling station ST-10, also named ST-MMER-2) from the Vault Attenuation Pond to Wally Lake in 2024. The location of this sampling station is illustrated on Figure 3.

Table 8-12 Meadowbank 2024 East Dike Discharge Water Quality Monitoring (ST-8)[§]

ST-8	Max Grab	Monthly Mean	Unit	Annual Average					10/14/2024	10/21/2024	11/4/2024	11/25/2024	12/2/2024
Parameter				2020	2021	2022	2023	2024					
Field Measured													
Temperature			°C	4.7	1.7	0.5	0.3	1.9	3.4	3.6	1.0	0.9	0.5
pH			pH units	7.82	7.69	7.93	8.28	8.68	7.90	8.67	8.84	9.04	8.94
Conductivity			uS/cm	79.9	82.6	79.6	71.2	158.7	243.0	162.4	136.1	78.7	173.4
Turbidity			NTU	2.24	3.98	2.80	2.93	1.57	2.12	3.16	0.64	0.81	1.12
Conventional Parameters													
TSS	30	15	mg/L	2	7	5	3	2	2	3	1	< 1	< 1
Major Ions													
Cyanide			mg/L	0.001	0.004	0.001	0.001	0.001	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Sulfate			mg/L	11	7	7	7	26	61	36	12	10	9.8
Total Metals													
Aluminum			mg/L	0.031	0.089	0.067	0.055	0.034	0.0518	0.0327	0.0301	0.0255	0.0295
Arsenic			mg/L	0.0040	0.0008	0.0011	0.0013	0.0013	0.00169	0.00129	0.00128	0.00124	0.00111
Copper			mg/L	0.0016	0.0010	0.0014	0.0013	0.0024	0.00189	0.00570	0.00170	0.00142	0.00133
Lead			mg/L	0.0007	0.0002	0.0002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Nickel			mg/L	0.0018	0.0033	0.0009	0.0011	0.0044	0.0169	0.0022	< 0.0010	< 0.0010	< 0.0010
Zinc			mg/L	0.004	0.004	0.005	0.005	0.005	0.0069	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Radionuclides													
Radium-226			Bq/l	0.006	0.005	0.006	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Table 8-13 Meadowbank 2024 East Dike Seepage Water Quality Monitoring (ST-S-1)[§]

ST-S-1	Unit	Annual Average					1/1/2024	2/5/2024	3/4/2024	4/7/2024	5/6/2024	6/2/2024	7/7/2024	8/20/2024	9/1/2024	10/7/2024
Parameter		2020	2021	2022	2023	2024										
Field Measured																
Temperature	°C	7.6	5.8	2.7	3.6	3.5	2.3	1.6	5.8	1.3	1.0	1.2	4.1	7.5	7.2	3.4
pH	pH units	8.11	7.65	7.99	7.79	7.88	8.62	6.72	10.19	7.46	8.09	7.49	6.87	7.72	8.25	7.41
Conductivity	uS/cm	118.5	426.6	116.5	199.2	114.3	68.0	67.9	79.2	104.3	87.1	91.0	92.5	142.8	120.0	290.0
Turbidity	NTU	1.73	7.04	15.90	6.49	3.03	1.88	2.94	2.69	6.14	2.57	4.07	2.66	2.40	1.36	3.55
Conventional Parameters																
Hardness, as CaCO ₃	mg/L	60.00	50.79	59.13	51.31	44.51	30.4	28.5	34.1	36.6	33.9	34.0	38.6	54.1	51.9	103.0
Total alkalinity, as CaCO ₃	mg/L	44.00	31.11	33.25	33.75	34.50	29	30	30	42	35	35	32	36	33	43
TDS	mg/L	77.00	63.33	73.13	86.25	77.50	55	85	85	50	65	65	65	65	65	175
TSS	mg/L	2.00	9.38	6.00	7.75	3.80	3	4	7	5	6	5	3	1	1	3
Major Ions																
Chloride	mg/L	2.9	1.2	1.2	1.0	1.3	1.1	1.4	1.1	1.3	< 1.0	1.7	1.2	< 1.0	< 1.0	2.3
Cyanide	mg/L	0.003	0.005	0.001	0.001	0.001	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	0.00166
Fluoride	mg/L	0.11	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.10	< 0.10	< 0.10	< 0.10	0.11	0.11	0.15
Sulfate	mg/L	22.10	22.64	28.98	26.30	19.94	6.5	7.2	7.9	8.9	7.9	12.0	12.0	24.0	24.0	89.0
Nutrients																
Ammonia Nitrogen	mg N/L	0.01	0.07	0.06	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	0.43	0.37	0.41	0.35	0.36	< 0.10	< 0.10	< 0.10	0.15	0.11	0.11	0.12	0.55	0.42	1.80
Nitrite	mg N/L	0.013	0.010	0.010	0.010	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals																
Aluminum	mg/L	0.0300	0.1741	0.1263	0.1381	0.0492	0.0440	0.0417	0.0820	0.0541	0.0181	0.0768	0.0464	0.0281	0.0300	0.0706
Arsenic	mg/L	0.0032	0.0136	0.0022	0.0027	0.0019	0.00095	0.00070	0.00102	0.00465	0.00090	0.00248	0.00226	0.00218	0.00207	0.00225
Barium	mg/L	0.0103	0.0098	0.0105	0.0098	0.0091	0.00680	0.00680	0.00810	0.00820	0.00770	0.00770	0.00834	0.01140	0.01090	0.01530
Cadmium	mg/L	0.00002	0.00001	0.00002	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000005	< 0.000010	< 0.000005	0.00004
Chromium	mg/L	0.0006	0.0026	0.0015	0.0032	0.0008	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.00027	< 0.0010	0.00018	< 0.0010
Copper	mg/L	0.0023	0.0029	0.0021	0.0020	0.0017	0.00193	0.00183	0.00307	0.00144	0.00110	0.00121	0.00120	0.00143	0.00183	0.00215
Iron	mg/L	0.0600	0.3488	0.2294	0.2463	0.0764	0.0660	0.0580	0.1610	0.0810	0.0160	0.1330	0.0703	0.0330	0.0424	0.1030
Lead	mg/L	0.0002	0.0008	0.0002	0.0003	0.0002	< 0.00020	< 0.00020	0.00032	< 0.00020	< 0.00020	< 0.00020	0.0000734	< 0.00020	0.0000461	< 0.00020
Manganese	mg/L	0.0240	0.0201	0.0368	0.0063	0.0120	0.00190	0.00150	0.00350	0.00210	< 0.0010	0.00490	0.00161	0.00120	0.00591	0.09590
Mercury	mg/L	0.00001	0.00001	0.00001	0.00002	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0015	0.0012	0.0012	0.0028	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.000633	< 0.0010	0.000795	0.0017
Nickel	mg/L	0.0046	0.0054	0.0089	0.0103	0.0033	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0015	0.000841	0.0015	0.001760	0.0225
Selenium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.000040	< 0.00010	0.000063	0.00021
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000005	< 0.000020	< 0.000005	< 0.000020
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	0.0000022	< 0.000010	0.0000038	< 0.000010
Zinc	mg/L	0.001	0.008	0.008	0.006	0.006	< 0.0050	< 0.0050	0.0205	0.0065	< 0.0050	< 0.0050	0.00226	< 0.0050	0.00194	0.0064

8.5.2.1.7 Portage Waste Rock Storage Facility (ST-16) ^s

The Portage Waste Rock Storage Facility (WRSF) has been in operation since 2009. In 2013, ponded water was observed at the south-east base of the WRSF (sampling station ST-16). This was first reported in the 2013 Annual Report (as well as to regulators in July 2013) as a small volume of the seepage, with elevated levels of cyanide, nickel and copper (among other constituents) had migrated, through a rockfill perimeter road, to the near shore area of NP-2 South. Agnico Eagle determined, in 2013, that the seepage contained reclaim water from the North Cell TSF that had flowed under the WRSF to a sump area designated as sampling station ST-16 (refer to WRSF Seepage Golder Report in Appendix G5 of the 2013 Annual Report). Since 2014, a permanent pumping system has been operating at ST-16, to collect water and pump it to the TSF or Portage Pit. The action plan implemented by Agnico Eagle has been very successful in preventing any further seepage into NP-2 South and into the ST-16 sump itself. All seepage water is entirely contained inside the ST-16 sump. Agnico Eagle will refer to previous years Annual Reports for more information on water quality results, management and mitigation of this seepage since 2013.

Thermistors installed in 2013 continue to indicate that freezeback is occurring along the seepage path. Previous years installation of the filters at RF-1 and RF-2, capping of tailings and optimized water management in the North Cell. In 2024, 190,070 m³ of North Cell water was transferred to the South Cell minimizing the water contained in this cell.

In 2024, ST-16 water accumulation was pumped into the Portage Pit. A total of 18,528 m³ was transferred between May to October. The volume pumped also included snow melt and precipitation accumulating into this sump. Water quality results for ST-16 and NP-2 South (downstream lake) in 2024 can be found in Tables 8-14 and Table 8-15, respectively. Monitoring stations are illustrated on Figure 1. Results are presented for information purposes only as there are no applicable Water License limits at this location. Result to date confirmed no impacts to downstream lakes.

In accordance with the 2025 Freshet Action Plan (see Appendix D of the 2024 Water Management Plan Version 14 (Appendix 13), Agnico Eagle will continue in 2025 to control the ST-16 location and to monitor the water quality, as needed. This is conducted to assess and prevent any impact to the receiving environment (NP-2) and to downstream lakes (NP-1, Dogleg and Second Portage).

Table 8-14 Meadowbank 2024 WRSF Seepage Water Quality Monitoring (ST-16) §

ST-16	Unit	Annual Average					5/13/2024	6/10/2024	7/21/2024	8/11/2024	9/15/2024
Parameter		2020	2021	2022	2023	2024					
Field Measured											
Temperature	°C	9.1	4.5	6.3	7.1	9.9	2.2	5.8	20.4	14.7	6.3
pH	pH units	7.70	7.67	7.27	7.45	7.35	7.67	7.32	7.34	7.44	6.97
Conductivity	uS/cm	288.9	281.8	294.7	294.3	269.9	144.9	100.4	383.0	370.0	351.0
Turbidity	NTU	22.53	12.91	23.23	12.85	12.72	39.80	7.03	4.35	7.49	4.94
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	140	125	143	118	112	46.7	41.9	150.0	160.0	163.0
Total alkalinity, as CaCO ₃	mg/L	75	63	86	75	65	35	28	79	100	83
Carbonate, as CaCO ₃	mg/L	4	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃	mg/L	78	62	86	74	65	35	28	78	100	82
TDS	mg/L	187	182	174	174	182	90	95	260	210	255
TSS	mg/L	10	8	15	11	10	24	11	8	3	4
Total organic carbon	mg/L	4.10	2.88	4.15	3.92	3.40	2.8	2.5	4.1	3.5	4.1
Dissolved organic carbon	mg/L	2.63	2.64	3.80	3.73	2.98	1.9	2.1	3.5	3.4	4.0
Colour	TCU	77	12	16	15	14	4	13	21	18	14
Major Ions											
Bromide	mg/L	0.07	1.00	1.00	1.00	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloride	mg/L	3.0	3.0	3.8	2.0	1.9	2.3	< 1.0	2.0	1.6	2.8
Cyanide	mg/L	0.001	0.005	0.002	0.002	0.003	0.00098	0.00188	0.00193	0.00277	0.00794
Cyanide (free)	mg/L	0.00100	0.00306	0.00315	0.00308	0.00276	< 0.0020	< 0.0020	0.0047	0.0030	0.0021
Cyanide (WAD)	mg/L	0.0010	0.0019	0.0013	0.0013	0.0013	0.00058	0.00140	0.00110	0.00092	0.00260
Fluoride	mg/L	0.17	0.20	0.19	0.18	0.18	< 0.10	< 0.10	0.24	0.22	0.24
Silica	mg/L	5.01	4.10	3.93	3.38	2.54	1.3	1.3	2.4	2.3	5.4
Sulfate	mg/L	67	64	70	62	64	26	17	87	96	92
Thiocyanate	mg/L	0.05	0.20	1.15	0.20	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thiosulphates	mg/L	0.02	0.20	1.15	0.20	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Nutrients and Chlorophyll a											
Ammonia Nitrogen	mg N/L	0.06	0.05	0.11	0.09	0.15	0.190	< 0.05	< 0.050	0.054	0.400
Nitrate	mg N/L	2.50	3.28	1.45	1.41	1.31	0.78	0.18	0.54	0.78	4.25
Nitrite	mg N/L	0.035	0.014	0.015	0.011	0.014	< 0.010	< 0.010	< 0.010	< 0.010	0.032
Total Kjeldahl nitrogen	mg N/L	0.39	0.23	0.27	0.33	0.45	0.30	< 0.10	0.19	0.44	1.2
Total phosphorus	mg P/L	0.013	0.013	0.013	0.012	0.011	0.0220	0.0079	0.0069	0.0120	0.0049
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Chlorophyll a	mg/L	0.0871	0.0002	0.0003	0.0004	0.0012	0.00061	0.00086	0.00130	0.00130	< 0.00180

ST-16	Unit	Annual Average					5/13/2024	6/10/2024	7/21/2024	8/11/2024	9/15/2024
Parameter		2020	2021	2022	2023	2024					
Total Metals											
Aluminum	mg/L	0.6415	0.2966	0.5739	0.2424	0.2772	0.9490	0.0961	0.1320	0.1460	0.0628
Antimony	mg/L	0.00010	0.00125	0.00080	0.00080	0.00067	< 0.00050	< 0.00050	0.00099	0.00080	0.00056
Arsenic	mg/L	0.0140	0.0464	0.0146	0.0140	0.0093	0.0170	0.0116	0.0083	0.0063	0.0034
Barium	mg/L	0.0147	0.0150	0.0181	0.0149	0.0162	0.0111	0.0068	0.0200	0.0243	0.0189
Beryllium	mg/L	0.00050	0.00010	0.00010	0.00010	0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron	mg/L	0.010	0.050	0.050	0.050	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	mg/L	0.000020	0.000011	0.000013	0.000011	0.000011	0.000016	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Calcium (total)	mg/L	32.4	27.5	33.2	28.0	26.1	12.2	10.3	34.9	36.5	36.7
Chromium	mg/L	0.00805	0.00566	0.00382	0.00375	0.00406	0.0137	0.0015	0.0023	0.0018	< 0.0010
Cobalt	mg/L	0.0014	0.0009	0.0012	0.0007	0.0010	0.00225	0.00040	0.00066	0.00072	0.00085
Copper	mg/L	0.0103	0.0050	0.0100	0.0049	0.0056	0.00503	0.00351	0.00685	0.00790	0.00454
Iron	mg/L	1.018	0.514	1.466	0.611	0.740	1.750	0.290	0.683	0.612	0.363
Lead	mg/L	0.0007	0.0003	0.0009	0.0004	0.0007	0.00244	0.00041	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.0050	0.0020	0.0022	0.0020	0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Magnesium (total)	mg/L	14.48	13.59	15.57	11.72	11.44	3.96	3.94	15.20	16.70	17.40
Manganese	mg/L	0.0620	0.0594	0.1991	0.0613	0.0906	0.1220	0.0299	0.0812	0.1120	0.1080
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0136	0.0209	0.0123	0.0132	0.0160	0.0045	0.0047	0.0307	0.0312	0.0087
Nickel	mg/L	0.0143	0.0094	0.0181	0.0062	0.0077	0.0139	0.0037	0.0076	0.0085	0.0046
Potassium (total)	mg/L	6.70	6.98	6.87	5.10	4.95	3.24	2.16	6.28	7.15	5.94
Selenium	mg/L	0.0010	0.0008	0.0003	0.0003	0.0003	0.00013	0.00012	0.00040	0.00034	0.00051
Silver	mg/L	0.000100	0.000021	0.000022	0.000020	0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Sodium (total)	mg/L	8.25	5.68	7.23	3.80	3.77	2.46	1.08	4.66	5.40	5.27
Strontium	mg/L	0.140	0.153	0.173	0.139	0.136	0.0603	0.0459	0.1970	0.2050	0.1710
Thallium	mg/L	0.00020	0.00001	0.00002	0.00001	0.00001	0.000018	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.0267	0.0100	0.0123	0.0084	0.0095	0.0275	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0040	0.0048	0.0048	0.0032	0.0026	0.00215	0.00050	0.00308	0.00400	0.00306
Vanadium	mg/L	0.002	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.003	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dissolved Metals											
Aluminum	mg/L	0.0060	0.0069	0.0088	0.0103	0.0128	0.0336	0.0089	0.0078	0.0069	0.0068
Antimony	mg/L	0.00010	0.00121	0.00078	0.00084	0.00070	< 0.00050	< 0.00050	0.00103	0.00080	0.00065
Arsenic	mg/L	0.0048	0.0434	0.0111	0.0125	0.0068	0.00998	0.00996	0.00591	0.00495	0.00327
Barium	mg/L	0.0064	0.0197	0.0146	0.0148	0.0158	0.0066	0.0058	0.0199	0.0264	0.0204
Beryllium	mg/L	0.00050	0.00010	0.00010	0.00010	0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010

ST-16	Unit	Annual Average					5/13/2024	6/10/2024	7/21/2024	8/11/2024	9/15/2024
Parameter		2020	2021	2022	2023	2024					
Boron	mg/L	0.0100	0.0500	0.0500	0.0500	0.0500	< 0.050	< 0.050	< 0.050	0.050	< 0.050
Cadmium	mg/L	0.00002	0.00001	0.00002	0.00011	0.00001	< 0.000010	< 0.000010	< 0.000010	0.000011	< 0.000010
Chromium	mg/L	0.00060	0.00100	0.00100	0.00100	0.00100	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Cobalt	mg/L	0.00050	0.00046	0.00070	0.00051	0.00083	0.00073	0.00035	0.00047	0.00159	0.00100
Copper	mg/L	0.00597	0.00535	0.00606	0.00419	0.00616	0.00677	0.00378	0.00612	0.00822	0.00592
Iron	mg/L	0.0333	0.0492	0.0839	0.1114	0.1344	0.0287	0.0773	0.230	0.216	0.120
Lead	mg/L	0.00021	0.00020	0.00037	0.00020	0.00024	0.00038	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.0050	0.0020	0.0020	0.0020	0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Manganese	mg/L	0.0500	0.0525	0.1019	0.0586	0.1118	0.104	0.0315	0.0704	0.240	0.1130
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00003	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00010
Molybdenum	mg/L	0.00993	0.02130	0.01243	0.01450	0.01714	0.0052	0.0046	0.0335	0.0321	0.0103
Nickel	mg/L	0.00917	0.00660	0.01068	0.00507	0.00618	0.0062	0.0036	0.0067	0.0083	0.0061
Selenium	mg/L	0.00100	0.00072	0.00035	0.00040	0.00037	0.00012	0.00011	0.00041	0.00053	0.00067
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Strontium	mg/L	0.1220	0.1524	0.1694	0.1526	0.1510	0.0705	0.0477	0.1920	0.2620	0.1830
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.0010	0.0050	0.0127	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.010	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0033	0.0045	0.0045	0.0034	0.0030	0.00209	0.00046	0.00351	0.00532	0.00358
Vanadium	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.001	0.006	0.007	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Table 8-15 Meadowbank 2024 NP-2 South Water Quality Monitoring[§]

NP-2 South	Unit	Annual Average					5/27/2024	6/10/2024	7/21/2024	8/11/2024	9/15/2024
Parameter		2020	2021	2022	2023	2024					
Field Measured											
Temperature	°C	10.3	5.3	7.7	10.0	10.2	2.8	4.5	20.1	16.7	7.0
pH	pH units	7.85	7.61	7.64	7.76	7.6	7.14	7.04	7.87	7.94	7.90
Conductivity	uS/cm	173.2	148.5	133.9	171.2	144.6	58.8	87.9	190.6	181.4	204.2
Turbidity	NTU	1.47	2.63	66.08	1.67	5.8	8.69	3.25	1.15	3.23	12.80
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	90	64	65	71	62	23.7	30.4	80.8	80.9	96.6
Total alkalinity, as CaCO ₃	mg/L	63	46	49	59	49	23	27	64	64	67
Carbonate, as CaCO ₃	mg/L	5	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃	mg/L	63	45	49	58	48	23	27	63	63	66
TDS	mg/L	113	69	68	105	104	55	115	145	90	115
TSS	mg/L	2	2	2	1	2	6	1	2	1	2
Total organic carbon	mg/L	4.1	3.9	3.9	4.0	3.4	2.9	2.4	4.0	3.8	3.9
Dissolved organic carbon	mg/L	3.9	3.7	3.6	3.8	3.1	2.3	2.2	3.5	3.6	3.9
Colour	TCU	11	11	7	6	7	11	9	5	4	6
Major Ions											
Bromide	mg/L	0.05	1.00	1.00	1.00	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloride	mg/L	2.2	1.9	1.6	1.5	1.4	< 1.0	< 1.0	1.9	1.6	1.7
Cyanide	mg/L	0.001	0.005	0.001	0.001	0.001	< 0.00050	< 0.00050	< 0.00050	0.00066	0.00056
Cyanide (free)	mg/L	0.0013	0.0025	0.0028	0.0036	0.0026	< 0.0020	< 0.0020	0.0042	0.0027	< 0.0020
Cyanide (WAD)	mg/L	0.0010	0.0013	0.0006	0.0005	0.0005	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Fluoride	mg/L	0.12	0.12	0.12	0.13	0.13	< 0.10	< 0.10	0.13	0.14	0.18
Silica	mg/L	0.81	0.76	0.50	0.94	0.71	0.78	0.69	0.39	0.49	1.20
Sulfate	mg/L	32.6	22.2	20.7	25.8	24.0	8.9	9.1	30.0	32.0	40.0
Thiocyanate	mg/L	0.05	0.20	0.96	0.20	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thiosulphates	mg/L	0.02	0.20	0.96	0.20	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Nutrients and Chlorophyll a											
Ammonia Nitrogen	mg N/L	0.02	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	0.053
Nitrate	mg N/L	0.08	0.19	0.11	0.11	0.14	< 0.10	< 0.10	< 0.10	< 0.10	0.31
Nitrite	mg N/L	0.03	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen	mg N/L	0.19	0.18	0.18	0.20	0.17	0.12	< 0.10	0.15	0.20	0.30
Total phosphorus	mg P/L	0.0200	0.0040	0.0049	0.0026	0.0042	0.0091	0.0035	< 0.0010	0.0040	0.0032
Orthophosphate	mg P/L	0.013	0.010	0.010	0.010	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Chlorophyll a	mg/L	0.0013	0.0015	0.0007	0.0011	0.0008	0.000071	0.00049	0.00091	0.00096	< 0.0017

NP-2 South	Unit	Annual Average					5/27/2024	6/10/2024	7/21/2024	8/11/2024	9/15/2024
Parameter		2020	2021	2022	2023	2024					
Total Metals											
Aluminum	mg/L	0.0150	0.0699	0.0365	0.0418	0.0493	0.1390	0.0464	0.0085	0.0143	0.0382
Antimony	mg/L	0.0001	0.0005	0.0005	0.0005	0.0005	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic	mg/L	0.00103	0.00275	0.00186	0.00155	0.00342	0.00824	0.00318	0.00193	0.00190	0.00183
Barium	mg/L	0.0038	0.0049	0.0041	0.0048	0.0047	0.0034	0.0034	0.0052	0.0049	0.0064
Beryllium	mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron	mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	mg/L	0.00002	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Calcium (total)	mg/L	23.4	16.1	16.8	18.0	15.5	6.04	7.88	20.30	20.40	22.90
Chromium	mg/L	0.0006	0.0010	0.0011	0.0016	0.0012	0.0022	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Cobalt	mg/L	0.00087	0.00053	0.00030	0.00027	0.00028	0.00042	0.00034	< 0.00020	< 0.00020	0.00024
Copper	mg/L	0.0040	0.0035	0.0027	0.0024	0.0020	0.00165	0.00205	0.00227	0.00207	0.00199
Iron	mg/L	0.153	0.115	0.117	0.146	0.154	0.285	0.160	0.115	0.091	0.117
Lead	mg/L	0.00021	0.00022	0.00026	0.00020	0.00035	0.00085	0.00029	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.005	0.002	0.002	0.002	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Magnesium (total)	mg/L	7.72	5.73	5.86	6.30	5.77	2.09	2.60	7.34	7.27	9.54
Manganese	mg/L	0.0357	0.0215	0.0189	0.0143	0.0202	0.0246	0.0297	0.0168	0.0155	0.0142
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0007	0.0018	0.0017	0.0017	0.0016	< 0.0010	< 0.0010	0.0016	0.0018	0.0027
Nickel	mg/L	0.0155	0.0140	0.0094	0.0092	0.0083	0.0055	0.0070	0.0063	0.0074	0.0153
Potassium (total)	mg/L	2.35	1.65	1.56	1.67	1.63	0.852	0.899	2.03	2.03	2.34
Selenium	mg/L	0.001	0.000	0.000	0.000	0.000	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	mg/L	0.0001	0.0000	0.0000	0.0000	0.0000	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Sodium (total)	mg/L	4.92	2.66	2.35	2.21	1.82	0.568	0.717	2.420	2.350	3.060
Strontium	mg/L	0.0773	0.0654	0.0655	0.0712	0.0626	0.0241	0.0320	0.0807	0.0806	0.0957
Thallium	mg/L	0.0002	0.0000	0.0000	0.0000	0.0000	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.010	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0013	0.0012	0.0012	0.0013	0.0013	0.00066	0.00048	0.00145	0.00161	0.00212
Vanadium	mg/L	0.0005	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.0037	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dissolved Metals											
Aluminum	mg/L	0.0087	0.0163	0.0088	0.0049	0.0063	0.0116	0.0059	0.0066	0.0045	0.0030
Antimony	mg/L	0.0001	0.0005	0.0005	0.0005	0.0005	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic	mg/L	0.00053	0.00234	0.00168	0.00207	0.00338	0.00895	0.00248	0.00185	0.00174	0.00187
Barium	mg/L	0.0028	0.0106	0.0042	0.0053	0.0050	0.0038	0.0036	0.0054	0.0052	0.007

NP-2 South Parameter	Unit	Annual Average					5/27/2024	6/10/2024	7/21/2024	8/11/2024	9/15/2024
		2020	2021	2022	2023	2024					
Beryllium	mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron	mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	mg/L	0.00002	0.00001	0.00001	0.00004	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Chromium	mg/L	0.0006	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Cobalt	mg/L	0.00067	0.00039	0.00028	0.00069	0.00026	0.00039	0.00033	< 0.00020	< 0.00020	< 0.00020
Copper	mg/L	0.0019	0.0031	0.0043	0.0037	0.0040	0.00706	0.00302	0.00324	0.00354	0.00293
Iron	mg/L	0.013	0.031	0.032	0.029	0.028	0.0218	0.0466	0.0335	0.0196	0.0204
Lead	mg/L	0.0002	0.0002	0.0003	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.005	0.002	0.002	0.002	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Manganese	mg/L	0.0233	0.0147	0.0162	0.0133	0.0198	0.0304	0.0283	0.0182	0.0126	0.0096
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0006	0.0018	0.0017	0.0021	0.0018	< 0.0010	< 0.0010	0.0018	0.0021	0.0029
Nickel	mg/L	0.0185	0.0119	0.0092	0.0102	0.0092	0.0076	0.0067	0.0068	0.0074	0.0175
Selenium	mg/L	0.0010	0.0001	0.0001	0.0002	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00014	0.000531	< 0.000020	< 0.000020	< 0.000020	0.000132
Strontium	mg/L	0.06	0.06	0.07	0.08	0.07	0.0315	0.0327	0.0834	0.0852	0.0941
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.010	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0010	0.0011	0.0012	0.0015	0.0014	0.00074	0.00043	0.00170	0.00172	0.00236
Vanadium	mg/L	0.00050	0.00500	0.00500	0.00500	0.00500	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.0010	0.0062	0.0056	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

8.5.2.1.8 North Portage Pit (ST-17) [§]

Since 2019, there is no longer a sump associated with the North Portage Pit and thus, as per the Water License, Agnico Eagle has started to consider this area as the Portage Pit Lake (ST-17 Lake). The naming convention of ST-17 replaced ST-17 Lake when the in-pit tailings deposition in the Portage pits started in 2020. Refer to previous Annual Reports for ST-17 Lake and ST-17 Pit Sump results.

In 2024, eight (8) samples were collected in North Portage Pit (ST-17) during April then from June to December. The Pore Water Quality Monitoring Program is followed. The sampling location is illustrated on Figure 1. Results are presented in Table 8-16. There are no applicable NWB Water License limits.

8.5.2.1.9 South Portage Pit (ST-19) [§]

There is no longer a sump associated with the South Portage Pit since the end of 2019. Sump sampling results (ST-19 Pit Sump) can be found in previous Annual Reports. In 2020, samples were taken in the pit under ST-19 Lake's name. In August 2020, the in-pit tailings deposition started in the Portage pits and the station name was modified for ST-19 instead of ST-19 Lake. The location remains the same for water collection, only the use of a different station name.

In 2024, ten (10) samples were collected in South Portage Pit (ST-19) during January to October. Results are presented in Table 8-17. There are no applicable NWB Water License limits. The Pore Water Quality Monitoring Program is followed since 2020. The sampling location is illustrated on Figure 1.

Table 8-16 Meadowbank 2024 North Portage Pit Water Quality Monitoring (ST-17)§

ST-17	Unit	Annual Average					4/9/2024	6/3/2024	7/7/2024	8/4/2024	9/1/2024	10/7/2024	11/4/2024	12/1/2024	
Parameter		2020	2021	2022	2023	2024									
Field Measured															
Temperature	°C	8.4	4.8	4.0	6.6	5.4	1.4	0.7	10.3	11.3	8.6	1.5	4.3	0.7	
pH	pH units	7.24	7.78	8.13	7.91	7.81	7.16	8.04	8.74	8.75	7.54	7.01	7.53	7.67	
Conductivity	uS/cm	2391.7	1775.5	2020.3	2762.4	2555.3	3785	3862	1595	1674	1220	2378	3373	3183	
Turbidity	NTU	14.25	7.44	13.25	21.98	19.02	9.01	8.88	39.20	46.10	7.72	9.64	12.60	9.51	
Conventional Parameters															
Hardness, as CaCO ₃	mg/L	610	476	612	697	595	966	857	327	405	382	508	719	934	
Total alkalinity, as CaCO ₃	mg/L	91	78	114	130	113	170	160	60	65	86	110	140	140	
Carbonate, as CaCO ₃	mg/L	-	1.00	1.00	1.09	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Bicarbonate, as CaCO ₃	mg/L	92	78	113	129	111	170	160	59	65	86	100	140	140	
TDS	mg/L	1120	1178	1632	1961	1776	2840	2930	1050	1040	990	1240	2340	2460	
TSS	mg/L	63	3	13	18	35	2	4	64	150	7	14	6	3	
Total organic carbon	mg/L	13.8	10.8	20.4	21.9	19.3	28.0	29.0	15.0	23.0	8.9	8.0	23.0	21.0	
Dissolved organic carbon	mg/L	12.5	9.6	17.2	19.2	16.3	27.0	28.0	10.0	15.0	5.8	7.2	21.0	21.0	
Sodium Adsorption Ratio (salinity in water)	-	-	3.04	4.13	4.40	3.91	5.7	5.0	3.0	3.1	1.9	3.6	5.1	5.1	
Oxidation-Reduction Potential	mV	-	277.8	241.8	283.8	265.7	230	270	250	350	220	270	270	430	
Major Ions															
Bromide	mg/L	0.79	1.26	1.54	1.83	1.59	2.4	2.4	< 1.0	< 1.0	< 1.0	1.3	2.0	2.0	
Chloride	mg/L	124.5	99.7	127.8	184.9	165.3	290	310	87	100	50	140	180	190	
Cyanide	mg/L	0.067	0.132	0.085	0.463	0.493	1.54	1.50	0.0765	0.0554	0.0176	0.0240	0.2390	0.1610	
Cyanide (free)	mg/L	0.0265	0.1931	0.0395	0.2369	0.2367	0.99	0.53	0.012	0.010	0.008	0.013	0.095	0.079	
Cyanide (WAD)	mg/L	0.0550	0.0858	0.0521	0.2775	0.4274	1.50	1.30	0.011	0.026	0.019	0.016	0.120	0.063	
Fluoride	mg/L	0.25	0.24	0.31	0.23	0.21	0.21	0.23	0.20	< 0.10	0.23	0.25	0.28	0.30	
Silica	mg/L	6.17	3.65	5.96	5.76	6.11	7.00	6.8	4.4	5.1	6.4	6.7	6.4	6.3	
Sulfate	mg/L	720	673	961	1164	1023	1700	1500	550	560	470	980	1400	1400	
Nutrients															
Ammonia Nitrogen	mg N/L	13.09	17.63	23.62	34.54	25.06	50.0	40.0	11.0	12.0	8.4	14.0	40.0	42.0	
Nitrate	mg N/L	2.82	1.56	1.23	2.10	0.81	2.00	1.20	0.27	0.28	0.37	0.90	0.64	0.70	
Nitrite	mg N/L	0.256	0.180	0.199	0.139	0.262	0.456	0.548	0.070	0.129	0.175	0.329	0.125	0.164	
Total Kjeldahl nitrogen	mg N/L	25.000	28.000	38.000	51.825	41.286	80	78	21	19	11	19	61	58	
Total phosphorus	mg P/L	0.098	0.028	0.169	0.069	0.090	0.012	0.011	0.280	0.240	0.046	0.025	0.016	0.014	
Orthophosphate	mg P/L	0.080	0.021	0.077	0.023	0.013	0.013	0.012	0.025	< 0.010	< 0.010	< 0.010	< 0.010	0.012	
Total Metals															
Aluminum	mg/L	0.4100	0.0464	0.0876	0.1900	0.4616	0.0083	0.0127	0.984	1.750	0.076	0.338	0.0617	0.0262	
Antimony	mg/L	-	0.00304	0.00341	0.00430	0.00268	0.006520	0.005250	0.000869	0.001350	0.000476	0.000831	0.003490	0.003930	

ST-17	Unit	Annual Average					4/9/2024	6/3/2024	7/7/2024	8/4/2024	9/1/2024	10/7/2024	11/4/2024	12/1/2024
Parameter		2020	2021	2022	2023	2024								
Arsenic	mg/L	0.3950	0.0808	0.1021	0.0737	0.0419	0.0807	0.0632	0.0271	0.0343	0.0161	0.0134	0.0586	0.0610
Barium	mg/L	0.0473	0.0256	0.0329	0.0397	0.0293	0.0470	0.0373	0.0160	0.0201	0.0205	0.0333	0.0311	0.0378
Beryllium	mg/L	-	0.00009	0.00002	0.00002	0.00003	< 0.000020	< 0.000020	0.000019	0.000046	< 0.000010	0.000028	0.000033	0.000033
Boron	mg/L	-	0.0635	0.1498	0.1544	0.1484	0.233	0.193	0.061	0.101	0.137	0.142	0.172	0.234
Cadmium	mg/L	0.00002	0.00005	0.00003	0.00005	0.00003	0.0000160	0.0000130	0.0000180	0.0000290	0.0000342	0.0000769	< 0.000010	0.0000520
Calcium (total)	mg/L	214.6	157.1	203.3	241.3	195.4	335	300	105	129	110	144	245	317
Chromium	mg/L	0.00335	0.00070	0.00111	0.00360	0.00349	< 0.00020	< 0.00020	0.00728	0.01320	0.00049	0.00262	0.00045	0.00028
Copper	mg/L	0.514	0.704	0.440	0.488	0.206	0.6440	0.3600	0.0493	0.0748	0.0627	0.0371	0.2160	0.2290
Iron	mg/L	1.298	0.291	0.628	0.722	1.480	0.388	0.426	2.650	3.920	0.784	0.994	1.200	0.541
Lead	mg/L	0.00045	0.00097	0.00070	0.00101	0.00097	0.000689	0.000634	0.001230	0.002100	0.000715	0.000860	0.000586	0.000810
Lithium	mg/L	-	0.00366	0.00509	0.00434	0.00513	0.00480	0.00390	0.00417	0.00701	0.00501	0.00695	0.00410	0.00600
Magnesium (total)	mg/L	18.60	20.32	25.26	23.04	25.86	31.7	26.0	15.8	19.9	26.0	35.8	25.8	34.8
Manganese	mg/L	0.2574	0.4986	0.5492	0.2561	0.3406	0.191	0.139	0.403	0.325	0.461	0.620	0.245	0.353
Mercury	mg/L	0.00001	0.00005	0.00010	0.00009	0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Molybdenum	mg/L	0.0952	0.0702	0.0886	0.0791	0.0533	0.0991	0.0878	0.0298	0.0358	0.0233	0.0208	0.0765	0.0953
Nickel	mg/L	0.1076	0.4539	0.1984	0.2415	0.1775	0.4180	0.3270	0.0514	0.0907	0.0451	0.0906	0.220	0.260
Potassium (total)	mg/L	79.22	49.30	64.17	84.35	65.46	131.0	107.0	26.6	38.6	28.2	35.9	90.9	117.0
Selenium	mg/L	0.0224	0.0216	0.0256	0.0523	0.0332	0.0851	0.0646	0.00971	0.0148	0.00559	0.0128	0.040	0.0388
Silver	mg/L	0.00035	0.00016	0.00009	0.00016	0.00007	0.000146	0.000118	0.000028	0.000049	0.000026	0.000033	0.000097	0.000054
Sodium (total)	mg/L	203.9	181.3	221.0	250.3	199.4	384.0	328.0	100.0	126.0	77.0	97.7	283.0	375.0
Strontium	mg/L	-	0.519	0.873	1.234	1.042	1.830	1.560	0.467	0.691	0.625	0.760	1.360	1.540
Thallium	mg/L	0.00067	0.00007	0.00001	0.00001	0.00002	0.0000101	< 0.0000040	0.0000130	0.0000260	0.0000176	0.0000773	0.0000080	0.0000210
Tin	mg/L	-	0.0002	0.0003	0.0004	0.0003	< 0.00040	< 0.00040	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00040	< 0.00040
Titanium	mg/L	-	0.0027	0.0023	0.0051	0.0084	< 0.0010	< 0.0040	0.0159	0.0247	0.0025	0.0065	< 0.0040	< 0.0010
Uranium	mg/L	-	0.0090	0.0162	0.0152	0.0156	0.02150	0.01540	0.00728	0.00888	0.0197	0.0174	0.01910	0.02440
Vanadium	mg/L	-	0.0003	0.0004	0.0007	0.0011	< 0.00040	< 0.00040	0.00209	0.00366	0.00021	0.00061	< 0.00040	< 0.00040
Zinc	mg/L	0.072	0.004	0.004	0.004	0.007	0.00069	0.00320	0.00480	0.01680	0.00590	0.00490	0.01420	0.00549
Dissolved Metals														
Aluminum	mg/L	0.0118	0.0077	0.0088	0.0099	0.0114	0.00250	0.00490	0.00857	0.04520	0.00400	0.00872	0.00610	0.00490
Antimony	mg/L	-	0.00313	0.00335	0.00376	0.00302	0.006350	0.006180	0.001050	0.00160	0.000449	0.001870	0.003650	0.003450
Arsenic	mg/L	0.34538	0.05523	0.06373	0.04660	0.02469	0.04080	0.03810	0.01160	0.02220	0.00452	0.01230	0.04330	0.03630
Barium	mg/L	0.0483	0.0247	0.0321	0.0375	0.0300	0.0463	0.0414	0.0133	0.0187	0.0218	0.0327	0.0358	0.0344
Beryllium	mg/L	-	0.00001	0.00002	0.00002	0.00001	< 0.000020	< 0.000020	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000020	< 0.000020
Boron	mg/L	-	0.081	0.131	0.141	0.157	0.222	0.234	0.061	0.104	0.122	0.171	0.183	0.156
Cadmium	mg/L	0.00002	0.00002	0.00002	0.00005	0.00002	0.0000110	0.0000130	< 0.0000050	0.0000156	0.0000293	0.0000529	0.0000220	< 0.000010
Chromium	mg/L	0.00550	0.00026	0.00019	0.00021	0.00017	< 0.00020	< 0.00020	< 0.00010	0.00032	< 0.00010	< 0.00010	< 0.00020	< 0.00020
Copper	mg/L	0.327	0.563	0.255	0.293	0.153	0.5460	0.2320	0.0155	0.1420	0.0123	0.0600	0.0629	0.0377

ST-17	Unit	Annual Average					4/9/2024	6/3/2024	7/7/2024	8/4/2024	9/1/2024	10/7/2024	11/4/2024	12/1/2024
Parameter		2020	2021	2022	2023	2024								
Iron	mg/L	0.020	0.034	0.040	0.041	0.043	0.0568	0.0172	0.0073	0.0838	0.0064	0.0646	0.0652	0.0594
Lead	mg/L	0.0005	0.0001	0.0002	0.0002	0.0001	0.0000340	0.0000460	0.0001290	0.0000954	0.0000154	0.0000532	0.0001870	0.0000370
Lithium	mg/L	-	0.00339	0.00515	0.00408	0.00506	0.00420	0.00470	0.00380	0.00580	0.00453	0.00780	0.00460	0.00360
Manganese	mg/L	0.2039	0.4678	0.4717	0.2315	0.2993	0.214	0.159	0.310	0.177	0.444	0.530	0.261	0.290
Mercury	mg/L	0.00001	0.00005	0.00010	0.00009	0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Molybdenum	mg/L	0.0898	0.0655	0.0880	0.0744	0.0613	0.1010	0.0962	0.0355	0.0409	0.0233	0.0460	0.0864	0.0886
Nickel	mg/L	0.0919	0.4255	0.1869	0.2155	0.1738	0.3980	0.3370	0.0400	0.0637	0.0412	0.1100	0.2270	0.1880
Selenium	mg/L	0.0225	0.0179	0.0257	0.0494	0.0400	0.0861	0.0757	0.0124	0.019	0.00495	0.0283	0.0534	0.0398
Silver	mg/L	0.00018	0.00012	0.00007	0.00009	0.00002	0.000027	< 0.000010	0.0000067	0.0000231	0.000006	0.0000258	0.000038	< 0.000010
Strontium	mg/L	0.573	0.546	0.876	1.181	1.154	1.80	1.80	0.563	0.740	0.582	1.12	1.47	1.53
Thallium	mg/L	0.00035	0.00007	0.00001	0.00001	0.00002	0.0000054	0.0000067	0.0000081	0.0000165	0.0000168	0.0000579	0.0000070	0.0000061
Tin	mg/L	-	0.0002	0.0057	0.0014	0.0003	< 0.00040	< 0.00040	0.00041	< 0.00020	< 0.00020	0.00030	< 0.00040	< 0.00040
Titanium	mg/L	-	0.0006	0.0008	0.0010	0.0007	< 0.0010	< 0.0010	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.0010	< 0.0010
Uranium	mg/L	-	0.0082	0.0158	0.0147	0.0180	0.02180	0.02060	0.00903	0.00928	0.02080	0.02170	0.02250	0.02260
Vanadium	mg/L	-	0.0002	0.0003	0.0004	0.0003	< 0.00040	< 0.00040	< 0.00020	0.00022	< 0.00020	< 0.00020	< 0.00040	< 0.00040
Zinc	mg/L	0.001	0.006	0.004	0.003	0.003	0.0010	0.00143	0.00090	0.00232	0.00458	0.00581	0.00334	0.00305

Table 8-17 Meadowbank 2024 South Portage Pit Water Quality Monitoring (ST-19) §

ST-19	Unit	Annual Average					1/1/2024	2/11/2024	3/25/2024	4/9/2024	5/6/2024	6/2/2024	7/7/2024	8/4/2024	9/1/2024	10/7/2024
Parameter		2020	2021	2022	2023	2024										
Field Measured																
Temperature	°C	-	3.9	4.7	6.2	5.3	-0.2	0.6	0.2	2.0	3.5	5.4	10.8	12.1	12.4	5.8
pH	pH units	7.75	8.20	8.29	8.34	8.26	8.73	8.36	8.35	8.55	8.51	8.36	7.96	8.00	7.93	7.88
Conductivity	uS/cm	2677	2971	4588	5648	6022	5681	5777	6949	7029	6302	5729	6095	5903	5519	5239
Turbidity	NTU	-	3.99	24.85	8.82	15.50	5.27	6.63	39.50	6.67	7.92	21.60	51.80	5.88	2.64	7.07
Conventional Parameters																
Hardness, as CaCO ₃	mg/L	871	988	1333	2773	1519	1630	1860	1670	1720	1540	1360	1430	1330	1350	1300
Total alkalinity, as CaCO ₃	mg/L	90	91	103	103	99	100	97	93	100	100	91	95	99	100	110
Carbonate, as CaCO ₃	mg/L	-	1.0	1.1	1.3	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2
Bicarbonate, as CaCO ₃	mg/L	-	90	102	102	97	100	97	92	100	100	91	95	99	100	100
TDS	mg/L	17	2680	3719	4335	4858	4640	5260	5570	5550	5130	4660	4590	4240	4750	4190
TSS	mg/L	1	15	52	23	44	30	29	130	44	16	90	73	9	3	17
Total organic carbon	mg/L	19	26	54	78	92	79	100	110	110	90	93	84	89	80	80
Dissolved organic carbon	mg/L	17.7	25.4	52.4	75.8	85.7	76	89	100	99	84	90	77	82	81	79
Sodium Adsorption Ratio (salinity in water)	-	-	5	6	7	8	7.3	7.5	8.3	8.5	7.7	7.2	7.3	7.1	7.4	7.1
Oxidation-Reduction Potential	mV	-	192.9	177.5	228.3	223.0	160	180	240	210	220	230	270	210	210	300
Major Ions																
Bromide	mg/L	-	2.33	4.47	3.33	3.92	2.7	2.6	5.6	5.6	4.8	4.3	4.1	3.5	3.2	2.8
Chloride	mg/L	200.0	219.9	435.8	670.0	799.0	710	940	1000	950	710	910	750	730	690	600
Cyanide	mg/L	0.049	0.310	1.733	4.101	6.652	1.11	5.02	16.00	19.80	13.40	8.90	1.84	0.06	0.04	0.35
Cyanide (free)	mg/L	0.0180	0.3700	0.2021	0.7626	1.7692	0.52	1.00	3.70	4.00	4.60	2.90	0.59	0.01	0.02	0.35
Cyanide (WAD)	mg/L	0.0210	0.2300	0.8188	1.8038	3.3426	0.74	< 0.50	7.70	5.50	9.50	7.20	2.00	< 0.0025	0.02	0.26
Fluoride	mg/L	0.39	0.25	0.16	0.15	0.14	0.17	0.13	0.12	0.11	0.16	0.14	0.15	< 0.10	0.17	0.18
Silica	mg/L	-	6.00	7.14	6.13	4.88	7.5	5.3	5.3	5.9	3.0	1.5	5.1	4.2	5.5	5.5
Sulfate	mg/L	1150	1032	1808	2150	1969	2300	87	2500	2600	2400	2000	1800	2100	2000	1900
Nutrients																
Ammonia Nitrogen	mg N/L	14.72	40.11	53.08	63.25	55.30	56	60	61	65	64	44	50	51	55	47
Nitrate	mg N/L	2.04	8.17	12.11	21.68	21.81	22.1	26.7	26.1	29.0	19.0	18.5	18.1	20.4	18.6	19.6
Nitrite	mg N/L	0.080	0.280	0.347	0.271	0.282	0.267	0.289	0.318	0.323	0.330	0.260	0.254	0.266	0.261	0.254
Total Kjeldahl nitrogen	mg N/L		66	110	141	148	140	160	170	170	150	140	160	140	120	130
Total phosphorus	mg P/L	0.010	0.027	0.031	0.045	0.028	0.028	< 0.020	0.041	0.014	0.016	0.026	0.043	0.023	0.054	0.011
Orthophosphate	mg P/L	-	0.039	0.038	0.032	0.045	0.011	0.026	0.057	0.070	0.062	0.050	0.058	0.071	0.033	< 0.010
Total Metals																
Aluminum	mg/L	0.0190	0.0947	0.9945	0.4291	0.4841	0.0155	0.0262	1.250	0.2520	0.0651	0.9970	1.890	0.1420	0.0550	0.1480
Antimony	mg/L	-	0.01139	0.01543	0.02274	0.01224	0.01910	0.01910	0.00695	0.00643	0.01510	0.01130	0.01240	0.01130	0.00865	0.01210
Arsenic	mg/L	0.0108	0.1296	0.1502	0.2602	0.1611	0.1190	0.1140	0.0721	0.1200	0.1550	0.1680	0.1330	0.3080	0.2650	0.1570
Barium	mg/L	0.0292	0.0893	0.1329	0.2675	0.1347	0.116	0.140	0.143	0.158	0.133	0.130	0.142	0.117	0.145	0.123
Beryllium	mg/L	-	0.00002	0.00006	0.00009	0.00006	< 0.000050	< 0.000050	< 0.00010	< 0.00010	< 0.000050	< 0.000050	< 0.000050	< 0.00005	< 0.000050	< 0.000050
Boron	mg/L	-	0.1990	0.2951	0.5493	0.3580	0.407	0.438	0.362	0.341	0.412	0.355	0.323	0.293	0.339	0.310
Cadmium	mg/L	0.00002	0.00007	0.00019	0.00056	0.00022	< 0.000025	< 0.000025	0.000191	0.000564	< 0.000025	0.000086	0.000393	0.000271	0.000448	0.000212
Calcium (total)	mg/L	267.0	358.0	492.8	1049.2	575.5	619	707	634	654	580	516	542	506	511	486
Chromium	mg/L	0.00060	0.00190	0.03978	0.01203	0.01555	0.00120	< 0.00050	0.05300	0.00760	0.00125	0.03780	0.04740	0.00178	0.00101	0.00394
Copper	mg/L	0.003	2.451	3.178	10.461	7.744	3.17	7.71	11.10	13.40	11.20	8.48	8.36	8.39	4.50	1.13
Iron	mg/L	0.070	0.277	2.785	2.935	1.492	0.0446	0.0333	3.87	2.20	0.304	3.170	4.640	0.202	0.093	0.359
Lead	mg/L	0.00017	0.00056	0.00912	0.00438	0.00295	0.000267	0.000396	0.00441	0.00321	0.00104	0.00428	0.00825	0.00312	0.00153	0.00298
Lithium	mg/L	-	0.00337	0.00426	0.00549	0.00409	< 0.0025	0.0026	< 0.0050	< 0.0050	< 0.0025	0.0033	0.0045	0.0038	0.0056	0.0061
Magnesium (total)	mg/L	50.10	23.40	24.87	37.53	19.90	21.3	22.1	22.0	21.7	20.9	18.0	18.5	16.5	18.1	19.9
Manganese	mg/L	1.351	0.046	0.125	0.096	0.071	0.0445	0.0046	0.1470	0.0586	0.0190	0.0896	0.1550	0.0536	0.0661	0.0735
Mercury	mg/L	0.00001	0.00010	0.00022	0.00010	0.00024	< 0.00010	< 0.00010	< 0.0015	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Molybdenum	mg/L	0.1804	0.1051	0.1097	0.2023	0.0935	0.1210	0.1260	0.0791	0.0739	0.1090	0.0790	0.0926	0.0900	0.0844	0.0798

ST-19	Unit	Annual Average					1/1/2024	2/11/2024	3/25/2024	4/9/2024	5/6/2024	6/2/2024	7/7/2024	8/4/2024	9/1/2024	10/7/2024
Parameter		2020	2021	2022	2023	2024										
Nickel	mg/L	0.034	0.276	0.708	3.127	1.949	0.705	0.547	3.580	4.860	2.980	3.070	1.850	0.767	0.706	0.420
Potassium (total)	mg/L	66.60	138.20	186.83	399.17	198.40	231	256	233	237	208	170	165	161	164	159
Selenium	mg/L	0.0010	0.1071	0.1752	0.4149	0.2177	0.238	0.243	0.216	0.254	0.226	0.199	0.210	0.191	0.188	0.212
Silver	mg/L	0.00010	0.00040	0.00044	0.00132	0.00048	0.000176	0.000387	0.002430	0.000160	0.000669	0.000231	< 0.000050	0.000398	0.000054	0.000257
Sodium (total)	mg/L	391.0	330.0	473.1	1040.8	634.8	646	737	702	748	670	577	568	550	578	572
Strontium	mg/L	0.924	1.346	2.169	5.868	3.272	3.00	3.89	4.01	4.26	3.63	3.21	2.72	2.75	2.83	2.42
Thallium	mg/L	0.00020	0.00010	0.00003	0.00003	0.00004	0.000018	< 0.000010	0.000080	0.000058	0.000014	0.000019	0.000051	0.000032	0.000047	0.000046
Tin	mg/L	-	0.0005	0.0009	0.0019	0.0012	< 0.0010	< 0.0010	< 0.0020	< 0.0020	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Titanium	mg/L	-	0.0018	0.0528	0.0212	0.0232	< 0.0025	< 0.0025	0.064	< 0.020	< 0.0025	0.054	0.060	< 0.010	< 0.010	0.0061
Uranium	mg/L	-	0.0192	0.0148	0.0202	0.0095	0.00972	0.01120	0.00895	0.01020	0.01210	0.00752	0.00840	0.00832	0.00925	0.00954
Vanadium	mg/L	-	0.0006	0.0038	0.0019	0.0020	< 0.0010	< 0.0010	0.0035	< 0.0020	< 0.0010	0.0029	0.0052	0.0014	< 0.0010	< 0.0010
Zinc	mg/L	0.001	0.002	0.006	0.020	0.005	0.00288	0.00094	< 0.010	< 0.010	0.00391	< 0.0050	0.00640	0.00770	< 0.0050	0.00123
Dissolved Metals																
Aluminum	mg/L	0.0060	0.0085	0.0135	0.0191	0.0489	0.3120	0.0166	0.0139	0.0139	0.0163	0.0404	0.0172	0.0215	0.0154	0.0221
Antimony	mg/L	-	0.01046	0.01616	0.01437	0.01458	0.0143	0.0138	0.0153	0.0148	0.0160	0.0141	0.0161	0.0138	0.0119	0.0157
Arsenic	mg/L	0.00120	0.12000	0.13282	0.16687	0.15849	0.0876	0.1080	0.0723	0.1180	0.1600	0.1650	0.1180	0.3100	0.2730	0.1730
Barium	mg/L	0.0201	0.0797	0.1268	0.1383	0.1357	0.101	0.135	0.145	0.162	0.141	0.142	0.137	0.130	0.152	0.112
Beryllium	mg/L	-	0.00002	0.00004	0.00005	0.00005	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Boron	mg/L	-	0.190	0.277	0.314	0.349	0.300	0.346	0.332	0.395	0.465	0.364	0.282	0.318	0.319	0.367
Cadmium	mg/L	0.00002	0.00006	0.00014	0.00025	0.00016	0.000050	< 0.000025	< 0.000025	0.000125	< 0.000025	< 0.000025	0.000333	0.000334	0.000452	0.000188
Chromium	mg/L	0.00060	0.00029	0.00042	0.00055	0.00103	0.00577	< 0.00050	0.00051	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Copper	mg/L	0.0005	2.0440	3.2285	3.6762	7.3170	2.26	6.85	12.20	13.40	11.50	1.42	10.10	9.67	4.69	1.08
Iron	mg/L	0.010	0.011	0.147	0.302	0.093	0.5140	0.0272	0.1430	0.0512	0.1010	0.0559	0.0187	< 0.005	0.0066	0.0084
Lead	mg/L	0.00017	0.00010	0.00029	0.00046	0.00094	0.00590	0.000080	0.001310	0.000333	0.000121	0.000084	0.000186	0.000615	0.000453	0.00030
Lithium	mg/L	-	0.00345	0.00345	0.00367	0.00348	0.0033	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.0031	< 0.0025	0.0038	0.0060	0.0061
Manganese	mg/L	1.2296	0.0445	0.0403	0.0414	0.0360	0.04680	0.00387	0.01100	0.0130	0.02140	0.02390	0.04870	0.05910	0.06820	0.06390
Mercury	mg/L	0.0000	0.0001	0.0001	0.0001	0.0002	< 0.00010	< 0.00010	< 0.0015	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Molybdenum	mg/L	0.1618	0.0992	0.1075	0.1126	0.0924	0.0939	0.1070	0.0972	0.0859	0.1040	0.0844	0.0822	0.0940	0.0881	0.0871
Nickel	mg/L	-	0.245	0.651	1.251	1.607	0.564	0.495	2.250	2.940	2.800	3.290	1.770	0.819	0.738	0.403
Selenium	mg/L	0.001	0.096	0.172	0.253	0.243	0.190	0.238	0.279	0.305	0.245	0.220	0.236	0.255	0.235	0.224
Silver	mg/L	0.00010	0.00033	0.00068	0.00121	0.00385	0.001310	0.000329	0.002130	0.000183	0.000651	< 0.000025	0.000893	0.001040	0.03160	0.000341
Strontium	mg/L	0.995	1.274	2.186	3.208	3.372	2.58	3.83	4.30	4.52	3.77	3.67	2.96	2.93	2.75	2.41
Thallium	mg/L	0.00020	0.00005	0.00002	0.00002	0.00003	0.000119	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	0.000029	0.000031	0.000037	0.000042
Tin	mg/L	-	0.0005	0.0008	0.0011	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Titanium	mg/L	-	0.0012	0.0021	0.0027	0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Uranium	mg/L	-	0.0190	0.0143	0.0110	0.0099	0.00792	0.01020	0.00985	0.01120	0.01170	0.00993	0.00893	0.00952	0.01040	0.00901
Vanadium	mg/L	-	0.0010	0.0008	0.0010	0.0013	0.0035	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Zinc	mg/L	0.001	0.001	0.002	0.004	0.005	0.02010	0.00071	0.00058	0.00066	0.00082	0.00088	0.01030	0.00192	0.00592	0.00357

8.5.2.1.10 Goose Pit (ST-20) §

Mining activities have ceased in the Goose Pit in April 2015. Starting in June 2015, no additional water was pumped out of the Goose Pit sump; instead, runoff and groundwater were kept in the pit to contribute to natural re-flooding of the pit. On May 24th, 2019, Agnico Eagle received from NWB the Ministers Approval regarding the Amendment No.3 to Type A Water License 2AM-MEA1526 to authorize Water Uses and Waste Deposits associated with the In-Pit Tailings Disposal. In-Pit Deposition in Goose Pit started on July 5th, 2019.

Since the in-pit tailings deposition started in July 2019, the station name has been changed for ST-20 instead of ST-20 Lake. Nomenclature modification only, the sampling location remains the same. Refer to previous Annual Reports for the ST-20 Lake sampling results.

In 2024, Agnico Eagle collected ten (10) monthly water quality samples at the bottom of Goose Pit (ST-20). Results of sampling conducted at station ST-20 are presented in Table 8-18. The station location is illustrated in Figure 1.

Six (6) samples were also collected monthly during open water from May to October at the sump at the top of Goose Pit (sampling station ST-20 Goose Pit Sump). The data is presented in Table 8-19, the sampling location is illustrated on Figure 1. There are no applicable license limits for ST-20 Goose Pit Sump and ST-20 as the water was not directly released into the environment; the data is presented for information purposes only.

8.5.2.1.11 Tailings Storage Facility (ST-21) §

The North Cell Tailings Storage Facility became operational in February 2010. On November 17th, 2014, the reclaim water intake was transferred from the North Cell TSF to the South Cell TSF. Tailings deposition was also stopped in the North Cell TSF and commenced in the South Cell TSF at that time. As per the NWB Water License, sampling station ST-21 changed location from the North to the South Cell. Sampling was conducted monthly during open water as per the requirements of the NWB Water License. There are no applicable license limits for this station as the water is pumped into Portage Pit. Sample results are presented in Table 8-20. The location of sampling station ST-21 (South Cell TSF) is illustrated on Figure 1. As per the Water License, no further monitoring in the TSF North Cell is required.

8.5.2.1.12 Vault Pit Lake (ST-26) §

In 2014, a sump was constructed in Vault Pit in an area of water accumulation. Water from Vault Pit is sampled monthly during open water as per the requirements in the NWB Water License. Since 2020, water from Vault Pit sump (ST-23) is no longer sampled due to the natural reflooding of the Pit, samples are now collected from the Vault Pit Lake (ST-26) (Table 8-21). Please refer to previous Annual Reports for ST-23 results. The Vault Pit Lake was sampled monthly during open water as per the requirements in the NWB Water License (sampling station ST-26 on Figure 3). In 2024 no water was pumped to the Vault Attenuation Pond. Water is rather kept in the pit and contributes to the natural reflooding. There are no applicable license limits for ST-26.

Table 8-18 Meadowbank 2024 Goose Pit Water Quality Monitoring (ST-20) §

ST-20	Unit	Annual Average					2/10/2024	3/17/2024	5/26/2024	6/2/2024	7/7/2024	8/4/2024	9/1/2024	10/13/2024	11/4/2024	12/1/2024
Parameter		2020	2021	2022	2023	2024										
Field Measured																
Temperature	°C	7.9	7.8	8.9	7.8	3.5	0.8	0.6	1.4	1.6	9.9	10.3	6.0	3.8	0.3	0.5
pH	pH units	8.28	8.02	7.81	7.92	7.62	7.58	7.39	7.52	7.56	7.84	7.97	7.74	7.73	7.45	7.39
Conductivity	uS/cm	2362.3	2021.4	1441.4	1385.5	1887.6	2340	2509	392	762	1470	2093	2368	2472	2254	2216
Turbidity	NTU	3.85	3.87	3.35	23.14	11.85	-	2.71	27.30	17.90	16.60	14.80	6.07	8.24	7.73	5.32
Conventional Parameters																
Hardness, as CaCO ₃	mg/L	817.33	527.20	359.10	340.83	503.90	699	688	113	196	318	498	596	626	621	684
Total alkalinity, as CaCO ₃	mg/L	81.00	100.40	77.60	72.00	100.10	130	130	33	42	71	95	120	130	120	130
Carbonate, as CaCO ₃	mg/L	7.00	1.10	1.00	1.00	1.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0
Bicarbonate, as CaCO ₃	mg/L	78.00	98.40	75.00	70.17	100.00	130	130	33	42	70	95	120	130	120	130
TDS	mg/L	1493	1396	977	877	1345	1840	1810	265	485	875	1250	1710	1750	1670	1790
TSS	mg/L	11.00	2.75	4.00	64.17	10.30	3	2	28	10	16	15	6	12	6	5
Total organic carbon	mg/L	-	12.80	6.78	6.77	5.98	8.9	8.7	1.4	2.6	4.4	7.1	8.9	8.3	5.9	3.6
Dissolved organic carbon	mg/L	17.00	11.72	6.18	4.40	5.15	7.7	8.0	1.1	2.4	4.4	5.5	7.9	7.1	4.5	2.9
Sodium Adsorption Ratio (salinity in water)	-	-	3.20	2.43	2.45	3.06	3.8	3.8	0.9	1.6	2.6	3.2	3.7	3.7	3.6	3.7
Oxidation-Reduction Potential	mV	-	222.14	242.60	351.67	317.00	190	310	290	440	190	240	210	470	430	400
Major Ions																
Bromide	mg/L	-	1	2	1	1	1.1	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloride	mg/L	224	109	58	55	76	110	110	12	27	54	70	98	100	85	90
Cyanide	mg/L	0.370	0.058	0.018	0.021	0.027	0.080	0.0445	0.0073	0.0101	0.0156	0.0380	0.0321	0.0190	0.0106	0.0127
Cyanide (free)	mg/L	-	0.0143	0.0059	0.0112	0.0069	0.0049	0.0058	0.0100	0.0054	0.0120	0.0120	0.0079	0.0069	0.0023	< 0.0020
Cyanide (WAD)	mg/L	0.3812	0.0336	0.0137	0.0147	0.0157	< 0.050	0.0210	0.0067	0.0070	0.0090	0.0280	0.0150	0.0120	0.0043	0.0035
Fluoride	mg/L	0.27	0.25	0.26	0.25	0.27	0.38	0.36	0.11	0.14	0.21	< 0.10	0.30	0.35	0.35	0.35
Silica	mg/L	7.2	5.9	4.8	4.6	5.9	7.9	7.9	1.5	2.3	4.2	5.8	7.3	7.3	7.2	7.4
Sulfate	mg/L	943	768	596	562	823	1100	1100	160	280	470	720	1100	1100	1100	1100
Nutrients																
Ammonia Nitrogen	mg N/L	22.5	23.2	19.2	18.6	28.8	41	40	4	9.6	18	26	35	35	37	42
Nitrate	mg N/L	3.91	2.05	0.77	0.19	0.12	0.14	< 0.10	0.26	0.12	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrite	mg N/L	0.180	0.462	0.614	0.333	0.049	0.147	0.207	0.020	0.030	0.023	0.018	< 0.010	< 0.010	0.012	< 0.010
Total Kjeldahl nitrogen	mg N/L	43	36	24	22	33	47	45	4.5	11	22	32	38	46	45	40
Total phosphorus	mg P/L	0.063	0.023	0.017	0.075	0.037	0.032	0.032	0.013	0.012	0.020	0.024	0.033	0.027	0.067	0.110
Orthophosphate	mg P/L	1.38	0.15	0.07	0.05	0.04	0.053	0.067	< 0.010	< 0.010	0.034	0.023	0.040	0.031	0.029	0.095
Total Metals																
Aluminum	mg/L	0.1693	0.0526	0.0375	0.6159	0.1339	0.0218	0.0182	0.3720	0.3620	0.2270	0.0948	0.0585	0.0889	0.0508	0.0446
Antimony	mg/L	0.0133	0.0140	0.0086	0.0067	0.0083	0.01300	0.01360	0.00132	0.00275	0.00527	0.00798	0.00894	0.00976	0.00971	0.01060
Arsenic	mg/L	0.8344	0.5060	0.3106	0.2443	0.3249	0.462	0.514	0.049	0.101	0.188	0.292	0.403	0.433	0.382	0.425

ST-20	Unit	Annual Average					2/10/2024	3/17/2024	5/26/2024	6/2/2024	7/7/2024	8/4/2024	9/1/2024	10/13/2024	11/4/2024	12/1/2024
Parameter		2020	2021	2022	2023	2024										
Barium	mg/L	0.0637	0.0434	0.0308	0.0305	0.0374	0.0497	0.0510	0.0146	0.0170	0.0254	0.0355	0.0435	0.0447	0.0449	0.0480
Beryllium	mg/L	0.00050	0.00002	0.00001	0.00003	0.00002	< 0.000020	< 0.000020	0.000026	0.000028	0.000014	0.000010	< 0.000020	< 0.000010	< 0.000020	< 0.000020
Boron	mg/L	0.010	0.137	0.099	0.090	0.141	0.216	0.191	0.025	0.047	0.084	0.138	0.173	0.167	0.164	0.200
Cadmium	mg/L	0.00050	0.00001	0.00001	0.00002	0.00001	< 0.000010	0.0000110	0.0000231	0.0000180	0.0000159	0.0000169	< 0.000010	0.0000116	0.0000130	0.0000180
Calcium (total)	mg/L	309.00	197.84	132.18	123.05	182.63	254.0	249.0	39.6	70.7	114.0	180.0	217.0	228.0	226.0	248.0
Chromium	mg/L	0.00162	0.00063	0.00067	0.00973	0.00171	< 0.00020	0.00023	0.00672	0.00418	0.00231	0.00077	0.00040	0.00103	0.00066	0.00059
Copper	mg/L	2.5258	0.0245	0.0058	0.0104	0.0154	0.03310	0.02820	0.00588	0.00808	0.01010	0.01340	0.01630	0.01350	0.01230	0.01320
Iron	mg/L	0.458	0.112	0.092	1.529	0.333	0.102	0.119	0.774	0.542	0.453	0.278	0.255	0.337	0.246	0.219
Lead	mg/L	0.00024	0.00036	0.00018	0.00087	0.00074	0.000183	0.000181	0.002040	0.001370	0.000894	0.000482	0.000281	0.000772	0.000644	0.000577
Lithium	mg/L	0.00517	0.00345	0.00381	0.00337	0.00399	0.00610	0.00500	0.00178	0.00206	0.00275	0.00394	0.00460	0.00450	0.00440	0.00480
Magnesium (total)	mg/L	13	9	7	8	12	15.6	16.3	3.5	4.7	7.8	12.0	13.4	13.8	14.0	16.0
Manganese	mg/L	0.0474	0.0501	0.0528	0.0725	0.0988	0.1040	0.0988	0.0863	0.0752	0.0780	0.0991	0.1040	0.1070	0.1110	0.1250
Mercury	mg/L	0.00001	0.00008	0.00008	0.00009	0.00006	< 0.00010	< 0.00010	< 0.00001	< 0.00001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00001	< 0.00001
Molybdenum	mg/L	0.1025	0.0770	0.0493	0.0447	0.0647	0.09320	0.09660	0.00985	0.02030	0.04240	0.06510	0.07380	0.08140	0.07740	0.08720
Nickel	mg/L	0.1656	0.0653	0.0410	0.0473	0.0686	0.1040	0.1020	0.0219	0.0312	0.0464	0.0687	0.0745	0.0739	0.0768	0.0870
Potassium (total)	mg/L	137.54	80.18	52.63	49.18	72.31	102.0	100.0	11.6	22.8	44.4	70.5	88.6	90.9	88.3	104.0
Selenium	mg/L	0.0479	0.0329	0.0197	0.0162	0.0189	0.02650	0.03280	0.00309	0.00739	0.01350	0.02100	0.01620	0.02160	0.02200	0.02470
Silver	mg/L	0.000900	0.000040	0.000013	0.000019	0.000010	< 0.000010	< 0.000010	0.000009	0.000009	0.0000119	0.0000073	< 0.000020	< 0.0000050	< 0.000010	< 0.000010
Sodium (total)	mg/L	274.2	157.9	104.7	96.8	154.3	220.0	211.0	20.7	49.0	93.1	155.0	192.0	187.0	195.0	220.0
Strontium	mg/L	0.693	0.543	0.396	0.380	0.591	0.825	0.842	0.143	0.200	0.389	0.577	0.729	0.713	0.734	0.758
Thallium	mg/L	0.00020	0.00002	0.00001	0.00002	0.00001	0.000011	0.000010	0.0000172	0.000015	0.0000144	0.0000164	0.0000091	0.0000251	0.0000106	0.000010
Tin	mg/L	0.0010	0.0003	0.0003	0.0003	0.0003	< 0.00040	< 0.00040	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00040	< 0.00020	< 0.00040	< 0.00040
Titanium	mg/L	0.010	0.002	0.002	0.013	0.005	< 0.0010	< 0.0010	0.01410	0.01070	0.00833	0.00298	< 0.0040	0.00286	0.00100	0.00120
Uranium	mg/L	0.0080	0.0064	0.0049	0.0055	0.0077	0.01090	0.01150	0.00225	0.00310	0.00536	0.00652	0.00862	0.00944	0.00934	0.00952
Vanadium	mg/L	0.0008	0.0005	0.0003	0.0014	0.0005	< 0.00040	< 0.00040	0.00086	0.00077	0.00066	0.00044	< 0.00040	0.00043	< 0.00040	< 0.00040
Zinc	mg/L	0.0028	0.0015	0.0014	0.0039	0.0019	0.00094	0.00065	0.00428	0.00214	0.00187	0.00094	< 0.0020	0.00250	0.00171	0.00164
Dissolved Metals																
Aluminum	mg/L	0.0088	0.0111	0.0116	0.1143	0.0124	0.00800	0.00570	0.01740	0.01140	0.02820	0.01070	0.01100	0.01310	0.01030	0.00801
Antimony	mg/L	0.01277	0.01210	0.00872	0.00719	0.00783	0.01190	0.01200	0.00116	0.00285	0.00518	0.00778	0.00846	0.00957	0.01030	0.00914
Arsenic	mg/L	0.7832	0.3984	0.3085	0.2462	0.2666	0.4160	0.4240	0.0289	0.0801	0.1520	0.2360	0.3350	0.3350	0.3300	0.3290
Barium	mg/L	0.0552	0.0430	0.0305	0.0300	0.0359	0.0495	0.0465	0.0102	0.0180	0.0231	0.0346	0.0434	0.0446	0.0462	0.0424
Beryllium	mg/L	0.00050	0.00001	0.00001	0.00001	0.00002	< 0.000020	< 0.000020	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000020	< 0.000020	< 0.000020	< 0.000010
Boron	mg/L	0.010	0.141	0.108	0.096	0.127	0.169	0.167	0.020	0.048	0.073	0.125	0.168	0.175	0.172	0.155
Cadmium	mg/L	0.000020	0.000019	0.000011	0.000021	0.000011	< 0.000010	< 0.000010	0.0000161	0.0000131	0.0000165	0.0000113	< 0.000010	< 0.000010	0.000012	< 0.0000050
Chromium	mg/L	0.0006	0.0002	0.0002	0.0006	0.0002	< 0.00020	< 0.00020	0.00022	0.00016	< 0.00010	< 0.00010	< 0.00020	< 0.00020	< 0.00020	0.00011
Copper	mg/L	0.6846	0.0197	0.0033	0.0068	0.0056	0.00214	0.00616	0.00327	0.00522	0.00588	0.00638	0.01260	0.00531	0.00535	0.00413
Iron	mg/L	0.010	0.007	0.009	0.118	0.009	0.0060	0.0324	0.0145	0.0034	0.0088	0.0027	0.0074	0.0060	0.0064	0.0037
Lead	mg/L	0.00024	0.00012	0.00006	0.00021	0.00007	0.0000460	0.0001610	0.0001430	0.0000186	0.0000698	0.0000129	0.0000190	0.0001720	0.0000460	0.0000435

ST-20	Unit	Annual Average					2/10/2024	3/17/2024	5/26/2024	6/2/2024	7/7/2024	8/4/2024	9/1/2024	10/13/2024	11/4/2024	12/1/2024
Parameter		2020	2021	2022	2023	2024										
Lithium	mg/L	0.00517	0.00344	0.00389	0.00286	0.00349	0.00460	0.00440	0.00117	0.00185	0.00217	0.00371	0.00420	0.00460	0.00420	0.00401
Manganese	mg/L	0.0265	0.0413	0.0427	0.0442	0.0926	0.0983	0.0931	0.0749	0.0762	0.0637	0.0913	0.1080	0.1010	0.1150	0.1040
Mercury	mg/L	0.00001	0.00008	0.00008	0.00009	0.00006	< 0.00010	< 0.00010	< 0.00001	< 0.00001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0937	0.0705	0.0511	0.0465	0.0629	0.0925	0.0911	0.00926	0.0201	0.0394	0.0637	0.0750	0.0769	0.0809	0.0803
Nickel	mg/L	0.1433	0.0622	0.0398	0.0379	0.0612	0.0951	0.0864	0.0164	0.0273	0.0399	0.0585	0.0701	0.0722	0.0779	0.0683
Selenium	mg/L	0.03800	0.03218	0.02041	0.01674	0.01850	0.02820	0.02930	0.00268	0.00748	0.01330	0.020	0.01770	0.02180	0.02270	0.02180
Silver	mg/L	0.00010	0.00002	0.00001	0.00001	0.00001	< 0.000010	0.000022	< 0.000050	< 0.0000050	< 0.0000050	< 0.0000050	< 0.000010	< 0.000010	< 0.000010	< 0.0000050
Strontium	mg/L	0.6288	0.5940	0.4079	0.3887	0.5736	0.788	0.784	0.123	0.242	0.337	0.555	0.707	0.721	0.707	0.772
Thallium	mg/L	-	0.00002	0.00001	0.00001	0.00001	0.0000082	0.0000064	0.0000110	0.0000104	0.0000130	0.0000203	0.0000078	0.0000142	0.0000120	0.0000097
Tin	mg/L	-	0.0003	0.0003	0.0002	0.0003	< 0.00040	< 0.00040	0.00046	< 0.00020	< 0.00020	< 0.00020	< 0.00040	< 0.00040	< 0.00040	< 0.00020
Titanium	mg/L	0.0100	0.0006	0.0006	0.0019	0.0008	< 0.0010	< 0.0010	0.00071	< 0.00050	< 0.00050	< 0.00050	< 0.0010	< 0.0010	< 0.0010	< 0.00050
Uranium	mg/L	0.0070	0.0063	0.0048	0.0056	0.0075	0.01030	0.00992	0.00189	0.00311	0.00509	0.00763	0.00879	0.00972	0.00964	0.00869
Vanadium	mg/L	0.0007	0.0004	0.0003	0.0004	0.0004	< 0.00040	< 0.00040	0.00021	< 0.00020	0.00069	< 0.00020	< 0.00040	< 0.00040	< 0.00040	0.00023
Zinc	mg/L	0.0010	0.0029	0.0014	0.0043	0.0030	0.00199	0.00287	0.00212	0.00136	0.00724	0.00087	0.00263	0.00273	0.00467	0.00315

Table 8-19 Meadowbank 2024 Goose Pit Sump Water Quality Monitoring (ST-20 Pit Sump) §

ST-20 Pit Sump Parameter	Unit	Annual Average					5/26/2024	6/2/2024	7/7/2024	8/18/2024	9/1/2024	10/13/2024
		2020	2021	2022	2023	2024						
Field Measured												
Temperature	°C	-	10.7	9.1	7.3	6.5	2.6	2.8	10	12.7	9.7	1.4
pH	pH units	7.88	7.89	7.68	7.74	7.63	7.14	7.61	7.39	7.87	8.03	7.71
Conductivity	uS/cm	-	388.5	463.6	647.2	340.7	138.9	133.5	472.0	504.0	322.0	474.0
Turbidity	NTU	17.99	10.71	14.30	18.81	31.28	94.80	57.30	7.41	1.46	1.90	24.80
Conventional Parameters												
Hardness, as CaCO ₃	mg/L	-	193	210	213	160	60.9	67.6	192.0	202.0	205.0	230.0
Total alkalinity, as CaCO ₃	mg/L	-	55	56	62	51	27	30	65	58	59	64
TDS	mg/L	228	306	307	332	243	100	115	310	275	310	345
TSS	mg/L	9	7	6	20	20	52	37	13	2	2	12
Major Ions												
Chloride	mg/L	5.6	7.4	13.4	8.4	6.7	3.0	4.3	8.4	8.8	7.7	8.2
Cyanide	mg/L	0.001	0.007	0.002	0.001	0.001	0.00242	0.00342	0.00071	0.00085	< 0.00050	< 0.00050
Fluoride	mg/L	0.19	0.26	0.29	0.33	0.21	< 0.10	< 0.10	0.23	0.26	0.27	0.27
Sulfate	mg/L	108	145	160	165	115	40	39	140	140	160	170
Nutrients												
Ammonia Nitrogen	mg N/L	0.05	0.11	0.05	0.06	0.07	0.099	0.110	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	3.48	3.58	2.87	2.02	0.86	0.39	0.41	1.16	0.98	0.99	1.25
Nitrite	mg N/L	0.025	0.017	0.019	0.010	0.010	0.010	0.011	0.011	< 0.010	< 0.010	< 0.010
Total Metals												
Aluminum	mg/L	0.3995	0.1801	0.1773	0.2489	0.3570	0.8580	0.6740	0.2130	0.0140	0.0227	0.3600
Arsenic	mg/L	0.00623	0.00373	0.00365	0.00361	0.01156	0.02790	0.02130	0.00671	0.00459	0.00360	0.00526
Barium	mg/L	0.0169	0.0214	0.0199	0.0221	0.0202	0.0167	0.0157	0.0213	0.0215	0.0216	0.0241
Cadmium	mg/L	0.00002	0.00002	0.00002	0.00002	0.00003	0.0000584	0.0000320	0.0000300	0.0000210	0.0000219	0.0000309
Chromium	mg/L	0.00395	0.00137	0.00219	0.00208	0.00531	0.01570	0.01020	0.00237	0.00023	0.00030	0.00308
Copper	mg/L	0.0036	0.0011	0.0012	0.0024	0.0027	0.00535	0.00401	0.00132	0.00127	0.00178	0.00226
Iron	mg/L	0.678	0.317	0.339	0.465	0.729	1.850	1.380	0.453	0.019	0.042	0.631
Lead	mg/L	0.00039	0.00030	0.00039	0.00054	0.00184	0.005820	0.003870	0.000462	0.000120	0.000096	0.000687
Manganese	mg/L	0.0460	0.0359	0.0316	0.0424	0.0803	0.1450	0.1430	0.0961	0.0210	0.0233	0.0536
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0033	0.0044	0.0043	0.0043	0.0026	0.000988	0.001350	0.003340	0.003420	0.003300	0.003280
Nickel	mg/L	0.0840	0.0460	0.0377	0.0343	0.0470	0.0306	0.0287	0.0471	0.0390	0.0554	0.0809
Selenium	mg/L	0.0010	0.0007	0.0006	0.0007	0.0003	0.000165	0.000178	0.000342	0.000386	0.000390	0.000452
Silver	mg/L	0.00010	0.00001	0.00001	0.00001	0.00001	0.0000349	0.0000100	< 0.0000050	< 0.0000050	< 0.0000050	0.0000053
Thallium	mg/L	0.00020	0.00004	0.00003	0.00004	0.00004	0.0000252	0.0000240	0.0000352	0.0000402	0.0000444	0.0000595
Zinc	mg/L	0.0025	0.0022	0.0035	0.0039	0.0027	0.00659	0.00430	0.00228	0.00049	0.00043	0.00238

Table 8-20 Meadowbank 2024 Tailings Storage Facility Water Quality Monitoring (ST-21) §

ST-21	Unit	Annual Average					5/19/2024	5/26/2024	6/2/2024	7/7/2024	8/4/2024	9/1/2024	10/13/2024
Parameter		2020	2021	2022	2023	2024							
Field Measured													
Temperature	°C	8.3	5.5	9.3	12.1	6.2	2.8	5.6	3.6	9.9	12.0	9.4	0.4
pH	pH units	7.91	8.12	7.37	7.83	7.72	7.69	7.68	7.52	7.92	7.88	7.91	7.47
Conductivity	uS/cm	1160	1583	1202	1741	862	799	696	625	831	1266	1013	806
Turbidity	NTU	19.71	36.36	23.00	27.41	31.52	35.60	36.40	53.80	21.10	33.70	7.97	32.10
Conventional Parameters													
Hardness, as CaCO ₃	mg/L	-	419	424	537	333	312	248	214	301	477	434	343
Total alkalinity, as CaCO ₃	mg/L	75	88	68	83	69	43	43	51	82	96	100	68
TDS	mg/L	735	1186	835	1303	631	560	490	435	565	925	855	590
TSS	mg/L	35	42	21	19	25	29	29	31	15	44	6	22
Major Ions													
Chloride	mg/L	43.70	101.80	34.00	104.00	10.90	8.7	8.7	8.8	9.4	17.0	16.0	7.7
Cyanide	mg/L	0.024	0.055	0.036	2.275	0.022	0.01660	0.00741	0.02160	0.01370	0.06700	0.02250	0.00803
Cyanide (free)	mg/L	0.0038	0.0420	0.0076	0.2403	0.0034	0.0052	0.0037	0.0032	0.0026	0.0032	0.0034	0.0024
Cyanide (WAD)	mg/L	0.0028	0.0138	0.0093	2.0988	0.0075	0.0065	0.0032	0.0061	0.0019	0.0270	0.0044	0.0031
Fluoride	mg/L	0.26	0.23	0.21	0.23	0.18	< 0.10	< 0.10	0.10	0.19	0.28	0.31	0.17
Sulfate	mg/L	383	570	488	720	331	340	330	230	290	450	360	320
Nutrients													
Ammonia Nitrogen	mg N/L	6.0	15.7	4.7	11.1	0.8	0.56	0.58	1.60	0.82	0.34	0.33	1.40
Nitrate	mg N/L	4.49	7.42	3.29	6.81	3.46	0.60	0.51	1.82	3.48	6.30	6.95	4.53
Nitrite	mg N/L	0.353	0.213	0.201	0.170	0.084	0.018	0.028	0.069	0.138	0.162	0.073	0.103
Total Metals													
Aluminum	mg/L	0.453	0.910	0.629	0.361	0.541	0.444	0.522	1.00	0.237	0.969	0.125	0.491
Arsenic	mg/L	0.0190	0.0923	0.0466	0.0727	0.0607	0.0680	0.0693	0.0569	0.0487	0.0613	0.0485	0.0723
Barium	mg/L	0.0287	0.0381	0.0327	0.0471	0.0283	0.0211	0.0198	0.0181	0.0276	0.0471	0.0418	0.0229
Cadmium	mg/L	0.00003	0.00009	0.00009	0.00011	0.00008	0.0000722	0.0000708	0.0000679	0.0000870	0.0001270	0.0000569	0.0000861
Chromium	mg/L	0.00313	0.02466	0.01242	0.01299	0.01402	0.0110	0.0144	0.0268	0.0040	0.0234	0.0025	0.0160
Copper	mg/L	0.079	2.796	0.061	2.081	0.026	0.01430	0.00954	0.02250	0.02530	0.07590	0.02810	0.00781
Iron	mg/L	1.243	2.614	1.619	1.137	1.527	1.280	1.550	2.960	0.563	2.430	0.338	1.570
Lead	mg/L	0.0050	0.0153	0.0056	0.0043	0.0060	0.00529	0.00768	0.00947	0.00270	0.00670	0.00169	0.00840
Manganese	mg/L	0.5820	0.3444	0.4976	0.4425	0.3534	0.347	0.287	0.277	0.409	0.552	0.168	0.434
Mercury	mg/L	0.00001	0.00006	0.00006	0.00004	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0590	0.0417	0.0267	0.0401	0.0137	0.00876	0.00832	0.00918	0.01410	0.02290	0.01570	0.01700
Nickel	mg/L	0.030	1.139	0.129	0.678	0.132	0.1880	0.1570	0.0999	0.111	0.1440	0.0921	0.130
Selenium	mg/L	0.0013	0.0417	0.0076	0.0403	0.0011	0.000655	0.000584	0.001140	0.001230	0.002120	0.001220	0.000746
Silver	mg/L	0.0001	0.0009	0.0001	0.0009	0.0000	0.0000195	0.0000504	0.0000230	0.0000137	0.0000460	0.0000205	0.0000085
Thallium	mg/L	0.00020	0.00004	0.00002	0.00002	0.00002	0.0000105	0.0000154	0.0000237	0.0000088	0.0000180	0.0000052	0.0000237
Zinc	mg/L	0.004	0.005	0.004	0.002	0.007	0.00708	0.00739	0.00590	0.01960	0.00630	0.00115	0.00439

Table 8-21 Meadowbank 2024 Vault Pit Water Quality Monitoring (ST-26) [§]

ST-26	Unit	Annual Average					6/23/2024	7/8/2024	8/11/2024	9/10/2024	10/20/2024
Parameter		2020	2021	2022	2023	2024					
Field Measured											
Temperature	°C	9.1	6.7	8.8	8.2	8.7	2.3	12.9	17.7	8.4	2.3
pH	pH units	7.99	7.60	7.63	7.47	7.61	7.32	7.37	7.79	8.03	7.54
Conductivity	uS/cm	278.9	219.0	288.0	221.9	244.9	174.2	246.0	243.0	558.0	348.0
Turbidity	NTU	1.61	4.78	3.10	2.23	8.39	3.63	15.40	2.17	17.70	3.07
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	119	104	114	96	107	82.7	91.4	97.7	129.0	136.0
Total alkalinity, as CaCO ₃	mg/L	55	46	49	44	50	38	48	52	54	60
Carbonate, as CaCO ₃	mg/L	5	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃	mg/L	55.6	45.4	48.6	43.2	50	38	47	51	54	60
TDS	mg/L	125	150	148	124	157	175	150	135	165	160
TSS	mg/L	20	8	2	3	25	7	12	20	72	16
Total organic carbon	mg/L	2.3	1.7	1.6	1.9	1.4	1.2	1.5	1.5	1.4	1.5
Dissolved organic carbon	mg/L	2.4	1.6	1.5	1.7	1.4	1.3	1.4	1.4	1.3	1.5
Major Ions											
Chloride	mg/L	8.28	7.12	8.22	5.83	7.34	5.4	7.3	7.6	8.4	8.0
Cyanide	mg/L	0.001	0.005	0.001	0.001	0.001	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Cyanide (free)	mg/L	0.0010	0.0025	0.0024	0.0026	0.0024	< 0.0020	< 0.0020	0.0037	0.0022	< 0.0020
Silica	mg/L	3.86	2.32	2.54	1.99	2.50	1.9	2.1	2.4	3.1	3.0
Sulfate	mg/L	61.8	53.0	59.4	49.0	57.6	41	52	60	66	69
Nutrients											
Ammonia Nitrogen	mg N/L	0.148	0.074	0.054	0.053	0.050	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	2.23	1.61	1.54	1.03	1.34	0.83	1.10	1.25	1.53	1.97
Nitrite	mg N/L	0.018	0.012	0.013	0.010	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen	mg N/L	0.36	0.13	0.12	0.16	0.15	< 0.10	0.12	0.25	< 0.10	0.17
Total phosphorus	mg P/L	0.028	0.006	0.003	0.004	0.010	0.0045	0.0045	< 0.0010	0.0280	0.0110
Orthophosphate	mg P/L	0.016	0.010	0.010	0.010	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals											
Aluminum	mg/L	0.0270	0.2543	0.0419	0.0566	0.2107	0.0863	0.2760	0.0324	0.5350	0.1240
Antimony	mg/L	0.0003	0.0013	0.0013	0.0010	0.0013	0.000833	0.001020	0.001130	0.001560	0.002030
Arsenic	mg/L	0.0045	0.0032	0.0028	0.0027	0.0036	0.00249	0.00344	0.00269	0.00529	0.00411
Barium	mg/L	0.01204	0.01366	0.01484	0.01221	0.01213	0.00925	0.01180	0.01120	0.01430	0.01410
Beryllium	mg/L	0.0005	0.0001	0.0001	0.00001	0.00001	0.000010	< 0.000010	< 0.000010	0.000016	< 0.000010
Boron	mg/L	0.01	0.04	0.03	0.01	0.01	0.010	0.010	< 0.010	0.012	0.013
Cadmium	mg/L	0.000020	0.000014	0.000010	0.000013	0.000014	< 0.0000050	0.0000180	0.0000100	0.0000220	0.0000141
Calcium (total)	mg/L	34.6	30.2	33.4	28.5	31.5	24.5	25.9	28.7	37.9	40.3
Chromium	mg/L	0.0006	0.0010	0.0005	0.0008	0.0005	0.00028	0.00063	0.00017	0.00116	0.00033
Copper	mg/L	0.0017	0.0013	0.0011	0.0013	0.0013	0.00108	0.00166	0.00084	0.00181	0.00116
Iron	mg/L	0.06	0.46	0.06	0.10	0.41	0.200	0.468	0.0451	1.070	0.282
Lead	mg/L	0.0002	0.0009	0.0002	0.0006	0.0009	0.000427	0.001090	0.000139	0.002470	0.000562
Lithium	mg/L	0.0050	0.0023	0.0022	0.0019	0.0022	0.00148	0.00231	0.00191	0.00290	0.00245
Magnesium (total)	mg/L	7.94	6.96	7.39	6.01	7.02	5.21	6.48	6.29	8.45	8.66
Manganese	mg/L	0.0212	0.0194	0.0092	0.0119	0.0152	0.0220	0.0201	0.0045	0.0207	0.0087
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0219	0.0212	0.0228	0.0201	0.0267	0.0164	0.0209	0.0223	0.0351	0.0390
Nickel	mg/L	0.0021	0.0022	0.0016	0.0046	0.0020	0.00142	0.00231	0.00129	0.00287	0.00206
Potassium (total)	mg/L	3.26	2.72	2.67	2.19	2.41	1.76	2.23	2.12	2.80	3.16
Selenium	mg/L	0.0009	0.0003	0.0003	0.0002	0.0002	0.000180	0.000185	0.000242	0.000286	0.000316
Sodium (total)	mg/L	3.67	2.71	2.82	2.10	2.51	1.76	2.42	2.33	2.99	3.05
Strontium	mg/L	0.219	0.215	0.233	0.194	0.221	0.152	0.208	0.202	0.261	0.284
Thallium	mg/L	0.000200	0.000017	0.000015	0.000012	0.000016	0.0000110	0.0000131	0.0000131	0.0000210	0.0000197
Tin	mg/L	0.001	0.004	0.002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Titanium	mg/L	0.0100	0.0044	0.0027	0.0008	0.0026	0.00119	0.00296	< 0.0020	0.00510	0.00150
Uranium	mg/L	0.0052	0.0055	0.0056	0.0045	0.0055	0.00389	0.00429	0.00448	0.00708	0.00782
Vanadium	mg/L	0.0005	0.0040	0.0021	0.0002	0.0006	< 0.00020	0.00105	< 0.00020	0.00110	< 0.00020
Zinc	mg/L	0.001	0.005	0.003	0.001	0.003	0.00106	0.00497	0.00250	0.00580	0.00119
Dissolved Metals											
Aluminum	mg/L	0.0062	0.0190	0.0131	0.0172	0.0123	0.0102	0.0135	0.0120	0.0153	0.0104
Antimony	mg/L	0.0003	0.0013	0.0013	0.0010	0.0013	0.000755	0.001020	0.001230	0.001590	0.002110
Arsenic	mg/L	0.0034	0.0027	0.0028	0.0028	0.0039	0.00206	0.00515	0.00300	0.00383	0.00538
Barium	mg/L	0.0110	0.0127	0.0137	0.0118	0.0116	0.00859	0.01090	0.01170	0.01190	0.01490
Beryllium	mg/L	0.00050	0.00010	0.00005	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Boron	mg/L	0.01	0.04	0.03	0.01	0.01	< 0.010	< 0.010	0.012	0.011	0.013
Cadmium	mg/L	0.000020	0.000011	0.000011	0.000016	0.000010	0.0000100	0.0000104	0.0000079	0.0000121	0.0000084
Chromium	mg/L	0.0006	0.0008	0.0005	0.0001	0.0001	< 0.00010	0.00011	0.00012	< 0.00010	< 0.00010
Copper	mg/L	0.0014	0.0010	0.0020	0.0017	0.0014	0.00113	0.00120	0.00177	0.00144	0.00133
Iron	mg/L	0.0100	0.0072	0.0104	0.0104	0.0061	0.0117	0.0100	0.0034	0.0023	0.0032
Lead	mg/L	0.00022	0.00017	0.00012	0.00006	0.00003	0.0000480	0.0000400	0.0000120	0.0000187	0.0000282
Lithium	mg/L	0.0050	0.0021	0.0023	0.0017	0.0020	0.00147	0.00183	0.00205	0.00204	0.00248
Manganese	mg/L	0.0112	0.0110	0.0083	0.0089	0.0077	0.0150	0.01470	0.00311	0.00153	0.00430
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0188	0.0212	0.0224	0.0191	0.0268	0.0146	0.0205	0.0240	0.0352	0.0395
Nickel	mg/L	0.0015	0.0016	0.0021	0.0016	0.0020	0.00214	0.00228	0.00158	0.00165	0.00244
Selenium	mg/L	0.0011	0.0003	0.0003	0.0002	0.0003	0.000166	0.000199	0.000222	0.000346	0.000381
Strontium	mg/L	0.204	0.215	0.230	0.188	0.222	0.139	0.200	0.238	0.247	0.284
Thallium	mg/L	-	0.000016	0.000012	0.000011	0.000012	0.0000060	0.0000103	0.0000114	0.0000150	0.0000167
Tin	mg/L	-	0.004	0.002	0.0004	0.0003	0.00054	< 0.00020	< 0.00020	< 0.00020	< 0.0002
Titanium	mg/L	0.010	0.004	0.002	0.001	0.001	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Uranium	mg/L	0.0044	0.0053	0.0056	0.0044	0.0055	0.00295	0.00419	0.00502	0.00759	0.00786
Vanadium	mg/L	0.0010	0.0040	0.0020	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Zinc	mg/L	0.001	0.004	0.004	0.002	0.001	0.00279	0.00046	0.00099	0.00132	0.00113

8.5.2.1.13 Vault Rock Storage Facility (ST-24)^{\$}

The Vault Waste Rock Storage Facility (WRSF) has been in operation since 2013. As in the past years, ponded water was observed at the base of the WRSF (sampling station ST-24). In 2024, water was sampled from June to October. As per NWB Water License, samples were collected to assess water quality, and the results are presented in Table 8-22. No water was pumped from this location as it is mainly a ponding area without flow and will dry-up during warmer months. There are no applicable license limits at this location as there is no discharge to the environment; the data is presented for information purposes only. The location of this sampling station (ST-24) is illustrated on Figure 3.

8.5.2.1.14 Vault Attenuation Pond (ST-25)^{\$}

Surface water was sampled monthly during open water from the Vault Attenuation Pond as per the requirements in the NWB Type A Water License (sampling station ST-25). There are no applicable license limits. The data is presented in Table 8-23 for information purposes only. The location of sampling station ST-25 is illustrated on Figure 3. There was no water pumped out from the Vault Attenuation Pond to Wally Lake in 2024.

Table 8-22 Meadowbank 2024 Vault Waste Rock Storage Facility Seepage Water Quality Monitoring (ST-24) §

ST-24	Unit	Annual Average					6/23/2024	7/8/2024	8/11/2024	9/10/2024	10/20/2024
Parameter		2020	2021	2022	2023	2024					
Field Measured											
Temperature	°C	11.1	7.5	8.1	8.4	9.7	9.3	11.9	18.0	8.4	0.9
pH	pH units	7.71	7.63	7.67	7.32	7.49	7.22	7.41	7.63	7.93	7.27
Conductivity	uS/cm	265.6	235.0	331.2	255.1	247.5	131.8	103.6	228.0	368.0	406.0
Turbidity	NTU	2.88	4.13	1.55	3.34	3.04	3.63	4.30	1.12	2.55	3.60
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	133	110	139	108	95	44.1	54.7	97.4	119.0	162.0
Total alkalinity, as CaCO ₃	mg/L	53	43	52	48	43	24	31	52	54	56
TDS	mg/L	175	158	173	160	144	100	70	155	195	200
TSS	mg/L	4	3	1	2	3	2	3	< 1	4	5
Major Ions											
Chloride	mg/L	4.8	4.6	3.1	1.3	1.1	< 1.0	< 1.0	< 1.0	< 1.0	1.3
Cyanide	mg/L	0.0010	0.0050	0.0010	0.0010	0.0005	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Fluoride	mg/L	0.09	0.10	0.10	0.10	0.11	< 0.10	< 0.10	< 0.10	0.13	< 0.10
Sulfate	mg/L	74	64	85	69	67	27	27	67	83	130
Nutrients											
Ammonia Nitrogen	mg N/L	0.03	0.61	0.07	0.06	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	2.29	1.16	1.10	0.77	0.67	0.27	0.29	0.51	0.75	1.51
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals											
Aluminum	mg/L	0.0895	0.1059	0.0346	0.0606	0.0470	0.0781	0.0484	0.0156	0.0425	0.0503
Arsenic	mg/L	0.0029	0.0021	0.0018	0.0018	0.0017	0.00123	0.00175	0.00221	0.00174	0.00164
Barium	mg/L	0.0141	0.0127	0.0136	0.0103	0.0086	0.0046	0.0056	0.0086	0.0107	0.0136
Cadmium	mg/L	0.00002	0.00003	0.00002	0.00002	0.00001	< 0.000010	< 0.000010	< 0.000010	0.000010	0.000010
Chromium	mg/L	0.0006	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.0036	0.0036	0.0034	0.0027	0.0023	0.00235	0.00234	0.00202	0.00212	0.00253
Iron	mg/L	0.17	0.17	0.10	0.11	0.07	0.123	0.077	< 0.010	0.066	0.088
Lead	mg/L	0.0002	0.0003	0.0002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Manganese	mg/L	0.0418	0.0303	0.0185	0.0124	0.0068	0.0105	0.0058	0.0029	0.0064	0.0083
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0156	0.0151	0.0170	0.0172	0.0231	0.0087	0.0125	0.0259	0.0276	0.0410
Nickel	mg/L	0.0045	0.0038	0.0026	0.0021	0.0016	0.0015	0.0014	0.0012	0.0014	0.0027
Selenium	mg/L	0.0010	0.0002	0.0003	0.0002	0.0003	0.00011	0.00014	0.00028	0.00032	0.00058
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	0.000010	< 0.000010
Zinc	mg/L	0.001	0.005	0.005	0.005	0.007	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0125

Table 8-23 Meadowbank 2024 Vault Attenuation Pond Water Quality Monitoring (ST-25) §

ST-25	Unit	Annual Average					6/23/2024	7/8/2024	8/11/2024	9/10/2024
Parameter		2020	2021	2022	2023	2024				
Field Measured										
Temperature	°C	9.9	6.7	8.5	9.8	10.4	2.2	13.0	17.9	8.5
pH	pH units	7.68	7.61	7.27	7.44	7.62	7.41	7.31	7.69	8.08
Conductivity	uS/cm	177.7	136.0	182.2	156.0	150.5	92.3	159.0	148.9	201.9
Turbidity	NTU	4.18	1.74	1.23	1.44	2.34	2.08	3.94	1.50	1.84
Conventional Parameters										
Hardness, as CaCO ₃	mg/L	88	58	69	60	53	37.3	57.9	59.9	56.2
Total alkalinity, as CaCO ₃	mg/L	41	21	28	29	30	20	32	34	32
TDS	mg/L	114	86	93	91	89	90	95	75	95
TSS	mg/L	6	2	2	1	2	< 1	2	2	2
Major Ions										
Chloride	mg/L	5.4	5.0	3.5	1.9	1.8	1.2	2.1	1.8	2.1
Cyanide	mg/L	0.001	0.005	0.001	0.001	0.001	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Fluoride	mg/L	0.10	0.10	0.10	0.10	0.10	< 0.10	< 0.10	0.10	0.11
Sulfate	mg/L	43.9	36.1	45.8	40.8	36.3	25	38	42	40
Nutrients										
Ammonia Nitrogen	mg N/L	0.15	0.28	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	0.97	0.59	0.26	0.12	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrite	mg N/L	0.05	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals										
Aluminum	mg/L	0.168	0.041	0.022	0.017	0.017	0.0195	0.0146	0.0099	0.0224
Arsenic	mg/L	0.0011	0.0005	0.0005	0.0004	0.0004	0.00036	0.00043	0.00048	0.00047
Barium	mg/L	0.0179	0.0127	0.0142	0.0115	0.0094	0.0073	0.0106	0.0102	0.0095
Cadmium	mg/L	0.00002	0.00002	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Chromium	mg/L	0.0011	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.0039	0.0015	0.0018	0.0015	0.0012	0.00106	0.00127	0.00133	0.00123
Iron	mg/L	0.314	0.060	0.032	0.020	0.028	0.039	0.026	< 0.010	0.036
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Manganese	mg/L	6.018	0.011	0.006	0.005	0.007	0.0144	0.0067	0.0025	0.0026
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0045	0.0044	0.0045	0.0036	0.0026	0.0019	0.0027	0.0030	0.0028
Nickel	mg/L	0.0043	0.0019	0.0017	0.0015	0.0012	0.0013	0.0013	0.0010	0.0011
Selenium	mg/L	0.0009	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Zinc	mg/L	0.002	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050

8.5.2.1.15 Portage WRSF – Waste Extension Pool (WEP1/ST-30 and WEP2/ST-31) §

In 2014, as per inspections conducted within the framework of the Freshet Action Plan, runoff was noted at the northeast side of the Portage NPAG waste rock extension pile in a natural depression (WEP). Agnico Eagle contained this runoff and pumped it back to the North Cell TSF as a precaution and to prevent egress to the East Diversion non-contact water ditch. WEP1 (ST-30) and WEP2 (ST-31) sumps were constructed in September 2015. The sumps WEP1 and WEP2 have replaced the natural depression forming the former WEP for the water management in this area. Sampling have commenced in 2016 at sumps WEP1 and WEP2 as per NWB Water License 2AM-MEA1530. There are no applicable license limits. The sampling locations are illustrated on Figure 1 and results are presented in Table 8-24 for WEP1 (ST-30) and Table 8-25 for WEP2 (ST-31).

In 2024, 64,755 m³ of water was pumped from the WEP collection system which includes 40,241 m³ of water from WEP1 and 24,515 m³ from WEP2. The water from the WEP collection system is pumped to the ST-16 sump system and historically pumped to the North Cell TSF (from 2016 to 2022). Similar to 2023, in 2024 the water from the WEP collection system was pumped to ST-16 then pumped into Portage Pit (Pit A).

Results of samples collected in 2024 at station ST-5 (East Diversion ditch discharge point into NP-2 South) are documented in Table 8-10. The results from summer 2024 show that no water coming from the former WEP collection system was in contact with the East Diversion ditch. Agnico Eagle will continue to monitor the area and will ensure that water collected in WEP1 and WEP2 sumps are pumped back into the North Cell TSF or in the pits.

8.5.2.1.16 Saddle Dam 3 (ST-32) §

Water accumulated at the base of Saddle Dam 3 was pumped into the South Cell TSF (11,828 m³ in 2024). This water originates from non-contact surface runoff from the surrounding terrain. Water samples were collected during the open water season to assess water quality. There are no applicable license limits for this location as the water was not being released into the environment; the data is presented in Table 8-26 for information purposes only. The sampling location (ST-32) is illustrated on Figure 1. Water accumulation at the toe of Saddle Dam 3 does not have any consequence on the integrity of the TSF infrastructure. As stated previously, water was pumped back to the South Cell TSF as a mitigation measure. Inspections continue to be held at this location on a weekly basis to ensure conformity.

8.5.2.1.17 Saddle Dam 1 (ST-S-2) §

Water accumulated at the base of Saddle Dam 1 was pumped into the North Cell TSF (8,317 m³ in 2024). This water originates from non-contact surface runoff from the surrounding terrain because of the topography. Water samples were collected during the open water season to assess water quality. There are no applicable license limits for this location as the water was not being released into the environment; the data is presented in Table 8-27 for information purposes only. The sampling location (ST-S-2) is illustrated on Figure 1. The water accumulation at the toe of Saddle Dam 1 does not have any major consequence on the integrity of the TSF infrastructure, as the water is pumped and properly managed. As previously mentioned, water was pumped back to the North Cell TSF as a mitigation measure. Inspections continue to be held at this location on a weekly basis to ensure conformity.

Table 8-24 Meadowbank 2024 Waste Extension Pool WEP1 Water Quality Monitoring (ST-30) §

ST-30	Unit	Annual Average					5/12/2024	6/2/2024	7/7/2024	8/19/2024	9/1/2024
Parameter		2020	2021	2022	2023	2024					
Field Measured											
Temperature	°C	9.4	7.1	8.8	6.4	7.0	1.0	2.7	9.8	13.5	7.8
pH	pH units	7.36	7.53	7.33	7.41	7.8	8.31	7.40	7.37	7.48	8.19
Conductivity	uS/cm	220.8	187.3	250.1	235.8	253.5	214.0	74.5	287.0	343.0	349.0
Turbidity	NTU	6.04	3.91	65.64	6.41	8.84	23.80	5.14	7.30	2.55	5.43
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	113	92	111	104	107	75.1	30.9	124.0	141.0	165.0
Total alkalinity, as CaCO ₃	mg/L	73	55	73	78	74	42	26	83	110	110
TDS	mg/L	150	145	151	149	150	105	50	165	230	200
TSS	mg/L	6	1	25	3	7	19	5	8	2	< 1
Major Ions											
Chloride	mg/L	2.3	2.1	3.1	1.8	1.7	3.3	< 1.0	1.4	1.6	1.4
Cyanide	mg/L	0.008	0.006	0.009	0.004	0.004	0.00404	0.00125	0.00502	0.00551	0.00229
Cyanide (free)	mg/L	0.002	0.005	0.004	0.004	0.003	0.0021	0.0047	0.0026	0.0046	0.0029
Cyanide (WAD)	mg/L	0.002	0.003	0.004	0.002	0.002	0.0018	0.0011	0.0023	0.0040	0.0014
Fluoride	mg/L	0.13	0.14	0.17	0.15	0.12	< 0.10	< 0.10	0.12	0.15	0.14
Sulfate	mg/L	34.2	40.1	40.7	46.7	46.1	44	8.6	51	60	67
Nutrients											
Ammonia Nitrogen	mg N/L	0.26	0.13	0.28	0.08	0.11	0.088	< 0.050	0.210	0.150	< 0.050
Nitrate	mg N/L	1.45	1.56	1.31	0.89	1.58	3.11	0.22	0.22	1.61	2.73
Nitrite	mg N/L	0.040	0.013	0.021	0.011	0.012	0.013	< 0.010	< 0.010	0.011	0.014
Total Metals											
Aluminum	mg/L	0.113	0.055	1.932	0.115	0.112	0.3060	0.1150	0.1160	0.0126	0.0116
Arsenic	mg/L	0.0032	0.0108	0.0141	0.0056	0.0279	0.1080	0.0228	0.00422	0.00232	0.0020
Barium	mg/L	0.0149	0.0124	0.0266	0.0133	0.0138	0.0107	0.0055	0.0163	0.0192	0.0175
Cadmium	mg/L	0.00002	0.00001	0.00003	0.00001	0.00001	0.000023	< 0.000010	0.000015	0.000012	0.000007
Chromium	mg/L	0.0013	0.0014	0.0096	0.0014	0.0021	0.00590	0.00230	0.00107	< 0.0010	0.00012
Copper	mg/L	0.0123	0.0057	0.0112	0.0059	0.0040	0.00406	0.00327	0.00499	0.00411	0.00380
Iron	mg/L	1.108	0.474	4.110	0.598	0.667	0.752	0.316	1.430	0.581	0.255
Lead	mg/L	0.0003	0.0002	0.0025	0.0003	0.0010	0.003760	0.000660	0.000414	< 0.00020	0.000036
Manganese	mg/L	10.9900	0.0392	0.2136	0.0781	0.1249	0.146	0.0294	0.229	0.175	0.0451
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0025	0.0035	0.0043	0.0029	0.0031	0.00780	0.00180	0.00166	0.00210	0.00196
Nickel	mg/L	0.0044	0.0028	0.0089	0.0030	0.0071	0.02090	0.00410	0.00426	0.00380	0.00243
Selenium	mg/L	0.0010	0.0003	0.0003	0.0002	0.0002	0.00018	< 0.00010	0.000126	0.00028	0.00044
Silver	mg/L	0.00010	0.00002	0.00003	0.00002	0.00001	< 0.000020	< 0.000020	0.0000053	< 0.000020	< 0.0000050
Thallium	mg/L	0.00020	0.00001	0.00004	0.00001	0.00001	< 0.000010	< 0.000010	0.0000072	< 0.000010	0.0000035
Zinc	mg/L	0.002	0.005	0.010	0.004	0.005	< 0.0050	< 0.0050	0.00776	< 0.0050	0.00038

Table 8-25 Meadowbank 2024 Waste Extension Pool WEP2 Water Quality Monitoring (ST-31) §

ST-31	Unit	Annual Average					5/12/2024	6/2/2024	7/7/2024	8/19/2024	9/1/2024
Parameter		2020	2021	2022	2023	2024					
Field Measured											
Temperature	°C	9.7	6.4	8.9	6.6	7.5	0.8	3.7	9.4	15.0	8.6
pH	pH units	7.67	7.34	7.43	7.39	7.51	7.96	7.20	7.26	7.40	7.73
Conductivity	uS/cm	213.2	190.7	232.2	225.8	219.4	159.2	69.0	206.8	328.0	334.0
Turbidity	NTU	4.17	4.06	7.90	10.39	6.88	21.80	2.34	5.96	1.66	2.65
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	101	94	109	95	88	57.0	30.7	86.1	131.0	137.0
Total alkalinity, as CaCO ₃	mg/L	75	60	79	78	66	32	26	75	100	98
TDS	mg/L	142	150	145	123	141	85	55	125	215	225
TSS	mg/L	3	4	6	14	6	18	2	4	1	5
Major Ions											
Chloride	mg/L	3.2	2.6	2.3	1.7	1.6	3.2	< 1.0	< 1.0	< 1.0	1.7
Cyanide	mg/L	0.001	0.005	0.002	0.001	0.001	0.00099	< 0.00050	0.00112	0.00144	0.00135
Cyanide (free)	mg/L	0.001	0.003	0.002	0.004	0.002	< 0.0020	< 0.0020	0.0021	< 0.0020	0.0022
Cyanide (WAD)	mg/L	0.001	0.001	0.001	0.001	0.001	0.00052	0.00052	< 0.00050	0.00087	0.00150
Fluoride	mg/L	0.13	0.13	0.19	0.17	0.15	< 0.10	< 0.10	0.16	0.21	0.20
Sulfate	mg/L	31.5	39.4	37.8	38.5	37.8	39	11	27	58	54
Nutrients											
Ammonia Nitrogen	mg N/L	0.05	0.10	0.05	0.05	0.06	0.080	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	1.04	1.15	0.76	0.50	0.79	1.46	< 0.10	< 0.10	0.77	1.52
Nitrite	mg N/L	0.02	0.01	0.01	0.01	0.01	0.012	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals											
Aluminum	mg/L	0.086	0.099	0.194	0.293	0.127	0.3650	0.0775	0.1050	0.0156	0.0739
Arsenic	mg/L	0.0195	0.0594	0.0071	0.0038	0.0053	0.01710	0.00081	0.00469	0.00208	0.00189
Barium	mg/L	0.0112	0.0109	0.0119	0.0115	0.0099	0.0075	0.0039	0.0080	0.0142	0.0157
Cadmium	mg/L	0.000020	0.000011	0.000009	0.000011	0.000009	0.000012	< 0.000010	< 0.0000050	< 0.000010	0.0000059
Chromium	mg/L	0.0011	0.0021	0.0042	0.0052	0.0023	0.00720	< 0.0010	0.00139	< 0.0010	0.00087
Copper	mg/L	0.0032	0.0013	0.0016	0.0014	0.0016	0.00198	0.00113	0.00184	0.00096	0.00223
Iron	mg/L	0.343	0.286	0.473	0.594	0.324	0.702	0.203	0.396	0.123	0.196
Lead	mg/L	0.0003	0.0002	0.0002	0.0003	0.0004	0.00133	< 0.00020	0.000198	< 0.00020	0.000165
Manganese	mg/L	0.0948	0.0357	0.0583	0.0349	0.0285	0.0581	0.0123	0.0215	0.0234	0.0271
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0046	0.0103	0.0058	0.0026	0.0034	0.0072	< 0.0010	0.00219	0.0030	0.00355
Nickel	mg/L	0.0032	0.0042	0.0042	0.0043	0.0035	0.00820	0.00150	0.00331	0.00180	0.00262
Selenium	mg/L	0.0010	0.0002	0.0002	0.0001	0.0001	< 0.00010	< 0.00010	0.000058	0.00012	0.00015
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00001	< 0.000020	< 0.000020	< 0.0000050	< 0.000020	0.0000099
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	0.0000052	< 0.000010	0.0000038
Zinc	mg/L	0.001	0.005	0.004	0.005	0.005	< 0.0050	< 0.0050	0.0022	< 0.0050	0.00689

Table 8-26 Meadowbank 2024 Saddle Dam 3 Water Quality Monitoring (ST-32) §

ST-32	Unit	Annual Average					5/27/2024	6/17/2024	7/20/2024	8/18/2024	9/15/2024
Parameter		2020	2021	2022	2023	2024					
Field Measured											
Temperature	°C	13.6	6.7	6.0	5.7	8.5	3.6	9.3	15.4	11.9	2.2
pH	pH units	7.89	7.69	7.45	7.53	7.49	7.27	8.05	7.41	7.68	7.03
Conductivity	uS/cm	475.4	411.1	468.1	439.9	450.2	147.1	292.0	529.0	620.0	663.0
Turbidity	NTU	17.72	30.76	39.21	74.81	24.25	79.90	17.10	2.63	2.72	18.90
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	209	202	208	170	190	66.2	122.0	221.0	255.0	286.0
Total alkalinity, as CaCO ₃	mg/L	73	66	74	68	68	45	46	73	88	90
TDS	mg/L	301	339	305	263	315	100	225	410	380	460
TSS	mg/L	6	16	28	63	17	54	12	1	3	16
Major Ions											
Chloride	mg/L	13.5	13.8	11.7	9.8	8.8	< 1.0	2.5	8.4	11.0	21.0
Cyanide	mg/L	0.004	0.009	0.010	0.004	0.005	0.01040	0.00725	0.00103	0.00214	0.00354
Fluoride	mg/L	0.24	0.25	0.30	0.26	0.24	< 0.10	0.11	0.31	0.33	0.36
Sulfate	mg/L	110	115	113	101	135	44	100	150	180	200
Nutrients											
Ammonia Nitrogen	mg N/L	0.24	0.47	0.52	0.22	0.64	< 0.050	0.060	< 0.050	< 0.050	3.00
Nitrate	mg N/L	9.45	7.29	8.98	7.04	5.63	0.28	1.38	5.80	6.09	14.60
Nitrite	mg N/L	0.07	0.06	0.05	0.02	0.02	< 0.010	0.026	0.026	0.022	0.031
Total Metals											
Aluminum	mg/L	0.137	0.493	0.943	1.327	0.369	1.370	0.1390	0.0269	0.0342	0.2730
Arsenic	mg/L	0.0426	0.0258	0.0393	0.0265	0.0252	0.0209	0.00906	0.021	0.0707	0.00441
Barium	mg/L	0.0318	0.0350	0.0416	0.0356	0.0269	0.0161	0.0188	0.0338	0.0362	0.0295
Cadmium	mg/L	0.00002	0.00003	0.00003	0.00003	0.00003	0.000042	0.000035	0.000014	0.000011	0.000034
Chromium	mg/L	0.00193	0.01056	0.01608	0.03497	0.00586	0.0222	0.0025	< 0.0010	< 0.0010	0.0026
Copper	mg/L	0.0035	0.0095	0.0077	0.0076	0.0046	0.00791	0.00325	0.00184	0.00457	0.00519
Iron	mg/L	0.275	0.905	1.801	2.476	0.800	2.89	0.458	0.055	0.073	0.523
Lead	mg/L	0.0002	0.0020	0.0047	0.0036	0.0026	0.00853	0.00338	< 0.00020	< 0.00020	0.00077
Manganese	mg/L	0.088	0.144	0.096	0.064	0.085	0.0973	0.0762	0.0155	0.0113	0.223
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0078	0.0089	0.0082	0.0056	0.0051	0.0021	0.0038	0.0064	0.0078	0.0056
Nickel	mg/L	0.031	0.039	0.044	0.041	0.035	0.0201	0.0190	0.0412	0.0547	0.0409
Selenium	mg/L	0.0013	0.0011	0.0008	0.0006	0.0004	< 0.00010	0.00018	0.00054	0.00058	0.00084
Silver	mg/L	0.00010	0.00005	0.00002	0.00003	0.00002	0.000027	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.00020	0.00005	0.00006	0.00005	0.00004	0.000025	0.000015	0.000026	0.000031	0.000091
Zinc	mg/L	0.036	0.005	0.006	0.008	0.005	0.0071	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Table 8-27 Meadowbank 2024 Saddle Dam 1 Water Quality Monitoring (ST-S-2) §

ST-S-2	Unit	Annual Average					5/20/2024	7/21/2024	8/18/2024	9/29/2024	10/20/2024
Parameter		2020	2021	2022	2023	2024					
Field Measured											
Temperature	°C	8.75	5.00	5.60	4.88	5.60	2.9	6.7	10.5	6.4	1.5
pH	pH units	7.93	7.64	7.64	7.29	7.31	7.68	6.88	7.63	7.27	7.11
Conductivity	uS/cm	548.7	490.4	778.2	822.9	894.8	373.0	601.0	846.0	1242.0	1412.0
Turbidity	NTU	7.33	21.37	33.61	11.26	5.94	6.85	3.44	1.11	15.70	2.60
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	311	238	361	327	378	121	252	329	589	598
Total alkalinity, as CaCO ₃	mg/L	60	60	60	54	73	50	68	70	79	100
TDS	mg/L	376	396	579	587	638	210	420	525	1070	965
TSS	mg/L	4	15	79	16	57	4	8	2	270	2
Major Ions											
Chloride	mg/L	6.20	6.24	8.66	6.90	7.64	3.8	2.9	6.5	13.0	12.0
Cyanide	mg/L	0.003	0.008	0.010	0.009	0.010	0.00770	0.00966	0.00885	0.01530	0.00627
Cyanide (free)	mg/L	0.002	0.004	0.003	0.004	0.002	< 0.0020	0.0027	< 0.0020	< 0.0020	0.0023
Cyanide (WAD)	mg/L	0.002	0.003	0.003	0.004	0.002	0.0018	0.0022	0.0017	0.0032	0.0024
Fluoride	mg/L	0.18	0.17	0.21	0.19	0.19	< 0.10	0.18	0.22	0.23	0.21
Sulfate	mg/L	217	186	322	337	340	160	190	260	580	510
Nutrients											
Ammonia Nitrogen	mg N/L	0.063	0.815	0.084	0.061	0.182	0.069	< 0.050	< 0.050	0.620	0.120
Nitrate	mg N/L	4.11	5.83	6.03	4.96	10.36	0.89	12.80	8.29	15.10	14.70
Nitrite	mg N/L	0.035	0.020	0.015	0.014	0.023	0.011	< 0.010	< 0.010	0.057	0.025
Total Metals											
Aluminum	mg/L	0.270	0.567	1.132	0.283	0.970	0.0369	0.0862	0.0104	4.69	0.0246
Arsenic	mg/L	0.0317	0.0204	0.0289	0.0199	0.0326	0.0180	0.0145	0.0253	0.0815	0.0236
Barium	mg/L	0.022	0.022	0.029	0.023	0.025	0.0115	0.0217	0.0230	0.0418	0.0287
Cadmium	mg/L	0.00002	0.00004	0.00008	0.00005	0.00007	0.000015	0.000023	0.000020	0.000170	0.000102
Chromium	mg/L	0.0024	0.0054	0.0120	0.0056	0.0137	< 0.0010	0.0017	< 0.0010	0.0637	< 0.0010
Copper	mg/L	0.0032	0.0043	0.0073	0.0031	0.0049	0.00118	0.00185	0.00136	0.01720	0.00268
Iron	mg/L	0.460	0.918	2.431	0.648	2.704	0.099	0.221	0.021	13.10	0.078
Lead	mg/L	0.0003	0.0023	0.0054	0.0020	0.0051	0.00065	0.00078	< 0.00020	0.02350	< 0.00020
Manganese	mg/L	0.110	0.110	0.190	0.110	0.280	0.0580	0.0243	0.0215	0.8030	0.4950
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0080	0.0083	0.0110	0.0110	0.0140	0.0045	0.0108	0.0129	0.0230	0.0190
Nickel	mg/L	0.0291	0.0232	0.0544	0.0384	0.0529	0.0096	0.0128	0.0255	0.1290	0.0878
Selenium	mg/L	0.0013	0.0009	0.0014	0.0013	0.0015	0.00028	0.00124	0.00135	0.00224	0.00216
Silver	mg/L	0.00010	0.00002	0.00003	0.00002	0.00005	< 0.000020	< 0.000020	< 0.000020	0.000171	< 0.000020
Thallium	mg/L	0.00020	0.00002	0.00002	0.00001	0.00003	< 0.000010	< 0.000010	< 0.000010	0.000077	0.000019
Zinc	mg/L	0.002	0.121	0.062	0.192	0.618	0.163	0.209	0.0239	0.163	2.530

8.5.2.1.18 Central Dike Seepage (ST-S-5) §

Sampling was conducted on a monthly as per the requirements of the NWB Water License. There are no applicable license limits for this station as the water is pumped to the Portage Pit. Sample results are presented in Table 8-28. See Figure 1 for the location of ST-S-5. A total of 554,951 m³ of water was pumped into the Portage Pit in 2024. Refer to Section 8.5.7.1.2 for details on the Central Dike seepage regarding consequences and mitigation measures in place.

8.5.2.1.19 Phaser Pit (ST-41 Lake) §

The Phaser Pit Sump (ST-41) was constructed during 2018 operation to manage the water runoff from the pit. In 2020, due to the natural reflooding ongoing of the pit, Agnico Eagle start considering this as Phaser Pit Lake (ST-41 Lake). Refer to previous Annual Reports for ST-41 sump results. In 2024, ST-41 Lake monthly samples were conducted from June to October, during open water season as per the requirements of the NWB Water License. There are no applicable license limits. The data is presented in Table 8-29. Sampling station ST-41 Lake is illustrated on Figure 3. No water was transferred to Phaser Attenuation Pond and all water was kept in the pit to promote the natural reflooding.

8.5.2.1.20 BB Phaser Pit (ST-42 Lake) §

The BB Phaser Pit Sump was constructed during 2018 operation to manage the water runoff from the pit. In 2020, due to the natural reflooding of the pit, BB Phaser Pit Sump is no longer an active station and Agnico Eagle considers this station as BB Phaser Pit Lake (ST-42 Lake). Refer to previous Annual Reports for ST-42 sump results. In 2024, monthly samples have been conducted from June to October during open water season, as per the requirements of the NWB Water License. There are no applicable license limits. The data is presented in Table 8-30. Sampling station ST-42 Lake is illustrated on Figure 3. No water has been transferred to Phaser Attenuation Pond since 2019. All water was kept in the pit to promote the natural reflooding.

8.5.2.1.21 Phaser Attenuation Pond (ST-43) §

During 2024, no water from Phaser and BB Phaser Pits was pumped and transferred to Phaser Attenuation Pond (ST-43). Similar to previous years, in 2024, no water was transferred, and all water was kept in the pond to promote the natural reflooding. Monthly samples have been conducted during open water season as per the requirements of the NWB Water License. There are no applicable license limits. The data is presented in Table 8-31. Sampling station ST-43 is illustrated on Figure 3.

Table 8-28 Meadowbank 2024 Central Dike Seepage Water Quality Monitoring (ST-S-5) §

ST-S-5	Unit	Annual Average					1/1/2024	2/12/2024	3/31/2024	4/7/2024	5/5/2024	6/10/2024	7/7/2024	8/4/2024	9/1/2024	10/13/2024	11/10/2024	12/14/2024
Parameter		2020	2021	2022	2023	2024												
Field Measured																		
Temperature	°C	3.8	1.8	2.1	3.3	3.3	0.2	-0.2	0.9	0.2	0.5	2.4	8.5	13.0	5.7	0.9	-0.4	0.1
pH	pH units	7.61	7.49	7.93	7.67	6.96	7.83	7.08	7.70	7.56	7.52	7.20	8.10	7.86	7.57	7.45	7.53	7.40
Conductivity	uS/cm	3545	3335	2807	2322	2350	2757	2526	2956	3006	2978	376	1949	2571	1658	1761	2610	3052
Turbidity	NTU	13.36	13.23	14.42	10.72	12.85	7.50	12.00	4.42	3.95	23.30	25.20	28.90	18.10	9.26	9.90	9.39	2.32
Conventional Parameters																		
Hardness, as CaCO ₃	mg/L	987	838	774	699	677	848	802	765	811	830	129	389	706	678	548	790	830
Total alkalinity, as CaCO ₃	mg/L	118	122	138	145	153	180	180	190	190	190	50	110	130	120	130	180	190
TDS	mg/L	2160	2438	1907	1758	1810	2120	2270	2280	2140	2230	290	1290	1750	1780	1330	2080	2160
TSS	mg/L	6	3	6	11	8	7	7	8	7	7	13	16	9	4	4	9	6
Major Ions																		
Chloride	mg/L	286.3	222.4	151.0	126.4	119.2	170	180	170	180	160	11	72	110	93	74	100	110
Cyanide	mg/L	0.058	0.076	0.047	0.037	0.043	0.06270	0.04520	0.05210	0.05230	0.04770	0.00737	0.01630	0.04590	0.01460	0.02380	0.05710	0.09680
Cyanide (free)	mg/L	0.016	0.092	0.025	0.014	0.017	0.0180	0.0210	0.0270	0.0260	0.0320	0.0062	0.0150	0.0190	0.0110	0.0083	0.0092	0.0094
Cyanide (WAD)	mg/L	0.011	0.019	0.018	0.016	0.022	0.0320	0.0230	0.0330	0.0320	0.0320	0.0056	0.0100	0.0300	0.0120	0.0130	0.0250	0.0190
Fluoride	mg/L	0.51	0.47	0.49	0.45	0.43	0.51	0.50	0.47	0.48	0.51	0.11	0.32	0.45	0.39	0.39	0.48	0.52
Sulfate	mg/L	1529	1403	1203	1126	1080	1300	1200	1500	1300	1400	120	770	990	1000	780	1300	1300
Nutrients																		
Ammonia Nitrogen	mg N/L	26.28	28.57	22.02	19.08	17.03	20	21	21	21	21	1.4	13	21	17	10	17	21
Nitrate	mg N/L	0.14	0.27	0.28	0.29	0.37	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.32	< 0.10	0.11	0.85	2.39	< 0.10	< 0.10
Nitrite	mg N/L	0.047	0.026	0.026	0.027	0.022	< 0.010	0.016	< 0.010	< 0.010	< 0.010	0.015	0.018	< 0.010	0.038	0.112	< 0.010	< 0.010
Total Metals																		
Aluminum	mg/L	0.038	0.018	0.029	0.041	0.036	0.0142	< 0.0060	< 0.0060	< 0.0060	< 0.0060	0.2820	0.0541	0.0185	0.00938	0.0128	< 0.0060	0.0141
Arsenic	mg/L	0.0533	0.0465	0.0565	0.0880	0.0709	0.1140	0.1030	0.1030	0.1030	0.100	0.0181	0.0445	0.0628	0.0372	0.0247	0.0867	0.0542
Barium	mg/L	0.0226	0.0204	0.0191	0.0185	0.0181	0.0208	0.0198	0.0186	0.0201	0.0192	0.0104	0.0116	0.0199	0.0188	0.0188	0.0180	0.0215
Cadmium	mg/L	0.00014	0.00002	0.00002	0.00003	0.00003	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	0.000037	< 0.0000050	< 0.00002	0.0000447	0.000087	< 0.000020	< 0.000020
Chromium	mg/L	0.001	0.002	0.002	0.002	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0035	0.00062	< 0.0020	0.00012	< 0.0010	< 0.0020	< 0.0020
Copper	mg/L	0.002	0.001	0.001	0.001	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.00269	0.00047	0.00490	0.000709	0.00082	0.00170	< 0.0010
Iron	mg/L	1.6000	1.2655	1.4000	2.0969	2.1132	3.21	2.78	2.72	2.82	2.94	0.859	1.32	1.25	0.741	0.688	3.22	2.81
Lead	mg/L	0.0005	0.0004	0.0006	0.0004	0.0008	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	0.00501	0.000311	< 0.00040	0.0000617	< 0.00020	0.00065	< 0.00040
Manganese	mg/L	2.01	1.61	1.55	1.44	1.49	1.94	1.92	1.67	1.88	1.76	0.227	0.856	1.46	1.40	1.00	1.81	1.95
Mercury	mg/L	0.00001	0.00003	0.00009	0.00007	0.00009	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Molybdenum	mg/L	0.1910	0.1486	0.1032	0.0706	0.0575	0.0743	0.0731	0.0683	0.0683	0.0618	0.0111	0.0385	0.0624	0.0481	0.0398	0.0740	0.0707
Nickel	mg/L	0.0108	0.0056	0.0072	0.0078	0.0083	0.0032	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0113	0.00505	0.0053	0.0309	0.0312	0.0023	0.0029
Selenium	mg/L	0.0012	0.0007	0.0007	0.0005	0.0008	0.00160	0.00106	0.00080	0.00082	0.00065	0.00022	0.000702	0.00102	0.00103	0.00089	0.00049	< 0.00020
Silver	mg/L	0.00011	0.00004	0.00003	0.00004	0.00003	< 0.000040	< 0.000040	< 0.000040	< 0.000040	< 0.000040	< 0.00002	< 0.000010	< 0.000040	< 0.0000050	< 0.000020	< 0.000040	< 0.000040
Thallium	mg/L	0.00027	0.00003	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	0.000011	< 0.0000020	< 0.000020	0.0000068	< 0.000010	< 0.000020	< 0.000020
Zinc	mg/L	0.004	0.010	0.009	0.009	0.008	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.005	< 0.0010	< 0.010	0.001	< 0.0050	< 0.010	< 0.010
Dissolved Metals																		
Aluminum	mg/L	0.006	0.007	0.007	0.010	0.006	< 0.0060	< 0.0060	< 0.0060	< 0.0060	< 0.0060	0.0068	0.00341	0.0061	0.0035	0.0050	0.0070	< 0.0060
Arsenic	mg/L	0.0102	0.0187	0.0227	0.0565	0.0531	0.1020	0.0874	0.1080	0.0885	0.0459	0.00607	0.00947	0.0153	0.0133	0.0143	0.0889	0.0584
Barium	mg/L	0.0210	0.0198	0.0187	0.0196	0.0204	0.0209	0.0212	0.0219	0.0220	0.0218	0.0088	0.0193	0.0228	0.0208	0.0212	0.0220	0.0215
Cadmium	mg/L	0.00007	0.00002	0.00002	0.00003	0.00003	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	0.000021	0.0000083	< 0.000020	0.000031	0.000089	< 0.000020	< 0.000020
Chromium	mg/L	0.0007	0.0020	0.0017	0.0018	0.0015	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0010	< 0.00010	< 0.0020	< 0.00020	< 0.0010	< 0.0020	< 0.0020
Copper	mg/L	0.0011	0.0006	0.0009	0.0032	0.0036	0.00260	< 0.00040	< 0.00040	0.00747	0.01730	0.00329	0.00148	0.00090	0.00587	0.00153	0.00048	0.00111
Iron	mg/L	0.0400	0.3614	0.3292	1.1418	1.2456	2.60	2.91	2.70	1.95	< 0.010	0.0050	0.0076	< 0.010	0.0064	0.0083	2.51	2.23
Lead	mg/L	0.0003	0.0004	0.0003	0.0004	0.0003	< 0.00040	< 0.00040	0.00050	< 0.00040	< 0.00040	< 0.00020	0.0000249	< 0.00040	< 0.000010	< 0.00020	< 0.00040	< 0.00040
Manganese	mg/L	1.85	1.62	1.54	1.48	1.60	1.94	2.09	2.05	2.00	1.95	0.224	0.978	1.36	1.51	1.16	1.98	1.96
Mercury	mg/L	0.00001	0.00003	0.00009	0.00008	0.00009	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Molybdenum	mg/L	0.177	0.145	0.104	0.073	0.063	0.0735	0.0787	0.0835	0.0793	0.0704	0.0116	0.0519	0.0621	0.0547	0.0429	0.0820	0.0684
Nickel	mg/L	0.0093	0.0057	0.0067	0.0070	0.0087	0.0039	0.0020	< 0.0020	0.0029	0.0033	0.0102	0.00575	0.0053	0.0243	0.0376	0.0036	0.0035

ST-S-5	Unit	Annual Average					1/1/2024	2/12/2024	3/31/2024	4/7/2024	5/5/2024	6/10/2024	7/7/2024	8/4/2024	9/1/2024	10/13/2024	11/10/2024	12/14/2024
Parameter		2020	2021	2022	2023	2024												
Selenium	mg/L	0.0015	0.0007	0.0009	0.0007	0.0010	0.00198	0.00117	0.00162	0.00109	0.00139	0.00025	0.000886	0.00077	0.000967	0.00112	0.00068	0.00047
Silver	mg/L	0.00009	0.00004	0.00004	0.00004	0.00006	< 0.000040	< 0.000040	0.000314	< 0.000040	< 0.000040	< 0.000020	< 0.0000050	< 0.000040	0.0000672	< 0.000020	< 0.000040	< 0.000040
Thallium	mg/L	0.00030	0.00003	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000010	0.0000058	< 0.000020	0.0000114	0.000012	< 0.000020	< 0.000020
Zinc	mg/L	0.004	0.010	0.009	0.010	0.008	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.0050	0.00249	< 0.010	0.00429	< 0.0050	< 0.010	< 0.010

Table 8-29 Meadowbank 2024 Phaser Pit Water Quality Monitoring (ST-41 Lake) [§]

ST-41 Lake Parameter	Unit	Annual Average					6/23/2024	7/8/2024	8/11/2024	9/10/2024	10/20/2024
		2020	2021	2022	2023	2024					
Field Measured											
Temperature	°C	16.8	8.9	7.7	8.6	7.8	2.2	12.5	16.3	7.4	0.8
pH	pH units	7.68	7.79	7.76	7.47	7.72	7.40	7.67	7.75	8.11	7.69
Conductivity	uS/cm	149.7	151.4	200.4	135.5	207.4	162.8	165.7	189.7	260.0	259.0
Turbidity	NTU	5.86	4.56	2.38	2.42	2.65	4.63	4.06	1.28	2.24	1.02
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	83	75	82	78	84	79.1	62.4	76.7	102.0	98.8
Total alkalinity, as CaCO ₃	mg/L	28	37	44	41	47	42	41	48	54	49
Carbonate, as CaCO ₃	mg/L	-	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃	mg/L	-	37	44	41	47	42	41	48	54	49
TDS	mg/L	102	103	115	109	132	160	120	90	185	105
TSS	mg/L	4	4	2	2	3	4	6	1	1	< 1
Total organic carbon	mg/L	1.9	2.8	2.4	3.0	2.3	1.8	2.3	2.1	1.8	3.5
Dissolved organic carbon	mg/L	1.7	2.6	2.3	2.7	2.3	2.1	2.1	2.1	1.8	3.2
Major Ions											
Chloride	mg/L	2.00	2.65	2.82	2.30	8.04	28.0	2.6	2.6	3.8	3.2
Cyanide	mg/L	0.001	0.005	0.001	0.001	0.001	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Cyanide (free)	mg/L	0.001	0.002	0.002	0.003	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0021
Silica	mg/L	-	2.03	2.06	1.99	1.92	1.8	1.5	1.5	1.9	2.9
Sulfate	mg/L	34.4	37.3	37.2	36.2	39.6	36	26	40	46	50
Nutrients											
Ammonia Nitrogen	mg N/L	0.08	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	1.89	1.17	0.79	0.61	0.51	0.38	0.41	0.54	0.59	0.65
Nitrite	mg N/L	0.02	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen	mg N/L	-	0.14	0.10	0.15	0.16	< 0.10	0.12	0.29	0.10	0.20
Total phosphorus	mg P/L	-	0.0048	0.0035	0.0147	0.0015	0.0024	0.0021	< 0.0010	< 0.0010	0.0012
Orthophosphate	mg P/L	-	0.01	0.01	0.01	0.03	0.100	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals											
Aluminum	mg/L	0.110	0.116	0.062	0.060	0.057	0.1130	0.0902	0.0262	0.0312	0.0259
Antimony	mg/L	-	0.0006	0.0007	0.0005	0.0005	0.000452	0.000381	0.000529	0.000735	0.000531
Arsenic	mg/L	0.0021	0.0017	0.0016	0.0016	0.0015	0.00155	0.00153	0.00150	0.00149	0.00135
Barium	mg/L	0.0117	0.0142	0.0157	0.0135	0.0136	0.0147	0.0110	0.0120	0.0157	0.0147
Beryllium	mg/L	-	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Boron	mg/L	-	0.01	0.01	0.01	0.01	0.012	< 0.010	< 0.010	< 0.010	< 0.010
Cadmium	mg/L	0.00002	0.00002	0.00001	0.00001	0.00001	0.0000100	0.0000090	0.0000055	0.0000067	0.0000127
Calcium (total)	mg/L	25.40	23.03	25.28	24.08	25.54	24.3	18.7	23.4	31.5	29.8
Chromium	mg/L	0.0006	0.0003	0.0003	0.0004	0.0002	0.00051	0.00037	< 0.00010	< 0.00010	< 0.00010
Copper	mg/L	0.0029	0.0034	0.0029	0.0035	0.0028	0.00235	0.00291	0.00239	0.00234	0.00380
Iron	mg/L	0.1867	0.1946	0.0974	0.1012	0.0723	0.1450	0.1260	0.0193	0.0260	0.0453
Lead	mg/L	0.0003	0.0005	0.0003	0.0003	0.0002	0.000345	0.000310	0.000112	0.000174	0.000144
Lithium	mg/L	-	0.0014	0.0014	0.0013	0.0014	0.00124	0.00131	0.00128	0.00157	0.00159
Magnesium (total)	mg/L	4.77	4.33	4.69	4.28	4.86	4.50	3.79	4.46	5.64	5.92
Manganese	mg/L	0.0579	0.0242	0.0060	0.0075	0.0050	0.00939	0.00682	0.00155	0.00143	0.00588
Mercury	mg/L	0.00001	0.00000	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0059	0.0074	0.0095	0.0077	0.0100	0.01210	0.00686	0.00936	0.01260	0.00887
Nickel	mg/L	0.0059	0.0039	0.0019	0.0034	0.0020	0.00208	0.00215	0.00158	0.00115	0.00318
Potassium (total)	mg/L	-	1.95	1.85	1.60	1.57	1.40	1.39	1.54	1.76	1.76
Selenium	mg/L	0.0010	0.0002	0.0002	0.0001	0.0002	0.000180	0.000103	0.000147	0.000184	0.000140
Sodium (total)	mg/L	-	1.34	1.30	1.21	1.29	1.00	1.28	1.18	1.33	1.65
Strontium	mg/L	-	0.127	0.130	0.120	0.130	0.115	0.106	0.124	0.159	0.148
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	0.0000087	0.0000068	0.0000067	0.0000078	0.0000075
Tin	mg/L	-	0.0002	0.0002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Titanium	mg/L	-	0.0023	0.0012	0.0013	0.0013	0.00137	0.00189	< 0.00200	< 0.00050	< 0.00050
Uranium	mg/L	-	0.0039	0.0041	0.0038	0.0037	0.00342	0.00266	0.00353	0.00440	0.00445
Vanadium	mg/L	-	0.0002	0.0002	0.0002	0.0004	< 0.0002	0.0010	< 0.0002	< 0.0002	< 0.0002
Zinc	mg/L	0.016	0.003	0.001	0.001	0.003	0.00314	0.00268	0.00480	0.00156	0.00060
Dissolved Metals											
Aluminum	mg/L	0.008	0.027	0.022	0.040	0.023	0.0140	0.0434	0.0150	0.0317	0.0114
Antimony	mg/L	-	0.0006	0.0007	0.0005	0.0005	0.000417	0.000404	0.000619	0.000724	0.000536
Arsenic	mg/L	0.0007	0.0015	0.0019	0.0016	0.0019	0.00149	0.00295	0.00170	0.00167	0.00180
Barium	mg/L	0.0072	0.0133	0.0151	0.0131	0.0123	0.0102	0.0101	0.0122	0.0153	0.0139
Beryllium	mg/L	-	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Boron	mg/L	-	0.01	0.01	0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	mg/L	0.00002	0.00002	0.00001	0.00006	0.00001	0.0000070	0.0000100	0.0000065	0.0000069	0.0000119
Chromium	mg/L	0.0006	0.0001	0.0002	0.0002	0.0001	0.00012	0.00020	< 0.00010	< 0.00010	0.00011
Copper	mg/L	0.001	0.003	0.003	0.003	0.004	0.00440	0.00360	0.00309	0.00276	0.00380
Iron	mg/L	0.010	0.031	0.024	0.024	0.014	0.0177	0.0319	0.0028	0.0043	0.0141
Lead	mg/L	0.0003	0.0002	0.0002	0.0001	0.0001	0.0000850	0.0003540	0.0000191	0.0000710	0.0000793
Lithium	mg/L	-	0.0014	0.0014	0.0012	0.0014	0.00106	0.00126	0.00138	0.00157	0.00151
Manganese	mg/L	0.0383	0.0209	0.0055	0.0080	0.0110	0.02330	0.00673	0.00201	0.01920	0.00366
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0025	0.0073	0.0095	0.0074	0.0099	0.01090	0.00677	0.01120	0.01170	0.00898
Nickel	mg/L	0.0037	0.0035	0.0020	0.0026	0.0026	0.00212	0.00444	0.00165	0.00142	0.00328
Selenium	mg/L	0.0010	0.0002	0.0002	0.0002	0.0001	0.000101	0.000120	0.000144	0.000212	0.000162
Strontium	mg/L	-	0.126	0.129	0.118	0.133	0.106	0.105	0.151	0.160	0.145
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	0.0000050	0.0000042	0.0000067	0.0000062	0.0000061
Tin	mg/L	-	0.0002	0.0003	0.0004	0.0003	0.00088	0.00023	< 0.00020	< 0.00020	< 0.00020
Titanium	mg/L	-	0.0005	0.0005	0.0005	0.0007	< 0.00050	0.00125	< 0.00050	0.00067	< 0.00050
Uranium	mg/L	-	0.0038	0.0042	0.0037	0.0037	0.00258	0.00268	0.00399	0.00511	0.00426
Vanadium	mg/L	-	0.0002	0.0002	0.0003	0.0004	< 0.00020	0.00079	< 0.00020	0.00040	< 0.00020
Zinc	mg/L	0.001	0.001	0.002	0.004	0.003	0.00279	0.00787	0.00161	0.00189	0.00109

Table 8-30 Meadowbank 2024 BB Phaser Pit Water Quality Monitoring (ST-42 Lake) §

ST-42 Lake Parameter	Unit	Annual Average					6/23/2024	7/8/2024	8/11/2024	9/10/2024	10/20/2024
2020		2021	2022	2023	2024						
Field Measured											
Temperature	°C	4.3	5.1	7.7	8.1	8.5	3.0	12.1	17.3	8.3	2.0
pH	pH units	7.99	7.68	7.29	7.43	7.56	7.30	7.38	7.75	8.10	7.28
Conductivity	uS/cm	161.5	127.1	162.5	275.5	190.6	231.0	152.9	161.2	182.1	226.0
Turbidity	NTU	1.78	4.77	2.00	1.82	2.71	5.24	2.37	0.97	1.29	3.70
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	80	61	64	75	65	46.5	59.4	56.6	71.7	89.2
Total alkalinity, as CaCO ₃	mg/L	55	32	35	41	38	27	36	43	40	45
Carbonate, as CaCO ₃	mg/L	-	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃	mg/L	-	32	34	41	38	27	36	43	40	45
TDS	mg/L	46	88	80	108	102	100	110	100	115	85
TSS	mg/L	4	5	2	1	2	3	5	1	2	1
Total organic carbon	mg/L	-	3.5	3.1	3.4	3.0	2.5	3.0	2.8	2.7	3.8
Dissolved organic carbon	mg/L	5.6	3.3	3.1	3.1	2.9	2.7	2.7	2.8	2.7	3.6
Major Ions											
Chloride	mg/L	1.6	2.2	2.0	1.8	2.0	1.4	2.0	1.7	2.3	2.4
Cyanide	mg/L	0.001	0.005	0.002	0.001	0.001	< 0.00050	< 0.00050	0.00061	0.00074	< 0.00050
Cyanide (free)	mg/L	0.001	0.002	0.003	0.002	0.002	< 0.0020	< 0.0020	0.0022	0.0024	< 0.0020
Silica	mg/L	-	2.3	2.4	2.7	2.4	1.6	2.2	2.4	2.5	3.2
Sulfate	mg/L	39	30	30	36	34	20	30	38	37	45
Nutrients											
Ammonia Nitrogen	mg N/L	0.06	0.05	0.06	0.07	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	1.18	0.76	0.67	0.70	0.53	0.33	0.53	0.59	0.60	0.62
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen	mg N/L	-	0.14	0.12	0.12	0.15	< 0.10	0.12	0.32	0.12	0.11
Total phosphorus	mg P/L	0.0100	0.0044	0.0035	0.0020	0.0022	0.0057	0.0024	< 0.0010	< 0.0010	< 0.0010
Orthophosphate	mg P/L	-	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals											
Aluminum	mg/L	0.0600	0.1497	0.0616	0.0411	0.0508	0.0969	0.0688	0.0226	0.0269	0.0387
Antimony	mg/L	-	0.00055	0.00052	0.00060	0.00043	0.000286	0.000440	0.000411	0.000486	0.000529
Arsenic	mg/L	0.00180	0.00166	0.00150	0.00150	0.00140	0.00154	0.00153	0.00120	0.00143	0.00132
Barium	mg/L	0.0162	0.0113	0.0115	0.0135	0.0106	0.00755	0.01090	0.00903	0.01120	0.01420
Beryllium	mg/L	-	0.00002	0.00001	0.00001	0.00001	0.000015	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Boron	mg/L	-	0.01	0.01	0.01	0.01	0.019	< 0.010	< 0.010	< 0.010	< 0.010
Cadmium	mg/L	0.00002	0.00002	0.00001	0.00001	0.00001	0.0000122	0.0000161	0.0000076	0.0000100	0.0000181
Calcium (total)	mg/L	24.2	18.7	19.7	23.2	19.7	14.2	17.8	17.5	22.0	27.1
Chromium	mg/L	0.00060	0.00044	0.00021	0.00024	0.00023	0.00041	0.00039	< 0.00010	< 0.00010	0.00015
Copper	mg/L	0.0049	0.0045	0.0035	0.0036	0.0029	0.00259	0.00300	0.00231	0.00277	0.00383
Iron	mg/L	0.075	0.271	0.087	0.062	0.082	0.1880	0.1170	0.0118	0.0297	0.0659
Lead	mg/L	0.00017	0.00097	0.00016	0.00011	0.00014	0.000243	0.000185	0.000044	0.000112	0.000100
Lithium	mg/L	-	0.00128	0.00123	0.00133	0.00119	0.00091	0.00122	0.00099	0.00125	0.00156
Magnesium (total)	mg/L	4.67	3.45	3.64	4.06	3.75	2.69	3.63	3.15	4.08	5.21
Manganese	mg/L	0.0154	0.0206	0.0093	0.0059	0.0069	0.01330	0.00858	0.00212	0.00242	0.00788
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0044	0.0043	0.0044	0.0049	0.0042	0.00328	0.00434	0.00389	0.00481	0.00492
Nickel	mg/L	0.0058	0.0044	0.0031	0.0034	0.0025	0.00263	0.00255	0.00177	0.00216	0.00340
Potassium (total)	mg/L	-	1.50	1.45	1.51	1.26	0.949	1.330	1.100	1.320	1.580
Selenium	mg/L	0.00100	0.00014	0.00012	0.00012	0.00010	0.000085	0.000093	0.000114	0.000097	0.000123
Sodium (total)	mg/L	-	1.17	1.16	1.25	1.08	0.777	1.070	0.910	1.130	1.500
Strontium	mg/L	-	0.0902	0.0934	0.1112	0.0952	0.0634	0.0970	0.0857	0.1050	0.1250
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	0.0000079	0.0000084	0.0000051	0.0000070	0.0000086
Tin	mg/L	-	0.0002	0.0002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Titanium	mg/L	-	0.0034	0.0013	0.0010	0.0016	0.00183	0.00154	< 0.0020	< 0.0020	0.00068
Uranium	mg/L	-	0.0034	0.0033	0.0039	0.0030	0.00212	0.00284	0.00252	0.00353	0.00382
Vanadium	mg/L	-	0.0003	0.0002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Zinc	mg/L	0.001	0.002	0.001	0.001	0.002	0.00227	0.00483	0.00250	< 0.0010	0.00102
Dissolved Metals											
Aluminum	mg/L	0.0190	0.0384	0.0222	0.0207	0.0214	0.0192	0.0351	0.0159	0.0182	0.0186
Antimony	mg/L	-	0.00054	0.00053	0.00059	0.00047	0.000242	0.000461	0.000591	0.000527	0.000547
Arsenic	mg/L	0.00125	0.00140	0.00170	0.00188	0.00190	0.00198	0.00178	0.00198	0.00162	0.00214
Barium	mg/L	0.0124	0.0103	0.0112	0.0139	0.0109	0.00717	0.01010	0.01210	0.01190	0.01320
Beryllium	mg/L	-	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	0.000016
Boron	mg/L	-	0.01	0.01	0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	mg/L	0.00002	0.00001	0.00001	0.00001	0.00001	0.0000070	0.0000101	0.0000096	0.0000097	0.0000225
Chromium	mg/L	0.00060	0.00012	0.00012	0.00013	0.00013	0.00017	0.00014	< 0.00010	< 0.00010	0.00013
Copper	mg/L	0.0035	0.0037	0.0038	0.0044	0.0044	0.00449	0.00366	0.00396	0.00448	0.00537
Iron	mg/L	0.010	0.042	0.018	0.022	0.018	0.0350	0.0187	0.0047	0.0096	0.0226
Lead	mg/L	0.00017	0.00020	0.00010	0.00008	0.00007	0.0001160	0.0000875	0.0000400	0.0000442	0.0000865
Lithium	mg/L	-	0.00117	0.00137	0.00128	0.00123	0.00090	0.00120	0.00132	0.00120	0.00151
Manganese	mg/L	0.0005	0.0126	0.0078	0.0056	0.0105	0.02960	0.00661	0.00280	0.00238	0.01130
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0041	0.0042	0.0044	0.0047	0.0046	0.00290	0.00443	0.00564	0.00508	0.00517
Nickel	mg/L	0.0047	0.0040	0.0031	0.0033	0.0032	0.00298	0.00314	0.00261	0.00257	0.00447
Selenium	mg/L	0.00075	0.00013	0.00012	0.00013	0.00013	0.000112	0.000092	0.000125	0.000139	0.000180
Strontium	mg/L	-	0.0876	0.0935	0.1123	0.1021	0.0574	0.0949	0.1210	0.1100	0.1270
Thallium	mg/L	0.000200	0.000008	0.000006	0.000006	0.000005	0.0000020	0.0000051	0.0000062	0.0000067	0.0000053
Tin	mg/L	-	0.0003	0.0003	0.0004	0.0003	0.00072	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Titanium	mg/L	-	0.0006	0.0005	0.0005	0.0005	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Uranium	mg/L	-	0.0034	0.0033	0.0038	0.0032	0.00153	0.00298	0.00365	0.00377	0.00392
Vanadium	mg/L	-	0.0003	0.0002	0.0002	0.0002	< 0.00020	0.00033	< 0.00020	< 0.00020	< 0.00020
Zinc	mg/L	0.001	0.004	0.003	0.003	0.004	0.00137	0.00649	0.00341	0.00355	0.00317

Table 8-31 Meadowbank 2024 Phaser Attenuation Pond Water Quality Monitoring (ST-43) §

ST-43	Unit	Annual Average					6/23/2024	7/8/2024	8/11/2024	9/10/2024
Parameter		2020	2021	2022	2023	2024				
Field Measured										
Temperature	°C	12.7	8.1	9.2	8.4	11.9	8.7	11.8	18.8	8.1
pH	pH units	7.55	7.53	7.66	7.45	7.57	7.21	7.29	7.75	8.03
Conductivity	uS/cm	158.5	126.5	163.9	144.8	193.1	151.4	184.6	188.5	248.0
Turbidity	NTU	1.98	1.35	1.39	2.46	2.32	2.26	2.49	1.29	3.25
Conventional Parameters										
Hardness, as CaCO ₃	mg/L	70	62	70	64	75	71.2	71.6	80.1	78.7
Total alkalinity, as CaCO ₃	mg/L	28	23	31	32	42	37	40	44	46
TDS	mg/L	91	85	87	99	121	150	105	105	125
TSS	mg/L	5	1	1	2	1	1	1	1	2
Major Ions										
Chloride	mg/L	1.6	2.8	3.7	2.8	3.8	3.6	3.7	3.7	4.0
Cyanide	mg/L	0.001	0.005	0.001	0.001	0.001	< 0.00050	< 0.00050	0.00059	< 0.00050
Fluoride	mg/L	0.07	0.10	0.10	0.10	0.11	< 0.10	< 0.10	0.11	0.12
Sulfate	mg/L	45	39	41	34	43	37	40	47	46
Nutrients										
Ammonia Nitrogen	mg N/L	0.08	0.31	0.06	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	0.95	0.42	0.14	0.12	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrite	mg N/L	0.013	0.010	0.010	0.010	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals										
Aluminum	mg/L	0.058	0.051	0.037	0.039	0.030	0.0408	0.0240	0.0201	0.0358
Arsenic	mg/L	0.00065	0.00066	0.00068	0.00070	0.00063	0.000668	0.000573	0.000644	0.000615
Barium	mg/L	0.011	0.011	0.012	0.011	0.012	0.0119	0.0117	0.0117	0.0115
Cadmium	mg/L	0.000020	0.000050	0.000024	0.000018	0.000016	0.0000289	0.0000106	0.0000100	0.0000140
Chromium	mg/L	0.00085	0.00011	0.00013	0.00023	0.00013	0.00017	0.00013	< 0.00010	0.00012
Copper	mg/L	0.0048	0.0030	0.0034	0.0028	0.0025	0.00268	0.00243	0.00262	0.00246
Iron	mg/L	0.340	0.204	0.140	0.152	0.112	0.1500	0.1400	0.0644	0.0941
Lead	mg/L	0.00024	0.00022	0.00015	0.00015	0.00014	0.000261	0.000102	0.000073	0.000114
Manganese	mg/L	0.0581	0.0257	0.0140	0.0137	0.0108	0.0183	0.0100	0.00647	0.00853
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0008	0.0014	0.0018	0.0016	0.0014	0.000956	0.001310	0.001650	0.001660
Nickel	mg/L	0.0107	0.0051	0.0035	0.0033	0.0022	0.00310	0.00212	0.00169	0.00205
Selenium	mg/L	0.00100	0.00007	0.00006	0.00007	0.00007	0.000056	0.000057	0.000080	0.000079
Silver	mg/L	0.000100	0.000012	0.000014	0.000010	0.000009	0.0000074	0.0000075	< 0.000010	< 0.000010
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	0.0000060	0.0000068	0.0000072	0.0000070
Zinc	mg/L	0.004	0.003	0.002	0.002	0.002	0.00451	0.00084	< 0.0010	0.00160

8.5.2.1.22 Monitoring Station KM 87 (ST-44)[§]

The monitoring station ST-44 was created in 2023 to monitor the water quality after a spill event. The new monitoring station location was determined in collaboration with the CIRNAC's Officer.

In November 2022, a tractor trailer overturned at kilometer 87 on the AWAR resulting in a spill of diesel fuel. A downstream monitoring location, ST-44, has been sampled weekly during the open water season period and the results are presented in the Table 8-33. For further details on the event, refer to the spill report and the associated follow up report that are provided in Appendix 28 of the 2022 Meadowbank Complex Annual Report. A consultant was hired with the objective to assess the extent of the fuel spill impacts, and to develop and implement a strategy to manage the impacts and protect nearby receptors by developing a conceptual site model, development of risk assessment and remedial plan, work was ongoing in 2024 and will continue in 2025.

Water accumulated into the sump was pumped out and transferred to the Stormwater Water Management Pond. In 2024, a volume total of 14,334 m³ was pumped of the collection sump. Monthly breakdown is presented in Table 8-32.

Table 8-32 2024 Volume of Water Pumped from ST-44[§]

Month	Volume Pumped (m ³)
May	1,663
June	6,365
July	2,562
August	3,205
September	404
October	135
Total	14,334

Table 8-33 Meadowbank 2024 KM 87 Water Quality Monitoring (ST-44) §

ST-44	Unit	5/26/2024	6/3/2024	6/9/2024	6/16/2024	6/23/2024	7/9/2024	7/14/2024	7/21/2024	7/29/2024	8/4/2024
Parameter											
Field Measured											
pH	pH units	8.34	8.23	6.51	6.24	-	6.90	7.70	6.34	7.30	7.49
Conventional Parameters											
TSS	mg/L	11	4	6	3	-	2	1	2	1	2
General Organics											
Total oil and grease	mg/L	0.90	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	12.00	< 0.50	0.70
Volatile Organics											
Benzene	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.0002
Ethylbenzene	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.0002
Toluene	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.0002
Xylenes	mg/L	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.0004
m,p-Xylenes	mg/L	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.0004
o-Xylene	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.0002
F2 (C10-C16)	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
F3 (C16-C34)	mg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
F4 (C34-C50)	mg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Petroleum Hydrocarbons F (C10-C50)	mg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

ST-44	Unit	8/13/2024	8/18/2024	8/25/2024	9/2/2024	9/9/2024	9/15/2024	9/22/2024	9/29/2024	10/6/2024	10/13/2024
Parameter											
Field Measured											
pH	pH units	7.60	8.47	7.10	6.84	7.13	6.85	6.84	7.43	6.45	7.14
Conventional Parameters											
TSS	mg/L	4	3	3	22	3	6	9	4	6	2
General Organics											
Total oil and grease	mg/L	6.10	0.60	1.30	0.90	< 0.50	< 0.50	0.60	0.90	0.50	< 0.50
Volatile Organics											
Benzene	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Ethylbenzene	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Toluene	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Xylenes	mg/L	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040
m,p-Xylenes	mg/L	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040
o-Xylene	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
F2 (C10-C16)	mg/L	< 0.1	< 0.1	< 0.1	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
F3 (C16-C34)	mg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
F4 (C34-C50)	mg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Petroleum Hydrocarbons F (C10-C50)	mg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

8.5.2.1.23 Meadowbank Landfarm (ST-14)§

Meadowbank's first landfarm (Landfarm 1 – ST-14) was located on the north-west side of the South Tailings Cell that is currently flooded and is now inactive. Landfarm 2 (ST-14b) was constructed in 2016 and contaminated soil has been added since 2017. In 2024, during freshet, ponded water was identified from the landfarm and sampled, as per the Water License requirements. Results are shown in Table 8-34. Water was naturally flowing towards the adjacent Tailings Storage Facilities. Refer to the Landfarm Section 7.2.1 for more information.

Table 8-34 Meadowbank 2024 Landfarm Water Quality Monitoring (ST-14b)

ST-14b	Unit	5/26/2024
Parameter		
Field Measured		
pH	pH units	7.54
Conventional Parameters		
TSS	mg/L	8
Total Metals		
Arsenic	mg/L	0.0604
Copper	mg/L	0.00208
Lead	mg/L	0.00061
Nickel	mg/L	0.0189
Volatile Organics		
Benzene	mg/L	< 0.00020
Ethylbenzene	mg/L	< 0.00020
Toluene	mg/L	< 0.00020
Xylenes	mg/L	< 0.00040
F2 (C10-C16)	mg/L	< 0.1
F3 (C16-C34)	mg/L	0.2
F4 (C34-C50)	mg/L	< 0.2

8.5.2.1.24 Landfill§

No water quality monitoring was completed at the landfill in 2024 as no leachate was observed.

8.5.2.2 Whale Tail Site§**8.5.2.2.1 Whale Tail Attenuation Pond (ST-WT-1) §**

The Whale Tail Attenuation Pond has been in operation since May 20th, 2020. Water from the Whale Tail Attenuation Pond is transferred in the IVR Attenuation Pond before being treated in the WTP and then discharged in either Whale Tail South or Kangislulik Lake via the submerged diffusers. Samples from the Whale Tail Attenuation Pond (ST-WT-1) prior to treatment, are to be collected four (4) times per year as per the Water License, however Agnico Eagle collected samples more frequently than prescribed in 2024. The results for 2024 are presented in Table 8-35 below. Sampling station is illustrated on Figure 4.

8.5.2.2.2 IVR Attenuation Pond (ST-WT-23) §

The IVR Attenuation Pond has been in operation since in 2021. Water from the IVR Attenuation Pond is treated in the WTP prior to being discharged in either Whale Tail South or Kangislulik Lake via the submerged diffusers. Samples from the IVR Attenuation Pond (ST-WT-23) prior to treatment, are to be collected four (4) times per year as per the Water License, however Agnico Eagle collected samples more

frequently than prescribed in 2024. The results for 2024 are presented in Table 8-36 below. Sampling station is illustrated on Figure 4.

8.5.2.2.3 Whale Tail Waste Rock Storage Facility Pond (ST-WT-3) §

In 2024 water was observed in the Whale Tail WRSF pond. As per the Water License, water samples are required to be taken four (4) time per calendar year. In 2024, six (6) water samples during open water were taken and the data is presented in Table 8-37. There are no applicable license limits for this station. Sampling station ST-WT-3 is illustrated on Figure 4. A total of 13,830 m³ was pumped from this pond in 2024.

8.5.2.2.4 Whale Tail Pit (ST-WT-4) §

In 2019, with the development of the Whale Tail Pit, Agnico Eagle started water quality monitoring in the pit sump. As per the Water License, water samples need to be taken four (4) time per calendar year. In 2024, seventeen (17) water samples were taken, and the data is presented in Table 8-38. Agnico Eagle has taken more frequent samples, when safe to do and when water is present in the pit, starting in July 2019 to have a better understanding of the water management on site. There are no applicable license limits. Sampling station ST-WT-4 is illustrated on Figure 4. A total of 1,149,247 m³ was pumped from the Whale Tail Pit sumps in 2024.

8.5.2.2.5 IVR Pit (ST-WT-18) §

In 2024, Agnico Eagle continued to collect water quality samples in the IVR Pit sump (ST-WT-18) during the development of the IVR Pit. As per the Water License, water samples need to be taken four (4) time per calendar year. In 2024, eighteen (18) water samples were taken, and the data is presented in Table 8-39. Agnico Eagle has taken samples, when safe to do and when water was present in the pit. A total of 863,653 m³ was pumped from the IVR Pit sump in 2024. There are no applicable license limits. Sampling station ST-WT-18 is illustrated on Figure 4.

8.5.2.2.6 Lake A47 (ST-WT-6) §

Due to dewatering of this lake in 2020, this station is no longer operational.

Table 8-35 Whale Tail Attenuation Pond 2024 Water Quality Monitoring (ST-WT-1) [§]

ST-WT-1	Unit	Annual Average					1/16/2024	2/4/2024	2/18/2024	3/4/2024	4/15/2024	4/29/2024	5/5/2024	5/13/2024	5/27/2024	6/2/2024	6/10/2024	6/17/2024	6/23/2024
Parameter		2020	2021	2022	2023	2024													
Field Measured																			
Temperature	°C	4.4	2.0	4.0	3.0	4.0	3.1	0.2	0.0	0.4	0.4	0.2	0.7	-0.2	1.6	0.9	2.3	3.0	3.4
pH	pH units	7.54	7.37	7.14	7.71	7.62	8.47	7.12	8.09	7.49	7.84	7.70	7.67	7.48	7.06	7.35	7.11	7.41	7.29
Conductivity	uS/cm	337.5	280.5	339.5	331.6	390.6	293.0	246.0	295.0	243.0	259.0	277.0	249.0	242.0	189.9	180.8	259.0	272.0	303.0
Turbidity	NTU	63.90	60.10	53.90	104.30	23.54	6.40	6.38	10.20	4.31	23.30	7.97	13.60	29.30	77.70	56.40	48.90	37.10	30.20
Conventional Parameters																			
Hardness, as CaCO ₃	mg/L	156	107	126	124	135	107.0	84.7	103.0	88.0	99.1	94.9	92.0	78.0	64.3	68.8	94.7	94.2	110.0
Total alkalinity, as CaCO ₃	mg/L	59	49	46	48	52	52	48	1.2	48	62	62	49	47	39	38	43	44	56
TDS	mg/L	212	174	195	244	280	180	130	135	185	175	195	200	175	120	120	270	260	235
TSS	mg/L	67	64	41	84	21	4	3	3	3	49	7	7	22	54	41	44	36	28
Major Ions																			
Chloride	mg/L	52.8	30.5	29.8	40.1	40.8	42	28	32	24	27	33	26	27	18	17	32	31	33
Fluoride	mg/L	0.12	0.14	0.13	0.14	0.14	0.23	0.15	< 0.10	0.15	0.13	0.19	0.13	< 0.10	< 0.10	< 0.10	0.12	0.10	0.17
Sulfate	mg/L	28.9	34.0	59.7	42.0	62.3	32	31	33	30	34	31	30	30	22	23	27	28	38
Nutrients																			
Ammonia (NH ₃)	mg/L	1.35	1.10	1.11	1.32	1.48	0.48	0.23	2.70	0.89	2.70	1.20	0.52	0.68	0.15	0.14	1.50	1.60	1.90
Ammonia Nitrogen	mg N/L	0.02	0.90	0.92	1.08	1.21	0.39	0.19	2.20	0.74	2.30	1.00	0.43	0.56	0.13	0.12	1.20	1.30	1.50
Nitrate	mg N/L	2.47	1.80	2.37	1.67	2.77	0.26	0.19	2.17	0.79	2.42	0.70	0.43	0.83	0.41	0.40	1.64	2.12	2.82
Nitrite	mg N/L	0.14	0.12	0.10	0.08	0.11	0.013	< 0.010	0.096	0.040	0.091	0.037	0.018	0.035	0.014	0.013	0.061	0.079	0.127
Total phosphorus	mg P/L	0.05	0.06	0.05	0.07	0.02	0.0059	0.0041	0.0055	0.0025	0.0290	0.0100	0.0062	0.0160	0.0490	0.0310	0.0350	0.0290	0.0260
Total Metals																			
Aluminum	mg/L	0.801	1.080	0.828	0.970	0.394	0.0584	0.0385	0.1030	0.0389	0.388	0.112	0.141	0.266	1.030	0.722	1.040	0.574	0.521
Arsenic	mg/L	0.0304	0.0399	0.1834	0.0790	0.0854	0.0204	0.0141	0.0166	0.0125	0.0159	0.0162	0.0125	0.0107	0.0134	0.0125	0.0144	0.0133	0.1420
Barium	mg/L	0.0817	0.0655	0.0525	0.0555	0.0476	0.0471	0.0397	0.0463	0.0385	0.0459	0.0441	0.0402	0.0351	0.0336	0.0352	0.0450	0.0407	0.0451
Cadmium	mg/L	0.000028	0.000021	0.000030	0.000026	0.000021	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	0.000021	< 0.000010	0.000015	0.000025	0.000017	0.000021	0.000024	0.000023
Chromium	mg/L	0.0115	0.0166	0.0082	0.0111	0.0061	0.0015	< 0.0010	0.0013	< 0.0010	0.0047	0.0012	0.0015	0.0040	0.0135	0.0087	0.0148	0.0081	0.0079
Copper	mg/L	0.0033	0.0034	0.0034	0.0028	0.0038	0.00055	0.00082	0.00086	0.05120	0.00289	0.00276	0.00393	0.00135	0.00264	0.00226	0.00221	0.00183	0.00201
Iron	mg/L	1.98	2.69	1.94	2.57	1.01	0.256	0.486	0.554	0.548	1.240	0.806	0.982	0.864	2.220	1.620	2.400	1.360	1.270
Lead	mg/L	0.00065	0.00204	0.00135	0.00155	0.00061	0.00033	0.00034	0.00039	0.00061	0.00070	0.00033	0.00044	0.00069	0.00131	0.00104	0.00120	0.00090	0.00085
Manganese	mg/L	0.370	0.330	0.295	0.277	0.206	0.165	0.205	0.171	0.190	0.228	0.177	0.199	0.189	0.170	0.180	0.194	0.215	0.194
Mercury	mg/L	0.00001	0.00001	0.00001	0.00002	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0055	0.0048	0.0089	0.0142	0.0092	0.0147	0.006	0.0112	0.0064	0.0113	0.0115	0.0068	0.0044	0.0023	0.0019	0.0055	0.0056	0.0091
Nickel	mg/L	0.0175	0.0146	0.0389	0.0172	0.0188	0.0030	0.0012	0.0019	0.0025	0.0047	0.0025	0.0022	0.0047	0.0095	0.0072	0.0107	0.0082	0.0237
Selenium	mg/L	0.00088	0.00028	0.00033	0.00018	0.00020	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	0.00013
Silver	mg/L	0.000097	0.000022	0.000020	0.000026	0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.00019	0.00003	0.00003	0.00003	0.00003	< 0.000010	< 0.000010	0.000018	< 0.000010	0.000017	0.000012	0.000011	0.000016	0.000024	0.000022	0.000031	0.000024	0.000029
Zinc	mg/L	0.0041	0.0075	0.0090	0.0088	0.0072	< 0.0050	< 0.0050	< 0.0050	0.0351	< 0.0050	0.0083	0.0078	< 0.0050	0.0069	< 0.0050	0.0060	< 0.0050	< 0.0050

ST-WT-1	Unit	Annual Average					7/8/2024	7/15/2024	8/5/2024	8/12/2024	8/26/2024	9/2/2024	9/16/2024	9/23/2024	10/1/2024	10/23/2024	10/28/2024	12/2/2024
Parameter		2020	2021	2022	2023	2024												
Field Measured																		
Temperature	°C	4.4	2.0	4.0	3.0	4.0	9.1	12.0	10.9	14.6	11.1	7.9	6.8	5.3	4.0	0.2	0.7	0.2
pH	pH units	7.54	7.37	7.14	7.71	7.62	7.59	7.97	7.93	7.53	7.56	7.78	7.73	7.82	7.38	7.88	7.74	7.48
Conductivity	uS/cm	337.5	280.5	339.5	331.6	390.6	349.0	333	414	330	350	376	736	817	888	662	633	568.2
Turbidity	NTU	63.90	60.10	53.90	104.30	23.54	13.80	15.00	3.52	9.73	30.00	12.10	24.90	90.10	17.50	7.58	5.48	7.08
Conventional Parameters																		
Hardness, as CaCO ₃	mg/L	156	107	126	124	135	108.0	115.0	128.0	108.0	115.0	136.0	273.0	321.0	275.0	226.0	210.0	185.0
Total alkalinity, as CaCO ₃	mg/L	59	49	46	48	52	60	58	64	52	45	46	58	60	66	57	57	78
TDS	mg/L	212	174	195	244	280	220	240	275	180	250	275	505	750	595	530	420	375
TSS	mg/L	67	64	41	84	21	15	13	13	8	36	8	21	84	12	4	2	5
Major Ions																		
Chloride	mg/L	52.8	30.5	29.8	40.1	40.8	31	29	36	30	36	41	81	99	82	68	60	56
Fluoride	mg/L	0.12	0.14	0.13	0.14	0.14	0.13	0.14	0.16	0.14	0.15	0.13	0.14	0.13	0.16	0.15	0.15	0.16
Sulfate	mg/L	28.9	34.0	59.7	42.0	62.3	47	48	64	49	50	54	140	170	190	130	130	97
Nutrients																		
Ammonia (NH ₃)	mg/L	1.35	1.10	1.11	1.32	1.48	1.40	0.96	2.20	1.10	0.31	0.18	1.60	2.00	4.60	2.10	2.30	3.60
Ammonia Nitrogen	mg N/L	0.02	0.90	0.92	1.08	1.21	1.10	0.79	1.80	0.91	0.25	0.15	1.30	1.60	3.70	1.70	1.90	3.00
Nitrate	mg N/L	2.47	1.80	2.37	1.67	2.77	2.61	2.59	4.34	2.45	1.42	1.40	5.87	6.38	9.65	5.17	5.45	6.65
Nitrite	mg N/L	0.14	0.12	0.10	0.08	0.11	0.109	0.095	0.203	0.098	0.047	0.038	0.267	0.251	0.367	0.177	0.179	0.375
Total phosphorus	mg P/L	0.05	0.06	0.05	0.07	0.02	0.0180	0.0200	0.0230	0.0076	0.0330	0.0067	0.0270	0.0810	0.0190	0.0039	0.0016	0.0210
Total Metals																		
Aluminum	mg/L	0.801	1.080	0.828	0.970	0.394	0.131	0.246	0.166	0.144	0.349	0.100	0.335	2.920	0.228	0.0988	0.0566	0.0553
Arsenic	mg/L	0.0304	0.0399	0.1834	0.0790	0.0854	0.158	0.159	0.177	0.0632	0.025	0.018	0.21	0.101	0.289	0.108	0.105	0.408
Barium	mg/L	0.0817	0.0655	0.0525	0.0555	0.0476	0.0405	0.0504	0.0496	0.0441	0.0470	0.0505	0.0599	0.0931	0.0632	0.0568	0.0569	0.0426
Cadmium	mg/L	0.000028	0.000021	0.000030	0.000026	0.000021	0.000022	0.000026	0.000016	0.000015	0.000024	0.000021	0.000094	< 0.000010	< 0.000010	0.000032	0.000036	0.000011
Chromium	mg/L	0.0115	0.0166	0.0082	0.0111	0.0061	0.0017	0.0038	0.0023	0.0018	0.0026	0.0010	0.0051	0.0564	0.0051	0.0019	0.0011	0.0014
Copper	mg/L	0.0033	0.0034	0.0034	0.0028	0.0038	0.00114	0.00149	0.00191	0.00129	0.00153	0.00100	0.00189	0.00360	0.00205	0.00183	0.00154	0.0015
Iron	mg/L	1.98	2.69	1.94	2.57	1.01	0.397	0.717	0.484	0.580	1.030	0.449	0.720	4.980	0.524	0.218	0.174	0.494
Lead	mg/L	0.00065	0.00204	0.00135	0.00155	0.00061	0.00036	0.00049	0.00042	0.00038	0.00055	0.00036	0.00051	0.00209	0.00029	< 0.00020	< 0.00020	< 0.00020
Manganese	mg/L	0.370	0.330	0.295	0.277	0.206	0.124	0.182	0.131	0.170	0.147	0.147	0.292	0.467	0.280	0.272	0.268	0.205
Mercury	mg/L	0.00001	0.00001	0.00001	0.00002	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0055	0.0048	0.0089	0.0142	0.0092	0.0090	0.0092	0.0134	0.0108	0.0098	0.0095	0.0106	0.0107	0.0127	0.0111	0.0111	0.0147
Nickel	mg/L	0.0175	0.0146	0.0389	0.0172	0.0188	0.0216	0.0223	0.0285	0.0111	0.0072	0.0069	0.0490	0.0574	0.0608	0.0361	0.0350	0.0525
Selenium	mg/L	0.00088	0.00028	0.00033	0.00018	0.00020	0.00014	0.00017	0.00026	0.00019	0.00016	0.00019	0.00049	0.00051	0.00062	0.00033	0.00033	0.00030
Silver	mg/L	0.000097	0.000022	0.000020	0.000026	0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.00019	0.00003	0.00003	0.00003	0.00003	0.000026	0.000030	0.000031	0.000023	0.000025	0.000022	0.000038	0.000088	0.000040	0.000027	0.000025	0.000018
Zinc	mg/L	0.0041	0.0075	0.0090	0.0088	0.0072	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0052	< 0.0050	0.0128	0.0125	0.0066	< 0.0050	< 0.0050	< 0.0050

Table 8-36 IVR Attenuation Pond 2024 Water Quality Monitoring (ST-WT-23) §

ST-WT-23	Unit	Annual Average				3/25/2024	4/15/2024	4/22/2024	4/29/2024	5/6/2024	5/13/2024	5/20/2024	5/27/2024	6/3/2024	6/10/2024
Parameter		2021	2022	2023	2024										
Field Measured															
Temperature	°C	5.8	4.0	4.3	5.2	0.6	0.5	1.4	0.9	0.4	0.2	0.6	0.8	1.6	2.4
pH	pH units	7.31	7.09	7.39	7.58	7.80	7.74	7.66	7.53	7.84	7.53	7.50	7.36	6.98	7.15
Conductivity	uS/cm	335.1	416.5	403.4	420.5	305	298	309	313	286	311	334	278	224	224
Turbidity	NTU	44.70	26.90	13.50	9.24	5.93	5.79	5.38	4.47	8.04	14.60	11.30	43.80	15.20	22.00
Conventional Parameters															
Hardness, as CaCO ₃	mg/L	127	158	145	149	103	117	107	106	117	106	131	94.9	79.4	79
Total alkalinity, as CaCO ₃	mg/L	44	54	51	56	58	60	91	64	62	52	110	40	38	35
TDS	mg/L	232	262	265	313	190	220	240	240	230	195	235	260	190	265
TSS	mg/L	28	27	9	6	5	5	7	2	4	10	6	32	8	17
Major Ions															
Chloride	mg/L	35	49	51	52	35	32	38	37	34	40	44	46	37	32
Fluoride	mg/L	0.12	0.15	0.13	0.13	0.16	0.15	0.14	0.18	0.15	0.11	0.13	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	50	59	48	59	40	37	42	37	36	37	40	22	20	20
Nutrients															
Ammonia (NH ₃)	mg/L	0.97	0.87	1.64	0.65	0.92	1.30	1.20	1.10	1.10	1.10	1.20	0.30	0.26	0.45
Ammonia Nitrogen	mg N/L	0.77	0.71	1.33	0.53	0.76	1.10	0.95	0.92	0.88	0.89	0.97	0.24	0.21	0.37
Nitrate	mg N/L	2.26	3.11	3.21	3.00	1.09	1.46	1.21	1.13	1.29	1.57	1.98	0.75	0.85	1.03
Nitrite	mg N/L	0.136	0.064	0.077	0.052	< 0.010	0.038	0.021	0.021	0.016	0.018	0.029	0.020	0.02	0.031
Total phosphorus	mg P/L	0.0220	0.0446	0.0096	0.0127	0.0036	0.0047	0.0011	0.0034	0.0020	0.0075	0.0250	0.0230	0.0120	0.0130
Total Metals															
Aluminum	mg/L	0.748	0.497	0.195	0.113	0.0753	0.0567	0.0391	0.0387	0.0699	0.1410	0.1150	0.5370	0.1970	0.3590
Arsenic	mg/L	0.07119	0.25934	0.04490	0.14722	0.0280	0.0207	0.0234	0.0246	0.0294	0.0657	0.0559	0.0239	0.0180	0.0165
Barium	mg/L	0.0554	0.0688	0.0602	0.0544	0.0473	0.0515	0.0481	0.047	0.047	0.0441	0.0501	0.0395	0.0342	0.0381
Cadmium	mg/L	0.00003	0.00003	0.00002	0.00002	< 0.000010	< 0.000010	< 0.000010	0.000018	< 0.000010	0.000011	0.000013	0.000024	0.000018	0.000019
Chromium	mg/L	0.0125	0.0072	0.0045	0.0022	0.0012	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0024	0.0022	0.0087	0.0034	0.0055
Copper	mg/L	0.00264	0.00256	0.00173	0.00100	0.00072	0.00137	0.00102	0.00098	0.00081	0.00091	0.00113	0.00135	0.00087	0.00112
Iron	mg/L	1.77	1.20	0.65	0.33	0.492	0.492	0.356	0.339	0.407	0.440	0.420	1.160	0.413	0.797
Lead	mg/L	0.00124	0.00087	0.00087	0.00028	< 0.00020	0.00027	0.00034	0.00022	0.00020	0.00038	0.00030	0.00085	0.00037	0.00055
Manganese	mg/L	0.266	0.229	0.212	0.136	0.232	0.262	0.262	0.240	0.217	0.184	0.198	0.169	0.138	0.200
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0031	0.0072	0.0164	0.0082	0.0094	0.0106	0.0102	0.0101	0.0103	0.0092	0.0101	0.0036	0.0029	0.0039
Nickel	mg/L	0.0281	0.0470	0.0145	0.0165	0.0069	0.0053	0.0063	0.0063	0.0069	0.0115	0.011	0.022	0.0066	0.008
Selenium	mg/L	0.00039	0.00028	0.00019	0.00021	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	0.0001	0.0001	< 0.0001	< 0.00010	< 0.00010
Silver	mg/L	0.00003	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.000039	0.000028	0.000020	0.000020	0.000011	0.000012	0.000010	0.000014	0.000014	0.000014	0.000014	0.000019	0.000014	0.000016
Zinc	mg/L	0.0072	0.0089	0.0100	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

ST-WT-23	Unit	Annual Average				6/17/2024	6/24/2024	7/1/2024	7/8/2024	7/15/2024	8/5/2024	8/12/2024	8/19/2024	8/26/2024	9/2/2024
Parameter		2021	2022	2023	2024										
Field Measured															
Temperature	°C	5.8	4.0	4.3	5.2	6.1	7.4	12.0	11.1	11.9	11.7	16.2	12.7	11.2	8.3
pH	pH units	7.31	7.09	7.39	7.58	7.71	7.58	8.01	7.27	7.85	7.94	7.38	7.70	8.02	7.79
Conductivity	uS/cm	335.1	416.5	403.4	420.5	247	307	357	366	381	410	416	459	485	487
Turbidity	NTU	44.70	26.90	13.50	9.24	13.10	15.00	6.84	7.02	4.94	12.50	2.87	1.92	3.20	4.17
Conventional Parameters															
Hardness, as CaCO ₃	mg/L	127	158	145	149	86	112	123	120	128	144	139	156	161	166
Total alkalinity, as CaCO ₃	mg/L	44	54	51	56	35	44	47	51	52	55	54	53	50	50
TDS	mg/L	232	262	265	313	165	250	250	235	295	290	345	330	340	380
TSS	mg/L	28	27	9	6	13	10	3	4	2	4	2	1	1	2
Major Ions															
Chloride	mg/L	35	49	51	52	36	41	50	42	43	53	56	54	59	59
Fluoride	mg/L	0.12	0.15	0.13	0.13	< 0.10	0.10	0.11	0.11	0.13	0.14	0.13	0.13	0.14	0.12
Sulfate	mg/L	50	59	48	59	21	32	36	41	44	51	51	46	57	58
Nutrients															
Ammonia (NH ₃)	mg/L	0.97	0.87	1.64	0.65	0.35	0.71	0.36	0.46	0.27	0.56	0.37	0.15	0.12	0.10
Ammonia Nitrogen	mg N/L	0.77	0.71	1.33	0.53	0.29	0.58	0.30	0.38	0.22	0.46	0.31	0.12	0.097	0.085
Nitrate	mg N/L	2.26	3.11	3.21	3.00	1.31	2.19	2.59	2.71	3.24	3.11	2.79	2.83	3.27	2.84
Nitrite	mg N/L	0.136	0.064	0.077	0.052	0.025	0.056	0.041	0.057	0.048	0.079	0.079	0.043	0.037	0.033
Total phosphorus	mg P/L	0.0220	0.0446	0.0096	0.0127	0.0100	0.0130	0.0110	0.0081	0.0086	0.0092	0.0056	0.0110	0.0150	0.0100
Total Metals															
Aluminum	mg/L	0.748	0.497	0.195	0.113	0.2160	0.1950	0.0923	0.0648	0.0609	0.0676	0.0323	0.0166	0.0191	0.0353
Arsenic	mg/L	0.07119	0.25934	0.04490	0.14722	0.0422	0.1220	0.1520	0.1570	0.1460	0.1090	0.0790	0.1150	0.1680	0.1420
Barium	mg/L	0.0554	0.0688	0.0602	0.0544	0.0389	0.0456	0.0468	0.0468	0.0515	0.0539	0.0560	0.0610	0.0603	0.0600
Cadmium	mg/L	0.00003	0.00003	0.00002	0.00002	0.000022	0.000019	0.000016	0.000013	0.000012	0.000016	0.000011	< 0.000010	0.000010	0.000013
Chromium	mg/L	0.0125	0.0072	0.0045	0.0022	0.0042	0.0034	0.0017	0.0011	0.0011	0.0014	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.00264	0.00256	0.00173	0.00100	0.00090	0.00112	0.00093	0.00091	0.00095	0.00132	0.00099	0.00103	0.00090	0.00084
Iron	mg/L	1.77	1.20	0.65	0.33	0.494	0.508	0.223	0.177	0.181	0.193	0.117	0.050	0.060	0.151
Lead	mg/L	0.00124	0.00087	0.00087	0.00028	0.00035	0.00041	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Manganese	mg/L	0.266	0.229	0.212	0.136	0.1430	0.1340	0.0832	0.0662	0.0601	0.0464	0.0486	0.0382	0.0367	0.0644
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0031	0.0072	0.0164	0.0082	0.0043	0.0067	0.0067	0.0080	0.0085	0.0097	0.0088	0.0086	0.0081	0.0084
Nickel	mg/L	0.0281	0.0470	0.0145	0.0165	0.0086	0.0156	0.0146	0.0141	0.0125	0.0124	0.0085	0.0095	0.0105	0.0096
Selenium	mg/L	0.00039	0.00028	0.00019	0.00021	< 0.00010	0.00012	0.00014	0.00014	0.00017	0.00020	0.00015	0.00017	0.00020	0.00022
Silver	mg/L	0.00003	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.000039	0.000028	0.000020	0.000020	0.000016	0.000020	0.000022	0.000021	0.000024	0.000025	0.000026	0.000022	0.000022	0.000019
Zinc	mg/L	0.0072	0.0089	0.0100	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

ST-WT-23	Unit	Annual Average				9/9/2024	9/16/2024	9/23/2024	10/1/2024	10/7/2024	10/22/2024	10/28/2024	11/4/2024	11/11/2024
Parameter		2021	2022	2023	2024									
Field Measured														
Temperature	°C	5.8	4.0	4.3	5.2	9.0	7.1	5.7	4.4	1.6	0.4	1.1	1.0	1.1
pH	pH units	7.31	7.09	7.39	7.58	7.74	7.67	7.70	7.74	6.42	7.52	7.90	7.53	7.40
Conductivity	uS/cm	335.1	416.5	403.4	420.5	472	533	636	658	596	684	619	573	626
Turbidity	NTU	44.70	26.90	13.50	9.24	3.26	5.82	11.80	8.03	10.30	4.88	5.22	6.69	3.84
Conventional Parameters														
Hardness, as CaCO ₃	mg/L	127	158	145	149	162	192	244	223	226	215	229	213	235
Total alkalinity, as CaCO ₃	mg/L	44	54	51	56	54	57	55	55	52	49	56	66	69
TDS	mg/L	232	262	265	313	305	365	610	485	395	420	435	355	550
TSS	mg/L	28	27	9	6	3	5	11	4	4	4	3	3	3
Major Ions														
Chloride	mg/L	35	49	51	52	63	67	77	77	72	74	66	64	73
Fluoride	mg/L	0.12	0.15	0.13	0.13	0.17	0.12	0.11	0.13	0.12	0.12	0.14	0.14	0.13
Sulfate	mg/L	50	59	48	59	59	71	100	120	120	110	130	110	120
Nutrients														
Ammonia (NH ₃)	mg/L	0.97	0.87	1.64	0.65	0.10	0.12	0.76	1.20	0.83	0.29	1.30	0.96	0.91
Ammonia Nitrogen	mg N/L	0.77	0.71	1.33	0.53	0.083	0.099	0.63	0.97	0.68	0.24	1.10	0.79	0.75
Nitrate	mg N/L	2.26	3.11	3.21	3.00	3.06	3.39	4.92	6.23	6.09	6.50	6.14	5.64	5.82
Nitrite	mg N/L	0.136	0.064	0.077	0.052	0.027	0.045	0.129	0.135	0.085	0.050	0.121	0.106	0.093
Total phosphorus	mg P/L	0.0220	0.0446	0.0096	0.0127	0.016	0.022	0.027	0.016	0.015	0.010	0.012	0.027	0.026
Total Metals														
Aluminum	mg/L	0.748	0.497	0.195	0.113	0.0344	0.0843	0.3110	0.1040	0.0909	0.0511	0.0567	0.0656	0.0421
Arsenic	mg/L	0.07119	0.25934	0.04490	0.14722	0.1960	0.1770	0.2110	0.2510	0.2930	0.1470	0.3370	0.4770	0.6420
Barium	mg/L	0.0554	0.0688	0.0602	0.0544	0.0597	0.0598	0.0765	0.0675	0.0709	0.0637	0.0673	0.0678	0.0756
Cadmium	mg/L	0.00003	0.00003	0.00002	0.00002	0.000011	0.000019	< 0.000010	< 0.000010	0.000022	0.000018	0.000025	0.000026	0.000018
Chromium	mg/L	0.0125	0.0072	0.0045	0.0022	< 0.0010	0.0014	0.0066	0.0024	0.0018	< 0.0010	0.0012	0.0016	0.0011
Copper	mg/L	0.00264	0.00256	0.00173	0.00100	0.00073	0.00078	0.00127	0.00117	0.00085	0.00083	0.00109	0.00108	0.00094
Iron	mg/L	1.77	1.20	0.65	0.33	0.111	0.201	0.598	0.258	0.212	0.127	0.137	0.279	0.163
Lead	mg/L	0.00124	0.00087	0.00087	0.00028	< 0.00020	< 0.00020	0.00032	0.00022	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Manganese	mg/L	0.266	0.229	0.212	0.136	0.0517	0.0712	0.166	0.144	0.100	0.0714	0.180	0.185	0.159
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0031	0.0072	0.0164	0.0082	0.0088	0.0076	0.0092	0.0089	0.0083	0.0062	0.0099	0.0105	0.0103
Nickel	mg/L	0.0281	0.0470	0.0145	0.0165	0.0124	0.0153	0.0278	0.0300	0.0279	0.0188	0.0397	0.0457	0.0539
Selenium	mg/L	0.00039	0.00028	0.00019	0.00021	0.00022	0.00026	0.00039	0.00044	0.00040	0.00034	0.00041	0.00041	0.00048
Silver	mg/L	0.00003	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.000039	0.000028	0.000020	0.000020	0.000019	0.000019	0.000032	0.000028	0.000022	0.000014	0.000027	0.000029	0.000035
Zinc	mg/L	0.0072	0.0089	0.0100	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Table 8-37 Whale Tail 2024 Waste Rock Storage Facility Pond Water Quality Monitoring (ST-WT-3) §

ST-WT-3	Unit	Annual Average					5/27/2024	6/9/2024	7/14/2024	8/11/2024	9/22/2024	10/8/2024
Parameter		2020	2021	2022	2023	2024						
Field Measured												
Temperature	°C	8.6	5.4	6.8	6.7	7.3	1.8	7.4	15.8	15.1	3.8	0.1
pH	pH units	7.18	7.41	7.04	7.44	7.58	6.90	8.23	7.58	7.47	6.95	8.36
Conductivity	uS/cm	280.8	184.8	190.9	260.8	286.3	107.2	88.8	225.0	318.0	364.0	615.0
Turbidity	NTU	23.89	26.19	12.76	7.96	7.81	13.00	10.80	5.89	2.75	7.73	6.70
Conventional Parameters												
Hardness, as CaCO ₃	mg/L	135	74	79	97	111	41.1	38.1	76.9	120.0	142.0	250.0
Total alkalinity, as CaCO ₃	mg/L	42	23	36	28	34	27	27	39	32	22	55
TDS	mg/L	185	132	117	177	209	95	130	150	195	305	380
TSS	mg/L	16	31	10	6	7	16	5	6	2	4	9
Major Ions												
Chloride	mg/L	11.4	4.9	4.1	2.3	3.2	1.1	< 1.0	1.1	2.3	3.4	10.00
Fluoride	mg/L	0.05	0.10	0.10	0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	79.9	46.9	47.5	75.0	89.8	27	18	54	100	140	200
Nutrients												
Total Ammonia (as NH ₃)	mg/L	-	0.17	0.07	0.11	0.06	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061
Ammonia Nitrogen	mg N/L	0.28	0.14	0.06	0.09	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	2.31	2.05	1.61	4.00	3.13	0.40	0.37	2.99	4.54	3.68	6.81
Nitrite	mg N/L	0.03	0.01	0.02	0.01	0.04	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.161
Total phosphorus	mg P/L	0.030	0.030	0.018	0.013	0.012	0.0360	0.0088	0.0110	0.0029	0.0059	0.0084
Total Metals												
Aluminum	mg/L	0.627	0.792	0.361	0.182	0.211	0.356	0.294	0.182	0.045	0.149	0.237
Arsenic	mg/L	0.0113	0.0087	0.0084	0.0049	0.0077	0.00404	0.00783	0.0190	0.00447	0.00305	0.00764
Barium	mg/L	0.0563	0.0349	0.0327	0.0356	0.0351	0.0180	0.0162	0.0351	0.0385	0.0409	0.0619
Cadmium	mg/L	0.000024	0.000021	0.000013	0.000011	0.000015	0.000015	< 0.000010	< 0.000010	< 0.000010	0.000019	0.000025
Chromium	mg/L	0.0100	0.0141	0.0074	0.0034	0.0043	0.0053	0.0062	0.0052	< 0.0010	0.0019	0.0060
Copper	mg/L	0.0032	0.0029	0.0026	0.0017	0.0018	0.00203	0.00149	0.00191	0.00151	0.00207	0.00192
Iron	mg/L	4.42	1.58	0.78	0.35	0.43	0.811	0.525	0.326	0.097	0.409	0.435
Lead	mg/L	0.0005	0.0010	0.0007	0.0003	0.0003	0.00038	0.00041	0.00030	< 0.00020	0.00026	0.00026
Manganese	mg/L	0.3027	0.1069	0.0534	0.0340	0.0503	0.0559	0.0306	0.0173	0.0066	0.0453	0.1460
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	< 0.0010	< 0.0010	0.0018	< 0.0010	< 0.0010	0.0020
Nickel	mg/L	0.0277	0.0166	0.0091	0.0075	0.0096	0.0082	0.0062	0.0072	0.0053	0.0182	0.0122
Selenium	mg/L	0.00122	0.00048	0.00039	0.00070	0.00060	< 0.00010	< 0.00010	0.00084	0.00092	0.00072	0.00091
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.000200	0.000030	0.000023	0.000019	0.000019	0.000015	0.000014	0.000020	0.000022	0.000018	0.000023
Zinc	mg/L	0.0032	0.0067	0.0051	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dissolved Metals												
Aluminum	mg/L	0.0060	0.0388	0.0176	0.0147	0.0134	0.0244	0.0172	0.0079	0.0048	0.0182	0.0079
Arsenic	mg/L	0.00621	0.00473	0.00559	0.00387	0.00649	0.00256	0.00603	0.01780	0.00365	0.00172	0.00716
Barium	mg/L	0.0457	0.0283	0.0306	0.0375	0.0348	0.0178	0.0138	0.0340	0.0388	0.040	0.0646
Cadmium	mg/L	0.000024	0.000017	0.000010	0.000011	0.000013	0.000013	< 0.000010	< 0.000010	< 0.000010	0.000013	0.000023
Chromium	mg/L	0.0006	0.0012	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.00126	0.00180	0.00221	0.00179	0.00211	0.00151	0.00141	0.00220	0.00168	0.00142	0.00444
Iron	mg/L	0.03	0.20	0.09	0.03	0.05	0.1660	0.0293	0.0186	0.0133	0.0779	0.0176
Lead	mg/L	0.00024	0.00024	0.00020	0.00020	0.00021	< 0.00020	< 0.00020	< 0.00020	< 0.00020	0.00026	< 0.00020
Manganese	mg/L	0.2381	0.0844	0.0447	0.0321	0.0488	0.0559	0.0232	0.0127	0.0074	0.0436	0.150
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0008	0.0010	0.0012	0.0011	0.0013	< 0.0010	< 0.0010	0.0019	< 0.0010	< 0.0010	0.0021
Nickel	mg/L	0.021	0.011	0.006	0.007	0.008	0.0068	0.0037	0.0058	0.0055	0.0168	0.0114
Selenium	mg/L	0.00117	0.00045	0.00037	0.00077	0.00065	< 0.00010	< 0.00010	0.00091	0.00094	0.00083	0.00102
Silver	mg/L	0.00010	0.00002	0.00002	0.00006	0.00009	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	0.000454
Thallium	mg/L	0.00020	0.00002	0.00002	0.00002	0.00001	0.000010	< 0.000010	0.000019	0.000020	0.000014	< 0.000010
Zinc	mg/L	0.0014	0.0050	0.0057	0.0050	0.0108	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0397	< 0.0050

Table 8-38 Whale Tail Pit Sump 2024 Water Quality Monitoring (ST-WT-4) §

ST-WT-4	Unit	Annual Average					1/16/2024	1/29/2024	2/18/2024	3/24/2024	4/16/2024	5/13/2024	5/21/2024	6/4/2024	6/17/2024
Parameter		2020	2021	2022	2023	2024									
Field Measured															
Temperature	°C	4.0	1.9	2.6	2.3	2.4	3.2	0.2	-0.2	0.8	0.0	0.6	2.3	0.6	2.3
pH	pH units	7.81	7.48	7.24	7.74	7.79	8.73	6.74	7.73	8.26	7.87	7.60	8.19	9.53	7.20
Conductivity	uS/cm	701.0	417.0	492.0	483.1	492.5	370.0	303.0	328.0	327.0	408.0	322.0	298.0	272.0	348.0
Turbidity	NTU	65.8	77.9	13.1	17.4	62.2	330.00	6.99	5.49	19.70	9.80	40.30	97.80	6.08	96.40
Conventional Parameters															
Hardness, as CaCO ₃	mg/L	353	255	188	179	181	-	109	108	114	139	115	112	117	137
Total alkalinity, as CaCO ₃	mg/L	118	67	69	65	66	39	55	58	67	99	58	59	39	61
TDS	mg/L	454	275	394	321	336	200	160	135	175	285	230	170	165	305
TSS	mg/L	1953	1813	12	24	75.9	320	2	1	8	9	33	69	5	84
Major Ions															
Chloride	mg/L	112	49	47	59	50	48	25	34	37	39	38	30	39	34
Fluoride	mg/L	0.20	0.21	0.22	0.21	0.20	0.30	0.18	0.22	0.20	0.17	0.18	0.19	0.14	0.19
Sulfate	mg/L	59	54	84	6	81	40	37	36	32	33	42	45	35	43
Nutrients and Chlorophyll a															
Total Ammonia (as NH ₃)	mg/L	-	1.64	2.99	5.00	3.23	0.39	0.37	2.60	2.10	11.00	0.75	0.54	0.20	3.00
Ammonia Nitrogen	mg N/L	4.79	1.38	2.46	4.12	2.65	0.32	0.30	2.10	1.70	9.00	0.62	0.45	0.16	2.50
Nitrate	mg N/L	9.76	2.76	4.14	5.01	4.09	0.15	< 1.0	1.98	1.36	7.49	0.82	0.5	< 0.10	3.72
Nitrite	mg N/L	0.499	0.219	0.230	0.184	0.206	0.014	< 0.10	0.081	0.228	0.305	0.058	0.064	0.012	0.151
Total phosphorus	mg P/L	0.06	0.93	0.04	0.04	0.08	0.360	0.014	0.0065	0.019	0.0077	0.046	0.043	0.0043	0.110
Total Metals															
Aluminum	mg/L	4.890	8.252	0.400	0.680	1.403	0.0294	0.0659	0.0645	0.342	0.278	1.18	2.24	0.144	3.30
Arsenic	mg/L	0.0533	0.1453	0.6933	0.1512	0.1012	0.0260	0.0260	0.0217	0.0380	0.0175	0.0287	0.0414	0.0208	0.0291
Barium	mg/L	0.282	0.183	0.077	0.075	0.074	0.0473	0.0556	0.0484	0.0546	0.0543	0.0513	0.0552	0.0536	0.0772
Cadmium	mg/L	0.000031	0.000067	0.000023	0.000036	0.000050	< 0.000010	< 0.000010	< 0.000010	0.000015	< 0.000010	0.000025	0.000118	0.000015	0.000070
Chromium	mg/L	0.1593	0.2670	0.0136	0.0124	0.0313	0.0019	< 0.0010	< 0.0010	0.0031	0.0034	0.0185	0.0452	0.0032	0.0314
Copper	mg/L	0.02253	0.01390	0.00425	0.00144	0.00224	< 0.00050	< 0.00050	0.00051	0.00070	0.00502	0.00071	0.00141	< 0.00050	0.00483
Iron	mg/L	6.43	15.09	1.02	1.49	2.49	< 0.010	0.332	0.271	0.738	0.664	1.95	3.96	0.338	6.13
Lead	mg/L	0.00762	0.01095	0.00143	0.00139	0.00144	< 0.00020	0.00056	0.00043	0.00226	0.00094	0.00166	0.00170	0.00023	0.00455
Manganese	mg/L	0.442	0.590	0.244	0.218	0.179	0.0476	0.189	0.144	0.122	0.094	0.102	0.137	0.139	0.217
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00002	< 0.00001	< 0.00010	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0214	0.0093	0.0231	0.0361	0.0172	0.0123	0.0090	0.0103	0.0239	0.0331	0.0125	0.0091	0.0058	0.0176
Nickel	mg/L	0.0735	0.1237	0.1138	0.0326	0.0277	< 0.0010	0.0012	0.0018	0.0038	0.0087	0.0085	0.0180	0.0017	0.0168
Selenium	mg/L	0.00282	0.00048	0.00060	0.00034	0.00020	< 0.00010	< 0.00010	< 0.00010	< 0.00010	0.00014	< 0.00010	< 0.00010	< 0.00010	0.00011
Silver	mg/L	0.00024	0.00004	0.00004	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.000586	0.000258	0.000027	0.000024	0.000046	< 0.000010	< 0.000010	0.000020	0.000021	0.000025	0.000035	0.000045	< 0.000010	0.000069
Zinc	mg/L	0.0199	0.0226	0.0111	0.0113	0.0153	< 0.0050	< 0.0050	0.0059	< 0.0050	< 0.0050	0.0077	0.0279	< 0.0050	0.0207

ST-WT-4	Unit	Annual Average					7/2/2024	7/14/2024	8/18/2024	9/16/2024	9/29/2024	10/13/2024	10/28/2024	12/2/2024
Parameter		2020	2021	2022	2023	2024								
Field Measured														
Temperature	°C	4.0	1.9	2.6	2.3	2.4	5.9	8.8	5.8	4.9	4.0	0.4	1.2	0.2
pH	pH units	7.81	7.48	7.24	7.74	7.79	7.29	7.89	7.93	7.76	7.71	6.95	7.69	7.33
Conductivity	uS/cm	701.0	417.0	492.0	483.1	492.5	342.0	341.0	442.0	1076.0	1160.0	744.0	627.0	664.7
Turbidity	NTU	65.8	77.9	13.1	17.4	62.2	12.50	5.93	4.98	52.00	276.00	21.90	8.48	63.60
Conventional Parameters														
Hardness, as CaCO3	mg/L	353	255	188	179	181	119	112	152	380	457	275	221	223
Total alkalinity, as CaCO3	mg/L	118	67	69	65	66	53	56	54	83	94	55	80	110
TDS	mg/L	454	275	394	321	336	210	240	285	800	975	565	405	415
TSS	mg/L	1953	1813	12	24	75.9	16	3	8	69	540	19	19	86
Major Ions														
Chloride	mg/L	112	49	47	59	50	34	37	47	79	100	91	70	63
Fluoride	mg/L	0.20	0.21	0.22	0.21	0.20	0.16	0.16	0.22	0.24	0.24	0.21	0.18	0.22
Sulfate	mg/L	59	54	84	6	81	47	49	61	240	290	160	94	89
Nutrients and Chlorophyll a														
Total Ammonia (as NH3)	mg/L	-	1.64	2.99	5.00	3.23	0.40	0.20	0.61	8.90	9.50	1.20	5.70	7.50
Ammonia Nitrogen	mg N/L	4.79	1.38	2.46	4.12	2.65	0.33	0.16	0.50	7.30	7.80	0.96	4.70	6.20
Nitrate	mg N/L	9.76	2.76	4.14	5.01	4.09	0.48	0.3	1.24	16.9	17.1	2.87	5.07	8.44
Nitrite	mg N/L	0.499	0.219	0.230	0.184	0.206	0.035	0.038	0.057	0.951	0.724	0.103	0.195	0.379
Total phosphorus	mg P/L	0.06	0.93	0.04	0.04	0.08	0.0094	0.0081	0.011	0.160	0.380	0.0062	0.0097	0.150
Total Metals														
Aluminum	mg/L	4.890	8.252	0.400	0.680	1.403	0.299	0.0795	0.12	2.13	8.90	0.608	0.603	3.46
Arsenic	mg/L	0.0533	0.1453	0.6933	0.1512	0.1012	0.0287	0.0270	0.0256	0.4950	0.58	0.0276	0.0181	0.2690
Barium	mg/L	0.282	0.183	0.077	0.075	0.074	0.0613	0.0609	0.0636	0.0969	0.21	0.0989	0.0860	0.0854
Cadmium	mg/L	0.000031	0.000067	0.000023	0.000036	0.000050	0.000126	0.000025	0.000018	0.000139	0.000049	0.000135	0.000032	0.000035
Chromium	mg/L	0.1593	0.2670	0.0136	0.0124	0.0313	0.0049	0.0018	0.0026	0.0461	0.2970	0.0114	0.0144	0.0453
Copper	mg/L	0.02253	0.01390	0.00425	0.00144	0.00224	< 0.00050	< 0.00050	< 0.00050	0.00559	0.00740	0.00137	0.00330	0.00430
Iron	mg/L	6.43	15.09	1.02	1.49	2.49	0.648	0.248	0.235	3.68	15.20	1.10	1.16	5.73
Lead	mg/L	0.00762	0.01095	0.00143	0.00139	0.00144	0.00078	< 0.00020	0.00038	0.00141	0.00372	0.00214	0.00055	0.00273
Manganese	mg/L	0.442	0.590	0.244	0.218	0.179	0.156	0.121	0.0917	0.329	0.418	0.360	0.208	0.166
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0214	0.0093	0.0231	0.0361	0.0172	0.011	0.0071	0.0228	0.0310	0.0189	0.0113	0.0262	0.0298
Nickel	mg/L	0.0735	0.1237	0.1138	0.0326	0.0277	0.0067	0.0035	0.0059	0.1210	0.1790	0.0219	0.0154	0.0553
Selenium	mg/L	0.00282	0.00048	0.00060	0.00034	0.00020	< 0.00010	< 0.00010	0.00018	0.00065	0.00087	0.00017	< 0.00010	0.00030
Silver	mg/L	0.00024	0.00004	0.00004	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	0.000023	< 0.000040	< 0.000020	< 0.000020	0.000025
Thallium	mg/L	0.000586	0.000258	0.000027	0.000024	0.000046	0.000017	0.000011	0.000024	0.000090	0.000258	0.000030	0.000037	0.000067
Zinc	mg/L	0.0199	0.0226	0.0111	0.0113	0.0153	0.0296	0.0073	< 0.0050	0.0323	0.0270	0.0510	0.0085	0.0122

Table 8-39 IVR Pit Sump 2024 Water Quality Monitoring (ST-WT-18) §

ST-WT-18	Unit	Annual Average					2/19/2024	3/24/2024	4/14/2024	4/28/2024	5/5/2024	5/13/2024	5/23/2024	5/26/2024	6/2/2024
Parameter		2020	2021	2022	2023	2024									
Field Measured															
Temperature	°C	2.8	4.3	5.5	6.5	2.3	0.2	1.7	0.1	0.2	0.9	0.3	7.6	0.6	0.8
pH	pH units	7.39	7.77	7.43	7.84	7.67	7.63	7.68	7.77	7.66	7.89	7.60	8.49	8.15	8.11
Conductivity	uS/cm	1009.0	1972.0	1300.0	445.0	437.0	279.0	273.0	201.0	262.0	329.0	420.0	369.0	366.0	375.0
Turbidity	NTU	36.00	450.00	108.00	9.59	8.42	3.89	8.28	9.84	2.88	5.67	10.70	-	19.90	4.57
Conventional Parameters															
Hardness, as CaCO3	mg/L	610	1400	534	156	161	103	101	70.6	99.4	123	140	326	118	124
Total alkalinity, as CaCO3	mg/L	78	105	98	72	62	54	55	47	59	54	58	91	71	71
TDS	mg/L	723	1173	750	290	303	145	120	125	210	250	320	260	265	225
TSS	mg/L	28	7872	458	7	172	2	7	4	< 1	1	5	3000	19	4
Major Ions															
Chloride	mg/L	297	378	203	31	42	34	33	22	32	39	52	14	8.4	5.6
Fluoride	mg/L	0.12	0.18	0.17	0.19	0.15	0.17	0.15	< 0.10	0.15	0.14	0.15	0.19	0.11	0.13
Sulfate	mg/L	35	198	180	88	77	35	34	25	35	39	54	83	110	87
Nutrients															
Ammonia (NH ₃)	mg/L	-	10.7	9.8	4.8	1.5	0.76	0.87	0.49	0.86	1.40	1.80	4.20	3.40	2.90
Ammonia Nitrogen	mg N/L	1.4	9.0	8.0	3.9	1.2	0.63	0.72	0.40	0.71	1.20	1.40	3.50	2.80	2.40
Nitrate	mg N/L	2.1	15.4	15.3	5.6	3.8	0.78	0.89	0.57	0.81	1.73	3.17	4.12	3.40	2.35
Nitrite	mg N/L	0.19	1.51	0.98	0.17	0.10	0.014	< 0.010	0.020	< 0.010	< 0.010	< 0.010	0.240	0.131	0.078
Total phosphorus	mg P/L	0.02	3.84	0.20	0.02	0.11	0.0042	0.0055	0.0052	< 0.0010	0.0037	0.039	1.40	0.032	0.089
Total Metals															
Aluminum	mg/L	0.6	48.2	6.5	0.2	1.0	0.0458	0.0919	0.0399	0.0221	0.0447	0.1240	15.6	0.263	0.103
Arsenic	mg/L	0.00	3.42	4.49	0.41	0.66	0.0343	0.0325	0.00822	0.0339	0.0542	0.2140	0.4870	0.3850	0.8860
Barium	mg/L	0.304	0.736	0.157	0.031	0.059	0.0446	0.0460	0.03390	0.0443	0.0473	0.0537	0.1980	0.0207	0.0335
Cadmium	mg/L	0.00002	0.00036	0.00009	0.00001	0.00004	< 0.000010	< 0.000010	< 0.000010	0.000022	< 0.000010	0.000014	0.000367	< 0.000010	< 0.000020
Chromium	mg/L	0.009	1.903	0.392	0.005	0.028	0.0013	0.0019	< 0.0010	< 0.0010	0.0011	0.0029	0.4510	0.0108	0.0026
Copper	mg/L	0.0044	0.0610	0.0063	0.0016	0.0028	0.00108	0.00090	0.00076	0.00626	0.00699	0.00088	0.0185	0.0009	< 0.0010
Iron	mg/L	1.1	81.0	10.5	0.5	2.1	0.394	0.507	0.667	0.322	0.269	0.273	32.9	0.528	0.205
Lead	mg/L	0.0002	0.0402	0.0026	0.0004	0.0021	0.00029	0.00023	< 0.00020	0.00204	0.00034	0.00023	0.03050	< 0.00020	< 0.00040
Manganese	mg/L	2.36	3.16	0.17	0.15	0.26	0.212	0.218	0.241	0.228	0.194	0.145	1.81	0.0553	0.0312
Mercury	mg/L	0.000010	0.000064	0.000010	0.000010	0.000015	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00010	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0019	0.0082	0.0163	0.0298	0.0094	0.0106	0.0091	0.0042	0.0097	0.0136	0.01410	0.0031	0.0038	0.0033
Nickel	mg/L	0.032	1.031	0.306	0.055	0.054	0.0085	0.0083	0.0012	0.0083	0.0153	0.0306	0.1490	0.0304	0.0257
Selenium	mg/L	0.00075	0.00289	0.00273	0.00060	0.00041	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	0.00015	0.00075	0.00080	0.00075
Silver	mg/L	0.00010	0.00127	0.00015	0.00002	0.00003	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	0.000057	< 0.000020	< 0.000040
Thallium	mg/L	0.000200	0.001706	0.000164	0.000020	0.000048	0.000010	0.000012	< 0.000010	0.000012	0.000014	0.000023	0.000389	0.000033	0.000033
Zinc	mg/L	0.006	0.110	0.054	0.005	0.015	< 0.0050	< 0.0050	< 0.0050	0.0255	0.0062	< 0.0050	0.128	< 0.0050	< 0.010

ST-WT-18	Unit	Annual Average					6/16/2024	9/10/2024	9/16/2024	9/30/2024	10/8/2024	10/13/2024	10/21/2024	10/28/2024	11/10/2024
Parameter		2020	2021	2022	2023	2024									
Field Measured															
Temperature	°C	2.8	4.3	5.5	6.5	2.3	2.0	6.8	6.3	5.3	3.4	2.6	1.0	1.6	0.8
pH	pH units	7.39	7.77	7.43	7.84	7.67	6.87	8.03	7.95	7.41	6.65	6.94	7.86	7.89	7.54
Conductivity	uS/cm	1009.0	1972.0	1300.0	445.0	437.0	308.0	531.0	525.0	581.0	628.0	595.0	566.0	620.0	645.0
Turbidity	NTU	36.00	450.00	108.00	9.59	8.42	14.60	5.87	3.50	8.26	4.61	4.59	9.70	22.50	3.84
Conventional Parameters															
Hardness, as CaCO ₃	mg/L	610	1400	534	156	161	107	166	164	185	227	185	216	215	236
Total alkalinity, as CaCO ₃	mg/L	78	105	98	72	62	46	61	60	68	64	66	62	62	67
TDS	mg/L	723	1173	750	290	303	215	380	375	425	340	565	390	425	420
TSS	mg/L	28	7872	458	7	172	9	9	3	5	5	3	18	2	1
Major Ions															
Chloride	mg/L	297	378	203	31	42	36	63	54	53	57	59	63	57	68
Fluoride	mg/L	0.12	0.18	0.17	0.19	0.15	0.1	0.17	0.13	0.13	0.14	0.19	0.15	0.16	0.18
Sulfate	mg/L	35	198	180	88	77	41	86	72	110	110	110	110	130	120
Nutrients															
Ammonia (NH ₃)	mg/L	-	10.7	9.8	4.8	1.5	1.10	1.30	1.40	1.00	1.20	1.20	1.20	1.10	1.20
Ammonia Nitrogen	mg N/L	1.4	9.0	8.0	3.9	1.2	0.86	1.10	1.10	0.83	0.96	0.95	0.99	0.93	0.97
Nitrate	mg N/L	2.1	15.4	15.3	5.6	3.8	2.63	4.98	5.25	5.52	6.70	6.54	6.07	6.70	6.78
Nitrite	mg N/L	0.19	1.51	0.98	0.17	0.10	0.017	0.100	0.114	0.156	0.189	0.187	0.168	0.170	0.169
Total phosphorus	mg P/L	0.02	3.84	0.20	0.02	0.11	0.025	0.082	0.058	0.050	0.059	0.049	0.045	0.055	0.057
Total Metals															
Aluminum	mg/L	0.6	48.2	6.5	0.2	1.0	0.209	0.1630	0.0778	0.1290	0.1250	0.0649	0.2080	0.0554	0.0348
Arsenic	mg/L	0.00	3.42	4.49	0.41	0.66	0.4920	0.9010	1.01	1.02	1.6	1.26	0.993	1.19	1.23
Barium	mg/L	0.304	0.736	0.157	0.031	0.059	0.0439	0.0576	0.0599	0.0608	0.070	0.0567	0.0629	0.0657	0.0705
Cadmium	mg/L	0.00002	0.00036	0.00009	0.00001	0.00004	< 0.000010	0.000021	< 0.000020	< 0.000020	< 0.000020	< 0.000020	0.000024	< 0.000020	0.000020
Chromium	mg/L	0.009	1.903	0.392	0.005	0.028	0.0065	0.0054	0.0024	0.0027	0.0034	< 0.0020	0.0076	< 0.0020	< 0.0020
Copper	mg/L	0.0044	0.0610	0.0063	0.0016	0.0028	< 0.00050	< 0.0010	< 0.0010	0.0011	0.0019	< 0.0010	0.00099	0.0019	0.0031
Iron	mg/L	1.1	81.0	10.5	0.5	2.1	0.371	0.282	0.134	0.405	0.176	0.111	0.370	0.105	0.067
Lead	mg/L	0.0002	0.0402	0.0026	0.0004	0.0021	0.00023	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00020	< 0.00040	< 0.00040
Manganese	mg/L	2.36	3.16	0.17	0.15	0.26	0.0996	0.112	0.120	0.434	0.134	0.111	0.177	0.154	0.176
Mercury	mg/L	0.000010	0.000064	0.000010	0.000010	0.000015	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0019	0.0082	0.0163	0.0298	0.0094	0.0079	0.0115	0.01210	0.0092	0.01310	0.0105	0.0106	0.0114	0.0118
Nickel	mg/L	0.032	1.031	0.306	0.055	0.054	0.0310	0.0643	0.0605	0.0776	0.0879	0.0776	0.0975	0.0895	0.0998
Selenium	mg/L	0.00075	0.00289	0.00273	0.00060	0.00041	0.00020	0.00037	0.00037	0.00045	0.00071	0.00058	0.00055	0.00055	0.00058
Silver	mg/L	0.00010	0.00127	0.00015	0.00002	0.00003	< 0.000020	< 0.000040	< 0.000040	< 0.000040	< 0.000040	< 0.000040	< 0.000020	< 0.000040	< 0.000040
Thallium	mg/L	0.000200	0.001706	0.000164	0.000020	0.000048	0.000020	0.000038	0.000033	0.000037	0.000043	0.000037	0.000039	0.000041	0.000041
Zinc	mg/L	0.006	0.110	0.054	0.005	0.015	< 0.0050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.0050	< 0.010	< 0.010

8.5.2.2.7 Whale Tail South Channel / Lake A45 (ST-WT-13) [§]

In 2024, water from the Whale Tail South Channel (former Lake A45) (ST-WT-13) was sampled on a monthly basis during open water as per the requirements in the NWB Water License (sampling station ST-WT-13 on Figure 4). Applicable license limits for this station include effluent water quality limits for TSS of 15 mg/L for the maximum authorized monthly mean and 30 mg/L for the maximum authorized concentration in a grab sample. Monthly results are presented in Table 8-41. The total monthly flow in the Whale Tail South Channel is presented in Table 8-40.

Table 8-40 Whale Tail South Channel Flow 2024[§]

Month	Monthly Flow (m ³)
January	-
February	-
March	-
April	-
May	-
June	501,586
July	36,214
August	-
September	43,030
October	472,591
November	247,313
December	65,591
Total	1,366,325

8.5.2.2.8 Lake A16 Outlet (ST-WT-14) [§]

In 2024, water from the Lake A16 outlet (ST-WT-14) was sampled in June, July, August, and September during open water as per the monthly requirements in the NWB Water License (sampling station ST-WT-14 on Figure 4). There are no applicable license limits. Results are presented in Table 8-42.

8.5.2.2.9 Lake A15 (ST-WT-15) [§]

In 2024, water from the Lake A15 (ST-WT-15) was sampled in June, July, August, and September during open water as per the monthly requirements in the NWB Water License (sampling station ST-WT-15 on Figure 4). There are no applicable license limits. Results are presented in Table 8-43.

Table 8-41 Whale Tail South Channel Water 2024 Quality Monitoring (ST-WT-13) §

ST-WT-13	Max Grab	Monthly Mean	Unit	Annual Average					6/2/2024	7/8/2024	8/11/2024	9/10/2024	10/8/2024
Parameter				2020	2021	2022	2023	2024					
Field Measured													
Temperature			°C	5.8	5.5	6.5	6.1	7.5	0.0	11.6	17.1	7.5	1.3
pH			pH units	7.52	7.75	7.48	7.54	8.03	7.72	7.59	7.80	7.68	9.36
Conductivity			uS/cm	52.3	44.0	83.4	66.8	69.9	18.61	69.10	93.90	91.60	76.30
Turbidity			NTU	1.59	2.25	6.68	1.61	3.38	6.34	1.26	1.10	4.02	4.16
Conventional Parameters													
TSS	30	15	mg/L	3	2	3	1	2	3	< 1	1	2	2
Major Ions													
Sulfate			mg/L	3.5	2.3	4.5	5.9	6.8	1.4	7.3	8.1	9.2	7.9
Nutrients													
Ammonia Nitrogen			mg N/L	-	0.066	0.050	0.057	0.055	0.075	< 0.050	< 0.050	< 0.050	< 0.050
Un-ionized Ammonia, calculated			mg N/L	-	0.00079	0.00060	0.00071	0.00281	< 0.00061	< 0.00061	< 0.0012	< 0.00061	< 0.0110
Total Metals													
Aluminum			mg/L	0.0472	0.0589	0.0936	0.0356	0.0884	0.1050	0.0091	0.0376	0.2460	0.0444
Arsenic			mg/L	0.00336	0.00148	0.00541	0.00229	0.00389	0.00594	0.00121	0.00522	0.0065	0.00059
Copper			mg/L	0.00106	0.00055	0.00089	0.00055	0.00067	0.00081	< 0.00050	0.00065	0.00088	< 0.00050
Lead			mg/L	0.00020	0.00020	0.00028	0.00020	0.00024	0.0003	0.00029	< 0.00020	0.00023	< 0.00020
Nickel			mg/L	0.0010	0.0018	0.0017	0.0020	0.0015	0.0016	< 0.0010	< 0.0010	0.0027	< 0.0010
Zinc			mg/L	0.0010	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Table 8-42 Whale Tail 2024 Lake A16 Outlet Water Quality Monitoring (ST-WT-14) §

ST-WT-14	Unit	Annual Average					6/16/2024	7/14/2024	8/13/2024	9/19/2024
Parameter		2020	2021	2022	2023	2024				
Field Measured										
Temperature	°C	8.8	10.8	15.3	6.7	10.7	4.2	14	15.2	9.3
pH	pH units	7.28	7.66	7.06	6.96	7.40	6.60	7.96	7.41	7.63
Conductivity	uS/cm	203.0	107.1	113.0	132.8	120.2	61.1	129.7	140.2	149.7
Turbidity	NTU	0.64	0.75	0.70	1.02	1.11	1.16	0.83	0.87	1.56
Conventional Parameters										
Hardness, as CaCO ₃	mg/L	86.5	39.6	41.1	43.6	38.2	20.0	43.1	44.7	44.9
Total alkalinity, as CaCO ₃	mg/L	49	11	14	16	23	8.8	20.0	23.0	42.0
Carbonate, as CaCO ₃	mg/L	4	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃	mg/L	49	11	14	16	23	8.8	20	22	42
TDS	mg/L	142	70	82	74	83	50	80	125	75
TSS	mg/L	2	2	1	1	1	< 1	1	1	< 1
Total organic carbon	mg/L	2.9	1.9	2.6	2.2	2.2	1.8	2.4	2.4	2.2
Dissolved organic carbon	mg/L	3.3	1.7	2.3	2.2	2.1	1.6	2.2	2.2	2.2
Major Ions										
Chloride	mg/L	37	16	14	14	12	5.9	13.0	15.0	14.0
Silica	mg/L	15.9	0.9	0.3	0.8	0.5	0.80	0.43	0.34	0.51
Sulfate	mg/L	19	12	15	19	16	7.8	17.0	16.0	22.0
Nutrients										
Ammonia (NH ₃)	mg/L	-	0.061	0.094	0.067	0.068	< 0.061	< 0.061	0.089	< 0.061
Ammonia Nitrogen	mg N/L	0.03	0.05	0.08	0.06	0.06	< 0.050	< 0.050	0.074	< 0.050
Nitrate	mg N/L	0.56	0.35	0.22	0.36	0.22	0.11	0.25	0.21	0.32
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen	mg N/L	0.27	0.12	0.24	0.15	0.17	< 0.10	0.29	0.13	0.14
Total phosphorus	mg P/L	0.019	0.002	0.003	0.001	0.001	0.0021	0.0012	< 0.0010	0.0013
Orthophosphate	mg P/L	0.02	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals										
Aluminum	mg/L	0.0060	0.0109	0.0062	0.0051	0.0062	0.0117	0.0050	0.0035	0.0046
Antimony	mg/L	0.0001	0.0005	0.0008	0.0005	0.0006	< 0.00050	0.00053	0.00062	0.00059
Arsenic	mg/L	0.00063	0.00059	0.00090	0.00063	0.00059	0.00034	0.00076	0.00068	0.00057
Barium	mg/L	0.0473	0.0171	0.0165	0.0148	0.0136	0.0089	0.0158	0.0155	0.0141
Beryllium	mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron	mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	mg/L	0.00003	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Calcium (total)	mg/L	25.40	11.40	11.67	12.48	10.87	5.58	12.40	12.70	12.80
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.00130	0.00061	0.00069	0.00056	0.00067	0.00054	< 0.00050	< 0.00050	0.00112
Iron	mg/L	0.025	0.028	0.018	0.022	0.025	0.030	0.018	0.014	0.036
Lead	mg/L	0.0003	0.0002	0.0002	0.0002	0.0003	< 0.00020	< 0.00020	0.00047	< 0.00020
Lithium	mg/L	0.006	0.002	0.002	0.002	0.002	< 0.0020	< 0.0020	< 0.002	< 0.0020
Magnesium (total)	mg/L	5.65	2.70	2.90	3.01	2.69	1.46	2.98	3.17	3.13
Manganese	mg/L	0.0084	0.0035	0.0017	0.0020	0.0024	0.0023	0.0031	0.0016	0.0025
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0005	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Nickel	mg/L	0.0029	0.0014	0.0010	0.0010	0.0016	0.0017	< 0.0010	< 0.0010	0.0028
Potassium (total)	mg/L	4.37	2.50	2.80	2.70	2.35	1.35	2.68	2.68	2.68
Selenium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Sodium (total)	mg/L	3.29	1.72	2.15	2.23	1.98	1.12	2.19	2.41	2.18
Strontium	mg/L	-	0.0732	0.0820	0.0876	0.0731	0.0341	0.0886	0.0875	0.0820
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.01	0.01	0.01	0.01	0.01	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Vanadium	mg/L	0.0005	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dissolved Metals										
Aluminum	mg/L	0.0060	0.0047	0.0069	0.0035	0.0046	0.0054	0.0044	0.0033	0.0051
Antimony	mg/L	0.0001	0.0005	0.0008	0.0006	0.0006	< 0.00050	0.00055	0.00070	0.00070
Arsenic	mg/L	0.00050	0.00099	0.00099	0.00150	0.00091	0.00034	0.00089	0.00088	0.00154
Barium	mg/L	0.0421	0.0173	0.0157	0.0159	0.0148	0.0096	0.0161	0.0174	0.0161
Beryllium	mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron	mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	mg/L	-	0.000011	0.000010	0.000012	0.000014	< 0.000010	0.000026	< 0.000010	< 0.000010
Chromium	mg/L	0.0006	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.00065	0.00057	0.00160	0.00078	0.00114	0.00203	0.00120	0.00074	0.00060
Iron	mg/L	0.010	0.009	0.008	0.007	0.011	0.0185	0.0105	< 0.0050	0.0083
Lead	mg/L	0.0003	0.0002	0.0003	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.005	0.002	0.002	0.002	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Manganese	mg/L	0.0047	0.0019	0.0010	0.0028	0.0021	0.0037	0.0021	0.0011	0.0015
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0005	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Nickel	mg/L	0.0025	0.0015	0.0011	0.0013	0.0014	0.0020	0.0011	< 0.0010	0.0014
Selenium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Strontium	mg/L	-	0.0732	0.0786	0.0972	0.0834	0.0387	0.091	0.104	0.100
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.010	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	0.00014	< 0.00010	0.00012
Vanadium	mg/L	0.0005	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.002	0.005	0.008	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Table 8-43 Whale Tail 2024 Lake A15 Outlet Water Quality Monitoring (ST-WT-15) §

ST-WT-15	Unit	Annual Average					6/16/2024	7/14/2024	8/13/2024	9/19/2024
Parameter		2020	2021	2022	2023	2024				
Field Measured										
Temperature	°C	9.1	11.2	14.5	6.1	12.1	11.8	12.8	14.7	9.0
pH	pH units	7.44	7.56	7.10	7.10	7.38	6.72	7.85	7.43	7.51
Conductivity	uS/cm	145.9	110.0	109.3	139.5	116.9	58.1	129.8	137.7	142.0
Turbidity	NTU	0.48	0.71	1.33	1.07	1.1	1.27	0.85	1.17	0.99
Conventional Parameters										
Hardness, as CaCO ₃	mg/L	58	39	40	47	40	19.1	41.5	47.7	50.6
Total alkalinity, as CaCO ₃	mg/L	43	11	14	16	16	9.7	17.0	< 1.0	18.0
Carbonate, as CaCO ₃	mg/L	4	1	1	1	1	< 1.0	< 1.0	< 1	< 1.0
Bicarbonate, as CaCO ₃	mg/L	43	11	14	16	16	9.7	17	21	18
TDS	mg/L	100	58	88	84	66	20	85	85	75
TSS	mg/L	2	1	2	2	1	< 1	< 1	1	< 1
Total organic carbon	mg/L	2.4	2.0	2.4	2.2	2.2	2.3	2.4	2.1	2.1
Dissolved organic carbon	mg/L	2.4	2.0	2.3	2.0	2.0	2.000	2.1	1.9	2.1
Major Ions										
Chloride	mg/L	22.9	15.7	13.7	13.8	11.8	5.2	13.0	15.0	14.0
Silica	mg/L	1.71	0.70	0.34	0.91	0.55	0.85	0.4	0.48	0.46
Sulfate	mg/L	14	12	15	22	16	7.1	17.0	16.0	22.0
Nutrients										
Ammonia (NH ₃)	mg/L	-	0.061	0.061	0.066	0.061	< 0.061	< 0.061	< 0.061	< 0.061
Ammonia Nitrogen	mg N/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	0.59	0.33	0.27	0.41	0.23	< 0.10	0.27	0.27	0.26
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen	mg N/L	0.25	0.13	0.11	0.16	0.17	0.11	0.33	< 0.10	0.13
Total phosphorus	mg P/L	0.0175	0.0021	0.0040	0.0011	0.0014	0.0016	0.0016	0.0012	0.0010
Orthophosphate	mg P/L	0.02	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals										
Aluminum	mg/L	0.0060	0.0078	0.0390	0.0062	0.0114	0.0218	0.0051	0.0127	0.0059
Antimony	mg/L	0.00010	0.00063	0.00075	0.00053	0.00054	< 0.00050	0.00052	0.00060	0.00055
Arsenic	mg/L	0.00050	0.00076	0.00131	0.00058	0.00069	0.00077	0.00070	0.00078	0.00051
Barium	mg/L	0.0261	0.0160	0.0182	0.0168	0.0153	0.0105	0.0155	0.0201	0.0151
Beryllium	mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron	mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	mg/L	0.00002	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Calcium (total)	mg/L	16.68	11.17	11.33	13.20	11.25	5.31	11.90	13.40	14.40
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.00068	0.00052	0.00077	0.00056	0.00051	< 0.00050	< 0.00050	0.00053	< 0.00050
Iron	mg/L	0.02	0.02	0.11	0.02	0.03	0.045	0.017	0.037	0.019
Lead	mg/L	0.0003	0.0002	0.0002	0.0004	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.005	0.002	0.002	0.002	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Magnesium (total)	mg/L	3.85	2.65	2.81	3.43	2.82	1.41	2.86	3.45	3.55
Manganese	mg/L	0.0018	0.0016	0.0546	0.0019	0.0049	0.0066	0.0035	0.0072	0.0022
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0005	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Nickel	mg/L	0.0016	0.0011	0.0022	0.0012	0.0011	0.0011	< 0.0010	0.0011	< 0.0010
Potassium (total)	mg/L	3.25	2.50	2.73	2.66	2.45	1.27	2.61	2.93	2.99
Selenium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Sodium (total)	mg/L	2.29	1.72	2.10	2.28	2.07	1.05	2.13	2.60	2.48
Strontium	mg/L	-	0.0755	0.0796	0.0872	0.0769	0.0358	0.0865	0.0956	0.0895
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.01	0.01	0.01	0.01	0.01	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Vanadium	mg/L	0.0005	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dissolved Metals										
Aluminum	mg/L	0.0060	0.0037	0.0037	0.0030	0.0040	0.0060	0.0038	< 0.0030	< 0.0030
Antimony	mg/L	0.0001	0.0006	0.0007	0.0006	0.0006	< 0.00050	0.00056	0.00064	0.00059
Arsenic	mg/L	0.00063	0.00074	0.00064	0.00133	0.00066	0.00040	0.00099	0.00073	0.00050
Barium	mg/L	0.0246	0.0161	0.0160	0.0190	0.0156	0.0098	0.0164	0.0205	0.0156
Beryllium	mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron	mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	mg/L	-	0.00001	0.00001	0.00001	0.00001	0.000010	0.000019	< 0.000010	< 0.000010
Chromium	mg/L	0.0006	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.00050	0.00047	0.00085	0.00082	0.00090	0.00138	0.00109	0.00070	0.00044
Iron	mg/L	0.0100	0.0083	0.0057	0.0059	0.0104	0.0185	0.0106	< 0.0050	0.0074
Lead	mg/L	0.0003	0.0002	0.0002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.005	0.002	0.002	0.002	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Manganese	mg/L	0.0013	0.0012	0.0015	0.0022	0.0024	0.0041	0.0021	0.0023	0.0011
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0005	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Nickel	mg/L	0.0016	0.0011	0.0010	0.0015	0.0013	0.002	0.0011	0.002	< 0.0010
Selenium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Strontium	mg/L	-	0.0757	0.0753	0.0978	0.0814	0.0384	0.0909	0.1020	0.0942
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.010	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	0.00012	< 0.00010	< 0.00010
Vanadium	mg/L	0.0005	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050

8.5.2.2.10 Whale Tail Dike Seepage (ST-WT-17) §

As discussed in Section 8.5.7.2.2 below, during dewatering operations of the Whale Tail North Basin, a small inflow of water was observed out of the downstream toe of Whale Tail Dike in a low depression. Once the dewatering of the Whale Tail North Basin was complete in 2020, the seepage water was directed to the Whale Tail Attenuation Pond and managed as part of this infrastructure. The same water management strategy was used in 2024.

Water quality sampling was conducted on a monthly basis, in 2024, as per the seepage requirements of the NWB Water License. Sample results are presented in Table 8-44. See Figure 4 for the location of ST-WT-17. Refer to Section 8.5.7.2.2 for details on the Whale Tail Dike seepage regarding consequences and mitigation measures in place.

8.5.2.2.11 Whale Tail South Transfer (ST-WT-26) §

Water transfer from Whale Tail South to Kangislilik Lake was not done in 2024 as the Whale Tail South Channel construction was operational. The channel facilitates the passive flow of water from Whale Tail South to Kangislilik Lake.

8.5.2.2.12 Water Ponding Around Whale Tail WRSF (ST-WT-30, ST-WT-31, ST-WT-32, ST-WT-33) §

There are four (4) monitoring stations for water ponding around the Whale Tail WRSF. These locations are outlined in Figure 4. Water quality monitoring was conducted on a monthly basis, during open water season, as per the NWB Water License. ST-WT-31 was not sampled in May and ST-WT-32, and ST-WT-33 were not sampled in May, August, and September as the area was dry during that period. There are no applicable license limits for these monitoring stations. Sample results are presenting in Table 8-45 for ST-WT-30, Table 8-46 for ST-WT-31, Table 8-47 for ST-WT-32, and Table 8-48 for ST-WT-33.

8.5.2.2.13 Water Ponding Around IVR WRSF (ST-WT-28, ST-WT-34, ST-WT-35, ST-WT-36) §

There are four (4) monitoring stations for water ponding around the IVR WRSF. These locations are outlined in Figure 4. Water quality monitoring was conducted on a monthly basis, during open water season, as per the NWB Water License. here are no applicable license limits for these monitoring stations. Sample results are presented in Table 8-49 for ST-WT-28, Table 8-50 for ST-WT-34, Table 8-51 for ST-WT-35, and Table 8-52 for ST-WT-36.

8.5.2.2.14 IVR Diversion Channel (ST-WT-37) §

The IVR Diversion Channel was constructed in Q3 2020 and was commissioned during freshet in 2021. The purpose of the channel is to direct non-contact water from the North-East watershed towards Nemo Lake. Applicable license limits for this station include effluent water quality limits for TSS of 15 mg/L for the maximum authorized monthly mean and 30 mg/L for the maximum authorized concentration in a grab sample. The location is outlined in Figure 4 and results from samples collected in 2024 are provided in Table 8-53.

Table 8-44 Whale Tail Dike Seepage 2024 Water Quality Monitoring (ST-WT-17) §

ST-WT-17	Unit	Annual Average					1/8/2024	2/4/2024	3/3/2024	4/15/2024	5/5/2024	6/2/2024	7/7/2024	8/11/2024	9/1/2024	10/8/2024	11/12/2024	12/1/2024
Parameter		2020	2021	2022	2023	2024												
Field Measured																		
Temperature	°C	3.5	3.1	1.7	2.4	2.7	0.6	0.3	0.2	0.4	0.5	0.4	5.8	12.3	6.8	3.3	0.9	0.9
pH	pH units	9.65	9.24	8.44	7.42	7.48	7.03	6.99	7.40	7.59	7.84	7.35	7.45	7.71	7.81	7.76	7.33	7.54
Conductivity	uS/cm	171.2	145.9	171.0	169.8	167.1	193.5	166.6	161.8	168.1	170.7	165.9	123.8	158.2	169.9	179.1	175.9	171.8
Turbidity	NTU	5.50	7.20	11.70	12.04	6.55	3.45	7.91	3.33	21.80	17.40	7.25	1.92	3.27	3.15	3.52	2.19	3.38
Conventional Parameters																		
Hardness, as CaCO ₃	mg/L	64	57	63	63	61	60.0	49.8	61.2	61.4	68.2	59.0	59.1	54.0	59.0	60.5	68.2	69.8
Total alkalinity, as CaCO ₃	mg/L	56	37	37	35	36	34	32	33	37	37	40	37	37	34	33	34	39
TDS	mg/L	87	93	101	115	108	110	90	110	130	130	125	105	85	95	70	125	115
TSS	mg/L	5	14	13	11	6	2	4	2	23	12	5	1	< 1	16	2	3	4
Major Ions																		
Chloride	mg/L	16	14	14	15	14	15	14	15	15	14	14	13	13	13	14	15	17
Fluoride	mg/L	0.11	0.11	0.11	0.10	0.10	< 0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.10	< 0.10	< 0.10	0.10	0.11
Sulfate	mg/L	9.8	11.7	16.8	23.7	23.3	20	22	23	23	23	21	23	20	21	29	26	29
Nutrients																		
Ammonia (NH ₃)	mg/L	-	0.059	0.062	0.070	0.067	< 0.061	0.066	< 0.061	< 0.061	0.110	0.079	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061
Ammonia Nitrogen	mg N/L	0.021	0.051	0.051	0.057	0.055	< 0.050	0.054	< 0.050	< 0.050	0.087	0.065	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	0.21	0.34	0.35	0.39	0.33	0.29	0.30	0.32	0.38	0.36	0.36	0.30	0.26	0.22	0.34	0.36	0.47
Nitrite	mg N/L	0.02	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.014
Total phosphorus	mg P/L	0.021	0.013	0.013	0.008	0.004	0.0023	0.0021	0.0026	0.0110	0.0080	0.0035	0.0027	0.0014	< 0.0010	0.0029	0.0035	0.0034
Total Metals																		
Aluminum	mg/L	0.110	0.163	0.317	0.173	0.063	0.0238	0.0395	0.0294	0.2380	0.2010	0.0755	0.0281	0.0204	0.0168	0.0217	0.0258	0.0409
Arsenic	mg/L	0.0112	0.0076	0.0079	0.0051	0.0052	0.00626	0.00467	0.00483	0.00437	0.00485	0.00578	0.00414	0.00453	0.00455	0.00466	0.00663	0.00709
Barium	mg/L	0.0315	0.0261	0.0310	0.0327	0.0292	0.0262	0.0241	0.0307	0.0335	0.0340	0.0309	0.0287	0.0279	0.0289	0.0285	0.0281	0.0287
Cadmium	mg/L	0.000022	0.000013	0.000014	0.000016	0.000013	< 0.000010	< 0.000010	< 0.000010	0.000010	0.000014	0.000011	0.000014	0.000013	0.000018	0.000021	0.000010	< 0.000010
Chromium	mg/L	0.002	0.003	0.008	0.003	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0019	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.002	0.002	0.002	0.001	0.001	0.0010	0.00085	0.00089	0.0014	0.0012	0.00105	0.00091	0.00093	0.00097	0.00106	0.00127	0.00101
Iron	mg/L	0.23	0.33	0.70	0.90	0.70	0.719	0.647	0.727	1.25	1.18	0.589	0.511	0.393	0.457	0.567	0.667	0.727
Lead	mg/L	0.0003	0.0003	0.0004	0.0003	0.0002	< 0.00020	< 0.00020	< 0.00020	0.00039	0.00033	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Manganese	mg/L	0.044	0.091	0.109	0.157	0.150	0.149	0.129	0.139	0.193	0.187	0.145	0.134	0.107	0.121	0.157	0.168	0.170
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0019	0.0020	0.0020	0.0017	0.0015	0.0015	0.0012	0.0013	0.0012	0.0012	0.0011	0.0013	0.0014	0.0014	0.0019	0.0022	0.0019
Nickel	mg/L	0.0019	0.0019	0.0033	0.0027	0.0011	< 0.0010	< 0.0010	< 0.0010	0.0015	0.0016	0.0013	0.001	< 0.0010	0.001	0.0012	< 0.0010	< 0.0010
Selenium	mg/L	0.00089	0.00025	0.00012	0.00010	0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	mg/L	0.00010	0.00003	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.00020	0.00003	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Zinc	mg/L	0.004	0.005	0.006	0.006	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Table 8-45 Whale Tail WRSF Ponding 2024 Water Quality Monitoring (ST-WT-30) §

ST-WT-30	Unit	Annual Average					5/27/2024	6/9/2024	7/14/2024	8/11/2024	9/16/2024
Parameter		2020*	2021	2022	2023	2024					
Field Measured											
Temperature	°C	4.9	7.7	6.5	7.1	9.0	0.9	6.4	13.8	18.1	5.8
pH	pH units	7.07	7.35	7.03	7.17	7.66	7.97	8.37	7.19	7.51	7.26
Conductivity	uS/cm	209.1	172.5	163.0	246.8	209.9	69.1	48.4	316.0	336.0	280.0
Turbidity	NTU	4.30	8.70	8.50	5.71	6.27	13.50	11.00	2.67	2.58	1.61
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	103	70	76	91	80	24.1	20.3	120.0	126.0	109.0
Total alkalinity, as CaCO ₃	mg/L	65	33	45	35	35	27	21	38	46	45
TDS	mg/L	-	113	121	157	159	70	25	280	205	215
TSS	mg/L	7	3	4	3	5	5	5	6	6	1
Major Ions											
Chloride	mg/L	7.4	4.2	3.8	2.5	1.8	< 1.0	< 1.0	1.3	1.7	3.8
Fluoride	mg/L	0.04	0.10	0.10	0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	31.5	31.9	34.9	59.9	52.8	6.2	3.9	91.0	94.0	69.0
Nutrients											
Ammonia (NH ₃)	mg/L	-	0.185	0.093	0.081	0.064	0.077	< 0.061	< 0.061	< 0.061	< 0.061
Ammonia Nitrogen	mg N/L	0.240	0.153	0.075	0.065	0.053	0.063	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	1.93	2.71	1.60	5.03	3.59	0.32	0.24	7.84	6.23	3.31
Nitrite	mg N/L	0.090	0.029	0.019	0.019	0.015	< 0.010	< 0.010	0.019	0.026	< 0.010
Total Metals											
Aluminum	mg/L	0.1465	0.1980	0.2614	0.1247	0.1661	0.182	0.283	0.285	0.0597	0.021
Arsenic	mg/L	0.0171	0.0115	0.0113	0.0048	0.0106	0.0150	0.0106	0.00971	0.0140	0.00375
Barium	mg/L	0.0626	0.0441	0.0442	0.0429	0.0365	0.0124	0.0126	0.0602	0.0539	0.0436
Cadmium	mg/L	0.000020	0.000016	0.000017	0.000013	0.000011	< 0.000010	< 0.000010	0.000013	< 0.000010	< 0.000010
Chromium	mg/L	0.0021	0.0057	0.0074	0.0031	0.0041	0.0042	0.0068	0.0070	0.0017	< 0.0010
Copper	mg/L	0.00290	0.00204	0.00212	0.00137	0.00139	0.00128	0.00136	0.00157	0.00159	0.00114
Iron	mg/L	0.705	0.388	0.548	0.222	0.286	0.316	0.460	0.523	0.102	0.031
Lead	mg/L	0.00017	0.00047	0.00049	0.00031	0.00031	0.00052	0.00039	0.00026	< 0.00020	< 0.00020
Manganese	mg/L	1.386	0.117	0.124	0.068	0.032	0.0308	0.0201	0.0606	0.0070	0.0395
Mercury	mg/L	0.00003	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.002	< 0.0010	< 0.0010	0.0023	0.0028	< 0.0010
Nickel	mg/L	0.0169	0.0125	0.0102	0.0076	0.0051	0.0038	0.0052	0.0086	0.0042	0.0038
Selenium	mg/L	0.00100	0.00119	0.00067	0.00119	0.00090	0.00034	0.00013	0.00173	0.00161	0.00069
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.000200	0.000022	0.000019	0.000015	0.000016	< 0.000010	0.000011	0.000026	0.000023	0.000012
Zinc	mg/L	0.0025	0.0055	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

*2020 Annual average from Perim-0.

Table 8-46 Whale Tail WRSF Ponding 2024 Water Quality Monitoring (ST-WT-31) §

ST-WT-31	Unit	Annual Average				6/9/2024	7/14/2024	8/11/2024	9/16/2024
Parameter		2020*	2021	2023	2024				
Field Measured									
Temperature	°C	5.4	6.7	5.4	8.2	2.8	10.8	14.2	5.1
pH	pH units	7.27	7.33	7.22	7.59	8.63	7.14	7.36	7.21
Conductivity	uS/cm	130.5	163.0	220.3	246.8	17.99	200.1	320.0	449.0
Turbidity	NTU	21.30	11.00	4.28	5.19	7.61	6.32	2.95	3.88
Conventional Parameters									
Hardness, as CaCO ₃	mg/L	65.0	63.8	82.2	93.5	7.83	74.3	121.0	171.0
Total alkalinity, as CaCO ₃	mg/L	35	30	36	35	7.2	37.0	49.0	46.0
TDS	mg/L	-	104	157	174	< 10	150	180	355
TSS	mg/L	16	6	5	3	4	1	4	< 1
Major Ions									
Chloride	mg/L	5.7	3.8	2.0	1.6	< 1.0	< 1.0	1.5	3.00
Fluoride	mg/L	0.03	0.10	0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	41.6	31.0	54.7	64.6	< 0.50	47	81	130
Nutrients									
Ammonia (NH ₃)	mg/L	-	0.119	0.094	0.061	< 0.061	< 0.061	< 0.061	< 0.061
Ammonia Nitrogen	mg N/L	0.065	0.096	0.077	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	0.34	2.68	4.13	4.91	< 0.10	3.06	6.38	10.10
Nitrite	mg N/L	0.030	0.015	0.014	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals									
Aluminum	mg/L	0.7625	0.2896	0.1021	0.1283	0.1930	0.0944	0.1720	0.0538
Arsenic	mg/L	0.0622	0.0132	0.0205	0.0196	0.00961	0.0109	0.0240	0.0338
Barium	mg/L	0.0375	0.0371	0.0392	0.0382	0.0059	0.0371	0.0586	0.0512
Cadmium	mg/L	0.000020	0.000021	0.000016	0.000013	< 0.000010	0.000016	0.000010	0.000015
Chromium	mg/L	0.0183	0.0076	0.0028	0.0032	0.0045	0.0023	0.0050	< 0.0010
Copper	mg/L	0.00275	0.00221	0.00160	0.00165	0.00094	0.00218	0.00155	0.00192
Iron	mg/L	1.400	0.464	0.185	0.214	0.305	0.169	0.284	0.096
Lead	mg/L	0.00039	0.00049	0.00028	0.00026	0.00037	< 0.00020	0.00026	0.00021
Manganese	mg/L	0.436	0.035	0.052	0.018	0.0196	0.0293	0.0104	0.0131
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0010	0.0015	0.0018	0.0019	< 0.0010	0.0011	0.0025	0.0029
Nickel	mg/L	0.0441	0.0105	0.0102	0.0084	0.0030	0.0103	0.0096	0.0105
Selenium	mg/L	0.00100	0.00094	0.00086	0.00110	< 0.00010	0.00095	0.00181	0.00153
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.000200	0.000020	0.000020	0.000021	< 0.000010	0.000020	0.000031	0.000024
Zinc	mg/L	0.0020	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

*2020 Annual average from Perim-1.

Table 8-47 Whale Tail WRSF Ponding 2024 Water Quality Monitoring (ST-WT-32) §

ST-WT-32	Unit	Annual Average					6/16/2024	7/14/2024
Parameter		2020*	2021	2022	2023	2024		
Field Measured								
Temperature	°C	3.4	6.9	6.5	4.9	3.5	3.2	3.8
pH	pH units	7.05	7.16	7.21	7.09	7.25	7.54	6.95
Conductivity	uS/cm	177.4	128.9	113.2	41.1	138.4	40.8	236.0
Turbidity	NTU	13.10	14.00	7.50	5.91	11.10	21.20	0.99
Conventional Parameters								
Hardness, as CaCO ₃	mg/L	80	51	42	60	55	19.3	91.1
Total alkalinity, as CaCO ₃	mg/L	33	22	21	17	20	14	25
TDS	mg/L	-	86	50	120	105	35	175
TSS	mg/L	10	9	4	4	17	32	< 1
Major Ions								
Chloride	mg/L	6.0	4.0	1.8	1.2	1.4	< 1.0	1.7
Fluoride	mg/L	0.03	0.10	0.10	0.10	0.10	< 0.10	< 0.10
Sulfate	mg/L	49.6	27.2	29.8	43.5	38.9	3.7	74.0
Nutrients								
Ammonia (NH ₃)	mg/L	-	0.112	0.063	0.103	0.116	0.17	< 0.061
Ammonia Nitrogen	mg N/L	0.575	0.093	0.052	0.084	0.095	0.14	< 0.050
Nitrate	mg N/L	3.69	1.45	1.59	2.85	2.93	0.10	5.76
Nitrite	mg N/L	0.025	0.018	0.010	0.010	0.010	< 0.010	< 0.010
Total Metals								
Aluminum	mg/L	0.2640	0.3610	0.1403	0.1647	0.4057	0.80	0.0114
Arsenic	mg/L	0.0151	0.0084	0.0105	0.0084	0.0102	0.01880	0.00169
Barium	mg/L	0.0571	0.0420	0.0298	0.0406	0.0383	0.0199	0.0566
Cadmium	mg/L	0.000020	0.000016	0.000010	0.000011	0.000016	0.000021	< 0.000010
Chromium	mg/L	0.0058	0.0097	0.0040	0.0032	0.0123	0.0236	< 0.0010
Copper	mg/L	0.00105	0.00145	0.00105	0.00104	0.00097	0.00140	0.00053
Iron	mg/L	0.575	0.594	0.236	0.264	0.721	1.43	0.011
Lead	mg/L	0.00024	0.00061	0.00039	0.00034	0.00061	0.00101	< 0.00020
Manganese	mg/L	0.130	0.066	0.020	0.025	0.032	0.0615	0.0018
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.00100	0.00125	0.00168	0.00130	0.00160	< 0.0010	0.0022
Nickel	mg/L	0.0216	0.0107	0.0056	0.0057	0.0063	0.0099	0.0027
Selenium	mg/L	0.00100	0.00085	0.00105	0.00094	0.00086	< 0.00010	0.00162
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020
Thallium	mg/L	0.000200	0.000020	0.000013	0.000012	0.000016	0.000021	< 0.000010
Zinc	mg/L	0.003	0.006	0.005	0.005	0.005	< 0.0050	< 0.0050

*2020 Annual average from Perim-2.

Table 8-48 Whale Tail WRSF Ponding 2024 Water Quality Monitoring (ST-WT-33) §

ST-WT-33	Unit	Annual Average					6/9/2024	7/14/2024
Parameter		2020*	2021	2022	2023	2024		
Field Measured								
Temperature	°C	7.9	5.2	7.0	8.7	8.6	3.3	13.8
pH	pH units	6.87	7.12	7.29	7.36	7.92	8.10	7.73
Conductivity	uS/cm	307.0	207.5	196.3	192.6	177.1	79.1	275.0
Turbidity	NTU	12.60	9.00	40.90	38.90	123.65	65.30	182.00
Conventional Parameters								
Hardness, as CaCO ₃	mg/L	166	88	79	73	68	40.8	95.2
Total alkalinity, as CaCO ₃	mg/L	52	42	62	59	54	34	73
TDS	mg/L	-	135	131	133	110	45	175
TSS	mg/L	10	6	47	18	50	86	14
Major Ions								
Chloride	mg/L	10.5	6.2	3.4	1.4	1.0	< 1.0	< 1.0
Fluoride	mg/L	0.06	0.10	0.10	0.10	0.10	< 0.10	< 0.10
Sulfate	mg/L	87.6	42.3	25.4	28.8	27.6	5.1	50.0
Nutrients								
Ammonia (NH ₃)	mg/L	-	0.138	0.101	0.153	0.061	< 0.061	< 0.061
Ammonia Nitrogen	mg N/L	0.115	0.114	0.083	0.123	0.050	< 0.050	< 0.050
Nitrate	mg N/L	1.31	1.80	0.65	1.03	0.72	0.19	1.24
Nitrite	mg N/L	0.030	0.055	0.031	0.019	0.011	< 0.010	0.011
Total Metals								
Aluminum	mg/L	0.3570	0.3038	0.9886	0.7100	1.1790	1.90	0.458
Arsenic	mg/L	0.0170	0.0148	0.0340	0.0358	0.0604	0.0487	0.0721
Barium	mg/L	0.0770	0.0597	0.0606	0.0471	0.0476	0.0378	0.0573
Cadmium	mg/L	0.000020	0.000028	0.000015	0.000014	0.000014	0.000016	0.000012
Chromium	mg/L	0.0030	0.0086	0.0370	0.0176	0.0347	0.0558	0.0136
Copper	mg/L	0.00325	0.00189	0.00309	0.00207	0.00247	0.00291	0.00202
Iron	mg/L	0.875	0.586	1.975	1.290	2.087	3.380	0.793
Lead	mg/L	0.00017	0.00058	0.00104	0.00161	0.00205	0.00295	0.00115
Manganese	mg/L	0.860	0.294	0.326	0.138	0.076	0.0959	0.0567
Mercury	mg/L	0.00002	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.00100	0.00135	0.00248	0.00300	0.00355	0.0012	0.0059
Nickel	mg/L	0.0279	0.0149	0.0189	0.0110	0.0151	0.0207	0.0095
Selenium	mg/L	0.00100	0.00065	0.00057	0.00050	0.00064	0.00015	0.00112
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020
Thallium	mg/L	0.000200	0.000031	0.000036	0.000035	0.000046	0.000049	0.000042
Zinc	mg/L	0.009	0.005	0.006	0.005	0.006	0.0060	< 0.0050

*2020 Annual average from Perim-3.

Table 8-49 Whale Tail IVR WRSF Sump 2024 Water Quality Monitoring (ST-WT-28) §

ST-WT-28	Unit	Annual Average			5/28/2024	6/10/2024	7/21/2024	8/11/2024	9/10/2024	10/8/2024
Parameter		2022	2023	2024						
Field Measured										
Temperature	°C	8.7	7.2	7.2	1.21	1.8	18.1	15.3	6.8	0.1
pH	pH units	7.05	7.30	7.15	7.21	7.58	7.16	6.63	7.27	7.06
Conductivity	uS/cm	296.0	962.5	1743.6	125.3	572.0	1828.0	4190.0	2970.0	776.0
Turbidity	NTU	8.60	24.20	18.05	21.50	61.10	3.96	4.04	11.80	5.88
Conventional Parameters										
Hardness, as CaCO ₃	mg/L	1067	341	745	417	224	722	1740	1060	308
Total alkalinity, as CaCO ₃	mg/L	54	54	53	45	47	52	58	53	62
TDS	mg/L	1323	674	1298	935	440	1580	2360	1990	480
TSS	mg/L	10	17	15	19	34	5	4	11	17
Major Ions										
Chloride	mg/L	712	246	524	360	120	450	1300	840	74
Fluoride	mg/L	0.11	0.10	0.11	< 0.10	< 0.10	< 0.10	0.12	0.11	< 0.10
Sulfate	mg/L	99	83	100	16	15	100	140	170	160
Nutrients										
Ammonia (NH ₃)	mg/L	0.45	0.28	0.39	0.45	0.17	0.3	0.78	0.57	0.061
Ammonia Nitrogen	mg N/L	0.37	0.23	0.32	0.37	0.14	0.25	0.64	0.47	0.05
Nitrate	mg N/L	6.76	5.05	5.11	0.92	0.98	5.38	6.53	6.75	10.1
Nitrite	mg N/L	0.063	0.037	0.055	0.032	0.018	0.047	0.120	0.074	0.041
Total Metals										
Aluminum	mg/L	0.204	0.480	0.239	0.238	0.567	0.0541	0.088	0.179	0.305
Arsenic	mg/L	0.06270	0.16054	0.28000	0.103	0.164	0.598	0.281	0.213	0.321
Barium	mg/L	0.2194	0.0972	0.1602	0.139	0.118	0.149	0.275	0.174	0.106
Cadmium	mg/L	0.00024	0.00012	0.00046	0.00017	0.000107	0.000364	0.00125	0.000783	0.000099
Chromium	mg/L	0.0075	0.0154	0.0069	0.0050	0.0167	0.0013	< 0.0050	0.0046	0.0088
Copper	mg/L	0.00160	0.00156	0.00142	0.00116	0.00137	0.00104	< 0.0025	0.00120	0.00127
Iron	mg/L	0.42	0.85	0.59	0.41	1.05	0.164	0.739	0.616	0.548
Lead	mg/L	0.00080	0.00080	0.00081	0.00085	0.00115	0.00045	0.00140	0.00053	0.00049
Manganese	mg/L	2.038	0.679	1.677	0.244	0.189	1.24	4.57	3.31	0.506
Mercury	mg/L	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0037	0.0017	0.0041	0.0025	0.0017	0.0047	0.0088	0.0031	0.0039
Nickel	mg/L	0.0606	0.0470	0.0765	0.0319	0.0301	0.0817	0.1570	0.1140	0.0445
Selenium	mg/L	0.00059	0.00053	0.00093	0.00018	0.00024	0.00099	0.00122	0.00101	0.00193
Silver	mg/L	0.00005	0.00002	0.00004	< 0.000020	0.000021	< 0.000020	< 0.00010	< 0.000040	< 0.000020
Thallium	mg/L	0.000138	0.000084	0.000087	0.000046	0.000059	0.00011	0.000159	0.000094	0.000055
Zinc	mg/L	0.0120	0.0053	0.0092	< 0.0050	< 0.0050	0.0054	< 0.025	0.010	< 0.0050

Table 8-50 Whale Tail IVR WRSF Ponding 2024 Water Quality Monitoring (ST-WT-34) §

ST-WT-34 Parameter	Unit	Annual Average				5/28/2024	6/10/2024	7/21/2024	8/11/2024	9/10/2024
		2021	2022	2023	2024					
Field Measured										
Temperature	°C	6.5	5.1	5.3	9.2	0.9	4.7	17.8	16.0	6.8
pH	pH units	6.94	6.96	7.35	7.53	7.62	8.09	7.62	6.82	7.52
Conductivity	uS/cm	1309	1195	1021	763.7	193.7	134.7	1568.0	893.0	1029.0
Turbidity	NTU	8.39	142.90	142.53	63.03	76.10	99.60	96.20	9.05	34.20
Conventional Parameters										
Hardness, as CaCO ₃	mg/L	523	736	413	284	72.7	55.1	597.0	328.0	365.0
Total alkalinity, as CaCO ₃	mg/L	51	74	89	63	46	37	73	71	90
TDS	mg/L	878	1156	647	688	160	95	1510	855	820
TSS	mg/L	4	106	86	51	94	56	58	2	44
Major Ions										
Chloride	mg/L	310	463	219	149	22	11	380	150	180
Fluoride	mg/L	0.10	0.10	0.10	0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10
Sulfate	mg/L	79	56	75	68	14	11	66	110	140
Nutrients										
Ammonia (NH ₃)	mg/L	1.5	1.8	0.9	0.3	0.20	0.088	0.78	0.21	0.40
Ammonia Nitrogen	mg N/L	1.2	1.5	0.7	0.3	0.16	0.072	0.64	0.17	0.33
Nitrate	mg N/L	2.73	1.69	2.55	2.34	0.53	0.38	2.34	4.79	3.67
Nitrite	mg N/L	0.257	0.059	0.035	0.030	0.019	< 0.010	0.037	0.045	0.038
Total Metals										
Aluminum	mg/L	0.0587	2.4748	3.3060	1.1926	2.31	1.50	1.05	0.142	0.961
Arsenic	mg/L	0.0228	0.0290	0.0653	0.0324	0.0605	0.0357	0.0112	0.00966	0.0447
Barium	mg/L	0.272	0.337	0.138	0.100	0.0559	0.0425	0.210	0.0882	0.104
Cadmium	mg/L	0.000051	0.000179	0.000110	0.000047	0.000020	0.000022	0.000052	0.000066	0.000074
Chromium	mg/L	0.0017	0.0214	0.0654	0.0233	0.0525	0.0299	0.0087	0.0021	0.0233
Copper	mg/L	0.00091	0.00603	0.00797	0.00279	0.0033	0.00312	0.0030	0.00167	0.00284
Iron	mg/L	1.094	7.362	6.193	2.515	3.93	2.90	3.65	0.304	1.79
Lead	mg/L	0.00022	0.00348	0.00280	0.00153	0.00245	0.00228	0.00172	0.00034	0.00084
Manganese	mg/L	1.14	2.99	1.89	0.64	0.20	0.145	1.48	0.664	0.735
Mercury	mg/L	0.00001	0.00001	0.00001	0.00003	< 0.00010	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0021	0.0027	0.0028	0.0019	0.0015	0.0010	0.0031	0.0020	0.0018
Nickel	mg/L	0.0229	0.0327	0.0401	0.0168	0.0232	0.0147	0.0163	0.0095	0.0201
Selenium	mg/L	0.00053	0.00037	0.00041	0.00036	0.00011	0.00012	0.00048	0.00065	0.00044
Silver	mg/L	0.00002	0.00005	0.00003	0.00002	0.000024	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.000043	0.000062	0.000076	0.000037	0.000048	0.000043	0.000036	0.000023	0.000037
Zinc	mg/L	0.005	0.016	0.015	0.006	0.0081	0.0062	0.0058	< 0.0050	< 0.0050

Table 8-51 Whale Tail IVR WRSF Ponding 2024 Water Quality Monitoring (ST-WT-35) §

ST-WT-35 Parameter	Unit	Annual Average				5/28/2024	6/10/2024	7/8/2024	8/11/2024	9/10/2024
		2021	2022	2023	2024					
Field Measured										
Temperature	°C	6.2	5.2	7.9	7.3	1.0	2.0	12.1	14.5	7.0
pH	pH units	7.35	7.22	7.26	7.60	7.95	8.27	7.32	6.79	7.69
Conductivity	uS/cm	236.0	106.0	218.8	319.5	84.9	96.5	398.0	583.0	435.0
Turbidity	NTU	2.80	24.20	20.58	43.96	35.30	84.40	12.10	43.90	44.10
Conventional Parameters										
Hardness, as CaCO ₃	mg/L	92	46	91	119	32.4	38.1	143.0	222.0	157.0
Total alkalinity, as CaCO ₃	mg/L	50	40	46	49	40	33	45	77	49
TDS	mg/L	138	65	163	271	70	60	360	540	325
TSS	mg/L	3	25	19	38	32	76	7	32	42
Major Ions										
Chloride	mg/L	10	3	4	34	1.9	3.3	66.0	70.0	28.0
Fluoride	mg/L	0.10	0.10	0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	51	8	46	46	5.5	5.4	38.0	84.0	99.0
Nutrients										
Ammonia (NH ₃)	mg/L	0.4	0.1	0.2	0.1	< 0.061	0.12	< 0.061	0.20	0.14
Ammonia Nitrogen	mg N/L	0.3	0.1	0.1	0.1	< 0.050	0.099	< 0.050	0.160	0.120
Nitrate	mg N/L	0.54	0.33	3.82	3.29	0.23	0.26	1.64	6.13	8.20
Nitrite	mg N/L	0.065	0.014	0.027	0.028	0.010	< 0.010	0.013	0.069	0.036
Total Metals										
Aluminum	mg/L	0.0815	0.8008	0.5190	0.7774	0.577	1.46	0.245	0.505	1.10
Arsenic	mg/L	0.1365	0.0357	0.0229	0.0174	0.0299	0.0361	0.0050	0.00553	0.0107
Barium	mg/L	0.072	0.039	0.057	0.053	0.0230	0.0386	0.0687	0.0810	0.0552
Cadmium	mg/L	0.000020	0.000021	0.000036	0.000051	< 0.000010	0.000020	0.000053	0.000096	0.000075
Chromium	mg/L	0.0019	0.0291	0.0142	0.0161	0.0119	0.0354	0.0029	0.0051	0.0251
Copper	mg/L	0.00099	0.00184	0.00152	0.00194	0.00129	0.00258	0.00120	0.00243	0.00220
Iron	mg/L	0.306	2.107	0.933	1.293	0.968	2.43	0.378	0.91	1.78
Lead	mg/L	0.00031	0.00080	0.00060	0.00101	0.00089	0.00196	0.00038	0.00092	0.00091
Manganese	mg/L	0.41	0.67	0.48	0.49	0.0869	0.121	0.353	1.190	0.695
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0019	0.0013	0.0017	0.0019	< 0.0010	< 0.0010	0.0024	0.0028	0.0021
Nickel	mg/L	0.0177	0.0158	0.0128	0.0096	0.0075	0.0166	0.0046	0.0069	0.0124
Selenium	mg/L	0.00038	0.00016	0.00052	0.00042	< 0.00010	0.00014	0.00052	0.00071	0.00065
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	0.000031	0.000026	0.000030	0.000033	0.000018	0.000045	0.000022	0.000042	0.000036
Zinc	mg/L	0.005	0.009	0.005	0.005	< 0.0050	0.0053	< 0.0050	< 0.0050	< 0.0050

Table 8-52 Whale Tail IVR WRSF Ponding 2024 Water Quality Monitoring (ST-WT-36) §

ST-WT-36	Unit	Annual Average				5/28/2024	6/10/2024	7/8/2024	8/11/2024	9/10/2024	10/8/2024
Parameter		2021	2022	2023	2024						
Field Measured											
Temperature	°C	6.6	6.3	6.2	5.5	0.7	1.4	11.0	14.0	5.9	0.1
pH	pH units	7.45	7.21	7.32	7.60	7.62	7.93	7.36	6.86	7.48	8.37
Conductivity	uS/cm	209.0	176.0	261.5	283.0	156.1	138.8	234.0	317.0	531.0	321.0
Turbidity	NTU	6.9	28.0	9.8	22.8	15.40	34.80	8.66	2.70	10.30	65.20
Conventional Parameters											
Hardness, as CaCO ₃	mg/L	82	74	98	100	57.3	52.7	84.9	126.0	135.0	147.0
Total alkalinity, as CaCO ₃	mg/L	46	48	57	70	57	52	68	89	79	72
TDS	mg/L	148	104	177	153	105	85	165	175	245	140
TSS	mg/L	4	18	5	46	11	20	5	6	6	230
Major Ions											
Chloride	mg/L	7	5	5	5	3.4	2.2	4.8	5.5	8.3	5.7
Fluoride	mg/L	0.10	0.10	0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	27	28	61	48	21	13	34	65	88	69
Nutrients											
Ammonia (NH ₃)	mg/L	0.6	0.1	0.2	0.1	0.28	0.085	< 0.061	0.25	< 0.061	< 0.061
Ammonia Nitrogen	mg N/L	0.5	0.1	0.2	0.1	0.23	0.070	< 0.050	0.21	< 0.050	< 0.050
Nitrate	mg N/L	4.25	0.93	1.67	1.22	1.04	0.49	0.60	0.52	2.22	2.47
Nitrite	mg N/L	0.070	0.017	0.017	0.017	0.023	0.024	0.011	0.017	0.019	< 0.010
Total Metals											
Aluminum	mg/L	0.210	0.750	0.173	1.042	0.304	0.50	0.196	0.223	0.23	4.80
Arsenic	mg/L	0.1355	0.1460	0.2811	0.2715	0.489	0.324	0.258	0.215	0.132	0.211
Barium	mg/L	0.067	0.063	0.066	0.055	0.0295	0.0325	0.0490	0.0595	0.0637	0.0937
Cadmium	mg/L	0.000010	0.000011	0.000020	0.000020	< 0.000010	0.000011	< 0.000010	0.000018	0.000013	0.000058
Chromium	mg/L	0.0059	0.0264	0.0056	0.0230	0.0063	0.0105	0.0053	0.0070	0.0068	0.1020
Copper	mg/L	0.00123	0.00146	0.00127	0.00181	0.00098	0.00113	0.00086	0.00095	0.00151	0.00542
Iron	mg/L	0.327	1.317	0.438	1.945	0.535	0.970	0.367	0.415	0.415	8.97
Lead	mg/L	0.00030	0.00081	0.00039	0.00092	0.00054	0.00094	0.00029	< 0.00020	0.00039	0.00314
Manganese	mg/L	0.0300	0.0679	0.3393	0.1643	0.0654	0.116	0.046	0.391	0.0893	0.278
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0013	0.0013	0.0020	0.0020	0.0016	0.0013	0.0025	0.0028	0.0018	0.0021
Nickel	mg/L	0.0112	0.0200	0.0185	0.0200	0.0160	0.0174	0.0124	0.0179	0.0114	0.0449
Selenium	mg/L	0.00058	0.00027	0.00041	0.00034	0.00041	0.00021	0.00019	0.00024	0.00032	0.00064
Silver	mg/L	0.00002	0.00002	0.00002	0.00003	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	0.000067
Thallium	mg/L	0.000021	0.000033	0.000032	0.000041	0.000021	0.000029	0.000026	0.000048	0.000025	0.000098
Zinc	mg/L	0.005	0.005	0.005	0.007	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0174

Table 8-53 Whale Tail IVR Diversion Ditch 2024 Water Quality Monitoring (ST-WT-37) §

ST-WT-37	Max Grab	Monthly Mean	Unit	Annual Average				5/27/2024	6/10/2024	7/8/2024	8/11/2024	9/10/2024
Parameter				2021	2022	2023	2024					
Field Measured												
Temperature			°C	6.6	5.0	5.5	7.7	2.7	3.6	10.5	15.1	6.8
pH			pH units	7.81	7.36	7.57	7.52	7.22	8.24	7.32	7.34	7.46
Conductivity			uS/cm	41.9	53.0	92.3	94.8	28.0	48.8	102.3	145.9	149.2
Turbidity			NTU	3.79	7.49	2.15	3.38	3.87	4.85	2.98	1.74	3.44
Conventional Parameters												
TSS	30	15	mg/L	2	5	3	3	5	2	7	2	1
Major Ions												
Sulfate			mg/L	2.8	4.0	10.3	9.6	2.2	4.7	9.2	12.0	20.0
Nutrients												
Ammonia Nitrogen			mg N/L	0.07	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Un-Ionized Ammonia, calculated			mg N/L	0.00102	0.00061	0.00062	0.00073	< 0.00061	< 0.0012	< 0.00061	< 0.00061	< 0.00061
Total Metals												
Aluminum			mg/L	0.111	0.217	0.052	0.067	0.102	0.101	0.0684	0.0269	0.035
Arsenic			mg/L	0.00231	0.00509	0.00232	0.00207	0.00221	0.00182	0.00175	0.00222	0.00234
Copper			mg/L	0.0010	0.0011	0.0012	0.0012	0.00127	0.00108	0.00097	0.00168	0.00105
Lead			mg/L	0.00020	0.00025	0.00023	0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Nickel			mg/L	0.0025	0.0043	0.0031	0.0027	0.0018	0.0023	0.0023	0.0041	0.0030
Zinc			mg/L	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

8.5.2.2.15 Whale Tail / IVR Attenuation Pond Discharge[§]

8.5.2.2.15.1 Kangislulik Lake (ST-WT-2a)[§]

In 2024, water from the attenuation ponds was discharged to Kangislulik Lake via the approved submerged diffusers. Water was treated by the Water Treatment Plan before discharge. As per Water License 2AM-WTP1830, the discharge is to be sampled weekly during discharge.

The sampling station is ST-WT-2a and discharge occurred from July 1st to 16th, August 4th to 31st, and September 1st to 30th. The results for ST-WT-2a are provided in Table 8-54. A total volume of 1,185,833 m³ was discharged. There were no exceedances of Water License or MDMER criteria in 2024. The sampling location is outlined in Figure 4.

Effluents have demonstrated to be non-acutely lethal. Refer to Section 8.3.2 (MDMER-8) above for the results.

8.5.2.2.15.2 Whale Tail South (ST-WT-24 and ST-WT-24a)[§]

In 2024, water from attenuation ponds was discharged to Whale Tail South Lake via the approved submerged diffusers. Water was treated by the Water Treatment Plan before discharge. As per Water License 2AM-WTP1830 the discharge is sampled on a weekly basis during discharge.

The permanent diffuser sampling station is ST-WT-24 and was discharging April 14th to 30th, May 1st to 31st, June 1st to 8th, June 10th to 29th, October 1st to 8th, October 21st to 31st, and November 1st to 16th. A total volume of 1,704,010 m³ was discharged. The location is outlined in Figure 4 and 2024 results from ST-WT-24 are provided in Table 8-55. There were no exceedances of Water License or MDMER criteria in 2024.

Effluents have demonstrated to be non-acutely lethal. Refer to Section 8.3.2 (MDMER-11) above for the results.

No water was discharged through Whale Tail South Lake Temporary Diffuser (ST-WT-24a) in 2024.

Table 8-54 Whale Tail / IVR Attenuation Pond 2024 Discharge to Kangislulik Lake Diffuser (ST-WT-2a) §

ST-WT-2a Parameter	Max Grab	Monthly Mean	Unit	Annual Average					7/1/2024	7/8/2024	7/15/2024	8/5/2024	8/12/2024	8/19/2024	8/26/2024
Field Measured															
Temperature			°C	7.4	7.1	7.7	9.1	9.7	12.2	10.4	11.9	11.9	16.3	12.7	11.7
pH	6.0-9.5	6.0-9.5	pH units	6.89	7.11	6.96	7.38	7.45	7.55	7.31	7.60	7.94	7.41	7.24	7.49
Conductivity			uS/cm	437.2	315.8	379.1	439.5	487.1	355.0	372.0	381.0	413.0	419.0	463.0	495.0
Turbidity			NTU	7.60	1.10	1.10	1.32	2.06	2.78	1.77	1.57	0.96	1.03	1.81	2.76
Conventional Parameters															
Hardness, as CaCO ₃			mg/L	205	121	136	146	167	120	114	111	131	133	147	170
Total alkalinity, as CaCO ₃			mg/L	47	36	39	36	49	37	48	60	49	47	44	48
Carbonate, as CaCO ₃			mg/L	5	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃			mg/L	47	36	39	36	49	37	47	59	49	47	44	48
TDS			mg/L	-	232	234	324	355	245	290	240	290	345	330	240
TSS	30	15	mg/L	6	1	2	1	3	4	1	2	1	1	2	1
Total organic carbon			mg/L	3.0	3.4	2.4	2.1	2.5	1.8	2.1	2.2	2.2	2.4	2.5	2.8
Dissolved organic carbon			mg/L	3.5	3.1	2.2	2.1	2.2	1.6	1.3	1.8	2.1	2.3	2.2	2.5
Major Ions															
Chloride			mg/L	78	37	43	60	61	48	39	44	48	56	55	64
Silica			mg/L	5.9	5.5	4.6	4.3	4.2	3.1	3.5	3.4	3.8	3.7	3.6	3.8
Sulfate			mg/L	48	55	63	58	73	44	47	54	50	59	54	63
Nutrients															
Ammonia (NH ₃)			mg/L	-	1.07	0.49	0.78	0.38	0.35	0.52	0.25	0.53	0.29	0.16	0.14
Ammonia Nitrogen	32	16	mg N/L	1.63	0.89	0.41	0.63	0.31	0.29	0.43	0.21	0.44	0.24	0.14	0.11
Nitrate			mg N/L	3.21	2.36	3.47	2.79	3.56	2.61	2.84	3.18	3.24	3.35	3.11	3.09
Nitrite			mg N/L	0.180	0.185	0.075	0.069	0.065	0.039	0.054	0.049	0.079	0.069	0.041	0.038
Total Kjeldahl nitrogen			mg N/L	2.13	1.14	0.61	0.79	0.59	0.41	0.56	0.71	0.75	0.65	0.64	0.45
Total phosphorus	0.6	0.3	mg P/L	0.0141	0.0025	0.0021	0.0016	0.0057	0.0025	< 0.0010	0.0010	0.0019	0.0011	0.0031	0.0037
Orthophosphate			mg P/L	0.01	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals															
Aluminum	1	0.5	mg/L	0.026	0.011	0.010	0.008	0.043	0.0256	0.0063	0.0084	0.0032	0.0051	0.0033	0.0039
Antimony			mg/L	0.0013	0.0085	0.0072	0.0040	0.0081	0.00508	0.00753	0.00617	0.00701	0.00591	0.00663	0.00976
Arsenic	0.2	0.1	mg/L	0.00456	0.00847	0.00963	0.00663	0.04963	0.0356	0.0151	0.0168	0.00681	0.00962	0.0139	0.0267
Barium			mg/L	0.0902	0.0479	0.0515	0.0514	0.0554	0.0463	0.0438	0.0409	0.0475	0.0515	0.0588	0.0609
Beryllium			mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron			mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	0.004	0.002	mg/L	0.000020	0.000017	0.000012	0.000014	0.000016	0.000013	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Calcium (total)			mg/L	61.2	33.6	39.0	44.8	49.1	35.5	32.5	31.9	38.1	39.1	43.3	50.5
Chromium	0.04	0.02	mg/L	0.0007	0.0010	0.0010	0.0010	0.0016	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	0.2	0.1	mg/L	0.00297	0.00174	0.00099	0.00104	0.00103	0.00095	0.00071	0.00065	0.00170	0.00082	0.00087	0.00097
Iron	2	1	mg/L	0.568	0.181	0.262	0.268	0.519	0.992	0.280	0.423	0.147	0.268	0.359	0.437
Lead	0.1	0.05	mg/L	0.00023	0.00021	0.00020	0.00020	0.00021	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium			mg/L	0.0091	0.0062	0.0072	0.0103	0.0091	0.0085	0.0063	0.0064	0.0069	0.0077	0.0086	0.0092
Magnesium (total)			mg/L	12.77	9.14	9.48	8.15	10.67	7.51	7.97	7.49	8.82	8.59	9.36	10.70
Manganese			mg/L	0.558	0.247	0.177	0.170	0.094	0.113	0.111	0.0681	0.0571	0.0591	0.0574	0.0562
Mercury	0.008	0.004	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0033	0.0029	0.0059	0.0083	0.0072	0.0039	0.0067	0.0063	0.0084	0.0074	0.0066	0.0080
Nickel	0.5	0.25	mg/L	0.0221	0.0185	0.0213	0.0123	0.0142	0.0146	0.0124	0.0097	0.0108	0.0078	0.0090	0.0106
Potassium (total)			mg/L	12.14	8.65	9.47	8.05	10.22	7.60	8.30	8.03	9.43	9.04	9.95	11.00
Selenium			mg/L	0.00097	0.00040	0.00026	0.00020	0.00022	0.00013	0.00017	0.00014	0.00015	0.00013	0.00013	0.00020
Sodium (total)			mg/L	7.99	6.72	11.32	7.59	8.85	6.64	9.16	7.63	7.76	7.59	7.82	9.26
Strontium			mg/L	0.384	0.274	0.341	0.442	0.490	0.382	0.323	0.315	0.389	0.392	0.474	0.504
Thallium			mg/L	0.000200	0.000015	0.000021	0.000019	0.000021	0.000018	0.000020	0.000018	0.000023	0.000021	0.000021	0.000021
Tin			mg/L	0.0010	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

ST-WT-2a	Max Grab	Monthly Mean	Unit	Annual Average					7/1/2024	7/8/2024	7/15/2024	8/5/2024	8/12/2024	8/19/2024	8/26/2024
Parameter				2020	2021	2022	2023	2024							
Titanium			mg/L	0.0100	0.0050	0.0050	0.0050	0.0061	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium			mg/L	0.00112	0.00116	0.00122	0.00117	0.00162	0.00049	0.00076	0.00088	0.00131	0.00084	0.00096	0.00154
Vanadium			mg/L	0.0005	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	0.2	0.1	mg/L	0.0096	0.0081	0.0055	0.0075	0.0080	0.0132	0.0059	0.0060	0.0117	0.0050	0.0095	0.0075
Dissolved Metals															
Aluminum			mg/L	0.0060	0.0042	0.0038	0.0038	0.0032	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030
Antimony			mg/L	0.00123	0.00843	0.00749	0.00430	0.00860	0.00497	0.00685	0.00695	0.00755	0.00637	0.00690	0.00986
Arsenic			mg/L	0.00214	0.00622	0.02057	0.00170	0.01179	0.00155	0.00191	0.00180	0.00275	0.00232	0.00213	0.00411
Barium			mg/L	0.08053	0.04832	0.05180	0.05565	0.05876	0.0484	0.0467	0.0477	0.0504	0.0571	0.0629	0.0629
Beryllium			mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron			mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium			mg/L	0.000020	0.000018	0.000011	0.000015	0.000013	0.000017	0.000010	< 0.000010	0.000011	< 0.000010	< 0.000010	< 0.000010
Chromium			mg/L	0.0006	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper			mg/L	0.00259	0.00169	0.00120	0.00496	0.00140	0.00412	0.00169	0.00105	0.00143	0.00155	0.00095	0.00084
Iron			mg/L	0.019	0.085	0.017	0.015	0.021	0.0398	0.0132	0.0101	0.0164	0.0078	0.0135	0.0246
Lead			mg/L	0.00023	0.00021	0.00020	0.00020	0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium			mg/L	0.0083	0.0059	0.0074	0.0117	0.0098	0.0092	0.0075	0.0070	0.0072	0.0084	0.0096	0.0099
Manganese			mg/L	0.6743	0.2490	0.1758	0.1852	0.0991	0.120	0.118	0.078	0.0602	0.0668	0.0636	0.0563
Mercury			mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0029	0.0029	0.0059	0.0088	0.0077	0.0038	0.0070	0.0072	0.0088	0.0079	0.0074	0.0081
Nickel			mg/L	0.0184	0.0186	0.0240	0.0132	0.0147	0.0151	0.0125	0.0108	0.0113	0.0087	0.0098	0.0103
Selenium			mg/L	0.00097	0.00041	0.00025	0.00021	0.00023	0.00013	0.00015	0.00014	0.00016	0.00015	0.00016	0.00019
Strontium			mg/L	0.3472	0.2770	0.3462	0.4824	0.5196	0.411	0.351	0.365	0.414	0.430	0.501	0.509
Thallium			mg/L	0.000200	0.000016	0.000021	0.000019	0.000022	0.000020	0.000022	0.000022	0.000027	0.000025	0.000025	0.000022
Tin			mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium			mg/L	0.010	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium			mg/L	0.0011	0.0011	0.0012	0.0012	0.0016	0.00024	0.00070	0.00085	0.00144	0.00090	0.00090	0.00144
Vanadium			mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc			mg/L	0.0084	0.0093	0.0059	0.0092	0.0154	0.0173	0.0076	0.0065	0.0259	0.0081	0.0087	0.0220
Volatile Organics															
Petroleum Hydrocarbons F (C10-C50)	6	3	mg/L	0.1	0.5	0.2	0.2	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

ST-WT-2a	Max Grab	Monthly Mean	Unit	Annual Average					9/2/2024	9/9/2024	9/16/2024	9/23/2024	9/24/2024	9/25/2024	9/29/2024
Parameter				2020	2021	2022	2023	2024							
Field Measured															
Temperature			°C	7.4	7.1	7.7	9.1	9.7	8.1	9.0	7.2	5.8	6.2	6.1	5.7
pH	6.0-9.5	6.0-9.5	pH units	6.89	7.11	6.96	7.38	7.45	7.46	7.23	7.52	7.53	7.49	7.20	7.38
Conductivity			uS/cm	437.2	315.8	379.1	439.5	487.1	486.0	479.0	505.0	605.0	584.0	595.0	668.0
Turbidity			NTU	7.60	1.10	1.10	1.32	2.06	1.38	1.00	2.69	2.21	4.62	2.01	2.20
Conventional Parameters															
Hardness, as CaCO ₃			mg/L	205	121	136	146	167	156	162	186	233	211	227	232
Total alkalinity, as CaCO ₃			mg/L	47	36	39	36	49	44	46	57	54	57	45	49
Carbonate, as CaCO ₃			mg/L	5	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃			mg/L	47	36	39	36	49	44	46	56	54	57	45	49
TDS			mg/L	-	232	234	324	355	315	380	370	475	400	500	550
TSS	30	15	mg/L	6	1	2	1	3	1	2	7	10	9	2	2
Total organic carbon			mg/L	3.0	3.4	2.4	2.1	2.5	2.2	2.5	2.9	2.8	3.0	2.5	2.8
Dissolved organic carbon			mg/L	3.5	3.1	2.2	2.1	2.2	2.2	2.2	2.4	2.6	2.6	2.4	2.5
Major Ions															
Chloride			mg/L	78	37	43	60	61	63	60	67	78	78	78	81
Silica			mg/L	5.9	5.5	4.6	4.3	4.2	4.4	4.3	4.5	5.4	5.2	5.1	5.3
Sulfate			mg/L	48	55	63	58	73	65	65	73	110	110	110	120
Nutrients															
Ammonia (NH ₃)			mg/L	-	1.07	0.49	0.78	0.38	0.11	0.088	0.13	0.75	0.61	0.54	0.85
Ammonia Nitrogen	32	16	mg N/L	1.63	0.89	0.41	0.63	0.31	0.095	0.073	0.11	0.62	0.50	0.44	0.70
Nitrate			mg N/L	3.21	2.36	3.47	2.79	3.56	2.70	2.98	3.40	4.16	4.79	4.43	5.93
Nitrite			mg N/L	0.180	0.185	0.075	0.069	0.065	0.027	0.023	0.044	0.130	0.103	0.095	0.115
Total Kjeldahl nitrogen			mg N/L	2.13	1.14	0.61	0.79	0.59	0.32	0.34	0.72	0.66	0.71	0.59	0.71
Total phosphorus	0.6	0.3	mg P/L	0.0141	0.0025	0.0021	0.0016	0.0057	0.0027	0.0048	0.021	0.015	0.016	0.0025	0.0032
Orthophosphate			mg P/L	0.01	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals															
Aluminum	1	0.5	mg/L	0.026	0.011	0.010	0.008	0.043	0.0042	0.0034	0.0921	0.2160	0.1950	0.0228	0.0169
Antimony			mg/L	0.0013	0.0085	0.0072	0.0040	0.0081	0.00684	0.0084	0.00944	0.0115	0.0104	0.00881	0.0105
Arsenic	0.2	0.1	mg/L	0.00456	0.00847	0.00963	0.00663	0.04963	0.0123	0.0152	0.171	0.168	0.153	0.023	0.0278
Barium			mg/L	0.0902	0.0479	0.0515	0.0514	0.0554	0.053	0.0572	0.057	0.0657	0.0674	0.0634	0.0627
Beryllium			mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron			mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	0.004	0.002	mg/L	0.000020	0.000017	0.000012	0.000014	0.000016	0.000011	< 0.00001	0.000021	0.000033	< 0.000010	0.000042	0.000018
Calcium (total)			mg/L	61.2	33.6	39.0	44.8	49.1	46.5	48.3	54.5	69.3	62.6	67.5	68.1
Chromium	0.04	0.02	mg/L	0.0007	0.0010	0.0010	0.0010	0.0016	< 0.0010	< 0.0010	0.0015	0.005	0.0043	< 0.0010	< 0.0010
Copper	0.2	0.1	mg/L	0.00297	0.00174	0.00099	0.00104	0.00103	0.00129	0.00064	0.00094	0.00140	0.00137	0.00103	0.00102
Iron	2	1	mg/L	0.568	0.181	0.262	0.268	0.519	0.224	0.238	0.907	1.030	0.932	0.514	0.510
Lead	0.1	0.05	mg/L	0.00023	0.00021	0.00020	0.00020	0.00021	0.00032	< 0.00020	< 0.00020	0.00025	0.00022	< 0.00020	< 0.00020
Lithium			mg/L	0.0091	0.0062	0.0072	0.0103	0.0091	0.0079	0.0084	0.0095	0.0124	0.0119	0.0125	0.0114
Magnesium (total)			mg/L	12.77	9.14	9.48	8.15	10.67	9.60	10.00	12.20	14.60	13.10	14.20	15.20
Manganese			mg/L	0.558	0.247	0.177	0.170	0.094	0.074	0.0649	0.0716	0.159	0.124	0.158	0.141
Mercury	0.008	0.004	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0033	0.0029	0.0059	0.0083	0.0072	0.0072	0.0080	0.0071	0.0091	0.0075	0.0069	0.0073
Nickel	0.5	0.25	mg/L	0.0221	0.0185	0.0213	0.0123	0.0142	0.009	0.011	0.0146	0.0264	0.021	0.0204	0.0219
Potassium (total)			mg/L	12.14	8.65	9.47	8.05	10.22	9.47	9.44	10.10	13.20	11.90	12.40	13.20
Selenium			mg/L	0.00097	0.00040	0.00026	0.00020	0.00022	0.00018	0.00020	0.00021	0.00041	0.00033	0.00033	0.00039
Sodium (total)			mg/L	7.99	6.72	11.32	7.59	8.85	7.89	7.99	8.75	11.00	9.42	10.2	12.8
Strontium			mg/L	0.384	0.274	0.341	0.442	0.490	0.469	0.54	0.492	0.671	0.626	0.65	0.632
Thallium			mg/L	0.000200	0.000015	0.000021	0.000019	0.000021	0.000018	0.000015	0.000018	0.000027	0.000025	0.000024	0.000021
Tin			mg/L	0.0010	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium			mg/L	0.0100	0.0050	0.0050	0.0050	0.0061	< 0.0050	< 0.0050	0.0054	0.0133	0.0121	< 0.0050	< 0.0050
Uranium			mg/L	0.00112	0.00116	0.00122	0.00117	0.00162	0.00142	0.00149	0.00219	0.00311	0.00284	0.00215	0.00268

ST-WT-2a	Max Grab	Monthly Mean	Unit	Annual Average					9/2/2024	9/9/2024	9/16/2024	9/23/2024	9/24/2024	9/25/2024	9/29/2024
Parameter				2020	2021	2022	2023	2024							
Vanadium			mg/L	0.0005	0.0050	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	0.2	0.1	mg/L	0.0096	0.0081	0.0055	0.0075	0.0080	0.0066	< 0.0050	0.0077	0.0069	0.0070	0.0135	0.0064
Dissolved Metals															
Aluminum			mg/L	0.0060	0.0042	0.0038	0.0038	0.0032	< 0.0030	< 0.0030	0.0037	0.0033	0.0053	< 0.0030	< 0.0030
Antimony			mg/L	0.00123	0.00843	0.00749	0.00430	0.00860	0.00814	0.00887	0.0115	0.0117	0.0101	0.00906	0.0116
Arsenic			mg/L	0.00214	0.00622	0.02057	0.00170	0.01179	0.00215	0.00272	0.0399	0.0593	0.0383	0.00334	0.00279
Barium			mg/L	0.08053	0.04832	0.05180	0.05565	0.05876	0.0616	0.0594	0.0657	0.0640	0.0622	0.0649	0.0688
Beryllium			mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron			mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.051
Cadmium			mg/L	0.000020	0.000018	0.000011	0.000015	0.000013	0.000010	< 0.000010	0.000011	0.000022	0.000017	0.000024	< 0.000010
Chromium			mg/L	0.0006	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper			mg/L	0.00259	0.00169	0.00120	0.00496	0.00140	0.00079	0.00089	0.00124	0.00103	0.00136	0.00147	0.00119
Iron			mg/L	0.019	0.085	0.017	0.015	0.021	0.0105	< 0.0050	0.0240	0.0511	0.0382	0.0233	0.0106
Lead			mg/L	0.00023	0.00021	0.00020	0.00020	0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium			mg/L	0.0083	0.0059	0.0074	0.0117	0.0098	0.0097	0.0086	0.0102	0.0123	0.0114	0.0125	0.0143
Manganese			mg/L	0.6743	0.2490	0.1758	0.1852	0.0991	0.0851	0.0673	0.0787	0.1530	0.1170	0.1570	0.1670
Mercury			mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0029	0.0029	0.0059	0.0088	0.0077	0.0083	0.0081	0.0083	0.0092	0.0081	0.0072	0.0083
Nickel			mg/L	0.0184	0.0186	0.0240	0.0132	0.0147	0.010	0.0113	0.0169	0.0242	0.0199	0.0216	0.0232
Selenium			mg/L	0.00097	0.00041	0.00025	0.00021	0.00023	0.00021	0.00021	0.00027	0.00037	0.00032	0.00040	0.00040
Strontium			mg/L	0.3472	0.2770	0.3462	0.4824	0.5196	0.547	0.527	0.558	0.661	0.622	0.67	0.708
Thallium			mg/L	0.000200	0.000016	0.000021	0.000019	0.000022	0.000020	0.000020	0.000019	0.000022	0.000021	0.000020	0.000022
Tin			mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium			mg/L	0.010	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium			mg/L	0.0011	0.0011	0.0012	0.0012	0.0016	0.00154	0.00152	0.00255	0.0032	0.00273	0.00182	0.00260
Vanadium			mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc			mg/L	0.0084	0.0093	0.0059	0.0092	0.0154	0.0060	0.0055	0.0057	0.0512	0.0347	0.0079	0.0080

Table 8-55 Whale Tail / IVR Attenuation Pond 2024 Discharge to Whale Tail South Permanent Diffuser (ST-WT-24) §

ST-WT-24 Parameter	Max Grab	Monthly Mean	Unit	Annual Average					4/15/2024	4/22/2024	4/29/2024	5/6/2024	5/13/2024	5/20/2024	5/27/2024	6/3/2024	6/10/2024
Field Measured																	
Temperature			°C	0.8	1.4	1.1	0.8	1.8	0.5	0.3	1.8	0.5	0.4	0.6	0.7	0.8	3.1
pH	6.0-9.5	6.0-9.5	pH units	7.09	7.01	7.04	7.02	7.3	7.52	7.24	7.02	7.69	6.92	7.15	7.20	7.21	7.41
Conductivity			uS/cm	239.0	308.0	430.0	371.5	393.9	297.0	308.0	307.0	304.0	225.0	33.0	271.0	246.0	220.0
Turbidity			NTU	1.00	0.80	1.40	1.30	1.46	0.51	0.6	0.48	1.43	1.74	1.15	1.99	2.53	0.79
Conventional Parameters																	
Hardness, as CaCO ₃			mg/L	104	116	163	139	145	96.4	109.0	117.0	119.0	102.0	115.0	86.7	74.7	73.1
Total alkalinity, as CaCO ₃			mg/L	52	41	57	50	46	55	64	57	45	40	51	31	32	31
Carbonate, as CaCO ₃			mg/L	4	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃			mg/L	51	40	56	50	46	55	64	56	45	40	51	31	32	31
TDS			mg/L	-	196	272	230	319	195	315	225	200	195	255	255	195	185
TSS	30	15	mg/L	3	2	3	1	2	1	< 1	2	< 1	2	1	3	3	2
Total organic carbon			mg/L	4.0	2.6	2.9	2.6	2.3	2.2	2.3	2.3	2.3	2.6	2.9	1.9	1.9	1.7
Dissolved organic carbon			mg/L	3.0	2.5	2.6	2.4	2.1	2.1	2.1	2.3	2.1	2.4	2.7	1.8	1.6	1.4
Major Ions																	
Chloride			mg/L	33.5	33.5	50.6	43.8	50.8	31	38	37	38	40	44	45	37	31
Silica			mg/L	7.8	7.2	9.4	6.9	6.0	9	8.6	8.9	7.9	6.5	7.3	3.7	2.8	3.2
Sulfate			mg/L	31	51	66	56	74	47	48	46	47	48	48	40	31	30
Nutrients																	
Ammonia (NH ₃)			mg/L	-	0.83	1.18	2.44	0.89	1.30	1.20	1.10	0.98	1.60	1.00	0.31	0.53	0.51
Ammonia Nitrogen	32	16	mg N/L	-	0.73	0.98	1.99	0.72	1.10	0.98	0.90	0.80	1.30	0.84	0.25	0.44	0.42
Nitrate			mg N/L	1.33	1.65	2.55	3.48	3.27	1.40	1.20	1.12	1.23	1.72	1.86	0.74	0.87	0.98
Nitrite			mg N/L	0.048	0.064	0.054	0.085	0.054	0.036	0.021	0.019	0.015	0.021	0.025	0.017	0.016	0.026
Total Kjeldahl nitrogen			mg N/L	1.54	0.90	1.19	2.39	0.87	1.20	1.10	0.91	0.96	1.30	0.99	0.50	0.46	0.47
Total phosphorus	0.6	0.3	mg P/L	0.027	0.009	0.003	0.002	0.002	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Orthophosphate			mg P/L	0.01	0.01	0.02	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals																	
Aluminum	1	0.5	mg/L	0.0270	0.0149	0.0179	0.0094	0.0092	0.0050	0.0043	0.0041	< 0.0030	0.0075	0.0109	0.0107	0.0145	0.0104
Antimony			mg/L	0.00026	0.00414	0.01579	0.00215	0.00650	0.00070	0.00083	0.00088	0.00103	0.00165	0.00168	0.00052	0.00056	0.00064
Arsenic	0.2	0.1	mg/L	0.00199	0.00373	0.05714	0.00273	0.01843	0.00386	0.00153	0.00197	0.00230	0.00440	0.00490	0.00148	0.00176	0.00171
Barium			mg/L	0.05634	0.04894	0.06541	0.06034	0.04881	0.0397	0.0462	0.0482	0.0502	0.0412	0.0442	0.0313	0.0303	0.0366
Beryllium			mg/L	0.0006	0.0002	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron			mg/L	0.028	0.044	0.050	0.050	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	0.004	0.002	mg/L	0.000029	0.000018	0.000014	0.000013	0.000014	< 0.000010	0.000013	0.000011	< 0.000010	< 0.000010	< 0.000010	0.000020	< 0.000010	< 0.000010
Calcium (total)			mg/L	29.3	32.4	47.0	41.9	42.6	29.4	33.1	35.7	36.0	31.0	34.8	28.4	24.1	23.2
Chromium	0.04	0.02	mg/L	0.0006	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	0.2	0.1	mg/L	0.0025	0.0014	0.0017	0.0011	0.0011	0.00148	0.00105	0.00094	0.00115	0.00081	0.00108	0.00063	0.00064	< 0.00050
Iron	2	1	mg/L	0.393	0.231	0.285	0.256	0.343	0.308	0.160	0.203	0.178	0.327	0.329	0.278	0.274	0.189
Lead	0.1	0.05	mg/L	0.000174	0.000196	0.000203	0.000200	0.000216	< 0.00020	0.00023	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium			mg/L	0.0060	0.0048	0.0079	0.0074	0.0075	0.0037	0.0043	0.0042	0.0048	0.0053	0.0057	0.0099	0.0081	0.0066
Magnesium (total)			mg/L	7.0	8.1	11.2	8.5	9.5	5.55	6.46	6.69	7.05	6.06	6.74	3.85	3.51	3.69
Manganese			mg/L	0.249	0.261	0.294	0.297	0.189	0.234	0.272	0.271	0.266	0.209	0.209	0.175	0.147	0.233
Mercury	0.008	0.004	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0047	0.0037	0.0072	0.0170	0.0068	0.0072	0.0090	0.0092	0.0100	0.0066	0.0084	0.0018	0.0018	0.0011
Nickel	0.5	0.25	mg/L	0.0045	0.0157	0.0541	0.0107	0.0175	0.0044	0.0063	0.0070	0.0079	0.0104	0.0098	0.0060	0.0053	0.0064
Potassium (total)			mg/L	5.79	6.77	9.61	7.88	8.39	4.28	4.91	5.02	5.50	5.87	6.78	5.13	4.31	4.21
Selenium			mg/L	0.00057	0.00033	0.00022	0.00015	0.00022	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Sodium (total)			mg/L	5.80	6.47	10.95	7.48	8.28	5.16	6.08	6.40	6.84	5.37	7.06	4.36	5.60	3.35
Strontium			mg/L	0.218	0.254	0.392	0.353	0.407	0.219	0.285	0.270	0.289	0.280	0.305	0.302	0.265	0.239
Thallium			mg/L	0.000177	0.000038	0.000017	0.000015	0.000017	0.000012	0.000012	0.000013	0.000011	0.000014	0.000011	0.000011	< 0.000010	0.000011
Tin			mg/L	0.002	0.004	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

ST-WT-24	Max Grab	Monthly Mean	Unit	Annual Average					4/15/2024	4/22/2024	4/29/2024	5/6/2024	5/13/2024	5/20/2024	5/27/2024	6/3/2024	6/10/2024
Parameter				2020	2021	2022	2023	2024									
Titanium			mg/L	0.009	0.006	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium			mg/L	0.00098	0.00117	0.00261	0.00144	0.00144	0.00068	0.00079	0.00073	0.00077	0.00054	0.00092	0.00022	0.00025	0.00013
Vanadium			mg/L	0.00050	0.00440	0.00500	0.00500	0.00500	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	0.2	0.1	mg/L	0.0058	0.0073	0.0070	0.0073	0.0077	0.0089	< 0.0050	< 0.0050	0.0094	0.0078	0.0082	0.0114	0.0091	0.0084
Dissolved Metals																	
Aluminum			mg/L	0.0048	0.0034	0.0030	0.0030	0.0033	< 0.0030	< 0.0030	< 0.0030	< 0.0030	0.0030	< 0.0030	< 0.0030	0.0036	< 0.0030
Antimony			mg/L	0.00036	0.00405	0.01547	0.00231	0.00702	0.00079	0.00086	0.00095	0.00103	0.00185	0.00190	0.00061	0.00065	0.00068
Arsenic			mg/L	0.00092	0.00226	0.04635	0.00123	0.00231	0.00056	0.00061	0.00063	0.00114	0.00167	0.00143	0.00091	0.00086	0.00124
Barium			mg/L	0.0562	0.0486	0.0647	0.0625	0.0536	0.0494	0.0477	0.0519	0.0495	0.0470	0.0507	0.0379	0.0349	0.0410
Beryllium			mg/L	0.0004	0.0002	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron			mg/L	0.0157	0.0436	0.0501	0.0500	0.0504	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium			mg/L	0.000024	0.000016	0.000013	0.000014	0.000015	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	0.000020	0.000013	0.000013
Chromium			mg/L	0.0007	0.0009	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper			mg/L	0.00206	0.00132	0.00163	0.00114	0.00162	0.00286	0.00250	0.00091	0.00118	0.00155	0.00185	0.00260	0.00087	0.00075
Iron			mg/L	0.0298	0.0691	0.0471	0.0684	0.0492	0.0327	0.0217	0.0171	0.0325	0.1260	0.0805	0.0974	0.0304	0.0243
Lead			mg/L	0.00017	0.00020	0.00020	0.00020	0.00023	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium			mg/L	0.0049	0.0047	0.0079	0.0078	0.0086	0.0044	0.0050	0.0048	0.0046	0.0057	0.0068	0.0118	0.0099	0.0073
Manganese			mg/L	0.246	0.241	0.293	0.303	0.211	0.288	0.277	0.304	0.277	0.239	0.241	0.209	0.177	0.245
Mercury			mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0046	0.0036	0.0070	0.0171	0.0073	0.0084	0.0097	0.0103	0.0096	0.0075	0.0095	0.0021	0.0022	0.0012
Nickel			mg/L	0.0037	0.0163	0.0535	0.0111	0.0187	0.0057	0.0068	0.0073	0.0080	0.0119	0.0115	0.0071	0.0061	0.0071
Selenium			mg/L	0.00047	0.00031	0.00021	0.00016	0.00023	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Strontium			mg/L	0.219	0.251	0.389	0.367	0.443	0.276	0.277	0.297	0.301	0.316	0.348	0.355	0.301	0.258
Thallium			mg/L	0.000173	0.000038	0.000015	0.000016	0.000018	0.000012	0.000010	0.000012	0.000012	0.000013	0.000015	0.000013	0.000011	0.000013
Tin			mg/L	0.002	0.004	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium			mg/L	0.009	0.006	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium			mg/L	0.00096	0.00104	0.00251	0.00144	0.00150	0.00076	0.00092	0.00093	0.00067	0.00056	0.00096	0.00022	0.00024	0.00012
Vanadium			mg/L	0.0011	0.0044	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc			mg/L	0.0059	0.0079	0.0065	0.0082	0.0150	0.0109	0.0073	< 0.0050	0.0520	0.0135	0.0109	0.0143	0.0067	0.0085
Volatile Organics																	
Petroleum Hydrocarbons F (C10-C50)	6	3	mg/L	0.4	0.4	0.2	0.2	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

ST-WT-24	Max Grab	Monthly Mean	Unit	Annual Average					6/17/2024	6/24/2024	10/1/2024	10/7/2024	10/22/2024	10/28/2024	11/1/2024	11/4/2024	11/11/2024
Parameter				2020	2021	2022	2023	2024									
Field Measured																	
Temperature			°C	0.8	1.4	1.1	0.8	1.8	6.3	7.5	4.6	2.3	0.2	0.8	0.4	0.7	0.9
pH	6.0-9.5	6.0-9.5	pH units	7.09	7.01	7.04	7.02	7.3	7.75	7.50	7.65	6.82	7.18	7.33	7.19	7.16	7.06
Conductivity			uS/cm	239.0	308.0	430.0	371.5	393.9	256.0	303.0	679.0	620.0	617.0	632.0	596.0	566.0	610.0
Turbidity			NTU	1.00	0.80	1.40	1.30	1.46	1.98	2.09	2.73	2.48	2.30	0.84	0.84	0.97	0.85
Conventional Parameters																	
Hardness, as CaCO ₃			mg/L	104	116	163	139	145	75.9	104	243	193	231	215	221	210	232
Total alkalinity, as CaCO ₃			mg/L	52	41	57	50	46	34	41	51	45	41	46	49	51	59
Carbonate, as CaCO ₃			mg/L	4	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃			mg/L	51	40	56	50	46	34	41	51	45	41	46	49	51	58
TDS			mg/L	-	196	272	230	319	350	210	495	430	465	520	410	345	505
TSS	30	15	mg/L	3	2	3	1	2	1	2	4	1	2	1	3	2	3
Total organic carbon			mg/L	4.0	2.6	2.9	2.6	2.3	1.9	1.8	2.9	2.5	3.0	2.8	2.3	2.3	2.4
Dissolved organic carbon			mg/L	3.0	2.5	2.6	2.4	2.1	1.6	1.7	2.5	2.3	2.6	2.3	2.2	2.3	2.3
Major Ions																	
Chloride			mg/L	33.5	33.5	50.6	43.8	50.8	36	41	77	72	72	67	72	67	70
Silica			mg/L	7.8	7.2	9.4	6.9	6.0	2.7	3.7	5.6	5.5	5.2	6.5	6.3	6.5	7.5
Sulfate			mg/L	31	51	66	56	74	31	41	130	120	130	130	120	110	140
Nutrients and Chlorophyll a																	
Ammonia (NH ₃)			mg/L	-	0.83	1.18	2.44	0.89	0.30	0.72	1.20	0.80	0.29	1.40	0.83	0.98	0.92
Ammonia Nitrogen	32	16	mg N/L	-	0.73	0.98	1.99	0.72	0.24	0.59	0.95	0.66	0.24	1.10	0.68	0.80	0.75
Nitrate			mg N/L	1.33	1.65	2.55	3.48	3.27	1.30	2.17	6.20	6.22	6.71	6.64	6.51	5.69	6.23
Nitrite			mg N/L	0.048	0.064	0.054	0.085	0.054	0.026	0.051	0.135	0.085	0.051	0.126	0.094	0.104	0.098
Total Kjeldahl nitrogen			mg N/L	1.54	0.90	1.19	2.39	0.87	0.44	0.74	1.10	0.87	0.92	1.50	0.65	0.91	0.70
Total phosphorus	0.6	0.3	mg P/L	0.027	0.009	0.003	0.002	0.002	< 0.0010	0.0014	0.0022	0.0036	0.0019	< 0.0010	0.0025	0.0037	0.0023
Orthophosphate			mg P/L	0.01	0.01	0.02	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals																	
Aluminum	1	0.5	mg/L	0.0270	0.0149	0.0179	0.0094	0.0092	0.0112	0.0144	0.0167	0.0087	0.0119	0.0051	0.0092	0.0090	0.0084
Antimony			mg/L	0.00026	0.00414	0.01579	0.00215	0.00650	0.00146	0.00427	0.01280	0.01200	0.01110	0.01440	0.01540	0.01650	0.02050
Arsenic	0.2	0.1	mg/L	0.00199	0.00373	0.05714	0.00273	0.01843	0.00296	0.01080	0.02970	0.02790	0.03100	0.02290	0.04110	0.04900	0.09240
Barium			mg/L	0.05634	0.04894	0.06541	0.06034	0.04881	0.0314	0.0383	0.0620	0.0547	0.0675	0.0604	0.0667	0.0620	0.0677
Beryllium			mg/L	0.0006	0.0002	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron			mg/L	0.028	0.044	0.050	0.050	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	0.004	0.002	mg/L	0.000029	0.000018	0.000014	0.000013	0.000014	< 0.000010	0.000012	0.000025	0.000013	0.000015	0.000023	0.000026	0.000017	0.000014
Calcium (total)			mg/L	29.31	32.38	46.96	41.92	42.59	23.8	31.9	70.5	54.6	65.9	60.1	61.6	57.8	64.7
Chromium	0.04	0.02	mg/L	0.0006	0.0010	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	0.2	0.1	mg/L	0.0025	0.0014	0.0017	0.0011	0.0011	0.00093	0.00086	0.00144	0.00208	0.00088	0.00108	0.00134	0.00106	0.00101
Iron	2	1	mg/L	0.393	0.231	0.285	0.256	0.343	0.215	0.385	0.513	0.377	0.561	0.289	0.419	0.409	0.754
Lead	0.1	0.05	mg/L	0.000174	0.000196	0.000203	0.000200	0.000216	< 0.00020	< 0.00020	0.00045	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium			mg/L	0.0060	0.0048	0.0079	0.0074	0.0075	0.0064	0.0071	0.0122	0.0087	0.0113	0.0093	0.0097	0.0085	0.010
Magnesium (total)			mg/L	7.00	8.10	11.20	8.46	9.48	4.01	5.91	16.20	13.60	16.10	15.80	16.40	16.00	17.00
Manganese			mg/L	0.249	0.261	0.294	0.297	0.189	0.154	0.137	0.157	0.106	0.0967	0.196	0.157	0.20	0.186
Mercury	0.008	0.004	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0047	0.0037	0.0072	0.0170	0.0068	0.0026	0.0054	0.0093	0.0065	0.0065	0.0085	0.0084	0.0097	0.0097
Nickel	0.5	0.25	mg/L	0.0045	0.0157	0.0541	0.0107	0.0175	0.0068	0.0125	0.0260	0.0234	0.0196	0.0346	0.0353	0.0425	0.0512
Potassium (total)			mg/L	5.79	6.77	9.61	7.88	8.39	4.60	6.45	14.20	11.50	13.50	13.30	13.20	13.20	15.10
Selenium			mg/L	0.00057	0.00033	0.00022	0.00015	0.00022	< 0.00010	0.00013	0.00042	0.00035	0.00037	0.00036	0.00039	0.00039	0.00049
Sodium (total)			mg/L	5.80	6.47	10.95	7.48	8.28	4.94	6.30	13.50	10.50	12.20	11.80	13.00	12.30	14.30
Strontium			mg/L	0.218	0.254	0.392	0.353	0.407	0.243	0.309	0.672	0.526	0.680	0.599	0.600	0.594	0.640
Thallium			mg/L	0.000177	0.000038	0.000017	0.000015	0.000017	0.000013	0.000016	0.000024	0.000019	0.000019	0.000023	0.000024	0.000026	0.000037
Tin			mg/L	0.002	0.004	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium			mg/L	0.009	0.006	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

ST-WT-24	Max Grab	Monthly Mean	Unit	Annual Average					6/17/2024	6/24/2024	10/1/2024	10/7/2024	10/22/2024	10/28/2024	11/1/2024	11/4/2024	11/11/2024
Parameter				2020	2021	2022	2023	2024									
Uranium			mg/L	0.00098	0.00117	0.00261	0.00144	0.00144	0.00025	0.00073	0.00367	0.00234	0.00244	0.00272	0.00280	0.00287	0.00301
Vanadium			mg/L	0.00050	0.00440	0.00500	0.00500	0.00500	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	0.2	0.1	mg/L	0.0058	0.0073	0.0070	0.0073	0.0077	0.0071	0.0076	< 0.0050	0.0086	0.0061	0.0055	0.0105	0.0069	0.0086
Dissolved Metals																	
Aluminum			mg/L	0.0048	0.0034	0.0030	0.0030	0.0033	< 0.0030	< 0.0030	< 0.0030	0.0035	< 0.003	0.0065	< 0.0030	< 0.0030	< 0.0030
Antimony			mg/L	0.00036	0.00405	0.01547	0.00231	0.00702	0.00179	0.00453	0.01430	0.01410	0.01140	0.01610	0.01610	0.01790	0.02090
Arsenic			mg/L	0.00092	0.00226	0.04635	0.00123	0.00231	0.00142	0.00144	0.00329	0.00302	0.00171	0.00469	0.0043	0.00674	0.00596
Barium			mg/L	0.0562	0.0486	0.0647	0.0625	0.0536	0.0387	0.0421	0.0660	0.0670	0.0683	0.0681	0.0689	0.0626	0.0729
Beryllium			mg/L	0.0004	0.0002	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron			mg/L	0.0157	0.0436	0.0501	0.0500	0.0504	< 0.050	< 0.050	0.056	< 0.050	0.052	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium			mg/L	0.000024	0.000016	0.000013	0.000014	0.000015	0.000024	< 0.000010	0.000015	< 0.000010	0.000018	0.000033	0.000018	0.000013	0.000014
Chromium			mg/L	0.0007	0.0009	0.0010	0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper			mg/L	0.00206	0.00132	0.00163	0.00114	0.00162	0.00232	0.00077	0.00131	0.00107	0.00111	0.00189	0.00253	0.00228	0.00076
Iron			mg/L	0.0298	0.0691	0.0471	0.0684	0.0492	0.0252	0.0115	0.0111	0.0647	0.0663	0.0730	0.0563	0.0555	0.0591
Lead			mg/L	0.00017	0.00020	0.00020	0.00020	0.00023	< 0.00020	0.00074	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium			mg/L	0.0049	0.0047	0.0079	0.0078	0.0086	0.0086	0.0087	0.0147	0.0112	0.0107	0.0107	0.0103	0.0094	0.0104
Manganese			mg/L	0.246	0.241	0.293	0.303	0.211	0.186	0.156	0.162	0.137	0.103	0.227	0.168	0.207	0.190
Mercury			mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0046	0.0036	0.0070	0.0171	0.0073	0.0031	0.0059	0.0102	0.0077	0.0067	0.0093	0.0089	0.0098	0.010
Nickel			mg/L	0.0037	0.0163	0.0535	0.0111	0.0187	0.0083	0.0134	0.0260	0.0277	0.0204	0.0393	0.0366	0.0425	0.0513
Selenium			mg/L	0.00047	0.00031	0.00021	0.00016	0.00023	< 0.00010	0.00012	0.00044	0.00043	0.00039	0.00043	0.00041	0.00039	0.00046
Strontium			mg/L	0.219	0.251	0.389	0.367	0.443	0.279	0.346	0.715	0.663	0.646	0.641	0.651	0.613	0.684
Thallium			mg/L	0.000173	0.000038	0.000015	0.000016	0.000018	0.000014	0.000020	0.000025	0.000020	0.000018	0.000027	0.000025	0.000025	0.000033
Tin			mg/L	0.002	0.004	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium			mg/L	0.009	0.006	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium			mg/L	0.00096	0.00104	0.00251	0.00144	0.00150	0.00025	0.00065	0.00417	0.00255	0.00241	0.00283	0.00291	0.00298	0.00292
Vanadium			mg/L	0.0011	0.0044	0.0050	0.0050	0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc			mg/L	0.0059	0.0079	0.0065	0.0082	0.0150	0.0114	0.0562	< 0.0050	0.0089	0.0064	0.0084	0.0094	0.0082	0.0270
Volatile Organics																	
Petroleum Hydrocarbons F (C10-C50)	6	3	mg/L	0.4	0.4	0.2	0.2	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

8.5.2.2.16 Groundwater Storage Pond Effluent – GSP-1 (ST-WT-20) §

Groundwater Storage Pond One (GSP-1) is used to store water from the underground operations. A total volume of 3,190 m³ was pumped from underground to GSP-1 (ST-WT-20) in 2024 from November to December. As per the Water License, sampling is conducted four times per year minimum. Agnico Eagle collected samples on a monthly basis, except for in May due to safety concerns due to unsafe access. Results are provided in Table 8-57 below and the sampling location outlined in Figure 4.

8.5.2.2.17 Whale Tail Landfarm (ST-WT-27) §

In the event of water accumulation or seepage within the Whale Tail landfarm, the ponded water will be analyzed for Water License prior to discharge. In 2024, prior to freezing up, approximately 130 m³ of water was trucked to the Meadowbank TSF. Results are provided in Table 8-56 below and the sampling location is outlined in Figure 4.

Table 8-56 Whale Tail Landfarm 2024 Water Quality Monitoring (ST-WT-27) §

ST-WT-27 Parameter	Unit	Annual Average	5/27/2024	7/21/2024	8/18/2024	9/4/2024	10/8/2024
Field Measured							
pH	pH units	7.54	7.77	7.52	7.47	7.68	7.28
Conventional Parameters							
TSS	mg/L	109	5	7	13	12	510
Total Metals							
Arsenic	mg/L	0.09186	0.0681	0.0825	0.0533	0.0514	0.2040
Copper	mg/L	0.00335	0.00063	< 0.00050	< 0.0010	< 0.00050	0.01410
Lead	mg/L	0.00401	0.00060	0.00043	0.00044	0.00026	0.01830
Nickel	mg/L	0.0362	0.0154	0.0164	0.0088	0.0096	0.1310
Zinc	mg/L	2.76	< 0.0050	4.24	6.75	2.74	0.07
Volatile Organics							
Benzene	mg/L	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Ethylbenzene	mg/L	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Toluene	mg/L	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Xylenes	mg/L	0.00047	0.00074	< 0.00040	< 0.00040	< 0.00040	< 0.00040
F2 (C10-C16)	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.09
F3 (C16-C34)	mg/L	0.25	< 0.20	0.24	< 0.20	< 0.20	0.39
F4 (C34-C50)	mg/L	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Petroleum Hydrocarbons F (C10-C50)	mg/L	0.29	0.21	0.31	0.25	< 0.20	0.46

8.5.2.2.18 Landfill §

No water quality monitoring was completed at the landfill in 2024 as no leachate was observed.

Table 8-57 Whale Tail Groundwater Storage Pond (GSP-1) 2024 Water Quality Monitoring (ST-WT-20) §

ST-WT-20	Unit	Annual Average					1/8/2024	2/4/2024	3/24/2024	4/14/2024	6/2/2024	7/21/2024	8/11/2024	9/10/2024	10/8/2024	11/30/2024	12/29/2024
Parameter		2020	2021	2022	2023	2024											
Field Measured																	
Temperature	°C	9.4	6.9	3.2	3.1	4.4	0.7	-0.4	0.5	-0.2	0.4	18.2	16.5	8.5	3.2	0.3	0.4
pH	pH units	7.43	7.25	6.72	7.40	10.19	9.21	9.18	10.31	10.69	11.18	9.81	9.31	10.00	10.07	11.13	11.23
Conductivity	uS/cm	2070	12673	18310	76581	7343	9570	10650	9880	11440	2840	5000	5760	6290	9	9270	10060
Turbidity	NTU	17.40	5.10	2.80	2.13	2.36	1.32	1.33	0.91	0.80	3.80	1.61	1.31	5.83	3.54	4.51	0.99
Conventional Parameters																	
Hardness, as CaCO ₃	mg/L	1209	1778	3633	3945	3635	4180	4110	4470	5250	1210	2010	2360	2700	4060	4560	5080
Total alkalinity, as CaCO ₃	mg/L	47	40	45	36	52	28	34	82	110	40	14	16	21	42	82	98
TDS	mg/L	1446	2643	4598	5449	5375	5870	6150	7050	7150	2210	3630	3770	4790	5510	6290	6700
TSS	mg/L	18	10	6	8	8	< 1	6	5	6	8	4	3	24	19	5	9
Major Ions																	
Chloride	mg/L	672	1285	2369	2838	2849	3300	3500	3800	3800	840	1500	1900	2200	3000	3700	3800
Fluoride	mg/L	0.07	0.10	0.10	0.11	0.18	0.14	0.18	0.16	0.17	< 0.10	0.15	0.18	0.21	0.20	0.23	0.23
Sulfate	mg/L	24	35	74	101	135	120	140	150	170	53	92	110	140	140	170	200
Nutrients																	
Ammonia (NH ₃)	mg/L	-	14.5	32.7	33.8	19.3	30.0	33.0	35.0	36.0	7.2	4.4	4.9	7.3	17.0	19.0	18.0
Ammonia Nitrogen	mg N/L	7	12	27	28	16	24	27	29	29	5.9	3.6	4	6	14	16	15
Un-Ionized Ammonia, calculated	mg N/L	0.07	0.05	0.02	0.23	10.62	3.7	3.6	22.0	28.0	6.7	3.0	1.9	4.5	9.4	17.0	17.0
Nitrate	mg N/L	17.75	34.37	76.56	86.98	74.26	93.6	99.8	102.0	111.0	20.5	38.6	48.6	56.3	75.9	84.7	85.9
Nitrite	mg N/L	0.23	0.52	2.00	3.14	2.84	3.59	3.74	4.09	3.97	0.786	1.63	2.08	2.48	2.86	2.99	3.05
Total Metals																	
Aluminum	mg/L	0.243	0.161	0.079	0.052	0.072	< 0.030	< 0.030	< 0.030	< 0.030	0.0507	0.067	0.065	0.157	0.268	0.034	< 0.030
Arsenic	mg/L	0.0084	0.0402	0.0092	0.0062	0.0032	0.0043	0.0042	0.0039	0.0037	0.00199	0.0015	0.0012	0.00193	0.0051	0.0039	0.0036
Barium	mg/L	0.353	0.379	0.645	0.618	0.495	0.629	0.564	0.641	0.698	0.178	0.280	0.349	0.382	0.558	0.579	0.591
Cadmium	mg/L	0.000327	0.000824	0.002032	0.001399	0.000078	0.00012	< 0.00010	< 0.00010	< 0.00010	< 0.000020	< 0.000050	< 0.000050	< 0.000020	< 0.00010	< 0.00010	< 0.00010
Chromium	mg/L	0.0034	0.0058	0.0097	0.0088	0.0186	< 0.010	< 0.010	0.015	0.018	0.0091	0.017	0.0209	0.0231	0.028	0.025	0.029
Copper	mg/L	0.0027	0.0021	0.0044	0.0042	0.0038	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0010	< 0.0025	< 0.0025	< 0.0010	< 0.0050	< 0.0050	< 0.0050
Iron	mg/L	0.49	0.26	0.16	0.11	0.12	< 0.10	< 0.10	< 0.10	< 0.10	0.074	< 0.050	< 0.050	0.212	0.350	< 0.10	< 0.10
Lead	mg/L	0.00041	0.00080	0.00176	0.00169	0.00153	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00040	< 0.0010	< 0.0010	< 0.00040	< 0.0020	< 0.0020	< 0.0020
Manganese	mg/L	1.91	1.81	3.97	2.93	0.12	0.694	0.463	0.044	< 0.010	0.0064	0.0139	0.0174	0.0264	0.024	< 0.010	< 0.010
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0035	0.0042	0.0088	0.0085	0.0124	< 0.010	0.010	< 0.010	0.016	0.0073	0.0076	0.0124	0.0132	0.016	0.017	0.017
Nickel	mg/L	0.0537	0.0843	0.1652	0.1414	0.0206	0.071	0.057	0.031	0.019	< 0.0020	< 0.0050	0.0056	0.0055	< 0.010	< 0.010	< 0.010
Selenium	mg/L	0.00097	0.00055	0.00102	0.00091	0.00084	< 0.0010	< 0.0010	< 0.0010	0.0010	0.00029	0.00050	0.00063	0.00059	0.0012	< 0.0010	0.0010
Silver	mg/L	0.00010	0.00008	0.00018	0.00017	0.00015	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.000040	< 0.00010	< 0.00010	< 0.000040	< 0.00020	< 0.00020	< 0.00020
Thallium	mg/L	0.00021	0.00017	0.00032	0.00031	0.00018	0.00026	0.00025	0.00025	0.00027	0.000040	0.000091	0.000119	0.000118	0.00019	0.00018	0.00017
Zinc	mg/L	0.009	0.019	0.044	0.042	0.038	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.025	< 0.025	< 0.010	< 0.050	< 0.050	< 0.050

8.5.2.2.19 Erosion Management

As required by NIRB Project Certificate 008 Condition 11: *The Proponent shall develop and implement an Erosion Management Plan to prevent or minimize erosion and its resulting effects from project-related land disturbance. The Plan should be submitted to the Nunavut Impact Review Board (NIRB) at least 30 days prior to the start of construction, with updates submitted annually thereafter or as may otherwise be required by the NIRB.*

In accordance with Condition 11 of NIRB Project Certificate No. 008, Agnico Eagle maintains an Erosion Management Plan (V2; December 2018) for the Whale Tail Mine. This plan presents the monitoring and mitigation actions related to three specific events which have the potential to cause erosional concerns: dike construction and dewatering, freshet, and the rise of water levels in Whale Tail South.

For each of these three events, monitoring consists of water quality analyses and/or visual inspections in erosion-prone areas, which are conducted and reported under a number of programs, as follows.

- For erosion related to dike construction and dewatering:
 - During construction of dewatering dikes and subsequent lake dewatering, water quality analysis is conducted under the *Water Quality Monitoring and Management Plan for Dike Construction and Dewatering*. No activities to report for 2024.
- For erosion related to freshet:
 - Potential for erosional concerns was identified around onsite and WTHR infrastructure (e.g. culverts, bridges) during annual freshet.
 - For specified locations, water quality analysis is conducted under the *Water Quality and Flow Monitoring Plan* (according to NWB Type A Water License requirements), as described in Section 8.5 of this report.
 - In addition, visual inspections with water quality analysis as required are conducted under the *Freshet Action Plan* (results below).
- For erosion related to rise of water levels in Whale Tail South:
 - Water quality analysis is conducted under the *Core Receiving Environment Monitoring Plan (CREMP)* (Appendix 26 of this report).
 - Visual inspections are conducted under the *Erosion Management Plan* (results below).

Results of visual assessments and any required water quality monitoring for erosional concerns under the Freshet Action Plan and Erosion Management Plan are reported here (Whale Tail Site, Whale Tail Haul Road, Whale Tail South Flooding). Other results including water quality monitoring for dike construction and dewatering, water quality monitoring under the Water Quality and Flow Monitoring Plan, and water quality monitoring under the CREMP are reported under the various sections of this Annual Report, as described above.

8.5.2.2.19.1 Freshet Action Plan and Erosion Management Plan Monitoring Methods

Under the Freshet Action Plan, inspections of Whale Tail Site and Whale Tail Haul Road water management infrastructure (including bridges, culverts, ditches, Whale Tail South channel, IVR diversion channel) are conducted daily to weekly by dedicated personnel starting in May. In addition to these regular inspections of onsite water management infrastructure, opportunistic visual assessments are conducted for erosion concerns along the flooded shoreline of Whale Tail South.

According to the *Erosion Management Plan*, erosional concerns are recorded for all locations inspected, such as: bed erosion upstream and downstream of watercourse crossing structures, scour under bridge abutments and abutment foundations, erosion along cutslopes and fillslopes of embankments (rill and gully erosion), etc. Mitigation measures are implemented as needed to prevent erosional concerns.

Water quality monitoring for turbidity/TSS is then conducted as required based on visual observations during visual inspections. TSS is analyzed by onsite assay laboratory procedures when excess turbidity is observed. TSS is analyzed by commercial accredited laboratory if any elevated results are received from the onsite laboratory. For locations with potential to impact the receiving environment, TSS results exceeding 30 mg/L are reported to appropriate regulators.

8.5.2.2.19.2 Whale Tail Haul Road Erosion Monitoring Results

In 2024, no erosion concerns that required mitigation actions were identified during visual inspections for Whale Tail Haul Road water management infrastructure (e.g. scour, bed erosion, etc.). No turbidity concerns that required mitigation actions were identified, no water quality samples were required to be collected, and no contingency mitigation measures (e.g. straw booms or woodchip booms) were required to be installed.

8.5.2.2.19.3 Whale Tail Site Erosion Monitoring Results

As described previously, turbidity/TSS samples are required to be collected at regular intervals for major onsite water management infrastructure locations according to the NWB Water License (e.g. the IVR Diversion Channel, WTS Channel, WRSF Ponds). Results are provided in the relevant Water Quality and Flow Monitoring sections of this report.

During onsite visual inspections of water management infrastructure under the Freshet Action Plan, no major erosional concerns were observed (e.g. scour, bed erosion, gully, etc.) requiring management action.

Overland flow across the emulsion plant road, near the Mammoth Dike, has historically presented potential for erosional concerns. Snow and ice were found to block the culverts, causing meltwater to flow over the road during freshet. Since 2022, mitigation measures for this issue have included installing plywood covers and/or prioritizing snow and ice removal at the culvert inlet and outlet. In 2024, no water flow over the road was recorded. A low level of turbidity in meltwater flowing through the culverts was visually identified at the beginning of the freshet. To avoid transportation of sediment to Kangislulik Lake (located approx. 50 – 100 m downslope, to the north), woodchip booms were again installed on the downstream side of the road, where required (culvert 1). In all cases, water was visually clear before it reached Kangislulik Lake.

8.5.2.2.19.4 Whale Tail South Flooding

Flooding of Whale Tail South (WTS) was complete in 2019. However, opportunistic visual inspections of the shoreline continued in 2024 during the open water season by Environment Department technicians to ensure that erosion along the new banks did not mobilize excess TSS into Whale Tail Lake. According to the Erosion Monitoring Plan, shorelines were inspected for any major instability, along with signs of permafrost degradation such as ground ice melting, gully and fissuring. None of these issues were identified in 2024.

8.5.3 Sewage Treatment Plant^s

8.5.3.1 *Meadowbank Site^s*

The Meadowbank mine site has one Seprotech L333 (STP-SEP) sewage treatment plant (STP) and three Little John 100 units (LJ-MIX) in operation; the equipment operates together with one sewage discharge effluent stream directed to the Stormwater Management Pond (SMP). In 2024, water was pumped from the SMP to the Portage Pit in May, June, July, August, and September. There is no discharge to any receiving waters. The SMP also collects spring runoff from the surrounding area.

Samples are taken in accordance with Operation & Maintenance Manual – Sewage Treatment Plan for the purpose of determining operating efficiency of the units. Sample results are available in Table 8-58, for influent (STP-IN), Seprotech L333 and LJ-MIX effluent. Results of the sample analysis are submitted to the NWB in the monthly monitoring reports.

The total volume of treated sewage discharged in 2024 was 26,974 m³. In addition, 405.74 m³ of sewage sludge was collected and disposed of in the Tailings Storage Facility.

Table 8-58 Meadowbank 2024 Sewage Treatment Plan (STP-IN, STP-SEP, and LJ-MIX)§

STP-IN	Unit	1/8/2024	2/5/2024	3/4/2024	4/8/2024	5/6/2024	6/3/2024	7/2/2024	8/19/2024	9/3/2024	10/8/2024	11/4/2024	12/2/2024
Parameter													
Field Measured													
pH	pH units	6.90	7.00	6.90	7.20	6.80	6.50	7.70	6.80	6.80	6.70	7.30	6.80
Conventional Parameters													
TSS	mg/L	71	210	76	270	120	90	80	79	120	100	1200	4200
Nutrients													
Ammonia Nitrogen	mg N/L	64	92	71	76	81	71	81	67	81	62	73	72
Un-Ionized Ammonia, calculated	mg N/L	0.23	0.52	0.24	0.63	0.27	0.12	2.00	0.21	0.22	0.15	0.71	0.13
Nitrate	mg N/L	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrite	mg N/L	< 0.010	0.015	< 0.010	< 0.010	< 0.010	0.013	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen	mg N/L	72	95	77	77	84	91	97	79	90	95	93	81
Biochemical Oxygen Demand	mg/L	110	59	130	130	31	120	170	180	170	80	99	150
Chemical oxygen demand	mg/L	280	140	290	410	360	310	310	340	380	290	360	440
Total phosphorus	mg P/L	7.8	12.0	13.0	9.8	10.0	10.0	11.0	10.0	8.7	8.5	20.0	7.4
Coliforms													
Total Coliform	CFU/100mL	16000000	16000000	N/D	11000000	30000000	N/D	N/D	< 1000000	33000000	17000000	17000000	37000000
Fecal Coliform	CFU/100mL	3800000	2600000	3500000	6600000	2700000	34000000	2700000	4900000	2000000	8000000	4600000	5000000
Atypical colonies	CFU/100mL	36000000	6000000	>200000000	92000000	157000000	>200000000	>200000000	105000000	34000000	41000000	55000000	23000000

*N/D – Total coliforms cannot be determined due to the high atypical colonies count

STP-SEP	Unit	1/8/2024	2/5/2024	3/4/2024	4/8/2024	5/6/2024	6/3/2024	7/2/2024	8/19/2024	9/3/2024	10/8/2024	11/4/2024	12/2/2024
Parameter													
Field Measured													
pH	pH units	7.20	6.90	6.90	7.30	6.70	6.50	7.70	6.60	6.70	7.20	7.20	7.00
Conventional Parameters													
TSS	mg/L	8	9	7	7	4	3	8	8	4	6	6	8
Nutrients and Chlorophyll a													
Ammonia Nitrogen	mg N/L	29	48	52	56	46	45	44	23	31	40	59	72
Un-Ionized Ammonia, calculated	mg N/L	0.190	0.170	0.160	0.510	0.110	0.060	0.990	0.046	0.072	0.270	0.390	0.240
Nitrate	mg N/L	5.44	2.57	2.25	2.28	4.20	3.98	4.27	5.78	5.59	5.76	2.23	0.85
Nitrite	mg N/L	1.310	1.520	1.280	0.876	1.390	1.350	1.150	1.310	0.992	1.340	1.390	0.975
Total Kjeldahl nitrogen	mg N/L	30	50	52	54	46	50	53	24	31	59	60	76
Biochemical Oxygen Demand	mg/L	8	11	13	13	12	8	12	31	8	6	6	9
Chemical oxygen demand	mg/L	49	58	54	56	51	41	24	41	41	39	59	69
Coliforms													
Total Coliform	CFU/100mL	200	1000	1000	4000	5500	2200	< 1000	< 100	500	7300	2900	4300
Fecal Coliform	CFU/100mL	< 10	< 10	190	550	450	100	100	20	60	< 10	< 10	170
Atypical colonies	CFU/100mL	100	< 100	2300	55000	30000	5700	1640	4500	1800	8200	4300	8200

STP-LJ-MIX	Unit	1/8/2024	2/5/2024	3/4/2024	4/8/2024	5/6/2024	6/3/2024	7/2/2024	8/19/2024	9/3/2024	10/8/2024	11/4/2024	12/2/2024
Parameter													
Field Measured													
pH	pH units	6.30	6.80	6.80	6.80	5.90	5.80	6.60	6.60	5.80	5.60	6.40	5.00
Conventional Parameters													
TSS	mg/L	14	7	15	7	7	5	21	210	13	5	54	4
Nutrients and Chlorophyll a													
Ammonia Nitrogen	mg N/L	7.2	25	18	19	17	10	24	9	12	16	5	21
Un-Ionized Ammonia, calculated	mg N/L	0.0063	0.0890	0.0500	0.0550	0.0073	0.0035	0.0500	0.0180	0.0038	0.0031	0.0067	0.0011
Nitrate	mg N/L	9.34	32.60	24.90	11.70	29.20	32.30	6.97	13.20	6.37	13.40	21.30	28.40
Nitrite	mg N/L	0.644	0.167	0.183	0.489	0.071	0.055	0.585	0.559	0.234	0.392	0.016	1.980
Total Kjeldahl nitrogen	mg N/L	7.8	27	17	20	17	12	29	12	14	23	7.5	22
Biochemical Oxygen Demand	mg/L	12	9	9	14	2	8	29	57	12	15	6	3
Chemical oxygen demand	mg/L	43	41	37	59	37	36	45	320	57	43	69	44
Coliforms													
Total Coliform	CFU/100mL	6000	16000	10000	5000	2000	23000	11000	80000	21000	2300	3000	< 1000
Fecal Coliform	CFU/100mL	820	910	820	450	210	2200	640	11000	3800	730	1360	< 10
Atypical colonies	CFU/100mL	36000	10000	20000	14000	46000	19000	10000	130000	10000	5800	60000	17000

8.5.3.2 Whale Tail Site[§]

In 2024, effluent from the Sewage Treatment Plan was discharged to the IVR Attenuation Pond on a daily basis. The total volume of treated sewage discharged in 2024 from the Newterra associated to the permanent camp was 44,395 m³. In addition, 1,317 m³ of sewage sludge was collected and disposed of in the Whale Tail WRSF.

As per Water License Schedule I Sampling location ST-WT-11 (Figure 4), effluent is to be sampled four times per calendar year. To assess the efficiency of the STP, a monthly sample was taken at the STP effluent. Results are provided in Table 8-60 below. There are no applicable license limits. Agnico Eagle intends to follow the operational/design parameters outlined in Table 8-59, however operational realities have made meeting the Nitrate and Total Phosphorus operating targets challenging. Nevertheless, it is important to highlight that no issues have occurred in the surrounding environment as a result of the deviation to the operational targets. In 2024, results were above the operational targets for nitrate, phosphorus and as well as one instance where TSS, one total residual chlorine, and one fecal coliform was above the target.

Table 8-59 Whale Tail STP Operational Parameters[§]

Parameters	Unit	Effluent
pH	pH units	6.5 – 9.0
Oil, Grease	mg/L	<5
Biological Oxygen Demand	mg/L	<25
Total Suspended Solids	mg/L	<25
Unionized Ammonia Nitrogen (NH ₃ -N)	mg-N/L	<1.25
Nitrate Nitrogen (NO ₃ -N)	mg-N/L	<5
Total Phosphorus (P)	mg-P/L	<0.5
Fecal Coliform	CFU/100 ml	<200
Total Residual Chlorine	mg/L	<0.2

In 2024, nitrate levels remained above operational targets despite increasing Micro C dosing with an average of 10.50 mg N/L compared to 8.20 mg/L in 2023 and 14.03 mg N/L in 2022, 12.12 mg N/L in 2021 and 16.51 mg N/L in 2020. A modification to the system was completed in 2022 to allow higher Micro C dosing and in 2023 the post anox tank was improved. Work is being done to evaluate raw water characteristics to optimize Micro C dosing. Agnico Eagle will continue monitor nitrate levels in 2025.

In 2022, a modification to the sewage treatment plant system allowed increased dosing of Alum for phosphorus removal. Total phosphorus average levels for 2024 were 1.51 mg P/L compared to 1.74 mg P/L in 2023 and 1.77 mg P/L in 2022. Results are still lower when compared to average of 3.94 mg P/L in 2021 and 5.96 mg P/L in 2020. In 2025, Agnico Eagle will continue to evaluate areas of improvement within the plant, including evaluating the changing of dosing locations and preparing solutions in-house to improve dosing, in order to optimize overall performance of the unit.

Table 8-60 Whale Tail 2024 Sewage Treatment Plan (ST-WT-11) §

ST-WT-11 Parameter	Unit	Annual Average					1/8/2024	2/5/2024	3/4/2024	4/1/2024	5/7/2024	6/3/2024	7/2/2024*	8/12/2024	9/16/2024	10/8/2024	11/6/2024	12/2/2024
		2020	2021	2022	2023	2024												
Field Measured																		
pH	pH units	7.01	7.10	6.90	6.86	7.01	7.27	7.15	6.91	7.20	6.70	6.80	7.51	6.90	6.58	6.90	6.80	7.36
Total Chlorine Residual	mg/L	-	0.1	0.2	0.1	0.2	0.0	0.1	0.1	0.1	0.1	NA	NA	NA	NA	0.9	0.0	0.0
Conventional Parameters																		
Hardness, as CaCO ₃	mg/L	71	76	85	76	65	46.1	69.1	81.6	77.3	84.3	52.5	84.2	57.6	56.3	46.1	61.3	67.0
Total alkalinity, as CaCO ₃	mg/L	112	55	35	34	46	68	81	17	22	6.4	17	6.1	58	53	64	61	100
TDS	mg/L	-	325	337	283	312	300	315	280	255	340	300	380	280	295	295	365	340
TSS	mg/L	3	3	2	2	9	32	19	< 1	21	< 1	5	< 1	< 1	18	2	< 1	1
Major Ions																		
Chloride	mg/L	81.1	75.2	75.2	66.1	63.8	67	68	72	62	61	62	59	58	51	49	73	83
Fluoride	mg/L	0.06	0.09	0.10	0.10	0.10	0.12	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	38.5	37.8	53.3	53.2	52.8	44	54	57	44	92	54	47	47	47	54	50	44
Nutrients and Chlorophyll a																		
Ammonia (NH ₃)	mg/L	-	0.10	0.10	6.65	0.10	0.068	< 0.061	< 0.061	0.074	0.110	0.120	< 0.061	0.068	< 0.061	< 0.061	0.290	0.120
Ammonia Nitrogen	mg N/L	0.27	0.12	0.10	5.48	0.08	0.056	< 0.050	< 0.050	0.061	0.089	0.096	< 0.050	0.056	< 0.050	< 0.050	0.240	0.100
Un-Ionized Ammonia, calculated	mg/L	-	-	0.0004	0.0068	0.0005	0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.00071	< 0.0004	< 0.0004	< 0.0004	0.0007	0.00099
Nitrate	mg N/L	16.51	12.12	14.03	8.20	10.50	5.90	10.00	8.64	12.30	8.10	8.92	21.60	11.10	11.20	10.40	5.82	12.00
Nitrite	mg N/L	0.14	0.05	0.03	0.02	0.01	0.021	< 0.010	< 0.010	< 0.010	< 0.010	0.012	0.023	0.012	0.014	< 0.010	< 0.010	0.017
Biochemical Oxygen Demand	mg/L	9	2	2	2	2	< 2	7	2	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Total phosphorus	mg P/L	5.96	3.94	1.77	1.74	1.51	2.00	2.30	0.33	2.10	0.049	0.980	3.80	2.30	2.00	0.65	1.00	0.63
Orthophosphate	mg P/L	6.11	4.10	1.89	1.58	1.10	1.50	0.55	0.25	1.30	0.03	0.74	3.60	1.90	1.30	0.71	0.83	0.55
General Organics																		
Total oil and grease	mg/L	1.7	1.5	4.1	1.3	0.7	0.90	0.80	< 0.50	< 0.50	0.70	< 0.50	1.60	0.80	< 0.50	< 0.50	0.70	< 0.50
Total Metals																		
Aluminum	mg/L	0.0394	0.0381	0.0384	0.0381	0.1271	0.0517	0.3410	0.0276	0.6140	0.0403	0.2620	0.0313	0.0191	0.0553	0.0203	0.0305	0.0316
Arsenic	mg/L	0.0059	0.0053	0.0061	0.0066	0.0071	0.00473	0.00529	0.00293	0.00651	0.00112	0.00373	0.00835	0.00929	0.01060	0.00657	0.00499	0.02080
Barium	mg/L	0.0037	0.0093	0.0045	0.0048	0.0042	0.0027	0.0075	0.0049	0.0055	0.0065	0.0030	0.0046	0.0019	0.0062	0.0012	0.0034	0.0028
Cadmium	mg/L	0.000026	0.000031	0.000024	0.000020	0.000023	0.000013	0.000026	< 0.000010	0.000068	0.000036	0.000023	0.000051	< 0.000010	0.000013	< 0.000010	< 0.000010	< 0.000010
Chromium	mg/L	0.0011	0.0010	0.0010	0.0010	0.0013	< 0.0010	0.0037	< 0.0010	0.0024	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.0154	0.0096	0.0049	0.0050	0.0081	0.00788	0.02720	0.00712	0.02090	0.00473	0.00722	0.00567	0.00266	0.00768	0.00122	0.00244	0.00194
Iron	mg/L	0.05	0.06	0.05	0.04	0.09	0.054	0.391	0.031	0.321	0.027	0.070	0.041	0.032	0.034	0.020	0.025	0.051
Lead	mg/L	0.00034	0.00996	0.00056	0.00067	0.01146	0.00181	0.0766	0.00351	0.0477	0.00059	0.00168	0.00033	0.00040	0.00124	< 0.00020	0.00051	0.00296
Manganese	mg/L	0.0027	0.0149	0.0317	0.0285	0.0246	0.0139	0.0198	0.0345	0.0303	0.0568	0.0229	0.0632	0.0082	0.0058	0.0123	0.0153	0.0123
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0012	0.0011	0.0013	0.0012	0.0012	0.0019	0.0017	< 0.0010	0.0013	< 0.0010	0.0013	< 0.0010	0.0013	< 0.0010	< 0.0010	0.0010	< 0.0010
Nickel	mg/L	0.0069	0.0090	0.0090	0.0134	0.0329	0.0262	0.0396	0.0216	0.1530	0.0165	0.0681	0.0186	0.0081	0.0184	0.0045	0.0134	0.0070
Selenium	mg/L	0.0010	0.0003	0.0001	0.0001	0.0001	0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	mg/L	0.00011	0.00005	0.00002	0.00002	0.00002	< 0.000020	0.000024	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium	mg/L	-	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Zinc	mg/L	0.057	0.065	0.086	0.084	0.096	0.0583	0.1290	0.0623	0.3460	0.1220	0.0765	0.1780	0.0307	0.0630	0.0206	0.0373	0.0269
Coliforms																		
Total Coliform	CFU/100mL	491	1877	210	4569	1057	400	N/D	6500	300	70	N/D	N/D	10	ND	40	N/D	80
Fecal Coliform	CFU/100mL	10	36	5	61	76	22	>60	23	21	7	26	44	80	>600	< 10	16	5
Atypical colonies	CFU/100mL	10940	27945	544	9403	5668	6500	>20000	7000	2800	840	>20000	>2000	4050	>2000	720	>2000	100

N/D – Total coliforms cannot be determined due to the high atypical colonies count

*Coliforms analysis for July collected on July 3rd, 2024

8.5.4 Bulk Fuel Storage Facility^s

8.5.4.1 Meadowbank Site^s

Notification to the CIRNAC Inspector, made in accordance with Part F, Item 13 of NWB License 2AM-MEA1530 to empty the secondary containment area, was sent on June 3rd, 2024 and September 13th, 2024. Water was trucked from the secondary containment area of the Meadowbank bulk fuel storage tanks in 2024 to the Stormwater Management Pond and did not reach any receiving environment. Tank farm location (ST-37 and ST-37.1) are illustrated on Figure 1.

8.5.4.2 Baker Lake Marshalling Facilities^s

Water in the secondary containment area of the main diesel bulk fuel storage facilities (Tanks 5 – 6; ST-40.1 and Tanks 7 – 8; ST-40.3) at the Baker Lake Marshalling Facility were sampled on May 27th, 2024, and Tanks 1 – 4; ST-40.2, were sampled on June 16th, 2024. Notification to the CIRNAC Inspector, made in accordance with Part F, Item 13 of NWB License 2AM-MEA1530 to empty secondary containment areas, was sent on June 3rd 2024. No water quality parameters exceeded the water quality limit stipulated in Part F, Item 9 of the 2AM-MEA1530 Water License.

Water was also sampled from Tanks 1 – 4 (ST-40.2), Tanks 5 – 6 (ST-40.1) and Tanks 7 – 8 (ST-40.3) on September 11th, 2024. A second notification to the CIRNAC Inspector was sent on September 13th, 2024. No water quality parameters exceeded the water quality limit stipulated in Part F, Item 9 of the 2AM-MEA1530 Water License.

In total, approximately 1,113 m³ from Tanks 1 – 4, 672 m³ from Tanks 5 – 6 containment area and 870 m³ from Tanks 7 – 8 containment area was discharged to the environment. No water was discharged for station ST-38. Water in the secondary containment of Jet-A Tanks (ST-38) was trucked back to Meadowbank for disposal in the Stormwater Management Pond.

The locations of these sampling stations (ST-40.1, ST-40.2, and ST-40.3) are illustrated on Figure 6 and results are presented in Table 8-61.

Table 8-61 Baker Lake 2024 Bulk Fuel Storage Facility Water Quality Monitoring (ST-40.1, ST-40.2, ST-40.3)^s

Bulk Fuel	Max Grab	Max Mean	Unit	5/27/2024	9/11/2024	6/16/2024	9/11/2024	5/27/2024	9/11/2024
Parameter				ST-40.1	ST-40.1	ST-40.2	ST-40.2	ST-40.3	ST-40.3
Field Measured									
pH	6.0 - 9.5	6.0 - 9.5	pH units	7.50	8.15	6.94	7.90	7.67	8.09
Conventional Parameters									
TSS	30	15	mg/L	10	5	4	2	7	2
Nutrients									
Total Ammonia (as NH ₃)			mg/L	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061
Ammonia Nitrogen	6	6	mg N/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
General Organics									
Total oil and grease	5 and no visible sheen	5 and no visible sheen	mg/L	< 0.50	< 0.50	1.00	< 0.50	< 0.50	< 0.50
Total Metals									
Arsenic	1	0.5	mg/L	0.00048	0.00072	0.00063	0.00065	0.00094	0.00092
Copper	0.6	0.3	mg/L	0.00553	0.00564	0.00255	0.00293	0.00190	0.00203
Lead	0.1	0.1	mg/L	0.00036	0.00029	0.00022	< 0.00020	0.00068	< 0.00020
Nickel	1	0.5	mg/L	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0011	< 0.0010
Zinc	1	0.5	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Volatile Organics									
Benzene	0.37	0.37	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Ethylbenzene	0.09	0.09	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Toluene	0.002	0.002	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Xylenes			mg/L	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040

Following the 2024 annual geotechnical inspection, minor deficiencies of exposed membrane and/or damaged membrane were observed at the Baker Lake Fuel Farm. To preserve the integrity of the secondary containment and geomembrane, deficiencies will be addressed during the summer of 2025.

Baker Lake Bulk Fuel Storage: Environmental Performance Monitoring Plan Version 7 is provided in Appendix 60 of the 2024 Annual Report. Section 5 of this management plan details the environmental performance monitoring plan which is a tiered approach with an emphasis on visual and operational inspections; routine surface water sampling to control and monitor the quality of the contact water; and event monitoring (in the case of a spill emergency or occurrence). Management of the bulk fuel storage facility will be guided by the monitoring results. As detailed in this plan, Agnico Eagle committed to increasing visual inspections of the Baker Lake Marshalling Facilities from weekly to twice weekly during Freshet and summer months. Monthly inspections are also conducted by the Energy and Infrastructure Department. Inspection of the facility included: 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. Furthermore, Agnico Eagle is following the annual recommendations from the third-party Geotechnical Inspection of the Marshalling Facility. This report and the Agnico Eagle implementation plan are provided respectively in Appendix 7 and 10.

8.5.4.3 Whale Tail Site[§]

In 2024 a 10-day notice, made in accordance with Part F, Item 14 of the NWB License 2AM-WTP1830, was sent to CIRNAC Inspector on June 3rd, 2024, and September 13th, 2024 with the advisement that water would be discharged from the following fuel tank secondary containments: Whale Tail 1.5 million litre diesel tank farm (ST-WT-12), Whale Tail Powerhouse (ST-WT-16), and Whale Tail Underground GenSet (ST-WT-38). Water from the secondary containments of ST-WT-12 and ST-WT-16 were transported back to Meadowbank and did not reach any receiving environment. In June, water from the secondary containment (ST-WT-38) was pumped to the IVR Attenuation Pond and did not reach any receiving environment.

8.5.5 All-Weather Access Road/ Whale Tail Haul Road and Quarries*[§]

8.5.5.1 Meadowbank Site[§]

As required by DFO Authorizations NU-03-0190 Condition 5.3 (AWPAR); *A photographic record of before, during and after construction, during decommissioning and after restoration, showing that all works and undertakings have been completed according to the approved Plan and conditions of this authorization [...]*

And

As required by NIRB Project Certificate No.004 Condition 31: *Cumberland shall provide detailed stream crossing design criteria, including consideration of the DFO Operational Statement for Clear-span bridges for all water crossings identified to have fish presence, final crossing designs, site specific mitigation procedures, an effects monitoring program, and a maintenance and closure plan for all water course crossings, to the DFO and the NWB for review and approval.*

* TSM- Biodiversity and Conservation Management

A geotechnical structural inspection of the AWAR, including all culverts, bridges, and quarries, was conducted in 2024. This annual inspection is a requirement of the Water License. The findings are presented in the report titled 'Meadowbank and Whale Tail 2024 Geotechnical Inspection Report', attached in Appendix 7. Agnico Eagle implementation plan to the recommendations from the inspection are included in Appendix 10. More specifically, Section 6 of the annual Geotechnical Inspection Report provided the observations and descriptions of each culvert and bridges along the AWAR.

In 2023, Agnico Eagle provided to DFO a detailed list of all culverts along both roads including those that are considered fish bearing. In 2024, Agnico Eagle hired a subject matter expert to perform culvert stream assessment along the WTHR and AWAR. Field work took place at freshet 2024 and the conclusion of the assessment will be communicated to DFO. Agnico Eagle will continue to collaborate with DFO and will discuss any further actions, as needed.

Pre-freshet and freshet inspections were conducted at crossings along the AWAR in 2024. Weekly inspections are also conducted along the AWAR on a year-round basis. During the freshet and open water season, these inspections are conducted to document any visual turbidity plumes or erosion along the AWAR, culverts or crossings and to ensure that runoff, if any, would be free of any visible sheen and would not impact the environment. In 2024, no visual turbidity plumes or erosion concerns were observed.

In relation to Fisheries and Oceans Canada Authorizations NU-03-0190, NU-03-0191.3, NU-03-0191.4, NU-08-0013 and NU-14-1046 Agnico Eagle maintains a Habitat Compensation Monitoring Plan (HCMP) (Version 4, 2017) to ensure that fish habitat compensation features are constructed and functioning as intended. Based on the schedule described in the Habitat Compensation Monitoring Plan, monitoring of compensation features currently occurs every two (2) years. Monitoring was conducted in 2023 for the constructed spawning pad, located at stream crossing R02 along the All-Weather Access Road. The constructed spawning pads were visually confirmed to be stable as designed. Refer to the 2023 Habitat Compensation Monitoring Report provided in Appendix 38 of the 2023 Meadowbank Complex Annual Report and Section 8.8.1 for more details. No monitoring was completed in 2024. The next monitoring is planned for the summer of 2025.

8.5.5.2 Whale Tail Site^s

As required by NIRB Project Certificate No.008 Condition 21: The Proponent shall ensure that all project infrastructures in watercourses are designed and constructed in such a manner that they do not unduly prevent or limit the movement of water or fish species in fish bearing streams and rivers, unless otherwise authorized by Fisheries and Oceans Canada.

Throughout the life of the Project, the Proponent shall report on how the Proponent has maintained and/or implemented mitigation measures in fulfillment of this term and condition in the Proponent's annual report to the Nunavut Impact Review Board.

A geotechnical structural inspection of the Whale Tail Haul Road, including all culverts, bridges, eskers and quarries, was conducted in 2024. This annual inspection is a requirement of the Water License. The findings are presented in the report titled 'Meadowbank and Whale Tail 2024 Geotechnical Inspection Report', attached in Appendix 7. Agnico Eagle implementation plan to the recommendations from the inspection are also included in Appendix 10. More specifically, Section 7 of the annual Geotechnical Inspection Report provided the observations and descriptions of each culvert and bridges along the WTHR.

In 2023, Agnico Eagle provided to DFO a detailed list of all culverts along both roads including those that are considered fish bearing. In 2024, Agnico Eagle hired a subject matter expert to perform culvert stream assessment along the WTHR and AWAR. Field work took place at freshet 2024 and the conclusion of the assessment will be communicated to DFO. Agnico Eagle will continue to collaborate with DFO and will discuss any further actions, as needed.

Pre-freshet and freshet inspections were conducted at crossings along the WTHR in 2024. Weekly inspections are also conducted along the WTHR on a year-round basis. During the freshet and open water season, these inspections are conducted to document any visual turbidity plumes or erosion along the AWAR, culverts or crossings and to ensure that runoff, if any, would be free of any visible sheen and would not impact the environment. In 2024, no erosion concerns that required mitigation actions were identified during visual inspections for Whale Tail Haul Road. Refer to Section 8.5.2.2.19 for more details.

8.5.6 QAQC Sampling^s

As required by NIRB Project Certificate No.004, Condition 23: *ensure that water quality monitoring performed at locations within receiving waters that allow for an assimilative capacity assessment of concern to regulators, be carried out by an independent contractor and submitted to an independent accredited lab for analysis, on a type and frequency basis as determined by the NWB; results of analysis shall be provided to the NWB and NIRB's Monitoring Officer.*

And

As required by NWB Water License 2AM-MEA1530 Part I, Item 17: *The Licensee shall annually review the approved QA/QC Plan and modify the Plan as necessary. Proposed changes shall be submitted to an Accredited Laboratory for approval.*

And

As required by NWB Water License 2AM-WTP1830 Part I, Item 20: *The Licensee shall annually review the approved QA/QC Plan and modify the Plan as necessary. Proposed changes shall be submitted to an Accredited Laboratory for approval.*

The objective of quality assurance and quality control (QA/QC) program is to assure that the chemical data collected are representative of the material being sampled, are of known quality, are properly documented, and are scientifically defensible. Data quality was assured throughout the collection and analysis of samples using specified standardized procedures, by the employment of accredited laboratories, and by staffing the program with experienced technicians.

Most of the chemical analyses for Meadowbank and Whale Tail sites were performed by Bureau Veritas (BV) in Ontario, an accredited facility. All data from BV lab underwent a vigorous internal QA/QC process, including the use of spiked samples and duplicate samples. All QA/QC data passed the laboratories acceptable limits. The laboratory certificates of quality control can be provided on request for Meadowbank and Whale Tail.

Toxicity and sublethal tests were performed by Nautilus Environmental in Ontario. Testing was conducted as stipulated in the corresponding Environment Canada Biological Test Methods. QA/QC measures implemented by the lab, including the use of reference toxicants, met the acceptable limits. Toxicity reports for Meadowbank and Whale Tail can be provided on request.

Agnico Eagle also require the services of laboratory as Bureau Veritas in Edmonton, Alberta, H2Lab in Val D'Or, Quebec, and SGS in Lakefield, Ontario. Agnico Eagle also uses the services of ALS for many of the CREMP and AEMP water quality analysis.

Field blanks (FB) are laboratory bottles filled with deionized water in the field and then treated as a normal sample (N). They are used to identify errors or contamination in sample collection and analysis. Trip blank (TB) are laboratory pre-filled bottles with DI water carried to the sampling location and are left unopened. Duplicate field water quality samples (FD) are collected simultaneously in the field and used to assess sampling variability and sample homogeneity.

The QA/QC Plan was revised in March 2025 (Version 10) and can be found in Appendix 44 of the 2024 Annual Report.

8.5.6.1 Meadowbank Site^s

In 2024, 257 water samples were collected (excluding Groundwater and CREMP monitoring programs), 55 duplicates, 53 field blanks and 41 trip blanks, representing 21% of duplicates, 21% of field blanks and 16% of trip blanks which is above the QA/QC duplicate and trip blank program objective of 10%.

The following presents the percentage of duplicate and field samples collected from each of the monitoring programs:

- MDMER and EEM monitoring programs: 6 duplicate samples, 7 field blanks and 6 trip blanks were collected from a total of 21 samples, representing 29% of duplicates, 33% of field blanks, and 29% of trip blanks;
- Sewage Treatment Plant (STP) monitoring program: 6 duplicate samples, 4 field blanks, and 3 trip blanks were collected from a total of 36 samples, representing 17% of duplicates, 11% of field blanks, and 8% for trip blanks.
- Surface water monitoring programs: 40 duplicate samples, 39 field blanks and 32 trip blanks were collected from a total of 195 samples, representing 21 % for duplicates, 20% for field blanks, and 16% for trip blanks;
- Bulk fuel storage facilities monitoring program: 3 duplicate samples and 3 field blanks were collected from a total of 6 samples, representing 50 % for duplicates and field blanks; As per the QAQC Plan, one (1) field duplicate and one (1) field blank are to be collected per monitoring station. The objective of the bulk fuel storage facilities monitoring program is met;
- Groundwater Monitoring Program: Duplicates were collected for each station during the July and August monitoring sessions. One (1) field blank and one (1) trip blank were also collected for each groundwater monitoring session (refer to Section 4.2 of the 2024 Meadowbank Groundwater Monitoring Report – Appendix 35 of the 2024 Annual Report), which aligns with the frequency outlined in the current QAQC Management Plan (Appendix 44 of the 2024 Annual Report); and
- Core Receiving Environment Monitoring Program (CREMP): A combined total of 20 duplicates were collected between the Meadowbank Lakes, Baker Lake, and the Whale Tail Lakes. Travel blanks (TB), de-ionized (DI) blanks and Equipment Blanks were submitted for all sampling events

(refer to Appendix 26 of the 2024 Annual Report for the 2024 CREMP Report), which aligns with the frequency outlined in the current QA/QC Management Plan (Appendix 44 of the 2024 Annual Report).

Analytical precision is a measurement of the variability associated with duplicate analyses of the same sample in the laboratory. Duplicate results were assessed using the relative percent difference (RPD) between measurements. The equation used to calculate a RPD is.

$$\text{RPD} = (A-B) / ((A+B)/2) * 100; \text{ where: } A = \text{field sample}; B = \text{duplicate sample}.$$

Large variations in RPD values are often observed between duplicate samples when the concentrations of analytes are low and approaching the detection limit. Consequently, a RPD of 20% for concentrations of field and duplicate samples that both exceed 10x the method detection limit (MDL) is considered notable. The analytical precision of one QA/QC sampling event is characterized as:

- High, when less than 10% of the parameters have variations that are notable;
- Medium, when 10 to 30% of the parameters have variations that are notable;
- Low, when more than 30% of the parameters have variations that are notable.

Meadowbank results of the QA/QC data are presented in Tables 1-1 to 1-32 of Appendix 45 for the MDMER and EEM, surface water, STP and bulk fuel storage facility monitoring programs. The following is a summary of the QA/QC results, per sampling program:

- MDMER and EEM: All the duplicate samples collected were considered as having high analytical precision.
- Surface Water: All QA/QC sampling events conducted within the surface water quality program are rated as having high analytical precision except for five (5) samples having a medium analytical precision of 10% (x2), 11%, 13%, and 19%.
- Sewage Treatment Plant (STP): All the duplicate samples collected were considered as having high analytical precision except for two (2) samples having medium analytical precision of 13% (x2).
- Bulk Fuel Storage Facility: All the duplicate samples collected were considered as having high analytical precision.

RPD values were also calculated for field blanks (FB) and lab blanks (LB) in 2024 as the QA/QC Plan. All field blank samples are considered to have high analytical precision.

The QA/QC plan was followed, and samples were collected by qualified technicians. Given the high number of samples collected in 2024, it is common to have some RPD exceedances as a result of the discrete differences in the original and field duplicates. Given the variability of these exceedances (occurring with different parameters, on different dates for different sampling programs) and the high number of successful samples, it is evident that field QA/QC standards during water sampling were

maintained during sampling in 2024. Agnico Eagle environmental technicians will continue to follow standard QA/QC procedures for surface water sampling that requires the use of sample bottles that are provided by an accredited laboratory, proper handling, and storage of bottles to prevent cross-contamination between areas and, if appropriate, thoroughly rinsing the sample containers with sample water prior to sample collection.

Each equipment used for field measurement are calibrated prior usage. Calibration datasheets are kept for future reference, if needed.

8.5.6.2 Whale Tail Site^s

In 2024, 273 samples were collected (excluding Groundwater and CREMP monitoring programs), 62 duplicates, 62 field blanks, and 49 trip blanks, which represents 23% of duplicates, 23% of field blanks, and 18% of trip blanks which is higher than the QA/QC duplicate and trip blank program objective of 10%.

The following presents the percentage of duplicate and field samples collected from each of the monitoring programs:

The following presents the percentage of duplicate and field samples collected from each of the monitoring programs:

- MDMER and EEM monitoring programs: 20 duplicate samples, 20 field blanks, and 17 trip blanks were collected from a total of 53 samples, representing 38% of duplicates, 38% of field blanks, and 32% of trip blanks;
- Surface water monitoring programs: 40 duplicate samples, 40 field blanks, and 30 trip blanks were collected from a total of 208 samples, representing 19% of duplicates, 19% of field blanks, and 14% of trip blanks;
- Sewage Treatment Plant (STP) monitoring program: 2 duplicate samples, 2 field blanks, and 2 trip blanks were collected from a total of 12 samples, representing 17% of duplicates, 17% of field blanks, and 17% of trip blanks.
- Groundwater Monitoring Program: 2 duplicates, 1 field blank and 1 trip blank were collected (refer to the 2024 Whale Tail Groundwater report – Appendix 36 of the 2024 Annual Report), which aligns with the frequency outlined in the current QAQC Management Plan (Appendix 44 of the 2024 Annual Report); and
- Core Receiving Environment Monitoring Program (CREMP): A combined total of 20 duplicates were collected between the Meadowbank Lakes, Baker Lake, and the Whale Tail Lakes. Travel blanks (TB), de-ionized (DI) blanks and Equipment Blanks were submitted for all sampling events (refer to Appendix 26 of the 2024 Annual Report for the 2024 CREMP Report), which aligns with the frequency outlined in the current QAQC Management Plan (Appendix 44 of the 2024 Annual Report).

Analytical precision is a measurement of the variability associated with duplicate analyses of the same sample in the laboratory. Duplicate results were assessed using the relative percent difference (RPD) between measurements. The equation used to calculate a RPD is:

$$RPD = (A-B) / ((A+B)/2) * 100; \text{ where: } A = \text{field sample}; B = \text{duplicate sample}.$$

Large variations in RPD values are often observed between duplicate samples when the concentrations of analytes are low and approaching the detection limit. Consequently, a RPD of 20% for concentrations of field and duplicates samples that both exceed 10x the method detection limit (MDL) is considered notable. The analytical precision of one QAQC sampling event is characterized as:

- High, when less than 10% of the parameters have variations that are notable;
- Medium, when 10 to 30% of the parameters have variations that are notable;
- Low, when more than 30% of the parameters have variations that are notable.

Results of the QA/QC data are presented in Tables 1-33 to 1-62 of Appendix 45 for the MDMER and EEM, surface water, STP, respectively. The following is a brief summary of the QA/QC results, per sampling program:

- MDMER and EEM: All the duplicate samples collected were considered as having high analytical precision except for five (5) samples having a medium analytical precision of 11%, 15%, 22% (x2), and 26%.
- Surface Water: All QAQC sampling events conducted within the surface water quality program are rated as having high analytical precision except for one (1) sample having a medium analytical precision of 15%.
- Sewage Treatment Plant (STP): All the duplicate samples collected were considered as having high analytical precision.

RPD values were also calculated for field blanks (FB) and lab blanks (LB) in 2024 as per the QA/QC Plan. All field blank samples are considered to have high analytical precision.

The QA/QC plan was followed, and samples were collected by qualified technicians. It is common to have some RPD exceedances as a result of the discrete differences in the original and field duplicates. Given the variability of these exceedances (occurring with different parameters, on different dates for different sampling programs) and the high number of successful samples, it is evident that field QA/QC standards during water sampling were maintained during sampling in 2024. Agnico Eagle technicians will continue to follow standard QA/QC procedures for surface water sampling that requires the use of sample bottles that are provided by an accredited laboratory, proper handling and storage of bottles to prevent cross-contamination between areas and, if appropriate, thoroughly rinsing the sample containers with sample water prior to sample collection.

Each equipment used for field measurement are calibrated prior each usage. Calibration datasheets are kept for future reference, if needed.

8.5.7 Seepage^s

8.5.7.1 Meadowbank Site^s

As required by NWB Water License 2AM-MEA1530 Part I, Item 14: *The results and interpretation of the Seepage Monitoring program in accordance with Part I, Item 13*

The Seepage Monitoring program includes the following locations:

- *Lake water Seepage Through Dewatering Dikes;*
- *Seepage (of any kind) Through Central Dike;*
- *Seepage and Runoff from the Landfill(s);*
- *Subsurface Seepage and Surface Runoff from Waste Rock Piles;*
- *Seepage at Pit Wall and Pit Wall Freeze/Thaw;*
- *Permafrost Aggradation;*
- *Mill Seepage.*

And

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 10: *Summary of quantities and analysis of seepage and runoff monitoring from the Landfills, Waste Rock Storage Facility and Central Dike.*

8.5.7.1.1 Lake water seepage through dewatering dikes^s

Seepage flow at East Dike is measured by the flow meters installed in the two seepage collection sumps downstream of East Dike. The average flow measured during the year 2024 was estimated to be around 275 m³/day. The measured flow is generally decreasing compared to values from the early years of operation of the dike. Please refer to Section 8.5.2.1.3 for a discussion regarding East Dike Discharge to Second Portage Lake. This section discusses the water quality monitoring results and compliance with MDMER and Water License. Refer to Table 8-2 in Section 8.3.1.2 above for the volume of water discharged to Second Portage Lake and to in Section 8.5.2.1.4 for discharge to Portage Pit. More information can also be found in the Water Management Plan (Version 14) in Appendix 13.

Seepage channels at the toe of Bay-Goose Dike can be observed in the summer. That water naturally reports to the Bay-Goose Pit and is not managed by pumping. Agnico Eagle conducts punctual flow monitoring at predetermined locations to get an estimate of the seepage evolution. The flow in the channels is measured using a bucket and a stopwatch (averaging around 5.8 m³/day in 2024). The reading frequency is based on the Dewatering Dikes OMS Manual (Appendix 28).

8.5.7.1.2 Seepage through Central Dike^s

Seepage was observed at the downstream toe of Central Dike since the fall period of 2014. This water was contained between the West road and the Central Dike downstream toe. Agnico Eagle utilized piezometers, thermistors, and a groundwater well to monitor the dike integrity, the foundation temperatures, and the piezometric levels within the structure and its foundation. The seepage is located within the mining footprint, away from the receiving environment and is confined directly downstream. The average seepage rate at Central Dike is within a similar trend than previous years, excepted during tailings deposition in South Cell. The seepage in 2024 ranged between 13 m³/hr in winter and 220 m³/hr in June.

The Central Dike seepage situation is considered stable and well managed as Agnico Eagle has the pumping capacity to deal with the seepage flow rate, the integrity of the infrastructure has not been compromised, and no tailings were found outside the perimeter of the South Cell TSF.

The monitoring of the Central Dike seepage will continue throughout the operating life of the dike, with analysis of the instrumentation results and water quality monitoring, as required.

Seepage water quality results of this monitoring program are discussed in Section 8.5.2.1.18 above.

8.5.7.1.3 Seepage and runoff from the landfill[§]

Results and interpretation of this monitoring program are discussed in Section 8.5.2.1.24 above.

8.5.7.1.4 Subsurface seepage and surface runoff from waste rock piles

Sections 8.5.2.1.7 and 8.5.2.1.13 provide details regarding seepage monitoring at the Portage and Vault WRSF.

8.5.7.1.5 Seepage at pit wall and pit wall freeze/thaw and permafrost aggradation[§]

No mining activities occurred in Vault Pit, Phaser Pit, BB Phaser Pit, Portage Pit A, Portage Pit E, and Goose Pit. Therefore, any seepage is contributing to the re-flooding of the pits.

Seepage was observed at the toe of the D-dump in 2022. The seepage has been monitored in 2023 and has reduced significantly and could not be found in 2024.

In Vault pit, no new water inflows were observed other than the ones identified in 2022. No major seepage inflows were observed in Goose, Phaser and in BB Phaser Pits in 2024.

The 2024 Annual Open Pit Geomechanical Inspection provides more details regarding seepage at pit walls (Appendix 8).

In 2024, an assessment of B Dump stability was performed by an external consultant. It concluded the following: The Factors of Safety meet the target value; The upstream face towards west road is unaffected by the flooding of Portage Pit A; The downstream face stability is achieved with a realistic rockfill friction. Additionally, the settlement and tension cracks are still limited to within the footprint of the pit, making it unlikely for the settlement to progress back to the Whale Tail Haul Road.

8.5.7.1.6 Mill seepage Meadowbank Site [§]

On November 4th, 2013, it was observed that water was seeping through the road in front of the Assay Lab Road. Construction of an interception trench was completed in April-May 2014 and repairs and sealing of containment structures within the mill were completed during the summer of 2014. In November 2015 work was conducted to repair portions of the mill floor and ensure its watertight integrity. Additional elastomeric sealant was applied in the floor joints. Agnico Eagle also put in place an internal action plan and monitoring program for this seep in 2014. The monitoring is part of the Freshet Action Plan. Refer to Appendix D of the 2024 Water Management Plan (Appendix 13) for more details regarding the monitoring and action taken by Agnico Eagle before, during and after the freshet at this seepage area.

In 2024, pumping of the mill seepage trench occurred from May to October. No flow of water has been pumped during the winter months in 2024 in the interception trench because of frozen conditions.

During a site assessment on December 15th, 2023, evidence of water inflow was observed on the west side of the Assay lab road. On May 20th and 22nd, 2024 additional seepage was observed on the west side of the Assay lab road. Following dye tests, the source was identified as the leach tank secondary containment, and after consultation with an engineering firm, repairs were completed in October 2024, to restore the containments functionality in the short-term. A comprehensive evaluation of a more resilient and long-term solution has been finalized and is planned to be completed in the summer of 2025. During both events water inflow was contained within the existing water management infrastructure that was built in 2014. Agnico Eagle is confident that the corrective measures implemented in previous years are still effective and prevent potential contaminated water from reaching any receiving environment. Agnico Eagle will continue to monitor the downstream area and ensure the secondary containment is kept as dry as possible.

Daily visual inspections were conducted during freshet. Prior and after freshet, inspections were conducted weekly and after rain events.

Monthly water quality samples were collected when water was present at the interception trench and Third Portage Lake as well as Monitoring Wells MW-04, MW-05, MW-06, MW-07 and MW-08 (presented on Figure 16 below). Tables 8-62 and Table 8-63 contain monitoring results from the interception trench/wells and Third Portage Lake (TPL-Assay), respectively. It should be noted that all wells were dry in 2024, therefore no samples were collected.

Monitoring will be continued in 2025 as per the Freshet Action Plan to identify if trending is maintained. Impacts to the environments have been avoided by pumping collected water back to the milling process with no water being discharged to the environment.

Figure 16 Meadowbank General Layout of the Assay Road Seepage^s

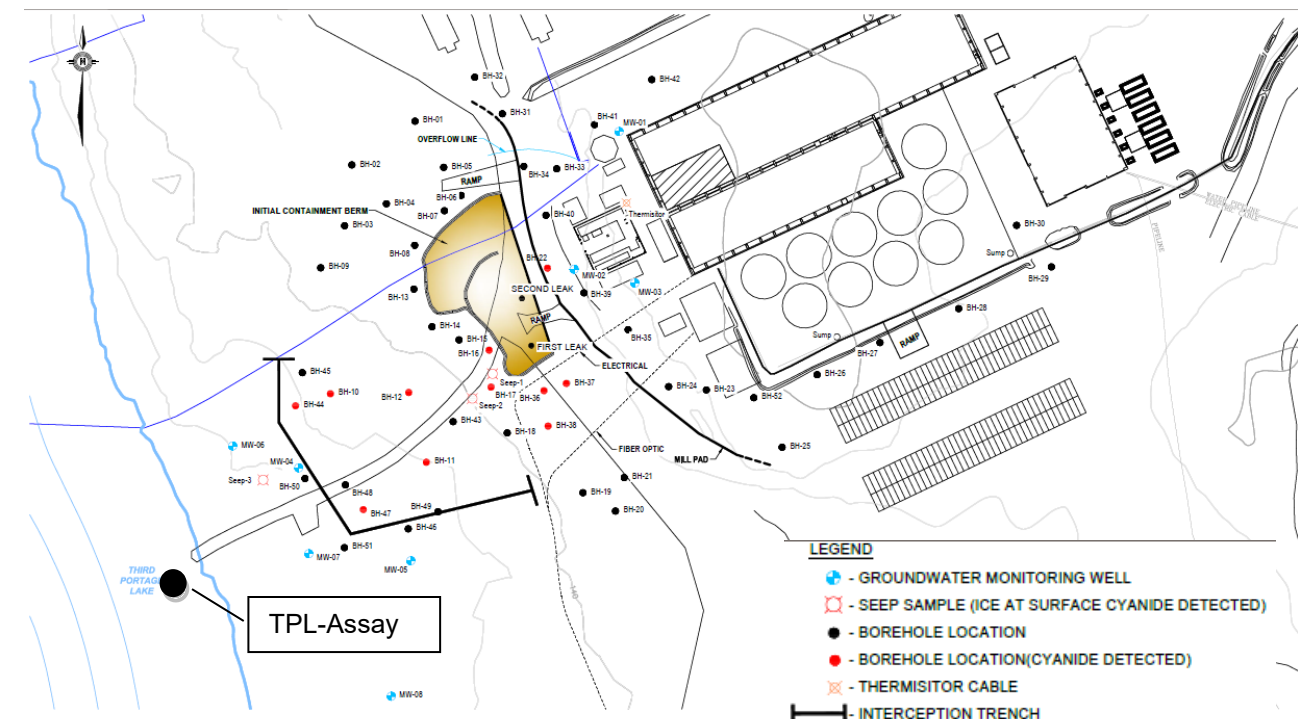


Table 8-62 Meadowbank Assay Road Seepage Trench and Well Water Quality Monitoring 2014-2024§

Date	Mill Trench				MW-04				MW-05				MW-06				MW-07				MW-08			
	CN t (mg/L)	Free CN (mg/L)	Cu (mg/L)	Fe (mg/L)	CN t (mg/L)	Free CN (mg/L)	Cu (mg/L)	Fe (mg/L)	CN t (mg/L)	Free CN (mg/L)	Cu (mg/L)	Fe (mg/L)	CN t (mg/L)	Free CN (mg/L)	Cu (mg/L)	Fe (mg/L)	CN t (mg/L)	Free CN (mg/L)	Cu (mg/L)	Fe (mg/L)	CN t (mg/L)	Free CN (mg/L)	Cu (mg/L)	Fe (mg/L)
Regulatory guideline Water License	1	NA	0.2	NA	1	NA	0.2	NA	1	NA	0.2	NA	1	NA	0.2	NA	1	NA	0.2	NA	1	NA	0.2	NA
Regulatory guideline MDMER	1	NA	0.6	NA	1	NA	0.6	NA	1	NA	0.6	NA	1	NA	0.6	NA	1	NA	0.6	NA	1	NA	0.6	NA
Regulatory guideline CCME	NA	0.005	0.002	0.3	NA	0.005	0.002	0.3	NA	0.005	0.002	0.3	NA	0.005	0.002	0.3	NA	0.005	0.002	0.3	NA	0.005	0.002	0.3
Annual Average																								
2014	0.221	0.036	0.024	1.29	0.120	NR	0.076	5.80	<0.005	< 0.01	0.031	2.20	0.100	NR	0.240	4.80	0.039	<0.020	0.125	7.50	0.011	0.008	0.060	2.41
2015	0.031	<0.005	0.006	0.51	Dry				Dry				Dry				0.008	<0.005	0.047	4.53	<0.005	<0.005	0.152	9.41
2016	0.022	0.012	0.025	0.30	Dry				Dry				Dry				0.006	0.005	0.238	33.80	<0.005	<0.005	0.243	41.30
2017	0.023	0.007	0.004	0.59	Dry				<0.010	<0.005	NR	NR	Dry				0.007	<0.005	0.188	70.23	NR	<0.005	0.026	10.50
2018	0.012	0.011	0.005	0.11	Dry				Dry				Dry				0.004	<0.005	0.051	20.30	Dry			
2019	0.029	0.006	0.005	0.04	Dry				<0.001	<0.001	0.008	1.77	0.042	<0.001	0.014	2.76	0.002	<0.001	0.036	17.80	Dry			
2020	0.023	0.008	0.005	0.22	Dry				<0.001	<0.001	0.008	5.80	Dry				0.006	<0.001	0.026	11.00	Dry			
2021	0.046	0.012	0.006	1.84	Dry				Dry				Dry				0.006	0.002	0.024	24.55	Dry			
2022	0.030	0.021	0.005	1.00	Dry				<0.050	<0.002	1.310	369.00	Dry				0.0051	<0.002	0.058	50.65	Dry			
2023	0.065	0.021	0.008	0.61	Dry				Dry				Dry				Dry				Dry			
2024																								
2024-05-12	0.00455	0.0036	0.00489	0.546	Dry				Dry				Dry				Dry				Dry			
2024-05-22	9.1	4.8	2.21	1.74	Dry				Dry				Dry				Dry				Dry			
2024-06-10	0.0704	0.065	0.0121	0.515	Dry				Dry				Dry				Dry				Dry			
2024-07-20	0.0365	0.015	0.00179	5.390	Dry				Dry				Dry				Dry				Dry			
2024-08-11	0.0224	0.007	0.00654	0.193	Dry				Dry				Dry				Dry				Dry			
2024-09-10	0.0156	0.0031	0.00831	0.245	Dry				Dry				Dry				Dry				Dry			
2024 Average	1.542	0.816	0.374	1.44	Dry				Dry				Dry				Dry				Dry			

NR – No Result

Table 8-63 Meadowbank Assay Road Seepage 2024 TPL-Assay Water Quality Monitoring^s

TPL-Assay	Unit	Annual Average					1/16/2024	2/11/2024	6/2/2024	7/21/2024	8/11/2024	9/10/2024	10/20/2024
Parameter		2020	2021	2022	2023	2024							
Field Measured													
Temperature	°C	11.00	7.22	12.40	8.70	7.31	0.1	0.3	6.8	18.6	17.8	7.2	0.4
pH	pH units	7.90	7.60	7.40	7.71	7.65	8.11	6.56	7.93	7.66	7.83	7.87	7.61
Conductivity	uS/cm	98.9	99.2	100.2	113.3	151.4	124.7	132.1	56.0	110.7	121.3	379.0	135.7
Turbidity	NTU	1.99	1.00	1.10	1.28	2.78	0.88	1.29	2.27	1.27	4.85	5.53	3.35
Conventional Parameters													
Hardness, as CaCO ₃	mg/L	51	41	38	44	55	49.9	54.5	19.9	42.8	46.1	121.0	50.6
Total alkalinity, as CaCO ₃	mg/L	38	25	26	28	29	35	35	11	28	29	39	29
Carbonate, as CaCO ₃	mg/L	5	1	1	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO ₃	mg/L	38	25	26	28	29	35	35	11	28	28	39	28
TDS	mg/L	65	57	55	79	103	85	80	40	95	60	285	75
TSS	mg/L	3	1	1	1	1	< 1	< 1	1	< 1	1	3	2
Total organic carbon	mg/L	3	2	2	2	2	2.3	2.6	1.4	2.2	1.9	2.8	1.9
Dissolved organic carbon	mg/L	1.90	1.86	1.90	2.02	2.04	2.2	2.3	1.3	2.0	2.1	2.5	1.9
Colour	TCU	5.0	2.8	2.3	2.2	2.9	< 2	< 2	5	2	2	5	2
Major Ions													
Bromide	mg/L	0.1	1.0	1.0	1.0	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloride	mg/L	5.0	5.7	5.2	5.6	11.7	8.3	8.5	5.5	6.1	6.5	40.0	6.7
Cyanide	mg/L	0.001	0.005	0.001	0.001	0.001	< 0.00050	< 0.00050	< 0.00050	< 0.00050	0.00053	0.00071	< 0.00050
Cyanide (free)	mg/L	0.001	0.002	0.002	0.003	0.002	< 0.0020	< 0.0020	< 0.0020	0.0045	< 0.0020	0.0022	< 0.0020
Cyanide (WAD)	mg/L	0.001	0.001	0.001	0.001	0.001	< 0.00050	< 0.00050	0.00052	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Fluoride	mg/L	0.10	0.11	0.10	0.12	0.12	0.11	0.14	< 0.10	< 0.10	0.11	0.17	0.13
Silica	mg/L	0.79	0.46	0.34	0.74	0.97	0.99	1.10	0.47	0.69	0.54	1.90	1.10
Sulfate	mg/L	15.6	15.4	15.0	17.2	22.3	21	22	6.4	15	18	49	25
Thiocyanate	mg/L	0.1	0.2	0.2	0.2	0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thiosulphates	mg/L	0.02	0.02	0.20	0.20	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Nutrients and Chlorophyll a													
Ammonia Nitrogen	mg N/L	0.02	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate	mg N/L	0.01	0.10	0.34	0.10	0.12	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.21	< 0.10
Nitrite	mg N/L	0.02	0.01	0.01	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen	mg N/L	0.16	0.12	0.15	0.15	0.16	0.20	0.26	< 0.10	0.15	0.16	0.17	0.11
Total phosphorus	mg P/L	0.020	0.001	0.003	0.002	0.002	0.0014	< 0.0010	0.0031	< 0.0010	< 0.0010	0.0026	0.0014
Orthophosphate	mg P/L	0.07	0.01	0.01	0.00	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Chlorophyll a	mg/L	0.001	0.002	0.001	0.001	0.001	0.00020	-	0.00057	0.00052	0.00045	0.00160	< 0.0011
Total Metals													
Aluminum	mg/L	0.022	0.014	0.010	0.008	0.014	< 0.0030	< 0.0030	0.0266	0.0069	0.0053	0.0283	0.0253
Antimony	mg/L	0.0001	0.0005	0.0005	0.0005	0.0005	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic	mg/L	0.0005	0.0008	0.0010	0.0008	0.0008	0.00057	0.00057	0.00132	0.00077	0.00077	0.00086	0.00054
Barium	mg/L	0.0050	0.0060	0.0053	0.0054	0.0076	0.0063	0.0070	0.0046	0.0050	0.0058	0.0187	0.0060
Beryllium	mg/L	0.0005	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron	mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	mg/L	0.00002	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Calcium (total)	mg/L	14.40	11.56	10.78	12.35	16.00	14.2	15.3	6.0	12.2	13.1	37.0	14.2
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Cobalt	mg/L	0.0005	0.0002	0.0002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Copper	mg/L	0.0006	0.0008	0.0008	0.0007	0.0007	0.00062	0.00067	0.00053	0.00060	0.00063	0.00107	0.00071
Iron	mg/L	0.133	0.036	0.052	0.045	0.061	0.0170	0.0130	0.0910	0.0400	0.0430	0.1580	0.0640
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.005	0.002	0.002	0.002	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0045	< 0.0020
Magnesium (total)	mg/L	3.73	2.99	2.77	3.09	3.66	3.50	3.98	1.19	2.97	3.21	7.06	3.70
Manganese	mg/L	0.0118	0.0049	0.0055	0.0082	0.0100	0.0021	0.0024	0.0197	0.0067	0.0074	0.0251	0.0069
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010

TPL-Assay	Unit	Annual Average					1/16/2024	2/11/2024	6/2/2024	7/21/2024	8/11/2024	9/10/2024	10/20/2024
Parameter		2020	2021	2022	2023	2024							
Nickel	mg/L	0.001	0.001	0.001	0.001	0.001	< 0.0010	< 0.0010	0.0011	< 0.0010	< 0.0010	0.0012	< 0.0010
Potassium (total)	mg/L	1.75	1.45	1.38	1.49	1.79	1.65	1.80	0.93	1.47	1.58	3.53	1.60
Selenium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	mg/L	0.00010	0.00002	0.00002	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Sodium (total)	mg/L	2.50	1.99	1.70	1.81	2.02	1.95	2.21	0.643	1.66	1.83	3.94	1.91
Strontium	mg/L	0.05	0.06	0.06	0.06	0.09	0.0749	0.0803	0.0315	0.0596	0.0681	0.2510	0.0681
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.010	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0010	0.0002	0.0002	0.0003	0.0004	0.00031	0.00031	< 0.00010	0.00021	0.00022	0.00103	0.00045
Vanadium	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dissolved Metals													
Aluminum	mg/L	0.006	0.004	0.005	0.006	0.004	< 0.0030	< 0.0030	0.0070	0.0032	0.0051	< 0.0030	0.0034
Antimony	mg/L	0.0001	0.0005	0.0005	0.0005	0.0005	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic	mg/L	0.0005	0.0007	0.0013	0.0009	0.0011	0.00115	0.00102	0.00178	0.00084	0.00140	0.00097	0.00085
Barium	mg/L	0.0042	0.0117	0.0057	0.0059	0.0079	0.0067	0.0076	0.0045	0.0057	0.0061	0.0186	0.0060
Beryllium	mg/L	0.0010	0.0000	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron	mg/L	0.01	0.05	0.05	0.05	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	mg/L	0.00002	0.00001	0.00002	0.00009	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Cobalt	mg/L	0.0005	0.0002	0.0002	0.0002	0.0002	0.00024	< 0.00020	0.00023	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Copper	mg/L	0.0005	0.0007	0.0009	0.0019	0.0025	0.00118	0.00156	0.00351	0.00194	0.00558	0.00235	0.00108
Iron	mg/L	0.010	0.009	0.019	0.011	0.013	< 0.0050	< 0.0050	0.0301	0.0123	0.0081	0.0250	0.0053
Lead	mg/L	0.0002	0.0002	0.0003	0.0002	0.0002	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.005	0.002	0.002	0.002	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0040	< 0.0020
Manganese	mg/L	0.001	0.003	0.006	0.008	0.009	0.0011	0.0020	0.0213	0.0084	0.0045	0.0207	0.0042
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Nickel	mg/L	0.001	0.001	0.001	0.001	0.002	< 0.0010	0.0016	0.0028	< 0.0010	0.0023	0.0014	0.0010
Selenium	mg/L	0.0010	0.0001	0.0001	0.0001	0.0001	< 0.00010	< 0.00010	0.00021	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	mg/L	0.00010	0.00002	0.00009	0.00002	0.00002	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Strontium	mg/L	0.05	0.06	0.06	0.07	0.09	0.0849	0.0846	0.0345	0.0642	0.0694	0.250	0.0704
Thallium	mg/L	0.00020	0.00001	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	0.010	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.0010	0.0002	0.0002	0.0004	0.0004	0.00035	0.00040	< 0.00010	0.00025	0.00023	0.00111	0.00047
Vanadium	mg/L	0.001	0.005	0.005	0.005	0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.001	0.006	0.006	0.005	0.006	< 0.0050	< 0.0050	0.0086	< 0.0050	0.0095	< 0.0050	< 0.0050

8.5.7.2 Whale Tail Site[§]

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 13: *Summary of quantities and analysis of Seepage and runoff monitoring from the Landfill, Waste Rock Storage Facility and associated dikes/berms.*

8.5.7.2.1 Lake water seepage through dewatering dikes[§]

Lake water seepage continues to be observed at Whale Tail Dike and is summarized in Section 8.5.7.2.2 below. No other lake water seepage was observed at the other dewatering dikes in 2024.

No seepage occurred from WRSF Dike in 2024. The mitigation measures implemented in 2020 were successful in ensuring the proper performance of this infrastructure.

8.5.7.2.2 Seepage through Whale Tail Dike[§]

The Whale Tail Dike was commissioned on March 5th, 2019 with the beginning of the dewatering activity of the North Basin.

In July 2019, seepage streams were observed on the downstream toe of Whale Tail Dike. The flow was measured using v-notch weirs at approximately 300 m³/h which is higher than what was anticipated in the water balance. A detailed investigation including additional instrumentation and geophysics was conducted for a better understanding of the seepage phenomenon at the Whale Tail Dike.

A pumping system was installed to collect and manage the non-contact seepage water but has not yet been commissioned. The collected seepage water will be discharged to Whale Tail South Basin via a diffuser without treatment if the water quality meets the discharge criteria of the Water License 2AM-WTP1830. Until the system is commissioned and discharge criteria are met, water will overflow from the pump stations to the Whale Tail Attenuation Pond and be managed as part of this infrastructure.

An intensive grouting campaign was conducted between Q4 2019 and Q1 2020 to further reduce the seepage flow. The campaign was successful in reducing the seepage by more than 50 %. In 2024, the seepage rate was stable compared to that of 2023 and ranged from 68 to 150 m³/h.

Seepage water quality results of this monitoring program are discussed in Section 8.5.2.2.10 above.

8.5.7.2.3 Seepage and runoff from the landfill[§]

The Whale Tail Landfill was commissioned in October 2019. No seepage from this structure has been observed.

8.5.7.2.4 Subsurface seepage and surface runoff from waste rock piles[§]

No subsurface seepage was observed from the WRSF in 2024. Surface runoff is collected and managed as per the strategy detailed in the Water Management Plan (Appendix 14). Water quality results of this monitoring program are discussed in Section 8.5.2.2 above.

8.5.7.2.5 Seepage at pit wall and pit wall freeze/thaw and permafrost aggradation^s

Seepage was observed in Whale Tail Pit along the south and west walls exposed bench faces. In 2024, 1.15 Mm³ of water was pumped out of Whale Tail Pit. That number included groundwater inflow as well as snowmelt and runoff. The groundwater inflow comes from Whale Tail South as well as some infiltration from the Whale Tail Attenuation Pond. A permanent sump within the pit has been implemented in 2023 to intercept the water from the south wall groundwater seepage.

Refer to the “2024 Annual Open Pit Geomechanical Inspection” for more details regarding seepage at pit walls (Appendix 9).

8.6 BLAST MONITORING ⁴

In accordance with NIRB Project Certificate No.008, Condition 22, DFO 16-HCAA-00370 Condition 2.3.3 and DFO 20-HCAA-00275 Condition 2.3.8, Agnico Eagle had developed a blasting program which complies with *The Guidelines for the Use of Explosives In or Near Canadian Fisheries Water* as modified by the DFO for use in the North and adhere to guidance provided in *Monitoring Explosive-Based Winter Seismic Exploration in Waterbodies*. As a result, Agnico Eagle conducts monitoring to evaluate blast related peak particle velocity and overpressure to protect nearby fish bearing waters.

Agnico Eagle has updated the Blast Monitoring Program (Version 10, December 2024) to propose a modification to the blast monitoring station near Kangislulik Lake, at the Whale Tail Site. The updated plan was sent to DFO for review and approval prior modification is implemented. DFO’s approval was received on February 11th, 2025. This Version 10 is submitted as Appendix 33 of this annual report.

Agnico Eagle also developed a specific Blast Monitoring Program for blasting activities needed at Meadowbank site, for the construction of a water management infrastructure in the former Quarry 23. This specific plan was submitted to DFO in December 2024 and approval was received in January 2025.

8.6.1 Meadowbank Site

As required by NIRB Project Certificate No.004, Condition 83: *Cumberland shall ensure that the explosive mix-truck is only used to mix diesel and ammonia nitrate to form an explosive only at the blast site, and that when the explosive mix-truck is not in use it is stored with the strictest setback requirements as required or recommended by NRCan.*

And

As required by NIRB Project Certificate No.004, Condition 85: *Develop a detailed blasting program to minimize the effects of blasting on fish and fish habitat, water quality, and wildlife and terrestrial VECs.*

No blast monitoring was conducted at the Meadowbank mine site in 2024 as mining operations ceased in 2019.

Refer to the Ammonia Management Plan for more details regarding storage and handling of explosives (Appendix E of the Water Management Plan in Appendix 13).

⁴ TSM – Biodiversity and Conservation Management

8.6.2 Whale Tail Site

As required by DFO Authorization 16-HCAA-00370 Condition 2.3.3: *The proponent shall develop a blasting mitigation plan in consultation with DFO to ensure effects on fish and fish habitat are minimized, as per Nunavut Impact Review Board Project Certificate No. 008 Condition 22. The Blasting mitigations plan shall be submitted to DFO prior to construction for approval, and shall adhere to the guidance provided in the Monitoring Explosive-Based Winter Seismic Exploration in Waterbodies, NWT 2000-2002.*

And

As required by DFO Authorization 20-HCAA-00275 Condition 2.3.8: *The proponent shall develop a blasting mitigation plan in consultation with DFO to ensure effects on fish and fish habitat are minimized, as per Nunavut Impact Review Board Project Certificate No. 008 Condition 22. The Blasting mitigations plan shall be submitted to DFO prior to construction for approval, and shall adhere to the guidance provided in the Monitoring Explosive-Based Winter Seismic Exploration in Waterbodies, NWT 2000-2002.*

And

As required by NIRB Project Certificate No.008 Condition 22: *The Proponent shall engage with Fisheries and Oceans Canada to develop project specific thresholds, mitigation and monitoring for any blasting activities that would exceed the requirements of Fisheries and Oceans Canada’s Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters. If project-specific thresholds, mitigation and monitoring requirements are developed, the Proponent shall identify these requirements in the annual report provided to the NIRB.*

The detailed results of the 2024 blast monitoring program are available in the report titled “2024 Meadowbank and Whale Tail Blast Monitoring Report for the Protection of Nearby Fish Habitat” attached as Appendix 34.

Peak particle velocity (PPV) and instantaneous pressure change (IPC) monitoring data was recorded throughout 2024 during blasting activities at Whale Tail and IVR pits, and after May 2024 for the Underground operations, for the protection of fish. The locations of the blast monitoring stations on surface in 2024 at the Whale Tail Mine site are highlighted in Figure 1 of the Blast Monitoring Report found in Appendix 34.

In 2024, 80 blasts were monitored at IVR pit. There were zero (0) blasts exceeding the PPV concentration DFO limit of 13 mm/s and zero (0) blasts exceeding the IPC measurement DFO limit of 50 kPa.

At the Whale Tail pit, 146 blasts were monitored. There were zero (0) blasts exceeding the PPV or the IPC limits.

For the Underground mine, nine (9) blasts were monitored. There was one (1) blast exceeding the PPV concentration DFO limit of 13 mm/s and zero (0) blasts exceeding the IPC limit of 50 kPa. It is to note that only blasts that had chance of being detected on a blast monitoring station were monitored. Increase monitoring has been ongoing since the exceedance occurred, to further refine the vibration model, in addition to other corrective measures detailed in the 2024 Blast Monitoring Report (Appendix 34).

As mentioned above, one (1) PPV exceedance was recorded in 2024. The exceedance occurred on May 20th, 2024. The event was located at Kangislulik Station 3 following blasting activities related to the Underground mine. Analysis of the blast monitoring station data showed that the PPV was 15.969 mm/s and that the IPC was 18.691 kPa. This is the first instance of an underground blast vibration exceedance recorded at the surface. A blast exceedance notification was submitted to DFO on May 23rd.

Vibration data collected from the Nemo Lake and Kangislulik Lake monitoring stations in 2024 indicates 99.6% compliance with the aforementioned Guidelines.

Table 8-64 presents a summary of PPV and IPC exceedance and Table 8-65 the maximum and average PPV and IPC from 2018 - 2024.

Table 8-64 Whale Tail Mine PPV and IPC exceedance from 2018-2024

Year	PPV exceedance	IPC exceedance
2018	2	0
2019	8	0
2020	4	0
2021	0	0
2022	2	0
2023	0	0
2024	1	0
Total	17	0

Table 8-65 Whale Tail Mine Maximum and Average PPV and IPC from 2018 – 2024

Location	Parameters	2018	2019	2020	2021	2022	2023	2024
Whale Tail Pit	Max PPV (mm/s)	26.1	20.9	14.6	12.7	11.05	6.24	8.42
	Average PPV (mm/s)	4.5	2.16	0.98	1.6	3.36	2.42	2.45
	Max IPC (kPa)	30.54	24.46	17.09	14.90	12.93	7.30	9.85
	Average IPC (kPa)	5.01	2.23	1.19	1.40	3.93	2.90	2.87
IVR Pit	Max PPV (mm/s)	N/A	N/A	6.5	8.6	17.37	7.37	7.35
	Average PPV (mm/s)	N/A	N/A	0.67	1.22	3.98	3.01	1.85
	Max IPC (kPa)	N/A	N/A	7.59	10.10	20.33	8.62	8.60
	Average IPC (kPa)	N/A	N/A	0.81	1.20	4.66	3.52	2.16
UG Mine	Max PPV (mm/s)	N/A	N/A	N/A	N/A	N/A	N/A	15.97
	Average PPV (mm/s)	N/A	N/A	N/A	N/A	N/A	N/A	3.88
	Max IPC (kPa)	N/A	N/A	N/A	N/A	N/A	N/A	18.69
	Average IPC (kPa)	N/A	N/A	N/A	N/A	N/A	N/A	4.54

Agnico Eagle is committed to keeping the vibrations below the limit authorized and to monitoring all blasts to fully comply with regulations.

8.7 GROUNDWATER MONITORING^s

8.7.1 Meadowbank Site^s

As required by NIRB Project Certificate No.004 Condition 8: *Continue to undertake semi-annual groundwater samples and re-evaluate the groundwater quality after each sample collection; report the results of each re-evaluation to NIRB's Monitoring Officer, INAC and EC.*

The full results of the 2024 groundwater monitoring program are available in Appendix 35. Below highlights key points from the report only; for complete information, maps and findings, the reader should refer to the complete report presented in Appendix.

The objective of the 2024 groundwater monitoring program is to document groundwater quality at the site and any potential changes in groundwater quality that may be associated with mining operations and the deposition of tailings in the Tailings Storage Facility (TSF) and in-pit tailings deposition (IPD). Monitoring activities completed in 2024 include water level measurement and sampling of groundwater and surface water at monitoring locations for the analysis of chemical parameters listed in Group 2 of Table 2 Schedule I of the Meadowbank Water License. Monitoring well MW-16-01 serves to investigate potential groundwater quality effects from the TSF, while monitoring wells MW-IPD-01(s), MW-IPD-01(d), MW-IPD-07, and MW-IPD-09 serve to investigate potential effects to groundwater from the IPD. Seepage at Pit A and Pit E could not be sampled due to the unsafe ground conditions and the flooded conditions in the pit at the seepage inflow point.

Regional groundwater is interpreted to flow east towards the Third Portage Lake and Second Portage Lake. On a local scale, surface and groundwater flow is influenced by local topography and mining operations at previously mined pits and from tailings storage operations (IPD and TSF).

In 2024, water levels indicate that IPD monitoring wells identified as MW-IPD-01(s) and MW-IPD-01(d) are still hydraulically downgradient to the Second Portage Lake; similarly, the monitoring wells MW-IPD-07 and MW-IPD-09 are downgradient to the Third Portage Lake. Water quality at these monitors is likely influenced by Lake water seepage rather than the TSF or IPD operations, currently. The groundwater quality at monitoring wells MW-IPD-01(d), MW-IPD-01(s), MW-IPD-07, and MW-IPD-09 continues to display a natural water signature, which is consistent with interpreted flow directions. Future concentrations can be compared to these background concentrations as water levels in the pits continue to rise.

Monitoring well MW-16-01 is located hydraulically downgradient of the TSF and Central Dike. The groundwater quality at monitoring well MW-16-01 is interpreted to be affected by reclaim water from the South Cell TSF based on similar chemical signatures to reclaim water monitoring stations ST-21-North (North Cell TSF surface water), ST-21-South (South Cell TSF surface water) and ST-S-5 (Central Dike seepage). So far, contaminant transport from the tailings cells has locally affected groundwater quality to the west side of the central dump and mined-out pits. The gradient between the surrounding lakes (SPL and TPL) and the mined-out pits is preventing advection from carrying contaminants further eastwards. Subsequent groundwater monitoring programs will be important to help mitigate the effect of mining on local hydrogeology and ensure these contaminants do not alter regional groundwater quality in the future.

The groundwater monitoring program was initiated in 2003. A total of 14 groundwater monitoring wells were installed between 2003 to 2018 to characterize the groundwater within the five site areas: South and

Central Dike, East Flat (East Dike area), Goose Pit, Portage Pit-A and Portage Pit-E. The available historical groundwater monitoring program analytical results from 2003 to 2024 are discussed in Section 5.4 of the 2024 Groundwater Monitoring Report (Appendix 35).

8.7.2 Whale Tail Site^s

As required by NIRB Project Certificate No.008 Condition 15: *The required Groundwater Monitoring Plan should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent plan revisions or updates submitted annually thereafter. Subject to the additional direction and requirements of the Nunavut Water Board, the Proponent shall prepare and implement a Groundwater Monitoring Plan that, at a minimum includes:*

- *The collection of additional site-specific hydraulic data (e.g., from new monitoring wells) in key areas during the pre-development, construction and operation phases;*
- *Definition of vertical and horizontal groundwater flows in the project development areas;*
- *Delineates monitoring plans for both vertical and horizontal ground water; and*
- *Thresholds that will trigger the implementation of adaptive management strategies that reflect site specific conditions encountered at the project site.*

And

As required by NIRB Project Certificate No.008 Condition 16: *An updated Groundwater Monitoring Plan that outlines the Proponent's plans to fulfill this term and condition should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent plan revisions or updates submitted annually thereafter. Within two years of commencing operations, the Proponent shall:*

- a) Conduct additional analyses to determine the approximate fill time for the Whale Tail Pit at closure;*
- b) Undertake a hydrogeological characterization study to assess the potential for arsenic and phosphorous diffusion from submerged Whale Tail pit walls;*
- c) If the results of the characterization study indicate a moderate to high potential for arsenic and/or phosphorous diffusion, perform detailed hydrodynamic modelling of the flooded pit lake prior to closure to evaluate meromictic conditions and flooded pit water quality; and*
- d) Add these required activities to the site Groundwater Monitoring Plan.*

In Appendix 36, the 2024 Groundwater Management Monitoring Report presented a compilation of the site-specific data collection in 2024 to meet the requirements established in the Groundwater Monitoring Plan (GWMP; Version 3_NWB, May 2019). The following is a summary of the report and Agnico Eagle will refer the reader to the report for an exhaustive comprehension of the program and results for 2024.

In 2024, only Whale Tail Pit intercepted groundwater. The IVR Pit is in permafrost and is not expected to interact with the deeper groundwater flow system until closure, when the formation of the pit lake will

slowly degrade the permafrost underlying the open pit. The Whale Tail underground is still located within permafrost and therefore has not intercepted groundwater.

Westbay Well Sampling

Hydrostatic pressures were measured in September 2024 at Westbay Well AMQ16-626 to monitor hydraulic heads and changes in groundwater flow conditions. Following the pressure measurements, groundwater samples were collected to monitor the total dissolve solids (TDS) and groundwater quality. A technical memorandum documenting this work, sampling results and historical monitoring from AMQ16-626 is included in Attachment A of the report presented in Appendix 36.

Water samples were collected from Ports 3 and 4 of AMQ16-626 in September 2024 to assess groundwater quality.

Based on 2024 data from Ports 3 and 4, the calculated TDS content of Formation water is estimated to range between 2,163 and 2,621 mg/L near these ports. The TDS in samples from Ports 3 and 4 is similar to measurements in recent years and slightly less saline than historical sampling results in 2016, which may reflect the lower residual drilling fluid content in the collected samples and therefore inferred higher accuracy in the calculated Formation water quality. Overall, although slightly less saline than the Whale Tail TDS profile adopted for the FEIS, the results do not deviate significantly from FEIS assumptions.

Arsenic, which is a constituent of interest in the ore and waste rock to be mined, occurs in groundwater at concentrations that are low and consistent with previous reliable data collected from the well. Radium-226 in groundwater measured in 2024 at Ports 3 and 4 were below the Federal Metal and Diamond Mining Effluent Regulations.

The assumptions for the conceptual model for the site are considered unchanged by 2024 groundwater quality monitoring at AMQ16-626.

Thermal Monitoring

Under the GWMP, AMQ17-1233 and AMQ17-1337 were intended to monitor permafrost conditions between Nemo Lake and Whale Tail Mine (verify the presence of permafrost and the restricted horizontal movement of groundwater below the active layer due to permafrost in the upper 450 to 520 m of bedrock). These thermistors, formerly located outside of the pit footprint, are no longer functioning due to mining activity but were showing permafrost conditions until they stopped functioning in 2019. Thermistor IVR long V651A TH was installed to the southeast of IVR Pit in 2019 to continue to monitor permafrost conditions. Many of the shallow beads installed in V651A TH malfunctioned in 2022 and the data is unavailable, however data from the deeper thermistor beads confirm permafrost is present at depth up to approximately 450 to 500 metres below ground surface

Nine thermistors were installed in 2020 to monitor the talik zone near the south wall of the Whale Tail Pit. In August 2021 these thermistors were dismantled due to nearby mining activity and data is no longer available. While active, these thermistors were used to evaluate if during open pit mining and with the dewatering of the North Basin, the closed talik zone will progressively freeze back. Through the year 2021 until their dismantling in August 2021, some freezeback was observed in the upper bedrock in thermistors PSW-DH2 TH, PSW-DH3 TH, PSW-DH7 TH and PSW-DH10 TH, resulting in minor changes to the talik

zone extent. The available 2024 data collected from thermistor AMQ-PSW3-DDH1 TH indicate a slow decrease in temperature within the talik zone near the south wall of Whale Tail Pit.

As part of the Whale Tail Dike Operation Maintenance and Surveillance Manual, performance of the Whale Tail Dike (WTD) was monitored with thermistors located downstream and/or upstream of the WTD. Similar to observations in 2023, the trend of permafrost degradation noted at the abutments in 2021 did not progress laterally based on the 2024 thermistor readings, however they did note field observations indicative of further degradation (observed settlement upstream and downstream of the east and west abutments). The thermal regime in this area is interpreted to have not yet reached an equilibrium.

Hydraulic Head Monitoring

With mining of the Whale Tail Pit, there has been a general decrease in hydraulic heads relative to predevelopment conditions. The largest increase occurred in the early years of operations and since then, the hydraulic heads have been relatively similar year after year. The lower hydraulic heads are attributed to the dewatering of the North Basin and the ongoing excavation of the open pit.

Seepage Surveys

Seepage has consistently been observed in the southeast wall in 2024 (herein referred to as south wall), and the seepage forms ice in the pit walls during the winter. The seepage is attributed to a highly weathered zone near surface as opposed to faults, which is consistent with the original conceptual model for the Whale Tail Mine and the prediction of a seepage face in the south wall. All of the groundwater seepage observed in the south wall is intercepted by Whale Tail Pit sumps. The seepage area observed in the south wall continues to increase with the pit operations, where the lateral extent varies per bench.

Comparison of Model Predicted Values to Measured Values

In 2021, inflow measurements were trending 50% higher than predicted for based on the groundwater model developed for the FEIS, triggering a review and update of the groundwater model. On this basis, Lorax completed a model update and recalibrated the model to operational data (2021 average winter pumping rates from the Whale Tail Sump and hydraulic heads measured at Westbay AMQ16-626). Documentation of the model update is provided in Attachment F of the report (Appendix 36), and a summary of the updated groundwater inflow predictions based on the recalibrated model are provided in Table 4 of the 2024 Groundwater Management Monitoring Report (Appendix 36).

The flow observed during the winter months (January, February, March, April, November and December) ranged between 1,785 m³/day to 2,362 m³/day, with an average flow rate of 2,122 m³/day. As previously discussed, flow measurements during the winter months are the best estimate of groundwater inflow rates to the Whale Tail Pit since surface water inflows should be minimal. The inflow in the winter will reflect saline groundwater inflow and seepage from the Whale Tail Attenuation Pond and South Basin of Whale Tail Lake, with input from the Whale Tail Attenuation Pond expected to be most significant. Overall, inflow measurements are trending 43% lower than the updated predictions for 2024, and no revision of the model based on the triggers is required.

As part of the updated groundwater modelling, groundwater inflow to the open pit was predicted to be composed of 35% inflow from the Whale Tail Attenuation Pond and 65% inflow from Whale Tail South

Basin. Overall, TDS measured in pit wall seepage was similar to the TDS measured in the Whale Tail Attenuation Pond (within 10 mg/L). The TDS in the Whale Tail Pit sump tended to be slightly higher than both the pit wall seepage and the Whale Tail Attenuation Pond, which in turn was generally higher than the Whale Tail Dike Seepage. In the winter months the TDS in the Whale Tail Pit sump was generally similar and within 10 mg/L of the TDS in the Whale Tail Attenuation Pond. These observations suggests that the source water proportions may be overpredicting the contribution of water from the Whale Tail Dike Seepage. Overall, measured groundwater inflow to the open pit in the winter was 43% lower than predicted values using the updated model for 2024, and it's possible that the model is overpredicting inflow from the Whale Tail South Basin.

8.8 HABITAT COMPENSATION MONITORING PROGRAM

8.8.1 Meadowbank Site

8.8.1.1 No Net Loss Plan

As required by Fisheries and Oceans Canada (DFO) *Fisheries Act* Authorization NU-03-0191.3, Condition 4: 111.08 Habitat Units (HUs) of compensatory fish habitat shall be created by re-flooding Second Portage, Third Portage, and Vault Lakes; creating access to Wally Lake; and, creating shoals and boulder gardens in Second Portage Lake.

And

As required by Fisheries and Oceans Canada (DFO) *Fisheries Act* Authorization NU-03-0191.3, Condition 5: All fish habitat compensatory works shall be completed and functioning according to the Meadowbank Gold Project No Net Loss Plan (NNLP), prepared by Agnico-Eagle Mines Ltd. Dated October 15, 2012.

Since in-pit deposition of tailings material was permitted within the Portage area beginning in 2019, Agnico Eagle is working with DFO to adapt the above-referenced Meadowbank Gold Project No Net Loss Plan (NNLP) associated with NU-03-0191.3, as necessary. An addendum to the NNLP which describes proposed changes in habitat compensation related to in-pit deposition of tailings material was submitted to DFO in December 2020. DFO's review was received in May 2022. Agnico Eagle submitted a response to these comments directly to DFO in July 2022, with a follow-up call in August, 2022.

According to this discussion, the following activities occurred in 2023 and 2024:

- June 2023: Agnico Eagle provided to DFO a *2023 Study Plan for Siting of Stream Spawning Habitat Enhancements at the Meadowbank Complex* (dated June 12th, 2023).
 - Briefly, Agnico Eagle used the site-specific spatial model for Arctic grayling young-of-year occupancy in combination with historical field data evaluations and stakeholder input to identify a short-list of sites for further field visits and habitat evaluations in 2023.
- June – September 2023: Site selection field studies were conducted, according to this plan.
 - Field evaluations focused on documenting habitat conditions within the candidate streams themselves, as well as locally (amount of connected overwintering habitat, as well as spawning and rearing locations). Stream habitat data collected historically in the corridor

from Baker Lake to the Whale Tail Mine was also reviewed to comment on the relative availability of optimal spawning habitat regionally.

- August 28th, 2023: Consultation on the proposed offsetting project and field visit to discuss potential locations with the Baker Lake HTO (KivIA and DFO invited).
 - A site visit and discussions with local stakeholders were held to obtain feedback on the candidate stream locations.
- July 5th, 2024: Submission of the final site selection report to DFO, along with baseline ecological monitoring plan.
 - Information from the above-described desktop and field assessments and stakeholder discussions was combined to provide a final commentary on site selection.
 - The C11/R06/km 23 location was identified as most suitable, based on existing flow and habitat conditions, and BLHTO representative comments.
- Summer 2024: Baseline ecological monitoring completed at proposed offsetting location (C11/R06/km 23) and reference sites, including adult fish visual surveys, egg kick net and aquascope surveys, larval drift trapping, temperature and water depth loggers.
- September 2024/February 2025: Meetings with BLHTO/KivIA (respectively) to review final site selection information and baseline monitoring program.

Agnico Eagle continues to work with DFO in consultation with local stakeholders (BLHTO, KivIA) on this program, and anticipates hosting another meeting with interested parties ahead of the 2025 field season to review results to date and next steps.

8.8.1.2 Habitat Compensation Monitoring Plan

As required by DFO Authorizations NU-03-0191.3 Condition 3 and 6 (Second and Third Portage Lakes), NU-03-0191.4 (Vault Lake) Condition 3 and 6; NU-03-0190 Condition 5 (AWPAR), NU-14-1046 (Phaser Lake) Condition 3 and 5; *Submit written report summarizing monitoring results and photographic record of works and undertakings.*

And

As required by NIRB Project Certificate No 004 Condition 53: Agnico Eagle Mines Ltd. shall, in consultation with the HTOs and DFO, develop a Fish Habitat Monitoring Plan, including augmenting baseline fisheries data in the period prior to operation, with the clear objective of demonstrating the success of the No Net Loss Plan approved by the DFO. The Fish Habitat Monitoring Plan should include Phaser Lake. The updated plan should be provided to the NIRB for review at least 30 days prior to commencement of construction activities. Results from the fisheries baseline data to be provided in the annual report to the NIRB.

According to Fisheries and Oceans Canada (DFO) Fisheries Act Authorizations (FAAs) NU-0190, NU-03-0191.3, NU-03-0191.4 and NU-14-1046, Agnico Eagle maintains a Habitat Compensation Monitoring

Plan (HCMP; Version 4, February 2017) to demonstrate whether fish habitat compensation features at the Meadowbank Mine are constructed and functioning as intended.

No monitoring was required in 2024 under the Meadowbank Mine's Habitat Compensation Monitoring Plan. The next event is scheduled for 2025 (AWAR R02 spawning pads monitoring and Dogleg Ponds enhancements monitoring).

Currently, monitoring of the AWAR R02 compensation feature is scheduled to continue every other year until decommissioning of the AWAR (orig. est. 2031), but Agnico Eagle anticipates discussions with DFO ahead of the next monitoring event (2025) to revise this approach.

8.8.2 Whale Tail Site

8.8.2.1 Fish Habitat Offsetting Plan

As required by NIRB Project Certificate No.008 Condition 24: *The Proponent shall engage Fisheries and Oceans Canada, and other interested parties to further assess:*

- *Whether the increased surface area of Whale Tail Lake is a viable offset to habitat losses resulting from development of the Project; and*
- *Whether Whale Tail end pit would support fish in the post closure scenario.*

Results of this assessment should be incorporated into the Habitat Compensation Plan and/or the Conceptual Fisheries Offsetting Plan as appropriate. The updated information should be submitted to the NIRB at within 60 days of the issuance of the Project Certificate.

And

As required by DFO Authorization 20-HCAA-00275 Condition 5.3.2: The Proponent shall monitor to validate Agnico Eagle Mines Ltd.'s Habitat Suitability Index (HSI). The monitoring shall be conducted to the satisfaction of DFO. Where appropriate, the HSI will incorporate additional knowledge generated by the monitoring plans and complementary measures research projects of the Approved Project (PATH No.: 16-HCAA-00370) and adjust the Habitat Evaluation Procedure (HEP) model according to the results generated. The HSI will be used to refine, as necessary, the performance end-points in habitat units for offsetting.

And

As required by DFO Authorization 16-HCAA-00370 Condition 5.2.1: The Proponent shall monitor to validate Agnico Eagle Mines Ltd.'s Habitat Suitability Index (HSI). The monitoring shall be conducted to the satisfaction of DFO. Where appropriate, the HSI will incorporate additional knowledge generated by the complementary measures research projects under section 4.2.2, in particular research project 4.2.2.1c, and adjust the Habitat Evaluation Procedure (HEP) model according to the results generated. The HSI will be use to refine, as necessary, the performance end-points in habitat units for offsetting.

As required by NIRB Project Certificate No.008 Condition 24, Agnico Eagle has submitted the Fish Habitat Offsetting Plan (Appendix 51 of the 2018 Annual Report) in March 2018 (accepted by DFO through Fisheries Act Authorization 16-HCAA-00370 on July 23rd, 2018). This document incorporates the

requested analysis of fish habitat gains from increased surface area in Whale Tail Lake and water quality modelling for Whale Tail Mine.

As described in FAA 16-HCAA-00370 Condition 5.2.1 and 20-HCAA-00275 Condition 5.3.2, Agnico Eagle will work with DFO to develop a plan for monitoring to validate HSIs used in offsetting plans for the Whale Tail Mine. This plan will incorporate (where appropriate) additional knowledge from the complementary measures research projects.

8.8.2.2 Fish Habitat Offset Monitoring Plan

As required by DFO Authorization 16-HCAA-00370 Condition 5.1.1.2: The proponent shall provided an updated Whale Tail Pit Fish Habitat Offset Monitoring Plan, prepared by Agnico Eagle Mines Ltd. To DFO for review and approval on or before December 31, 2018. This update shall include, but is not limited to, details on the monitoring methods, frequency of monitoring, sampling location and criteria for success.

And

As required by DFO Authorization 20-HCAA-00275 Condition 5.2.1: The Proponent shall provide a Whale Tail Expansion Fish Habitat Offset Monitoring Report to DFO including geotechnical and biological and ecological monitoring as per section 5.1.1. The Proponent is required to provide the Report by March 31 of 2027 and update annually for 10 years or until DFO indicates requirements of this Authorization have been met.

And

As required by DFO Authorization 16-HCAA-00370 Condition 5.1.1.3: The proponent shall develop a schedule for the implementation of the offsetting measures, and shall provide this schedule to DFO no later than December 31, 2019.

And

As required by DFO Authorization 16-HCAA-00370 Condition 5.1.1.4: The Proponent shall provide an annual Whale Tail Pit Fish Habitat Offset monitoring Report to DFO (and interested parties) following the construction of the offsetting habitat by March 31. The Proponent is required to provide the Whale Tail Pit Fish Habitat Monitoring Report until DFO indicates this requirement has been met.

And

As required by DFO Authorization 20-HCAA-00275 Condition 5.2.3: The Proponent shall provide a summary report of all Whale Tail Expansion Fish Habitat Offset Monitoring Reports described in section 5.2.1 before March 31, 2036 to DFO (and interested parties) which shall analyse results from the offsetting measures of the Whale Tail Expansion Project following the construction of the offsetting habitat. DFO reserves the right to request additional Summary Report if annual reporting were to continue until requirement has been met.

And

As required by DFO Authorization 16-HCAA-00370 Condition 5.1.1.5 and DFO Authorization 20-HCAA-00275 Condition 5.2.2: As part of the annual Whale Tail fish Habitat Offset Monitoring Report, the Proponent shall include, but not limited to:

- *a digital photographic record with GPS coordinates of pre-construction, during construction and post construction conditions shall be compiled using the same vantage points and direction to show that the approved works have been completed in accordance with the offsetting plan*
- *a summary of field observations for each respective year as well as as-built survey*
- *a detailed analysis report summarizing the effectiveness of the offsetting measures*

The schedule for the implementation of the offsetting measures as per DFO Authorization 16-HCAA-00370 Condition 5.1.1.3 was submitted to DFO on January 7th, 2020 (Appendix 48 of the 2019 Annual Report). This schedule was further revised in the Fish Habitat Offsetting Plan for the Whale Tail Expansion Project (March 2020; approved with issue of FAA 20-HCAA-00275). With a revised Life of Mine schedule approved in 2024, updates to the expected offsetting construction dates are provided here in the 2024 Fish Habitat Offsets Monitoring Report (Appendix 37).

According to DFO Authorization 16-HCAA-00370 Condition 5.1.1.2, Agnico Eagle submitted Version 1 of the Whale Tail Fish Habitat Offsets Monitoring Plan on March 2018 (Appendix 51 of the 2018 Annual Report) and having received no comment, resubmitted this plan to DFO on March 15th, 2019. This Plan was again referenced in the DFO-approved Fish Habitat Offsetting Plan for the Whale Tail Expansion Project (March 2020) and no modifications were received from DFO.

Agnico Eagle submitted Version 2 of the Whale Tail Fish Habitat Offsets Monitoring Plan (developed to include requirements of both Whale Tail site FAAs 16-HCAA00370 and 20-HCAA-00275) to DFO in July, 2021, and has not received any comment. According to Conditions 4.3.3, 5.1.1.2, and 5.3.1 of 20-HCAA-00275, this Plan includes a pre-offsetting ecological monitoring program to assess the suitability of flooded areas in Whale Tail South as fish habitat, prior to construction of the A18 sill. This program is based on the monitoring methods described in the approved Whale Tail Pit Expansion Project Fish Habitat Offsetting Plan (March, 2020), and was formally initiated in 2021. A final analysis report to address this requirement under 20-HCAA-00275 Condition 5.3.1 (Impact Analysis of Fish Habitat from Flooding) was provided to DFO under separate cover (dated April 30th, 2024).

In addition, according to 16-HCAA-00370 Condition 5.1.1.4, 5.1.1.5, and 20-HCAA-00275 Condition 5.2.1 and 5.2.3, the Whale Tail Fish Habitat Offsets Monitoring Plan (V2; July 2021) describes the schedule for monitoring of offsetting following construction of permanent offsetting features, which includes annual reporting to DFO and a final summary report. This monitoring schedule will be revised in keeping with changes to the offsetting construction schedule that will occur under the revised life of mine, and communicated with DFO.

In 2024, no field assessments were specifically required under the FHOMP. Monitoring is scheduled to resume after construction of the approved permanent offsetting features. Nevertheless, water level monitoring and water quality monitoring under the CREMP continued. Flood zone water levels remain similar to previous years and water quality within the flood zone remains suitable for aquatic life based on CREMP criteria.

Six research studies (Table 8-66) form the complementary measures for Whale Tail Mine offsetting. Progress of these studies and achievement of success criteria are evaluated annually by the Meadowbank Fisheries Research Advisory Group (MFRAG; Section 8.9). At this time, one study is

complete, and some study periods have been extended compared to original timelines, primarily due to restrictions during the Covid-19 pandemic.

Table 8-66 Whale Tail Mine complementary measures (research projects)

Study	Lead Researcher	Study Period*
Study 1: Assessment of changes in aquatic productivity and fish populations due to flooding of Whale Tail South and downstream lakes during operations	H. Swanson	2018 – 2025
Study 2: Assessment of impacts of the Baker Lake wastewater outflow on aquatic systems including fish and fish habitat	H. Swanson M. Hanson	2019 – 2026
Study 3: Literature review and field validation of northern lake fish habitat preferences	S. Doka	2018 – 2025
Study 4: Arctic Grayling occupancy modelling (COMPLETE)	H. Swanson	2018 – 2021
Study 5: End pit lake habitat use	TBD	TBD
Study 6: eDNA methods development	J. Stetefeld	2018 – 2025
* Estimated termination date as of December, 2024.		

8.8.2.3 Consultation

As required by DFO Authorization 16-HCAA-00370 Condition 5.1.1.6: *Each year, following the submission of the annual Whale Tail Pit Fish Habitat Offset Monitoring Report to DFO, the Proponent shall arrange to meet with DFO and interested parties (e.g., KIA) to review the results of the previous year of the monitoring program. The results of the meetings and any mutually agreed upon modifications aimed at improving the effectiveness of the offsetting monitoring program shall be incorporated into the upcoming year of the monitoring programs. The Proponent shall update the Whale Tail Pit Fish Habitat Offset Monitoring Plan, to reflect the changes, and the plans shall be approved in writing by DFO prior to implementation.*

Annual meetings to review results of the previous year's Whale Tail Mine Fish Habitat Offset Monitoring Report will be implemented following the first year of constructed habitat offset monitoring.

8.8.2.4 Complementary Measures Research - Fish Habitat Offsetting Plan Whale Tail Mine

As required by DFO Authorization 16-HCAA-00370 Condition 4.2.1.2: *The Proponent shall provide updated research plans with detailed methodologies for projects listed under conditions 4.2.2.1a, b, c and d. Each updated plan shall be provided to DFO for approval on or before December 31, 2018 and at least 60 days prior to commencement of research.*

And

As required by DFO Authorization 16-HCAA-00370 Condition 4.2.1.6: *The proponent shall make all effort to ensure that the results from the research projects conducted for the complementary measures are published in peer-reviewed scientific journals.*

And

As required by DFO Authorization 16-HCAA-00370 Condition 4.2.1.3: *The proponent shall initiate a literature review no later than November 2018, and provide the results of this review to DDO no later than February 28, 2019. This shall include an outline of the proposed studies by February 28, 2019, and a complete detailed research plans by December 31, 2019.*

In compliance with DFO Authorization 16-HCAA-00370 Condition 4.2.1.2, updated research plans for these studies are provided in Annual Progress Reports on Complementary Measures, which are submitted to DFO by May 30 annually, in compliance with Condition 4.2.1.5 of the Authorization.

A summary of the research plans and details on the progress of each study listed under Condition 4.2.2.1a-e is also provided in the 2024 Fish Habitat Offset Monitoring Report (Appendix 37), including progress towards publication in peer-reviewed scientific journals.

As per Condition 4.2.1.3, the requested literature review and preliminary study outline for the end pit lake study were provided to DFO by email on March 15th, 2019 (Appendix 42 of the 2018 Annual Report). As communicated to DFO, the complete detailed research plan will be provided once a research partner is identified, which will be approximately 1 – 2 years prior to study initiation (est. 2027).

8.9 MEADOWBANK FISHERIES RESEARCH ADVISORY GROUP (MFRAG)

As required by DFO Authorization 16-HCAA-00370 Condition 4.2.1.4: *To serve as an advisory group for the complementary measures that shall be undertaken as listed under condition 4.2.2.1, the Proponent shall establish a Meadowbank Fisheries research Advisory Group (MFRAG). The MFRAG membership shall include DFO and the Proponent, an independent third party research advisor, any interested Inuit organizations within the Kivalliq Region, and other agencies or interested parties s considered appropriate by MFRAG members. The proponent shall develop a draft terms of reference and participant list for this advisory group which shall be provided to DFO by September 1, 2018.*

As part of the Fish Habitat Offsetting Plan for Whale Tail Pit (C. Portt and Associates, 2018a), the MFRAG was conceptualized to provide a forum for input from key stakeholders. Terms of Reference were signed by the parties of the MFRAG (Agnico Eagle, DFO, Baker Lake Hunters' and Trappers' Organization, Kivalliq Inuit Association, and a designated external advisor) in 2020 and reviewed by the parties in December 2023, with no changes proposed. The MFRAG has met annually since 2019 to review project progress reports, propose and approve or reject new projects or project components, and assess whether criteria for success have been met.

In 2024, the sixth MFRAG meeting was held by video conference on December 12th, with all member groups participating. In advance of the meeting, all member groups received the previous year's Annual Progress Report, along with a non-technical summary in English and Inuktitut. Progress of each research study was presented by the lead researcher, and MFRAG parties had the opportunity for questions, comments, and open discussion with the research teams. Each MFRAG member group agreed to provide written comments, if any, by February 7th, 2025. Written comments were received from DFO and the external advisor, and will be distributed to all member groups and the research study leads for consideration.

Further details of the research studies (complementary measures) and progress towards criteria for success are provided in the 2024 Fish Habitat Offsets Monitoring Report (Appendix 37).

8.10 KANGISLULIK LAKE TROPHIC CHANGES

As required by NIRB Project Certificate No.008 Condition 23: *The Plan for undertaking these additional studies and associated monitoring should be submitted to the NIRB at least 30 days prior to operations, with updates submitted annually thereafter or as may otherwise be required by the NIRB. A report on the results of these studies and associated monitoring should be provided at least 30 days prior to closure. The Proponent shall, reflecting any direction from Environment and Climate Change Canada and Fisheries and Oceans Canada:*

a) Conduct additional analysis to support the conclusions that a change in trophic status in Mammoth Lake would not impact fish productivity;

b) Undertake additional site-specific studies to assess the predicted trophic change on lake ecosystem productivity to monitor potential changes to downstream environments;

As part of the FEIS Addendum for the Whale Tail Expansion Project (Agnico Eagle, 2018; Section 6.5), supplemental analyses were conducted to understand impacts of Project-related changes to water quality in Kangislulik Lake (and downstream lakes). It was determined that anticipated increases in phosphorus would increase the lower trophic food base for fish, potentially resulting in numerical increases in forage fish such as Slimy Sculpin, and a minor but not measurable increase in growth and reproduction rates for large-bodied fish such as Lake Trout and Arctic Char. However, any observed effects are expected to be reversible during late closure or post-closure, and the stability of the fish population is not expected to be compromised.

c) Monitor actual loadings/concentrations in the receiving environment, identify trends in downstream chemistry and productivity, and track trophic status of Mammoth Lake

Predictions for changes in water quality and lake ecosystem productivity for Kangislulik Lake and downstream lakes are being tracked through annual compliance monitoring programs (Water Quality and Flow Monitoring Plan and the CREMP). Water quality sampling and analyses of lower trophic levels (phytoplankton biomass and diversity; benthic invertebrate population metrics) occur yearly under these programs, and results are reported in Section 8.5 (Water Quality and Flow Monitoring) and Appendix 26 (CREMP Report). Growth rates and abundance of small-bodied fishes were also examined in a study conducted by University of Waterloo researchers from 2018 - 2021. Results to date were provided in the 2024 MFRAG meeting, and final reporting from this research study is expected in 2025. Details of this research study are also provided in the Fish Habitat Offset Monitoring Report (Appendix 37).

8.11 FISH-OUT PROGRAM SUMMARY

8.11.1 Meadowbank Site

No fish-out program occurred in 2024.

8.11.2 Whale Tail Site

As required by DFO Authorization 16-HCAA-00370 Condition 2.4 and 20-HCAA-00275 Clause 2.3.7: *The proponent shall provided a final fish-out plan to DFO at least three weeks prior to commencing the fish-out program to allow for review and approval.*

And

As required by DFO Authorization 16-HCAA-00370 Condition 3.2.1: *All fish-out results shall be provided to DFO in a fish-out monitoring report within 2 months of the completion of a fish-out program. In addition, the Proponent shall provide DFO with photocopies of all field data/notes, copies of photographs with GPS coordinates and an electronic database of data collected and result of all sample analyses. This condition shall be followed in accordance with the General Fish-out Protocol for Lakes and Impoundments in the Northwest Territories and Nunavut.*

No fish-out program occurred in 2024.

8.12 AEMP[§]

8.12.1 Introduction[§]

The Aquatic Effects Management Program (AEMP) for the Meadowbank Mine was developed in 2005 as part of the project's Final Environmental Impact Statement (FEIS; Cumberland, 2005), and has been formally implemented since 2006. In December 2012, the AEMP was restructured to serve as an overarching “umbrella” program to integrate results of individual, but related, monitoring programs in accordance with the current NWB Type A Water License 2AM-MEA1530 (Meadowbank Mine) and NWB Water License 2AM-WTP1830 (Whale Tail Mine) requirements. The scope of the original 2005 AEMP was renamed the Core Receiving Environment Monitoring Program (CREMP; 2024 report provided in Appendix 26). The AEMP Plan was last updated in April, 2022 (Version 5).

According to the Plan, this 2024 AEMP synthesis report aims to summarize and evaluate findings across all relevant aquatic monitoring programs to understand linkages between sources of stressors and potential effects. Specifically, for each of the Meadowbank and Whale Tail Mines, this AEMP report will:

- Summarize the results of each of the underlying monitoring programs, and identify exceedances of triggers and thresholds;
- For variables with trigger or threshold exceedances, provide an integrated evaluation (across programs) of magnitude, spatial scale, temporal trends, causation, and uncertainty using a categorical rating system and an issue-specific conceptual site model; and
- Based on this evaluation, recommend additional management actions.

8.12.2 Meadowbank Site AEMP[§]

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 16: *The results of monitoring under the AEMP.*

8.12.2.1 Summary of Results of AEMP Monitoring Programs[§]

In 2024, AEMP-related monitoring programs for the Meadowbank Mine (excluding the Whale Tail Mine, which is assessed in Section 8.12.3) consisted of the:

- Core Receiving Environment Monitoring Program (CREMP) (and targeted effects-assessment studies, when required);
- Minesite Water Quality and Flow Monitoring;
- Effluent-related Monitoring (Metal and Diamond Mining Effluent Regulation (MDMER) Monitoring);
- Groundwater Monitoring;

- Visual AWAR and Quarries Water Quality Monitoring;
- Tailings Pore Water Monitoring; and
- Air Quality and Dustfall Monitoring.

The results of these monitoring programs are integrated in the AEMP and assist in the evaluation of potential effects of mining activities on the aquatic environment.

Programs that are part of the AEMP model but were not required to be conducted in 2024 for the Meadowbank Mine include:

- Fish-out programs;
- Dike Construction and Dewatering Monitoring; and
- Blast Monitoring.

For each AEMP monitoring program conducted in 2024, a summary of trigger/threshold or guideline exceedances for environmental stressor variables is provided in Table 8-67. Across all programs, consistent trigger or guideline exceedances for stressor variables were only identified through the CREMP (changes in TDS and constituent major ions). These results indicate an increase in the measured parameter compared to baseline/reference concentrations, and do not indicate an exceedance of thresholds for impacts to aquatic life (e.g. all water quality results were within CCME Water Quality Guidelines for the Protection of Aquatic Life). In addition to the CREMP observations, water quality guidelines for TSS were exceeded in one non-contact water management ditch (ST-6) in September. Since this was a punctual event with known cause, a brief evaluation in the AEMP context is provided.

1. Water-borne toxicants - Conventional Parameters, Major Ions, and TDS: Mine-related changes in a number of inter-related water quality parameters without effects-based thresholds (e.g., CCME water quality criteria) continue to be observed for all near-field lakes (2024: conductivity, hardness, major ions – calcium, magnesium, potassium).

2. Suspended Solids – TSS: This parameter exceeded NWB limits in September at the Portage Area West Diversion Ditch, a channel created in 2012 to divert non-contact water away from mine site infrastructure towards Third Portage Lake.

Results of the AEMP monitoring programs in 2024 are further summarized in text below, and the integrated evaluation of sources, exposure, and effects, along with management actions is provided in Section 8.12.2.2.

Table 8-67 Summary of trigger/guideline exceedances for AEMP programs at the Meadowbank Mine in 2024[§]

	AEMP Program								
	CREMP	Dike Construction & Dewatering Monitoring	Habitat Compensation Monitoring	Effluent-Related Monitoring	Minesite Water Quality and Flow Monitoring	Fish-Out Studies	Visual A WAR Water Quality Monitoring	Blast Monitoring	Tailings Pore Water Monitoring ³
Stressor Variables									
Suspended solids	○		○	●		○		NA	○
Sediment deposition	NA		NA	NA		○		NA	NA
Water-borne toxicants	●		○	NA		NA		NA	○
Sediment toxicants	NA		NA	NA		NA		NA	NA
Nutrients	○		○	NA		NA		NA	○
Other physical stressors	NA		NA	NA		NA		NA	NA
Effects Variables									
Phytoplankton	○ ²		NA	NA		NA		NA	NA
Zooplankton	NA		○	NA		NA		NA	NA
Fish	NA		○	NA		NA		NA	NA
Benthic invertebrates	○		● ⁴	NA		NA		NA	NA
Periphyton	NA		NA	NA		NA		NA	NA
Fish habitat	NA		NA	NA		○ ⁵		NA	NA

Notes:

1 - Results are compared to NWB Water License effluent criteria for reference only - no release to surface water in 2024.

2 - Decrease in biomass and/or richness at one or more individual locations, not mine-related.

3 - Results pending. No release to receiving environment in 2024.

4 - Increased benthic invertebrate population density in effluent exposure areas compared to reference (2017 and 2020).

5 - Road material deposition through bridge at water crossings. Potential for impacts to fish habitat, remedial actions underway.

- Stressor variables: No trigger/guideline exceedance
Effects variables: No apparent effects or unlikely mine-related
- Stressor variables: Trigger or guideline exceedance (and significant difference from baseline/ref. where available)
Effects variables: Possible mine-related effects (discussed in text)
- Observed effects, likely mine-related (discussed in text)

Note: Results for air quality are reviewed to inform trends assessments, but do not have triggers sent in the context of effects on the aquatic environment, so are not included in this table

8.12.2.1.1 Meadowbank CREMP^s

Briefly, no new mine-related changes in CREMP-measured parameters were recorded in 2024. There are no major mining activities taking place at Meadowbank and effluent discharge only occurred at Second Portage Lake from October to December in 2024.

Similar to previous years, the before-after-control-impact evaluation and trend analyses only identified mine-related increases in concentrations of dissolved solids and related parameters (hardness, conductivity, and constituent major ions such as calcium, magnesium, potassium). While the changes are considered to be mine-related, there is no evidence to suggest concentrations are continuing to increase, or that they would result in adverse ecological effects.

Sediment chemistry was not required to be analyzed in 2024.

The phytoplankton community at Meadowbank showed a statistically significant decrease in excess of trigger values (20% effect size) for biomass at WAL only, and in richness at TPE, SP, and WAL. However, the observed fluctuations fall within the range of historical baseline/reference conditions and were not considered to be mine-related.

No statistically significant changes to the benthic invertebrate community relative to baseline/reference conditions occurred in the 2024 analysis, except for an increase in taxa richness at SP for the 2021 - 2024 time period. This was determined unlikely to be mine-related based on analysis of spatial-temporal trends.

8.12.2.1.2 Meadowbank Water Quality and Flow Monitoring^s

Results of water quality analyses for managed non-contact water and seepage to the receiving environment are discussed here. Complete results of the Water Quality and Flow Monitoring program are provided in Section 8.5.

East and West Diversion Ditches (ST-5/ST-6)

Meadowbank Mine non-contact water collection locations with discharge to the receiving environment consist of the East and West diversion ditches. These ditches were constructed on the north side of the mine site to intercept overland flow and direct it to NP-2 Lake and Third Portage Lake, respectively. For these locations, single samples are collected monthly during open water (generally open water lasts from June – October) for analysis by an accredited laboratory and compared to NWB Water License TSS criteria for individual grab samples and the monthly mean. For the East diversion ditch (ST-5), all results for 2024 were in compliance with these criteria. For the West diversion ditch (ST-6), an exceedance occurred for the month of September. A sediment plume caused by heavy rains was observed at the outflow of the ditch, in the near-shore area of Third Portage Lake (within the CREMP TPN basin), and contingency mitigation measures were put in place to limit the extents. Samples of the water quality (TSS) of the lake outside of the barrier were collected to ensure it was functioning as intended. Acute Lethality samples were also collected and result showed no toxicity. The issue is discussed in more detail in Section 8.5.2.1.2.

Waste Rock Storage Facility Seepage (NP-2)

In 2013, seepage from the North Cell TSF through the Portage WRSF was identified and sampled as sump ST-16. Water in this sump is pumped back to contact water management infrastructure (in 2024, to the Portage Pit). Nevertheless, Agnico Eagle initiated a targeted monitoring program for the potential receiving environment in that area (2013 – 2018), with the closest receptor being NP-2 Lake. Yearly water quality monitoring in NP-2 continues. There are no applicable NWB Water License limits for this location. Results are used as applicable to inform AEMP integrated analyses (Section 8.12.2.2), but confirm no impacts to downstream lakes.

Mill Seepage (TPL-Assay)

Monitoring results for the designated location in Third Portage Lake (TPL-Assay) in response to mill seepage (first identified in 2013) continues to indicate that there have been no impacts to the near shore receiving water. The seepage appears to be effectively contained through construction of an interception trench (2014) and installation of a pumping system. Pumping is conducted from the interception trench, as required, and sampling is completed for adjacent monitoring wells when water is present, and at the designated near-shore monitoring station in Third Portage Lake. There are no applicable license limits. Results are used as applicable to inform AEMP integrated analyses (Section 8.12.2.2).

8.12.2.1.3 Meadowbank Site Effluent-Related Monitoring^s

MDMER monitoring requirements include monitoring effluent (weekly/quarterly chemistry analysis, daily discharge volume, and toxicity testing), receiving environment water quality (4x/year monitoring at discharge and reference areas), and receiving environment biological monitoring studies (fish and/or benthic invertebrate monitoring on a three-year cycle). Results for 2024 in relation to regulatory criteria are summarized here and full results (Section 8.5) are used as applicable to inform the integrated analysis (Section 8.12.2.2).

In 2024, only East Dike seepage water was discharged to the receiving environment at the Meadowbank Mine (Second Portage Lake), and discharge only occurred between October and December. All effluent water quality analyses were in compliance with MDMER/NWB Water License criteria. Acute lethality effluent testing (Rainbow trout and *Daphnia magna*) was also performed as part of the MDMER effluent characterization, as required. In the single test with rainbow trout and all three tests with *Daphnia magna*, 0% mortality was reported at 100% effluent concentration.

EEM sub-lethal and acute lethality tests with four test species (*Ceriodaphnia dubia*, fathead minnow, *Lemna minor*, *Pseudokirchneriella subcapitata*), were conducted twice in 2024 (October 21st and November 25th). Briefly, all test results showed no acute lethality, and sublethal effects were identified in one test (November 25) for *Ceriodaphnia dubia* and *Lemna minor*. Complete results will be analyzed in context as part of the Cycle 6 EEM Biological Monitoring Interpretive Report (due in July, 2027), along with receiving environment water quality analyses.

The last EEM Biological Monitoring Interpretive Report (Cycle 5) was dated June 28th, 2024. This report consisted of an Investigation of Cause (IOC) after higher benthic invertebrate population densities were observed in effluent discharge areas compared to reference in the previous two cycles (Wally Lake discharge location (2017) and Second Portage Lake discharge location (2020)). Fish population and

tissue studies were not required as part of Cycle 5. The study re-evaluated available data from EEM and CREMP studies on effluent and surface water quality, sediment quality, and benthic invertebrate communities from 2006 – 2023 for the two exposure areas (SP and WAL) and two reference areas (INUG and PDL). The objective was to determine if variations in benthos covary with water or sediment quality variables that are associated with the released effluent. Results of the IOC indicated considerable support that variability in benthic invertebrate densities (higher density in exposure areas) were caused by mine-related changes in conductivity (i.e. major ions) from effluent release.

8.12.2.1.4 Meadowbank Groundwater Monitoring[§]

The complete 2024 Groundwater Monitoring Report is provided in Appendix 35, with a summary below in the context of the AEMP. A more detailed summary of the 2024 program for the Meadowbank Mine is provided in Section 8.7.1.

While not directly applicable to groundwater, water quality results of this program are compared to the maximum average concentration (MAC) limit of the NWB Water License for Third Portage Lake effluent discharge, for comparative purposes only. Parameters include TSS, chloride, various nutrients, cyanide, and a selection of metals, including those regulated under MDMER. In 2024, all parameters concentrations met these criteria.

Overall, the 2024 program results continue to indicate that while contaminant transport from the tailings cells has locally affected groundwater quality to the west of the central dump and mined-out pits, the current gradient between the mined-out pits and surrounding lakes (SPL, TPL) is preventing advection from carrying contaminants further eastwards (towards the lakes). Groundwater contamination is therefore not likely to be a potential exposure pathway into the receiving aquatic environment and is not considered further in the AEMP assessment at this time.

8.12.2.1.5 AWAR and Quarries Water Quality Monitoring[§]

Under the Freshet Action Plan, pre-freshet and freshet inspections were conducted at bridges and culverts along the AWAR in 2024 daily to monthly (as require based on flow conditions) from May through September. These inspections are conducted to document the presence/absence of flow, erosional concerns, and turbidity plumes. No turbidity plumes or erosional concerns were observed, and no samples were required to be collected.

In fall 2024, deficiencies were identified through deposition of road material at bridge crossings along the AWAR. Road material is apparently being entrained by passing vehicles and passing through the bridge deck. Agnico Eagle has proposed a remedial action plan and is working with DFO to eliminate this potential effect.

8.12.2.1.6 Meadowbank Tailings Pore Water Monitoring[§]

The Tailings Pore Water Monitoring program is discussed in Section 5.1.1.1. Briefly, in 2024 Agnico Eagle collected monthly tailings effluent slurry samples prior to disposal in the Portage Pits. Reclaim water from the pits is also sampled, when safely feasible. There are no applicable license limits. In-pit porewater sampling was also conducted at Goose Pit in 2022, 2023, and 2024. Results, when available,

will inform closure and post-closure monitoring plans for the Meadowbank Mine and will be presented in the Closure and Reclamation Plan. As a result, pore water monitoring is not considered further in the AEMP assessment at this time.

8.12.2.1.7 Meadowbank Air Quality and Dustfall Monitoring^s

The complete 2024 Air Quality and Dustfall Monitoring Report is provided in Appendix 42 and results are summarized in Section 8.14.1. Across the parameters evaluated (suspended particulates, NO₂, dustfall), dustfall and annual average TSP are considered the parameters most relevant to the AEMP analysis. Annual average TSP results in 2024 and historically have been well below the regulatory guideline. In 2024, a single monthly dustfall sample exceeded the related management threshold, which is equivalent to Alberta Environment guideline for industrial areas. It is noted that this guideline relates to nuisance/aesthetic concerns, not environmental quality. For the purposes of the AEMP evaluation, trends in dustfall are reviewed to help understand potential linkages to observed exceedances of aquatic triggers/guideline values. Visual assessment of trends to date (since 2011) indicates that in general, rates of dustfall appear to have been stable over time and across monitoring locations.

8.12.2.2 Integration of Monitoring Results^s

According to the AEMP, the results of the monitoring programs were integrated in a mechanistic fashion with a thorough review of results to identify any patterns among the relevant receiving environment monitoring programs. For groups of stressor variables where triggers or guidelines were consistently exceeded in 2024 (summarized in Section 8.12.2.1), a discussion of results across AEMP programs is provided here to explore spatial scale, temporal trends, causation, and uncertainty. Patterns among the programs are then characterized using an issue-specific conceptual site model, which assists in the evaluation of the transport pathways, provides information on specific media (identifies stressors) and evaluates receptors of concern (effects variables).

In 2024, water quality was the only stressor variable for which associated triggers or guidelines were consistently exceeded. The following activities were identified primarily as having the potential to impact water quality in the receiving environment, and are considered in the source evaluation:

Effluent Discharge

- Historical (to Wally Lake, Second Portage Lake) and current (East Dike seepage discharge as monitored non-contact water).

Managed Surface Water and Seepage

- East and West Portage Diversion Ditches;
- WRSF seepage (historical); and
- Mill seepage.

Construction Activities

- Historical. None in 2024.

While dust deposition was identified as a potential source of impacts, results of air quality monitoring to date indicate neither TSP nor onsite dustfall results have regularly exceeded available FEIS predictions or

long-term (annual or 30-d) regulatory guidelines. This potential source is therefore considered unlikely to be a major contributor to any unpredicted changes in aquatic systems, and is not considered further.

Similarly, groundwater monitoring continues to indicate that groundwater quality is not likely to have a significant effect on receiving environment surface water quality since pit inflows are the only inferred direction of flow at this time. As a result, this potential source of impacts to surface water is not considered further.

8.12.2.2.1 Changes in Conventional Parameters/Major Ions/TDS[§]

In 2024 and similar to previous years, CREMP analyses identified trigger exceedances and statistically significant changes relative to baseline/reference conditions at one or more near-field areas including TPE, TPN, SP and WAL for: conductivity, hardness, total dissolved solids, alkalinity and major ions (calcium, magnesium, potassium). These trends have been observed for many years, and as further explored below, while they are considered to be mine-related, the measured concentrations in 2024 are still relatively low and there is no evidence to suggest concentrations are increasing year over year, or that the observed concentrations would result in adverse ecological effects.

Notwithstanding, consideration was again given here to evaluate and classify results for these parameters across AEMP programs. No triggers are applicable to this variable group outside the CREMP, so Table 8-68 is restricted to that program, but relevant monitoring results across programs are reviewed further below as they relate to the source evaluation (Section 8.12.2.2.1.1) or effects evaluation (Section 8.12.2.2.1.3).

Table 8-68 Summary of monitoring results across AEMP programs related to conventional parameters and major ions in surface water[§]

Note: No triggers are applicable to this variable group outside the CREMP.

Stressor Variable Group: Conventional Parameters and Major Ions					
Program	Magnitude	Spatial Scale	Temporal Trend	Causation	Uncertainty
CREMP	1	Large	Stable	High	?
Magnitude: n/a – not evaluated/no applicable trigger 0 – no exceedance 1 – early warning trigger exceeded, or change from baseline 2 – management threshold exceedance (or change from baseline exceeding magnitude of concern) Spatial Scale: n/a – no magnitude of effect, therefore not evaluated small – localized scale moderate – sub-basin to basin scale large – basin to whole lake scale Temporal Trend Indicators: n/a – no magnitude of effect, therefore not evaluated Stable – no changes year-over-year Increasing – year-over-year increases Decreasing – year-over-year decreases Causation Ratings: n/a – no magnitude of effect, therefore not evaluated Low – no evidence for a mine-related source Moderate – some likelihood of a mine-related source High – the source of the problem is very likely to be mine-related Uncertainty Ratings (confidence in all other findings): ? – low uncertainty ?? – moderate uncertainty ??? – high uncertainty					

The conceptual site model presented in Table 8-69 assists in understanding the possible linkages (i.e., effect to receptors from the source). All available monitoring results for 2024 related to the identified potential sources/transport pathways, stressors, and receptors are reviewed in text format below.

Table 8-69 Integrated conceptual site model for AEMP assessment of observed changes in conductivity and related parameters at the Meadowbank Mine[§]

Source		Transport Pathways		Exposure Media					Effects Measures				
				Medium Stressor	Narrative	Magnitude	Spatial Scale	Link to Source	Receptor	Narrative	Magnitude	Spatial Scale	Link to Stressor
Surface Water													
Effluent, Managed Non-Contact Water, Seepage?	→	Discharge, run-off to surface water	→	Conductivity, hardness, major ions, TDS	CREMP lakes close to the mine (Third Portage, Second Portage, Wally) have higher concentrations of dissolved solids and constituent major ions compared to baseline/reference conditions. These changes are mine-related, but are not continuing to increase and are below adverse ecological effect levels.	T, SD	2+	Strong (see text)	Primary Production ^a Chlorophyll a ^a Phytoplankton biomass ^a Phytoplankton taxa richness ^c Sub-lethal toxicity (growth inhibition)	Biomass/Richness: No consistent (year-over-year), statistically significant changes above trigger effect sizes (20%). Toxicity: No growth inhibition in the last EEM reporting cycle (2021) or 2024. Rather, growth stimulation occurs in 90% effluent.	0	N/A	N/A
Secondary Production ^c Zooplankton sub-lethal toxicity (<i>Ceriodaphnia dubia</i>) ^c Zooplankton acute lethality (<i>Ceriodaphnia dubia</i> , <i>Daphnia magna</i>)										Targets for sublethal toxicity and acute lethality were met in the last EEM reporting cycle (2021) and 2024.	0	N/A	N/A
^{a, c} Benthic invertebrate density and richness										^c Increased density in effluent discharge sampling area compared to baseline/reference (2017, 2020). ^a No statistically significant changes in abundance/richness at CREMP sampling areas.	T, SD	2+	Strong (see text)
Fish ^c Sublethal toxicity (Fathead minnow) ^c Acute lethality (Fathead minnow, Rainbow trout) ^d Presence/absence										Toxicity: Targets for sublethal toxicity and acute lethality were met in the last EEM reporting cycle (2021) and 2024. Presence: Fish presence around dike faces was confirmed in the last Habitat Compensation Monitoring (2021)	0	N/A	N/A
Associated monitoring program:						Magnitude		Spatial Extent					
a	Core Receiving Environment Monitoring Program					0	No trigger exceedance			1 - Occurs at one near-field sampling area only			
b	Water Quality and Flow Monitoring					T	Exceeds early-warning trigger.			2+ - Multiple near-field areas			
c	Effluent-Related Monitoring					TT	Exceeds effects-based threshold.			All - Extends to far-field areas			
d	Habitat Compensation Monitoring					SD	Statistically significant difference from baseline/reference						
e	Groundwater Monitoring					Qual	Qualitative assessment						
f	AWAR and Quarries Water Quality Monitoring												
g	Tailings Pore Water Monitoring												

8.12.2.2.1.1 Source Evaluation^s

Since the water quality parameters (conductivity, hardness, total dissolved solids, alkalinity and major ions) are largely inter-related, conductivity has been used as an indicator parameter for source evaluations in this review, because it is commonly measured across all monitoring locations and programs. While CREMP conductivity triggers (27 $\mu\text{S}/\text{cm}$ for Second and Third Portage Lakes and 37 $\mu\text{S}/\text{cm}$ for Wally Lake; set at the 95th centile of baseline data), do not specifically apply to effluent or managed surface water results, they are used here to further understand the potential for a source to be contributing to observations of water quality changes in the receiving environment programs.

Effluent Monitoring - In 2024 and recent years, the only source of effluent discharge for the Meadowbank Mine was East Dike seepage, which was released to Second Portage Lake. Conductivity results (field measured) for the East Dike seepage effluent in 2024 (78 - 243 $\mu\text{S}/\text{cm}$; Section 8.5.2.1) exceeded the CREMP water quality trigger of 27 $\mu\text{S}/\text{cm}$. These results suggest that effluent discharge may be contributing to the observed water quality changes in the CREMP near-field lakes, as determined in previous years and noted in the CREMP report. The influence of effluent release on major ions in the receiving environment was also concluded through analysis of all available historical data in the 2024 EEM Cycle 5 Interpretive Report (Section 8.4.1).

Managed Surface Water Monitoring - The East and West diversion ditches are designed to redirect runoff from the northern area watershed away from mine facilities, to Second Portage Lake via NP-2 (East diversion ditch) and to Third Portage Lake (West diversion ditch). Monthly field-measured conductivity in both diversion ditches (East, ST-5: 46 - 396 $\mu\text{S}/\text{cm}$; West, ST-6: 30 - 264 $\mu\text{S}/\text{cm}$; Section 8.5.2.1) commonly exceeded the CREMP trigger (27 $\mu\text{S}/\text{cm}$). Again, although the trigger does not apply directly to these locations, it provides a benchmark and suggests these are potential sources of the elevated conductivity and related parameters (compared to baseline conditions) observed in CREMP results in Second and Third Portage Lakes.

Water quality monitoring also continues in two near-field lake locations (NP-2, Third Portage Lake) in response to historical seepage events (Section 8.12.2.1.2), to confirm that mitigation measures to eliminate seepage pathways remain effective. Conductivity in 2024 in NP-2, which receives East Diversion Ditch run-off and ultimately reports to Second Portage Lake, was field-measured at 59 - 204 $\mu\text{S}/\text{cm}$. Conductivity at the near-shore Third Portage Lake location TPL-Assay was field-measured at 56 - 379 $\mu\text{S}/\text{cm}$. Since conductivity results for these surface water locations receiving managed non-contact water or runoff exceed the CREMP trigger (95th centile of baseline), they may also be potential sources of the elevated conductivity and related parameters observed in the CREMP results for Second and Third Portage Lakes.

Summary - Based on these results, the most likely source of the changes to conductivity and related parameters identified through the CREMP continues to be effluent discharge and potentially, managed non-contact water runoff (likely current and historical).

8.12.2.2.1.2 Exposure Evaluation^s

Conductivity (tracked here as an indicator variable) measured in near-field CREMP lakes throughout 2024 was in the range of 33 - 54 $\mu\text{S}/\text{cm}$ (Second and Third Portage and Wally Lakes). These results for the near-field receiving environment just exceed CREMP trigger values set at the 95th centile of baseline concentrations (27 $\mu\text{S}/\text{cm}$ for Second and Third Portage Lakes and 37 $\mu\text{S}/\text{cm}$ for Wally Lake), but are

statistically greater than baseline/reference in the BACI analysis. Long-term trend analysis completed for data through 2021 indicated that conductivity and the other parameters of interest here (hardness, calcium, magnesium, total alkalinity, and TDS) have generally been stable from 2014 to 2021. A full description of the long-term trend analysis and results was included in the 2021 CREMP report.

Exposure and reference area water quality sampling for the EEM program was also conducted on November 24th and December 29th, 2024, and results for conductivity were 41 and 43 µS/cm for the exposure area (Second Portage Lake effluent discharge location). These values are consistent with CREMP results for near-field locations.

8.12.2.2.1.3 Effects Evaluation^s

Although ongoing CREMP analyses indicate that the observed changes in near-field water chemistry are likely mine-related, a thorough literature review in the 2019 CREMP report indicated that concentrations of these parameters at Meadowbank (which were similar 2024) remain well below concentrations associated with adverse effects to aquatic life.

The conclusions of this literature review that suggest no inhibitory effects are supported by monitoring results for aquatic receptors. Results of all associated monitoring programs for receptors of interest shown in Table 8-69 in 2024 or the last available year are summarized as follows:

- The most recent complete review of effluent toxicity assessments presented in the 2021 EEM Cycle 4 Interpretive Report (seven complete tests from 2018 – 2020, with an alga (*Pseudokirchneriella subcapitata*), a macrophyte (*Lemna minor*), a zooplankton (*Ceriodaphnia dubia*), and a fish, Fathead minnow) indicated that 48 of 49 measurement endpoints met thresholds (in one 2020 test an IC25 was less than 30% effluent concentration (growth for fathead minnow), but these test results were identified as anomalous based widely ranging mortality across replicates).
- The 2024 Cycle 5 EEM Interpretive Report also determined that historical effluent at the tested concentration (90%) did not inhibit phytoplankton growth but rather stimulated it in sublethal toxicity testing. The effect could not be attributed to any specific parameter.
- However, as reported in the 2024 CREMP Report, no pervasive mine-related changes in phytoplankton biomass or communities in the receiving environment have been observed to date for Meadowbank Mine receiving lakes (BACI analysis).
- The Cycle 5 EEM Interpretive Report did find considerable support that observed variability in benthic invertebrate densities in the receiving environment (higher density in effluent exposure areas) has been caused by mine-related changes in conductivity (i.e. major ions) from effluent release. Through this program, increased density (compared to baseline/reference) above the critical effect size was observed at the Wally Lake effluent exposure area in 2017, and at the Second Portage Lake near-field exposure area in 2020. An increase was also observed at the Second Portage far-field exposure area in 2020, but residuals were within the normal range of variation.
- Benthic invertebrate community sampling is also performed through the CREMP, using a statistically robust Before-After Control-Impact (BACI) analysis. Sampling stations are further from effluent release areas than EEM near-field exposure stations, but the EEM Second Portage far-field station corresponds to the CREMP location.

- In the context of interpreting the Cycle 5 EEM results, it is noted that the CREMP BACI analysis of 2020 benthic invertebrate density, comparing the exposure area SP-FF to the reference area INUG, indicated no significant differences in benthic invertebrate density (Azimuth, 2021), and this continues to be the case (Azimuth, 2022a, 2023, 2024). BACI is a robust experimental design that considers temporal changes in both the exposure and reference areas. As indicated in Azimuth (2020), benthic density in INUG increased during the period of 2015 to 2020, relative to earlier years, with a similar trend observed in Second Portage Lake. At least part of the observed changes in benthic density at effluent stations may therefore be related to natural variability.
- Finally, while the last HCMP program results in 2021 indicate that periphyton growth on dike faces continues to be slow (as expected in Arctic ultraoligotrophic lakes), interstitial water quality meets CCME criteria, and fish presence around the dike faces has been confirmed.

Summary – Measured concentrations of conductivity and related parameters remain above baseline/reference values in Meadowbank receiving lakes. These changes appear related to effluent discharge, and appear to be stimulating benthic invertebrate production in areas immediately adjacent to effluent diffusers, though some portion of the observed changes may also be natural variability. Concentrations are well below those associated with adverse effects to aquatic life. While spatial extents of the observed changes in benthic invertebrate density have not been specifically examined, it may be inferred that they do not extend significantly beyond the near-field effluent discharge area since increased density has not been observed at CREMP sampling stations in the same lakes.

8.12.2.2.1.4 Management Actions[§]

As a result of this review, any mine-related impacts to receptors of concern will continue to be assessed through the scheduled monitoring programs and no adaptive management is planned in relation to the observed changes in conventional parameters and major ions for near-field lakes.

8.12.2.2.2 TSS in Portage West Area Diversion Ditch[§]

TSS is monitored monthly during open water in the Portage Area East and West diversion ditches. For the West diversion ditch (ST-6), an exceedance occurred for the month of September. During regular inspections (September 20th), a sediment plume caused by heavy rains was observed at the outflow of the ditch, in the near-shore area of Third Portage Lake (within the CREMP TPN basin). The plume extended ~2 m into the lake and ~20m along the immediate shoreline area, with no observable impact further into the lake. Contingency mitigation measures were put in place to limit the extents, including woodchip booms and a marine curtain. Targeted water quality sampling was conducted outside the installed turbidity curtains and demonstrated no acute lethality. The issue is discussed in more detail in Section 8.5.2.1.2. A brief summary of this issue in the AEMP format is provided here since triggers were not exceeded further in the adjacent receiving environment, since it was a punctual event, and the source is known.

Table 8-70 Summary of 2024 monitoring results across AEMP programs related to TSS in surface water[§]

Stressor Variable Group: TSS in surface water					
Program	Magnitude	Spatial Scale	Temporal Trend	Causation	Uncertainty
CREMP (TPN)	0	n/a	n/a	n/a	?
Minesite Water Quality and Flow	2	Small	Stable	High	?
Magnitude: n/a – not evaluated/no applicable trigger 0 – no exceedance 1 – early warning trigger exceeded, or change from baseline 2 – management threshold exceedance (or change from baseline exceeding magnitude of concern) Spatial Scale: n/a – no magnitude of effect, therefore not evaluated small – localized scale moderate – sub-basin to basin scale large – basin to whole lake scale Temporal Trend Indicators: n/a – no magnitude of effect, therefore not evaluated Stable – no changes year-over-year Increasing – year-over-year increases Decreasing – year-over-year decreases Causation Ratings: n/a – no magnitude of effect, therefore not evaluated Low – no evidence for a mine-related source Moderate – some likelihood of a mine-related source High – the source of the problem is very likely to be mine-related Uncertainty Ratings (confidence in all other findings): ? – low uncertainty ?? – moderate uncertainty ??? – high uncertainty					

Since no impacts to TSS were observed in the larger receiving environment of TPN through regular CREMP sampling or targeted spill sampling, the potential for effects to receptors from the source (linkages) are not evaluated further through a conceptual model, but the source, exposure, and potential for effects are discussed below.

8.12.2.2.2.1 Source, Exposure, and Effects Evaluation[§]

In this case, the source of the trigger exceedance was determined to be heavy rains occurring in late September, without adequate sediment control measures in place within the diversion ditch. Extents of the observed turbidity in the receiving environment of Third Portage Lake were limited spatially (approximately 2 m x 20 m) and temporally, resulting in limited potential for effects on receptors. Results of TSS monitoring under the CREMP further from shore in this lake basin (CREMP station TPN) in September, November, and December indicated that TSS was within CREMP triggers.

8.12.2.2.2.2 Management Actions[§]

As discussed, upon noticing the turbidity plume during regular inspection, mitigation measures were installed (woodchip booms, Marine curtain) and maintained as needed to suppress further TSS transport. As part of regular spill response, Agnico Eagle will adjust administrative controls to better ensure adequate sediment controls are in place within water management infrastructure prior to rainfall events. Agnico Eagle intends to investigate and trial alternative means for sediment and erosion control during the 2025 freshet. A geotechnical field investigation will be conducted to identify further areas of

improvement to the structure to prevent similar events from occurring. No additional management actions are identified based on this AEMP evaluation.

8.12.3 Whale Tail Site AEMP^s

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 19: *The results of monitoring under the AEMP.*

8.12.3.1 Summary of Results of AEMP- Related Monitoring Programs^s

In 2024, AEMP-related monitoring programs for the Whale Tail Mine included:

- Core Receiving Environment Monitoring Program (and targeted effects-assessment studies, when required);
- Mercury Monitoring Program;
- Minesite Water Quality and Flow Monitoring;
- Effluent-Related Monitoring (MDMER Monitoring);
- Fish Habitat Offsets Monitoring;
- Groundwater Monitoring;
- Visual WTHR and Quarries Water Quality Monitoring;
- Blast Monitoring; and
- Air Quality Monitoring.

The results of these monitoring programs are integrated in the AEMP, and assist in the evaluation of potential effects of mining activities on the aquatic environment.

Programs that are part of the AEMP model but were not required to be conducted in 2024 for the Whale Tail Mine include:

- Dike Construction and Dewatering Monitoring; and
- Fish-Out Studies.

For each AEMP monitoring program conducted in 2024, a summary of trigger/threshold or guideline exceedances and observed effects (changes in receptor groups) is provided in Table 8-71. Across all programs, consistent trigger or guideline exceedances for stressor variables were only identified through the CREMP. In all cases, these results only indicate an increase in the measured parameter compared to baseline/reference concentrations, and do not indicate an exceedance of thresholds for impacts to aquatic life and/or unpredicted changes (e.g. all water quality results were within CCME Water Quality Guidelines for the Protection of Aquatic Life and/or FEIS-predicted ranges, where available).

1. **Nutrients:** CREMP triggers were exceeded for TKN, TP, TOC, and DOC, along with a statistically significant increase above baseline/reference values in one or more near field lakes (WTS, KAN, and/or A20) in 2024.
2. **Water-borne toxicants - Conventional parameters, TDS and constituent major ions:** CREMP triggers were exceeded along with statistically significant increases above baseline/reference concentrations at near and mid-field areas (WTS, A20, KAN, A76 and NEM)

for conventional parameters (alkalinity, conductivity, hardness), major ions (calcium, potassium, magnesium, sodium) and TDS.

3. **Water-borne toxicants - Metals:** Yearly mean concentrations for lithium again marginally exceeded CREMP trigger values and statistically significant increases above baseline/reference values were observed at WTS and KAN.

Results of the AEMP monitoring programs are further summarized in text below, and the integrated evaluation of sources, exposure, and effects, along with management actions is provided in Section 8.12.3.2.

Table 8-71 Summary of trigger/guideline exceedances for AEMP programs at the Whale Tail Mine in 2024[§]

AEMP Program										
	CREMP	Mercury Monitoring Program	Dike Construction & Dewatering Monitoring	Fish Habitat Offsets Monitoring	Effluent-Related Monitoring	Minesite Water Quality and Flow Monitoring	Fish-Out Studies	WTHR Water Quality Monitoring	Blast Monitoring	Groundwater Monitoring ¹
Stressor Variables										
Suspended solids	○	NA		NA	○	○		○	NA	NA
Sediment deposition	NA	NA		NA	NA	NA		○	NA	NA
Water-borne toxicants	●	○		NA	○	NA		NA	NA	○
Sediment toxicants	○ ²	○		NA	NA	NA		NA	NA	NA
Nutrients	●	NA		NA	○	NA		NA	NA	NA
Other physical stressors	NA	NA		NA	NA	NA		NA	● ⁷	NA
Effects Variables										
Phytoplankton	● ⁸	NA		NA	NA	NA		NA	NA	NA
Zooplankton	NA	NA		NA	○	NA		NA	NA	NA
Fish	NA	○		● ³	○	NA		NA	NA	NA
Benthic invertebrates	● ⁹	NA		NA	● ⁶	NA		NA	NA	NA
Periphyton	NA	NA		NA	NA	NA		NA	NA	NA
Fish habitat	NA	NA		● ⁴	NA	NA		○ ⁵	NA	NA

Notes:

- 1- No guidelines apply. Certain parameters are compared to FEIS assumptions and effluent criteria for reference.
- 2 - Targeted study for sediment chromium near WT Dike found no evidence for mine-related changes.
- 3 - Apparent increase in growth metrics for Lake Trout in flood zone lakes
- 4 - Fish use of flooded terrestrial habitat confirmed
- 5 - Road material deposition through bridge at water crossings. Potential for impacts to fish habitat, remedial actions scheduled.
- 6 - Increased density of benthic invertebrates in effluent exposure areas. Investigation of cause is proposed for next EEM Cycle.
- 7 - Single blast (of 235 records) exceeded PPV. None exceeded IPC.
- 8 - Apparent decrease in taxa richness at subset of near- and mid-field lakes.
- 9 - Apparent increase in abundance and/or richness at WTS, KAN, and NEM



Stressor variables: No trigger/guideline exceedance
Effects variables: No apparent effects or unlikely mine-related



Stressor variables: Trigger or guideline exceedance (and significant difference from baseline/reference where available)
Effects variables: Possible mine-related effects (discussed in text)



Observed effects, likely mine-related (discussed in text)

Note: Results for air quality are reviewed to inform trends assessments, but do not have triggers sent in the context of effects on the aquatic environment, so are not included in this table

8.12.3.1.1 Whale Tail CREMP^s

The Core Receiving Environment Monitoring Program report for 2024 is provided in Appendix 26, and additionally summarized in Section 8.1. Highlights in the AEMP context are provided below.

Briefly, some statistical increases from baseline/reference conditions were observed in some near-field and mid-field areas for: TDS and constituent ions (calcium, magnesium, potassium, and sodium); some nutrients (TKN, TP, TOC, DOC), and lithium. Similar to results seen over the years at the Meadowbank study lakes, these trends mainly represent increases above baseline/reference conditions only; except for total phosphorus, none of these analytes have effects-based guidelines for the protection of aquatic life. Total phosphorus is one of the main constituents of concern for the Whale Tail Mine, with increases above CREMP triggers predicted and quantified in the FEIS.

Unlike previous years, phytoplankton biomass showed no significant change from baseline/reference in 2024. Increased primary production was predicted in the FEIS and was generally observed in the first few years of mining in near-field lakes, but appears to have stabilized and corrected. A statistically significant apparent decrease in phytoplankton taxa richness was observed at several lakes (KAN, NEM, A76) in excess of the 20% trigger, but within the 50% threshold value. While it was determined that this effect may be partially mine-related, it was also driven by high richness at one of two reference lakes in 2024, and trends will be closely assessed in subsequent years.

Wide-spread sediment chemistry analysis was not required in 2024, other than TOC and grain size. However a targeted coring program was conducted in WTS in August, 2024 to evaluate a potential increase in chromium observed in 2023. While sediment cores from 2023 and 2024 suggest higher chromium concentrations compared to 2017, substantial spatial heterogeneity within the basin makes any temporal trend indistinguishable.

Among benthic invertebrate samples, statistically significant increases in abundance (2024) and richness (2021 – 2024 trend) were observed for some near-field lakes, particularly KAN. Changes were considered more likely to have been caused by natural variability rather than mine activities (nutrient inputs), as in previous years, since no changes in sediment TOC (reflective of primary production) were observed.

8.12.3.1.2 Mercury Monitoring Program^s

Complete results of the Mercury Monitoring Program (MMP) are provided in Appendix 27. Results are summarized here, and additionally in Section 8.2.

The purpose of the MMP is to assess changes in mercury concentrations caused by the creation of the Whale Tail Impoundment (“Impoundment”) following the construction of the Whale Tail Dike in September 2018, which raised water levels in the area, connecting several lakes. The MMP was designed to monitor mercury dynamics in key components of the ecosystem to verify FEIS predictions for mercury concentrations in water, sediment, and fish tissue. The scope of the 2024 program included large-bodied (Lake Trout) and small-bodied fish, water, and sediment sampling at various locations within the Impoundment, downstream of the mine, and at local reference lakes (water and sediment only). In both water and sediment, total and methylmercury concentrations were below available FEIS predictions and CCME Guidelines for the Protection of Aquatic Life.

In 2024, small-bodied fish samples were collected opportunistically, but analytical results are not yet available. Historically (through 2023), both small-bodied fish species in the Impoundment showed increases in tissue mercury concentrations in 2020 that persisted in 2023. Lake Trout were collected from the Impoundment in 2024 and tissue mercury concentrations were found to be higher than baseline/reference concentrations and similar to the FEIS-predicted peak mercury concentration. Water and sediment analyses indicate downstream transport of flood-related mercury beyond the Impoundment is limited. Water and sediment concentrations in Kangislulik Lake (first lake downstream) were similar to baseline/reference in 2024.

8.12.3.1.3 Whale Tail Water Quality and Flow Monitoring^s

Results of water quality analyses for managed non-contact water and seepage to the receiving environment are discussed here in relation to regulatory limits. Complete results of the Water Quality and Flow Monitoring program are provided in Section 8.5 and used as necessary below (Section 8.12.3.2) to inform the integration of monitoring results.

Whale Tail South Channel (ST-WT-13)

Water flowing through the Whale Tail South Channel was sampled on a monthly basis during open water season. Applicable NWB Water License limits for this station include effluent water quality limits for TSS of 15 mg/L for the maximum monthly mean and 30 mg/L for the maximum concentration in a grab sample. No results exceeded these limits in 2024.

IVR Diversion Channel (ST-WT-37)

The IVR Diversion Channel conducts non-contact water from the North-East watershed towards Nemo Lake. Applicable NWB Water License limits for this station include effluent water quality limits for TSS of 15 mg/L for the maximum monthly mean and 30 mg/L for the maximum concentration in a grab sample. No results exceeded these limits in 2024.

8.12.3.1.4 Whale Tail Effluent-Related Monitoring^s

MDMER monitoring requirements include monitoring effluent (weekly/quarterly chemistry analysis, daily discharge volume, toxicity testing), receiving environment water quality (4x/year at discharge and reference areas), and receiving environment biological monitoring studies (fish and/or benthic invertebrate monitoring on a three-year cycle). Effluent quality results for 2024 in relation to regulatory criteria (MDMER/NWB Water License) are summarized here and full results (Sections 8.3 and 8.5) are used as necessary to inform the integration of AEMP monitoring results in Section 8.12.3.2.

Kangislulik Lake Diffusers (ST-MDMER-8/WT-WT-2a)

There are two submerged diffusers to facilitate discharge from the Whale Tail and IVR Attenuation Ponds to Kangislulik Lake. Discharge occurred in July, August, and September, 2024. All results of weekly effluent chemistry sampling were in compliance with MDMER/NWB Water License criteria for water quality, including acute lethality toxicity tests for rainbow trout and *Daphnia magna*. EEM sub-lethal and acute lethality tests with four test species (*Ceriodaphnia dubia*, fathead minnow, *Lemna minor*, *Pseudokirchneriella subcapitata*), were conducted three times in 2024 (July 8, August 5, September 9). Briefly, all test results showed no sublethal effects, and indeterminate acute lethality were identified in one test (August 5) for *Ceriodaphnia dubia* and in one test (September 9) for fathead minnow. Complete

results will be analyzed in context as part of the Cycle 6 EEM Biological Monitoring Interpretive Report (due in July, 2027), along with receiving environment water quality analyses.

The Cycle 2 EEM Biological Monitoring Interpretive Report was provided in July, 2024, with evaluation of data collected between 2021 and 2023. Results from sublethal toxicity tests (2021 – 2023) indicated that the Whale Tail effluent had no detectable effects on the growth or survival of Fathead Minnow. Mine effluent concentrations of 2.95% to >100% had detectable effects on reproduction of *Ceriodaphnia dubia*, which is not consistent with the results of the in situ benthic invertebrate community study (2023). No inhibitory effects were observed for *Pseudokirchneriella subcapitata* or *Lemna minor* exposed to effluent samples in laboratory toxicity tests. The fish population survey examined Lake Trout and Slimy Sculpin as sentinel species, with fish collected from Kangislulik Lake and two reference lakes (Lake 8 and D1) in 2023. Four growth-related effect indicators were assessed for each species. For Lake Trout, one metric (liver weight at body weight) was reduced for the effluent-impacted lake (Kangislulik), but the change was less than the critical effect size of 25%. Slimy Sculpin were lighter at a given age than reference lakes, but the difference exceeded the critical effect size for just one reference lake of the two. In the benthic invertebrate community survey, various indices of community composition were analyzed and one (density) showed an increase from baseline/reference above the critical effect size. This effect also occurred in Cycle 1 (2020 sampling). Richness was also significantly different, though the critical effect size was not exceeded. Based on these results, an Investigation of Cause is proposed for Cycle 3, along with routine monitoring for fish. Water quality testing in the EEM study indicated no exceedance of CCME WQGs. Complete water quality results are used as required to assist in the AEMP evaluation, below.

Whale Tail South Diffusers (ST-MDMER-11/ST-WT-24)

Discharge from the Whale Tail and IVR Attenuation Ponds occurred through the Whale Tail South permanent diffuser (ST-WT-24) periodically in April, May, June, October, and November, 2024. All results were in compliance with MDMER/NWB Water License criteria for water quality, including acute lethality toxicity tests for Rainbow Trout and *Daphnia magna*.

8.12.3.1.5 Whale Tail Fish Habitat Offset Monitoring[§]

The complete 2024 Fish Habitat Offsets Monitoring Report for the Whale Tail Mine is provided as Appendix 37 and summarized in Section 8.8.2.

Briefly, monitoring of currently constructed fish habitat offsets (flood zone habitat) was not required in 2024. Nevertheless, water level monitoring and water quality monitoring under the CREMP continued. Flood zone water levels remain similar to previous years and water quality within the flood zone remains suitable for aquatic life based on CREMP criteria.

The final analysis report on utility of the Whale Tail South flood zone for use as fish habitat was provided to DFO in April, 2024 (“*An Assessment of the Effect of Increased Water Elevations on Indicators of the Productivity of the Lake Trout (Salvelinus namaycush), Relative to Baseline and Reference Lakes at the Whale Tail Mine*” – C. Portt and Associates and Kilgour and Associates, April 30, 2024). This report examines the effects of increased water elevations south of the Whale Tail Dike at the Whale Tail mine site on the productivity of Lake Trout. It will be used to establish if the proposed offsetting measures (flooded area) are likely to provide suitable habitat and enhance productivity of Lake Trout. Results indicate that Lake Trout density and growth rate were higher post-flooding than during the baseline period and that recruitment has increased. Consequently, there is little doubt that Lake Trout productivity has increased. An increase in nutrients is probably the main driver of the observed increases in growth and

condition and may also be affecting density through increases in recruitment and survival. The monitoring results have also demonstrated that the newly created habitat is being used by juvenile Lake Trout and other species.

8.12.3.1.6 Whale Tail Groundwater Monitoring^s

A summary of groundwater monitoring is provided in Section 8.7.2, and in the Groundwater Monitoring Report provided in Appendix 36.

For the Whale Tail Mine, groundwater monitoring was conducted in 2024 according to the Groundwater Monitoring Plan. This monitoring program exists primarily to update site water quality and water balance models, and support water management activities and water quality planning for pit reflooding. Currently, groundwater inflow quantity and quality to the Whale Tail Pit are assessed through the Westbay System monitoring well installation, and analysis of sump and seepage samples.

Westbay well water quality results for TDS are compared to FEIS assumptions, and do not deviate significantly. Arsenic, which is a constituent of interest in Whale Tail ore and waste rock, continues to occur at low concentrations consistent with previous reliable data from this well. Radium-226 is below MDMER effluent criteria. Overall, the assumptions for the conceptual model for the mine site are considered unchanged by 2024 groundwater quality monitoring.

Currently, since pit inflows are the inferred direction of groundwater movement at the Whale Tail Mine, groundwater quality is not likely to have a significant direct effect on receiving environment surface water quality, and is not considered further in the AEMP analysis at this time.

8.12.3.1.7 Whale Tail Haul Road and Quarries Water Quality Monitoring^s

Visual inspections for freshet monitoring under the Freshet Action Plan occur daily or weekly for onsite and Whale Tail Haul Road water management infrastructure including culverts, ditches, bridges, the Whale Tail South Channel, and the IVR Diversion Channel.

Briefly, in 2024, no erosion concerns that required mitigation actions were identified during visual inspections for Whale Tail Haul Road water management infrastructure (e.g. scour, bed erosion, etc.). Based on visual assessments for turbidity, no water quality samples were required to be collected for measurement of TSS and no turbidity management measures were required to be installed (e.g. straw booms or woodchip booms).

In fall 2024, deficiencies were identified through deposition of road material at bridge crossings along the WTHR. Road material is apparently being entrained by passing vehicles and passing through the bridge deck. Agnico Eagle has proposed a remedial action plan and is working with DFO to eliminate this potential impact.

8.12.3.1.8 Whale Tail Blast Monitoring^s

A Blast Monitoring Report is produced annually, and complete results are provided in that document (Appendix 34). In 2024, 80 blasts occurred and were monitored at the IVR Pit. No blasts exceeded the peak particle velocity (PPV) limit of 13 mm/s or the instantaneous pressure change (IPC) limit of 50 kPa. For the Whale Tail Pit, 146 blasts were monitored, and none exceeded PPV or IPC limits. In addition,

nine (9) blasts were monitored for the underground mine, and one exceedance of the PPV limit occurred (no exceedance of the IPC limit). DFO was notified and corrective actions taken.

8.12.3.1.9 Whale Tail Air Quality Monitoring^s

The complete 2024 Air Quality and Dustfall Monitoring Report is provided in Appendix 42 and results are summarized in Section 8.14.2. Across the parameters evaluated (suspended particulates, NO₂, dustfall), dustfall and annual average TSP are considered most relevant to the AEMP analysis. At the Whale Tail Mine, dustfall (30-d average) is measured year-round at one onsite location, and during the summer season at three (3) transects along the Whale Tail Haul Road. Dust suppressant is applied along the entire length of this road. In 2024, all onsite and WTHR monitoring results for dustfall met management thresholds, which are equivalent to Alberta Environment guidelines for recreational or industrial areas. It is noted that these guidelines relate to nuisance/aesthetic concerns, not environmental quality. For the purposes of the AEMP evaluation, trends in dustfall are also reviewed to help understand potential linkages to observed exceedances of aquatic triggers/guideline values. Visual assessment of trends to date (since 2018) indicates that while occasional peaks occur, rates of dustfall appear to have been stable over time and across monitoring locations. Annual average TSP was within FEIS predictions and GN guidelines in 2024.

8.12.3.2 Integration of Monitoring Results^s

According to the AEMP, the results of the monitoring programs were integrated in a mechanistic fashion with a thorough review of results to identify any patterns among the relevant receiving environment monitoring programs. For groups of variables where triggers or guidelines were consistently exceeded in 2024 (summarized in Section 8.12.3.1), a discussion of results across AEMP programs is provided here to explore spatial scale, temporal trends, causation, and uncertainty. Patterns among the programs are then characterized using an issue-specific conceptual site model, which assists in the evaluation of the transport pathways, provides information on specific media (identifies stressors) and evaluates receptors of concern (effects variables).

In 2024, water quality was the only stressor variable for which associated triggers or guidelines were consistently exceeded in any monitoring program. The following onsite activities were identified primarily as having the potential to impact water quality in the receiving environment, and are considered in the source evaluation:

Flood-Related (Allochthonous) Inputs

- Ongoing inputs from Whale Tail South terrestrial flooding to WTS and lakes downstream via the South Whale Tail Channel

Effluent Discharge

- Effluent discharge from the Whale Tail and IVR Attenuation Ponds to Whale Tail South
- Effluent discharge from the Whale Tail and IVR Attenuation Ponds to Kangislulik Lake

Managed Surface Water and Seepage

- IVR Diversion Channel non-contact water discharge towards Nemo Lake

Construction Activities

- Historical. None in 2024.

While dust deposition was identified as a potential source of impacts, results of air quality monitoring to date indicate neither TSP nor onsite dustfall results have regularly exceeded available FEIS predictions or long-term (annual or 30-d) regulatory guidelines. This potential source is therefore considered unlikely to be a major contributor to any unpredicted changes in aquatic systems, and is not considered further.

Similarly, groundwater monitoring continues to indicate that groundwater quality is not likely to have a significant effect on receiving environment surface water quality since pit inflows are the only inferred direction of flow at this time. As a result, this potential source of impacts to surface water is not considered further.

8.12.3.2.1 Changes in Nutrients (TKN, TP, TOC, DOC)[§]

Similar to 2023, mean annual concentrations of total Kjeldahl nitrogen (TKN), total phosphorus, and total and dissolved carbon (TOC and DOC) in 2024 exceeded their respective CREMP triggers. All of these parameters were statistically higher at WTS compared to baseline/reference conditions. At KAN and A20, only TKN, TOC, and DOC were found at concentrations statistically higher than baseline/reference conditions.

These trends are generally consistent with findings in previous impact years and FEIS Addendum predictions for increased nutrient concentrations in WTS and KAN. Comparison to FEIS predictions is further explored in the PEAMP – Section 12.5.1. Notwithstanding, consideration was again given here to evaluate and classify results for these parameters across AEMP programs.

Table 8-72 Summary of monitoring results across AEMP programs related to nutrients in 2024[§]

Note: No triggers are applicable to this variable group outside the CREMP and effluent-related monitoring.

Stressor Variable Group: Nutrients					
Program	Magnitude	Spatial Scale	Temporal Trend	Causation	Uncertainty
CREMP	1	Large	Stable	Moderate	?
Effluent-Related Monitoring	0	n/a	n/a	n/a	n/a
Magnitude: n/a – not evaluated/no applicable trigger 0 – no exceedance 1 – early warning trigger exceeded, or change from baseline 2 – management threshold exceedance (or change from baseline exceeding magnitude of concern) Spatial Scale: n/a – no magnitude of effect, therefore not evaluated small – localized scale moderate – sub-basin to basin scale large – basin to whole lake scale Temporal Trend Indicators: n/a – no magnitude of effect, therefore not evaluated Stable – no changes year-over-year Increasing – year-over-year increases Decreasing – year-over-year decreases Causation Ratings: n/a – no magnitude of effect, therefore not evaluated Low – no evidence for a mine-related source Moderate – some likelihood of a mine-related source High – the source of the problem is very likely to be mine-related Uncertainty Ratings (confidence in all other findings): ? – low uncertainty ?? – moderate uncertainty ??? – high uncertainty					

The conceptual site model presented in Table 8-73 assists in understanding the possible linkages (i.e., effect to receptors from the source). All available monitoring results for 2024 related to the identified potential sources/transport pathways, stressors, and receptors are reviewed in text format below.

Table 8-73 Integrated conceptual site model for AEMP assessment of observed changes in nutrients at the Whale Tail Mine (2024 results unless indicated)[§]

Source	Transport Pathways	Exposure Media					Effects Measures						
		Medium Stressor	Narrative	Magnitude	Spatial Scale	Link to Source	Receptor	Narrative	Magnitude	Spatial Scale	Link to Stressor		
Effluent, Terrestrial Inputs?	Effluent discharge, Flooding	Surface Water											
		TP, TKN, TOC, DOC	CREMP triggers were exceeded along with statistically significant increases compared to baseline/reference for nutrient parameters in WTS, A20, and/or KAN. Changes do not exceed FEIS predictions.	T, SD	2+	Moderate (see text)	Primary Production						
							^a Phytoplankton biomass		No differences in biomass.		0	N/A	N/A
							^a Phytoplankton taxa richness		Possible mine-related decrease in richness.		T	2+	low
							^d Periphyton biomass		Seasonal growth on floating artificial substrate appears greater in WTS and A20 compared to reference lakes (2023).		Qual	N/A	N/A
							^c Effluent sub-lethal toxicity (algal and macrophyte growth inhibition)		No growth inhibition in the EEM Cycle 2 (2021 - 2023 data).		0	N/A	N/A
							Secondary Production						
							^c Zooplankton sub-lethal toxicity (<i>Ceriodaphnia dubia</i>)		Inhibition of reproduction in <i>C. dubia</i> in 3 of 6 tests for EEM Cycle 2 (2021 - 2023 data). Not consistent with in-situ invertebrate study results. No acute lethality in EEM Cycle 2 (<i>C. dubia</i> , 2021 - 2023) or MDMER toxicity testing (<i>D. magna</i>).		0	N/A	N/A
							^c Zooplankton acute lethality (<i>Ceriodaphnia dubia</i> , <i>Daphnia magna</i>)						
							^{a, c} Benthic invertebrate density and richness		ⁱ Increased density in effluent discharge area in KAN. ^a Increased abundance and richness at some CREMP lakes (KAN, NEM, A76).		T, SD	2+	Low - Moderate (see text)
Fish													
^c Sublethal toxicity (Fathead minnow)		No sublethal toxicity or acute lethality in EEM Cycle 2 (fathead minnow, 2021 - 2023) or MDMER toxicity testing (rainbow trout).		0	N/A	N/A							
^c Acute lethality (Fathead minnow, Rainbow trout)													
^{c, d} Population metrics (e.g. relative abundance (CPUE), length frequency)		^c No consistent differences in lake trout or slimy sculpin growth metrics exceeding the critical effect size (KAN vs ref lakes, 2023). ^d Various indices indicate stimulation effect for growth of Lake Trout in flood zone lakes (2023).		SD	N/A	N/A							
Associated monitoring program:				Magnitude		Spatial Extent							
a	Core Receiving Environment Monitoring Program			0	No trigger exceedance		1 - Occurs at one near-field sampling area only						
b	Water Quality and Flow Monitoring			T	Exceeds early-warning trigger.		2+ - Multiple near-field areas and/or mid-field areas						
c	Effluent-Related Monitoring			TT	Exceeds effects-based threshold.		All - Extends to far-field areas						
d	Fish Habitat Offsets Monitoring			SD	Statistically significant difference from baseline/reference								
e	Groundwater Monitoring			Qual	Qualitative assessment								
f	WTHR Water Quality Monitoring												
g	Mercury Monitoring Program												
h	Blast Monitoring												

8.12.3.2.1.1 Source Evaluation^s

As suggested in CREMP reports, the observed changes in nutrients continue to be considered likely to have been caused primarily by terrestrial inundation and to a lesser extent, effluent discharge. For WTS and Kangislulik Lake these activities may be summarized as:

- WTS:
 - Flooding occurred mainly in 2019. Water levels have been maintained in WTS with regular freshet-based fluctuations, until the present.
 - Effluent discharge to WTS has occurred as required since 2019.
- KAN:
 - Effluent discharge to Kangislulik Lake has been ongoing as required since 2019.
 - WTS flooded waters, with allochthonous inputs due to inundation have flowed through the Whale Tail South Channel into KAN since 2020 (though pumping also occurred in fall 2019 prior to channel construction).

Changes in TOC and DOC are considered related to increased primary productivity and/or allochthonous carbon inputs. These parameters are often largely affected by flooding regimes and causality is not explored further here.

Increases in N and TP were predicted in the FEIS and results in 2024 did not exceed predictions. Following an initial increase, concentrations of TP and N-containing compounds have generally been stable in WTS, A20, and KAN over the last several years.

Nevertheless, results for N and TP from other AEMP monitoring programs are reviewed here in comparison to the CREMP trigger to help confirm potential sources of nutrients to the receiving environment in 2024. While the CREMP triggers do not specifically apply to effluent, managed surface water, or seepage, available nutrient monitoring results for those sources are compared to CREMP triggers to determine the potential for a source to be contributing to the observed water quality changes in the receiving environment programs.

Managed Surface Water and Seepage

No monitored sources of managed non-contact water (e.g. diversion ditches) or seepage report directly to the receiving environment of WTS or Kangislulik Lake, other than the Whale Tail South Channel which connects the two.

Effluent Monitoring

Effluent monitoring results (Section 8.3.2 and Section 8.5.2.2) indicate that all measured concentrations of TP were less than the CREMP trigger (0.0045 mg/L). While TKN is not measured in effluent, measured concentrations of nitrate in effluent exceeded the CREMP trigger (1.5 mg/L) in six of seven monitoring events, with discharge to both Kangislulik and WTS. In all cases, EEM exposure area results in Kangislulik and Whale Tail Lakes in 2024 were less than CREMP nutrient triggers.

These results suggest that effluent discharge may have had some impact on increasing concentrations of nutrients, primarily nitrogen-containing compounds, in the Whale Tail near-field lakes, as was predicted in the FEIS. Terrestrial flooding is also considered a likely source of the observed changes in nutrients.

8.12.3.2.1.2 Exposure Evaluation^s

Nitrogen compounds - TKN is one of four nitrogen-containing compounds measured through the CREMP. It is a composite parameter that includes both organic and inorganic forms including ammonia, nitrate, nitrite, and organic nitrogen compounds. While annual mean TKN exceeded its CREMP trigger (0.17 mg/L) in near-field lakes in 2024, it does not have an effects-based threshold, so the changes are significant only in that they represent an increase compared to baseline/reference values. All three of the other nitrogen-containing compounds assessed through the CREMP have effects-based thresholds, which were not exceeded in 2024.

Total Phosphorus – Annual average total phosphorus was measured slightly above the CREMP trigger (0.0045 mg/L) in WTS (0.005 mg/L) only in 2024. This trigger represents the 95th centile of baseline concentrations, and FEIS water quality modeling indicated exceedances were predicted to occur. Concentrations remain below the CREMP adaptive management threshold of 0.01 mg/L, which is equivalent to the CCME upper limit of oligotrophic status. Changes to total phosphorus in 2024 also remained within FEIS impact predictions.

8.12.3.2.1.3 Effects Evaluation^s

The potential for increased nutrient concentrations in downstream lakes to further impact primary productivity (and higher trophic levels) was predicted in the FEIS Addendum, though predicted changes were not quantified. Observed changes are summarized briefly here, incorporating results across all applicable AEMP programs.

Primary Production

Phytoplankton production is monitored annually through the CREMP. In general, an increase in phytoplankton biomass compared to baseline/reference was observed at the Whale Tail study lakes each year from the beginning of mine-related influence in 2019 until 2023. In 2024, there were no statistically significant differences in phytoplankton biomass compared to baseline/reference for any lake. Trend directions were mixed, with apparent increases at KAN and A20 and apparent decreases at the rest of the areas. The mixed trend results suggest that the more subtle patterns in 2024 are likely due to natural variability rather than to mining activity. The increases in phytoplankton biomass that occurred after the initiation of mining appear to have corrected and stabilized. In 2024, an apparent decrease in phytoplankton taxa richness was observed for the first time in several lakes, but the effect is at least in part related to trends at one of the two reference lakes, and evidence for mine-related causation is mixed at this time. EEM effluent toxicity studies (Cycle 2 report; 2021 – 2023 data) show no impairment of growth endpoint for the tested algae.

Periphyton growth in WTS was monitored through the Fish Habitat Offsets Monitoring Plan (Section 8.12.3.1.5) in 2022 and 2023. In both years, seasonal growth on artificial substrate samplers appeared greater in flood zone lakes compared to reference, with potentially greater growth in WTS compared to A20. This is in line with measured concentrations of total phosphorus, which were slightly higher in WTS than A20.

As described in the 2024 CREMP Report (Appendix 26), since mining activity began, there has been a general correspondence between increases in nutrient levels at WTS, KAN, and A20 and increased phytoplankton biomass. In 2024, concentrations of TP remained below FEIS predictions, and phytoplankton biomass was not statistically different from baseline/reference. According to the FEIS, phosphorus and nitrate levels are predicted to increase at both WTS and KAN until 2026, after which concentrations are predicted to decline. With these predicted increases in nutrients, phytoplankton biomass expected to increase over the next three years of CREMP sampling.

Secondary Production

Mine-related impacts to zooplankton are only evaluated through MDMER and EEM effluent toxicity testing, since low statistical power has historically prohibited analysis through the CREMP. In the last EEM interpretive report (2024), all acute toxicity thresholds were met for zooplankton. Inhibition of reproduction in *C. dubia* was reported in 3 of 6 tests, but this was not consistent with in-situ invertebrate study results, which showed an apparent stimulatory effect on density of benthic invertebrates.

Because the stressor is water quality, effects to pelagic receptors are primarily considered here. Effects to benthic invertebrates are more closely considered in association with any observed changes in sediment quality. However it is noted that the Cycle 2 EEM biological study found increased density of benthic invertebrates in the effluent exposure area in Kangislulik Lake in 2023 compared to reference sites. At several near-field CREMP sampling stations (WTS, KAN, and/or NEM), apparent increases in both abundance and richness were observed in 2024. Though the full CREMP examination indicates stronger evidence for natural variability in this case rather than mine activity, it is noted that increases in mine-derived nutrients could have a cascading effect, leading to eventual changes in benthic communities (as predicted qualitatively in the FEIS). Analyses in subsequent years should help to evaluate causation of the observations. An EEM Investigation of Cause is also proposed to address the cause of observed changes in benthic invertebrates.

Fish

In the last EEM interpretive report (2024), all effluent toxicity thresholds were met for fish. In the associated EEM population survey (2023), only one fish metric exceeded the critical effect size (25% change) across both species evaluated. Slimy sculpin were lighter in Kangislulik Lake than reference lakes, with the change exceeding the critical effect size for one of the two reference lakes only. This differs from results of the Cycle 1 survey, which found sculpin were longer in Kangislulik Lake compared to both reference lakes (though the critical effect size was not exceeded). Since all effluent quality criteria were met, and since no differences were found for any other metric evaluated across both fish species, these changes are not expected to be mine-related.

Changes in forage fish populations (primarily slimy sculpin) in WTS and Kangislulik Lake are also monitored in both Kangislulik and flood zone lakes through a study under the Fish Habitat Offsetting Plan (2018 – 2021; C. Portt & Associates, 2018) and through the Fish Habitat Offsets Monitoring Plan (FHOMP; 2022 & 2023). Study results to date have confirmed the presence of small-bodied fishes in newly created shoreline habitat at catch rates and size ranges that appear no lower than reference areas. The research study is expected to be completed in 2025, at which time full results will be available.

Changes in large-bodied fish (lake trout) in flood zone lakes are further monitored through the FHOMP, and were reported to DFO in April, 2024 (*An Assessment of the Effect of Increased Water Elevations on Indicators of the Productivity of the Lake Trout (Salvelinus namaycush), Relative to Baseline and*

Reference Lakes at the Whale Tail Mine” – C. Portt and Associates and Kilgour and Associates, April 30th, 2024). Results indicate that Lake Trout density and growth rate were higher post-flooding than during the baseline period and that recruitment has increased. These impacts were considered most likely due to increased nutrients in flood zone lakes, and are expected to be temporary.

8.12.3.2.1.4 Management Actions[§]

Based on results of CREMP sampling in 2024, the Level 0 (routine sampling) water management strategy is in effect for 2025 according to the Whale Tail Adaptive Management Plan. This is indicated since total phosphorus (and arsenic) at WTS and Kangislulik Lake are within normal operating ranges. Based on results of this AEMP analysis (no evidence of ongoing and/or unanticipated mine-related effects to receptors), no changes to adaptive management actions are planned at this time and trends in nutrients will continue to be tracked in 2025.

8.12.3.2.2 Changes in Conventional Parameters, Major Ions, and TDS[§]

Similar to previous years and similar to the Meadowbank impact-area lakes, CREMP trigger values were exceeded along with statistically significant increases from baseline/reference values at near and mid-field areas WTS, A20, KAN, A76, and NEM for conventional parameters (alkalinity, conductivity, hardness), major ions (calcium, potassium, magnesium, sodium, TDS). Importantly, none have effects-based thresholds, and changes are not expected to result in adverse effects to aquatic life. Nevertheless, causation is explored here through a review of other AEMP monitoring results.

No triggers are applicable to this variable group outside the CREMP, so Table 8-74 is restricted to that program.

Table 8-74 Summary of monitoring results across AEMP programs related to nutrients[§]

Note: No triggers are applicable to this variable group outside the CREMP.

Stressor Variable Group: Conventional Parameters and Major Ions					
Program	Magnitude	Spatial Scale	Temporal Trend	Causation	Uncertainty
CREMP	1	Large	Stable/Increasing	High	?
Magnitude: n/a – not evaluated/no applicable trigger 0 – no exceedance 1 – early warning trigger exceeded, or change from baseline 2 – management threshold exceedance (or change from baseline exceeding magnitude of concern) Spatial Scale: n/a – no magnitude of effect, therefore not evaluated small – localized scale moderate – sub-basin to basin scale large – basin to whole lake scale Temporal Trend Indicators: n/a – no magnitude of effect, therefore not evaluated Stable – no changes year-over-year Increasing – year-over-year increases Decreasing – year-over-year decreases Causation Ratings: n/a – no magnitude of effect, therefore not evaluated Low – no evidence for a mine-related source Moderate – some likelihood of a mine-related source High – the source of the problem is very likely to be mine-related Uncertainty Ratings (confidence in all other findings): ? – low uncertainty ?? – moderate uncertainty ??? – high uncertainty					

The conceptual site model presented in Table 8-75 assists in understanding the possible linkages (i.e., effect to receptors from the source). As described in previous years, similar changes have been observed at the Meadowbank Mine, and it is likely that they are related to a combination of direct impacts of construction activities and inputs from dewatering and effluent discharge. All available monitoring results related to the identified potential sources/transport pathways, stressors, and receptors for 2024 are reviewed in text format below.

Table 8-75 Integrated conceptual site model for AEMP assessment of observed changes in conventional parameters, TDS and related ions at the Whale Tail Mine (2024 results unless indicated)[§]

Source		Transport Pathways		Exposure Media			Effects Measures						
				Medium Stressor	Narrative	Magnitude	Spatial Scale	Link to Source	Receptor	Narrative	Magnitude	Spatial Scale	Link to Stressor
				Surface Water									
Effluent, Managed Non-Contact Water/Runoff/Flooding?	→	Effluent discharge, runoff to surface water →	→	Conductivity, hardness, major ions, TDS	Near- and mid-field lakes WTS, A20, KAN, A76 and NEM have higher concentrations of dissolved solids and constituent major ions (e.g. calcium and magnesium) compared to baseline/reference conditions. While these changes are mine-related, they are not expected to result in adverse ecological effects.	T, SD	2+	Moderate (see text) →	Primary Production				
									^a Phytoplankton biomass	No differences in biomass.	0	N/A	N/A
									^a Phytoplankton taxa richness	Possible mine-related decrease in richness.	T	2+	low
									^d Periphyton biomass	Seasonal growth on floating artificial substrate appears greater in WTS and A20 compared to reference lakes (2023).	Qual	N/A	N/A
									^c Effluent sub-lethal toxicity (algal and macrophyte growth inhibition)	No growth inhibition in EEM Cycle 2 Report (2021 - 2023).	0	N/A	N/A
									Secondary Production				

8.12.3.2.2.1 Source Evaluation^s

Conductivity is a composite variable that responds positively when concentrations of ionic compounds increase (e.g., chlorides, sulphates, carbonates, sodium, magnesium, calcium, potassium and metallic ions), so conductivity is used here to broadly assess potential causation of changes in those parameters because it is regularly measured across monitoring programs. While the CREMP conductivity trigger (48.6 $\mu\text{S}/\text{cm}$; set at the 95th centile of baseline data), does not specifically apply to effluent, managed surface water, or seepage results, it is used here to determine the potential for a source to be contributing to observations of water quality changes in the receiving environment programs.

Effluent Monitoring

WTS: Results of water chemistry analysis for effluent discharged to WTS (Section 8.3.2) indicated that conductivity in all four monitoring events (220 - 620 $\mu\text{S}/\text{cm}$) exceeded the CREMP trigger of 49 $\mu\text{S}/\text{cm}$.

KAN: Similarly, conductivity for effluent discharged to Kangislulik Lake exceeded the CREMP trigger in all three monitoring events (372 - 479 $\mu\text{S}/\text{cm}$).

Managed Surface Water and Seepage Monitoring

WTS and KAN: No sources of managed non-contact surface water (e.g. diversion ditches) or seepage report directly to the receiving environment of WTS or Kangislulik Lake, other than the Whale Tail South Channel which connects the two lakes.

NEM: Managed non-contact surface water is directed towards Nemo Lake via the IVR Diversion Channel. Water quality monitoring in 2024 indicated conductivity exceeded the CREMP trigger in three of five monitoring events, with concentrations ranging from 28 - 149 $\mu\text{S}/\text{cm}$.

Summary

Overall, these results support previous general conclusions that the observed changes are likely related to a combination of ongoing effluent discharge and water management activities (including non-contact water diversions and flooding), as well as potentially historic construction and dewatering activities.

8.12.3.2.2.2 Exposure Evaluation^s

Annual average conductivity (tracked here as an indicator variable) in near- and mid-field lakes was measured at 81 – 192 $\mu\text{S}/\text{cm}$ in near- and mid-field lakes. These results exceeded the CREMP trigger value (48.6 $\mu\text{S}/\text{cm}$) set at the 95th centile of baseline measurements and are statistically greater than baseline/reference in the BACI analysis. A similar range of results was measured in EEM exposure area monitoring in WTS and KAN (104 – 214 $\mu\text{S}/\text{cm}$). Conductivity and the related parameters in this group exceeding CREMP triggers in 2024 do not have effects-based thresholds (e.g. CCME water quality guidelines).

8.12.3.2.2.3 Effects Evaluation^s

As described in the CREMP report, the parameters in this group with trigger exceedances in 2024 do not have effects-based thresholds (e.g., CCME water quality guidelines), so toxicity-related impacts are not

anticipated. Major ions are essential elements, and in oligotrophic freshwater lake environments adverse effects on primary producers and secondary consumers (e.g., zooplankton) are more commonly associated with major cation deficiency than enrichment. Review of monitoring results for receptor species (Section 8.12.3.2.1.3), largely indicates apparent increases in measurement endpoints (e.g. density, growth, biomass) historically in the impacted lakes (more likely related to changes in nutrient regimes) and no effluent-related toxicity in laboratory tests.

8.12.3.2.4 Management Actions^s

Overall, these trends are similar to those observed in the Meadowbank near-field CREMP lakes. Based on results of a review in 2019 (Appendix F of the 2023 CREMP Report), there is no evidence to suggest that measured concentrations of these parameters are resulting in adverse ecological effects. No changes in management actions are therefore planned as a result of this evaluation.

8.12.3.2.3 Changes in Lithium^s

In 2019, concentrations of total lithium were measured approximately weekly during Mammoth Dike construction and results suggested that slightly elevated concentrations of lithium in WTS and/or KAN early in the 2019 season may have been caused by dike construction and WTN dewatering activities. This parameter has trended lower since that time, and results suggest that the systems have stabilized since 2022. In 2022, 2023, and 2024, the yearly mean concentrations of both total and dissolved lithium marginally exceeded the trigger concentration in WTS and/or KAN (total and dissolved lithium trigger = 0.0020 mg/L). Lithium does not have an effects-based threshold (CCME water quality guideline), but as discussed in the CREMP Report (Appendix 26), a USEPA factsheet reports no-observed effects concentrations for sub-lethal toxicity tests with a zooplankton and a fish at two to three times the order of magnitude measured at the Whale Tail Mine. Based on this and since no apparent negative changes to lower trophic levels are identified (as discussed in Section 8.12.3.2.2), this trigger exceedance was not investigated further. Trends will continue to be monitored through the CREMP but no adaptive management actions are planned at this time beyond routine monitoring.

8.13 NOISE MONITORING

8.13.1 Meadowbank Site

As required by NIRB Project Certificate No.004 Condition 62: Cumberland shall develop and implement a noise abatement plan to protect people and wildlife from significant mine activity noise, including blasting, drilling, equipment, vehicles and aircraft. The noise abatement plan will be developed in consultation with Elders, GN, HC, and EC.

The 2024 noise monitoring program at the Meadowbank Site was conducted according to the Noise Monitoring and Abatement Plan (Version 4, December 2018). Complete results of the program are provided in Appendix 41 (2024 Noise Monitoring Report), and summarized below.

The objective of this program is to measure noise levels at five previously determined monitoring locations around the Meadowbank Mine (R1 – R5), over at least two 24 h periods. Since high winds in the area tend to substantially reduce the quantity of available valid data, Agnico Eagle aims to conduct a minimum of two monitoring events of two to four days per station to fulfill monitoring objectives.

After data processing in keeping with standard methods (Alberta Energy Regulator Directive 038), monitoring results collected under specified weather conditions are compared to the site's daytime target sound level (55 dBA), nighttime target sound level (45 dBA), and FEIS predictions (Cumberland, 2005).

Final daytime, night-time, and 24 h L_{eq} values calculated from recorded 1-min data for each monitoring event and station are shown in Table 8-76. All monitoring results met daytime and nighttime design targets. For one of the two surveys at station R5, one hourly L_{eq} values (11 am – 12 pm on August 9; 59 dBA) marginally exceeded the FEIS-predicted maximum (57 dBA). This was caused by a brief (<2 minute) aircraft fly-over. Aircraft were not included in FEIS noise models since they are an occasional occurrence. They may also be related to exploration activities in the region, rather than mine operation. Results for all other surveys and monitoring stations were less than FEIS predictions. Historical comparisons indicate no clear trends towards increasing sound levels site-wide.

No human receptors (e.g. cabins) are located in the vicinity of noise monitoring stations, and no noise-related complaints have been received to date. Impacts of sensory disturbance on wildlife are determined separately through the Terrestrial Ecosystem Monitoring Plan (TEMP), and reported annually in the Wildlife Monitoring Summary Report.

Based on these results, no changes to noise abatement or mitigation measures are proposed at this time. Noise monitoring occurs annually, and will continue in 2025 according to the Noise Monitoring and Abatement Plan.

Table 8-76 Daytime, night-time, and 24-h L_{eq} values for monitoring locations R1 – R5 at the Meadowbank Site

Monitoring Station and Start Date (2024)	$L_{eq, day}$ (dBA)		$L_{eq, night}$ (dBA)		FEIS Prediction (dBA)	$L_{eq, 24h}$ (dBA)
	Design Target	Measured Value	Design Target	Measured Value		
R1 Jun. 27 - 29 Jul. 16 - 19	55	40.1 (IS)	45	- (IS)	58 - 63	- (IS)
R2 Jul. 6 - 9 Aug. 7 - 9	55	38.6 48.3	45	- 33.4	58 - 63	- 46.0
R3 Aug. 2 - 5 Aug. 17 - 19	55	33.7 32.9	45	32.9 36.1	49 - 53	33.3 34.2
R4 Jul. 20 - 22 Aug. 22 - 24	55	34.0 -	45	38.2 36.1	58 - 63	36.5 -
R5 Jul. 15 - 17 Aug. 7 - 9 Sept. 4	55	48.2 49.7 (IS)	45	- 35.3 (IS)	$1\ h\ L_{eqs} < 57$	54.1* (59.9)*^ (IS)
(-) Monitoring period with insufficient valid data due to weather conditions outside targets. *R5 values are max. 1-h L_{eq} . ^ L_{eq} elevated due to helicopter flyovers; not suitable for comparison to FEIS prediction (see text). IS = Invalid survey due to incomplete data set (R1) or a fallen microphone (R5)						

8.13.2 Whale Tail Site

As required by NIRB Project Certificate No.008 Condition 5: *Result of all noise monitoring undertaken by the Proponent shall be provided to the Nunavut Impact Review Board on an annual basis. The Proponent shall:*

- a) Conduct noise monitoring at least once during each phase of the Project at four (4) locations in the vicinity of the Whale Tail Pit Project and at two (2) locations along the haul road to demonstrate that noise levels remain within predicted levels for all Project areas; and*
- b) If monitoring identifies an exceedance, the Proponent shall provide an explanation for the exceedance, a description of planned mitigation, and shall conduct additional monitoring to evaluate the effectiveness of mitigative measures.*

The 2024 noise monitoring program at the Whale Tail Site was conducted according to the Noise Monitoring and Abatement Plan (Version 4, December 2018). Complete results of the program are provided in Appendix 41 (2024 Noise Monitoring Report) and summarized below.

The objective of this program is to measure noise levels at six previously determined monitoring locations around the Whale Tail Mine and Haul Road (R6 – R11), over at least two 24 h periods annually. One additional far field station at the Whale Tail Mine Local Study Area boundary (R12) is also surveyed periodically, but was not required in 2024. Since high winds in the area tend to substantially reduce the quantity of available valid data, Agnico Eagle aims to conduct a minimum of two monitoring events of two to four days per station to fulfill monitoring objectives.

After data processing in keeping with standard methods (Alberta Energy Regulator Directive 038), monitoring results collected under specified weather conditions are compared to the site's daytime target sound level (55 dBA), nighttime target sound level (45 dBA), and FEIS Addendum predictions (Agnico Eagle, 2018).

Final daytime, night-time, and 24 h L_{eq} values calculated from recorded 1-min data for each monitoring event and station are shown in Table 8-77. Results for all surveys were less than the site's daytime design target (55 dBA), night-time design target (45 dBA) and FEIS prediction. Historical comparisons indicate no clear trends towards increasing sound levels, and FEIS impact predictions have not been exceeded to date.

No human receptors (e.g. cabins) are located in the vicinity of noise monitoring stations, and no noise-related complaints have been received to date. Impacts of sensory disturbance on wildlife are determined separately through the Terrestrial Ecosystem Monitoring Plan (TEMP) and reported annually in the Wildlife Monitoring Summary Report.

Based on these results, no changes to noise abatement or mitigation measures are proposed at this time. Noise monitoring occurs annually and will continue in 2025 according to the Noise Monitoring and Abatement Plan.

Table 8-77 Daytime, night-time, and 24-h Leq values for monitoring locations R6 – R11 at the Whale Tail Site

Monitoring Station and Start Date (2024)		Leq, day (dBA)		Leq, night (dBA)		FEIS Prediction (dBA)	Leq, 24h (dBA)
		Design Target	Measured Value	Design Target	Measured Value		
R6	Aug. 2 - 5 Aug. 11 - 14	55	31.7 35.7	45	24.2 32.1	40.5 - 42.5	29.2 34.8
R7	Jun. 18 - 20 Jul. 26 - 29	55	(IS) (IS)	45	(IS) (IS)	36.2 - 40.4	(IS) (IS)
	Aug. 27		-		(IS)		-
	Sep. 24 - 26		35.8		34.9		35.5
R8a	Jul. 12 - 13		36.2		28.3		34.8
	Aug. 11 - 14 Aug. 27 - 30	55	35.0 37.0	45	36.6 35.6	36.2 – 40.4	35.9 36.6
R9a	Jul. 12 - 14 Jul. 21 - 23	55	34.7 34.7	45	28.9 30.7	40.4 - 45.1	33.5 33.5
R10a	Jul. 1 – 3 Sept. 6 - 7 Sept. 24 - 26	55	35.0 35.8 30.9	45	31.4 38.1 31.5	36.2 – 40.4	33.4 37.3 31.1
R11a	Jun. 25 - 29 Jul. 26 - 29 Aug 17 - 19	55	(IS) 36.3 28.0	45	(IS) 36.5 26.4	45.1 – 50.0	(IS) 36.3 27.4
(-) Monitoring period with insufficient valid data due to weather conditions outside targets. IS = Invalid survey due to battery failure (R7, R11) or a fallen microphone (R7)							

8.14 AIR QUALITY MONITORING

8.14.1 Meadowbank Site

As required by NIRB Project Certificate No.004 Condition 71: *In consultation with EC, install and fund an atmospheric monitoring station to focus on particulates of concern generated at the mine site. The results of air-quality monitoring are to be reported annually to NIRB.*

And

As required by NIRB Project Certificate No.004 Condition 74: *shall employ environmentally protective method to suppress any surface road dust.*

The 2024 air quality and dustfall monitoring program at the Meadowbank Mine was conducted according to the Air Quality and Dustfall Monitoring Plan, Version 6 (March 2022). The objective of this program is to measure dustfall, NO₂, and suspended particulates (TSP, PM₁₀, PM_{2.5}) at various monitoring locations around the Meadowbank Mine and All-Weather Access Road (AWAR).

Results obtained for the measured parameters in 2024 were primarily compared to Government of Nunavut (GN) Environmental Guidelines for Ambient Air Quality (October, 2011) and/or Canadian

Ambient Air Quality Standards (CAAQS) for TSP, PM_{2.5} and NO₂ (2020/2025); BC Air Quality Objectives (November, 2021) for PM₁₀; Alberta Ambient Air Quality Guidelines (January, 2019) for passive dustfall, and to relevant model predictions from the Project's Final Environmental Impact Statement (Cumberland, 2005). Results for AWAR dustfall monitoring are also compared to management thresholds established in the Air Quality and Dustfall Monitoring Plan.

The complete report is provided as Appendix 42, and monitoring results are summarized below for the Meadowbank Mine and AWAR. Community concerns and dust mitigation measures are also highlighted.

8.14.1.1 Community Concerns

As described in the Air Quality and Dustfall Monitoring Plan, Agnico Eagle records community concerns that are raised with regards to dust generated by traffic on the AWAR and WTHR. Throughout 2024, Agnico Eagle ensured Baker Lake community members and key stakeholders were continuously informed and consulted on various topics, including environmental concerns of community members. No specific comments or complaints were received on this topic by the Meadowbank Environment Department.

The NIRB requested Agnico Eagle to provide an action plan for the development of a community-based monitoring program for dust. In response to the NIRB's recommendations, Agnico Eagle began the development of a community-based dustfall monitoring program in 2022. Agnico Eagle met with Hamlet Council on February 16th, 2022 and the Baker Lake HTO on February 17th, 2022 to discuss the development of the Baker Lake Dust Advisory Group (BLDAG). The first meeting in February 2022 was to identify the groups impacted by dust generated by Agnico Eagle operations. In August 2022, a berry picking session was held with two harvesters to collect IQ and listen to the experiences of these individuals to assist Agnico Eagle in better mitigating potential effects of dust. In 2023, Agnico Eagle continued to collaborate with the community of Baker Lake to identify areas of concern along the road. In early September, Agnico Eagle had an open public session on the AWAR and a bus tour took 16 interested elders along the AWAR to locate and note where dust suppressant had been added on the road, up to km 65.

In the past, consultation with the Hamlet was conducted to identify major areas of concern along the AWAR. Five areas were identified, and dust suppressant (dry flake product) was applied during the summer to mitigate dust in those areas. In 2024, Agnico Eagle applied dust suppressant along the full length of the AWAR. Moving forward, Agnico Eagle will evaluate the benefits of continuing the BLDAG.

8.14.1.2 On-Site Dust Mitigation and Air Quality Monitoring

Dust mitigation for the Meadowbank Mine was carried out in 2024 according to the Air Quality and Dustfall Monitoring Plan. Watering was conducted regularly for mine site roads and the airstrip, as conditions required. In addition, calcium chloride dust suppressant was applied at various Meadowbank Complex onsite locations in the summer season.

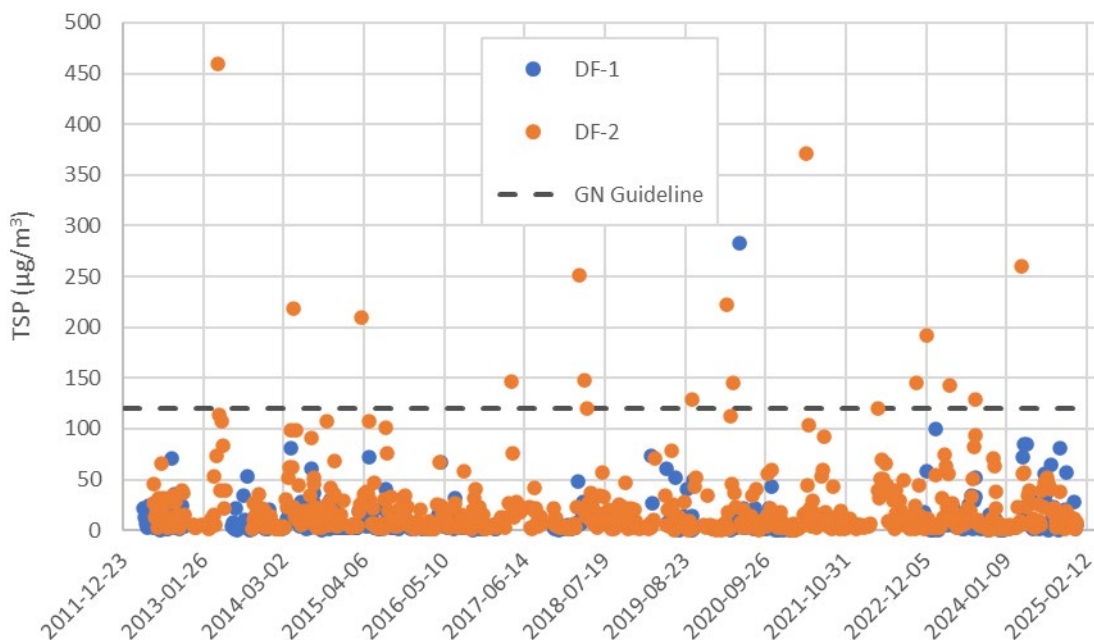
For all Meadowbank Mine air quality monitoring stations and parameters (suspended particulates, NO₂, dustfall), the vast majority of measurements in 2024 did not exceed relevant short-term regulatory guidelines or monitoring thresholds (24-h or 30-d). Across 319 samples for all three size fractions of suspended particulates at the two Meadowbank monitoring stations in 2024, 318 were less than the relevant 24-h guideline value. Historical results for total suspended particulates are shown in Figure 17, for reference. Of 48 onsite monitoring results for dustfall, 47 met the management threshold, which is

equivalent to the Alberta Environment regulatory guideline for industrial areas (30 d average). For relevant parameters (TSP, PM_{2.5}, NO₂), regulatory guidelines for annual averaging times were also met.

Overall, there are no apparent trends towards increasing air quality concerns for these locations.

Figure 17 Historical 24-h average concentrations of total suspended particulates (TSP) at Meadowbank Mine monitoring stations DF-1 and DF-2

Note: Dashed line indicates the 24-hr average GN guideline for ambient air quality.



8.14.1.3 AWAR Dust Mitigation and Dustfall Monitoring

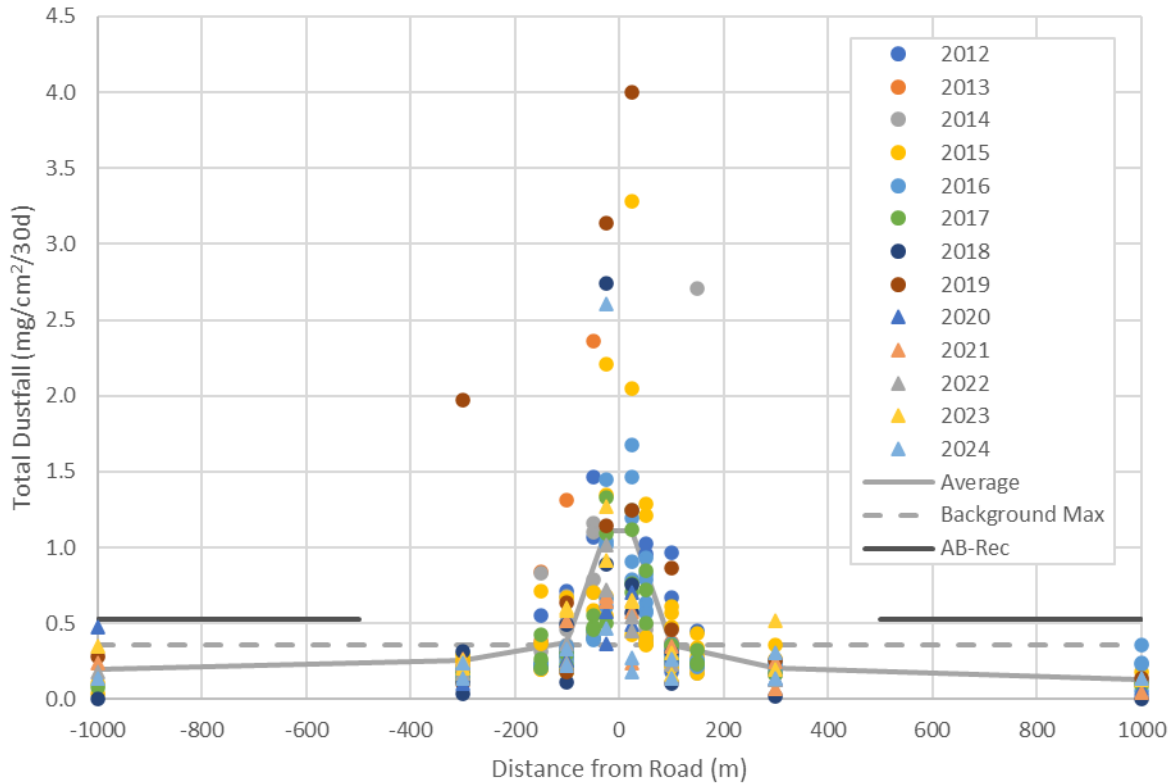
According to the Air Quality and Dustfall Monitoring Plan, a calcium chloride dust suppressant product is to be applied twice during the summer season on five specified sections of the AWAR, two locations in Baker Lake, and one onsite location. However, between May 23 – July 13, 2024, dust suppressant (commercial dry flake calcium chloride product) was applied at least once along the full length of the AWAR, from km 1 to km 110 (582 bags, 1,000 kg each), at a rate of approximately 5 – 6 bags per km. Additional product was applied at the Agnico Eagle spud barge laydown area (12 bags), Baker Lake fuel tank area (6 bags), and the local transportation contractor shop (6 bags). This was the first year of application along the full length of the AWAR.

In addition to calcium chloride, water was applied along the full length of the AWAR and at hamlet-based facilities between May 23 and July 12, totalling approximately 4,045 m³. This is a substantial increase over what was applied in 2023 (637 m³).

Dustfall monitoring was conducted over one-month periods beginning in June, July, and August, 2024 at two locations along the AWAR. For both locations, samples were collected along 1- or 2 km-long transects, centered on the road. The established dust management threshold was met (0.53 mg/cm²/30 d at 500+m from the road) in all three monitoring events. Historical dustfall results for these locations along with the management threshold are shown in Figure 18.

Figure 18 Total dustfall rates (mg/cm²/30d) for all samples collected since 2012 (August sampling events) along the Meadowbank AWAR

Note: Negative distances represent the downwind (east) side of the road, and positive distances represent the upwind (west) side.



8.14.2 Whale Tail Site

As required by NIRB Project Certificate No.008 Condition 1: *The Proponent shall:*

- Develop and implement an Air Quality Monitoring and Management Plan that includes clear objectives and that specifies air quality monitoring thresholds that will trigger adaptive management responses and actions;*
- In the implementation of the Plan, the Proponent shall demonstrate through active and passive monitoring of dustfall, for criteria air contaminant concentrations, incinerator stack testing, and vegetation, soil and snow chemistry sampling that dustfall and emissions of carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), sulphur dioxide (SO₂), suspended particulate matter, mercury, dioxins and furans, and other chemicals remain within predicted levels and, where applicable, within levels or limits established by all applicable guidelines and regulations;*
- The Proponent shall ensure continuous NO₂ monitoring is undertaken downwind of mining activities to allow for comparison to relevant standards including the Canadian Ambient Air Quality Standards;*
- If exceedances occur, the Proponent shall provide an explanation for the exceedance, a description of planned mitigation, and shall conduct additional monitoring to evaluate the effectiveness of mitigative measures; and*
- The Proponent shall also develop, implement, and report on the quality assurance and quality control protocols used to ensure data reliability and proper functioning of equipment.*

And

As required by NIRB Project Certificate No.008 Condition 2: *Prior to commencing construction activities the Proponent shall update the existing Dust Management and Monitoring Plan for the Meadowbank Mine site to address and/or include the following additional items:*

- *Align plan requirements with commitments made in the Final Environmental Impact Statement and during the Final Hearing to monitor dust along the existing all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project.*
- *Verify commitments to the utilization of dust suppressants along the all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project, including a description of the type of suppressant to be utilized and the frequency and timing of applications to be made throughout the various seasons of road use.*
- *Outline the specific triggers, thresholds, and adaptive management measures that will apply if monitoring indicates that dust deposition is higher than predicted.*

The Proponent shall report annually to the Nunavut Impact Review Board with a summary of its dust management activities.

The 2024 air quality and dustfall monitoring program at the Whale Tail Mine was conducted according to the Air Quality and Dustfall Monitoring Plan, Version 6 (March, 2022). The objective of this program is to measure dustfall, NO₂, and/or suspended particulates (TSP, PM₁₀, PM_{2.5}) at various monitoring locations around the Whale Tail Mine and Whale Tail Haul Road (WTHR).

Results obtained for the measured parameters in 2024 were primarily compared to Government of Nunavut (GN) Environmental Guidelines for Ambient Air Quality (October, 2011) and/or Canadian Ambient Air Quality Standards (CAAQS) for TSP, PM_{2.5} and NO₂ (2020/2025); BC Air Quality Objectives (November, 2021) for PM₁₀; Alberta Ambient Air Quality Guidelines (January, 2019) for passive dustfall, and to relevant model predictions from the Project's Final Environmental Impact Statement (Agnico Eagle, 2018). Results for WTHR dustfall monitoring are also compared to management thresholds established in the Air Quality and Dustfall Monitoring Plan.

The complete report is provided as Appendix 42, and results are summarized below for the Whale Tail Mine and Whale Tail Haul Road, along with a summary of road dust mitigation for each area.

8.14.2.1 Onsite Dust Mitigation and Air Quality Monitoring

Dust mitigation for the Whale Tail Mine was carried out in 2024 according to the Air Quality and Dustfall Monitoring Plan. Watering was conducted regularly for roads at the Whale Tail Mine to control dust, and calcium chloride dry flake product was applied at various onsite locations (e.g. IVR Pit area) during the summer season. Whale Tail Haul Road dust control is discussed further in Section 8.14.2.2.

For all Whale Tail Mine air quality monitoring stations and parameters (suspended particulates, NO₂, dustfall), the vast majority of measurements were below relevant short-term regulatory guidelines or monitoring thresholds (24-h or 30-d). Across 238 samples for suspended particulates at the Whale Tail Mine monitoring station (three size fractions combined), 232 results met the relevant 24-h guidelines. The six samples that exceeded guidelines included four for TSP, one for PM₁₀, and one for PM_{2.5}. Historical results for these parameters are shown in Figures 19, 20 and 21. In the Whale Tail FEIS, exceedances were predicted to occur for TSP and PM₁₀. All onsite monitoring results for dustfall (11 samples) met the management threshold, which is equivalent to the Alberta Environment regulatory guideline for industrial

areas (30 d average). All 1-h and 24-h measurements for NO₂ were below regulatory guidelines, and for relevant parameters (TSP, PM_{2.5}, NO₂), regulatory guidelines for annual averaging times were also met.

Overall, there are no apparent trends towards increasing or unpredicted air quality trends of concern at the Whale Tail Mine.

Figure 19 Historical 24-h average concentrations of total suspended particulates (TSP) at Whale Tail Mine monitoring station DF-6b

Note: Dashed line indicates the 24-hr average GN guideline for ambient air quality. In the FEIS (Agnico Eagle, 2018), modeled concentrations of TSP were predicted to exceed the GN guideline at this monitoring location.

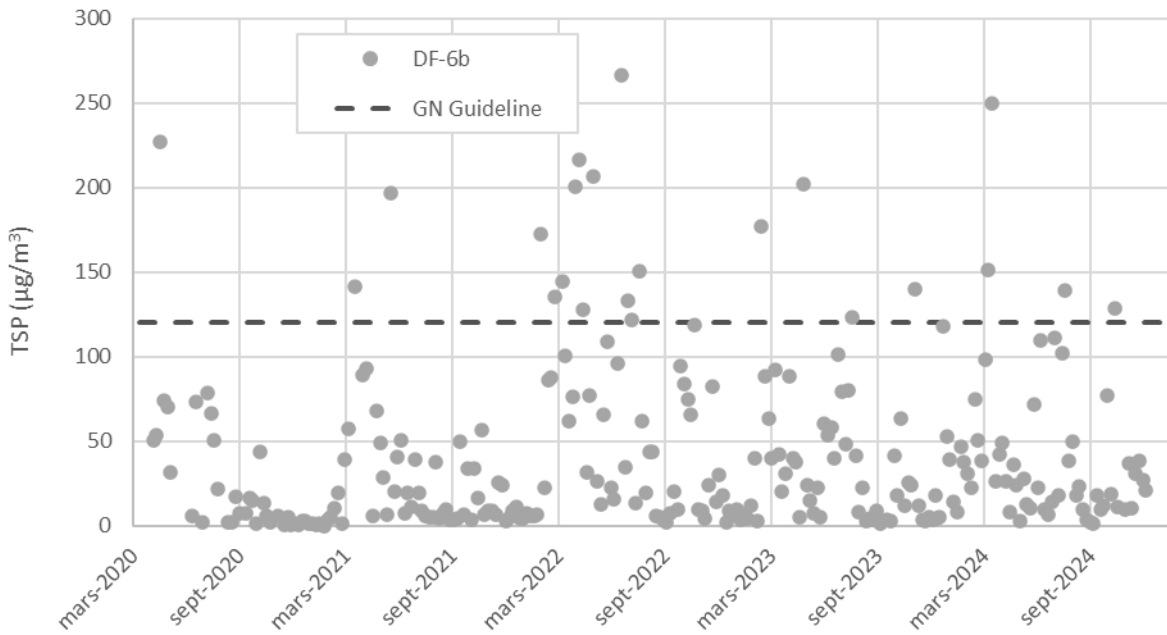
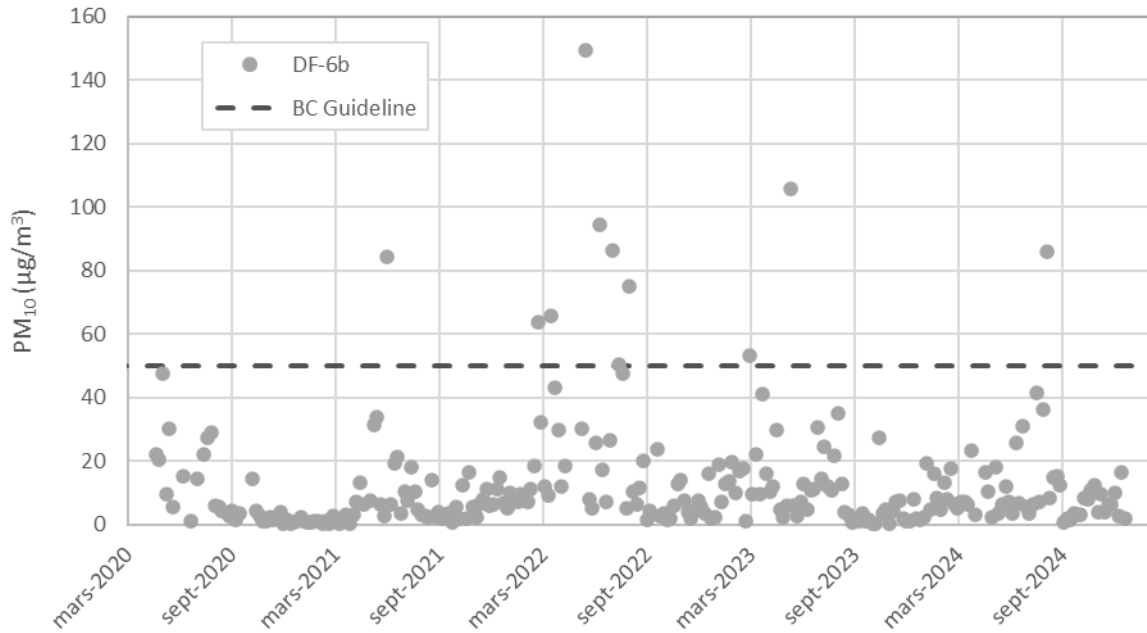
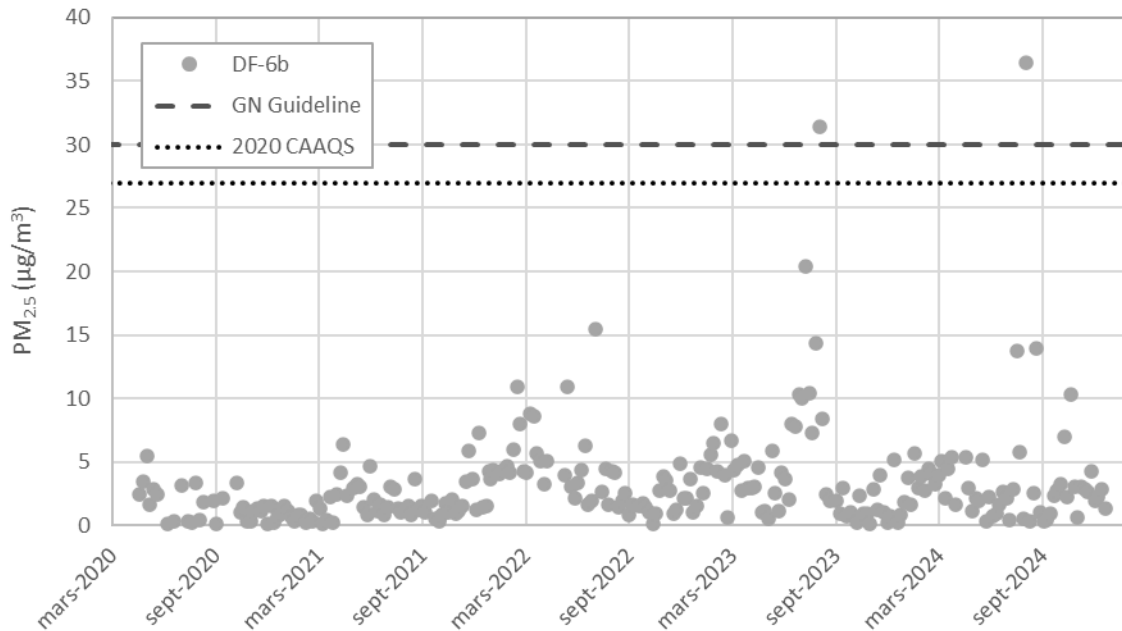


Figure 20 Historical 24-h average concentrations of PM₁₀ at Whale Tail Mine monitoring station DF-6b

Note: Dashed line indicates the 24-hr average BC guideline for ambient air quality. In the FEIS (Agnico Eagle, 2018), modeled concentrations of PM₁₀ were predicted to exceed the guideline at this monitoring location.

**Figure 21 Historical 24-h average concentration of PM_{2.5} at Whale Tail Mine monitoring station DF-6b**

Note: Dashed line indicates the 24-hr average GN guideline for ambient air quality and dotted line indicates the 24-h CAAQS.



8.14.2.2 WTHR Dust Mitigation and Dustfall Monitoring

In 2024, dust suppressant in the form of calcium chloride (dry flake product) was again applied to the entire length of the WTHR between May 13 and September 3. In total, 830 bags (1,000 kg each) were applied. In addition to calcium chloride, road watering was conducted along the entire WTHR throughout the summer season, as needed. Between May 13th and September 3rd, approximately 10,500 m³ of water were applied.

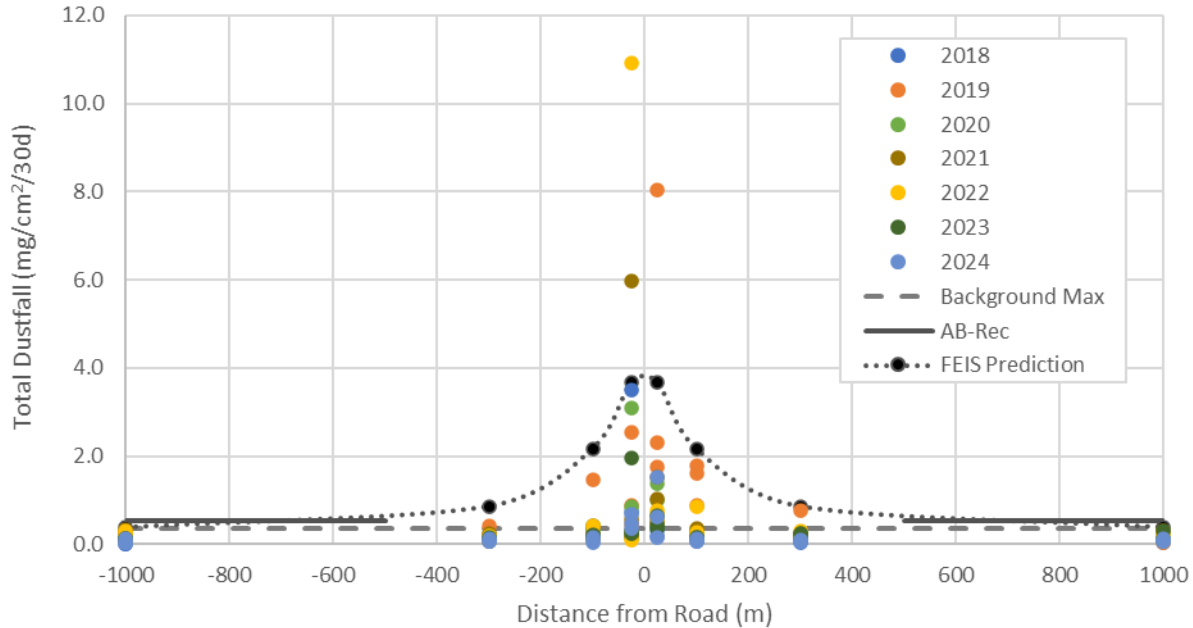
Dustfall monitoring on the WTHR in 2024 consisted of passive sampling over three 30-d periods during beginning in June, July, and August. Two-km sampling transects were centered on the road at km 134, km 151, and km 169. Results are compared to the specific FEIS Addendum predictions for deposition, as well as the management threshold of 0.53 mg/cm²/30d at 500 m, to assess the effectiveness of dust suppression efforts. This threshold is based on the general FEIS Addendum prediction for dust deposition along the WTHR, and is equivalent to the Alberta Environment guideline for residential/recreational areas.

In 2024, as in previous years, some specific FEIS Addendum model predictions were exceeded, but only within very close proximity to the road (25 m). The overarching FEIS prediction that maximum deposition rates along the AWAR would decline below the management threshold and Alberta Environment recreational area guideline within 500 m of the road was met in all cases, so mitigation is considered to have been effective.

Historical dustfall results for WTHR locations along with the management threshold are shown in Figure 22.

Figure 22 Total dustfall rates (mg/cm²/30d) for all samples collected in August along the Whale Tail Haul Road to date

Note: 2018 and 2019 data was collected at ground level, while 2020+ samples were collected on stands (2 m). Negative distances represent the east (downwind) side of the road, and positive distances represent the west (upwind) side. FEIS Prediction values are from the FEIS Addendum Appendix 4C, Table 4-C-24 (Agnico Eagle, 2018b). AB-Rec represents the management threshold of 0.53 mg/cm²/30d at 500 m from the road.



8.14.2.3 Community Engagement

Community engagement with regards to dust mitigation and monitoring for the Meadowbank Complex is discussed in Section 8.14.1.1.

8.15 GREENHOUSE GASES

As required by NIRB Project Certificate No.004 Condition 73: *Cumberland shall undertake to conserve the Project's use of energy, monitor the Project's greenhouse gas emissions, and continuously review and, if possible, consider for adoption new technologies to ensure greenhouse gases meet the latest Canadian standards or criteria.*

And

As required by NIRB Project Certificate No.008 Condition 3: *The Proponent shall maintain a Greenhouse Gas Emissions (GHG) Reduction Plan which includes:*

- *An estimate of the Project's GHG baseline emissions;*
- *A description of monitoring measures to be undertaken, including the methods, frequency, parameters, and a description the analysis that will be carried out on the monitoring data generated; and*

- *A description of mitigative and adaptive strategies planned, and taken, to reduce project-related greenhouse gas emissions over the Project lifecycle.*

The Plan should be submitted to the Nunavut Impact Review Board (NIRB) within 60 days of the issuance of the Project Certificate, with results submitted annually thereafter or as may otherwise be required by the NIRB.

The Greenhouse Gas Reduction Plan (GHGRP) was submitted as Version 3 in April, 2020, and results of GHG emissions calculations are reported here according to Section 3.2 of the Plan, with comparisons to FEIS predictions. Values reported here for emissions in 2024 are considered preliminary at this time, with some minor adjustments possible in the final emissions calculations that will be reported to Environment and Climate Change Canada's Greenhouse Gas Emission Reporting Program by June 1st, 2025. Values for past years are updated according to the final GHGRP submission.

As part of the FEIS Addendum for the Whale Tail Pit Expansion Project (Agnico Eagle, 2018), Project-related emissions of GHGs were calculated for the maximum emission scenario (i.e. peak production; estimated to occur in 2022) using methods consistent with the GHGRP. Emissions associated with the Meadowbank Mill were calculated in the FEIS for Whale Tail Pit (Agnico Eagle, 2016), and are shown as a separate line item in Table 8-78. These values are consistent with Table 2.1 in the GHG Reduction Plan (April, 2020).

Table 8-78 Predicted Greenhouse Gas Emissions summary for the Whale Tail Mine and Meadowbank Mill in the peak production year of 2022

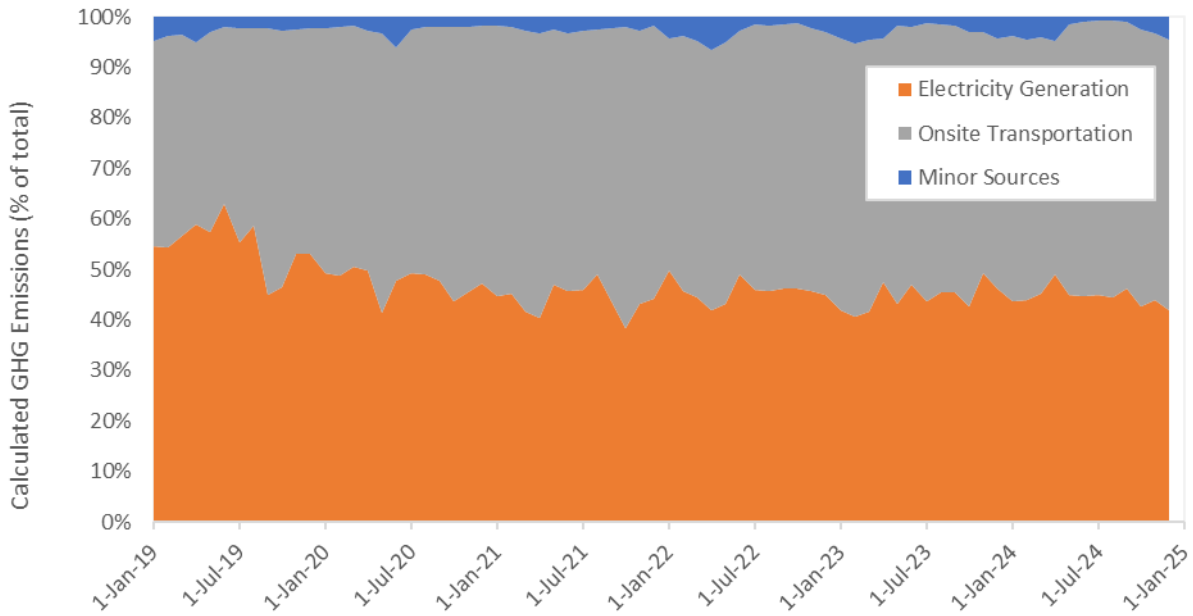
Emissions Source	Greenhouse Gas Emissions (kt CO ₂)
Non-road Exhaust	142.0
Generators	18.0
Heaters	1.9
Incinerator	2.3
Whale Tail Mine Total¹	164.2
Meadowbank Mill ²	180.0
Meadowbank Complex Total	344.2
1 – Golder Associates Ltd. 2018. Final Environmental Impact Statement (FEIS) Addendum. Whale Tail Pit – Expansion Project. Submitted to Nunavut Impact Review Board. December 2018.	
2 – Agnico Eagle, 2016. Whale Tail Pit Project - Meadowbank Mine Final Environmental Impact Statement and Type A Water License Amendments. Amendment/Reconsideration of the Project Certificate (No. 004/ File No.03MN107) and Amendment to the Type A Water License (No. 2AM-MEA1525). Submitted to the Nunavut Impact Review Board. June 2016.	

Calculated annual GHG emissions for the Meadowbank Complex beginning in 2018 (first year of Whale Tail Mine reporting) are provided in Table 8-79, with comparisons to FEIS predictions. Calculated emissions beginning in 2019 include both Whale Tail and Meadowbank sources combined, so only the total values are compared to FEIS predictions. Overall, preliminary total GHGRP-reportable emissions from the Meadowbank Complex in 2024 are 267,716 tCO₂e, which is less than the FEIS-predicted maximum value of 344,200 tCO₂e.

Table 8-79 Predicted and calculated GHG emissions (t CO₂e) for all sources required under the Greenhouse Gas Pollution Pricing Act (S.C. 2018, c.12,s.186, Schedule 3) for the Meadowbank Complex.

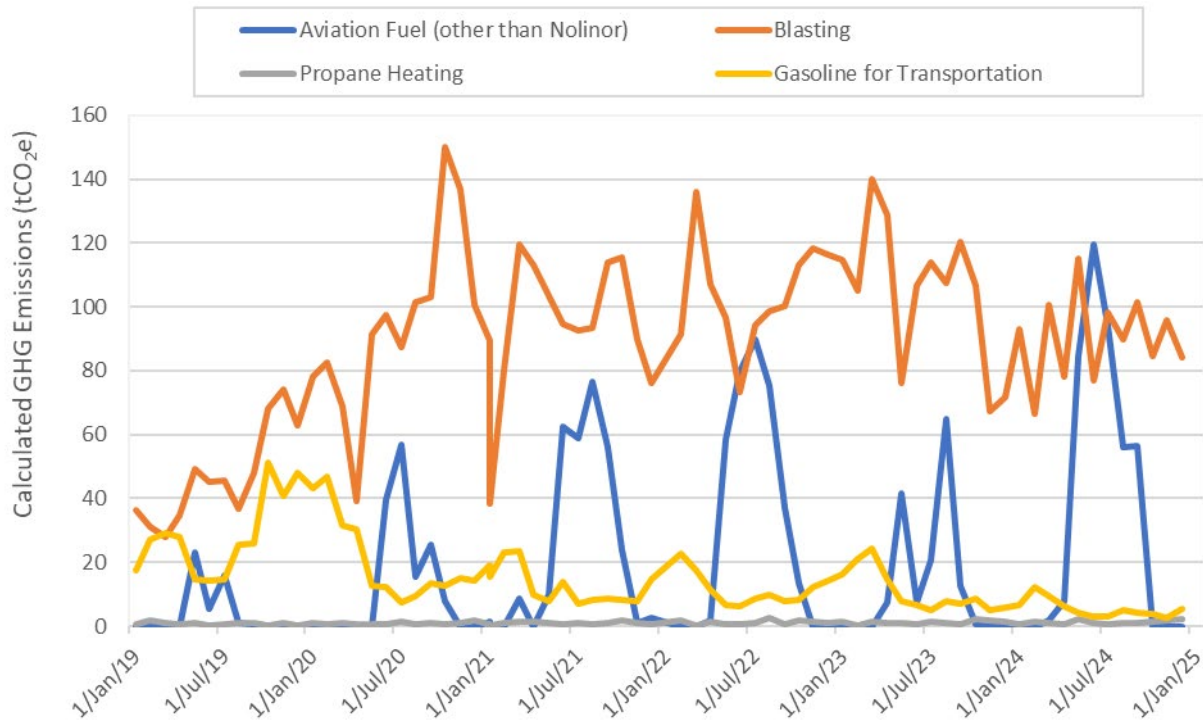
Emission Type	FEIS Prediction ¹	2018	2019	2020	2021	2022	2023	2024
Stationary fuel combustion emissions (Generators)	-	91,082	106,499	107,019	107,505	113,583	112,702	119,144
Stationary fuel combustion emissions (Other than generators)	-	-	577	266	604	2,978	6,007	6,759
Industrial process emissions ²	-	987	560	1,138	1,181	1,184	1,260	-
Industrial product use emissions	-	-	527	986	1,005	585	831	708
Venting emissions	-	-	-	-	-	-	-	-
Flaring emissions	-	-	-	-	-	-	-	-
Leakage emissions	-	-	-	-	-	-	-	-
On-site transportation emissions	-	90,650	82,951	112,791	130,404	127,690	132,979	141,082
Waste emissions	-	2,809	4,450	3,186	3,193	3,343	28	23
Wastewater emissions	-	-	-	-	-	-	-	-
TOTAL	344,200	185,528	195,564	225,385	243,893	249,362	253,808	267,716
¹ - FEIS predictions are further described in Table 8-78 above. ² - Emissions related to explosives use are reported under Stationary Fuel Combustion, rather than Industrial Process Emissions, beginning in 2024. <i>Note: Values for 2024 are preliminary at the time of this report. Others are updated according to final reporting to ECCC.</i>								

Calculated total monthly emissions for all sources required under the Greenhouse Gas Pollution Pricing Act (S.C. 2018, c.12,s.186, Schedule 3), for the Meadowbank Complex are shown in Figure 23, grouped by major and minor sources. Relatively little variation in sources of emissions has occurred month over month.

Figure 23 Calculated monthly GHG emissions (% of total) for the Meadowbank Complex.

*Note: Minor sources include emissions related to stationary combustion (other than generators), industrial processes, industrial product use, and waste emissions.

According to the GHGRP (Section 3.2), an analysis of specific sources is provided in [Figure 24](#). These sources include aviation, blasting, propane heating, and light truck transportation using gasoline. It is noted that aviation emissions exclude aviation fuel for flights to Nunavut, which are not subject to carbon pollution pricing. Reported aviation fuel use is therefore primarily associated with helicopter use for exploration activities and personnel transport during the summer months (peaks). Emissions related to blasting steadily increased over the course of 2019 - 2021 as Whale Tail operations ramped up. Blast-related emissions appear to have generally plateaued beginning in 2021. Propane heaters form a very minor component of overall emissions and have been relatively constant (0.4 – 2.0 tons CO₂e/month). Similarly, use of gasoline for transportation (primarily associated with light trucks, but also potentially smaller vehicles such as ATVs and snowmobiles) has remained relatively constant, though a slight increase during the winter season of 2019-2020 was observed.

Figure 24 Calculated historical emissions related to specific sources at the Meadowbank Complex*

*Note: Sources indicated in the GHGRP.

Agnico Eagle has an Energy and Greenhouse Gas Management Strategy developed to create value for the shareholders by operating in a safe, social and environmentally responsible manner. Agnico Eagle also has an Energy Savings Committee that involved members for each different departments on site. The objective of the Energy Savings Committee is to develop department level strategies to optimize and reduce energy and fuel consumption at the Meadowbank Complex.

Different projects over the years were held by Agnico Eagle over the duration of the project to reduce the energy consumption and increase or evaluate the use of new technologies at the Meadowbank Complex:

- Use of summer fuel;
- Use of solar panels in northern condition operation - test completed and successful;
- Identification of energy-saving opportunities in regards to the carbon tax;
- TSM flow chart implemented with Strategic Optimization team for energy-saving opportunities;
- Energy dashboard improvement for better energy consumption monitoring;
- Energy dashboard internal audit to ensure energy consumption data accuracy;
- Time study of the service equipment to increase capacity with the same consumption;
- Whale Tail Camp Power Plant heat recovery study;
- Use of a composter at Meadowbank;
- Genset Synchro R&D test on the Whale Tail Power Plant. Expected fuel consumption decrease;

- Insulation of remote buildings at Meadowbank;
- Audit and initiate projects to improve the heat recovery from generators boiler and the distribution;
- Shutting off the regrind circuit at the process plant when not required;
- Implementation of a three phase energy saving campaign;
- Winterizing windows at Meadowbank and Whale Tail;
- Improve glycol heat usage at Whale Tail;
- Compressed Air Audit;
- Decommissioning of Incinerator;
- Heat recovery system KPI and maintenance; and
- Underground ventilation on demand.

Section 4 of the Greenhouse Gas Reduction Plan (Version 3, April 2020) details some of the reduction initiative above. Some initiatives have already been implemented, while others are currently being assessed. Emissions and energy reduction initiatives underway are summarized in Table 8-80.

As the Meadowbank Complex emits more than 50Kt of CO₂e/yr, a report will be submitted to Environment and Climate Change Canada's Greenhouse Gas Emission Reporting Program by June 1st, 2025. Mining operations in Nunavut are also subject to the federal Output Based Pricing System Regulations, which came into effect July 1st, 2019. An Annual Report and supporting Verification Reports, required as part of the OBPS, will also be submitted on June 1st, 2025.

Table 8-80 Meadowbank Complex emissions and energy reduction initiatives

Description	Implementation Year	Stage of Development	Est. Annual Savings
Fuel Reduction Initiative	2018	Implemented	45,000 diesel L/year
Genset Synchro R&D	2019	Implemented	52,488 kWh/year
Whale Tail Camp Power Plant heat recovery study	2020	Implemented	1,944,000 kWh/year
Insulation of remote buildings	2019	Implemented	27,000 kWh/year
Meadowbank Composter	2019	Implemented	340,000 Diesel L/year
Audit and improvement for the Heat recovery system at Meadowbank	2020	Implemented	30,000 kWh/year
Shutting off regrind circuit at the mill from time to time (as feasible)	2021	Implementation commenced	1,000,000 kWh/year
Energy saving campaign	2021	Implemented	800,000 kWh/year
Winterize windows	2021	Implemented	300,000 kWh/year
Improve glycol heat usage at Whale Tail camp	2022	Implemented	70,000 Diesel L/year
Compressed air audit	2023	Implemented	250,000 Diesel L/year
Insulation campaign	2023	Implemented	125,000 Diesel L/year
Incinerator decommissioning	2023	Implemented	430,000 Diesel L/year
Squarefoot Rationalization project (actively work to	2023	Implementation	To be evaluated

Description	Implementation Year	Stage of Development	Est. Annual Savings
reduce square footage of heated areas)		commenced	
Heat Recovery system KPI	2024	Implementation commenced	150,000 Diesel L/year
Heat Recovery system maintenance	2024	Implementation commenced	150,000 Diesel L/year
UG Ventilation on demand	2024	Implementation commenced	450,000 kWh/year

8.16 CREEL SURVEY RESULTS

As required by DFO Authorization NU-03-0190 (AWPAR) Condition 5.2.4: *Engage the local Hunter Trapper Organization(s) in the development, implementation and reporting of annual creel surveys within the water bodies affected by the Plan.*

And

NIRB Project Certificate No.004 Condition 51: *Engage the HTOs in the development, implementation and reporting of creel surveys within waterbodies affected by the Project to the GN, DFO and local HTO.*

Completed discussion regarding creel survey and historic data is provided in Section 10 of the 2024 Wildlife Summary Monitoring Report (Appendix 39). The below is a summary of the findings and Agnico Eagle will refer to Appendix 39 for a complete discussion of the results.

Harvest calendars are provided on a household basis rather than an individual basis in order to simplify data entry and collection. The harvest calendar is attractive and consists of local photographs of wildlife and Baker Lake residents primarily taken by HHS participants (see Appendix F for 2024 calendar – Appendix 39 of this report). At the end of the calendar are maps that delineate a 4 km² UTM grid within the Baker Lake and Meadowbank Complex areas. Each grid has a unique code to facilitate recording of information. When calendars are issued, participants or participating households are encouraged to write harvest details (e.g., number of animals, sex, age, and location [i.e., grid code]) for the appropriate date on the calendar.

Participants were interviewed in person three times during the year (i.e., June 2024, November 2024, and January 2025). During the January 2025 interviews, remaining data from 2024 were collected. The purpose of the interviews is to ensure all harvest data are recorded on the calendars and to collect incidental information to compliment calendar data, including notable Caribou movements, aggregations, and unique observations. Between interview periods, participants were often contacted by phone or social media to encourage recording of harvest data.

The number of fishermen reporting successful fishing trips in 2024 was 34, which is higher than the average of 25 fisherman from 2007 to 2015 and 2019 to 2023 (14 years), and slightly higher than the number of fisherman reporting success in 2023 (i.e., 30). The highest number of fisherman reporting success in 2024 were in May and June, which is consistent with seasonal fishing patterns in other years.

The most common fish species captured, Lake Trout, represented 51% of the total catch in 2024, which was lower than in the last four years (i.e., 2020 to 2023). Lake Trout catch in 2024 (i.e., 356 individuals) was lower than the average of 667 from 2007 to 2015 and 2019 to 2023. Arctic Char were caught at lower

numbers in 2024 (48 individuals) than the average of 73 from 2007 to 2015 and 2019 to 2023. Lake Whitefish were captured in moderate numbers in 2024.

Fishing trips, regardless of success rate, did not generally occur beyond the immediate areas of Baker Lake, Whitehills Lake, and the lower AWAR. Some fishing occurred along the Thelon River system and along the northeastern shore of Baker Lake. As was the case in other years, results indicate that study participants are less willing to travel long distances to catch fish, regardless of AWAR access, likely due to the abundance of fish near the Hamlet of Baker Lake and around Whitehills Lake.

In 2024, fishing periods with the most active fisherman was May and June, which is comparable to other years). Over all reporting years, the periods with the most fish caught included the summer months (May and June), which reflects the high number of Lake Trout caught by fisherman heading out on the land after ice melt, and November. This trend can be observed in the trends from 2007 to 2015 and 2019 to 2023.

The 2024 HHS data were compared to the impact prediction thresholds to evaluate adherence to the impact predictions and the provision of adaptive management, as either a necessary or proactive measure. No thresholds were surpassed in 2024. (Section 10 of Appendix 39).

8.17 NO FISHING POLICY

As Required by NIRB Project Certificate No.004, Condition 52: *Cumberland shall enforce a no-fishing policy for employees while working on the job site.*

Agnico Eagle has a no-fishing policy for its Meadowbank and Whale Tail Mine Sites. The policy is enforced all through the year within environmental inspections. There were no incidents to report in 2024.

8.18 TERRESTRIAL ECOSYSTEM MONITORING

As Required by NIRB Project Certificate No.008, Condition 28: *The Proponent shall submit a revised TEMP to the Nunavut Impact Review Board (NIRB) within one (1) year of issuance of the Project Certificate, with subsequent versions provided as appropriate. Results of the TEMP shall be reported to the NIRB annually including details of how Inuit Qaujimajatuqangit contributed by knowledge holders has been considered and utilized in associated activities and updates.*

And

NIRB Project Certificate No.004 Condition 61: *In consultation with EC, Cumberland shall incorporate into the Terrestrial Ecosystem Management Plan and the Air Traffic Management Plan a commitment for aircraft to maintain (whenever possible) a cruising altitude of at least 610 metres during point to point travel when in areas likely to have migratory birds, and 1000 metres vertical and 1500 metres horizontal distance from observed concentrations of migratory birds, and use flight corridors to avoid areas of significant wildlife importance.*

Agnico Eagle submitted the TEMP Version 7 in June 2019 (Appendix 58 of the 2019 Annual Report). This version includes revisions per additional comments from TAG members, and Whale Tail Expansion Project environmental assessment information requests, technical comments, and technical meetings. TEMP Version 8 was submitted in 2020 within 60 days of issuance of the amended Project Certificate No.008 to comply with commitments made during the Expansion Project NIRB Review Process. This version was not approved. In 2024, the TAG worked collaboratively all year on a TEMP update. In February 2025, Agnico Eagle held an in-person workshop with the TAG to update the TEMP and were able to reach consensus on a TEMP Version 9 (March 2025) submitted with this annual report in

Appendix 38. TAG letters of support regarding TEMP Version 9 from HTO, KivIA and GN are provided in Appendix 62.

In 2024, TEMP Version 7 continued as the basis for 2024 monitoring and mitigation, with many modifications and exceptions applied through a collaborative approach within the TAG. Refer to Section 8.18.12 for more details regarding TAG activities.

The following Section 8.18 includes both Meadowbank and Whale Tail sites, as condition from Project Certificate no. 004 and 008.

8.18.1 Annual Monitoring

As Required by NIRB Project Certificate No.004, Condition 55: *Provide the Annual Wildlife Summary Monitoring Report.*

Baseline and monitoring programs were first initiated in 1999 and will continue through the life of the Project. Details of the wildlife monitoring program for the Project are provided in the Terrestrial Ecosystem Management Plan (Version 7, Agnico Eagle 2019). The 2024 Annual Report provides the monitoring objectives, methodology, historical and current year results, mitigation activities, and management recommendations for each monitoring program. The 2024 Annual Report builds on data presented in previous reports and incorporates monitoring recommendations from these reports, as well as recommendations and requests from intervenors on past reports made during the NIRB review process. Below is a summary of the results from each component of the 2024 Annual Report.

As a requirement of the NIRB Project Certificate, the 2024 Wildlife Monitoring Summary Report represents the 19th of a series of annual reports for the Agnico Eagle Meadowbank Complex. Baseline and monitoring programs were first initiated in 1999 and will continue through the life of the Mine. Details of the wildlife monitoring program for the Project are provided in the Terrestrial Ecosystem Management Plan (Version 7). The 2024 Wildlife Monitoring Summary Report provides the monitoring objectives, methodology, historical and current year results, and management recommendations for each monitoring program. The 2024 report builds on data presented in previous reports and incorporates monitoring recommendations from these reports, as well as recommendations and requests from intervenors on past reports made during the NIRB review process. Below is a summary of the results from each component of the 2024 Wildlife Monitoring Summary Report (Appendix 39) with more details provided in the following sections.

Wildlife monitoring is focused within the Local Study Area (LSA), which includes a 5 km area centred on the Meadowbank Mine Site and Vault Site (Meadowbank LSA), a 3 km area centred on the AWAR (AWAR LSA), a 3 km area centred on the Whale Tail borrow areas and the WTHR (WTHR LSA) and includes an approximate 1.5 km buffer around development areas at the Whale Tail Mine Site.

Several wildlife monitoring programs are focused on supporting movement of caribou through the Mine area during spring and fall migration. Road surveys are completed regularly by Agnico Eagle Environmental Department who drive the length of the AWAR and the WTHR and search for caribou, recording all wildlife observations. The AWAR and WTHR are each surveyed about once every two to three days throughout the year, with a higher frequency of surveys occurring during the peak in caribou migration. Viewshed surveys and caribou collar data are used as an early warning system for caribou migrating toward the Meadowbank Complex. These monitoring programs are used to advise mitigation measures such as road closures when large numbers of caribou are moving through the mine area.

Remote cameras have been placed along the WTHR since 2020, to monitor caribou crossing events along the road. The main objective for the remote camera program is to learn how characteristics of the WTHR, such as the slope and material of the road, influence caribou crossing events. A blast vibration and noise monitoring program was implemented at the Whale Tail Mine in 2021 to monitor how caribou respond to blasts. Snow conditions are measured along the WTHR to understand how snow management could influence caribou movement through the area. Monitoring and mitigation measures are regularly discussed with the Terrestrial Advisory Group (TAG), as several programs have been designed and implemented in collaboration with the TAG (e.g., snow study, new caribou migration mitigation protocols, etc.).

Mine and Pit ground surveys are completed regularly throughout the year to identify habituated wildlife, wildlife mortalities, bird nests, and other wildlife observations near the Meadowbank and Whale Tail Mines. Peregrine falcon nest monitoring is completed annually within the LSA. Many peregrine falcons will return to the same nest site each year, and these known nests are monitored to track nesting success over time. Local community members are surveyed as part of the Hunter Harvest Study to understand hunting patterns close to the AWAR and WTHR. Finally, non-native plant surveys were completed along the AWAR, WTHR as well as at Meadowbank and Whale Tail Mine sites. These areas are surveyed by road and on foot, and any non-native species are logged and removed if any are observed.

Each year the monitoring results are presented in an annual Wildlife Monitoring Summary Report and recommendations for adaptive management on monitoring programs are included. The annual monitoring results are often presented in the context of previous years of results to understand how wildlife interactions with the mine may be changing over time. Adaptive management is an important process for updating survey methods and allows for the monitoring programs to evolve with experience and community and regulator input through the Nunavut Impact Review Board.

Note that the following sections are a summary of the TEMP report and Agnico Eagle will refer the reader to the report in Appendix 39 for an exhaustive comprehension of the program and results for 2024.

8.18.2 Wildlife Study Results

As required by NIRB Project Certificate No.004 Condition 54

a. Updated terrestrial ecosystem baseline data

See the 2024 Wildlife Monitoring Summary Report attached in Appendix 39.

e. Details of a comprehensive hunter harvest survey to determine the effect on ungulate populations resulting from increased human access caused by the all-weather private access road, including establishing preconstruction baseline harvesting data, to be developed in consultation with local HTOs, the GN-DOE and the Nunavut Wildlife Management Board.

Completed discussion regarding HHS survey and historic data is provided in Section 10 of the 2024 Wildlife Summary Monitoring Report (Appendix 39). The below is a summary of the findings and Agnico Eagle will refer to Appendix 39 for a complete discussion of the results.

The HHS included 77 participants by the end of 2024, which is higher than participants in 2023, 2022, and 2021 (i.e., 75, 59, and 55 respectively). Higher numbers in 2024 are because of a higher number of new participants relative to those that have left the study. Of the 2024 participants, Caribou harvest data

were collected from 64 participants, which is slightly higher than the 63 participants reporting Caribou harvests in 2023 and considerably higher than the 55 hunters reporting harvests in 2022. The 64 participants reporting Caribou harvest in 2024 is the highest number since the HHS began.

Based on the previous discussion of total numbers of hunters in the Hamlet of Baker Lake, there were 389 potential hunters within the Baker Lake community in 2008. The number is comparable to the comprehensive 5-year Nunavut Wildlife Harvest Study in which 336 Baker Lake hunters were contacted and interviewed. Discussions with Baker Lake HTO members in 2019 suggest the total number of hunters is over 300. Given the historical and current number of hunters in Baker Lake, an estimate of 300 to 350 active hunters is used in this analysis. Based on these numbers, the 64 hunters reporting Caribou harvest in 2024 conservatively represent from 18 to 21% of total hunters in the community.

Hunting is highly concentrated in the vicinity of the Hamlet of Baker Lake and along the AWAR to approximately Km 85. More moderate harvests were reported along the northeastern and southwestern shores of Baker Lake, while limited hunting was reported within the Thelon River system to Aberdeen Lake. Annual variation in harvest location and intensity is attributable to numerous factors. For instance, many hunters have stated during informal discussions that they have a ‘favorite’ hunting area that they frequent each year. Some hunters have stated that they prefer hunting in ‘convenient’ locations, whereas other hunters prefer remote locations well away from frequented areas. A percentage of hunters also enjoyed partaking in long distance hunting trips over multiple days.

Between 1996 and 2001, 18% of Caribou harvests were estimated to be within 5 km of the AWAR (prior to construction) and 67% of harvests occurred within the Meadowbank RSA. In the first year of the HHS study (2007), prior to completion of the AWAR, 34% of harvests were reported within 5 km of the AWAR alignment and 79% were recorded within the Meadowbank RSA. The HHS data (2007 to 2015 and 2019 to 2023) fluctuated between 30 and 54% of reported harvest within 5 km of the AWAR, and between 62 and 85% within the Meadowbank RSA. The 2024 HHS data indicated that 48% of reported harvest occurred within 5 km of the AWAR and 82% occurred within the Meadowbank RSA, which are within the ranges observed in the study to date. As was the case in other years, threshold levels of 20% set for monitoring the effects of the Meadowbank mine development (note – does not include the Whale Tail mine, which was approved under a separate permit with a different effects assessment) on the distribution of Caribou harvest within the RSA were not exceeded.

In 2024, no Caribou were harvested within 5 km of the WTHR, which compares to no reported harvest during the NWMB harvest study, one (1) Caribou harvest in 2023, no Caribou in 2022, and three (3) in 2021. Overall harvest numbers were too low to determine whether harvests have increased following construction of the WTHR. Within the Whale Tail RSA (note – overlaps with the Meadowbank RSA), a total of 33 harvests were reported in 2024, which is just below the average across the first 14 years of the study. Given the low numbers of reported harvests close to the WTHR and the prohibition of the public from the WTHR, it is unlikely that the presence of the road has resulted in increased harvest in this area.

Based on the NWMB and inclusive Baker Lake HHS results (2007 to 2015; 2019 to 2024), highest Caribou harvests have occurred between August and December, with a second smaller peak between March and May. The similar pattern between the studies indicates that seasonal hunting preferences have not changed markedly in the last decade.

In spring 2024, overall Caribou hunting in the Meadowbank RSA was moderate with hunting occurring primarily west of the AWAR from the Hamlet of Baker Lake to the south end of Third Portage Lake around the Km 85 mark. Within the Whale Tail RSA, one or two Caribou were harvested at the south end of Third

Portage Lake, which is also within the Meadowbank RSA. During the summer, Caribou in the Meadowbank RSA were harvested across a larger area but particularly along the AWAR up to around Km 85 and near the Hamlet of Baker Lake. Some harvesting occurred along the Thelon River to Aberdeen Lake, and along the northeastern and southwestern shores of Baker Lake. Several Caribou were harvested up to around Km 85 at the south end of the Whale Tail RSA. In the fall, a considerable amount of hunting occurred and was much more concentrated around the Hamlet of Baker Lake, west of Whitehills Lake, along the AWAR up to near Km 85, and around the Prince River. A small number of Caribou were reported as being harvested in the southern portion of the Whale Tail RSA in fall 2024. In winter, Caribou were hunted at high numbers around the Hamlet of Baker Lake, around Whitehills Lake, and on the west side of the AWAR up to Tehek Lake. Some successful hunters travelled further afield by snowmobile (e.g., along the Thelon River to Aberdeen Lake, and near Princess Mary and Pitz lakes). Scattered Caribou harvests were reported in the Whale Tail RSA.

No Muskox was reported as being harvested in 2024, which compares to seven (7) reported Muskox harvests in 2023 and 18 in 2022. A total of 15 Wolverine were reported in 2024 compared to 18 in 2023. Wolverine in 2024 was hunted in the Whitehills Lake area, along the Thelon River between Schulz and Aberdeen lakes but especially north of Aberdeen Lake, and at the southwestern end of Baker Lake. Wolf harvest in 2024 (143 individuals) was considerably higher than in 2023 (47), 2022 (92), and 2021 (26). Wolves were primarily harvested close to Baker Lake, in the Whitehills Lake area, and north of Aberdeen Lake. Wolves were described as ubiquitous directly adjacent to the town of Baker Lake in 2024, with several participants stating that they had observed packs as large as 60 wolves in the area. Eight (8) Arctic Fox were reported as harvested in 2024 compared to none in 2023, 36 in 2022, and five (5) in 2021. Arctic Fox were primarily trapped or harvested close to Baker Lake. Other harvested mammal species in 2024 included two (2) Grizzly Bear, one (1) Ermine (*Mustela richardsonii*), one (1) American Marten (*Martes americana*), five (5) Arctic Ground Squirrel (*Urocitellus parryii*), and 10 Arctic Hare (*Lepus arcticus*). One (1) Grizzly Bear was harvested west of Whitehills Lake while the other was harvested outside the study area.

Bird species reported as being harvested in 2024 included ptarmigan sp. (*Lagopus* sp.; 197 individuals – a particularly high number), Canada Goose (*Branta canadensis*; 25), Snow Goose (*Anser caerulescens*; 13), gull species (*Larus* sp.; 10), and Tundra Swan (*Cygnus columbianus*; 2). In 2024, birds were reported as being collected primarily around the Hamlet of Baker Lake.

For the third year in a row, marine mammals were reported as being harvested. Four (4) Ringed Seal (*Pusa hispida*) were reported as being harvested by Baker Lake hunters, but these were outside the HHS boundaries.

The 2024 HHS data were compared to the impact prediction thresholds to evaluate adherence to the impact predictions and the provision of adaptive management, as either a necessary or proactive measure. No thresholds were surpassed in 2024 (Section 10.0 of Appendix 39).

f. Details of annual aerial surveys to be conducted to assess waterfowl densities in the regional study area during the construction phase and for at least the first three (3) years of operation, with the data analyzed and compared to baseline data to determine if significant effects are occurring and require mitigation.

At Meadowbank site, given the low densities of waterbird nests identified at the mine site and along the AWAR from 2005 - 2012 (i.e., too low to determine whether changes in nest abundance or success have occurred), and the absence of data suggesting that mine or road-related effects are occurring, the waterbird nest survey program has been discontinued.

The Whale Tail Mine requires the construction of two dikes within Whale Tail Lake to divert water from the proposed pit to surrounding lakes and tributaries, resulting in flooding that will elevate water levels by 4 m and inundate approximately 157 ha of tundra during the active bird nesting window. To investigate mitigation options for minimizing flooding-related impacts to birds, Trent University, in collaboration with Environment and Climate Change Canada and Agnico Eagle, conducted active bird nest surveys and experimented with deterrent options in summer 2018, 2019 and 2021 at the Whale Tail site.

The objectives of the study were to:

- 1) Determine the effectiveness of audio and visual deterrents for prevention of flood-zone nesting;
- 2) Estimate the number of nests and species composition lost due to flooding; and
- 3) Examine the behavioural response of birds to:
 - a) deterrents (e.g., impacts to duration on the nest); and
 - b) flooding (determine whether birds re-nested nearby after the flooding events).

Complete methods and results for Objectives 1, 2, and 3a are published and available online in the Trent University thesis “Assessing and Mitigating the Impacts of Mining-Induced Flooding on Arctic-Nesting Birds” (available through <https://batadora.trentu.ca/collection/trent-university-graduate-thesis-collection>) and are not revisited here). Refer to previous Wildlife Monitoring Summary Report for more details. A manuscript focussing on the effectiveness of deterrents in reducing territory density and behavioural responses (nest survival, frequency of incubation recesses) (Objectives 1 and 3a) was also published in Avian Conservation and Ecology (<https://ace-eco.org/vol19/iss2/art17/>) and attached as Appendix H of the Wildlife Monitoring Summary Report (Appendix 39). Briefly, results indicated that deterrents did not impact territory density overall across the four species studied. Individually, territory density for Horned Larks was reduced in the high-intensity treatment, but this species already had low densities. Deterrents did not reduce nest survival of passerines or shorebirds, nor did they affect the frequency of incubation recesses for incubating Lapland longspur females (the only species for which this was studied). Ultimately, the deterrents tested were not considered effective at preventing birds from using delineated treatment areas.

To address study objective 2, the final measured impact of Whale Tail area flooding on nesting migratory birds was presented in the 2021 Wildlife Monitoring Summary Report. This calculation was based on nesting densities observed by the research team in the Whale Tail South area in the flood year (2019), along with observed nesting dates and measured change in water levels during nesting. In total, 31 to 50 nests are estimated to have been impacted by flooding using this method. Holmes (2022) provides an estimate of 57 nests, using a slightly more conservative calculation of total predicted flood area. In both cases, the estimated number of impacted nests is fewer than FEIS Addendum predictions (89+ nests).

Methods related to Objective 3b have been previously provided in 2021 Wildlife Monitoring Summary Report and are not revisited here. The evidence available to draw conclusions regarding re-nesting in relation to flooding is limited and varied. Holmes (2022) found no statistically significant differences in average nest or territory density between flood zone and adjacent upland control plots prior to flooding (2018) and during flooding (2019), indicating no significant evidence of birds’ territory packing into habitats adjacent to flooded areas. Follow-up studies in 2021 did indicate average number of nests and average bird density increased from 2019 (during flooding) to 2021 (post-flood) in non-flooded plots, and

nest density decreased in previously flooded plots, supporting a hypothesis of birds moving their nesting sites to areas adjacent to flooding. Further analysis of this data, as presented in the 2022 Wildlife Monitoring Summary Report, examined this behavioural response through individual re-sightings. In total six individual Lapland longspur were re-sighted around Whale Tail Lake. Of these, one was re-sighted in the same year (2019) while the others were sighted pre- and post-flood. On average, these birds moved 180 m and moved uphill an average of 4.08 masl. In addition, six individual semipalmated sandpipers nesting around Whale Tail Lake were re-sighted. These birds moved their nesting site an average of 151 m and moved downhill an average of 0.18 masl (two birds moved <5 m from the original nest and the others moved 25 m, 45 m, 348 m, and 483 m). While re-sighting sample sizes are small, these data taken together at least anecdotally support the hypothesis that birds re-nest nearby post-flood.

The complete analysis incorporating this re-sighting data is included in a second Trent University thesis available online (<https://batadora.trentu.ca/collection/trent-university-graduate-thesiscollection>). However, the analysis focuses more broadly on nesting in relation to elevation, not specifically nest movement due to flooding. While additional manuscripts based on the two MSc theses referenced above are planned to be submitted for peer-reviewed publication by the research team, the study objectives have been met and reported under the Migratory Bird Protection Plan is considered complete at this time.

g. Details of an annual breeding bird plot surveys and transects along the all-weather road to be conducted during the construction phase and for at least the first three (3) years of operation.

The breeding bird PRISM (Program for Regional and International Shorebird Monitoring) plot and bird transect monitoring programs were designed to evaluate potential Project-related changes in breeding bird species abundance, richness, and diversity over time. The program is one component of the larger monitoring strategy to evaluate the success of mitigation measures implemented to minimize the amount of vegetation (i.e., bird habitat) removed or degraded (e.g., dustfall) by the Project, and whether certain Mine activities such as the Mine site or AWAR have resulted in reduced or compromised habitat function or effectiveness (i.e., zone of influence) for breeding birds.

For the breeding bird transects, data analysis in 2011 and 2015 indicated that no road-related effects had occurred to date, and thresholds had not been exceeded; therefore, annual transect surveys were permanently suspended after 2015. In 2020, Agnico Eagle sent ECCC the comprehensive 2003-2015 analysis of all PRISM and breeding bird transect data.

Results of the comprehensive analysis determined there were no significant effects of the Project or Mine-related infrastructure on bird abundance, diversity or community composition, which supports that mitigation is effective. In 2022, Agnico Eagle Meadowbank Complex finalized a collaboration agreement with ECCC, with a focus on contributing to regional bird monitoring programs. The agreement includes a commitment to conduct 48 PRISM plots selected by Canadian Wildlife Service (CWS) over 10 years (2021 to 2031), and to complete Breeding Bird Survey (BBS) routes along the AWAR and the Whale Tail Haul Road (WTHR) opportunistically when qualified individuals are on site. At a minimum, these BBS routes will be conducted every three (3) years during the operations, closure, and post-closure phases of the project. PRISM and BBS restart in 2022 and continued into 2023 and 2024.

In 2024, two BBS routes consisting of 50 stations each set every 800 m each were surveyed along the AWAR and the WTHR. As well, 13 designated PRISM plots were surveyed at Meadowbank and Whale Tail sites for a total of 34 plots out of the 48 PRISM plots selected. More detailed are provided in Section 15 of the 2024 Wildlife Monitoring Summary Report (Appendix 39).

h. Details of a monitoring program, including recording the locations and frequency of observing caribou and carnivores and any actions taken to avoid contact with or disturbance, and a specific mitigation plan for Short-eared owls and any other species of special concern pursuant to Schedule 3 of the Species at Risk Act located in the local study area or along the all-weather private access road.

See the 2024 Wildlife Monitoring Summary Report attached in Appendix 39 for a complete discussion.

All Mine site personnel, including construction and support staff, are required to document and report wildlife observed within the LSA of the Project as well as ancillary areas (e.g., AWAR and WTHR). The protocol involves notifying staff in the Environment Department, which is intended to ensure that potential problem animals are identified. Pertinent data, daily and weekly Mine site inspection reports are consolidated and entered into an electronic database (EQuIS). Monthly summary reports and wildlife observation data are submitted to the GN and KivIA. Quarterly reports are submitted to the KivIA.

In 2024, eight (8) mammalian species were detected and identified during road surveys in 2024: Arctic fox (*Vulpes lagopus*), Arctic ground squirrel (*Urocitellus parryii*), Arctic hare (*Lepus arcticus*), caribou, muskox, wolf (*Canis lupus*), wolverine (*Gulo gulo*) and northern red-backed vole (*Clethrionomys rutilus*). Caribou and muskox were the most frequently observed mammals. Fifteen avian species (five species could not be identified to an individual species) were detected and identified during road surveys in 2024: Canada goose (*Branta canadensis*), common raven (*Corvus corvax*), greater white-fronted goose (*Anser albifrons*), gull sp. (*Larinae* sp.), gyrfalcon (*Falco rusticolus*), peregrine falcon (*Falco peregrinus*), ptarmigan sp. (*Lagopus* sp.), rough-legged hawk (*Buteo lagopus*), sandhill crane (*Antigone canadensis*), snow goose (*Chen caerulescens*), Bald eagle (*Haliaeetus leucocephalus*), swan (*Cygnus* sp.), duck, Ross's goose (*Anser rossii*) and an unidentified bird species. At both AWAR and WTHR Snow geese were the most frequently observed species.

In 2024, seven (7) mammalian species and twelve avian species were detected and identified incidentally on the AWAR and WTHR in 2024. Arctic ground squirrels were only observed on the AWAR. The remainder of the mammalian species observed were recorded on both roads, including Arctic fox, Arctic hare, caribou, muskox, wolf and wolverine. On both roads, caribou and muskox were the most frequently observed species. Snow goose was the most common avian species observed on the AWAR and Canada goose was the most common avian species observed at WTHR. Snowy owl (*Bubo scandiacus*) was the only species observed incidentally that was not observed during road surveys.

A total of 9,243 caribou were observed crossing the AWAR and 2,468 caribou were observed crossing the WTHR in 2024. For the AWAR, most caribou crossing observations occurred during fall migration with 85% (7,858 of 9,243 caribou) of observed AWAR caribou crossings occurring during the fall. The months with the greatest number of caribou observed crossing the AWAR included October (over 1,975 observed crossings), and November (over 5,716 observations). There were no observed caribou crossings on the AWAR during July. During fall migration, 96% (1,593 of 2,371) of observed caribou crossings on the AWAR occurred on dates with a 24-hour AWAR closure, which is to be expected given that high numbers of caribou observations trigger road closures. For annual caribou crossing observations on the AWAR, 82% (7,595 of 9,243 caribou) of observed crossing events occurred on dates with an AWAR closure.

For the WTHR, most caribou crossing observations occurred during the spring migration with 96% (2,371 of 2,468) of observed WTHR caribou crossing occurring during this season. The month with the greatest number of caribou crossing the WTHR was April with 1,714 caribou crossings observed. There were no observed caribou crossings on the WTHR in January, February, March, September or December. During spring migration, 67% (1,593 of 2,371 caribou) of observed caribou crossings on the WTHR occurred on

dates with a 24-hour WTHR closure. For annual caribou crossing observations on the WTHR, 96% (2,376 of 2,468 caribou) of observed crossing events occurred on dates with a WTHR 24-hour closure or partial closure, and 4% (89 of 2,468 caribou) occurred on a day with a speed or access restriction in place.

Refer to Section 8.18.6 below for a discussion regarding species at risk.

8.18.3 Caribou Migration Corridor Information Summary

As required by NIRB Project Certificate No.004 Condition 56: *Maps of caribou migration corridors shall be developed in consultation with Elders and local HTOs, including Chesterfield Inlet and placed in site offices and upgraded as new information on corridors becomes available. Information on caribou migration corridors shall be reported to the GN, KIA and NIRB's Monitoring Officer annually.*

A caribou collaring data sharing agreement was signed between Agnico Eagle and the GN in 2023. Agnico Eagle has analyzed the recent (2020-2024) collar information to estimate caribou herd ranges. This information is presented in the Wildlife Monitoring Summary Report (Appendix 39). This will serve as a basis to initiate migratory corridor consultation discussions in 2025.

8.18.4 Caribou Collaring Study Meadowbank

As required by NIRB Project Certificate No.004 Condition 57: *participate in a caribou collaring program as directed by the GN-DOE.*

And

As required by NIRB Project Certificate No.008 Condition 29: *The Proponent shall, in collaboration with the Government of Nunavut, collect additional caribou collar data and conduct analyses of this data to quantify the zone of influence and associated effects of project components on caribou movement for a study area that includes the Whale Tail mine site, the haul road, the Meadowbank Gold Mine and its All-Weather Access Road.*

A summary of the analyses and associated effects shall be provided annually in the Proponent's annual report to the Nunavut Impact Review Board.

A caribou collaring data sharing agreement was signed between Agnico Eagle and the GN in 2023. Further details are available in the Wildlife Monitoring Summary Report (Appendix 39).

8.18.5 Remote Cameras

The initial remote camera study design (October 2018 to November 2019) was intended to collect general trends on caribou crossing events and traffic or road activities on the WTHR, to inform fine scale traffic mitigation. An updated study design was implemented in November 2019, to examine the permeability of the WTHR to caribou movement as those interactions relate to the physical parameters of the road. Results from the 2024 remote camera program are summarized below. Further details are provided in the Wildlife Monitoring Summary Report Section 8 (Appendix 39).

Locations of remote cameras have varied across program years. The same locations were used in 2024 as in 2021, 2022 and 2023. The locations of the paired remote cameras along the WTHR were selected based on high-frequency caribou crossing locations, and stratified across road height categories (i.e., <1.5 m, 1.5 to 3 m, and >3 m). Road heights were determined in the field. Backfill material and slope at

camera locations were determined from construction surveys. Backfill slopes along the WTHR are typically 2:1. In areas where backfill height exceeds 3 m, the slope was recontoured to 4:1 for safety.

An automated approach was used to classify the 2,500,329 photos collected in 2024. A total of 2,099 photographs were selected by the automated approach and reviewed by a human observer. There were 323 total wildlife observations across 224 observation events. Fourteen species were detected in 2024: Arctic fox, Arctic ground squirrel, Arctic hare, Canada goose, caribou, common raven, wolf, muskox, rock ptarmigan, snow goose, wolverine, and unidentified bird species including a duck species, gull species, and passerine species. Caribou were detected between February 18th, 2024 and September 26th, 2024. Caribou were detected on all ten camera monitoring locations except for camera pair 1, and caribou crossing events were recorded on six of ten camera monitoring locations. Caribou crossing events were detected in all seasons except for winter. Caribou detections were highest in summer (58%), second highest is spring (34%), and were lower during fall and winter (3% and 4%, respectively).

8.18.6 Blasting Monitoring

In 2024, pre-blast surveys for caribou and other wildlife were conducted on 203 occasions over 176 days between January 1st and December 31st. Caribou were observed on 41 occasions and muskox were observed on three (3) occasions during pre-blast surveys. No caribou or muskox groups exceeded GST within the setback distances; therefore, no blasting events were cancelled or postponed.

Between April 19th and September 30th, there were seven blast monitoring events for caribou behaviour. One monitoring session was performed in both spring and fall. The remaining events occurred during summer. All but one of the observed caribou groups were small with between one and three individuals observed. These groups were located at an average distance of 646 meters (SE = 59.7) from the blasts. The remaining group, monitored on April 19th, consisted of 300 individuals at ~5 km from the blasting site. During three blast monitoring events, the caribou moved out of sight and their behavior during and after the blast could not be monitored. During one event, the caribou were not observed before the blast, so no baseline data could be collected. After removal of trials with incomplete data, three trials could be assessed for behaviour.

Of the three analyzed blast monitoring events in 2024, there were additional vehicle disturbances (i.e., multiple stressors) during two of these events. On July 5th, six vehicle disturbances occurred between 5- and 10-minutes post blast. On July 8th, there was a heavy equipment disturbance approximately 15 minutes pre-blast. Despite the co-occurrence of blasting and vehicle disturbances, no notable changes in behaviour occurred during behaviour monitoring in 2024. Instead, post-blast behavior consisted primarily of feeding and lying down.

Further details are provided in the Wildlife Monitoring Summary Report Section 9 (Appendix 39).

8.18.7 Snow Study

Results from the 2024 snow study are summarized below. For more detailed information, refer to the completed discussion provided in Section 17.1 of the 2024 Wildlife Monitoring Summary Report in Appendix 39.

A total of nine (9) surveys were completed during the spring migration of 2024. Of the nine (9) survey locations, four were along the WTHR and five (5) were along the AWAR. Workers were patrolling on a regular basis, along the AWAR and the WTHR during the migration season (between April 1st and late

May) for signs of caribou crossing tracks adequate for snow sampling measurements. Surveys during 2024 took place during six days, including one day in February, one day in March, and four days in April. Prior to 2023, a full suite of snow data was collected at use plots and snow-managed control plots but not at non-managed control plots, and caribou track data were collected at use plots but not non-managed control plots. Data sheet improvements implemented in 2023 allowed for additional data fields to be collected in 2023 and 2024. Locations surveyed in 2023 onward included the full suite of snow data for each applicable plot type and caribou track data were collected at both use plots and non-managed control plots.

Between 2020 to 2024, 73 locations were surveyed for the snow study, nine (9) of which were completed in 2024. Considering snow survey locations across all years, snow berms were wider on the downwind (east) than the upwind (west) sides of the road. Average snow berm height was higher on the downwind wide of the road. The average snow berm height on both downwind and upwind sides of the road was less than 0.3 m, which is lower than 60% brisket height for the majority caribou and not likely to impede locomotion for a caribou. Slope was similar on upwind and downwind sides of the road. Snow depth was slightly deeper on the downwind side of the road and differed between plot types. Snow depth was similar between use plots and snow-managed control plots, but snow was deeper in non-managed control plots compared to both plot types in the berm area. Snow hardness was similar between plots on the upwind and downwind sides of the road and was also similar across plot types. Caribou track depth measurements between use plots and non-managed control plots could only be compared for data collected in 2023 and 2024. Average track depths similar in use plots compared to non-managed control plots. Results to date have not identified large absolute differences in the parameters measured.

8.18.8 Caribou Behaviour

Refer to the completed discussion provided in Section 17.2 of the 2024 Wildlife Monitoring Summary Report in Appendix 39.

Behaviour monitoring data from 2024 were combined with data from 2020 - 2023, and all results outlined in this report use all years, unless otherwise stated. The program and combined data resulted in several key findings:

- There were 70 surveys were conducted in 2024, 70 surveys in 2023, 104 surveys in 2022, 134 surveys in 2021, and 116 in 2020; Surveys were relatively equal between spring and fall migration periods and the overall distribution of surveys in 2024 was similar to 2023. In 2024, 7 surveys were conducted in winter, 31 surveys occurred during spring migration from March to May 5 occurred during calving and summer from June to August, and 27 occurred during fall migration from September to December.
- Caribou group sizes ranged from 1 to 2 individuals to >100. There were 3 surveys containing road crossings and 33 surveys containing disturbances in 2024. There is not a clear relationship between caribou group size and road crossing observations
- Caribou behaviour was relatively consistent between group sizes in 2024. Most caribou behaviour was “feeding” (non-response) across all group sizes. In 2024, 90% of caribou within 50 m of the road were observed standing, 70% of caribou within 50-100 m of the road were observed walking, and no distance category has surveys with more than 10% of caribou displaying response behaviours. The exception is smaller groups moved more than larger groups. Usually

smaller groups (less than 25 individuals) crossed the road. However, data did not show a clear relationship between caribou size and road crossings.

- Larger groups of caribou tended to be recorded further from the road. To date, only seven (7) groups larger than 50 individuals were recorded within 100 m of the road at the start of the survey, including two (2) in 2021, three (3) in 2022, and two (2) in 2023.
- In total over the five (5) years, 49% of surveys contained disturbances. An additional analysis was planned to look at how the number of vehicles in a convoy and duration of the convoy influence caribou behaviour, but due to a lack of data this was not included in 2024.
- Environmental/temporal variables included wind speed and temperature. The final response model indicated that temperature was a significant predictor of the proportion of caribou showing response behaviour, with more caribou showing response behaviour as temperature increases above 10°C.
- Following a disturbance event, the proportion of response behaviours in a group of caribou was significantly higher but generally returned to baseline behaviours within two sampling intervals (i.e., six minutes).
- Cox's proportional hazards modelling using all five years of data suggests that following a single disturbance, the probability of returning to non-response behaviour was 92% after 6 minutes, 98% after 9 minutes, and 100% after 15 minutes. The probability of returning to baseline behaviour within 6 minutes is lower for larger groups, and surveys with more than one disturbance - 86% for intervals with 2-3 disturbances and 84% for groups with >100 individuals
- Surveyors collected data both when the road was open and while it was closed beginning in 2021. There were 264 surveys conducted while the road was closed, and 174 surveys were conducted when the road was open across all years. Road closure status did not affect behaviour in the statistical analysis, however there was a higher proportion of individuals walking on average when the road was closed. This may be due to closures occurring more frequently during peak migration times.
- Statistical analysis found that side of road and season did not affect response behaviour (alert/running). Groups of caribou were observed on both the east and west sides of the road in all seasons but were more commonly observed on the west side during spring migration (i.e., upstream of the dominant direction of travel). The summer season showed relatively equal numbers of caribou groups on each side of the road, and the fall migration observed more groups on the upstream side (i.e., east side in the fall).
- The primary hypothesis of this study was that caribou closer to the road would demonstrate a stronger response to vehicle disturbances. Results of the statistical analysis provided mixed support for the hypothesis, as caribou tended to respond to disturbances, however, response behaviour did not differ with the distance from the road

The updates applied in 2024 and in previous years to the survey protocol and analysis and were helpful in improving the overall quality and accuracy of the data. Even with the changes to the protocol, the trends in the results were highly consistent between the five years of data. This increases the confidence that trends are repeatable year to year. Overall, the results of the statistical analysis did not provide support

for the key hypothesis that caribou tend to respond to disturbances more strongly when closer to the road, though they do respond to disturbances

8.18.9 Stop Work due to Wildlife

As required by NIRB Project Certificate No.004 Condition 60: *Whenever practical, Cumberland shall implement a stop work policy when wildlife in the area may be endangered by the work being carried out.*

Numerous road closures were implemented on all project roads, to ensure safe passage to large groups of migrating Caribou herds. Section 3 of the 2024 Wildlife Monitoring Summary Report (Appendix 39) details and discusses the 2024 road closure. Below is a summary of the results.

Significant movements of caribou and muskox occurred along the AWAR throughout 2024, resulting in multiple closures to Project-related traffic. The AWAR was closed (i.e., 24-hour closure) on 63 days in 2024, with 40 days due to caribou, 11 days due to weather, 2 days for maintenance, and 1 day for both caribou and maintenance. The AWAR had closure days with less than 24 hours of closure on 81 occasions, including 38 closure days due to caribou. In addition to the GST-related caribou closures, there was also a lead caribou 10-day closure, therefore road closures occurred due to caribou for 50 days in total. In total, the AWAR was closed for a total of 2,396 hours in 2024, with the highest number of closure hours reported in April, November, and December due to caribou migration. Speed restrictions were applied on 83 days on the AWAR and were applied in response to caribou or muskox presence. In total, there were 200 days in 2024 (i.e. 54.6% of the year) with road closures and restrictions applied on the AWAR in response to caribou or muskox.

The WTHR was fully closed (i.e., 24-hour closure) on 24 days, with 22 closure days due to caribou (including the lead caribou 10-day closure) and 2 closure days due to weather. On 40 days, the WTHR experience closures occurring for less than 24 hours, with 11 closure days related to wildlife. In total, the WTHR was closed for a total of 888 hours in 2024, with the highest number of closure hours reported in April and November due to caribou migration and January due to weather. Speed restrictions were applied on 77 days on the WTHR, all of which were applied in response to caribou and/or muskox presence. Traffic restrictions were applied on the WTHR on 33 days, most of which occurred in September and October. In total, there were 57 days in 2024 with road closures and restrictions applied on the WTHR in response to caribou and/or muskox.

The frequency of road surveys in 2024 demonstrated Agnico Eagle's commitment to preventing impacts to caribou from the AWAR, WTHR. Mitigation measures such as reduced speeds, convoys, and multiple road closures function to minimize road-related effects including mortality and injury, and to increase caribou passage.

Road-related monitoring and mitigation were implemented according to Figures 7 and 8 of the TEMP Version 7 and the spring migration protocol agreed with the TAG. Collar location maps were instrumental in assessing the need for increased road monitoring. Road-related mitigation related to caribou presence in 2024 resulted in road closures and a corresponding reduction in total vehicle movements.

Regular wildlife warnings were dispatched based on observation and monitoring data. The road supervisors and operators also ensured protection of wildlife by assisting in surveillance and closing roads as needed. Radio notices reminding operators of the appropriate speed limit were made frequently by dispatchers. During caribou peak migration, notices were sent to all road occupants, regulatory agencies, local groups, and wildlife consultants were notified, and road survey efforts were increased.

8.18.10 Raptor Nest Monitoring

Refer to Section 13 of the 2024 Wildlife Monitoring Summary Report (Appendix 39) for a complete discussion of the methodology and results.

The raptor nest monitoring program is designed to determine Project-related effects, and the success of mitigation strategies to prevent disturbance to nesting raptors. Within the Meadowbank LSA and AWAR LSA, peregrine falcons have previously nested in quarries along the AWAR, the Portage Pit, and Goose Pit. Monitoring of peregrine falcon nests in quarries along the AWAR has been conducted since 2009. The Portage, Goose, Vault, Whale Tail, and IVR Pits are inspected for peregrine falcon activity prior to and during the nesting season and managed under the Peregrine falcon Management and Protection Plan.

Monitoring in 2024 included surveys for nests associated with pits and quarries along the AWAR and WTHR. Raptor activity and potential nest locations were also noted on other surveys including road surveys, viewshed surveys, freshet monitoring, and on-site environmental monitoring. In addition, a research program was conducted by Arctic Raptors in 2024, to determine the relationship between nest success and Mine activity.

Eight (8) peregrine falcon nests were documented in Quarries 2, 3, 7, 9, 16, 18, 21, and 22 in 2024. No raptor nesting evidence was observed in quarries along the WTHR in 2024. No other raptor nests were identified during pit checks or incidentally during other surveys in 2024.

Raptor nest management plans were not developed at the active nest sites, as Mine-related activity was already restricted within the quarries, with the only disturbance being traffic on the nearby AWAR. Intensive monitoring, which would include approaching nests by foot, was not conducted. Nest locations are not publicized to prevent inadvertent disturbance by Mine employees.

8.18.11 Wildlife Deterrence

As required by NIRB Project Certificate No.004 Condition 25: Cumberland shall manage and control waste in a manner that reduces or eliminates the attraction to carnivores and/or raptors. Cumberland shall employ legal deterrents to carnivores and/or raptors at all landfill and waste storage areas. The deterrents are to be developed taking into consideration Traditional Knowledge and in consultation with the HTO, EC and INAC and incorporated into the final Waste Management Plan prior to filing the Plan with the NWB.

And

As required by NIRB Project Certificate No.004, Condition 59: In consultation with Elders and the HTOs, design and implement means of deterring caribou from the tailing ponds, such as temporary ribbon placement or Inukshuks, with such designs not to include the use of fencing”

And

As required by NIRB Project Certificate No.008 Condition 36: Prior to removal or deterrence of raptors, the Proponent will contact the Government of Nunavut – Department of Environment to discuss proposed mitigation options and, if required, will obtain the necessary permits. The Proponent shall include summaries of any mitigation measures implemented and permits obtained in fulfillment of this term and condition in the Proponent’s annual report to the Nunavut Impact Review Board.

There was no removal of raptor nests at both the Meadowbank and Whale Tail sites in 2024. Deterrents were applied at two (2) quarries in 2024 to discourage raptor nesting. All activity within the area were postponed minimizing the impact of potential nesting for this species and therefore ensure proper conditions for nesting activity. Once an active nest is identified, mine-related activity (e.g., vehicle operation, heavy equipment, aircraft, blasting, etc.) is automatically halted within the quarries, with the only potential disturbance being traffic on the nearby AWAR/WTTHR.

In 2024, to ensure caribou did not frequent the tailings storage facilities, near-daily monitoring of the TSF was performed throughout the open water season by environment personnel. Should caribou be observed near the TSF, they were swiftly deterred. Furthermore, 2024 was a heavy construction season around the TSF to continue the progressive closure of those cells. As a result of the construction, few caribou were observed in the vicinity of the TSF. On account of the frequent presence of environmental personnel and other workers in the area, it is not believed caribou spent any extended time near tailings, minimizing potential exposure.

Wildlife deterrents are implemented when habituated or problematic wildlife pose a threat to wildlife or Mine personnel through human-wildlife conflict. Necessary deterrent strategies are determined and implemented by the Environment Department based on the severity of risk and the nature of the interaction. Each deterrence event is reported using the EQuIS database. Wildlife deterrents were used and reported throughout 2024 at the mine sites. A total of 25 deterrence activities were reported from interactions with four species of mammals: caribou, grizzly bear, wolf, and wolverine. The total number of deterrence actions in 2024 were lower than prior years apart from 2017. Deterrence actions in the winter months for 2024 were primarily related to wolverine and wolves, whereas in the spring and summer deterrence actions were related mostly to caribou. Caribou wildlife deterrents involved herding caribou away from potential vehicle or equipment collisions around the mine sites. Refer to Section 4.5.4 of the 2024 Wildlife Monitoring Summary Report (Appendix 39) for a complete discussion of the methodology and results.

8.18.12 Terrestrial Advisory Group

As required by NIRB Project Certificate No.008 Condition 27: The Proponent shall participate in a Terrestrial Advisory Group with the Government of Nunavut, the Baker Lake Hunters and Trappers Organization, the Kivalliq Inuit Association, and other parties as appropriate to continually review and refine mitigation and monitoring details within the Terrestrial Ecosystem Management Plan. Additional caribou collar data, results from associated studies, Inuit Qaujimagatuqangit shared by knowledge holders and other monitoring data as available should be considered for incorporation as appropriate. Finalized Terms of Reference for the Terrestrial Advisory Group shall be provided to the NIRB within six (6) months of issuance of the Project Certificate. A summary of outcomes from Terrestrial Advisory Group meetings shall be provided to the NIRB on an annual basis in the Proponent's Annual Report.

And

As required by NIRB Project Certificate No.008 Condition 30: The Proponent shall work with the Government of Nunavut, the Baker Lake Hunters and Trappers Organization and the Kivalliq Inuit Association through the Terrestrial Advisory Group to develop and update thresholds to trigger implementation of mitigation measures on both the AWAR and Whale Tail Haul road, up to and including temporary road closures. The Proponent shall consider how these thresholds and mitigation measures reflect caribou life cycle sensitivities as well as demonstrate how Inuit Qaujimagatuqangit was incorporated throughout the development of these criteria and procedures.

The Proponent shall ensure the Terrestrial Ecosystem Management Plan is updated to reflect the thresholds agreed upon in accordance with the Terrestrial Advisory Group Terms of Reference, and that this Plan along with a summary of consultation with the Terrestrial Advisory Group are submitted on an annual basis or as thresholds are otherwise modified in the Proponent's annual report to the Nunavut Impact Review Board.

The Term of Reference for the TAG was provided to NIRB on November 1st, 2018. Refer to Appendix 46 of the 2018 Annual Report. The Term of Reference (TOR) was officially signed by all parties in 2019.

In fulfillment of Condition 27, a summary of outcomes from Terrestrial Advisory Group meetings are provided in the below section. Fulfillment of Condition 30 is discussed in Section 8.18.12.1.

8.18.12.1 2024 TAG Meetings

In accordance with Nunavut Impact Review Board Project Certificate No.008 Term and Condition 27, a Terrestrial Advisory Group was established for the Meadowbank Complex. It provides technical oversight on the Mine's mitigation, monitoring and adaptive management measures related to the protection of wildlife. The following parties are actively part of the Terrestrial Advisory Group: the Baker Lake Hunter and Trapper Organization, the Government of Nunavut, the Kivalliq Inuit Association and Agnico Eagle. It is also a venue for TAG members to openly raise concerns about wildlife, and to review and discuss the results of wildlife monitoring and to discuss opportunities for ongoing research.

Terms of reference were finalized and signed by all parties in 2019. Several TAG meetings were held since June 2018. Meetings held in 2024 are summarized in Table 8-81 below.

Table 8-81 2024 TAG meetings

Date	TAG meeting No.	Type of meeting	Parties attending
January 22 nd -23 rd , 2024	17	Conference call and In-person at Winnipeg	Agnico Eagle, BLHTO, KivIA, GN, CIRNAC, NTI
Series of meetings between March - May 2024	N/A	Recurrent spring migration update conference calls	Agnico Eagle, BLHTO, KivIA, GN, CIRNAC
March 1 st , 2024	18	Conference call and In-person at Baker Lake	Agnico Eagle, BLHTO, KivIA, GN, CIRNAC
July 10 th , 2024	19	Conference call and In-person at Baker Lake	Agnico Eagle, BLHTO, KivIA, GN
August 21 st , 2024	20	Conference call and In-person at Baker Lake	Agnico Eagle, BLHTO, KivIA, GN, CIRNAC
October 31 st – November 1 st , 2024	21	Conference call and In-person at Winnipeg	Agnico Eagle, BLHTO, KivIA, GN, CIRNAC
Series of meeting between September - December 2024	N/A	Recurrent fall migration update conference calls	Agnico Eagle, BLHTO, KivIA, GN, CIRNAC

Discussions held in 2024 were fruitful and led to numerous resolutions on files/brainstorming sessions.

8.18.12.2 Summary of outcomes

This section summarizes the TAG meetings held in 2024.

TAG #17 – January 2024

TAG #17 was an in-person workshop held over two (2) days focused on discussions for the spring migration lead caribou protocols, including decisions trees. Mitigation measures were discussed for both the lead caribou closure period and the period following lead caribou closure.

Recurrent Spring Migration Update Conference Calls – March to May 2024

Throughout the migration period, Agnico Eagle hosted conference calls to provide up to date field observations, which were complemented by BLHTO and KivIA's field observation, and discuss the ongoing migration and operations status. When needed, requests were made and discussed, identifying the path forward.

TAG #18 – March 2024

TAG #18 focused on approval from all TAG members regarding the 2024 Spring Migration Caribou Protection Protocols, which is proposing to trial updated caribou migration mitigation measures for the 2024 spring migration. The update is based on IQ highlighting the importance of allowing the lead migrating caribou herd to travel, encouraging the remaining herd to follow. Specific mitigation measures have been identified during two phases of the 2024 spring caribou migration period: the lead caribou herd period and the rest of the migration period. By March 19th, 2024, all parties agreed and signed the 2024 Spring Migration Caribou Protection Protocols

TAG #19 – July 2024

TAG #19 meeting focused on the review of the 2024 spring migration as well as discussion for fall migration planning. The review of the 2024 spring migration included an overview of the lead protection schedule and protection measure along with a comparison of 2023 versus 2024 AWAR and WTHR road closure. Overall, the 2024 spring migration pilot project proceeded as agreed in March 2024.

TAG #20 – August 2024

TAG #20 meeting included presentations on fall migration caribou patterns followed by a discussion of whether lead caribou mitigation measures could be applied for fall. Due to the wide interval for fall migration and high variation in timing of migration, it was determined that a different protocol was required during fall migrations, but not to be implemented during the 2024 fall migration.

TAG #21 – October 2024

TAG #21 was an in-person workshop held over two (2) days that included a presentation and discussion on the spring migration detailed analysis, as well as the decision to continue the lead caribou spring pilot program. Several presentations and discussions followed related to comments from the 2023 annual report review, including helicopter traffic monitoring and reporting and purpose of the remote camera program. Fall migration measure were discussed as well, with implementation planned for fall 2025. Many topics of this workshop were discussed in the context of TEMP version 9 updates, with a separate TEMP update focused workshop held in February 2025.

Recurrent Fall Migration Update Conference Calls – September to, December 2024

Throughout the migration period, Agnico Eagle hosted conference calls to provide up to date field observations, which were complemented by BLHTO and KivIA's field observation, and discuss the ongoing migration and operations status. When needed, requests were made and discussed, identifying the path forward.

8.18.13 Wildlife Crossing Whale Tail Site

As required by NIRB Project Certificate No.008 Condition 32: The Proponent shall engage with the Baker Lake Hunters and Trappers Organization and other relevant parties to ensure that safety barriers, berms, and designed crossings associated with project infrastructure, including the haul road, are constructed and operated as necessary to allow for the safe passage of caribou and other terrestrial wildlife. Summaries of engagement with the Baker Lake Hunters and Trappers Organization regarding implementation of this condition shall be provided to the Nunavut Impact Review Board along with details of the selected crossings in the Proponent's annual report to the Nunavut Impact Review Board.

Following consultation of the Baker Lake HTO, Agnico Eagle re-sloped, in previous years, the Whale Tail Haul Road at KM 127 to facilitate the wildlife passage in this area. BLHTO came back once the re-sloping was finalized and did not express any other concerns. Within the TAG meetings, permeability and road design discussions are ongoing and will meet the satisfaction of all parties, including the Baker Lake HTO. Different projects are also ongoing and are being discussed at the TAG meetings, such as the implementation of Lead caribou protection measures. Further details can be found in TEMP V9 (Appendix 39).

8.18.14 Wildlife Mortality

As required by NIRB Project Certificate No.008 Condition 33: A summary regarding all wildlife incidents reported, including a reference to whether compensation was or will be provided by the Proponent for direct mortalities, as well as a description of any other steps taken in fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board. The Proponent shall provide wildlife incident reports to the appropriate authorities in a timely fashion. Wildlife incident reports should include the following information:

- a) Locations (i.e., latitude and longitude), species, number of animals, a description of the animal activity, and a description of the gender and age of animals if possible;*
- b) Prior to conducting project activities, the Proponent should map the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites, and raptor nests in the project area, and identify the timing of critical life history events (i.e., calving, mating, denning and nesting); and*
- c) Additionally, the Proponent should indicate potential impacts from the project, and ensure that operational activities are managed and modified to avoid impacts on wildlife and sensitive sites.*

Section 3.6.9 of the 2024 Wildlife Monitoring Summary Report (Appendix 39) describes road-related wildlife mortalities. In 2024, there was a total combined of 30 road-related mortalities along the AWAR and WTHR: Arctic hare (5), arctic fox (7), arctic ground squirrel (11), caribou (1), ptarmigan (5) and wolverine (1). As per the IIBA Schedule J, Item 6.1, compensation was sent to KivIA for the arctic fox,

caribou and wolverine mortalities. Complete reports regarding these incidents were sent to the GN Conservation officer and KivIA.

Upon discovery of any roadkill, employees were reminded of road rules and the need to enforce these rules by Environment staff and/or road supervisors. All employees are regularly reminded at toolbox meetings that all Project-related incidents are to be reported, and that wildlife have the right-of-way at all times. Mine staff are required to stop vehicles and wait for wildlife to crossroads. No feeding wildlife and waste management practices are also regularly reviewed with employees. There were no project-related grizzly bear, muskox, or wolf mortalities associated with the AWAR or WTHR in 2024.

Section 4.5.8 of the 2024 Wildlife Monitoring Summary Report (Appendix 39) provides a summary of recorded project-related wildlife mortalities near or within the Meadowbank and Whale Tail mine sites. In 2024, there were six (6) long tailed-duck project-related mortalities at Meadowbank and one (1) arctic fox project-related mortality at Whale Tail. As per the IIBA Schedule J, Item 6.1, compensation was sent for the arctic fox to KivIA and the complete reports regarding these incidents were sent to the GN Conservation officer and KivIA. As per the migratory bird regulated, ECCC was emailed at the time of the mortality of six (6) long-tailed ducks.

8.18.15 Migratory Birds Protection Plan Whale Tail site

As required by NIRB Project Certificate No.008 Condition 34: The Proponent will maintain a Migratory Birds Protection Plan for the Project in consultation with Environment and Climate Change Canada and other interested parties. The plan should include and/or demonstrate that the Proponent give consideration to the following:

- *Information obtained from baseline characterization of migratory bird and vegetation communities within the predicted flood area;*
- *Results of field tests and/or the thorough literature review of the effectiveness of preferred deterrence prior to actual flooding; and*
- *Details regarding monitoring the effectiveness of mitigation measures during flooding.*

Results of implementation of the Migratory Birds Protection Plan shall be reported to the Nunavut Impact Review Board on an annual basis in the Proponent's annual report.

Refer to Section 8.18.2 above and Section 14 the 2024 Wildlife Monitoring Summary Report (Appendix 39).

The study objectives have been met and reporting under the Migratory Bird Protection Plan is considered complete at this time.

8.18.16 Species at Risk

As required by NIRB Project Certificate No.008 Condition 35: The Proponent shall ensure that the mitigation and monitoring strategies developed for Species at Risk are updated as necessary to maintain consistency with any applicable status reports, recovery strategies, action plans, and management plans that may become available through the duration of the Project. Information regarding development, implementation and monitoring of the measures developed by the Proponent in fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.

The intent of the federal Species at Risk Act is to protect species at risk from becoming extirpated or extinct as a result of human activity. Species with ranges that overlap with the Mine, may be considered to be of concern as a result of either their national, territorial or Committee on Status of Endangered Wildlife in Canada (COSEWIC) status. To date, no species have been listed under the Nunavut Species at Risk Act.

Wildlife species of concern that may be impacted by the Project are detailed in Table 8-82 below. Harris's Sparrow was added to the list of species of concern for the Project.

Table 8-82 Species of Concern Meadowbank and Whale Tail Study Areas

Species	COSEWIC Status	SARA Status	Potential Impact
Caribou (barren-ground population)	Threatened	No schedule	• Mortality due to vehicle collisions • Habitat loss • Change in harvest due to improved access • Barriers to movement and changes in behaviour
Grizzly bear (western population)	Special Concern	Special Concern Schedule 1	• Habitat loss • Mortality due to attraction or vehicle collisions
Polar Bear	Special Concern	Special Concern Schedule 1	• None anticipated
Wolverine (western population)	Special Concern	Special Concern Schedule 1	• Habitat loss • Mortality due to attraction or vehicle collisions
Short-eared Owl	Threatened	Special Concern Schedule 1	• Habitat loss • Potential loss of nests/eggs from clearing or flooding during breeding season and due to vehicle collisions
Peregrine Falcon (<i>anatum-tundrius complex</i>)	Not at risk	No status	• Physical hazards to nest on mine infrastructure or in quarries
Harris's Sparrow	Special Concern	Special Concern Schedule 1	• Habitat loss • Potential loss of nests/eggs from clearing or flooding during breeding season and due to vehicle collisions
Red-necked Phalarope	Special Concern	Special Concern Schedule 1	• Habitat loss • Potential loss of nests/eggs from clearing or flooding during breeding season
Transverse Lady Beetle	Special Concern	Special Concern Schedule 1	• Habitat loss

Agnico Eagle will ensure that the mitigation and monitoring strategies developed for Species at Risk are updated as necessary to maintain consistency with any applicable status reports, recovery strategies, action plans, and management plans that may become available through the duration of the Mine.

Updates to the Species at Risk will be considered during annual review and with each new revision of the TEMP.

8.18.17 Invasive Vegetation Species

As required by NIRB Project Certificate No.008 Condition 25: *At least 30 days prior to first shipment of equipment and supplies to the site, the Proponent's mitigation plans, protocols, monitoring and inspection program required in fulfillment of this term and condition shall be provided to the NIRB for review. Subsequently, information regarding inspections, monitoring results, and any reports as referenced above shall be included in the Proponent's annual report to the NIRB. The Proponent shall:*

- a) Ensure that equipment and supplies brought to the project sites are clean and free of soils that could contain plant seeds or organic matter not naturally occurring in the area*
- b) Ensure that vehicle tires and treads are inspected prior to initial use in project areas;*
- c) Incorporate protocols for monitoring for the potential introduction of invasive vegetation species (e.g. surveys of plant populations in previously disturbed areas) into relevant monitoring and management plans for the terrestrial environment; and*
- d) Ensure any introductions of non-indigenous plant species must be promptly reported to the Government of Nunavut Department of Environment.*

In 2019, Agnico Eagle initiated a non-native plant monitoring study to assess and monitor the potential introduction of non-native plant species, including weeds or invasive species. Subsequent monitoring events occurred from 2020 to 2024. Surveys will continue to be completed annually as per the TEMP. Survey method and results are presented in Section 16 of the 2024 Wildlife Monitoring Summary Report (Appendix 39). Agnico Eagle will refer to the complete report in Appendix for a complete discussion of the methodology and results.

Surveys at the Meadowbank Complex were conducted by a WSP vegetation ecologist between July 18th to 27th, 2024. The Meadowbank Complex area includes the AWAR, WTHR, Baker Lake tank farm, Whale Tail Mine site, and Meadowbank Mine site areas.

No non-native plants, as identified by the Canadian Endangered Species Conservation Council, were recorded at the Meadowbank Complex in 2024. A total of 201 individual locations were surveyed, which includes three (3) new added locations in the AWAR quarry. Eighteen surveys were completed in undisturbed tundra around the Meadowbank Mine site, WTHR, and AWAR to survey the presence/absence of non-native species. No non-native plants were found in the undisturbed areas surveyed.

Agnico Eagle continued to implement in 2024, in accordance with the TEMP, a protocol to ensure that all equipment and bulk supplies must arrive to the mine site free of soil or plant debris to minimize the risk of invasive plant introduction. Invasive plant inspection surveys were completed on cargo in Becancour, prior to being loaded onto shipping vessel. Carrier had closely followed the procedure and confirmed that each equipment/sea can was free of invasive plant.

8.19 COUNTRY FOOD

As required by NIRB Project Certificate No.004 Condition 67: *Develop and implement a program to monitor contaminant levels in country foods in consultation with HC; a copy of the plan shall be submitted to NIRB's Monitoring Officer.*

The Wildlife and Human Health Country Foods Level Risk Assessment field program is completed on a 3-year cycle. The last assessment and field program was completed in 2024. The complete report is provided here as Appendix 40 and summarized below.

Wildlife Assessment

Risk to wildlife receptors of concern (ROCs; ungulates, small mammals, songbirds, waterfowl, and shorebirds) that obtain food and water from onsite (Meadowbank Mine), near-site, All-Weather Access Road (AWAR), Whale Tail Haul Road (WTHR), Whale Tail Mine, and/or Tailings Storage Facility (TSF) locations in 2024 were evaluated. Parameters of potential concern (POPCs) were identified by screening measured concentrations in soil, water, tailings sediment, and tailings water against regulatory guideline values (primarily CCME's Soil Quality Guidelines for the Protection of Environmental Health, and Water Quality Guidelines the Protection of Agriculture and maximum measured baseline concentrations + 10%. For onsite, near-site, AWAR, Whale Tail Haul Road, and Whale Tail Mine locations, all measured concentrations met these screening values, so no POPCs were retained for further evaluation. In tailings sediment and water, measured concentrations for several chemical parameters exceeded screening values, so the TSF pathway was carried forward to the quantitative risk characterization.

ROC exposure to TSF contaminants (estimated daily intake; EDI) was calculated from average measured concentrations in TSF sediment and ponded water, and receptor-specific exposure factors such as body weight, food preferences, consumption rates, and time-in-area factors, as previously described in the WSLRA Plan. Toxicity reference values (TRVs) were identified from the literature. Hazard quotients (HQs) were calculated as: $HQ = EDI / TRV$. Risk was characterized as negligible when $HQ \leq 1$.

Risk associated with the TSF pathway was found to be negligible ($HQ \leq 1$) for all ROCs, with the exception of three parameters for shorebirds (arsenic, $HQ = 1.7$; chromium, $HQ = 1.2$; and copper, $HQ = 2.1$). However, based on the conservative nature of the assessment and since HQ targets were marginally exceeded, increased risk to populations of shorebirds from exposure to these contaminants within the TSF is considered improbable. In particular, the assumption that birds obtain 100% of their benthic invertebrate food source from the TSF over a 1-month period is considered overly conservative. In reality, birds are actively deterred from this area, and previous evaluations have indicated that such food resources are very limited, both in density and spatial distribution within the TSF. Based on the results of this assessment, management actions will include continuing to focus on deterring birds from the TSF to minimize potential for exposure.

Human Health - Country Foods Assessment

In addition to the wildlife assessment, an evaluation of risks to human receptors from contaminant exposure through consumption of country foods was conducted. For the established exposure pathways, POPCs were identified by comparing measured concentrations in all field-collected soil and water samples to regulatory guideline values that are protective of human health (primarily CCME's Soil Quality Guidelines for the Protection of Human Health, and Health Canada's Guidelines for Canadian Drinking Water Quality, where available) and maximum measured baseline concentrations. All measured

concentrations in soil and water met screening values, so no POPCs were identified, and no further evaluation was required.

Overall, this 2024 assessment supports FEIS-stage predictions that operation of the Meadowbank Complex would not increase risks to wildlife and human consumers of country food items from ingestion of chemical contaminants.

8.20 ARCHAEOLOGY

As required by NIRB Project Certificate No.004 Condition 69: carry out the Project to minimize the impacts on archeological sites, including conducting proper archeological surveys of the Project area (including the all-weather road and all quarry sites); [Cumberland] shall provide to the GN an updated baseline report for archeological sites in the Project area.

And

As required by NIRB Project Certificate No.004 Condition 70: shall report any archeological site discovered during the course of construction, including a burial site, immediately and concurrently to the GN and KivIA. Upon discovering an archeological site, Cumberland shall take all reasonable precautions necessary to protect the site until further direction is received from the GN. In the event that it becomes necessary to disturb an archaeological site, Cumberland shall consult with Elders, GN and KivIA to establish a site specific mitigation plan, and obtain all necessary authorizations and comply with all applicable laws.

And

As required by CIRNAC Land Lease 66H/8-1-5 Condition 66: If an archaeological site is discovered with the Land, the lessee shall immediately advise the Minister and the Territorial Archaeologist in writing.

And

As required by NIRB Project Certificate No.008 Condition 55: The Proponent shall conduct archaeological surveys prior to land disturbance related to the Project and report survey results to applicable parties, including the Government of Nunavut – Department of Culture and Heritage. Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent’s annual reporting to the Nunavut Impact Review Board.

And

As required by NIRB Project Certificate No.008 Condition 56: The Proponent shall report any archaeological site discovered during the construction, operation, and closure phases to the Government of Nunavut – Department of Culture and Heritage and the Kivalliq Inuit Association. Upon discovering an archeological site, the Proponent shall:

- Take all reasonable precautions necessary to protect the site until further direction is received from the Government of Nunavut – Department of Culture and Heritage; and*
- If it becomes necessary to disturb an archaeological site, the Proponent shall consult with the Government of Nunavut – Department of Culture and Heritage, the Kivalliq Inuit Association, and potential impacted communities to establish a site specific mitigation plan, and obtain all necessary authorizations and comply with all applicable laws.*

Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.

In 2024, no archeology surveys pertaining to operation were required and no new archaeological sites were discovered at the Meadowbank Complex.

8.21 CLIMATE MONITORING

8.21.1 Meadowbank Site

As required by NIRB Project Certificate No.004 Condition 21: *shall fund and install a weather station at the mine site to collect atmospheric data, including air temperature and precipitation.*

During the technical meeting and pre-hearing conference held in Baker Lake on January 14 -15, 2015 regarding the NWB Water License renewal, CIRNAC mentioned that *climate data provide important input for interpreting site-specific geothermal aspects, such as the rate of mine waste freezeback and active layer thicknesses, for permafrost encapsulation of the mine wastes. In addition, the previous year's climate is useful for interpreting the hydrology and water balance for the site.* It was recommended that the annual monitoring report summarize monthly climatic conditions at the Meadowbank site over a 12-month period. Table 8-83 includes average, minimum and maximum air temperatures, average and maximum wind speed as well as daily average, total and maximum volume of precipitation (rainfall / snowfall) on site. It should be noted that Agnico Eagle does not have a snow gauge but rather a rain gauge. For this reason, snow precipitations are reported as millimetre (mm) of rain.

In 2024, temperatures and winds recorded were similar to annual trends observed from 2009-2023. The coldest temperature was -40.09°C and warmest temperature was 27.58 °C. The maximum wind speed recorded in 2024 was 26.11 m/s. Total precipitation in 2024 (250.60 mm) remained within the annual precipitation range from previous years: 2023 (222.15 mm), 2022 (226.30 mm), 2021 (355.48 mm), 2020 (168.99 mm), 2019 (334.54 mm) 2018 (154.38 mm), 2017 (268.35 mm) and 2016 (299.45 mm). Figures 25, 26 and 27 below show, respectively, the temperature average, wind speed average and total precipitation data from 2009-2024.

Table 8-83 Meadowbank 2024 monthly climate data

Month	Temperature Average	Temperature Max	Temperature Min	Wind Speed Average	Wind Speed Max	Total Precipitation	Daily Average Precipitation	Max Precipitation
	°C	°C	°C	m/s	m/s	mm	mm	mm
January	-28.14	-2.57	-39.03	5.73	21.64	2.35	0.08	0.60
February	-29.10	-9.84	-40.09	4.77	16.29	6.60	0.23	0.90
March	-26.84	-10.63	-37.32	4.81	21.27	7.25	0.23	3.05
April	-14.57	-3.91	-34.75	4.30	18.60	5.90	0.20	1.75
May	-2.43	9.78	-18.40	4.52	18.11	12.30	0.40	6.20
June	5.73	19.23	-2.21	5.20	14.78	3.25	0.11	2.70
July	13.35	26.14	4.00	4.53	22.17	12.10	0.39	5.00
August	12.94	27.58	3.65	5.33	18.13	30.10	1.00	5.80
September	7.05	16.22	0.80	6.40	22.13	130.05	4.48	20.00
October	-1.53	9.07	-13.43	8.26	26.11	26.10	0.87	5.60

Month	Temperature Average	Temperature Max	Temperature Min	Wind Speed Average	Wind Speed Max	Total Precipitation	Daily Average Precipitation	Max Precipitation
	°C	°C	°C	m/s	m/s	mm	mm	mm
November	-13.26	-0.40	-25.74	6.09	20.82	6.05	0.20	1.25
December	-23.33	-5.16	-33.45	4.94	17.91	8.55	0.29	1.30
Total	N/A	N/A	N/A	N/A	N/A	250.60	N/A	N/A
Average	-8.34	6.29	-19.66	5.41	19.83	N/A	0.71	4.51

Figure 25 Meadowbank Site Temperature Average 2009-2024

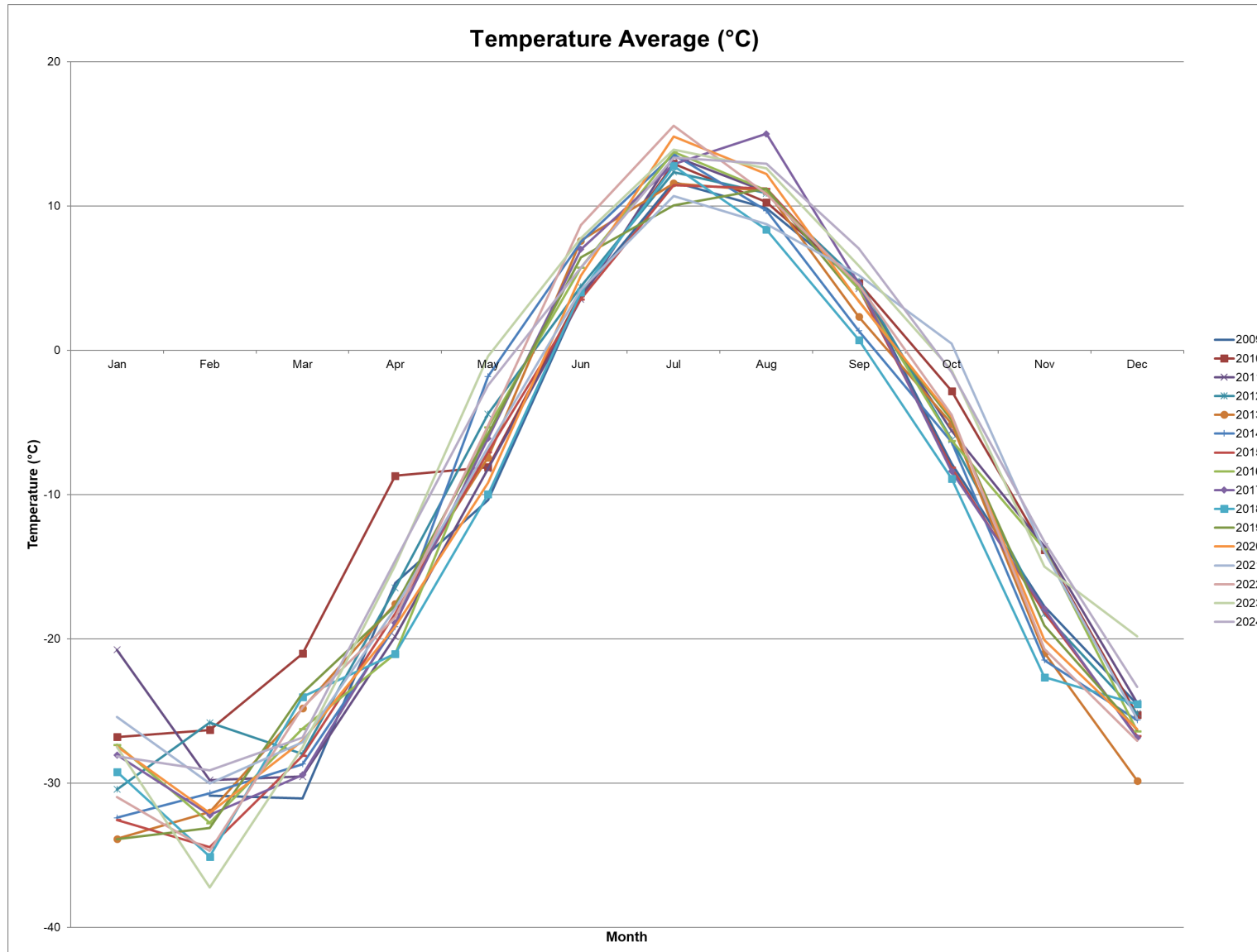


Figure 26 Meadowbank Site Wind Speed Average 2009-2024

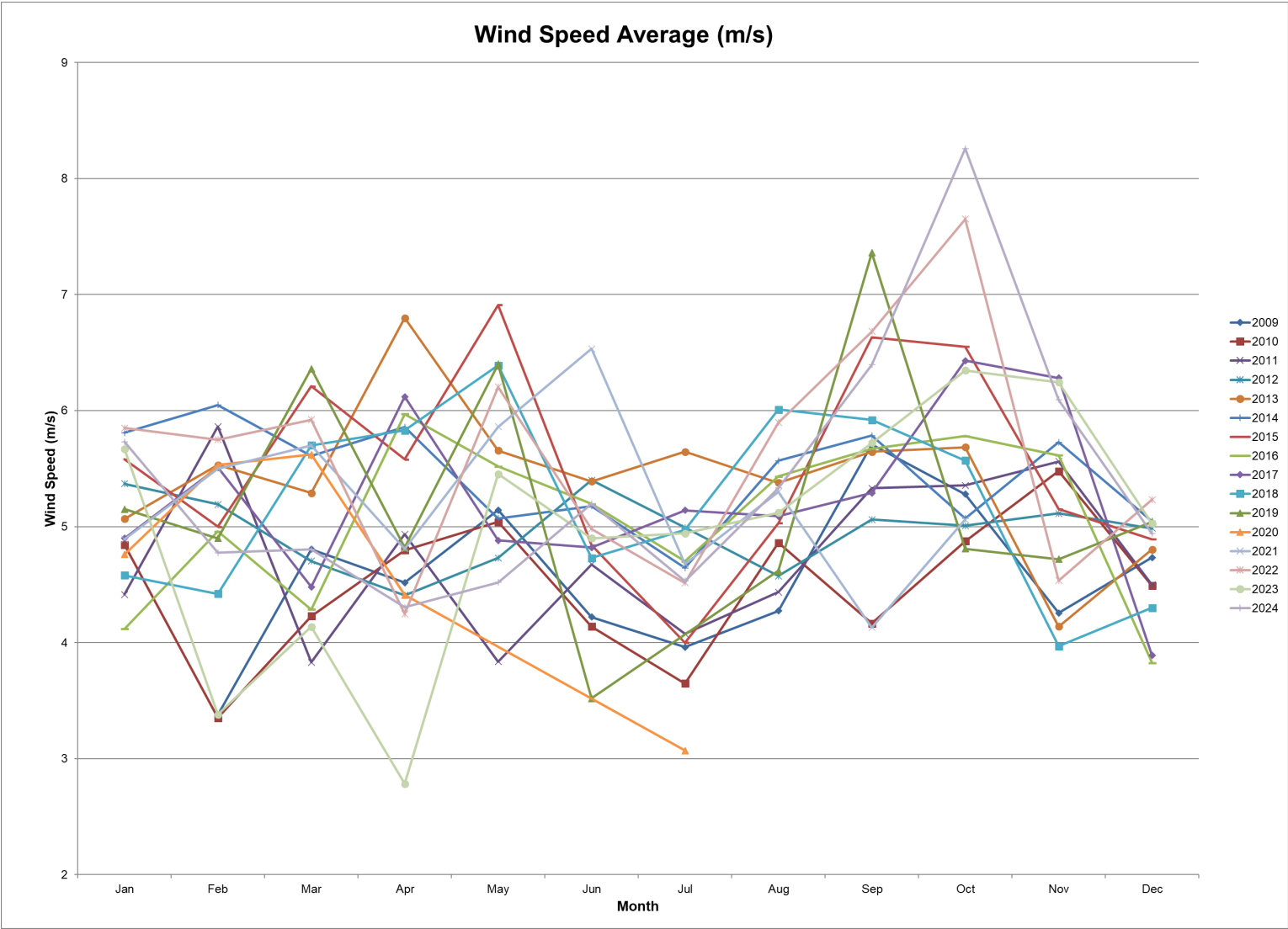
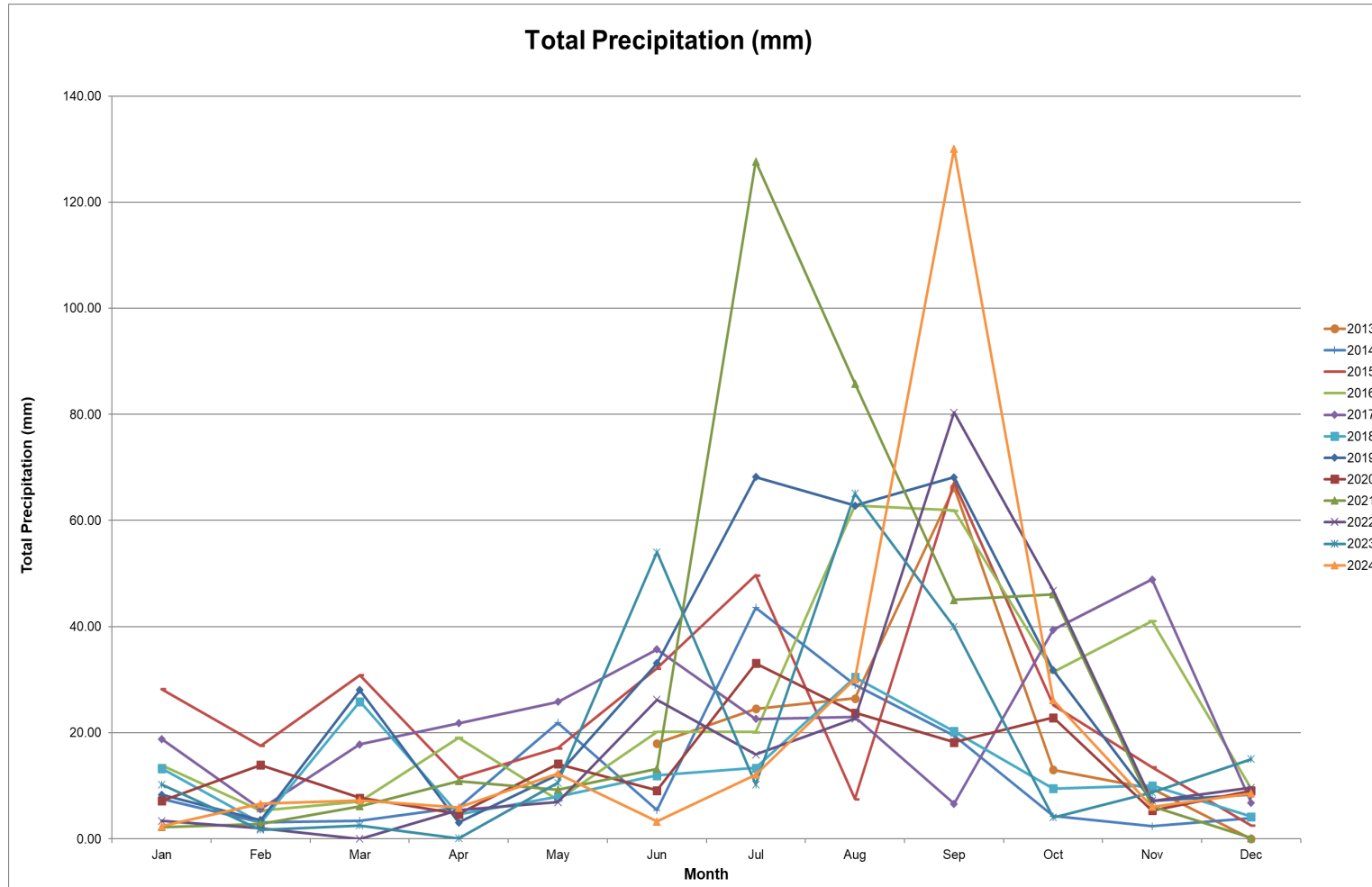


Figure 27 Meadowbank Site Total Precipitation 2013-2024



8.21.2 Whale Tail Site

The meteorological station at Whale Tail was functional for the whole year of 2024. Table 8-84 includes average, minimum and maximum air temperatures, average and maximum wind speed as well as daily average, total and maximum volume of precipitation (rainfall / snowfall) on site. It should be noted that Agnico Eagle does not have a snow gauge but rather a rain gauge. For this reason, snow precipitations are reported as millimetre (mm) of rain.

In 2024, temperatures, winds and precipitation recorded were similar to the data obtained for Meadowbank Site and to historic data from Meadowbank and Baker Lake from 2009-2024. Figures 28, 29 and 30 below show, respectively, the temperature average from 2018-2024, wind speed average from 2018-2024 and total precipitation data for 2019-2024. The coldest temperature for Whale Tail in 2024 was -40.23 °C and warmest temperature was 29.14°C. The maximum wind speed recorded in 2024 was 25.38 m/s. Total precipitation at Whale Tail site in 2024 (299.10 mm) was higher than 2023 (265.9 mm), 2022 (293.40mm), and 2020 (198.05 mm), but lower than 2021 (325.90 mm) and 2019 (352.58 mm).

Table 8-84 Whale Tail 2024 monthly climate data

Month	Temperature Average	Temperature Max	Temperature Min	Wind Speed Average	Wind Speed Max	Total Precipitation	Daily average Precipitation	Max Precipitation
	°C	°C	°C	m/s	m/s	mm	mm	mm
January	-28.64	-4.34	-38.89	3.91	17.31	9.40	0.30	3.20
February	-28.61	-10.61	-40.23	3.62	16.15	11.60	0.40	2.40
March	-26.23	-10.61	-37.84	3.27	21.15	11.40	0.37	2.60
April	-14.38	-1.52	-33.80	4.46	18.01	12.20	0.41	4.40
May	-2.31	9.40	-18.75	3.94	16.31	5.60	0.18	3.40
June	5.51	19.58	-3.12	3.42	13.74	6.20	0.21	5.20
July	13.65	27.46	3.33	4.10	19.31	34.70	1.12	8.00
August	12.65	29.14	3.40	3.63	18.15	17.30	0.56	7.40
September	6.47	15.88	0.71	4.51	20.46	87.60	2.92	12.00
October	-2.40	8.13	-14.80	5.82	25.38	86.20	2.78	25.20
November	-13.58	-0.93	-25.19	4.66	17.11	9.00	0.30	1.80
December	-23.42	-5.86	-32.50	4.32	18.38	7.90	0.25	2.00
Total	N/A	N/A	N/A	N/A	N/A	299.10	N/A	N/A
Average	-8.44	6.31	-19.81	4.14	18.46	N/A	0.82	6.47

Figure 28 Whale Tail Site Temperature Average 2018-2024

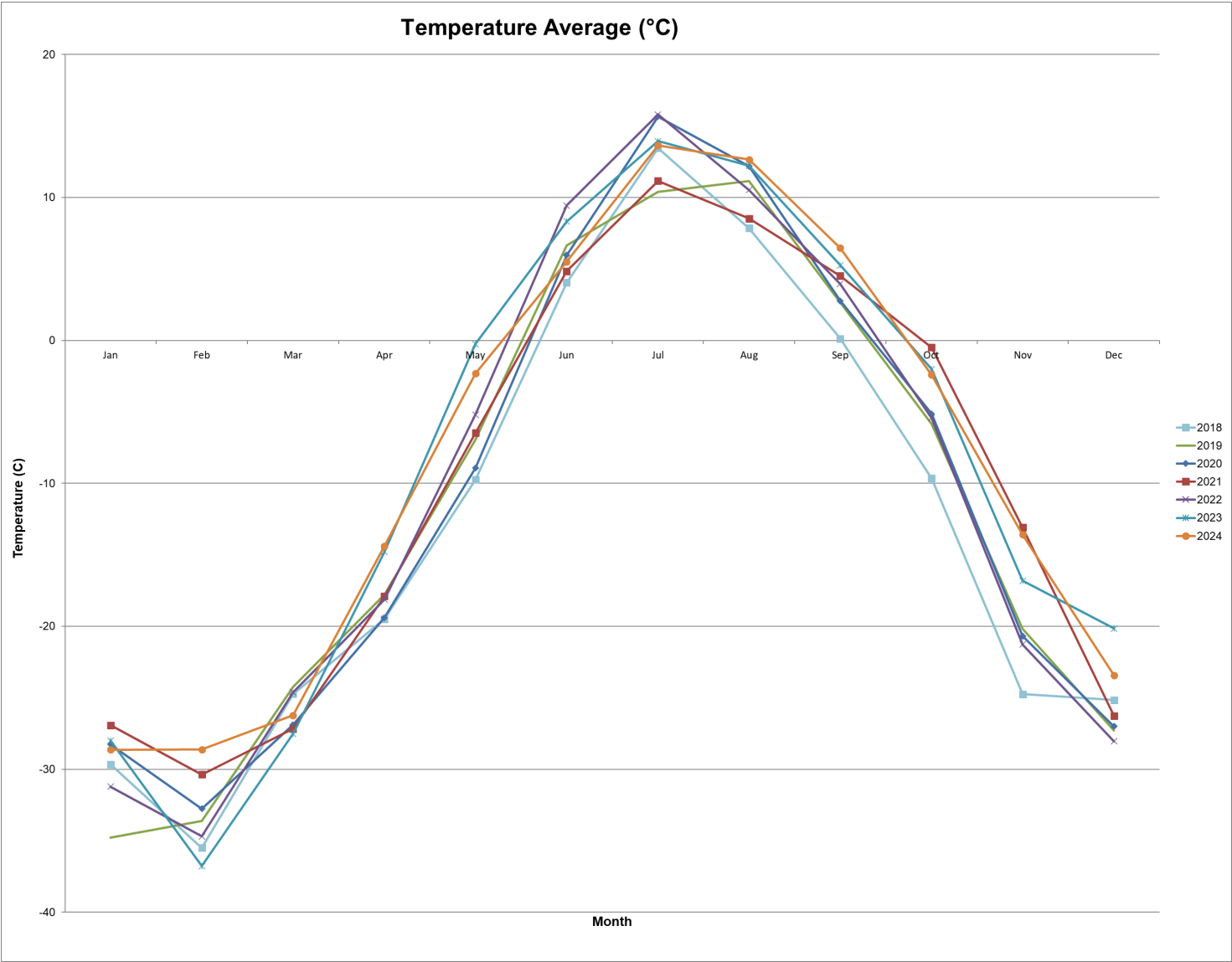


Figure 29 Whale Tail Site Wind Speed Average 2018-2024

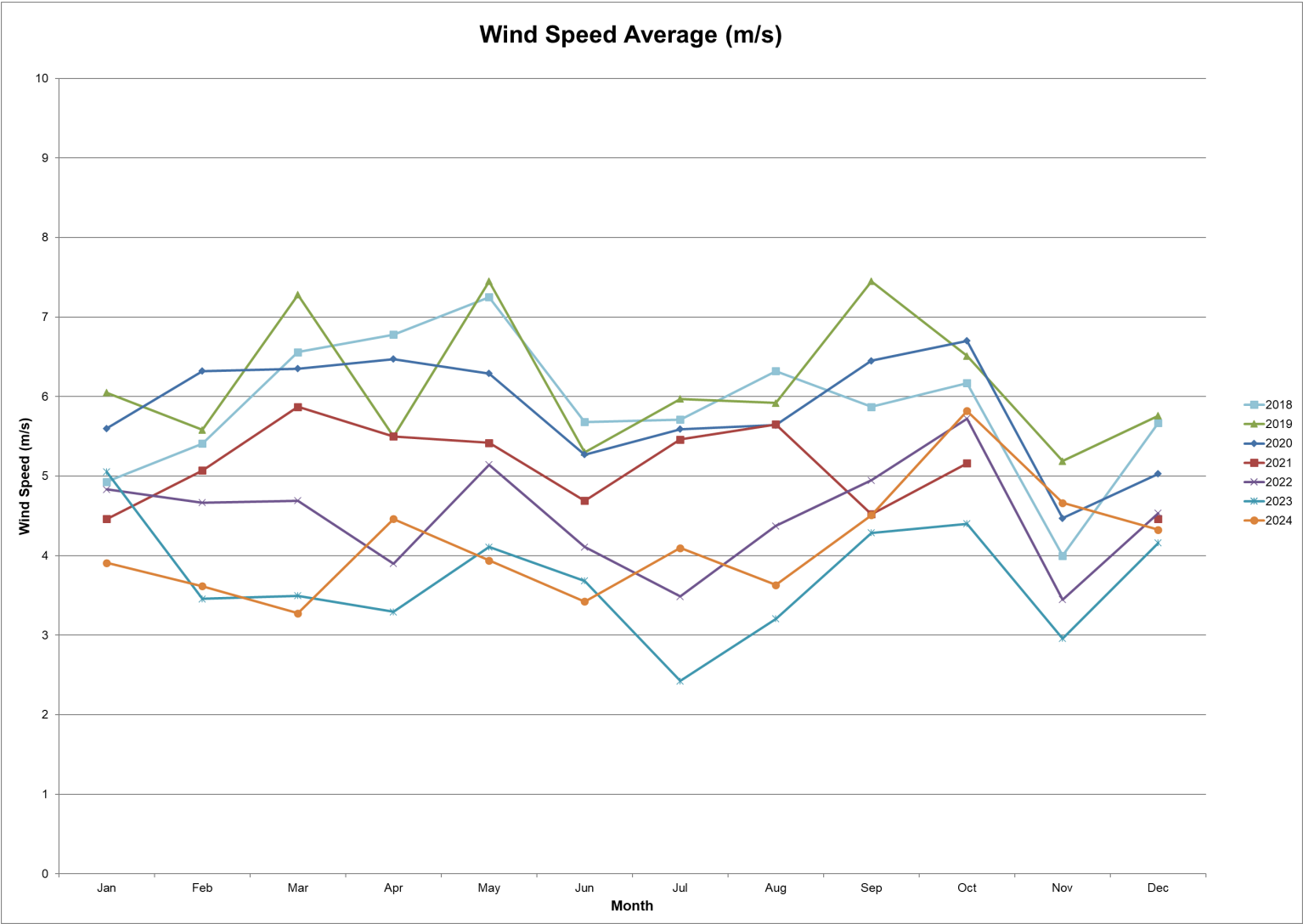
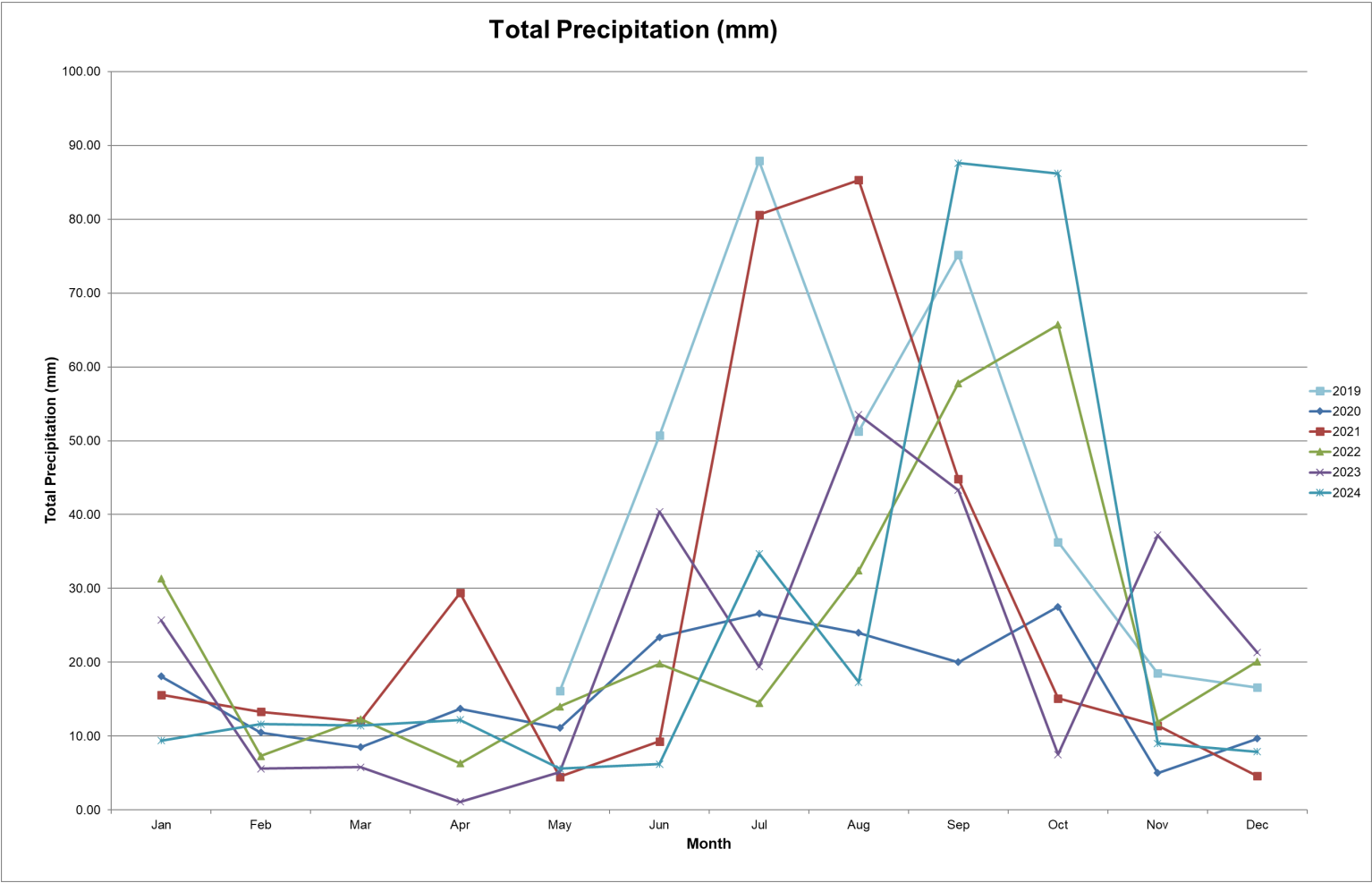


Figure 30 Whale Tail Site Precipitation 2019-2024



8.21.3 Historic Climate Data

Historic average is provided in Table 8-85 and Figures 31 to 33 below for temperature average, total precipitation, and wind speed max. Temperature averages were similar for Meadowbank, Whale Tail, and Baker Lake. Precipitation at Meadowbank and Baker shows a similar trend. It is difficult to compare the historic data to Whale Tail for precipitation as the data started to be collected only in May 2019. Based on the information collected over four and a half years, Whale Tail has received more precipitation compared to Meadowbank and Baker Lake. For the maximum wind speed, Meadowbank, Whale Tail, and Baker Lake show similar values.

Table 8-85 Historic Meadowbank, Whale Tail and Baker Lake monthly climate data

Date	Meadowbank			Whale Tail			Baker Lake		
	(average 2009-2024)			(average 2019-2024)*			(average 2009-2024)		
	Temperature Average	Wind Speed Max	Total Precipitation	Temperature Average	Wind Speed Max	Total Precipitation	Temperature Average	Wind Speed Max	Total Precipitation
	°C	m/s	mm	°C	m/s	mm	°C	m/s	mm
January	-28.98	19.32	10.49	-29.63	19.64	20.02	-28.82	22.93	9.05
February	-31.64	17.91	5.91	-33.19	17.39	9.66	-30.55	21.34	7.19
March	-26.75	19.06	12.42	-25.91	20.98	10.00	-25.84	21.37	7.97
April	-17.49	19.14	8.45	-17.41	18.23	12.54	-16.54	21.41	13.20
May	-6.16	18.61	13.20	-5.69	18.56	9.40	-5.46	19.64	16.43
June	5.57	17.69	21.85	6.40	17.80	24.97	6.10	19.04	23.75
July	12.79	18.13	36.76	13.44	18.88	43.95	12.48	18.66	28.13
August	11.05	18.31	39.12	10.73	19.12	43.97	11.34	19.98	37.89
September	4.08	21.42	51.95	3.68	20.31	54.78	4.60	21.04	44.33
October	-5.12	21.25	25.04	-4.43	22.43	39.71	-4.77	21.63	23.99
November	-17.53	20.87	13.83	-18.62	16.28	15.50	-17.20	21.09	18.86
December	-25.48	18.78	7.06	-25.33	18.32	13.36	-24.94	21.29	11.60
Total	N/A	N/A	246.07	N/A	N/A	297.86	N/A	N/A	242.39
Average	-10.47	19.21	N/A	-10.50	18.99	N/A	-9.97	20.78	N/A

*Precipitation data for Whale Tail collected from May 2019 onward.

Figure 31 Historic Comparison Meadowbank, Whale Tail, Baker Lake Sites Temperature Average 2009-2024

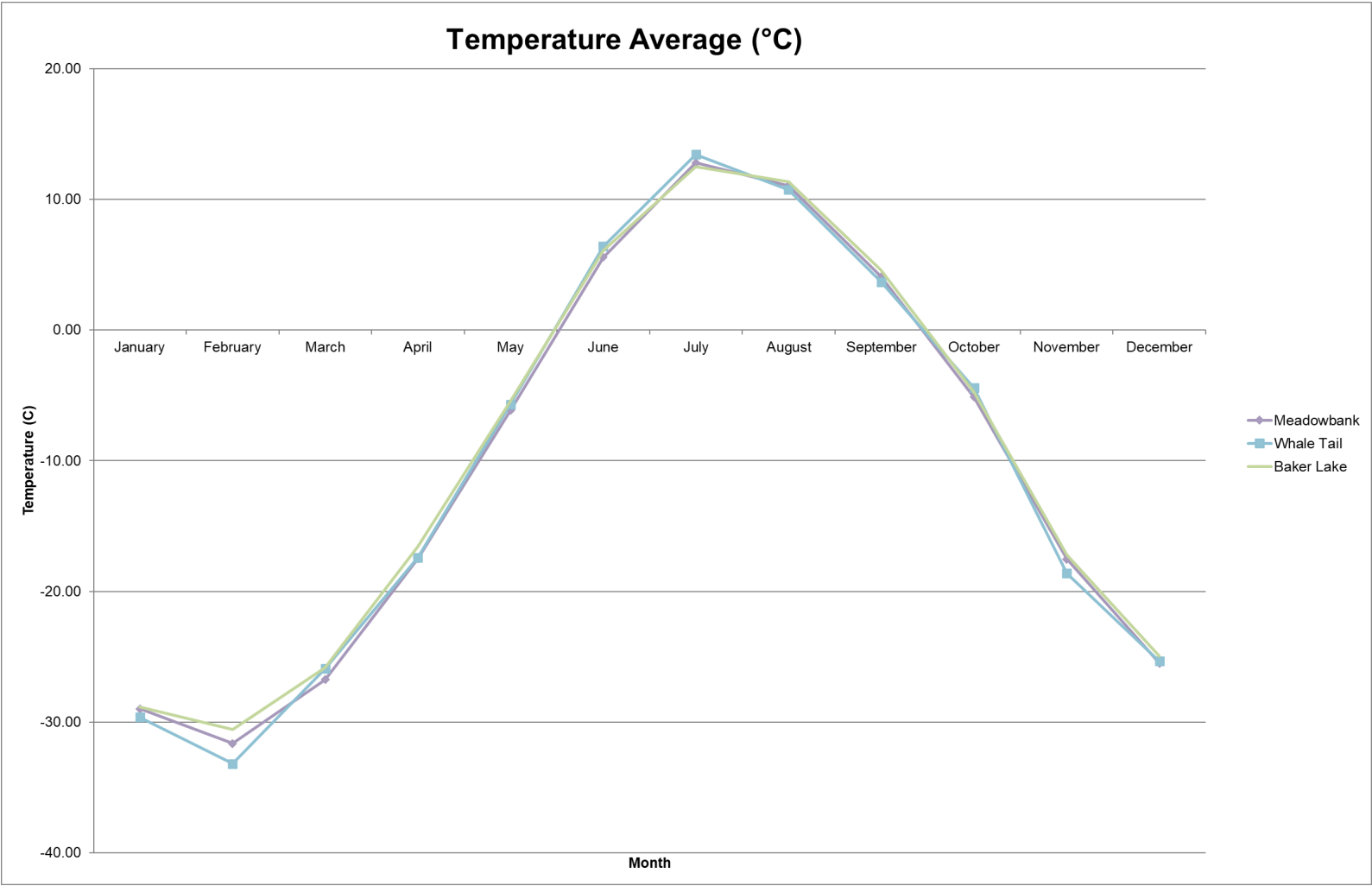


Figure 32 Historic Comparison Meadowbank, Whale Tail, Baker Lake Sites Total Precipitation Average 2009-2024

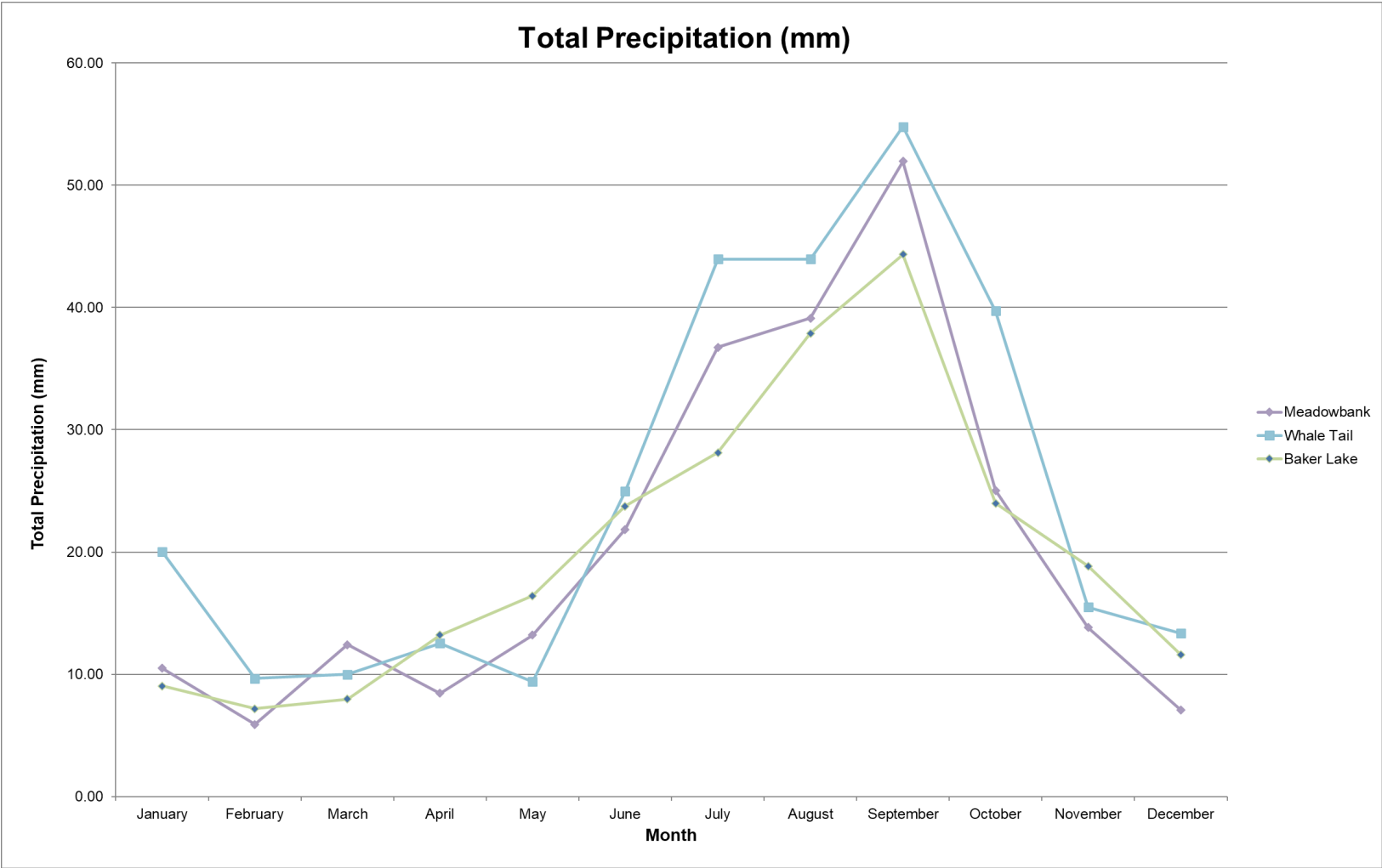
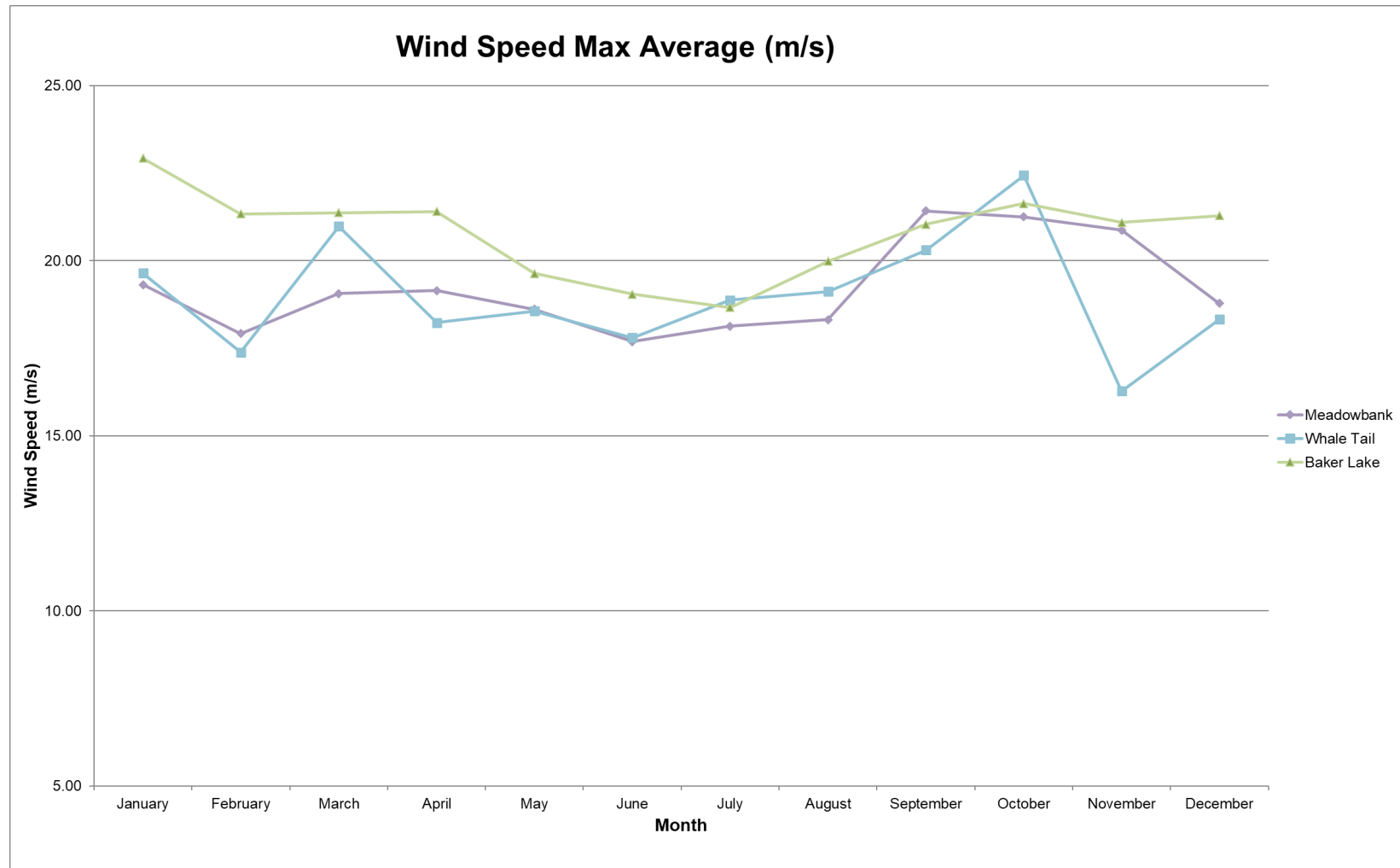


Figure 33 Historic Comparison Meadowbank, Whale Tail, Baker Lake Sites Wind Speed Max Average 2009-2024

8.22 ADAPTIVE MANAGEMENT^s

The primary objective of the Adaptive Management Plan (Version 1.5, July 2021) is to document specific mitigation measures and associated management actions to be taken when specified thresholds are exceeded for the following facilities and activities:

- Waste rock storage facility;
- Receiver water quality;
- Surface water quantity; and
- Underground mine water quantity.

Table 8-86 presents the thresholds for the 2024 period for each of the components included in that plan.

Table 8-86 Summary of Adaptive Plan Threshold

Item	Threshold for 2024	Management Strategy
WRSF Permafrost Aggradation	Level 0 (normal operating condition)	Continue temperature monitoring of the WRSF
WRSF Surface Water Balance and Active Layer Development	Level 0 (normal operating condition)	Continue temperature monitoring of the WRSF
Receiver Water Quality Whale Tail South	Level 0 for total phosphorus (normal operating condition)	Continue monitoring as per Water Quality and Flow Monitoring Plan Update water balance and water quality forecast as part of the Annual Report
	Level 0 for arsenic (normal operating condition)	Continue monitoring as per Water Quality and Flow Monitoring Plan Update water balance and water quality forecast as part of the Annual Report
Receiver Water Quality Kangislulik Lake	Level 0 for total phosphorus (normal operating condition)	Continue monitoring as per Water Quality and Flow Monitoring Plan Update water balance and water quality forecast as part of the Annual Report
	Level 0 for arsenic (normal operating condition)	Continue monitoring as per Water Quality and Flow Monitoring Plan Update water balance and water quality forecast as part of the Annual Report.
Surface Water Quantity	Level 0 (normal operating condition)	Continue water monitoring as per water management plan. Update water balance and water quality monitoring as part of Annual Report
Underground Water Quantity	Level 0 (normal operating condition)	Continue water monitoring as per water management plan Update water balance and water quality monitoring as part of Annual Report

The WRSF adaptive management threshold level was evaluated based on the review of the thermal data. These data are provided in the 2024 Thermal Monitoring Report (Appendix 20). Permafrost aggradation was observed in the foundation of the WRSF in 2024. Freeze-back within the first 7 m is currently aligned with the model prediction. The model predicted an active layer up to 7 m which has not been observed so far in the monitoring data. Follow up of the monitoring data will continue

For Whale Tail South and Kangislulik Lake, the water quality data is collected as part of the annual CREMP (Appendix 26, see Section 5.3). In 2024, for both lakes, the mean total phosphorus and total arsenic concentration for each sampling event remain at Level 0. Results from CREMP 2024 were used to assess adaptive management levels going into 2025. The mean concentrations of paired monthly sampling results were compared to Adaptive Management Plan thresholds. For Kangislulik Lake (total phosphorus and arsenic) and Whale Tail South (total phosphorus and arsenic), the water quality was assessed as Level 0 based on the results of the September 2024 sampling event. Monitoring as per the Water License will continue during 2025 along with the update of the water balance and water quality forecast as part of the Annual Report. Agnico Eagle will continue to track nutrients level in 2025, and additional measures outlined in the adaptive management plan will be implemented if warranted.

The surface and underground water quantity threshold in 2024 was at Level 0 as there was enough water storage capacity on site to manage water from these sources.

SECTION 9. CLOSURE

9.1 PROGRESSIVE RECLAMATION^s

9.1.1 Meadowbank Site^s

9.1.1.1 Mine Site^s

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 17: *A summary of any progressive closure and reclamation work undertaken including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling.*

And

As required by KIA KVPL08D280 Production Lease Condition 6.01 (9): *Reclaim and remediate the Leased Land in accordance with the Closure and Reclamation Plan, on an ongoing basis through the Term and deliver to KIA, not later than March 31 of each year of the Term, beginning five years after the effective date, an amended C&R Plan detailing the activities taken in the last year and to be undertaken in the next year and planned for the balance of the Term, that includes, but is not limited to the proposed methods and procedures for progressive reclamation.*

Agnico Eagle submitted the Meadowbank Interim Closure and Reclamation Plan dated May 29th, 2019, to CIRNAC on June 7th, 2019 and on July 24th, 2019 to the NWB. On March 2020, Agnico Eagle made a revision to the Meadowbank Interim Closure and Reclamation Plan (ICRP) – Update 2019 (Appendix 55 of the 2019 Annual Report) to address action items identified by the NWB during the review of the 2018 Annual Report.

Best management practices, including progressive closure, have been incorporated in the Meadowbank operation period. The current mine plan includes progressive closure associated with the following components:

- Open Pits;
- Portage WRSF;
- Tailings Storage Facilities; and
- Water management infrastructures.

The key closure activities that have been identified for progressive reclamation are detailed in the ICRP Section 6.2 for each individual component of the Project. The progressive reclamations activities provided in this ICRP will be updated in future versions of the plan to include new opportunities for progressive reclamation identified during operations. The next Closure and Reclamation Plan (CRP) for the Meadowbank Complex is planned to be presented in 2025.

In 2024, progressive reclamation activity occurred at the tailings storage facility of the Meadowbank Site. Progressive reclamation with the construction of the NPAG cover landform over the tailings in the North Cell was first undertaken in winter of 2015 following the completion of the tailings deposition. The construction continued in 2016 to 2019, and 2023. In 2024, the construction of the NPAG cover over the tailings and of some rockfill structures required to support possible additional tailings deposition were completed in the North Cell. A total of 113,145 m³ of NPAG rockfill material and 11,058 m³ of granular NPAG material was placed in the TSF in 2024.

Based on mining operations, there may be some additional opportunities to complete progressive closure on the South Cell and North Cell TSF before closure. In 2024, Agnico Eagle continued the work to update the closure landform design of the TSF. Based on the design assessment and the site conditions, additional tailings deposition could be completed in the North and South Cell, along with construction of internal rockfill structures required for water management and tailings deposition. Construction of the tailings closure NPAG cover landform will also be constructed in progressive closure based on site conditions and resources available.

The flooding of Vault and Phaser/BB Phaser pits with natural inflow began at the end of mining operations in the area in 2019 and continued during 2024. More details on this can be found in the Meadowbank Water Management Plan (Appendix 13).

In 2024, work progressed on the development and implementation of the closure water treatment system for the Portage and Goose Pits water as a result of in-pit deposition. The following main activities occurred, and will continue in 2025:

- Continue bench scale laboratory testing to define the water treatment technologies and design required for closure; and
- Implement in-pit semi-passive treatment to enhance the degradation of nitrogen compounds in reclaim water.

Details on the closure water treatment system for the Portage and Goose Pits water are provided in the 2024 Meadowbank Water Management Plan and will be included in the next CRP for the Meadowbank Complex planned to be presented in 2025.

Following conversion of the Portage Attenuation Pond into the Reclaim Pond (South Tailings Cell) in 2014, some of the dewatering equipment from the North Cell reclaim system (i.e. dewatering pipelines, reclaim barge, effluent diffuser pipelines, and pumps) has been dismantled and removed. This activity occurred mainly in 2015. Some water management systems not required at Meadowbank were moved at Whale Tail Mine based on availability and needs on both sites. The clarifiers of the Water Treatment Plant (WTP) at Meadowbank were demobilized partially to be used at Vault WTP. The Vault water treatment plant was then demobilized to be installed at Whale Tail Mine. Water management facilities or equipment not used or deemed not necessary could be removed or transferred between sites during operations.

Closure and reclamation of the Portage WRSF occurred progressively during operations with the placement of the NPAG cover landform over the side slopes of the PAG WRSF. Refer to the Meadowbank ICRP Section 5.2.5.4 (Appendix 55 of 2019 Annual Report) for cover design details. Approximately 90% of the Portage PAG WRSF has been covered. No additional work on this item is

planned to occur before closure as it will not be possible to progressively reclaim the uppermost bench or the top surface of the Portage WRSF as a landfill for demolition waste may be located on the WRSF if required.

The landfill located in the Portage WRSF will be in active use throughout the operation period and also during the closure period in order to receive debris from decommissioning and demolition. Operation landfills are progressively closed in the Portage WRSF during operation, but final closure of the landfill will occur at the end of the active closure stage.

Progressive reclamation activities for the buildings and equipment at Vault has occurred during operation after the mining activities. To date, the emergency camp and office at Vault have been removed. The incinerator at Meadowbank has also been partially dismantled, as the composter is presently in use. The Meadowbank emulsion plant has also partially been decommissioned as no more emulsion is being prepared at Meadowbank. In 2024, site cleanup continued with decommissioning of unused equipment. The area located between the airstrip and the South Cell TSF, in the former quarry used for the construction of the airstrip (referred to as Quarry 23) was cleaned up for the construction start of the TSF collection pond. Tires, equipment and core boxes were sorted out, disposed of or placed in suitable areas.

Specific timelines for progressive reclamation activities on site during operation for the buildings and equipment will be defined and included in the next CRP for the Meadowbank Complex planned to be presented in 2025. Efforts are also made to reduce inventories of consumables on site leading up to the end of operations.

9.1.1.2 AWAR^s

As required by CIRNAC Land Lease 66A/8-71-3, Condition 35: *The Lessee shall file annually a progress report for the preceding year outlining the ongoing reclamation completed in conformance with the approved Closure and Reclamation Plan.*

And

As required by KIA Right of Way KVRW06F04, Condition 28: *Agnico Eagle shall file annually, no later than March 31st of each year, a progress report for the preceding year, outlining any ongoing restoration completed, in conformity with the Closure and Reclamation Plan.*

No progressive reclamation has been completed on the AWAR or associated quarries in 2024 as none of the quarries are considered as no longer being required as borrow source for road maintenance.

Quarries no longer required for operations could be progressively reclaimed during operation, as equipment and resources become available. The AWAR will be preserved as the main access to the site in a sufficient condition to allow post-closure access for monitoring, inspection and maintenance activities. Material availability from quarries and proper maintenance are required to ensure the good state of the road. Based on planned maintenance schedule, a specific timeline for quarries progressive reclamation during operation will be defined.

9.1.1.3 Quarries^s

As required by CIRNAC Land Lease 66A/8-72-6, Condition 33: *The lessee shall file annually a report for the preceding year, outlining ongoing restoration completed in conformity with C&R Plan, as well as any variations from the said Plan.*

And

As required by KIA Quarry Lease KVCA06Q11, Condition 14: *AEM shall conduct reclamation activities during the first 12 months of the term of this Permit in accordance with the Reclamation Plan attached as Schedule 3. AEM shall annually thereafter submit to KIA a Reclamation Plan detailing the proposed reclamation activities for the upcoming year. Such Plans shall be subject to the approval of KIA and will form part of this Permit. AEM shall conduct reclamation in accordance with the approved Reclamation Plans*

And

As required by KIA Quarry Lease KVCA23Q01, Condition 19: *The Permittee shall conduct reclamation activities during the first twelve (12) months of the term of this Permit in accordance with the Meadowbank Interim Closure and Reclamation Plan attached in Schedule 3. The Permittee shall annually thereafter submit to the Association an Interim Closure and Reclamation Plan detailing the proposed reclamation activities for the upcoming year. Such plans shall be subject to the approval of the Association and will form part of this Permit. The Permittee shall conduct reclamation in accordance with the approved Plans.*

As mentioned in Section 9.1.1.2, no progressive reclamation has been completed on the AWAR or associated quarries in 2024.

9.1.2 Whale Tail Site^s

9.1.2.1 Mine Site^s

As required by NWB Water License 2AM-WTP1830 Part J, Item 2: *The Licensee shall submit to the Board for approval within three (3) years of Operations, an updated Interim Whale Tail Pit Closure and Reclamation Plan prepared in accordance with the “Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories”, issued by the Mackenzie Valley Land and Water Board (MVLWB) and Aboriginal Affairs and Northern Development Canada (AANDC) in 2013 (MVLWB/AANDC 2013) and consistent with the Mine Site Reclamation Policy for Nunavut, 2002. The Plan shall include all mine related facilities and Whale Tail Pit Haul Road.*

And

As required by NIRB Project Certificate 008 Condition 12: *The Proponent shall provide a summary of its progressive reclamation efforts and associated feedback received from communities with respect to aesthetic values solicited by the Proponent as part of its public engagement processes in its annual reporting to the NIRB. As part of the Closure and Reclamation Plan, the Proponent shall develop and implement a program to:*

- *Progressively reclaim disturbed areas within the project footprint, with an emphasis on restoring the natural aesthetics of the area through re-contouring to the extent practicable; and*

- *In a manner that demonstrates that the Proponent has considered the aesthetic values of local communities (e.g. information regarding the acceptability of the topography and landscape of the project areas following progressive reclamation efforts).*

And

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 20: A summary of any progressive Closure and Reclamation work undertaken, including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling.

And

As required by KIA Production Lease KVPL17D01 Condition 6.01 (10): Deliver to KIA, not later than March 31, 2022 and not later than March 31st every three (3) years thereafter, a Conceptual Reclamation and Closure Plan and Reclamation Estimate, detailing the reclamation and remediation activities taken in the last three (3) years and to be undertaken in the next three (3) years and planned for the balance of the Term. That includes, but not is not limited to the proposed methods and procedure for the progressive [...]

Agnico Eagle submitted an updated version of the Whale Tail Interim Closure and Reclamation Plan (ICRP) on July 2020 to NWB. For details regarding the planned permanent and progressive reclamation, please refer to Section 5 and 6 of the Whale Tail ICRP provided in Appendix 51 of the 2020 Annual Report.

In 2024, progressive placement of the Whale Tail and IVR WRSF NPAG cover landform was completed over the side slopes of the facilities. In 2025, it is planned to continue the progressive placement of the NPAG cover on these facilities.

The progressive reclamations activities provided in the 2020 ICRP will be updated in future versions of the plan to include new opportunities for progressive reclamation identified during operations. The next Closure and Reclamation Plan (CRP) for the Meadowbank Complex is planned to be presented in 2025.

9.1.2.2 Whale Tail Haul Road^s

As required by CIRNAC Land Lease 66H/8-2-1, Condition 25: The lessee shall file annually a report for the preceding year, outlining ongoing restoration completed in conformity with the approved Abandonment and Restoration Plan, as well as any variations from the said Plan.

No reclamation work was undertaken along the Whale Tail Haul Road in 2024.

9.1.2.3 Quarries^s

As required by KIA Quarry Lease KVCA15Q02, Condition 14: AEM shall conduct reclamation activities until November 22, 2018, in accordance with the Reclamation Plan attached Schedule 3. AEM shall annually thereafter submit to KIA a Reclamation Plan detailing the proposed reclamation activities for the upcoming year.

And

As required by KIA Quarry Lease KVCA18Q01, Condition 20: *The permittee shall conduct reclamation activities during the first twelve months of the term of this Permit in accordance with the Reclamation Plan attached as Schedule 3. The permittee shall annually thereafter submit to the Association an Reclamation Plan detailing the proposed reclamation activities for the upcoming year.*

And

As required by KIA Quarry Lease KVCA15Q01, Condition 13: *The permittee shall conduct reclamation activities during the first twelve months of the term of this Permit in accordance with the Reclamation Plan attached as Schedule 3. The permittee shall annually thereafter submit to the Association an Reclamation Plan detailing the proposed reclamation activities for the upcoming year.*

And

As required by CIRNAC Land Lease 66H/8-1-5, Condition 35: *The lessee shall file annually a report for the preceding year, outlining ongoing restoration completed in conformity with the approved Abandonment and Restoration Plan, as well as any variations from the said Plan.*

No progressive reclamation work was completed in 2024. Quarries and eskers are required for maintenance work on the Whale Tail Haul Road.

The quarries and eskers no longer required for operations could be progressively reclaimed during operation, as equipment and resources become available. The Whale Tail Haul Road will be preserved as the main access to the site in a sufficient condition to allow post-closure access for monitoring, inspection and maintenance activities. Material availability from quarries and proper maintenance are required to ensure a good state of the road. Based on planned maintenance schedule, a specific timeline for quarries and eskers progressive reclamation during operation will be defined.

9.2 RECLAMATION COSTS[§]

9.2.1 Meadowbank Site[§]

9.2.1.1 Project Estimate[§]

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 19: *An updated estimate of the current restoration liability based on project development monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking.*

And

As required by NIRB Project Certificate No.004, Condition 5: *Cumberland shall meet with respective licensing authorities prior to the commencement of construction to discuss the posting of adequate performance bonding. Licensing authorities are encouraged to take every measure to require that sufficient security is posted before construction begins. This bonding should not duplicate other amounts of security required (e.g. the NWB).*

And

As required by NIRB Project Certificate No.004 Condition 78: *Cumberland shall file a complete Closure and Reclamation Plan developed to comply with INAC's policy of full cost of restoration and any related NWB requirements such that the Inuit and taxpayers are not liable for any cost associated with the cleanup, modification, decommission, or abandonment.*

And

As required by NIRB Project Certificate No.004, Condition 80: *File annually with NIRB's Monitoring Officer an updated report on progressive reclamation and the amount of security posted, as required by KivIA, INAC, and/or the NWB.*

Refer to Section 9.1.1 for the progressive reclamation discussion.

A permanent closure and reclamation financial security cost estimate has been prepared with the present Project layout and infrastructure. The cost estimate covers the closure and reclamation of all Project facilities as described Meadowbank Interim Closure and Reclamation Plan – Update 2019 (V.01, Appendix 55 of the 2019 Annual Report) for permanent closure of the Project.

Agnico Eagle was required to submit the detailed financial security cost estimate to Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and to the Kivalliq Inuit Association (KivIA) to support land use and water licensing requirements. RECLAIM Version 7.0 workbook (March 2014) has been used for this estimate, as per the Guidelines for Closure and Reclamation Cost Estimates for Mines, issued by Indigenous and Northern Affairs Canada, Mackenzie Valley Land and Water Board and the Government of the Northwest Territories (INAC, MVLWB, GNWT, 2017).

Reclamation of the Project facilities can be divided into the following three general stages, as presented in the integrated schedule of the expected closure activities presented in Appendix P of the ICRP (Appendix 55 of the 2019 Annual Report):

- Operations: during which time progressive rehabilitation measures may be undertaken;
- Active Closure: during which time the major reclamation measures are undertaken; and
- Post Closure: all major construction activities have been completed and ongoing monitoring and maintenance is required, with minimal activity on-site.

The updated 2019 estimated closure and reclamation costs for the Meadowbank Project represent a total of C\$ 89,427,746. This total includes C\$ 62,269,580 of direct costs and C\$ 27,158,166 of indirect costs. The financial security cost estimate assumptions and methodology used for the calculations, along with the complete RECLAIM 7.0 spreadsheets are presented in Appendix Q of the ICRP (Appendix 55 of 2019 Annual Report).

For the purpose of this financial security cost estimate, only progressive rehabilitation measures which have already been completed to date (up to 2017) are considered in the calculations.

The revised cost estimate for the closure and reclamation of all Project facilities will be included in the next Closure and Reclamation Plan (CRP) for the Meadowbank Complex, planned to be presented in 2025.

9.2.1.2 AWAR and Quarries[§]

As required by CIRNAC Land Lease 66A/8-71-3, Condition 23: *The Lessee shall submit to the Minister no later than November 1st, 2025, and every three (3) years thereafter, an updated Closure and Reclamation Plan and cost estimates thereof.*

And

As required by CIRNAC Land Lease 66A/8-72-6, Condition 37: *The lessee shall submit to the Minister every 2 years after the commencement date of this lease (January 2007), a report describing cumulative variations from the C&R Plan with updated cost estimates.*

And

As required by KIA Right of Way KVRW06F04, Condition 16: *Agnico Eagle shall submit to KIA on March 31, 2009, and no later than March 31st of every second year thereafter, a report describing any variations from the Closure and Reclamation Plan and updated cost estimates.*

As described in Sections 9.1.1.2 and 9.1.1.3, no progressive reclamation has been completed on the AWAR or associated quarries in 2024.

The cost estimate for the reclamation of the AWAR and quarries represents C\$ 993,078 as per the calculation completed with Reclaim 7.0 (March 2014) in the Meadowbank Interim Closure and Reclamation Plan – Update 2019 (V.01, Appendix 55 of the 2019 Annual Report).

The revised cost estimate for the closure and reclamation of the AWAR and quarries will be included in the next Closure and Reclamation Plan (CRP) for the Meadowbank Complex, planned to be presented in 2025.

9.2.2 Whale Tail Site[§]

9.2.2.1 Project Estimate[§]

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 22: *An updated estimate of the current restoration liability based on Project development monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking.*

And

As required by NWB Water License 2AM-WTP1830 Part C, Item 7: *The Licensee shall, within twelve (12) months following the commencement of Operations and when the Licensee files a Final Reclamation and Closure Plan as required under the License, submit to the Board for review an updated reclamation cost estimate, using the INAC RECLAIM Reclamation Cost Estimating Model (Version 7.0 or the most current version in use at the time the updated reclamation cost estimate is submitted to the Board).*

And

As required by NIRB Project Certificate No.008, Item 7: *The Proponent shall meet with respective licensing authorities prior to the commencement of construction to discuss the posting of adequate performance bonding. Licensing authorities are encouraged to take every measure to require that sufficient security is posted before construction begins.*

A permanent closure and reclamation financial security cost estimate has been prepared with the present Project layout and infrastructure. The cost estimate covers the closure and reclamation of all Project facilities as described in the Whale Tail Pit Project Interim Closure and Reclamation Plan (July 2020) (Appendix 51 of the 2020 Annual Report).

The cost estimate covers the closure and reclamation of all Project facilities as described in the ICRP and was prepared using RECLAIM Version 7.0 (March 2014), for permanent closure of the Project. The 2020 estimated closure and reclamation costs for the Whale Tail Project represent a total of C\$50,663,508. This total includes C\$30,714,735 of direct costs and C\$19,948,773 of indirect costs.

As per NWB Water License Part C Item 1, Agnico Eagle has provided to both the Government of Canada (CIRNAC) and KivIA a Letter of Credit in the amount of C\$ 25,331,754 for a total of C\$ 50,663,508.

The revised cost estimate for the closure and reclamation of all Project facilities will be included in the next Closure and Reclamation Plan (CRP) for the Meadowbank Complex, planned to be presented in 2025.

9.3 TOPSOIL/ORGANIC MATTER SALVAGE AND REVEGETATION

As required by NIRB Project Certificate 008 Condition 13: *The Proponent shall explore the feasibility of topsoil/organic matter salvage as part of project development and provide updates to the Closure and Reclamation Plan based on this investigation. The Proponent shall provide a summary of its management of topsoil in annual reports to the NIRB.*

And

As required by NIRB Project Certificate No.008 Condition 26: *The Proponent shall include revegetation strategies within its Mine Closure and Reclamation Plan that support progressive reclamation, and promote natural revegetation and recovery of disturbed areas compatible with the surrounding natural environment. These strategies should include exploration of the feasibility and practicality of topsoil/organic matter salvage through Project development. Consideration for the results of similar reclamation efforts at other northern projects, including the Meadowbank Gold Mine Project, must be demonstrated. Within three (3) years from the commencement of construction, information regarding the revegetation strategies developed and implemented by the Proponent in fulfillment of this Term and Condition shall be included in the Proponent's annual report to the NIRB. Subsequently, information regarding the Proponent's progress in fulfillment of this Term and Condition shall be provided annually in the Proponent's annual report to the NIRB.*

Natural revegetation is already promoted and included in the Whale Tail ICRP. As per the 2019 Whale Tail ICRP Revision 1, active revegetation has not been planned as part of the reclamation plan given the cold climate setting of the Project. During the project development, the overburden sporadic quantities were disposed in the WRSFs along with other material from stripping. The overburden material was not segregated due to the layer of overburden being too thin and the overall site conditions.

Agnico Eagle Meliadine Mine Site, as per the 11MN034 Project Certificate, need to undertake a similar study than for the Whale Tail Mine. A revegetation study was conducted between 2018 and 2021 at Meliadine.

Results of the various studies conducted by Meliadine mine site has been shared with Meadowbank and Whale Tail in order to fulfill the current Project Certificate No. 008 obligations. For further details, refer to the Meliadine Annual Report.

Additional assessment is being completed at Meadowbank site for the monitoring of natural revegetation and to identify ways to promote natural revegetation during the closure activities. The details will be included in the Final Closure and Reclamation Plan for the Meadowbank Complex.

9.4 TEMPORARY MINE CLOSURE WHALE TAIL SITE

As required by NIRB Project Certificate No.008 Condition 47: The Proponent should undertake an analysis of the risk of temporary mine closure, giving particular consideration to how communities in the Kivalliq region may be affected by temporary closure of the mine, including consideration of the measures that can be taken to mitigate the potential for adverse effects (e.g. development of programs that provide transferable skills, identification of employment options that can include transfers amongst Agnico Eagle operations, etc.) This analysis is required to be updated as necessary to reflect significant changes to the Project or the socio-economic conditions in the region that may increase the risks and potential effects of temporary mine closures. This initial results of the Proponent's analysis should be provided to the Nunavut Impact Review Board (NIRB) within six (6) months of the issuance of the Project Certificate. Any updates to the analyses should be provided to the NIRB within three (3) months following completion of updated analyses by the Proponent.

Agnico Eagle submitted the analysis of risk of temporary mine closure on September 11th, 2018. There have not been any updates since the last submission. The Analysis of the Risk of Temporary Mine Closure is included in the Appendix 50 of the 2018 Annual Report.

9.5 SOCIO-ECONOMIC CLOSURE PLAN WHALE TAIL SITE

As required by NIRB Project Certificate 008 Condition 51: The Proponent shall develop a conceptual Socio-economic Closure Plan that:

- *Links the socio-economic closure plans for Meadowbank and Whale Tail;*
- *Identifies regular update and multi-party review requirements;*
- *Shows evidence of consideration of socio-economic lessons learned from other northern mine closure experiences;*
- *Includes evidence of consultation with Kivalliq communities and governance bodies on socio-economic objectives/goals related to closure planning;*
- *Emphasizes plans, policies, and programs to increase transferable skills of Inuit workers, including into trades and other skilled positions; and*
- *Includes all plans, policies and programs related to socioeconomic factors in a temporary closure situation; and*
- *Includes a Workforce Transition Plan between the Whale Tail Project and other production mines owned and operated by the Proponent in the Kivalliq region.*

The Proponent shall advance the recommendations of the Conceptual Socio-economic Closure Plan through the development of a Final Socio-economic Closure Plan that will be part of the Whale Tail Pit Project Final Closure and Reclamation Plan.

The conceptual socio-economic closure plan will be provided to the Nunavut Impact Review Board within one (1) year of issuance of the Project Certificate, and updated as needed prior to closure with information provided in the Proponent's annual report to the Nunavut Impact Review Board.

In 2024, Agnico Eagle engaged with multiple stakeholders on the Meadowbank Complex Closure. The purpose of these consultation activities was twofold; provide the communities with Meadowbank Complex Closure information and answer their questions; and identify their concerns and feedback regarding the Meadowbank Complex Closure.

Overall, 39 engagement activities were completed across six (6) communities through various channels including public meetings and advertisement (15), meetings with hamlet and government official, Hunters and Trappers, Kivalliq Wildlife Board, Kivalliq Elders Advisory Committee (18) and site visits (6) with stakeholders.

In preparation for the social transition related to the Meadowbank Complex closure, a collaborative idea was brought forward by the Hamlet of Baker Lake to create a committee with Agnico Eagle to discuss closure related topics. In 2024, the Beyond Meadowbank committee was established, which consists of representatives from both the Hamlet of Baker Lake, Agnico Eagle and community members.

As recommended in the 2019 Conceptual Socio-Economic Closure Plan (CSECP), Agnico Eagle will be conducting an update to the socio-economic baseline. Building on existing annual socio-economic monitoring reporting and prepare a socio-economic baseline with greater detail and analysis regarding economic conditions within three to five years prior to closure.

Following this baseline update, a socio-economic impact assessment will be conducted to aim to describe the full effect measuring economic outputs such as employment, income, businesses and contracting, government revenues, etc. The results will also integrate results from consultation with communities, the Beyond Meadowbank Committee and other stakeholders.

Additionally, a Human Resources transition plan was put into place with the intent of transferring as many Agnico Eagle employees as possible within Agnico Eagle's other operating mines. All employees were met one by one with a member of the Meadowbank Human Resources team to discuss preferences regarding which division each employee may want to transfer to.

Additional details are summarised in Meadowbank Conceptual Socio-Economic Closure Plan Update submitted as Appendix 53.

SECTION 10. PLANS / REPORTS / STUDIES

10.1 SUMMARY OF STUDIES^s

10.1.1 Meadowbank Site^s

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 20: *A summary of any studies requested by the Board that relate to Water use, Waste disposal or Reclamation, and a brief description of any future studies planned.*

No studies were requested by the NWB in 2024.

10.1.2 Whale Tail Site^s

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 23: *A summary of any studies requested by the Board that relate to Water use, Waste disposal or Reclamation, and a brief description of any future studies planned.*

No studies were requested by the NWB in 2024.

10.2 SUMMARY OF REVISIONS^s

A list of management plans for the Meadowbank and Whale Tail mines is included in Tables 10-1 to 10-3. These tables include details on the latest version and submission date to regulators.

Table 10-1 Active Management Plans for Meadowbank Site^s

Meadowbank Mine		
Management Plan	Submission Date	Version
Meadowbank No Net Loss Plan, Phaser Offsetting Plan addendum and In-Pit disposal addendum	February 2019	3
Habitat Compensation Monitoring Plan	February 2017	4
Groundwater Monitoring Plan	April 2020	11
Water Quality Monitoring and Management Plan for Dike Construction and Dewatering + Addendum	July 2016	4
Water Quality and Flow Monitoring Plan	March 2016	5
Interim Closure and Reclamation Plan	April 2020	Rev 1
OPEP/OPPP	March 2025	18
Baker Lake Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan	March 2025	7
Operational ARD-ML Sampling and Testing Plan	November 2013	2
Incinerator Waste Management Plan	June 2022	10
Landfarm Design and Management Plan	March 2025	6
Landfill Design Management Plan	March 2025	7
Dewatering Dike OMS	March 2025	12
Freshet Action Plan	March 2025	13
Tailings Storage Facility OMS	March 2025	13

Meadowbank Mine		
Management Plan	Submission Date	Version
Waste Rock and Tailings Management Plan	March 2025	15
Pore Water Quality Management Plan	April 2020	2
Water Management Plan	March 2025	14
Sewage Treatment Plant Management Plan	March 2017	6
AWAR Transportation Management Plan	October 2022	6

Table 10-2 Active Management Plans for Whale Tail Site[§]

Whale Tail Mine		
Management Plan	Submission Date	Version
Mercury Monitoring Plan	March 2023	4
Fish Habitat Offsetting Plan Whale Tail and Whale Tail expansion	June 2020	1
Fish Habitat Offsetting Monitoring Plan (under DFO approval)	July 2021	2
Groundwater Monitoring Plan	May 2019	3
Arsenic Water Treatment Plan OMM	January 2019	2
Water Quality Monitoring and Management Plan for Dike Construction and Dewatering	May 2020	3
Water Quality and Flow Monitoring Plan	April 2019	6
Interim Closure and Reclamation Plan	July 2020	4
Operational ARD-ML Sampling and Testing Plan – Whale Tail Pit Addendum	February 2023	7.1
Landfarm Design and Management Plan	March 2025	4
Landfill Design Management Plan	March 2025	6
Water Management Infrastructure OMS	March 2025	5
Freshet Action Plan	March 2025	7
Waste Rock Management Plan	March 2025	14
Water Management Plan	March 2025	14
Sewage Treatment Plant OMM	February 2019	2
Shipping Management Plan	March 2025	5
Thermal Monitoring Plan	March 2025	5
Migratory Bird Protection Plan	April 2020	3
Whale Tail Haul Road Management Plan	March 2023	4
Adaptive Management Plan	July 2021	1.5
Erosion Management Plan	December 2018	2
Incinerator and Composter Waste Management Plan	July 2023	2

Table 10-3 Active Management Plans for Meadowbank and Whale Tail Sites (Combined)[§]

Meadowbank Mine & Whale Tail Mine (Combined)		
Management Plan	Submission Date	Version
Air Quality and Dustfall Management Plan	April 2022	6
Noise Monitoring and Abatement Plan	December 2018	4
Aquatic Effects Management Program (AEMP)	April 2022	5
Core Receiving Environment Monitoring Program Plan Update (CREMP)	April 2022	4
QAQC Plan	March 2025	10
Greenhouse Gas Reduction Plan	April 2020	3

Meadowbank Mine & Whale Tail Mine (Combined)		
Management Plan	Submission Date	Version
Emergency Response Plan	March 2025	20a
Hazardous Materials Management Plan	March 2025	8
Spill Contingency Plan	March 2025	22
Blast Monitoring Program	March 2025	10
Meadowbank and Whale Tail Bulk Fuel Storage Facility	June 2022	7
Ammonia Management Plan	March 2024	5
Occupational Health & Safety Plan	December 2018	3
Wildlife and HHRA Country Foods Screening Level Risk Assessment Plan	March 2024	9
Terrestrial Ecosystem Management Plan	March 2025	9
Agnico Kivalliq Projects Socio-Economic Monitoring Program	April 2022	4

10.2.1 Meadowbank Site^s

As required by NWB Water License 2AM-MEA1530 Part B, Item 16: *The Licensee shall review the Plans or Manuals referred to in this License as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made.*

And

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 21: *Where applicable, revisions will be completed as Addendums, with an indication of where changes have been made, for Plans, Reports, and Manuals.*

As per Water License 2AM-MEA1530 Part B, Item 16: *'The Licensee shall review the Plans or Manuals referred to in this License as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made.'* Plan will be considered as approved unless a notification from the NWB requested the formal approval process.

The following monitoring and management plans were revised in 2024 and 2025 for submittal as part of the 2024 Annual Report. Plans updated in 2024 and submitted with the 2024 Annual Report are not included as part of this list.

The following monitoring and management plans were revised and apply to the Meadowbank Site:

- Oil Pollution Emergency Plan and Oil Pollution Prevention Plan (OPEP/OPPP), Version 18 (Appendix 25);
- Baker Lake Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan, Version 7 (Appendix 60);
- Meadowbank Landfarm Design and Management Plan Version 6 (Appendix 54);

- Meadowbank Landfill Design and Management Plan Version 7 (Appendix 56);
- Meadowbank - Dewatering Dikes Operation, Maintenance and Surveillance Manual, Version 12 (Appendix 28);
- Meadowbank - Tailings Management Operation - Maintenance and Surveillance Manual, Version 13 (Appendix 29).
- Meadowbank Waste Rock and Tailings Management Plan, Version 15 (Appendix 17); and
- Meadowbank Water Management Plan Version 14 (Appendix 13).

The following monitoring and management plans were revised and apply to both Meadowbank and Whale Tail sites:

- Quality Assurance / Quality Control (QA/QC) Plan, Version 10 (Appendix 44);
- Emergency Response Plan, Version 20a (Appendix 46);
- Hazardous Materials Management Plan, Version 8 (Appendix 43);
- Spill Contingency Plan, Version 22 (Appendix 22);
- Blast Monitoring Program, Version 10 (Appendix 33); and
- Terrestrial Ecosystem Management Plan, Version 9 (Appendix 38).

The above listed plans are in their respective appendix. A brief description of revisions made to each of plan is provided in the Control Document at the beginning of each plan.

In order to maintain ease of public access for important information, the Agnico Eagle Web Portal, <https://aemnunavut.ca/media/documents/> has been updated with the 2016 to 2023 Annual Reports, associated management plans, and other documents of interest. Agnico Eagle will continue to improve the Web Portal for ease of public access in 2025 by uploading a copy of the 2024 Annual Report along with the latest version available of management plans associated to the Meadowbank Complex.

10.2.2 Whale Tail Site^s

As required by NWB Water License 2AM-WTP1830 Part B, Item 17: *The Licensee shall review the Plans or Manuals referred to in this License as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made.*

And

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 24: *Where applicable, revisions as Addenda, with an indication of where changes have been made, for Plans, Reports, and Manuals.*

And

As required by NIRB Project Certificate 008 Item 13: *The Proponent is encouraged to provide on-going opportunities for consultation and comment on any substantive revisions to the Project-specific monitoring program, modelling, studies, management plans, management measures, and reporting under the Project Certificate.*

As per Water License 2AM-WTP1830 Part B, Item 16: *'The Licensee shall review the Plans or Manuals referred to in this License as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made.'* Plan will be considered as approved unless a notification from the NWB requested the formal approval process.

The following monitoring and management plans were revised in 2024 and 2025 for submittal as part of the 2024 Annual Report. Plans updated in 2024 and submitted with the 2023 Annual Report are not included as part of this list.

The following monitoring and management plans were revised and apply to Whale Tail Mine:

- Whale Tail Landfarm Design and Management Plan Version 4 (Appendix 55);
- Whale Tail Landfill Design and Management Plan Version 6 (Appendix 57);
- Whale Tail Water Management Infrastructure Operation, Maintenance and Surveillance Manual, Version 5, (Appendix 30);
- Whale Tail Waste Rock Management Plan, Version 14 (Appendix 18);
- Whale Tail Water Management Plan, Version 14 (Appendix 14);
- Shipping Management Plan, Version 5 (Appendix 59); and
- Whale Tail Thermal Monitoring Plan, Version 5 (Appendix 61).

The above listed plans are in their respective appendix. A brief description of revisions made to each of plan is provided in the Control Document at the beginning of each plan. Some plans detailed in Section 10.2.1 above apply to both Meadowbank and Whale Tail sites. Refer to this section for more details.

In order to maintain ease of public access for important information, the Agnico Eagle Web Portal, <https://aemnnavut.ca/media/documents/> has been updated with the 2016 to 2023 Annual Report, associated management plans, and other documents of interest. Agnico Eagle will continue to improve the Web Portal for ease of public access in 2025 by uploading a copy of the 2024 Annual Report along with the latest version available of management plans associated to the Meadowbank Complex.

Communities also have the opportunity to comment and ask questions related to the mine during the various public consultations detailed in Section 11.9. Agnico Eagle also distributed in 2024 the '2023 Kivalliq Projects Socio-Economic and Environment Highlights'. This pamphlet included, among other, keys information on employment, education and training, culture and traditional lifestyle, caribou migration, MMSO, AEMP/CREMP, dust and waste management.

10.2.2.1 Occupational Health and Safety Plan

As required by NIRB Project Certificate 008 Condition 57: *The Proponent shall update its Occupational Health and Safety Plan to include sexual health and well-being information in its employee orientation programming. In addition, the Proponent shall undertake an education program to inform workers of the range of health services available onsite. The updated plan shall be provided to the Nunavut Impact Review Board (NIRB), once completed within six (6) months of issuance of the Project Certificate. Summaries of the education programs undertaken and any future updates or modifications to the Occupational Health and Safety Plan and the education program shall be included in the Proponent's annual report to the NIRB.*

And

As required by NIRB Project Certificate 004 Condition 66: *Cumberland shall establish a nursing station and hire a registered on-site nurse.*

Agnico Eagle submitted the updated Occupational Health and Safety Plan on December 14th, 2018, to NIRB, which includes information on the inclusion of sexual health and well-being during employee orientation. The last updated Occupational Health and Safety Plan is included in the Appendix 51 of the 2018 Annual Report.

Agnico Eagle's education program on the range of health services on site includes:

- Introduction to clinic services on mandatory e-learning and onsite safety induction for all new employees;
- Visit to clinic during the general site orientation for all new employees;
- Dedicated bulletin board for health and wellness information;
- General awareness communications: visits to departmental tool-box meetings, emails, Agnico Eagle TV, posters, brochures, etc.; and
- Provision of condoms as well as feminine hygiene products to promote sexual health and hygiene awareness.

Additionally, since 2019, Agnico Eagle launched a site-wide daily communicator being shared by supervisors during the line-up meetings.

The nursing station was still operational in 2024.

10.3 EXECUTIVE SUMMARY TRANSLATIONS[§]

10.3.1 Meadowbank Site[§]

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 22: *An executive summary in English, Inuktitut and French of all plans, reports, or studies conducted under this License.*

Appendix 63 includes an executive summary in English, French and Inuktitut for the following documents:

- All monitoring and management plans listed in Section 10.2.1 above.
- Reports or studies submitted in 2024 for Meadowbank site:
 - 2024 Annual Open Pit Geomechanical Inspection;
 - 2024 Thermal Monitoring Report.
 - 2024 Groundwater Monitoring Report; and
 - 2024 Quarry 22 Report.
- Reports or studies submitted in 2024 for both Meadowbank and Whale Tail sites (also translated into Inuinnaqtun):
 - 2024 Annual Report NIRB Screening Decision;
 - 2024 Annual Geotechnical Inspection;
 - Meadowbank and Whale Tail Independent Review Board Report 32;
 - 2024 Core Receiving Environment Monitoring Program (CREMP) Report;
 - 2024 Marine Mammal and Seabird Observer (MMSO) Report;
 - 2024 Blast Monitoring Report;
 - 2024 Wildlife Monitoring Summary Report;
 - 2024 Wildlife and Country Foods Screening Level Risk Assessment Report;
 - 2024 Noise Monitoring Report;
 - 2024 Air Quality and Dustfall Monitoring Report;
 - 2024 Socio-Economic Monitoring Program Report;
 - 2024 Kivalliq Labour Market Analysis;
 - 2024 Elders Advisory Committee Summary Report; and
 - 2024 Meadowbank Conceptual Socio Economic Closure Plan Update.

10.3.2 Whale Tail Site^s

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 25: *An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this License.*

And

As required by NIRB Project certificate No.008 Item 9: *The Proponent shall make significant monitoring results and/or summaries of significant results available in English, Inuinnaqtun, and Inuktitut, to the extent feasible.*

Appendix 63 includes an executive summary in English, French and Inuktitut for the following documents. A summary in Inuinnaqtun is also provided for reports or studies of interest:

- All monitoring and management plans listed in Section 10.2.2 above.
- Reports or studies submitted in 2024 for Whale Tail site:
 - 2024 Annual Open Pit Geomechanical Inspection;
 - 2024 Thermal Monitoring Report;
 - 2024 Mercury Monitoring Program Report;
 - 2024 Report on the Implementation of Measures to Avoid and Mitigate Serious Harm;
 - 2024 Groundwater Management Monitoring Report; and
 - 2024 Fish Habitat Offsets Monitoring Report;

Some reports detailed in Section 10.3.1 above apply to both Meadowbank and Whale Tail sites. Refer to this section for more details.

SECTION 11. MODIFICATIONS / GENERAL / OTHER

11.1 MODIFICATIONS[§]

11.1.1 Meadowbank Site[§]

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 14: A summary of modifications and/or major maintenance work carried out on all water and waste related structures and facilities.

No modifications of major maintenance work was carried out on water and waste related structures. However, a minor improvement to the East Dike seepage station was in the process of being implemented in 2024 to improve monitoring capacity through the installation of instruments, namely, an in-line turbidimeter and pH meter.

11.1.2 Whale Tail Site[§]

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 17: A summary of Modifications and/or major maintenance work carried out on all Water and Waste-related structures and facilities.

In 2024, material was added on the crest of Whale Tail dike to fill historic depressions and ease observation of changing conditions.

In 2024, clean-up of the invert of the Ore stockpile saline ditch and removal of material clogging one culvert was performed. Also, as additional protection to prevent material from getting pushed into the saline ditch, a tire fence was installed in front of 50% of the infrastructure. Monitoring of the situation will continue in 2025 and further remediation will be completed if needed.

11.2 MINE EXPANSION[§]

As required by NIRB Project Certificate No.004 Condition 29: Report to NIRB if and when [Cumberland] develops plans for an expansion of the Meadowbank Gold Mine, and in particular if those plans affect the selection of Second Portage Lake as the preferred alternative for tailings management.

No new permitting activities for mine expansion were undertaken in 2024 for the Meadowbank Complex; however, one (1) Operational Notice and one (1) Modification were submitted in 2024 and are as summarized below.

11.2.1 Meadowbank Mine: Development of TDS Site-Specific Water Quality Objective[§]

On August 22nd, 2024, Agnico Eagle submitted an operational notice for the development of a site-specific water quality objective (SSWQO) for total dissolved solids (TDS) at the Meadowbank Mine. Agnico Eagle submitted the Operational Notice, following the process as set out under Part E, Item 7 of the Water License which states:

“The Licensee shall submit a Water Management Plan on an annual basis to the Board for review following the commencement of Operations. The Plan must include an updated Water Balance. The Water Management Plan shall include an action plan to be implemented if predicted re-flooded pit

water quality indicates that treatment is necessary. The Licensee shall not breach dikes until the water quality in the re-flooded area meets CCME Water Quality Guidelines for the Protection of Aquatic Life, baseline concentrations, or appropriate site specific water quality objectives. Subject to the Board approval, if water quality parameters are above CCME Guidelines, a site specific risk assessment must be conducted to identify water quality objectives that are protective of the aquatic environment.”

Accordingly, Agnico Eagle submitted the Operational Notice in compliance with the License. Initial round of comments were provided from the KivIA, CIRNAC, and ECCC on October 17th, 2024 and responses to recommendations were provided by Agnico Eagle on November 12th, 2024. CIRNAC and ECCC both provided a second round of responses which were issued to Agnico Eagle on December 31st, 2024. Responses to these comments and the approval of the Operational Notice by the NWB were still under review at the time of writing.

11.2.2 Whale Tail Mine: 2024 Modification^s

Agnico Eagle proposed a Modification to the Whale Tail Mine (referred to as the 2024 Modification) operating to mid-2028 under the License approval to 2030 which consisted of the:

- pushback of the IVR Pit;
- continuation of the Whale Tail underground; and
- expansion of the approved Whale Tail Ore Stockpile No.3

The project proposal was submitted to the Nunavut Planning Commission (NPC) on April 4th, 2024. On April 19th, 2024, the NPC determined that the proposed Modification was exempt from screening by the NIRB, as the activities did not change the general scope of the original or previously amended activities.

On May 6th, 2024, Agnico Eagle submitted a 60-day notice to the NWB for a Modification to Type A Water License 2AM-WTP1830. The Modification included an updated Water Management Plan and Waste Rock Management Plan for the Whale Tail Mine. The NWB sent an invitation for public comment on May 28th, 2024. As a result, recommendations were provided by, CIRNAC and ECCC and Agnico Eagle provided responses on July 12th, 2024. No recommendations or comments were provided by the KivIA on the 2024 Modification. ECCC issued a second round of recommendations and were addressed by Agnico Eagle on July 26th, 2024.

The NWB provided its approval of the 2024 Modification on August 6th, 2024, indicating the modification proposed is consistent with the scope of activities considered under Type A Water License 2AM-WTP1830. The NWB also approved the Water Management Plan (July 2024), and the Waste Rock Management Plan (May 2024) submitted with the Modification package and responses to recommendations.

11.3 EXPLORATION WHALE TAIL SITE

11.3.1 Ongoing Exploration Programs

As required by NIRB Project Certificate No.008, Condition 64: Within its annual reporting, the Proponent is encouraged to include detailed updates on the status of ongoing exploration programs associated with the Project and associated implications for future phase developments of the Amaruq property. Status updates in fulfillment

of this Term and Condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.

Diamond drilling completed by Agnico Eagle in 2024 on the Amaruq property included delineation, exploration, and geotechnical work. This work was based out of the Whale Tail camp. The two (2) main objectives for the 2024 diamond drilling were to:

1. Perform delineation drilling to consolidate open pit and underground mineral resources and reserves on the Amaruq deposit; and
2. Perform exploration drilling to determine pushback potential for the Whale Tail and IVR pits, as well as determining the underground potential at depths of the Amaruq deposit.

The 2024 diamond drilling campaign included 314 diamond drill holes totaling 41,192 meters.

A delineation drilling campaign was performed on IVR open pit area (5,445 m), focusing on IVR-2 west pushback. The objective was to bring more information about the resource quality and quantity prior to start mining the area.

Whale Tail Pit was drilled (5,621 m) to delineate resources of this deposit. This area was mainly drilled from the surface, with a minor portion drilled from underground levels with up-holes. For the underground Whale Tail delineation (12,581 m), the purpose was to delineate underground Whale Tail resources in preparation for the mining of these stopes. These were mostly performed with the underground diamond drill, with a slight contribution from the surface drill.

Exploration drill holes were a big part of the 2024 diamond drilling campaign, testing deep targets below Whale Tail and IVR deposits for future underground stopes, as well as more shallow targets, testing possible pushback for Whale Tail and IVR pits. For the deep holes (7,271 m), targets were Whale Tail deep, IVR deep, as well as IVR east area. For open pit pushback (10,212 m), targets were IVR-2 pushback, IVR zone-1, as well as WT extension.

Finally, one (1) geotechnical hole was performed (62 m) during the 2024 campaign. This hole was drilled from a catch bench of the Whale Tail pit northern wall. Instrumentation was installed inside the hole, and its purpose was to verify the structural integrity of the komatiite of this wall, capturing its rate of movement over time.

Following the effort to secure Amaruq Gold Deposit gold production, the 2024 diamond drilling campaign consolidated open pit and underground mineral resources and reserves on the Amaruq deposit, and added mineral inventory and resources which could extend the life of mine, both at open pit and underground levels. The data collected during the 2024 drilling campaign contributed to our understanding of the Whale Tail and IVR deposits and helped refine the 3D geological model.

In 2025, the main objectives regarding the diamond drilling campaign are:

- Continue the delineation of the underground stopes in Whale Tail;
- Perform exploration drilling and add mineral resources on Whale Tail deep area; and
- Perform conversion drilling on IVR underground stopes.

Regional Exploration work will continue to be conducted in 2025 between Whale Tail and Baker Lake. This will mainly focus on ground prospecting, with possible diamond drilling (to be confirmed).

11.4 INTERNATIONAL CYANIDE MANAGEMENT CODE

As required by NIRB Project Certificate No.004, Condition 28: *Cumberland shall become a signatory to the International Cyanide Management Code, communicate this to shippers, and do so prior to Cumberland storing or handling cyanide for the Project.*

In 2014 and 2015 audits and completion work were completed and assessed. A management of change process was implemented and put forward. From the status of Substantial Compliance in 2014, Agnico Eagle received full International Cyanide Management Code (ICMC) certification in March 2016 and again in January 2019. Additionally, Agnico Eagle completed a self-audit of the ICMC principals and standards in 2020. A third-party recertification audit of the Meadowbank Complex and its Supply Chain was completed in 2021 and the official ICMC certificates were received in September 2022. The Meadowbank Complex and its Supply Chain will undergo a third-party recertification audit again in 2025.

A cyanide information brochure has been made available to employees and the public. Copies are available at the Agnico Eagle's office in Baker Lake and are also available online www.aemnunavut.ca/documents/.

As per previous years shipments, the transport of cyanide in 2024 included a qualified nurse and an Emergency Response Team member escorting the convoy of cyanide up to the Meadowbank mine site. In addition, they were present at the Baker Lake Marshalling facility for the removal of cyanide from the barge and the loading of the tractor trailers for hauling.

Agnico Eagle maintains its compliance with ICMC requirements. The full certification information can be found at: [Agnico Eagle Mines Limited, Canada | The Cyanide Code](#)

As part of the ICMC, Agnico Eagle is required to inform the community of Baker Lake and Chesterfield, details regarding the cyanide shipping and transportation along the All-Weather Access Road (AWAR), along with associated restrictions that apply to Hamlet residents regarding the usage of the AWAR.

In June 2024, Agnico Eagle held an in-person meeting in Baker Lake to share Cyanide transportation procedure and safety measures. Community members and first responders were invited to join the meeting. Feedback and comments were received during this in-person meeting from both the community members and first responders.

Again in 2024, and following information received from the 2023 cyanide information session, Agnico Eagle demonstrated its commitment to respecting Inuit culture by continuing the adjusted cyanide transportation operations at the Meadowbank Complex. After an information session between Agnico Eagle representatives and members of the Baker Lake community to explain the cyanide transportation procedure under the ICMC, community members highlighted the necessity of maintaining access to a lake for collecting fresh water, especially for Elders, during the AWAR closure. This was initially shared in 2023 and discussed again in 2024, reflecting how Agnico Eagle can adapt its operations to respect Inuit culture.

As reported in 2023, and upon careful evaluation of available options, Agnico Eagle personnel responsible for the transportation kept adjustments to the AWAR sections to be either closed or opened during transportation, ensuring community safety. This modification allowed the community, particularly Elders, to retain access to the land for harvesting and collecting freshwater. Throughout the transportation operations, regular communications and updates were shared with the Baker Lake Hamlet, HTO, Health Center, RCMP, and KivIA. After these communications, Agnico Eagle received positive feedback from members of the community.

In October 2024, Agnico Eagle organized in person information session in Chesterfield Inlet. The cyanide and shipping information was presented and delivered to local community members via a community open house engagement. Participants were referred to Agnico Eagle Nunavut website where they can find Cyanide Transportation and Management pamphlet. During the transportation, the community of Chesterfield Inlet were kept informed about the Cyanide transportation through Meadowbank Complex Facebook page.

11.5 INSPECTIONS AND COMPLIANCE REPORTS^s

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 23: A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.

And

As required by NWB Water License 2AM-WTP1830 Schedule B, Item 26: A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.

11.5.1 CIRNAC^s

CIRNAC Inspectors conducted two (2) site inspections of the Meadowbank Complex, covering the Meadowbank and Whale Tail Water Licenses (2AM-MEA1530 and 2AM-WTP1830) and NIRB Project Certificates (No.004 and No.008) on May 28th to 30th, 2024, and October 31st to November 1st, 2024. The purpose of these visits was to ensure compliance with the applicable terms. A summary is provided below, and the reports can be provided upon request.

For the Meadowbank Site (Water License 2AM-MEA1530), the inspection report for May contained no instances of non-compliance, and outlined the following action items:

- Results of the inspection by expert of the Assay Lab Road Seep area and mill infrastructure, and details of steps that will be taken to prevent future seeps given the results from the expert conducting the inspection. Anticipated completion date of the works will be included in the response.
- A detailed analysis of the of tailings related spills and mitigation to be implemented to prevent future tailings related spills.
- An analysis of the effectiveness of the Baker Lake Water Management Project considering the observations made by the Inspector during the Inspection; and

- A plan for the culverts installed under the Whale Tail Haul Road connecting NP-2 and NP-1 Lakes based on the recommendations of a geotechnical review.

Following the reception of the report, Agnico Eagle initiated works on the required actions. Furthermore, Agnico Eagle provided a response to the CIRNAC Inspector on August 31st related to the May Inspection report.

No actions or non-compliances were identified in the October 31st inspection report. The purpose of this inspection was collection of compliance water samples from the discharge of ST-8 (East Dike Discharge). Results of water samples collected by both CIRNAC and Agnico Eagle were within the discharge criteria under Part F Item 7 of the License.

For the Whale Tail Mine (Water License 2AM-WTP1830), the inspection report for May contained no instances of non-compliance, and outlined the following action items:

- Replacing sampling sign for station ST-WT-37.

As of this report, all required actions were completed.

No actions or non-compliances were identified in the November 1st inspection report. The purpose of this inspection was collection of compliance water samples from the discharge of ST-WT-24 (Whale Tail South Lake Discharge). Results of water samples collected by both CIRNAC and Agnico Eagle were within the discharge criteria under Part F Item 7 of the License.

11.5.2 Environment and Climate Change Canada

ECCC conducted an inspection of the Baker Lake Tankfarm, Meadowbank, and Whale Tail sites on September 24th to 26th, 2024.

No inspection report was received following the inspection in September.

11.5.3 Kivalliq Inuit Association

KivIA did not conduct any site inspections at Meadowbank and Whale Tail in 2024. The KivIA Baker Lake Lands Officer patrolled the All-Wheater Access Road and the Whale Tail Haul Road to review and ensure application of TEMP measures.

11.5.4 Nunavut Impact Review Board

The annual NIRB inspection of the Meadowbank and Whale Tail site was conducted from July 23rd to 25th, 2024, and the NIRB held a Community Information Meeting in Baker Lake on July 22nd, 2024. The inspection report was received on March 19th, 2025.

The 2024 Site Visit was focused on overall updates to the site and items related to Project Certificates No. 004 and 008. Based on the observations made during this site visit, all Meadowbank and Whale Tail facilities in operation continue to be managed as per the Terms and Conditions of Project Certificate No. 004, Amendment 3 and Project Certificate No. 008, Amendment 1.

Find below a list of the main subjects that were discussed in the main inspection report:

- Meadowbank Site
 - Re-covering of berm liner in the secondary containment berms at the fuel storage areas at the Baker Lake Marshalling Facility which was noted in 2022 and 2023. Agnico Eagle said they would be repairing in 2024, and
 - Ensure that sediment fences are in good condition (e.g., Baker Lake Laydown Area) and ready to function in future flood events.
- Whale Tail Site:
 - Recovering of berm liners in the secondary containment berms at the fuel storage area at Whale Tail similar to 2023, and
 - Ensuring all signage is appropriate at site.

11.5.5 Hunter and Trapper Organization

HTO conducted surveys almost daily on the AWAR during caribou migration. One (1) site visit was organized in June, Agnico Eagle organized a bus tour with seven (7) interested HTO members and community elders to perform a site tour of the Whale Tail Mine site. Additionally, HTO monitors in conjunction with Arctic Connection conducted fisheries and water quality sampling on Whale Tail South and Kangislulik Lake.

11.5.6 Government of Nunavut – Conservation Officer

The GN Conservation officer did not conduct any site inspections in 2024 at Baker Lake, Meadowbank or Whale Tail.

11.5.7 Fisheries and Ocean Canada

DFO conducted one (1) site inspection at Meadowbank and Whale Tail between August 24th to 27th, 2024. No inspection report was received. Two (2) Duty to take Corrective Measures were received following this inspection:

- During the DFO AWAR inspection on August 24th, piles of road material were observed and noted adjacent to the stream at Bridge 6 (R15), KM69. This material, installed in 2022 for the installation of a temporary bridge (DFO File #22-HCAA-00465), was found in close proximity to the stream. Loose soils and road material should not be left un-stabilized around the watercourse, as they could impact the fish and fish habitat. On October 24th, DFO contacted Agnico Eagle, requiring corrective measures to be taken on this matter (DFO File #4-HCAA-02467).
- During the DFO Meadowbank Complex inspection from August 24th to 27th, gravel and/or road material deposition were observed and noted at multiple bridge crossing sites (including AWAR Bridge R06, R16, R18, WTHR Bridge 1, 2, 3, 4, 7, 8, 9,) along the AWAR and WTHR. This material was found in close proximity to, and within the streams, potentially impacting fish and

fish habitat. On October 24th, DFO contacted Agnico Eagle, requiring corrective measures to be taken on this matter (DFO File #4-HCAA-02468).

On November 29th, 2024, Agnico Eagle provided a follow-up to DFO regarding corrective actions and mitigation measures pertaining to both instances detailed above.

11.5.8 Transport Canada Marine Safety and Security

Transport Canada did not conduct any inspection at Baker Lake, Meadowbank, or Whale Tail in 2024.

Transport Canada conducted an inspection focusing on the Transportation of Dangerous Goods (TDG) on November 19th, 2024, of the QSL International Ltd terminal in Bécancour, for dangerous goods shipped by Agnico Eagle from the Meadowbank Mine. The inspection report, received on December 19th, 2024, contained action items pertaining to TDG corrective measures required. All findings in the inspection report were corrected.

An official document describing the corrective actions taken by Agnico Eagle to ensure future compliance and the safe transportation of dangerous goods will be submitted to Transport Canada in 2025.

11.6 NON-COMPLIANCE ISSUES[§]

11.6.1 Meadowbank Site[§]

As required by NIRB Project Certificate No.004 Condition 4: Take prompt and appropriate action to remedy any noncompliance with environmental laws and regulations and/or regulatory instruments, and shall report any noncompliance as required by law immediately and report the same to NIRB annually.

One (1) non-compliance related to Water License 2AM-MEA1530 at Meadowbank occurred at the Meadowbank Site in 2024. In September, water quality samples collected from monitoring station ST-6 (Portage West Diversion Ditch) exceeded the maximum allowable grab sample concentration (30 mg/L), and the maximum average concentration (15 mg/L) permitted by the Water License, Part F, Item 7. More information on this non-compliance can be found in Section 8.5.2.1.2.

There has been no (0) non-compliance related to the MDMER in 2024.

11.6.2 Whale Tail Site[§]

As required by NIRB Project Certificate No.008 Item 6: The Proponent shall take prompt and appropriate action to remedy any occasion of non-compliance with environmental laws and regulations and/or regulatory instruments, and shall report any non-compliance as required by law immediately. A description of all instances of non-compliance and associated follow up is to be reported annually to the NIRB.

One (1) peak particle velocity exceedance occurred at the Whale Tail Site on May 20th, 2024. The event was following blasting activities related to the Underground mine. Analysis of the blast monitoring station data showed that the PPV was 15.969 mm/s (DFO limit 13 mm/s). A blast exceedance notification was submitted to DFO on May 23rd. More information on this exceedance can be found in Section 8.6.2 and Appendix 34.

There has been no (0) non-compliance related to the MDMER and Whale Tail Water License 2AM-WTP1830 in 2024.

11.7 AWAR / WHALE TAIL HAUL ROAD USAGE REPORTS

11.7.1 Authorized and Unauthorized Non-Mine Use

11.7.1.1 AWAR Meadowbank Site

As required by NIRB Project Certificate No.004 Condition 32g: *Record all authorized non-mine use of the road, and require all mine personnel using the road to monitor and report unauthorized non-mine use of the road, and collect and report this data to NIRB one (1) year after the road is opened and annually thereafter.*

And

As required by NIRB Project Certificate No.004 Condition 33: *Cumberland shall update the Access and Air Traffic Management Plan to: 1. Include an All-weather Private Access Road Management Plan, including a right-of-way policy developed in consultation with the KivIA, GN, INAC and the Hamlet of Baker Lake, for the safe operation of the all-weather private access road; and 2. To facilitate monitoring of the environmental and socio-economic impacts of the private road and undertake adaptive management practices as required, including responding to any concerns regarding the locked gates.*

And

As required by NIRB Project Certificate No.004 Condition 34: *Cumberland shall, in consultation with the Hamlet of Baker Lake, KivIA, and the Royal Canadian Mounted Police, facilitate the hiring of a full-time road safety, search and rescue position to respond to safety matters arising from mine and unauthorized non-mine use of the all-weather private access road, including consulting with Baker Lake and Chesterfield Inlet Elders to incorporate Traditional Knowledge into search and rescue operations.*

And

As required by NIRB Project Certificate No.004 Condition 81: *Beginning with mobilization, and for the life of the Project, Cumberland shall provide full 24 hour security, including surveillance cameras and a security office at the Baker Lake storage facility/marshalling area, and take all necessary steps to ensure the safe and secure storage of any hazardous or explosive components within the Hamlet of Baker Lake boundaries.*

The security department at the Meadowbank Complex maintains a fully staffed security gatehouse at Baker Lake on a 24/7 schedule. The Security staff monitors the safety, traffic and security of all personnel and the public using the road. Agnico Eagle also has an emergency response team ready to respond to any incident that may occur on the AWAR. Agnico Eagle has several protocols and procedures in place to respond to emergencies.

Agnico Eagle procedures for non-mine uses of the road require that any local users report to the Baker Lake Gatehouse and sign a form that describes the safety protocol while on the road. The road is used primarily by local hunters using ATV's and snowmobiles. Daily records are kept. A summary of the non-mine authorized road use for 2024 is provided in Table 11-1. In 2024, 2,737 non-mine authorized road uses were recorded (drivers and passengers) compared to 3,143 in 2023. Table 11-2 below shows the ATVs and snowmobiles usage from 2012-2024.

Table 11-1 2024 Monthly AWAR ATVs and Snowmobile Usage Records

Month	Numbers of ATV's (drivers and passengers)
January	0
February	0
March	0
April	0
May	51
June	539
July	280
August	564
September	877
October	324
November	102
December	0
Total	2,737

Table 11-2 2012-2024 AWAR ATVs and Snowmobile Usage Records

Year	Numbers of ATV's (drivers and passengers)
2012	1,456
2013	1,958
2014	1,319
2015	2,366
2016	1,504
2017	1,715
2018	1,091
2019	2,163
2020	2,223
2021	3,079
2022	2,352
2023	3,143
2024	2,737

Agnico Eagle's Project Certificate 004 was issued in 2006. Following the approval of the All-Weather Access Road in 2007, the Project Certificate was revised in 2009 to address concerns regarding access to the AWAR. Pursuant to Condition 33, Agnico Eagle prepared the Transportation Management Plan: All Weather Private Access Road in 2009. It was submitted and later approved by CIRNAC and GN. Therefore, no revision of the 2005 Access and Air Traffic Management Plan was undertaken. Agnico Eagle is of the opinion that the Transportation Management Plan replaced the Access and Air Traffic Management Plan in 2009. The AWAR Transportation Management Plan was last updated in October 2022 and can be found in Appendix 45 of the 2022 Meadowbank Complex Annual Report.

11.7.1.2 Whale Tail Haul Road

As required by NIRB Project Certificate No.008, Condition 31: *The Proponent shall develop and implement a Road Access Management Plan and maintain traffic monitoring logs along the haul road between the Whale Tail Pit project and the Meadowbank mine. Where traffic exceeds levels predicted within the Environmental Impact Statement, the Proponent shall develop and implement appropriate modifications to its wildlife protection measures. The Road Access Management Plan shall be provided to the Nunavut Impact Review Board (NIRB) 90 days prior to operations commencing. An annual summary of the monthly maximum, minimum and average traffic levels shall be provided to the NIRB in the Proponent's annual report.*

And

As required by CIRNAC Road lease 66H/8-2-1 Condition 60: *The lease shall before the first (1st) day of September in each and every year during the term of the lease, provide to the Minister, a report of that years road activities. The report shall include, but not limited to:*

- 1. total number of loads hauled in that year*
- 2. total road operating cost for that year*

And

As required by CIRNAC Road lease 66H/8-2-1 Condition 63: *The lessee agrees to monitor and report unauthorized non-mine use of the road, and collect and report this data to the Minister, who shall make this report accessible to the Nunavut Impact Review board, one (1) year after the road is opened and annually thereafter.*

Agnico Eagle has provided and implemented the Whale Tail Haul Road Management Plan to meet Condition 31 of the NIRB Project Certificate No. 008. The Security staff monitors the safety, traffic and security of all personnel using the road. Table 11-3 below shows the traffic data for 2024 along the Whale Tail Haul Road. Total one-way traffic along the WTHR included 63,718 long-haul, 5,786 medium equipment, and 2,278 light equipment vehicles, for a total of 71,782 vehicles. Total traffic along WTHR was higher than 2021, 2022, and 2023 with 62,037, 61,070, and 65,973 vehicles, respectively. The higher traffic in 2021-2024 compared to 2020 (50,441 vehicles) may be explained in part by the reduced operation that occurred at the beginning of 2020 in response to the COVID-19 restrictions and the growth of the long-haul fleet to increase in hauling capacity. It should also be noted that traffic detailed above represents an entry on the WTHR and did not necessarily travel the entire WTHR.

Table 11-3 Whale Tail Haul Road 2024 Traffic Data

Date	Long Haul	Medium Equipment	Light Equipment	Total
January	5,328	339	119	5,786
February	5,890	488	167	6,545
March	6,098	417	142	6,657
April	1,634	229	215	2,078
May	6,478	457	330	7,265
June	6,768	668	227	7,663
July	6,524	471	144	7,139
August	6,128	674	141	6,943
September	3,922	797	273	4,992
October	4,088	533	89	4,710
November	5,096	411	228	5,735
December	5,764	302	203	6,269
Total	63,718	5,786	2,278	71,782

The haul road traffic volumes for the Mine are consistent with those applied to the Approved Project FEIS Volume 4, Appendix 4-B, Table 4-B-15 (Agnico Eagle 2016c). Table 11-4 below provides the FEIS daily vehicle traffic on the haul road based on an estimate that there will be traffic on the road 337 days in the year. In 2024, the WTHR was fully closed (i.e., 24-hour closure) on 24 days. On 40 days, the WTHR experience closures occurring for less than 24 hours, speed restrictions were applied on 77 days and traffic restriction on 33 days.

In order to make comparison to the FEIS, explosive trucks, fuel, cargo and oversize were categorized as medium equipment. Pickups and buses were categorized as light equipment. Based on data collected in 2024, total traffic values are in line with the FEIS predicted ranges. The annual daily average traffic was 175 for long haul, 16 for medium equipment and 6 for light equipment, for a total of 197, compared to the lower and upper bound of 83 and 226, respectively, for the FEIS (Table 11-5).

Table 11-4 FEIS Daily Vehicle Traffic on the Haul Road

Category	Lower 5%	Average	Upper 95%
Long Haul	64	154	173
Explosive	2	4	5
Fuel	1	2	4
Cargo	4	7	10
Pickup	12	20	26
Bus	0	2	4
Oversize	0	1	4

Table 11-5 2024 Annual Daily Average WTHR Traffic Comparison to Average FEIS

Category	Average FEIS	Lower – Upper FEIS	2024 Data
Long Haul	154	64-173	175
Medium Equipment	14	7-23	16
Light Equipment*	22	12-30	6
Total	190	83-226	197

*Also included other types of small vehicles like cube van, vacuum trucks, ambulance, etc.

There is no non-mine use of the Whale Tail Haul Road by any local users as the road is closed for public use. Two traditional land use crossing locations were identified during IQ/TK workshops and following meetings with the Hunters and Trappers Organization, the first location has been set at KM 127 and is currently functional. Following consultation with HTO in 2019, it has been determined that subsequent locations are not needed for Traditional Land Use Crossings to be implemented along the WTHR.

Here are some specifications regarding the crossing:

- Haul traffic from the Whale Tail Mine to Meadowbank Mill will have the right-of-way;
- Traditional land users (i.e. hunters on ATVs or snowmobiles) crossing the Whale Tail Haul Road on identified ramps must yield to Haul Road traffic;
- Haul Road traffic approaching traditional land use crossings must be vigilant of the potential use by ATVs or snowmobiles;
- Hunters and traditional land users on snowmobiles or ATVs must stop, look both ways, and yield to traffic before crossing the road; and
- Traditional land use marked signs were installed on the haul road to warn haul trucks and other vehicles on the road to ensure users protection and safety of traditional land users on ATVs or snowmobiles.

In 2024, no incidents involving non-mine authorized use occurred. Agnico Eagle is confident that the current procedures and protocols provide for the safety of the local public while using the road either for hunting access or for general recreational opportunities.

11.7.2 Safety Incidents

11.7.2.1 AWAR Meadowbank Site

As required by NIRB Project Certificate No.004 Condition 32e: *Prior to opening of the road, and annually thereafter, advertise and hold at least one community meeting in the Hamlet of Baker Lake to explain to the community that the road is a private road with non-mine use of the road limited to approved, safe and controlled use by all-terrain-vehicles for the purpose of carrying out traditional Inuit activities.*

And

As required by NIRB Project Certificate No.004 Condition 32f: *Place notices at least quarterly on the radio and television to explain to the community that the road is a private road with non-mine use of road limited to authorized, safe and controlled use by all-terrain-vehicles for the purpose of carrying out traditional Inuit activities.*

And

As required by NIRB Project Certificate No.004 Condition 32h: *Report all accidents or other safety incidents on the road, to the GN, KivIA [KIA], and the Hamlet immediately, and to NIRB annually.*

On January 31st, 2024, Agnico Eagle hosted a public meeting in Baker Lake, providing residents with key updates on All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) safety protocols. The discussion covered security measures, speed limits, and road usage restrictions, ensuring that community members had access to important information regarding transportation operations.

In addition to direct engagement, Agnico Eagle utilized digital outreach to broaden public awareness. Throughout 2024, 14 AWAR-related communications were shared on the Agnico Eagle Facebook page, offering timely updates and reinforcing key safety messages for the wider community.

In 2024, there were eight (8) environmental spills that occurred along the AWAR. Table 7-2 and Table 7-3 provide details on these spills. These spills were managed and remediated appropriately according to Agnico Eagle's Spill Contingency Plan.

In 2024, there were twenty-three (23) project-related wildlife mortalities along the AWAR. Four (4) Arctic Fox, four (4) Arctic Hare, one (1) Caribou, five (5) Ptarmigan, and nine (9) Arctic Ground Squirrels. All the incident/mortality reports can be found in 2024 Wildlife Monitoring Summary Report (Appendix 39).

No incidents involving non-mine authorized use occurred in 2024.

To continue avoiding further incidents, messages are continually provided to employees and contractors to reinforce the procedures for wildlife protection during road use. As well, reminders were given on reporting any issues or observations concerning wildlife to the AWAR road dispatch.

11.7.2.2 Whale Tail Haul Road

As required by CIRNAC Road lease 66H/8-2-1 Condition 64: *The lessee agrees to report any information received, including accidents or others safety incidents on the road, including the locked gates, to the minister, who shall make this information accessible to the GN, KIA a, the Hamlet of Baker Lake immediately.*

And

As required by NIRB Project Certificate No 008 Condition 66: *The Proponent shall operate the Whale Tail haul road as a private access road, implement any reasonable measures to limit public access to the road, and develop strategies that account for unauthorized use. These measures must include, but are not limited to, the following:*

- a) The posting of signs in English and Inuktitut at the gate, each major bridge crossing, and each 10 kilometres of road, stating that public use of the road is prohibited;*

- b) Annually advertise and hold at least one community meeting in the Hamlet of Baker Lake to explain to the community that the road is restricted to mine use only;*
- c) Place local notices (e.g., radio, television, social media) at least quarterly to explain to the community that the road is restricted to mine use only;*
- d) Record all unauthorized non-mine use of the road, and require all mine personnel using the road to monitor and report unauthorized non-mine use of the road; and,*
- e) Develop management strategies to ensure public and operator safety in the event of unauthorized public use.*

On January 31st, 2024, Agnico Eagle hosted a public meeting in Baker Lake, providing residents with key updates on All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) safety protocols. The discussion covered security measures, speed limits, and road usage restrictions, ensuring that community members had access to important information regarding transportation operations.

In addition to direct engagement, Agnico Eagle utilized digital outreach to broaden public awareness. Throughout 2024, 14 AWAR and WTHR -related communications were shared on the Agnico Eagle Facebook page, offering timely updates and reinforcing key safety messages for the wider community.

No incidents involving non-mine authorized use occurred in 2024.

There have been no accidents to date involving mine related truck traffic and locals using ATV's/snowmobiles.

In 2024, there were twenty-one (21) environmental spills occurred along the Whale Tail Haul Road. Table 7-4 and Table 7-5 provide details on each of these spills. All spills were managed and remediated appropriately according to Agnico Eagle's Spill Contingency Plan.

In 2024, there were seven (7) project-related mortalities along the Whale Tail Haul Road. Three (3) Arctic Fox, one (1) Arctic Hare, two (2) Arctic Ground Squirrels, and one (1) Wolverine were killed due to vehicle interaction. To avoid incidents, messages are continually provided to employees and contractors to reinforce the procedures for wildlife protection during road use. As well, reminders were given on reporting any issues or observations concerning wildlife to the Whale Tail Haul Road dispatch. All the incident/mortality reports can be found in 2024 Wildlife Monitoring Summary Report (Appendix 39).

11.7.2.2.1 Road Closure

As required by CIRNAC Road lease 66H/8-2-1 Condition 65: *The lessee shall give notice of any closure of the road to the Minister and the reasons thereof, and post any notice of closure at the access point and along the road.*

There were no Whale Tail Haul Road closures in 2024 that may have impacted local usage as the road is not public. There were road closures in 2024 due to inclement weather and wildlife migration (Wildlife Monitoring Summary Report Appendix 39) at various intervals throughout the year. When these situations occurred, the road status was provided to all Agnico Eagle and contractor employees, the GN, KivIA and BLHTO with regular updates.

11.8 SHIPPING MANAGEMENT

As required by NIRB Project Certificate No.008, Condition 37: *The Proponent shall maintain a Shipping Management Plan in coordination and consultation with applicable regulatory authorities and the Kivalliq Inuit Association, and the Hunters and Trappers Organizations of the Kivalliq communities. The updated plan should be submitted to the Nunavut Impact Review Board at least 90 days prior to the start to commencement of shipping activities, with subsequent updates submitted annually thereafter in the Proponent's annual report or as may otherwise be required by the NIRB.*

Agnico Eagle has developed and maintained a Shipping Management Plan prior to 2018 shipping activities. In 2024, Agnico Eagle followed the approved Shipping Management Plan (Version 4, April 2022) that was submitted as part of Appendix 56 of the 2021 Annual Report. An updated Shipping Management Plan (Version 5) has been included in Appendix 59.

11.8.1 Marine Shipping Routing

As required by NIRB Project Certificate No.008 Condition 38: *The Proponent shall ensure that marine shipping activities avoid sensitive wildlife habitat and species along the shipping route and use a routing south of Coats Island as the primary shipping route, subject to vessel and human safety considerations. Confirmation that the requirements of this term and condition are being effectively implemented by shipping companies contracted by the Proponent should be submitted as part of annual reporting to the Nunavut Impact Review Board.*

And

As required by NIRB Project Certificate No.008 Condition 39: *The Proponent shall ensure that, subject to vessel safety requirements, a setback distance of at least 500 metres is maintained from colonies and aggregations of seabirds and marine mammals during Project shipping transiting through Hudson Strait, Hudson Bay, and Chesterfield Inlet. Confirmation that the requirements of this term and condition are being effectively implemented by shipping companies contracted by the Proponent should be submitted as part of annual reporting to the Nunavut Impact Review Board.*

And

As required by NIRB Project Certificate No.004 Condition 41: *Subject to vessel and human safety considerations, Cumberland shall require shippers carrying cargo to the Project through Chesterfield Inlet to follow the following mitigation procedures in the event that marine mammals are in the vicinity of the shipping activities:*

- *Wildlife will be given right of way;*
- *Ships will maintain a straight course, constant speed, and will avoid erratic behaviour; and*
- *When marine mammals appear to be trapped or disturbed by vessel movements, the vessel will stop until the mammals have moved away from the area.*

For the fifth year, Agnico Eagle produced a joint MMSO report with Agnico Eagle Meliadine Mine. As the shipping company Groupe Desgagnés and Woodward ship dry cargo and fuel to Meadowbank and Meliadine and vessel could deliver at both sites during the same trip, it was determined that it will be efficient to report all the observations into the same report while ensuring that the requirement from both sites are clearly identified. The below is a summary of the findings and Agnico Eagle will refer to the 2024 Marine Mammal and Seabird Annual Report presented in Appendix 32 for a complete review.

When compared to pre-2020 levels, vessel participation in MMSO surveys has increased. During the 2024 shipping season, a total of 23 Groupe Desgagnés and Woodward vessels serviced the projects between June and November: seven (7) for Meadowbank, seven (7) for Meliadine, and nine (9) serviced both Meadowbank and Meliadine. Datasheets were obtained from 19 of the 23 trips in 2024, which is similar to the last 4 years (18 of the 23 trips in 2023, 21 of 27 in 2022, 23 of 29 in 2021, and 19 of 25 in 2020), all of which were greater than in previous years (6 vessels providing datasheets in 2019, and only 2 participating vessels in 2018). No incidents with marine mammals or seabirds were reported for the 2024 shipping season.

Vessel Mitigation

Vessels are required to transit south of Coats Island whenever the weather is safe to do so. The majority (87 %) of vessels servicing the Meadowbank and Meliadine projects in 2024 travelled south of Coats Island. Vessels traveled north of Coats Island on three occasions, two in July due to unfavorable sea conditions along the route, and one in October due to inclement weather.

Setbacks from Sensitive Habitats

In compliance with Whale Tail Mine Certificate No. 008, Term and Condition 39, project vessels must follow a setback distance of 500 m from colonies and aggregations of seabirds and marine mammals while transiting through the Hudson Strait, Hudson Bay, and Chesterfield Inlet. In addition, vessels must follow a setback distance of 2 km from Marble Island, as per Meliadine's Shipping Management Plan.

Vessel tracks were mapped along with identified sensitive areas for wildlife. Where detailed data were available, vessels were shown to avoid these areas where safe to do so. Groupe Desgagnés and/or Woodward vessel tracks appeared to potentially cross through the 2 km setback polygon at Marble Island on 10 occasions, and at the Coats Island setback polygon on 8 occasions (3 of these tracks appeared to cross both setback polygons, therefore a total of 15 vessels appear to have crossed setbacks). However, when examining the data, it appears that a vessel only potentially entered the 2 km Marble Island buffer on three occasions. In all cases where track lines appeared to intersect the setbacks, the point locations were investigated further. From the 15 vessel tracks that appeared to cross a setback polygon, only three (3) location points received from the satellite AIS were located within the setback polygons: 1) in June, the Qikiqtaaluk W.'s track shows a point location recorded 0.9 km from Marble Island; 2) in August, the Miena Desgagnés was within the 2 km buffer around Marble Island (1.2 km from Marble Island), and 3) in September, the Miena Desgagnés was 1.1 km from Marble Island. No other points were recorded within the Marble Island setback. The closest ship track point to the Coats Island setback was recorded by the Acadia Desgagnés in August, 12.3 km from the setback polygon. Therefore, it is unlikely that the ship passed directly through the setbacks and the intersections are likely due to a lack of ship track resolution. Vesseltracker, however, remains the most reliable way to obtain vessel tracks in the Arctic at this time. Agnico Eagle continues to train vessel captain regularly and remind them of the importance of maintain sensitive habitat buffers prior to the start of the shipping season.

Similar to previous years, training materials continued to be delivered to the vessel crew prior to the shipping season. These training materials were developed to improve the MMSO data collection of shipping companies. The training materials include poster for identification of common marines' species, detailed methods for marine mammal and seabird surveys (on moving vessels and stationary vessels), one-page fact sheet for marine mammal and seabird surveys, data sheets, summary brochure, and

training videos. Training material was distributed before the 2024 shipping season. Agnico Eagle also held pre-shipping season training presentation and conducted monthly meetings with shipping companies to reinforce MMSO requirements and area of improvement in the data collection during the season. Mitigation procedures to follow in the event that marine mammals are in the vicinity of the shipping activities are also part of the training material and pre-shipping meeting with the companies.

11.8.2 Wildlife Monitoring on Vessel

As required by NIRB Project Certificate No.008 Condition 40: *The Proponent shall develop and implement a ship-based marine mammal monitoring program, as part of a Marine Mammal Management and Monitoring Plan, in consultation with Fisheries and Oceans Canada, communities, and other interested parties. The Proponent shall report any accidental contact by project vessels with marine mammals or seabird colonies to applicable responsible authorities including Fisheries and Oceans Canada and Environment and Climate Change Canada. The Plan should be submitted to the Nunavut Impact Review Board at least 90 days prior to commencement of shipping activities, with subsequent updates submitted annually thereafter. Confirmation that the requirements of the Plan are being effectively implemented by shipping companies contracted by the Proponent should be provided with annual reporting.*

And

As required by NIRB Project Certificate No.004, Condition 36: *Ensure the placement of local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet*

The Marine Mammal Management and Monitoring Plan is provided as Appendix A of the Shipping Management Plan (Version 5, March 2025 – Appendix 59).

A complete report, 2024 Marine Mammal and Seabird Annual Report, detailing the 2024 mammal and seabird observations during the shipping season can be found in Appendix 32. Below is a summary of the report and Agnico Eagle will refer the reader to the report in Appendix for a complete review.

Marine Mammal Monitoring

In 2024, 62 transect and 88 stationary surveys for marine mammals were completed. There was a total of 23 marine mammal sightings (9 during surveys and 14 incidentally) during the 2024 shipping season, compared to 20 (surveys and incidentally) in 2023. Between 2017 and 2024, the majority of marine mammal sightings were recorded in the Hudson Strait or near Marble Island and Chesterfield Inlet. The number of marine mammal sightings was too low to allow for density analysis to be conducted. Groupe Desgagnés and Woodward did not record any marine mammal-vessel interactions (e.g., strikes) in 2024 or in previous years (2017 through 2023).

Seabird Monitoring

No accidental contact between vessels and seabirds was recorded in 2024 or in previous years. In 2024, a total of 97 transects and 136 stationary surveys were completed.

In 2024, 1,339 birds were recorded during moving vessel surveys. Among the 1,339 birds recorded, 22 different species were identified, with seven (7) different species remaining unidentified. The most

common species recorded in 2024 during moving vessel surveys were razorbill ($n = 726$) and northern fulmar ($n = 150$). Seabird detectability and density were estimated using models that account for lower detectability of birds with greater distance from survey transects. Detectability estimates were mostly consistent between years, with the highest estimate in 2022, followed by 2024. Differences in estimated density reflect variability in the effort and number of birds detected between years.

During stationary surveys in 2024, 530 seabird sightings were recorded, belonging to 10 identified species and 5 unknown species. The most commonly recorded species were herring gull ($n = 290$), unknown duck ($n = 75$), and razorbill ($n = 58$). The detection estimate for stationary seabird surveys were lower in 2024 than in previous years.

Marine Wildlife Observations – Baker Lake

In compliance with Project Certificate No. 004 Condition 36, local area marine mammal monitors have conducted a program of community wildlife observers on barges ferrying supplies between Helicopter Island and Baker Lake within Chesterfield Inlet between 2008 and 2019. In 2020 and 2021, community members were not permitted to board vessels due to health and safety restrictions in place related to the COVID-19 pandemic. In 2022, Agnico Eagle hired three local monitors from the community of Baker Lake for a total on 22 days surveys during the barge season. In 2023, Agnico Eagle had one local wildlife observers from the community of Baker Lake for a total of 27 days surveyed in July, August and October. In 2024, two local wildlife monitors were on the vessels for a total of 37 days in August, September, and October. One monitor was from the community of Chesterfield Inlet and the other one from the community of Baker Lake. The intent is to always have one local monitor on transiting vessel, and they overlap on schedule between 10 to 14 days. Wildlife was observed on 338 occasions in 2024. There were 331 separate sightings of birds (total of 1,138 individuals), and 1 sighting of an unknown seal species (1 individual). The most frequently recorded birds were unknown gull/tern species. Additional terrestrial wildlife species were observed, including 1 sighting of caribou (6 individuals), 3 sightings of muskox (21 individuals), and 2 sightings of fox (2 individuals).

As established in 2020, in addition to community wildlife observers, the shipping companies continued to record marine wildlife sightings while vessels were travelling between Helicopter Island and Baker Lake to supplement the community observer effort. In 2024, crew members onboard the Tuvaq W. recorded one incidental sighting of a harbour seal on 12 August while transiting between Helicopter Island and Baker Lake. In addition, the Tuvaq W. completed 15 seabird surveys, 13 of which had sufficient survey effort information (129 km of surveys with an average of 9.9 km per survey) in 2024, and 54 seabirds (9 different species) were observed during these surveys. Vessels also completed stationary surveys while anchored at Helicopter Island. In 2024, there were 54 stationary surveys completed for marine mammals at Helicopter Island; however, no marine mammals were observed during the surveys. For seabirds, 79 stationary surveys were completed, (49 of which had survey effort recorded), and 25 seabirds were recorded (6 different species).

In 2024, Agnico Eagle continues effort in the recruitment of local monitors in compliance with Term and Condition 36. Recruitment is done with the Agnico Eagle's community agents to find reliable and available monitors that are willing to board the vessels for a significant time period, as the vessels are travelling back and forth from the Inlet to the Baker Lake community. Per previous years, recruitment from the community has always proved to be challenging as multiple candidates first accepted the proposed work but declined and/or changed their minds at the last minute or decide to un-board the vessel on short

notice and did not want to pursue this type of work any further. Agnico Eagle starts the recruitment process for local monitor in advance of the shipping season based on estimated vessel arrival date in Baker Lake provided by the shipping company. Those dates are preliminary and are subject to change, for example, depending on the shipping route conditions or other reasons out of Agnico Eagle's control. Once local monitors are selected, the hiring process started and booking of flight/accommodation, if needed, are completed. If there is delay in the vessel arrival in Baker Lake or if the local monitor decides to not do the work anymore, the flexibility to hire someone else on a short notice is largely reduced, especially if flight and accommodation in Baker Lake are needed. While Agnico Eagle has good collaboration from the shipping company, it should also be noted that some vessels have no rooms to accommodate local MMSO monitor due to configuration of the vessel and they need to prioritize their employees onboard to ensure safe operations.

For 2025, it is Agnico Eagle's intent to continue to hire local monitors in compliance with Term and Condition 36. Additional to the above and as an alternative to ensure data collection as per Condition 36, Agnico Eagle will continue to work with the shipping companies for the possibility to pursue in 2025, the marine mammal monitoring from Helicopter Island to Baker Lake infrastructures.

Agnico Eagle will continue to improve the effectiveness of the MMSO Program in compliance with Whale Tail Project Certificate No. 008 Term and Conditions 38, 39, 40 and Meadowbank Project Certificate No. 004, Term and Condition 36. As discussed in previous section, the training material that summarizes and simplifies both the Marine Mammal Management and Monitoring Plan (MMMMP) and Shipping Management Plan (SMP) has continued to show their effectiveness in 2024.

11.8.3 Notification to Communities

As required by NIRB Project Certificate No.008 Condition 41: *The Proponent shall provide notification to communities regarding scheduled ship transits throughout the regional study area, including Hudson Bay and Chesterfield Inlet. The Proponent shall provide a summary of public consultation undertaken to address this term and condition in its annual report to the Nunavut Impact Review Board.*

Ahead of the 2024 barge season, Agnico Eagle conducted a community engagement tour in Coral Harbour, Chesterfield Inlet, Rankin Inlet, and Baker Lake. These meetings provided an opportunity to share key information about the upcoming shipping season and gather community feedback that could help refine adaptive management practices.

Representatives from Agnico Eagle's Community Relations, Environment, and Logistics teams, alongside Nunavut Sealink & Supply Inc.–Desgagnés Transarctik, participated in these discussions. As part of regulatory requirements, Fisheries and Oceans Canada (DFO) was invited to attend the meetings. Discussions covered a range of topics, tailored to the interests of each audience, including:

- Routing plans for the 2024 barge season;
- Review of the 2023 sealift season, including vessel traffic and material shipments;
- Hauling procedures and logistical considerations;
- Overview of the Marine Mammal & Seabird Observer Program (MMSO); and

- Findings from the 2023 MMSO season.

These discussions provided valuable insights that will help inform ongoing efforts to align shipping operations with community expectations, environmental considerations, and logistical best practices.

11.8.4 Ingress/Egress of Ship Cargo

As required by NIRB Project Certificate No.004 Condition 37: *Cumberland will contract only Transport Canada certified shippers to carry cargo for the Project, and will require shippers transporting cargo through Chesterfield Inlet to carry the most up-to date emergency response/spill handling equipment as recommended and accepted by the Government of Canada with the crew trained to deploy the equipment, including practice drills deploying spill equipment in remote locations within the Inlet.*

And

As required by NIRB Project Certificate No.004 Condition 38: *Cumberland shall make every reasonable effort to minimize the number of ships and barges transporting cargo for the Project, and require shippers transporting cargo for the Project through Chesterfield Inlet to be operated in accordance with safe shipping management policies, including using Canadian Hydrographic Service published detailed marine charts and nautical instructions, and be fitted with modern state-of-the-art navigation equipment.*

And

As required by NIRB Project Certificate No.004 Condition 42: *Cumberland shall ensure all fuel transfer operations take place in accordance with the Arctic Waters Pollution Prevention Act and relevant oil transfer guidelines.*

And

As required by NIRB Project Certificate No.004 Condition 82: *Monitor the ingress/egress of ship cargo at Baker Lake and report any accidents or spills immediately to the regulatory agencies as required by law and to NIRB's Monitoring Officer annually.*

And

As required by NIRB Project Certificate No.004 Condition 43: *Lightering activities at Helicopter Island are not approved, except in case of emergency only, and in such case Cumberland shall explain why all other methods were not practical, meaning technically, logistically, and financially not feasible.*

And

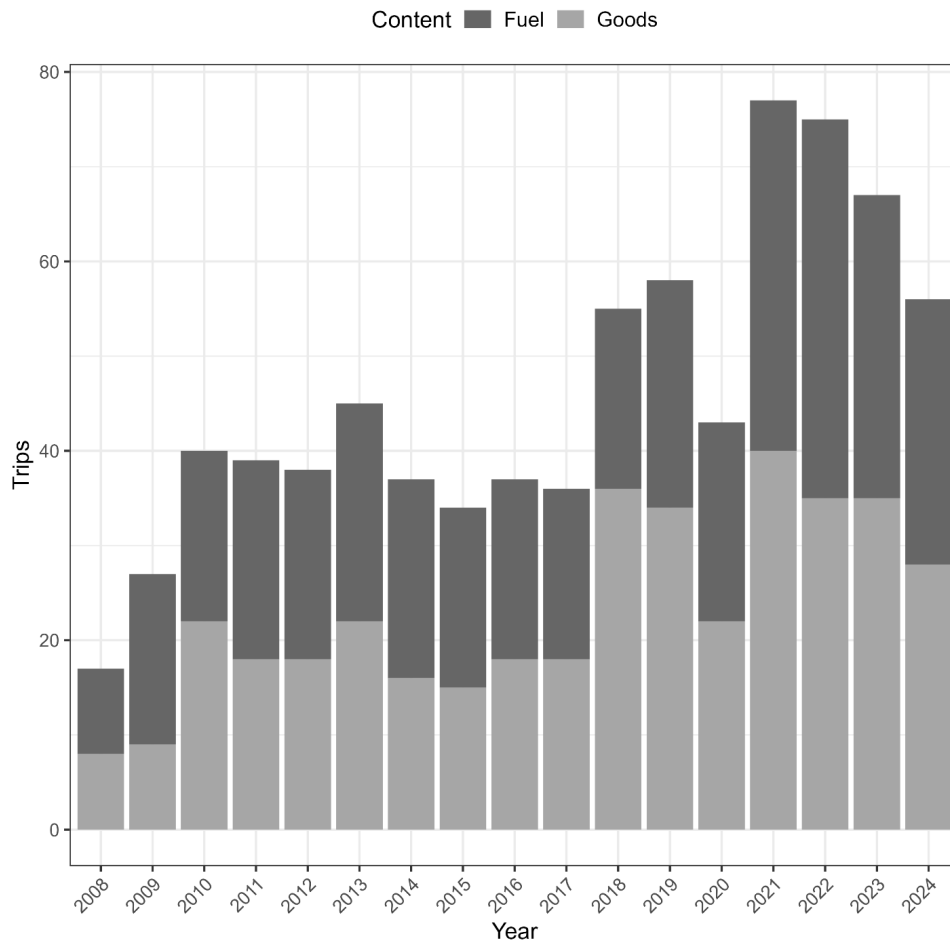
As required by NIRB Project Certificate No.008 Condition 43: *The Proponent shall contract only certified vessels to carry cargo for the Project, and will ensure shippers are aware of the requirements of the Shipping Management Plan, the Risk Management and Emergency Response Plan, and the Oil Pollution Emergency Plan. Evidence of meeting the requirements of this term and condition should be submitted as part of annual reporting to the Nunavut Impact Review Board*

In 2024, Agnico Eagle did not observe any accidents or spills that occurred at Baker Lake during the Ingress/Egress of ship cargo.

In 2024, Agnico Eagle monitored the ingress/egress of ship cargo at Baker Lake and the results are summarized in Figure 34. Barge trips from Chesterfield Inlet in 2024 numbered 28 for general cargo and 28 for fuel. With the expansion at the Whale Tail site, traffic increased in 2018 and 2019 compared to previous years (e.g., from < 40 in 2016 and 2017 to ~ 55 in 2018). Trips were down in 2024 compared to years 2021 to 2023.

Only certified vessels were hired to carry the cargo at Meadowbank Complex. Annual meetings were held with the dry cargo and fuel carriers to review the shipping and emergency plans. Per the Oil Pollution Emergency Plan and Oil Pollution Prevention Plan (OPEP/OPPP) (Appendix 25), an annual mock spill exercise is performed annually in Baker Lake as detailed in Section 7 above. Shipboard Marine Pollution Emergency Plans from the fuel shipping compagnie are also included as appendices of the OPEP/OPPP.

Figure 34 Barge traffic (number of trips/year) arriving in Baker Lake from Chesterfield Inlet since 2008



11.8.5 Insurance

As required by NIRB Project Certificate No.004 Condition 45: *“[Cumberland] shall carry, and require contracted shippers to carry adequate insurance to fully compensate losses arising from a spill or accident, including but not limited to the loss of resources arising from the spill or accident; any claims are to be reported to proper officials with a copy to NIRB’s Monitoring Officer”.*

All shipping contractors have insurance to fully compensate losses arising from a spill or accident, including but not limited to the loss of resources arising from spill or accident for all marine transport vessels and vehicles travelling on the AWAR and WTHR.

In 2022, Agnico Eagle reported to the authorities a 29 000 L spill of diesel fuel at KM 87 on the AWAR. In 2023, Agnico Eagle claimed the contractor, Arctic Fuel Services, concerning this incident. No claim was reported in 2024.

11.9 CONSULTATION, ENGAGEMENT AND COMMUNICATION^s

As required by NWB Water License 2AM-MEA1530 Schedule B, Item 24: *A summary of public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events and information sessions.*

Throughout the year, a total of 237 engagements were conducted using a variety of communication methods tailored to specific objectives. Meetings formed the foundation of these interactions, accounting for 178 events and involving both in-person and virtual formats to ensure flexibility and accessibility. Key stakeholders included government entities such as the Government of Nunavut (GN), particularly the Family Services department, which participated in discussions focused on strategies for community support and program delivery. Organizations like the Kivalliq Inuit Association (KivIA) were actively engaged to ensure alignment with Inuit values and priorities, often facilitated through the involvement of the IIBA Coordinator. Meetings with local leaders were particularly instrumental in understanding the needs of the community, providing essential insights into challenges, expectations, and areas requiring focused support. Partnerships were also strengthened with educational institutions like Nunavut Arctic College, emphasizing workforce development and youth training initiatives. Additionally, local organizations, including Catalyste+ and Abluqta, contributed insights and guidance on community-focused projects. These meetings were essential for planning, gathering feedback, and driving decision-making across various community development initiatives and projects.

In addition to meetings, 30 events were organized to foster collaboration and raise awareness of ongoing initiatives. These events included stakeholder workshops, career days, regional conferences, elder counseling sessions, and training programs, which were often attended by representatives from community organizations, government departments, and community members. These engagements provided a platform for sharing progress, building consensus, and addressing questions. Public meetings, totaling 21, served as a critical avenue for transparency and community involvement. These gatherings encouraged broad community participation by offering updates on projects, highlighting employment opportunities, and providing a forum for public feedback. Attendees included residents, community leaders, and representatives from Inuit organizations, with a strong emphasis on inclusivity, trust-building, and addressing concerns about the social and environmental impacts of development projects.

A total of three (3) site tours played a vital role in providing stakeholders with direct exposure to Meadowbank Complex operational site. These tours, involving representatives from the Baker Lake HTO, Government of Nunavut, and local educational organizations, showcased on-ground activities, safety protocols, and operational transparency. They also supported training and development initiatives by offering participants practical insights into operational environments.

While search and rescue support was not a primary focus of the year's engagement, Agnico Eagle played a vital role in broader community support efforts, demonstrating its commitment to community well-being and safety. The company provided 36.5 hours of helicopter assistance to Baker Lake Search & Rescue (SAR), successfully aiding in the location of a missing individual. Additionally, Agnico Eagle facilitated the transport of three ATVs left 100 km from AWAR during the August 19 SAR operation, contributing \$10K in in-kind support. Further reinforcing its dedication to emergency response, Agnico Eagle proactively offered helicopter assistance following a missing person announcement in Baker Lake. Although the support was ultimately not needed, the SAR team acknowledged and appreciated Agnico Eagle's swift response.

Overall, the 237 engagements conducted throughout the year reflected a strong commitment to fostering partnerships, ensuring transparency, and promoting community involvement. Stakeholders ranged from government officials and Inuit organizations to local communities and educational institutions. Central themes included advancing regional development, aligning with Inuit Qaujimajatuqangit (IQ) principles, and addressing community needs through collaborative approaches. Virtual platforms were extensively utilized, enabling broader participation and reducing logistical barriers. This comprehensive and adaptive communication strategy ensured that all stakeholders' voices were heard, creating a collaborative environment conducive to achieving shared goals.

Refer to table in Appendix 48 for more information regarding the public consultation and participation with local organization and the residents of the nearby communities.

11.9.1 Chesterfield Inlet^s

As required by NIRB Project Certificate No.004, Condition 39: *Cumberland shall advertise and hold a community information meeting in Chesterfield Inlet to fully discuss the shipping program for the Project. Thereafter, Cumberland shall annually advertise and hold a community information meeting in Chesterfield Inlet to report on the Project and to hear from Chesterfield Inlet residents and respond to concerns. A consultation report shall be submitted to NIRB's Monitoring Officer within one month of the meeting.*

And

As required by NIRB Project Certificate No.004, Condition 40: *Cumberland shall gather Traditional Knowledge from the local HTOs and conduct a minimum of a one-day workshop with residents of Chesterfield Inlet to more fully gather Traditional Knowledge about the marine mammals, cabins, hunting, and other local activities in the Inlet. Cumberland shall report to KivIA and NIRB's Monitoring Officer annually on the Traditional Knowledge gathered including any operational changes that resulted from concerns shared at the workshop.*

And

As required by NIRB Project Certificate No.008 Condition 42: *The Proponent shall design monitoring programs to ensure that local users of the marine area along the shipping route have the opportunity to provide feedback and input in relation to monitoring and evaluating potential project-induced impacts and changes in marine mammal distributions. The Proponent shall demonstrate how feedback received from community consultations has been incorporated into the most appropriate mitigation or management plans. The Proponent shall provide a summary of public consultation undertaken to address this term and condition in its annual report to the Nunavut Impact Review Board.*

In Chesterfield Inlet, a total of five (5) engagements were recorded over the year, encompassing meetings, events, and an open house. Meetings were the most frequent form of communication, occurring three (3) times. These meetings primarily involved the Hamlet of Chesterfield Inlet as the key stakeholder. Discussions included operational updates on projects such as Meliadine and Meadowbank, as well as logistical plans for sealift operations. The meetings provided an opportunity to keep the Hamlet leadership informed and to align specific community concerns, ensuring effective collaboration between the project teams and local governance.

One event, a community-based pre-employment training program, was conducted in partnership with Ilitagsiniq and opened to the public in Chesterfield Inlet. This 10-day program aimed to build local capacity by equipping participants with the skills needed to pursue employment opportunities tied to ongoing regional operations. This initiative highlighted the commitment to fostering long-term economic development within the community by addressing skill gaps and enhancing employability.

An open house (1) was also held, serving as a platform for direct interaction with community members. Stakeholders included the general public of Chesterfield Inlet, who were invited to ask questions, provide feedback, and learn more about project updates, such as the progress on IIBA (Inuit Impact and Benefit Agreement) initiatives and other operational activities. The open house promoted transparency and strengthened trust with the local community by offering insights into how operations align with regional priorities and Inuit Qaujimajatuqangit (IQ) principles.

Overall, the engagements in Chesterfield Inlet reflect a commitment to transparent communication, skill-building, and meaningful collaboration with local stakeholders, reinforcing the importance of addressing community-specific needs and fostering strong partnerships.

For information on 2024 engagements in Chesterfield Inlet, please see the summarized Engagement table in Appendix 48.

11.9.2 Hunters and Trappers Organizations^s

As required by NIRB Project Certificate No.004, Condition 40: *Cumberland shall gather Traditional Knowledge from the local HTOs and conduct a minimum of a one-day workshop with residents of Chesterfield Inlet to more fully gather Traditional Knowledge about the marine mammals, cabins, hunting, and other local activities in the Inlet. Cumberland shall report to KivIA and NIRB's Monitoring Officer annually on the Traditional Knowledge gathered including any operational changes that resulted from concerns shared at the workshop.*

And

As required by NIRB Project Certificate No.004, Condition 58: “in consultation with Elders and the HTOs and subject to safety requirements, design the lighting and use of lights at the mine site to minimize the disturbance of lights on sensitive wildlife and birds”

And

As required by NIRB Project Certificate No.004, Condition 68: *Cumberland shall, in consultation with Elders, local HTOs and the Meadowbank Gold Mine SEMC, demonstrate that they are working toward incorporating Inuit societal values into mine operation policies.*

In 2024, five (5) formal engagements were held with local HTO representatives. In addition to these meetings, Agnico Eagle continued to have regular engagements on project activities throughout 2024, including regular communication between the Project Environment team and HTO.

Engagement topics included:

- Operation updates;
- Exploration activities update in the region;
- Cyanide transportation and first responders' information session; and
- Permitting and Cultural awareness activities.

The purpose and outcome of the above engagement initiatives are summarized in the Engagement Table appended in Appendix 48.

For a demonstration of IQ integration into Meadowbank Complex operations, please refer to Section 11.9.4. For cyanide transportation adaption with respect to access to land and lake in the Baker Lake, suggestions received from local representatives allowed Agnico Eagle to adapt its transportation operations to ensure respect of traditional activities in the community.

In 2024, a site visit was organized for Baker Lake Hunters and Trappers and Baker Lake members of the Kivalliq Elders Advisory Committee (KEAC) to discuss on environmental closure topics (tailings, water management), provide an exploration update at the core shack, and present the Spawning Pad project. After the visit and exploration presentation, the group indicated they have concerns with the future of their children, grandchildren and community after closure. They said they are supportive of any exploration in the area to secure a possible future extension to ensure no starvation for the community.

11.9.3 Community Liaison Committees^s

Strengthening Community Engagement Through Transparent Communication

In 2024, Agnico Eagle reinforced its ongoing communication efforts with the Baker Lake Community Liaison Committee, fostering open dialogue and engagement with key community subgroups, including youth, women, and Elders.

A key component of this initiative was the informational newsletter, designed to provide updates on operational activities and successes, while also creating a direct channel for community feedback and dialogue.

The newsletter was developed and distributed to members of the Baker Lake Community Liaison, regional representatives, and Community of Interest groups, ensuring broad accessibility. It also included clear contact information for residents to share questions, concerns, or recommendations, helping to strengthen community-company collaboration.

To expand its reach, the newsletter was promoted on the Meadowbank Complex Mine Facebook page, allowing residents to access the document online or request a copy via email. These efforts continue to support transparent communication and provide a platform for meaningful community participation in discussions that shape Agnico Eagle's engagement with the region.

The newsletter for 2024 is available in Appendix 50.

11.9.4 Elders and IQ Validation

In 2021, Agnico Eagle established the Kivalliq Elders Advisory Committee (KEAC), a group which provides invaluable guidance to Nunavummiut and our Nunavut operations teams.

Comprised of Elders from the communities of Baker Lake, Chesterfield Inlet, Rankin Inlet, Whale Cove, and Arviat, the Elders' Committee not only keeps local communities informed about Agnico Eagle's mining activities and future plans, but it also provides Inuit Qaujimajatuqangit and Inuit Qaujimaningit (IQ), a body of Inuit traditional knowledge (TK), and Inuit Societal Values (ISV), a set of guiding community principles, so that it can be integrated into our exploration, planning, workforce, wellness, operational and closure plans.

The committee engaged in a schedule of activities during 2024, including nine (9) meetings, two (2) site visits, and twelve (12) initiatives. For a comprehensive overview of these activities, please refer to the Kivalliq Elders Advisory Committee 2024 Summary Report in Appendix 52.

During the KEAC engagement and initiatives, Inuit Qaujimajatuqangit and Inuit Traditional Knowledge is shared by the members and generates discussion amongst peers from the group which allows to gather invaluable information. Engagement channels include one-on-one conversations, focus groups and public consultations with general public.

The IQ and TK collected during engagement are documented specific to Environmental and Socio-Economic Valued Components. The data is stored by date, engagement purpose, engagement type, Agnico Eagle supporting team, meeting notes, questions, and comments.

The KEAC is convened by Agnico Eagle's Inuit Qaujimajatuqangit Advisor supported by the Public Affairs team who are responsible for documenting and sharing input and recommendations from the Committee to Agnico Eagle representatives, which is made publicly available in Appendix 52.

Here are a few initiatives that were implemented as recommended by the KEAC members in 2024:

- An Inuktitut name for the Committee was established 'Akkiqtiit';
- Elders voted to be included during community employment session and community open houses to advocate to the youth on the importance of working and thinking about the future. Elders participated to the following open houses: October 23rd in Chesterfield Inlet, October 24th in Arviat;
- Baker Lake members of the KEAC participated in a site visit at the Meadowbank mine site to discuss environmental closure. The group expressed desire to keep the road after closure;
- Elders shared that Inuit learn by seeing - It is good to have in house training because it provides opportunity to learn on the job for the younger generation who don't have a lot of education, good for them to have a career path;
- The elders were glad to learn about examples of local businesses that have been supported by the mentoring program. They have encouraged Agnico Eagle to further pursue advertisement of those initiatives to inspire the younger generation;
- Traditional knowledge was shared regarding closure and reclamation of the Meadowbank Mine site and is included in Appendix 53; and
- Participated in on-site counseling for employees.

All collected data are stored in an internal database software system that allows history tracking and reporting. The database tracks all the consented and validated IQ/TK as well as the integration into the operational management and monitoring plans.

The 2024 Socio-Economic Monitoring Report (SEMR) identifies where an Inuit Societal Values (ISVs) relates to, have been followed, or are connected to the subjects being discussed. The purpose of this is to demonstrate Agnico Eagle's commitment to following and implementing IQ and to begin to move toward a more fulsome integration of Inuit worldviews in its monitoring and reporting. Throughout this report, the "ISV" symbol will be used as an indicator and easy reference to one or more ISV.

11.9.5 Baker Lake^s

11.9.5.1 *Community Meetings in Baker Lake^s*

In 2024, Agnico Eagle conducted 39 engagements in Baker Lake, fostering dialogue and collaboration with community members, leadership, and key stakeholders. These engagements covered a diverse range of topics, including employment, community development, environmental impact, operational updates, and economic opportunities. The events consisted of 22 meetings, 6 events, 6 public meetings, and 5 support initiatives, providing multiple platforms for meaningful discussions.

One of the most significant events was the Meadowbank Coffee & Chat on January 31st, 2024, which provided a space for Baker Lake residents to engage in open discussions with Agnico Eagle representatives. This event covered operational updates, AWAR and WTHR security measures, exploration plans, and the mining life cycle, while also addressing community concerns and feedback.

Another key engagement was the Baker Lake Hamlet Meeting on January 30, where discussions centered around the Elders Cabin project, local economic initiatives, and the Community Initiatives Fund. This meeting reinforced Agnico Eagle's continued engagement with local leadership to exchange perspectives on community priorities.

The Baker Lake Hunters and Trappers Organization Pre-shipping Update on February 28 focused on the outcomes of the 2023 sealift operation, including haulage logistics and environmental considerations. Stakeholder input was gathered to enhance future sealift planning and improve community awareness of logistics and environmental monitoring.

Additionally, Agnico Eagle hosted an IIBA Information Session on February 27 to provide clarity on the Impact and Benefits Agreement (IIBA), while the Employment Information Session on February 21 facilitated discussions on job opportunities and workforce development in Baker Lake.

As part of the International Cyanide Management Code (ICMC), Agnico Eagle held an information session in Baker Lake in June 2024 to ensure community first responders were well-informed about the safe transportation of cyanide from Baker Lake to the Meadowbank mine site. The session, led by Meadowbank representatives, covered critical safety procedures and fostered an engaging discussion where participants shared questions and insights on safety protocols and potential road closures during transport operations. The session was attended by key community stakeholders, including the Baker Lake Fire Department, Hamlet of Baker Lake, Health Centre, Hunters and Trappers Organization, Kivalliq Inuit Association, and the Royal Canadian Mounted Police (RCMP). To enhance public awareness, general safety information was shared before transportation via social media, radio announcements, Facebook pages, and the Agnico Eagle website. During transportation, road closures were communicated, and the gatehouse was ready to ensure a rapid response in case of an incident. This initiative reflects Agnico Eagle's commitment to transparency, safety, and community collaboration, ensuring that proper protocols are in place to protect both responders and the broader community.

These 39 engagements provided opportunities for transparency, community participation, and knowledge-sharing, ensuring that local perspectives were considered in operational planning, workforce initiatives, and community development efforts.

The purpose and outcomes of the above engagement initiatives are summarized in Appendix 48.

11.9.5.2 Site Tours for Baker Lake Residents[§]

Agnico Eagle continues to provide opportunities for Baker Lake residents and key stakeholders across the Kivalliq region to visit the Meadowbank Complex, fostering transparency, knowledge-sharing, and meaningful dialogue about mining operations and environmental stewardship.

In 2024, Meadowbank welcomed approximately 100 visitors from Baker Lake, including community members, Elders, students, and local leadership, to engage in on-site discussions and environmental closure consultations. Key visits included:

- March – Kivalliq Inuit Association representatives toured the camp and Whale Tail underground operations.

- September 7 – Public site visit and environmental closure consultation, providing residents with updates on reclamation efforts.
- September 8 – Meadowbank HTO and Elders site visit, featuring a Spawning Pad Presentation and further consultation on environmental closure.
- September 9 – Hamlet and Member of Legislative Assembly (MLA) site visit, allowing local government representatives to engage with operations and environmental planning.
- September 13 – Student site visit, offering youth an interactive learning experience about mining, environmental sustainability, and career opportunities.

These visits serve as a platform for open discussions, community involvement in environmental decisions, and first-hand insights into Agnico Eagle's operations, reinforcing a shared commitment to responsible resource development.

11.9.6 Community Engagement Initiatives^s

Community engagement and consultation initiatives that Agnico Eagle held or participated in during 2024 are summarized in Appendix 48.

11.9.6.1 Community Coordinators Program^s

Agnico Eagle remains committed to fostering direct and meaningful engagement with communities across the Kivalliq Region through its Community Coordinators Program. This initiative ensures that Community Liaison Officers (CLOs)—both full-time and part-time—are present in key hamlets, including Rankin Inlet, Baker Lake, Arviat, Chesterfield Inlet, and Coral Harbour. These officers serve as trusted local points of contact, facilitating communication between Agnico Eagle and community members, while also supporting employment, outreach, and engagement initiatives.

By enhancing local presence and accessibility, the CLOs play a critical role in bridging community needs with operations, ensuring that Agnico Eagle remains responsive and accountable. Their responsibilities extend across several key areas, including:

- **Supporting Employment and Recruitment:** Assisting the Human Resources (HR) department in locating employees, facilitating recruitment efforts, and promoting Inuit employment initiatives outlined in the Meadowbank Complex IIBA.
- **Facilitating Community Engagement:** Organizing and hosting information sessions on Agnico Eagle's projects, initiatives, and business opportunities.
- **Providing Regular Updates:** Ensuring that the Hamlet Council and key community stakeholders receive timely information on Agnico Eagle's activities.
- **Promoting Awareness and Participation:** Distributing company information, participating in Nunavut donation initiatives, and engaging in community events and education programs.

The expanded role of Community Liaison Officers in 2024 has been instrumental in strengthening Agnico Eagle's engagement across Nunavut. By fostering direct communication and proactively addressing community concerns, this program not only supports recruitment objectives but also helps fulfill obligations under the Nunavut Impact Review Board (NIRB) and Inuit Impact and Benefit Agreement (IIBA). The presence of five CLOs across key communities reinforces Agnico Eagle's commitment to local partnerships, cultural respect, and long-term sustainability in the region.

As Agnico Eagle continues to grow, the Community Coordinators Program remains a cornerstone of its Nunavut operations, ensuring that community voices are heard, employment opportunities are expanded, and mutual benefits are realized.

11.9.7 Communication

As required by NIRB Project Certificate No.008 Item 12: *The Proponent shall establish a publicly-accessible Project-specific web portal or web page to make available in a central location all significant non-confidential monitoring and reporting information submitted to regulatory authorities pursuant to the Project Certificate and other territorial or federal permits issued for the Project. For clarity, posting on the Project-specific site does not replace any reporting obligation of the Proponent pursuant to the Project Certificate or any territorial or federal permit.*

Expanding Digital Engagement to Strengthen Community Communication

Since launching the Meadowbank Facebook page in 2018, Agnico Eagle has continued to enhance its digital communication efforts to ensure Kivalliq communities and employees remain informed about key operational updates, employment opportunities, and community initiatives. This platform was developed based on stakeholder recommendations, including input from the Kivalliq Socio-Economic Monitoring Committee, and has since become a key channel for real-time updates and engagement.

Strengthening Community Awareness Through Social Media

In 2024, Agnico Eagle leveraged social media to share timely updates and build awareness on various topics of interest to impacted communities, including:

- Community Office Hours – Updates on Baker Lake and Rankin Inlet office availability.
- Employment Information Sessions – Dates and locations for recruitment events in Kivalliq communities.
- Business Opportunities – Posts highlighting procurement and partnership opportunities.
- Sanajiksanut Program Launch – Promoting job openings and recruitment for Inuit employment programs.
- Sealift Season and Cyanide Transportation – Informing communities about logistics and safety measures.
- AWAR and WTHR Awareness and Road Rules – Providing guidance on road safety during mine-related activities.

- Caribou Migration and Road Closures – Sharing updates on wildlife monitoring and conservation efforts.
- Community Development Initiatives – Highlighting collaborations that support local economic and social well-being.

In 2024, the Meadowbank Facebook page saw a 42% increase in activity, with 233 posts compared to 164 in 2023, demonstrating Agnico Eagle's ongoing efforts to enhance transparency and outreach.

Expanding Reach Through Website & Blog Engagement

Beyond social media, Agnico Eagle continued to engage communities through its Nunavut website, featuring blog posts that celebrated cultural, economic, and workforce initiatives. Topics included:

- Agnico Eagle Perseverance Kajussissimainarniq Scholarship – Supporting educational aspirations.
- Inuit Culture Nights at Camp – Promoting cultural exchange and tradition.
- Mine Sites Country Kitchen Activities – Showcasing culinary traditions at site.
- Inuit Employee Training and Empowerment – Highlighting professional development opportunities.
- Business Mentorship Program – Supporting Nunavut entrepreneurs.
- Elders' Visits & Conservation – Connecting traditional knowledge with sustainability.
- Youth Empowerment Initiatives with Recreation and Parks Association of Nunavut (RPAN) – Investing in the next generation of Nunavummiut.

To extend reach and encourage community engagement, all blog content was reshared on the Nunavut Facebook pages, ensuring a broader audience could access and interact with these initiatives.

Evolving Community Engagement

Agnico Eagle continues to adapt its communication efforts to meet the evolving needs of Kivalliq communities. By maintaining active and responsive digital platforms, Agnico Eagle continues to provide accessible, transparent, and relevant information, fostering stronger relationships and ongoing dialogue with impacted communities.

Ensuring Public Access to Key Information

To ensure ongoing public access to key information, the Agnico Eagle Web Portal (<https://aemnunavut.ca/media/documents/>) has been updated with the 2016 to 2023 Annual Reports, associated management plans, and other relevant documents. The portal will continue to be maintained with the latest reports and information, ensuring regular updates of all publicly required documents on an annual basis.

11.10 SOCIO-ECONOMIC MONITORING PROGRAM (SEMP, SEMC, SEMWG, SEMR)

11.10.1 Meadowbank and Whale Tail Sites

As required by NIRB Project Certificate No.004 Condition 63: *the GN and INAC shall form a Meadowbank Gold Mine Socio-Economic Monitoring Committee (“Meadowbank SEMC”) to monitor the socio-economic impacts of the Project and the effectiveness of the Project’s mitigation strategies; the monitoring shall supplement, not duplicate, the monitoring required pursuant to the IIBA negotiated for the Project, and on the request of Government or NPC, could assist in the coordination of data collection and tracking data trends in a comparable form to facilitate the analysis of cumulative effects; the terms of reference shall focus on the Project, include a plan for ongoing consultation with KivIA and affected local governments and a funding formula jointly submitted by GN, INAC and [Cumberland]; the terms of reference shall be submitted to NIRB for review and subsequent direction within six (6) months of the issuance of a Project Certificate; [Cumberland] is entitled to be included in the Meadowbank SEMC.*

And

As required by NIRB Project Certificate No.004, Condition 64: *[Cumberland] shall work with the GN and INAC to develop the terms of reference for a socio-economic monitoring program for the Meadowbank Project, including the carrying out of monitoring and research activities in a manner which will provide project specific data which will be useful in cumulative effects monitoring (upon request of Government or NPC) and consulting and cooperating with agencies undertaking such programs; [Cumberland] shall submit draft terms of reference for the socio-economic monitoring program to the Meadowbank SEMC for review and comment within six (6) months of the issuance of a Project Certificate, with a copy to NIRB’s Monitoring Officer.*

And

As required by NIRB Project Certificate No 008, Condition 44: *The Proponent is strongly encouraged to continue to participate in the work of the Kivalliq Socio-Economic Monitoring Committee along with other agencies and the communities of the Kivalliq region, and to identify areas of mutual interest and priority for inclusion into a collaborative monitoring framework that includes socio-economic priorities related to the Project, communities, and the Kivalliq region as a whole. Information regarding the Proponent’s efforts in fulfillment of this term and condition shall be included in the Proponent’s annual report to the Nunavut Impact Review Board*

And

As required by NIRB Project Certificate No.008, Condition 54: *Proponent should ensure that the development of all project monitoring plans and associated reporting and updates are undertaken with active engagement of Kivalliq communities, land users, and harvesters. The Proponent should work with the Kivalliq Inuit Association, the local Hunters and Trappers Organizations and the Kivalliq Socio-Economic Monitoring Committee to report on the collection and integration of Inuit Qaujimaningit through its monitoring programs for the Project. To the extent that the sharing of such information is consistent with, and not limited by, any confidentiality or other agreements, summaries addressing the Proponent’s fulfillment of this term and condition should be included in the Proponent’s annual report to the Nunavut Impact Review Board.*

The Socio-Economic Monitoring Program (SEMP) is a framework used to monitor and evaluate the various indicators, metrics, units of measurements, etc., that are outlined in the Project Certificates.

Agnico Eagle commits to reporting on the SEMP annually. In 2024, no changes were brought to the program.

The Socio-Economic Monitoring Working Group (SEMWG) traditionally included GN and CIRNAC, however, in 2020 KivIa officially joined the SEMWG. The aim of this working group is to support Agnico Eagle's SEMP and the Kivalliq Socio-Economic Monitoring Committee (KvSEMC). In December 2024, Agnico Eagle tried to organize one (1) teleconference with the SEMWG to receive comment and feedback from the most recent post-covid SEMC (Fall 2022).

The Kivalliq Socio-Economic Monitoring Committee (KvSEMC) meets annually to present data and consider socio-economic impacts and benefits of mining projects generally on the Kivalliq region. Members of the KvSEMC include Government of Nunavut (including specific departmental representation), Government of Canada, Kivalliq Inuit Association, Hunters and Trappers Organizations, Community representatives, community organizations and Project owners. The Government of Nunavut chairs the KvSEMC. Feedback provided in the KvSEMC informs the final Socio-Economic Monitoring Report. Additionally, the KvSEMC can recommend additional monitoring priorities. In 2024, the Kivalliq Socio-economic Committee (KvSEMC) meeting was organized from December 3 - 5 where various stakeholders collaborated to discuss impacts of socio-economic projects in the region.

The Socio-Economic Monitoring Report (SEMR) is the annual report on the SEMP. It is a comprehensive socio-economic monitoring report that contains Project-level data (data collected by Agnico Eagle at each Project site or regionally) and community-level data (data provided by or in communities), including data that is mandated by the Project Certificate. It was reviewed by the SEMWG prior to its submission, to allow those groups to provide insight. Agnico Eagle is appending the 2024 Agnico Eagle Kivalliq Projects Socio-Economic Monitoring Report, in Appendix 47.

11.10.2 Whale Tail Site Updates

As required by NIRB Project Certificate No.008, Condition 45: The Proponent shall work in collaboration with other socio-economic stakeholders including, the Government of Nunavut, Indigenous and Northern Affairs Canada, the Kivalliq Inuit Association, and communities of the Kivalliq region, to establish a socio-economic working group for the Project to develop and oversee a Kivalliq Projects AEM Socio-Economic Monitoring Program. The working group will develop a Terms of Reference, which outlines each member's roles and responsibilities with regards to, where applicable, project specific socio-economic monitoring throughout the life of the projects. The Proponent shall work with the other parties to use the updated Kivalliq Projects Socio-Economic Monitoring Program to monitor the predicted impacts outlined in the projects' respective environmental impact statements as well as regional concerns identified by the Kivalliq Socio-Economic Monitoring Committee. The Proponent shall work in collaboration with all other socio-economic stakeholders such as the Government of Nunavut, Indigenous and Northern Affairs Canada, Kivalliq Inuit Association, and the communities of the Kivalliq region in developing this program, which should include a process for adaptive management and mitigation in the event unanticipated impacts are identified. The Terms of Reference for this multi-party, multi-project Working Group are to be provided to the Nunavut Impact Review Board (NIRB) upon completion, and within one (1) year of issuance of the Project Certificate. The Proponent shall produce annual joint "AEM Kivalliq Projects" Socio-Economic Monitoring reports throughout the life of the Projects that are submitted to the NIRB and discussed with the wider Kivalliq Socio-Economic Monitoring Committee. Details of the Kivalliq Projects Socio-Economic Monitoring Program are to be provided to the NIRB upon finalization, and within one (1) year of issuance of the Project Certificate. Information regarding the Proponent's efforts in

fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.

And

As required by NIRB Project Certificate No.008, Condition 53: Provided the collection and sharing of such information is consistent with and not limited by any Inuit Impact and Benefit Agreement with the Kivalliq Inuit Association and that employees are willing to voluntarily provide this information, the Proponent should collect and provide project-specific data concerning employee community of residence and number of employees that relocated from the year prior (where available, to and from, for Arviat, Baker Lake, Chesterfield Inlet, Coral Harbour, Nauyasat, Rankin Inlet and Whale Cove). The details of this process will be captured in the terms of reference for the project specific Whale Tail Pit Socio-Economic Monitoring Committee. Summaries of this information should be included in the annual Whale Tail Pit socio-economic monitoring reports submitted to the Nunavut Impact Review Board and shared with the wider Kivalliq Socio-Economic Monitoring Committee throughout the life of the Project.

And

As required by NIRB Project Certificate No 008, Condition 46: The Proponent should develop a Project-specific Whale Tail Pit Socio-Economic Monitoring Program designed to:

- *Monitor for project-induced effects, including the impacts predicted in the Environmental Impact Statement through indicators presented in the Whale Tail Pit Socio-Economic Monitoring Plan;*
- *Reflect regional socio-economic concerns identified by the Kivalliq Socio-Economic Monitoring Committee (KivSEMC);*
- *Work in collaboration with all other socio-economic stakeholders such as the Kivalliq Inuit Association, the Government of Nunavut, and Indigenous and Northern Affairs Canada, and the communities of the Kivalliq region to develop the program;*
- *Include a process for adaptive management and mitigation to respond if unanticipated impacts are identified; and*
- *Monitor the success of existing and newly implemented gender-specific initiatives to determine their success and why they were considered successful or to identify any challenges to their implementation.*

Details of the Whale Tail Pit Socio-Economic Monitoring Program should be submitted to the Nunavut Impact Review Board (NIRB) within one (1) year of issuance of the Project Certificate. The Proponent should produce annual Whale Tail Pit socio-economic monitoring reports throughout the life of the Project that are submitted to the NIRB and shared with the wider KivSEMC.

And

As required by NIRB Project Certificate No 008, Condition 50: The Terms of Reference for this multi-party, multi-project Working Group are to be provided to the Nunavut Impact Review Board (NIRB) upon completion, and within one (1) year of issuance of the Project Certificate. Details of the Kivalliq Projects Socio-Economic Monitoring Program are to be provided to the NIRB upon finalization, and within one (1) year of issuance of the Project Certificate. The Proponent shall produce annual joint "AEM Kivalliq Projects" Socio-Economic Monitoring reports throughout the life of the Projects that are to be submitted as part of the Proponent's annual report to the NIRB.

Refer to Section 11.10.1 above.

11.10.3 Socio-Economic Monitoring Report

As required by NIRB Project Certificate No.004, Condition 65: *Cumberland shall include in its socio-economic monitoring program for the Meadowbank Project the collection and reporting of data of community of origin of hired Nunavummiut.*

And

As required by NIRB Project Certificate No.008, Condition 48: *The Proponent is strongly encouraged to submit staff schedule forecasts that should, at a minimum, include the following:*

- *Title of positions required by department and division;*
- *Quantity of positions available by project phase and year;*
- *Transferable skills, both certified and uncertified which may be required for, or gained during, employment within each position;*
- *The National Occupational Classification code for each individual position.*

The Proponent should also identify and register all trades occupations, journeypersons, and apprentices working with the Project and make this information available to the Government of Nunavut to assist in delivery of training initiatives and programs. The Staff Schedule should be submitted to the Nunavut Impact Review Board six (6) months prior to each phase of the Project (construction, operations, closure).

And

As required by NIRB Project Certificate No.008, Condition 53: *Provided the collection and sharing of such information is consistent with and not limited by any Inuit Impact and Benefit Agreement with the Kivalliq Inuit Association and that employees are willing to voluntarily provide this information, the Proponent should collect and provide project-specific data concerning employee community of residence and number of employees that relocated from the year prior (where available, to and from, for Arviat, Baker Lake, Chesterfield Inlet, Coral Harbour, Nauyasat, Rankin Inlet and Whale Cove). The details of this process will be captured in the terms of reference for the project specific Whale Tail Pit Socio-Economic Monitoring Committee. Summaries of this information should be included in the annual Whale Tail Pit socio-economic monitoring reports submitted to the Nunavut Impact Review Board and shared with the wider Kivalliq Socio-Economic Monitoring Committee throughout the life of the Project.*

And

As required by NIRB Project Certificate No.008, Condition 61: *The Proponent, in collaboration with the Government of Nunavut and the Nunavut Housing Corporation, is encouraged to investigate measures and programs designed to assist Project employees with pursuing home ownership or accessing affordable housing options in the Kivalliq region. The Proponent should provide access to financial literacy, financial planning, and personal budgeting as part of the regular Life Skills Training and/or Career Path Program. Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.*

And

As required by NIRB Project Certificate No.008, Condition 59: *The Proponent is encouraged to work with the Kivalliq Inuit Association to establish cross-cultural training initiatives, which promote respect and consideration for the importance of Inuit Qaujimajatuqangit to the Inuit identity and to make this training available to Project employees and on-site sub-contractors. The Proponent should actively monitor the implementation of these initiatives, including the following items:*

- *Descriptions of the goals of each program offered;*
- *Language of instruction;*
- *Schedules and location(s) of when each program was offered;*
- *Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit participation rates; and*
- *Completion rates for enrolled participants, noting Inuit and non-Inuit participation rates.*

Summaries of the cross-cultural training initiatives implemented by the Proponent in fulfilment of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.

And

As required by NIRB Project Certificate No.008, Condition 62: *The Proponent should work with the Government of Nunavut to develop an effects monitoring program that identifies Project-related pressures to community infrastructure such as airport and transportation infrastructure, policing, health and social services, in Baker Lake and all the point-of-hire communities of the Kivalliq Region. Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.*

The section below summarizes key Agnico Eagle's socio-economic reporting, related primarily to employment and training. For the full report on the Project's socio-economic monitoring, please refer to the Appendix 47.

Reports can also be viewed on the Socio-Economic Monitoring Committee website on Agnico Eagle's website <http://aemnunavut.ca/media/documents/>.

11.10.3.1 Workforce

Agnico Eagle calculates the workforce based on headcount (snapshot of active employees taken at the end of the year, which includes full-time and part-time employees) and Full-Time Equivalents (FTE) (number of full-time positions based on hours worked, where one full time position is equivalent to 2,184 hours worked in a year).

The number of active Agnico Eagle employees working at Meadowbank and Whale Tail on December 31st, 2024, was 1,118, of which 160 employees were Inuit employees. The respective full-time equivalencies were 929 Agnico Eagle employees in total and 145 full-time equivalent (FTE) of Inuit Agnico Eagle employees.

The number of contractors employed at the project is only calculated using full-time equivalents (FTEs) due to the cyclical nature of contractor work. Therefore, during 2024 there were 727 full time equivalent contractor positions, and approximately 30 contractor Inuit.

Taken together, there were 1,831 FTE employees (Agnico Eagle permanent, temporary, on-call, students, and contractors), working full- and part-time jobs, at the end of 2024.

Agnico Eagle defines job statuses as follows:

- Permanent employee: an employee whose current job is not specifically tied to a short-term project and the position is expected to be required throughout the life of mine (LOM).
- Temporary employee: an employee whose current job will not continue beyond a specified period.
- On-call employee: an employee who has an undefined contract and is called upon when the need arises. It is expected that on-call employees will move to temporary or permanent positions as they become available.

11.10.3.1 Employment Demographics for Nunavut Based Employees

Table 11-6 shows the employment demographics for community of hire by headcount.

Table 11-6 Home communities of Agnico Eagle Inuit employees (by headcount)

Community of Hire	2022 Agnico Eagle headcount	2023 Agnico Eagle headcount	2024 Agnico Eagle headcount
Arviat	50	33	24
Baker Lake	138	123	91
Naujaat	9	5	3
Rankin Inlet	16	5	4
Chesterfield Inlet	2	3	3
Whale Cove	2	2	2
Coral Harbour	5	2	0
Kitikmeot	1	0	2
Qikiqtani	0	0	1
Outside of Kivalliq	22	24	30
Total	245	197	160

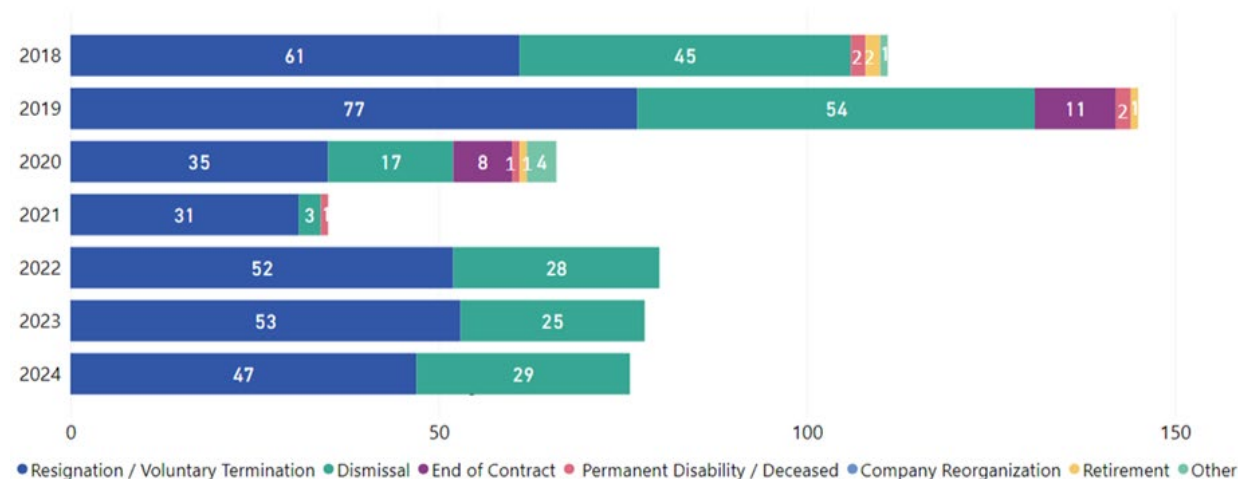
Agnico Eagle pays for the transportation of all Kivalliq-based employees from their home community to the mine for each work rotation. For employees coming from Arviat, Chesterfield Inlet, Rankin Inlet and/or Whale Cove, Agnico Eagle has a service contract with Calm Air to transport employees by charter plane from Rankin Inlet directly to and from the Meadowbank mine airstrip. For employees coming from Coral Harbour and/or Naujaat, a commercial ticket is bought from their home communities to the Baker Lake airport. Once in Baker Lake, they are transported by bus to and from the mine site via a daily ride similar to employees coming from Baker Lake. For all other employees not located in the Kivalliq region, transportation is provided from Mirabel and Val-d'Or via a charter flight operated by Nolinor Aviation.

11.10.3.1.2 Employee Retention

Figure 35 provides a breakdown of Inuit turnover (employees who leave Agnico Eagle's employment each year) by reason for leaving for Meadowbank/Whale Tail.

Figure 35 Breakdown of Inuit turnover 2018-2024

MEADOWBANK AND WHALE TAIL



In 2024, 76 Inuit employees departed from Meadowbank/Whale Tail. In 2024, total resignations / voluntary departure accounted for 47 out of 76 terminations of Inuit employees, with the remaining turnover (29 Inuit employees) attributed to dismissal. Resignations/voluntary departure and dismissals when similar to the previous year.

Agnico Eagle conducts one-on-one exit interviews to gather information on reasons for resignation and voluntary departure. Exit interviews collect qualitative information on common reasons why employees have left.

The reasons for the 47 departures at Meadowbank / Whale Tail included:

- Moving to another job (6);
- Family situation (9);
- Not liking camp life and / or missing family (8);
- Not liking the job (3);
- Conflict with an employee / supervisor (7);
- Lack of access to child support (5); and

- Other (9).

The turnover rate for Inuit employees at all Agnico Eagle projects is consistently higher than that for non-Inuit employees. At Meadowbank / Whale Tail, Inuit employee turnover was 42% in 2024 compared to 7% for non-Inuit.

11.10.3.1.3 Summer Student Employment Program

Agnico Eagle is committed to empowering the next generation of Nunavummiut by providing hands-on work experience, career development, and exposure to the mining industry through its summer employment programs. By fostering early engagement with students, strengthening ties with educational institutions, and creating direct pathways to employment, the company is helping to build a skilled and informed workforce for the future.

Recognizing the need for proactive outreach, Agnico Eagle has taken deliberate steps to strengthen interest in its summer employment programs by collaborating with Nunavut Arctic College (NAC), community leaders, and regional education initiatives. These engagements serve to educate, inspire, and connect students with real-world opportunities in the mining sector.

Building Stronger Partnerships with Nunavut Arctic College (NAC)

Introducing Students to Mining Careers: Agnico Eagle engaged with representatives responsible for NAC's Environmental Technology Program (ETP), to discuss a direct outreach initiative. Plans were set in motion for Agnico Eagle to visit ETP students in Iqaluit, introduce them to environmental careers in mining, and promote summer internship opportunities. NAC expressed strong interest, and an in-person planning meeting was scheduled.

Meet & Greet with ETP Students: Agnico Eagle hosted an interactive session with first- and second-year ETP students, where representatives from Community Relations, Meliadine Environmental, and Meadowbank Environmental departments introduced them to:

- Agnico Eagle's Nunavut operations and life at camp;
- Summer employment and internship opportunities;
- Meliadine Environmental Monitoring Programs and the Meadowbank Closure Plan; and
- Potential long-term career paths in the environmental field.

Impact: 17 students attended, engaging in active discussions. Three students expressed strong interest in summer internships. The session sparked numerous questions, demonstrating a high level of engagement and enthusiasm.

Environmental Technology Conference at NAC: Another session specifically focused on career opportunities in environmental monitoring and mining sustainability.

Impact: 13 students participated, expressing interest in internships for summer 2025.

Delivering Meaningful Summer Employment in 2024

Through these efforts, Agnico Eagle welcomed three summer students in 2024, providing them with direct exposure to operations and professional development opportunities:

- One (1) student in Baker Lake, supporting the Community Relations department.

Agnico Eagle remains dedicated to offering meaningful work experiences, while also ensuring that employment opportunities are structured, safe, and aligned with business needs. The company has implemented clear eligibility requirements to maintain workplace safety and accessibility:

- Students must be 18 years or older to work at mining sites; and
- Students 16 years or older may work in Baker Lake or Rankin Inlet offices.

By taking a proactive approach to student engagement, Agnico Eagle is not only creating employment opportunities but also investing in the long-term sustainability of Nunavut's workforce. Through direct engagement with students, internship opportunities, and strengthened partnerships with educational institutions, Agnico Eagle is helping to build career pathways that extend beyond summer jobs. Looking ahead, Agnico Eagle will continue working closely with Nunavut Arctic College, regional training organizations, and community leaders to empower the next generation of Inuit professionals.

11.10.3.2 Training

Agnico Eagle's Training Management System (TMS) and the Learning Management System (LMS) tracks and reports on training activities. The list of training provided can be found in Appendix 49.

11.10.3.2.1 Pre-employment training (Sanajiksanut Program)

Agnico Eagle remains committed to supporting Inuit employment and career development through the Sanajiksanut Program, which facilitates access to job opportunities, provides targeted training, and strengthens recruitment efforts. While recognizing the unique challenges associated with employment in remote regions, Agnico Eagle continues to collaborate with community partners and Inuit organizations to enhance its approach in a way that aligns with both community needs and operational requirements.

The Sanajiksanut Program is built around four key principles that guide Agnico Eagle's efforts in expanding Inuit workforce participation:

- Partnership with Ilitaqsiniq (Nunavut Literacy Council): Agnico Eagle collaborates with Ilitaqsiniq to integrate community-based training into its recruitment process. The pre-employment training program, designed by Inuit for Inuit, is delivered by an Inuit instructor, ensuring that training aligns with local needs and cultural values.
- Inuit Workforce Planning: Recruitment planning is conducted alongside operational teams to ensure Inuit employment opportunities are identified and supported within the company's workforce strategy.

- **Recruitment Process Enhancements:** To increase accessibility, Agnico Eagle has adapted communication channels to better reach Inuit candidates, ensuring they receive timely job opportunity updates.
- **Mining Awareness and Career Outreach:** The program works to engage younger generations through career awareness initiatives in Kivalliq schools and colleges, promoting long-term interest in the mining industry.

The Sanajiksanut Program consists of four (4) steps as detailed below:

Step 1: Expanding Access Through Employment Information Sessions

To enhance outreach, Agnico Eagle organized employment information sessions across Kivalliq and beyond, aiming to provide clear guidance on job opportunities and application processes.

In 2024, 20 sessions were conducted (compared to 19 in 2023) across six Kivalliq communities (Rankin Inlet, Baker Lake, Arviat, Naujaat, Coral Harbour, and Chesterfield Inlet), as well as in Winnipeg and Ottawa to connect with Inuit job seekers living outside Nunavut.

492 Inuit participants attended these sessions in 2024, a significant increase from 183 participants in 2023. Some scheduled sessions were impacted by logistical challenges, including weather conditions, accommodation availability, and Community Liaison Officer (CLO) presence. However, efforts were made to reach as many potential candidates as possible through alternative engagement methods.

Step 2: Online Application Process Facilitated by Employment Information Sessions

To facilitate job applications, Agnico Eagle provides localized support through Community Liaison Officers (CLOs) stationed in five Kivalliq communities: Rankin Inlet, Baker Lake, Arviat, Coral Harbour, and Chesterfield Inlet. In 2024, CLOs and the Sanajiksanut Coordinator provided one-on-one assistance to job seekers, both in-person and remotely.

Employment information sessions were expanded to Naujaat, where Sanajiksanut team members helped potential applicants navigate the job application process.

A new digital application tool was introduced, allowing applicants to submit their information via a simple online form accessible through a QR code.

Step 3: Building Job Readiness Through Pre-Employment Training

Recognizing the importance of skill development, Agnico Eagle supported seven Pre-Employment Training programs in 2024, fully facilitated by Iilitaqsiniq (Nunavut Literacy Council).

47 participants successfully completed training programs across five communities:

- Rankin Inlet: 2 sessions, 7 participants;
- Chesterfield Inlet: 1 session, 3 participants;

- Baker Lake: 2 sessions, 21 participants;
- Arviat: 1 session, 7 participants; and
- Coral Harbour: 1 session, 9 participants.

These programs align with pilimmaksarniq—a core Inuit value that emphasizes skill-building through learning experiences—ensuring that participants develop both technical and workplace skills to support long-term employability.

Step 4: Labour Pool List Coordinated by the Labour Pool Coordinator

Agnico Eagle maintains a Labour Pool List, tracking candidates who have completed the Sanajiksanut Program and are eligible for job opportunities within the company or with contractors.

Since the implementation of recruitment process changes in 2022, Agnico Eagle has successfully hired 430 Inuit employees. In 2024 alone, 105 Inuit employees were hired through this program.

The Sanajiksanut Program continues to adapt based on ongoing feedback from community partners and evolving operational priorities. Agnico Eagle remains committed to supporting workforce development initiatives that help facilitate job readiness and career growth for Nunavummiut.

In 2024, discussions with the Government of Nunavut (GN) Department of Family Services have focused on aligning employment initiatives with broader workforce strategies and identifying areas where collaboration can further support Inuit employment. Key areas of discussion have included:

- Enhancing collaboration on apprenticeship training and workforce development to support Inuit workers in transitioning into skilled trade positions;
- Improving recruitment accessibility by strengthening pre-employment training and community outreach efforts;
- Exploring ways to recognize and develop transferable skills, ensuring broader career pathways for Inuit job seekers; and
- Ongoing discussions regarding employment certifications and training opportunities to align workforce development with industry needs and community aspirations.

While logistical challenges such as weather, accommodation availability, and operational constraints may occasionally affect program delivery, Agnico Eagle remains committed to working collaboratively with the GN, Inuit organizations, and community stakeholders to explore opportunities for enhancing employment access and creating meaningful career pathways.

11.10.3.2.2 Training Hours

The following categories of training are available:

- **Mandatory:** Mandatory training related to compliance with the Nunavut Mine Act, as well as training that is mandated according to Agnico Eagle Health and Safety policies. Many of these training sessions are offered via e-learning prior to employee's arrival on site;
- **General:** Training activities required at a departmental level and covers many employees working in different departments. General training includes training on light duty equipment as well as enterprise software systems and cross-cultural training;
- **Specific:** Focused on developing individual competencies related to a specific position. This training qualifies individual workers for promotion following their progression through the Career Path. These training programs are provided by in classroom (theory) learning as well as practical (one-on-one) learning; and
- **Emergency Response Training** for certain individuals to assist and help in a variety of emergency situations.

Table 11-7 provides the training hours provided to Agnico Eagle employees at Meadowbank and Whale Tail (excluding contractors) in 2024.

Table 11-7 2024 Training hours

Type of Training	Inuit	Non-Inuit
Mandatory	514	8,128
General	353	5,182
Specific	11,322	14,269
Education	251	0
Specific Practical Evaluation	895	792
Specific Primary Evaluation	0	0
ERT	100	4,144
Total	13,867	32,515

11.10.3.2.3 Training Programs

11.10.3.2.3.1 E-Learning

Before coming to an Agnico Eagle site for the first time, newly hired employees must complete their Mandatory Training online, which consists of six (6) modules: General Induction, WHMIS, Fire Suppression, Job Hazard Analysis and Work Card, Spill Response, and Occupational Health and Safety (Personal Protective Equipment, Ladder Safety, Surface Standard Operating Procedure). The General Induction chapter provides general information about Agnico Eagle and working life at the mines, waste management, as well as information on the IIBAs and archaeological awareness. The e-learning training material has been translated into English, French, and Inuktitut.

In 2024, a few tools have been developed in the Training Management System (TMS) in order to improve user experience and the tracking of the training compliance. Also, the Training team has delivered many training sessions to improve the level of knowledge and skills on the Training Chart, which is an important tool for supervisors and management regarding the training compliance of the employees.

11.10.3.2.3.2 Cross-Cultural

Advancing Cultural Awareness Training for a More Inclusive Workplace

Agnico Eagle continues to refine its Cultural Awareness training to foster a deeper understanding of Inuit culture, values, and perspectives in the workplace. After an evaluation in 2022, it was determined that the previous training did not fully enhance cultural awareness and was too focused on Agnico Eagle's internal structure. To address this, Aqqiumavvik was selected to redesign the training, incorporating Inuit Qaujimajatuqangit (IQ) and Inuit Societal Values (ISV), along with interactive hands-on learning activities.

Progress and Implementation in 2023 to 2024

In 2023, significant strides were made in developing and piloting the revamped Cross-Cultural training program: A workshop was delivered to enhance understanding of different cultures and improve workplace communication. Finalized course content was delivered by Aqqiumavvik in summer 2023. Three pilot sessions were conducted at Meliadine in fall 2023, with support from an Inuk HR agent at the site. In January 2024, trainers were prepared to lead the sessions, with Inuit site representatives supporting the IQ portion of the training. The program was officially rebranded as Cultural Awareness to better reflect its objectives.

Cultural Awareness Training in 2024

In 2024, Agnico Eagle conducted 37 Cultural Awareness courses, with 20 sessions held at the Meadowbank Complex Site. The training was primarily facilitated by an Adult Educator, occasionally assisted by Inuit employees to present the IQ segment. Throughout the year, seven Inuit employees were onboarded as co-facilitators to help deliver the course. While none of these employees currently feel comfortable leading the sessions full-time, discussions are ongoing to explore long-term solutions for sustainable course facilitation. The onsite reception of the course has been very positive, with employees expressing appreciation for the interactive and engaging approach of the training.

On June 12th, 2024, two representatives from Kivalliq Inuit Association reviewed the course content and provided constructive feedback, most of which was favorable and has since been incorporated into the program.

This training continues to evolve, with a focus on building cultural understanding, improving workplace inclusion, and ensuring meaningful participation from Inuit employees in both the design and delivery of the program.

11.10.3.2.3.3 Career Paths

Agnico Eagle operates the Career Path program, which outlines the step-by-step progression that employees must follow to advance in their chosen career. The objective of the Career Path Program is to achieve 100% internal promotions for Inuit and no external candidates (southerners) hired to fill a position that is part of the program.

Enhancing Career Development Through Program Revisions

In 2024, the Training Department, in collaboration with operational teams, initiated a comprehensive review of career pathways within Energy & Infrastructure, Warehouse, and Process Plant departments. This revision aims to align career development opportunities with evolving operational needs, ensuring that employees have clear, structured pathways for professional growth and skill advancement within these key areas.

11.10.3.2.3.4 Trainee Programs

Agnico Eagle continues to support training efforts across projects. At Meadowbank / Whale Tail specific training increased for Inuit employees.

Training efforts for 2024 were as follows:

- Ten (10) trainees were enrolled in the Underground Trainee Program, and of those, seven (7) successfully completed the program;
- In 2023, Meadowbank launched a pilot program with CMAC, a key Agnico Eagle contractor providing specialized mining services. The aim was to train CMAC employees, with the support of Agnico Eagle, in the General Labor position. The duration of the program was 336 hours to focus on the General Labor position instead of the Haul Truck positions, delivering the Common Core Ontario training (3 days) instead of the Quebec training (7 days);
- Building on the success of the 2023 pilot project, the Underground Trainee Program continued in 2024 with two cohorts, each consisting of two trainees. So far, one trainee has successfully graduated, while two trainees remain actively enrolled. Additionally, two trainees postponed their training but are expected to complete the program in early 2025. This initiative continues to provide hands-on experience, fostering skill development and career growth in underground mining;
- At Meadowbank, four (4) trainees were enrolled in the Haul Truck Trainee Program, and of those, three (3) successfully completed the program. These trainees came from two (2) trainees each who all began the training in 2024; and
- In 2024, no trainees completed the Long Haul Truck Trainee Program at Meadowbank. In 2023, two (2) trainees completed the program, with Agnico Eagle noting that finding suitable candidates for this type of program is difficult.

The **Underground Trainee Program** is a trainee program at Meadowbank Complex created by Agnico Eagle and affiliated with CMAC. This program is a 42 days (504-hour) program. Trainees go through the Underground Common Core, given by a CMAC Instructor on-site, followed by training by Agnico Eagle trainers. By the end of the program, the trainees have the knowledge, the practice, and the experience to work in general labor.

The **Haul Truck Trainee Program**, run at Meadowbank, is a 42-day (504-hour) program to certify haul truck operators, which includes training on a simulator, in the classroom, and on the job. The program is aimed at existing employees in entry-level positions (e.g., dishwashers, janitors, chambermaids.).

A **Process Plant Trainee Program** is a 28-day program provides employees with an understanding of the mining and milling process and trains them to be competent and certified to fill positions as a process plant helper or a utility person.

The **Long-Haul Truck Trainee Program** is a 28-day (336-hour) program to certify long haul truck operators, which includes training on a simulator, in the classroom, and on the job. The program is aimed at existing employees in the mining department. A maximum of four (4) trainees is permitted at a time with one (1) trainer to provide the best training possible.

11.10.3.2.3.5 Apprenticeship Program

Supporting Inuit Career Growth Through Apprenticeship Opportunities

The Apprenticeship Program integrates on-the-job training with technical instruction, providing Inuit employees with the opportunity to develop skilled trades expertise. Over the course of three to four years, apprentices gain hands-on experience and classroom knowledge in their chosen trade, with the potential to challenge the Certificate of Qualification (COQ) exam to obtain their Gold Seal Journeyperson certificate. Those who meet the requirements may also pursue the Red Seal Exam, further expanding their career prospects. Agnico Eagle currently provides apprenticeship opportunities in six key trades: Millwright, Electrician, Heavy Duty Equipment Technician (HDET), Welder, Plumber, and Housing Maintainer.

Apprenticeship Program Activity in 2024

In 2024, one apprentice from Meadowbank successfully completed technical training in Alberta. Additionally, two new apprentices joined the program—one in plumbing and the other in electrical—bringing the total number of apprentices to seven by year-end.

To support workforce development, the adult educator provided study and learning resources to five Inuit employees who did not pass the HDET pre-trades entrance exam but remained eager to re-test, ensuring continued opportunities for skills advancement.

While outcomes may vary based on individual experiences, the apprenticeship program remains an avenue for Inuit employees to develop technical skills and industry experience that can contribute to their long-term career development in the skilled trades.

11.10.3.2.3.6 Adult Educator

In 2018, Agnico Eagle implemented an on-site education strategy at its Nunavut sites, starting with the appointment of a permanent Adult Educator at Meadowbank. The primary objective of the Adult Educator is to provide support to Agnico Eagle employees in enhancing their numeracy, literacy and soft skills. These skills are crucial for employees to access higher job positions and succeed in their apprenticeship journey.

Enhancing Workplace Learning Through Adult Education Support

At Meadowbank, the Adult Educator worked with three Inuit apprentices, focusing on math skills, test-taking strategies, reading comprehension, and science concepts relevant to their technical training. Additionally, life skills training—including safe travel practices—was incorporated to help ensure participants were well-prepared for their next phase of education and on-the-job learning. For Inuit employees in relief supervisor and leadership roles, the Adult Educator provided one-on-one coaching to develop communication, resilience, managerial confidence, organizational skills, and professionalism—all of which are critical for leadership growth in a dynamic work environment.

These educational efforts provided valuable learning resources to employees looking to advance their skills and career development within their chosen fields.

11.10.3.2.3.7 Emergency Response Team (ERT) training

Enhancing Emergency Preparedness at Meadowbank Complex

The Meadowbank Complex Emergency Response Team (ERT) plays a crucial role in ensuring site safety by responding to fires, hazardous materials incidents, underground emergencies, and other critical situations. Comprising dedicated employees who volunteer for this essential service, the ERT undergoes weekly training exercises, with each member required to complete a minimum of six practices annually, totaling 72 hours of specialized training per year.

By the end of 2024, the ERT had 115 active responders across Surface and Underground operations, including six (6) Inuit members. To strengthen emergency preparedness, seven (7) Basic Courses were conducted, adding 49 new Emergency Responders to the team. Throughout the year, 114 training sessions were held, covering a range of emergency scenarios, including aircraft response and hazardous materials (Hazmat) incidents.

Agnico Eagle's Emergency Response Team Demonstrates Excellence on the Global Stage

In 2024, Agnico Eagle's Emergency Response Team showcased its exceptional skills, teamwork, and preparedness in two (2) major mine rescue competitions, reinforcing the company's commitment to safety and emergency preparedness.

At the Northern Mining Health and Safety Forum (NMHSF) Mine Rescue Competition in Yellowknife, Agnico Eagle fielded a highly trained Surface team, demonstrating their ability to respond effectively to real-world emergency scenarios. Meanwhile, responders from Meadowbank, Meliadine, and Hope Bay came together to represent Agnico Eagle on the international stage at the International Mine Rescue Competition in Colombia. Competing against top teams from around the world, their dedication, precision,

and expertise led them to secure first place overall, a testament to the rigorous training and emergency response culture embedded within Agnico Eagle's operations.

These achievements highlight the elite level of emergency preparedness within Agnico Eagle, ensuring that its teams are equipped to handle any crisis with confidence, skill, and efficiency, both in competition and in real-world emergencies.

11.11 GENERAL SOCIO-ECONOMIC PROVISIONS

11.11.1 Whale Tail Site

11.11.1.1 Staff Schedule

As required by NIRB Project Certificate No.008, Condition 48: *The Proponent is strongly encouraged to submit staff schedule forecasts that should, at a minimum, include the following:*

- *Title of positions required by department and division;*
- *Quantity of positions available by project phase and year;*
- *Transferable skills, both certified and uncertified which may be required for, or gained during, employment within each position;*
- *The National Occupational Classification code for each individual position.*

The Proponent should also identify and register all trades occupations, journeypersons, and apprentices working with the Project and make this information available to the Government of Nunavut to assist in delivery of training initiatives and programs. The Staff Schedule should be submitted to the Nunavut Impact Review Board six (6) months prior to each phase of the Project (construction, operations, closure).

Construction Phase staff schedules have been sent to NIRB on May 2nd, 2018 and Operations Phase staff schedules have been sent to NIRB on April 25th, 2019 with an updated Version on June 25th, 2019 (Appendix 54 of the 2019 Annual Report).

11.11.1.2 Semi-Annual Call with Regulators

As required by NIRB Project Certificate No.008, Condition 49: *The Proponent shall make best efforts to collaborate with the Government of Nunavut's Career Development Officer, Regional Manager of Career Development, and Director of Career Development. Semi-annual calls, at a minimum, should be initiated by the Proponent to address:*

- *Hiring procedures and policies*
- *Issues regarding employee recruitment and retention*
- *AEM policies regarding career pathways and opportunities for advancement*
- *Internal and/or partnered training and development of employees*
- *Long-term labour market plans to facilitate training in communities*

Summary information addressing the Proponent's fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.

Agnico Eagle is committed to building strong partnerships with the Government of Nunavut - Department of Family Services to enhance workforce development, apprenticeship training, and career awareness initiatives across the region. Through site visits, teleconferences, and in-person meetings, these collaborations have provided critical opportunities to align Agnico Eagle's workforce needs with government-supported training and employment programs, ensuring that Nunavummiut gain meaningful access to careers in the mining industry.

Engagements and Key Outcomes in 2024

- January 2024 – Six (6) representatives from the Government of Nunavut - Department of Family Services visited Meliadine Mine to gain firsthand insight into the mining industry and Agnico Eagle's infrastructure, helping them better support job seekers and apprentices.
- March 2024 – A teleconference was held with four government representatives to explore key workforce development topics, including:
 - Apprenticeship Training on the Job Funding;
 - Apprentice Travel Support;
 - Concept of a Mining School in Rankin Inlet; and
 - Apprenticeship Day Initiative.

Advancing Apprenticeship and Career Pathways

- April 2024 – An in-person meeting was held in Iqaluit, where four representatives joined Agnico Eagle to discuss:
 - The possibility of Agnico Eagle delivering certifications for standardized trades;
 - The National Youth Mining Career Awareness Strategy;
 - Challenges and opportunities in the Apprenticeship Program;
 - The Government of Nunavut's Mine Training Strategy; and
 - A potential partnership with Skills Canada for career awareness initiatives.
- September 2024 – A teleconference with two (2) government representatives covered:
 - The MiHR Canadian Mining Certification Program;
 - Support for transferable skills within the mining sector;
 - Legislation regarding mining jobs and inclusion in the official Occupation Trade List; and
 - Expansion of the Rankin Inlet Trade School.

Career Awareness and Recruitment Initiatives

- October 2024 – An in-person meeting in Rankin Inlet with three government representatives led to an official invitation for the Department of Family Services to participate in Agnico Eagle's Career Day for the second consecutive year, which was gladly accepted.

This meeting reinforced collaborative efforts to enhance career pathways and apprenticeship opportunities for Nunavummiut, ensuring alignment between government workforce initiatives and Agnico Eagle's employment strategies.

- November 2024 – Government representatives participated in Career Day in Rankin Inlet, hosting an employment booth during the public session to provide information on the Apprenticeship Program and engaging with students through mining awareness activities.

Through these ongoing engagements, Agnico Eagle continues to play a proactive role in workforce development, ensuring that Nunavummiut receive the necessary support, training, and employment opportunities to pursue careers in mining. By aligning with the Government of Nunavut's workforce strategies, Agnico Eagle is not only meeting its hiring needs but also contributing to the long-term economic sustainability and career growth of local communities. These initiatives reinforce Agnico Eagle's dedication to investing in local talent, strengthening community partnerships, and fostering a skilled workforce for the future.

11.11.1.3 Listing of Formal Certificates and Licenses

As required by NIRB Project Certificate No.008, Condition 52: The Proponent should develop and maintain an easily referenced listing of formal certificates and licenses that may be acquired via on-site training or training during project employment. The listing shall indicate which of these certifications and licenses would be transferable to a similar job site within Nunavut. The initial listing should be provided to the Nunavut Impact Review Board within six (6) months of the Project Certificate being issued. Updates to the list should be included in the Proponent's annual reports submitted to the Nunavut Impact Review Board and shared with the wider Kivalliq Socio-Economic Monitoring Committee throughout the life of the Project.

In 2023, Agnico Eagle offered employees a "skills passport" to demonstrate transferrable skills. In July, Agnico Eagle met with MiHR to discuss the various initiatives that would grant Agnico Eagle's internal training a national accreditation and the employees a skills passport. Some of these programs were;

- The Canadian Mining Certification Program which was designed to certify trainee graduates and experienced Inuit operators. This was implemented by getting our Trainers certified to be "Workplace Assessors."; and;
- The Canadian Mining Recognition Program was created to recognize Agnico Eagle's in-house training programs.

In October 2023, Agnico Eagle decided not to pursue this option for several reasons such as;

- Lack of buy-in from the industry: only 1,800 registered profiles in the database after 10 years of existence; and

- Volume of work required to undertake this project and direct benefits for local workforce.

Agnico Eagle aims to explore more accessible options such as issuing a passport from TMS (in-house training and hours of operations at Agnico Eagle would be recognized in the industry) and conducting an assessment/recognition of skills via School of Mines/Ecole des Mines.

In 2024, the Skills Passport program was temporarily suspended due to staff shortages. Agnico Eagle intends to resume the program in 2025 with allocated funding in place.

A new initiative has been developed to ensure skills are properly assessed and accredited. Under this initiative, Inuit employees are sent to Quebec's School of Mines in Abitibi to enhance, assess, and certify their skills. Additionally, Agnico Eagle has implemented the Ontario Common Core for all trainees in the Underground Program, ensuring their registration with the Ministry of Ontario.

The listing of formal certificates and licenses was sent to NIRB on December 14th, 2018. There have not been any updates since the last submission. The list can be found in Appendix 59 of the 2018 Annual Report.

11.11.1.4 LMA and IWBS

As required by NIRB Project Certificate No.008, Condition 50: The Proponent will report the results of its Labour Market Analysis (LMA) and Inuit Work Barrier Study (WBS) to the Kivalliq Socio-Economic Monitoring Committee upon completion in 2018, which should integrate the findings into its ongoing work identifying gaps between the Kivalliq labour market and mining market needs, and how to activate latent labour pool in the Kivalliq region to maximize labour “capture” from mining for the region. The Proponent shall report the results and implications of the LMA and WBS within its first year’s Annual Report to the Nunavut Impact Review Board (NIRB), and show how the results have been integrated into an updated Socio-Economic Monitoring Plan for the Whale Tail Pit Project.

In 2023, the Employment and Culture Committee (ECC), comprising representatives from KivIA and Agnico Eagle, signed a Memorandum of Understanding (MOU) on updates to the Kivalliq Labour Market Analysis (KLMA) as part of IIBA obligations. Recognizing the need for a more effective timeline, the ECC recommended to the Implementation Committee (IC) that the KLMA cycle be adjusted to a three-year schedule. This change would allow sufficient time for comprehensive analysis, stakeholder collaboration, and the development of actionable workforce strategies.

In early 2023, the IC approved the ECC's recommendation, aligning the KLMA timeline with the IIBA's three-year review process. As a result, the KLMA was completed in 2024, ensuring that workforce projections and planning efforts remain aligned with broader regional economic and labour force trends.

The KLMA serves as a strategic tool to:

- Assess the regional workforce composition and trends;
- Forecast future labour market shifts and influencing factors; and
- Develop collaborative workforce strategies between Agnico Eagle and KivIA to strengthen Inuit participation in mining opportunities.

The executive summary of the KLMA findings is provided in Appendix 51, outlining key insights and recommendations for workforce development in the Kivalliq region.

In 2023, Agnico Eagle conducted an update to the IWBS, which is required under all Agnico Eagle's Kivalliq IIBAs. This edition of the 2023 IWBS covers three specific angles: gender-specific barriers, regional barriers and mine industry barriers. Complete report can be found in Appendix 51 of the 2023 Meadowbank Complex Annual Report.

11.11.1.5 Health Committee

As required by NIRB Project Certificate No.008, Condition 58: The Proponent is encouraged to form a subcommittee which includes Government of Nunavut representatives to reach consensus decisions on health related issues that the Proponent or the Government of Nunavut bring forward (e.g. programs and services to address sexually transmitted infections, a process for the treatment and transport of workers that may require medical services beyond that which the mine provides, monitoring and reporting on the impacts of the Project on health services within the potentially impacted communities and particularly, Baker Lake. etc.). Information regarding the Proponent's fulfillment of this term and condition shall be included in the Proponent's annual report to the Nunavut Impact Review Board.

And

As required by NIRB Project Certificate No.008, Condition 60: The Proponent shall engage with the Government of Nunavut to develop a process to ensure that any conditions first treated at the mine site and requiring ongoing care is appropriately accommodated in a timely manner at community health centres as required. Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.

Ongoing Collaboration with the Government of Nunavut on Health and Community Initiatives

In 2024, Agnico Eagle continued working with the Government of Nunavut (GN) to align health, safety, and cultural initiatives at its operations. A key meeting took place on April 3, where several areas of focus were discussed:

- Cyanide Transportation and Safety Kits – Continued engagement with the community before cyanide transportation. No further action required at this time;
- Patient File Sharing – Ensuring patient information requests remain secure and password-protected, with ongoing discussions on whether the process should be handled on a case-by-case basis. The next step is to schedule a call between clinics to finalize the information-sharing process;
- Sexually Transmitted Infections (STI) Awareness – Free condom distribution remains in place, with efforts to ensure alignment between on-site clinics and GN health regulations. Further discussions will take place in the next meeting;
- Prescription Medication Policy – The current approach of limiting prescriptions to one dose at a time remains in effect. No further actions required; and

- Culture and Language – Clinics plan to incorporate monthly health topics from the GN into their outreach efforts, with this initiative continuing as an area of focus.

A follow-up meeting planned for August 2024 in Rankin Inlet did not take place due to the absence of GN representation. Future discussions will provide opportunities to further align health and wellness initiatives with GN policies and community priorities.

11.11.1.6 Home Ownership

As required by NIRB Project Certificate No.008, Condition 61: The Proponent, in collaboration with the Government of Nunavut and the Nunavut Housing Corporation, is encouraged to investigate measures and programs designed to assist Project employees with pursuing home ownership or accessing affordable housing options in the Kivalliq region. The Proponent should provide access to financial literacy, financial planning, and personal budgeting as part of the regular Life Skills Training and/or Career Path Program. Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the Nunavut Impact Review Board.

Agnico Eagle recognizes the importance of housing accessibility as a key factor in supporting the long-term stability and well-being of its workforce in Nunavut. In alignment with Project Certificate requirement 61, the company has engaged in collaborative discussions with the Government of Nunavut and the Nunavut Housing Corporation to explore potential measures that support home ownership and access to affordable housing for project employees in the Kivalliq region.

In 2024, Agnico Eagle, alongside government agencies and community stakeholders, explored innovative solutions to address Nunavut's housing infrastructure needs. These discussions focused on:

- Identifying energy-efficient building materials and potential training programs to enhance local construction capabilities; and
- Exploring strategies to assist employees with home ownership.

Agnico Eagle in preliminary discussions on the potential impact of housing accessibility on workforce retention. These early conversations aim to assess housing-related factors that may influence long-term employment stability for Inuit workers, while considering broader regional workforce dynamics.

To help employees navigate financial planning and home ownership, Ilitaqsiniq's pre-employment curriculum includes training in:

- Financial literacy;
- Personal budgeting; and
- Financial planning.

This program ensures that new hires gain fundamental financial skills, which can contribute to long-term economic stability and housing readiness.

While challenges such as housing availability, affordability, and funding structures remain, Agnico Eagle will collaborate with the GN, Nunavut Housing Corporation, and other stakeholders to explore practical solutions that align with both community needs and project goals.

11.12 STATUS OF COMMITMENTS

11.12.1 Meadowbank Site

As required by NIRB Project Certificate No.004, Condition 1: *The commitments in this Final Hearing Report as Appendix A: Cumberland’s1 Commitments from the Final Hearing, are incorporated herein and must be met. In the event of a conflict between Appendix A and the Terms and Conditions of the Project Certificate, the Terms and Conditions of the Project Certificate prevail.*

An up-to-date listing of the status of implementation for commitments, made during the NIRB Final Hearings, and applicable to operation phase is provided in Appendix 1.

11.12.2 Whale Tail Site

As required by NIRB Project Certificate No.008, Condition 68: *The Proponent shall maintain an up-to-date listing of the status of implementation for its commitments made during the Nunavut Impact Review Board’s (NIRB) assessment of the Whale Tail Pit Project Proposal and the Whale Tail Pit Expansion Project Proposal through engagement of parties and active monitoring of associated implementation.*

The Proponent shall provide a status report on the implementation of all its commitments within three (3) months of issuance of the Project Certificate for the Whale Tail Pit Expansion Proposal and annually thereafter within its annual report to the NIRB.

An up-to-date listing of the status of implementation for commitments made during the NIRB assessment is provided in Appendix 2.

SECTION 12. POST-ENVIRONMENTAL ASSESSMENT MONITORING PROGRAM (PEAMP) – EVALUATION OF IMPACT PREDICTIONS

As required by NIRB Project certificate No.008 Item 11: The Proponent shall maintain the Environmental Impact Statement and the environmental monitoring programs developed for the Project, with predictions updated as new baseline data is collected. If the results of monitoring programs necessitate updates to effects predictions, the Proponent shall update the associated management programs and plans as required to address or reflect the updated assessment of effects.

12.1 PURPOSE

According to Appendix D of Meadowbank's NIRB Project Certificate No. 004, the Post-Environmental Assessment Monitoring Program (PEAMP) is a conceptual program designed "to work as an instrument of the proponent's overall monitoring efforts and should provide feedback to the NIRB and other agencies regarding ongoing project monitoring." The goal of the PEAMP is to provide the NIRB and other regulatory agencies information on how actual environmental and socioeconomic effects of the Meadowbank mine site compare to impacts predicted in the Final Environmental Impact Statement (FEIS; Cumberland, 2005).

The objectives of the PEAMP as specified in Appendix D of the Project Certificate are to:

- a) Measure the relevant effects of the project on the ecosystemic and socioeconomic environment(s). These effects may be measured through biophysical and socioeconomic monitoring programs undertaken by the Proponent or by other means as described in the Project Certificate;
- b) Assess the accuracy of the predictions made within the FEIS;
- c) Evaluate the effectiveness of project monitoring procedures and plans;
- d) Identify impacts requiring additional mitigation or adaptive management; and
- e) Provide relevant data and information to support regional monitoring initiatives where feasible.

Based on comments and discussions with NIRB in 2017 - 2019, Agnico Eagle revised the PEAMP at that time to also address the following NIRB recommendations more specifically:

- 1) Include a discussion that references the baseline and previous years' monitoring data and identifies any trends for each valued ecosystem component where an effect has been observed. Include this information in table and graphic format in order to clearly demonstrate what is being observed; and
- 2) Identify instances where original and/or amended impact predictions can no longer be supported based on project experience to date and include an analysis of the effectiveness of management and mitigation strategies currently employed.

Agnico Eagle recognizes the following recommendation, but asserts at this time that it is not a requirement of the PEAMP according to the Project Certificate:

- 3) Include a summary of lessons learned from the Project to date which can be applied to both updating existing project plans and to any of Agnico Eagle's other planned or ongoing projects as applicable.

Beginning in 2019, Agnico Eagle extended the PEAMP to include the Whale Tail Mine. Measured impacts are compared to those described in the FEIS for the Whale Tail Pit Project and the FEIS Addendum for the Whale Tail Pit – Expansion Project, as appropriate.

12.2 PEAMP EVALUATION

To fulfill Items A through D described in Appendix D of the Meadowbank Project Certificate No. 004, and in support of NIRB Recommendations 1 and 2 described above, a PEAMP evaluation has been carried out for each valued ecosystem or socioeconomic component (VC) identified in the FEIS documents for the Meadowbank Mine and the Whale Tail Mine (Cumberland, 2005; Agnico Eagle, 2016; Agnico Eagle, 2018). A conceptual model of the PEAMP evaluation process is provided in Figure 36. This process involves five components, described below. After an initial review of the FEIS to identify and summarize impact predictions for the current project phase (Part 1), Parts 2 – 5 are repeated on an annual basis to form the evaluation.

Part 1: For each VC, predicted residual impacts are summarized for the current project phase. Residual impacts are those occurring after planned mitigation measures are implemented (a summary of the FEIS-planned mitigation measures for each VC is provided Part 5, along with a description of implementation in the current monitoring year). Only predicted residual impacts for which monitoring was recommended in the FEIS are summarized, since the PEAMP program focuses on evaluating monitoring results in relation to impact predictions.

Part 2: For each predicted residual impact, current-year results of the associated monitoring programs are reviewed and summarized. Future results will be added to these tables to ensure historical trends can be observed, even when predicted impacts are not exceeded in a given year.

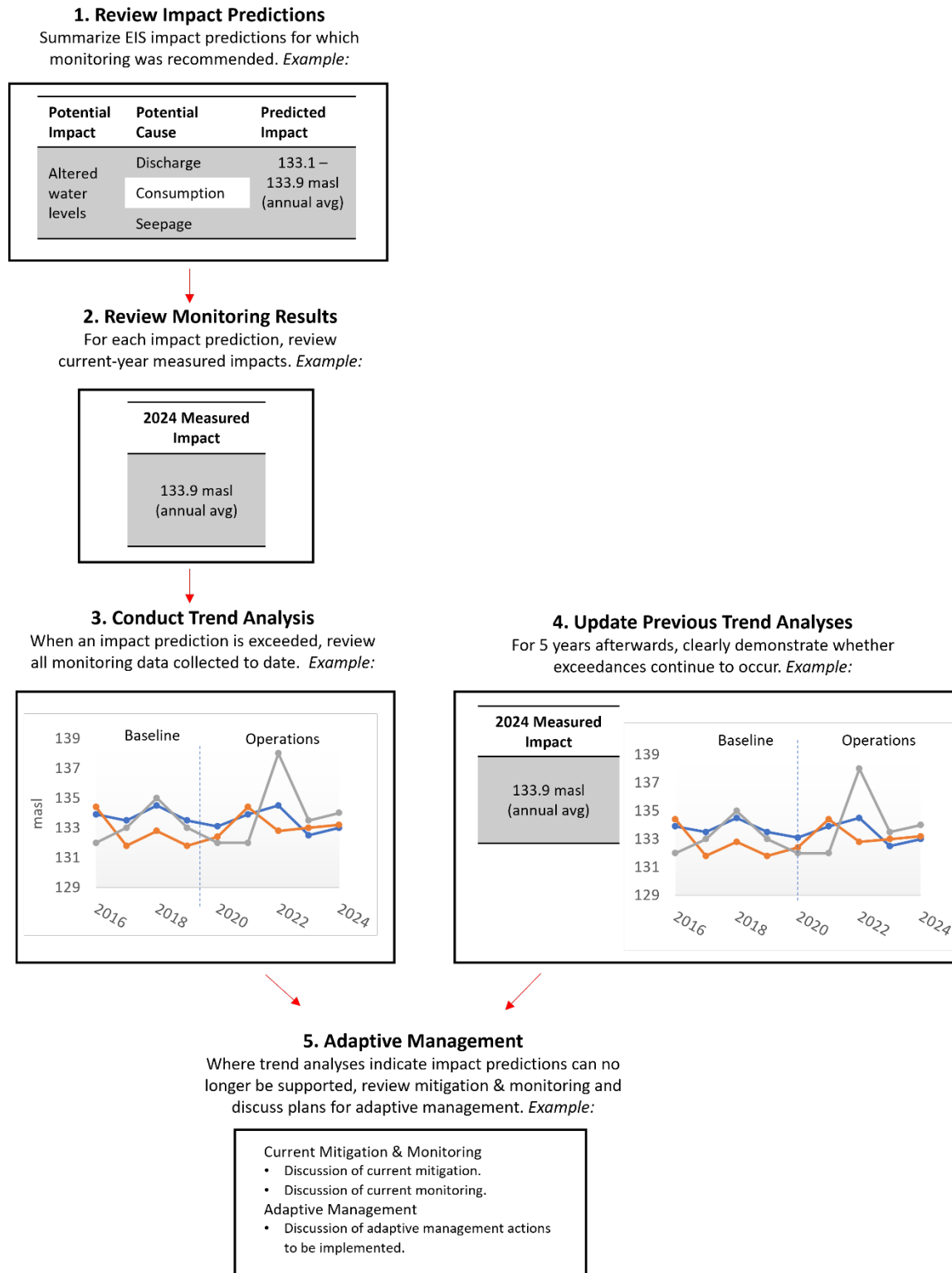
Part 3: When current monitoring results do not support an impact prediction (i.e. current-year measured impacts are outside of the range of predicted impacts), a trend analysis is conducted to review baseline and all monitoring data to date. A discussion of those results is provided.

Part 4: Previously-reported trend analyses are updated, regardless of current year monitoring results. In this way, discussions and trend analyses will be presented in the PEAMP moving forward for all instances where impact predictions have historically been exceeded on one or more occasions. This period of trend analysis within the PEAMP will be limited to five years post-exceedance to limit redundancy in reporting, unless there is a specific rationale for extended review. Historical trends are generally included in individual monitoring reports, and those appendices will be referenced in cases where results have historically (> 5 years ago) exceeded impact predictions.

Part 5: Effectiveness of the monitoring programs in evaluating impact predictions is discussed. A summary of the FEIS-planned mitigation measures for each VC is provided, along with a description of implementation in the current monitoring year. Where monitoring results indicate that impact predictions can no longer be supported, a description will be provided of the proposed adaptive management approaches.

It should be noted that the monitoring programs as described in the FEIS were developed at a conceptual level to assist in evaluating the overall potential impacts of the project. These were supporting documents in the FEIS and assisted in informing predictions, establishing regulatory limits, and forecasting management and mitigation actions to assist in the impact prediction process. Monitoring plans and sampling locations have since undergone changes and revisions to reflect actual mine operations. These differences are taken into account and identified when making comparisons to FEIS predictions.

Figure 36 Conceptual model of the PEAMP evaluation process



12.3 SUMMARY OF IMPACTS

A summary of the predicted potential impacts for the Meadowbank Mine with references to the FEIS (Cumberland, 2005) are provided in Table 12-1.

A summary of the predicted potential impacts (primary effect pathways) for the Whale Tail Mine with references to the Project FEIS or FEIS Addendum (Agnico Eagle, 2016 or 2018) are provided in Table 12-2. Primary effect pathways are those pathways likely to result in a measurable change to measurement indicators that could contribute to residual effects on a VC relative to the Baseline Case or guideline values. Any change in quantitative impact predictions for the Meadowbank Mine as a result of Whale Tail Mine development is described in the PEAMP evaluation sections below.

Table 12-1 Summary of FEIS VECs, potential impacts, and references for impact predictions for the Meadowbank Mine

VEC	Summary of Potential Impacts	Reference (in Cumberland, 2005)
Surface water quantity	Reduced water level and flow in receiving lakes	FEIS, Section 4.21.2.3 FEIS App B, Table B4
Surface water quality	Contamination of receiving lakes	FEIS, Section 4.21.2.3 FEIS App B, Table B5 FEIS App E FEIS - WQ
Fish populations	Direct impacts through blasting. Indirect impacts through habitat changes.	FEIS, Section 4.21.2.7 FEIS App B, Table B13
Fish habitat	Direct impacts through habitat destruction or alteration. Indirect impacts through introduction of contaminants.	FEIS, Section 4.21.2.7 FEIS App B, Table B14
Vegetation (wildlife habitat)	Removal of plant cover, abrasion/grading, salt, dust, grey water release	FEIS, Section 4.21.2.4 FEIS App B, Table B6
Ungulates	Habitat loss, mortality	FEIS, Section 4.21.2.5 FEIS App B, Table B7
Predatory mammals	Habitat loss, mortality	FEIS, Section 4.21.2.5 FEIS App B, Table B8
Small mammals	Habitat loss, mortality	FEIS, Table 4.24 FEIS App B, Table B9
Raptors	Habitat loss, mortality	FEIS, Section 4.21.2.6 FEIS App B, Table B10
Waterfowl	Habitat loss, ingestion of contaminants, mortality	FEIS, Section 4.21.2.6 FEIS App B, Table B11
Other breeding birds	Habitat loss, mortality	FEIS, Section 4.21.2.6 FEIS App B, Table B12
Air Quality	Contamination of aquatic environment by dust. Contamination of terrestrial environment by dust. Poor air quality. Odours may attract scavengers. Production of greenhouse gases, other gaseous contaminants and particulate matter.	FEIS, Section 4.21.2.2 FEIS App B, Table B2
Noise	General disturbance of wildlife as a result of regular noises (behavioural changes, displacement). Reduced habitat effectiveness.	FEIS, Section 4.21.2.2 FEIS App B, Table B3
Permafrost	Thaw instability. Changes in permafrost depth in various areas (increase/decrease).	FEIS, Section 4.21.2.1 FEIS App B, Table B1

VEC	Summary of Potential Impacts	Reference (in Cumberland, 2005)
	Ice entrapment in tailings/reclaim.	
Traditional Ways of Life (personal and community)	Reduced access to land. Reduction in traditional activities including harvesting. Undervaluing traditional ways and loss of knowledge.	FEIS Section 4.21.4.4 FEIS App B, Table B15
Employment, Training, and Business Opportunities	Financial expenditures of \$23 million annually for 10 years. Employment of at least 60 workers. Goods and services contracts for local businesses. Overall increased economic activity, including indirect and induced effects. Increased capacity of local labour force to participate in formal economy. Increase in interest of school on part of youth. Increased individual, family, and community wellness.	FEIS Section 4.21.4.3 FEIS App B, Table B15
Wellness (personal and community)	Poor financial decision making. Increased income disparity. Increased public health and safety risks. Stress from rotational employment. Increased traffic accidents and emergencies. Disturbance by project activities.	FEIS Section 4.21.4.5 FEIS App B, Table B15
Infrastructure and social services	Shortage of housing and other infrastructure. Increased demand for social services.	FEIS Section 4.21.4.6 FEIS App B, Table B15
Sites of heritage significance	Potential degradation of historically significant sites.	FEIS Section 4.21.4.7 FEIS App B, Table B15
Contributions to economy of Nunavut and Canada	\$92M annually during operations phase.	FEIS Section 4.21.4.8

Table 12-2 Summary of VCs and primary effects pathways (potential impacts) assessed in the FEIS Addendum for the Whale Tail Pit – Expansion Project

VC	Primary Effect Pathways (Volume 3, Appendix 3-C)	Reference (in Agnico Eagle (2018), unless indicated)
Surface Water Quantity	Project footprint, which will physically alter watershed areas and drainage patterns, may change downstream discharge, water levels, and channel/bank stability in streams, and affect water quality, fish habitat, and fish	Section 6.3.3.1
	Dewatering of lakes may change discharges, water levels, and channel/bank stability in receiving and downstream waterbodies, and affect water quality, fish and fish habitat	
	Alteration of watershed flow paths may change flows, water levels, and channel/bank stability in diverted and receiving waterbodies, and affect water quantity, water quality, fish and fish habitat	
Water Quality	Project footprint, which will physically alter watershed areas and drainage patterns, rates and quantities of diverted non-contact water to new watersheds, change downstream flows through flooding and dewatering, water levels, channel/bank stability in streams, and disturb lakes and may affect water quality and sediment quality	Section 6.2.3
	Water management activities (dams, drainage, diversion, discharge, and dewatering) that will alter natural drainage paths and create a reservoir may cause a change in mercury cycling and bioaccumulation	
	Activities from construction activities and mining operations (e.g.,	

VC	Primary Effect Pathways (Volume 3, Appendix 3-C)	Reference (in Agnico Eagle (2018), unless indicated)
	equipment, vehicles, buildings, open-pit mining, blasting) can create fugitive dust emissions and subsequent dust deposition may cause a change in water quality Activities from construction activities and mining operations (e.g., equipment, vehicles, buildings, open-pit mining, blasting) can alter air and dust emissions (including Sulphur dioxide, nitrogen oxides, and particulate matter) and subsequent deposition may cause a change in water quality Release of treated mine effluent (including sources from sewage, WRSF pond, and attenuation pond contact) may cause changes to surface water quality and sediment quality (i.e., nutrient and metal concentrations) in Mammoth Lake in operations and closure. Dewatering of waterbodies may change flows, water levels, channel/bank stability, and water quality (e.g., suspended sediments, nutrients, metals) in receiving and downstream waterbodies.	
Hydrogeology & Groundwater	(No primary pathways were identified)	NA
Fish and Fish Habitat	The construction of the Northeast, Whale Tail, and Mammoth dikes, Whale Tail, and IVR Pit and WRSF for the Expansion Project, dewatering of the diked area in Lake A17 (Whale Tail Lake) and Lake A16 (Mammoth Lake), (and dewatering and use of Lake A53 as the IVR Attenuation Pond for the Expansion Project, will result in the direct loss or alteration of fish habitat.	Section 6.5.4.2.2
	The construction of the North-East, Whale Tail, and Mammoth dikes will alter access to tributary streams and lakes (i.e., habitat connectivity) in the LSA, and may result in habitat loss for Lake Trout, Arctic Char, and Round Whitefish.	FEIS Volume 6, Section 6.5.3.2.2 (Agnico Eagle, 2016)
	During the construction and operations of the Whale Tail, Mammoth, and WRSF dikes, water diversions will result in a reduction of water levels in Lake A16 (Mammoth Lake) and downstream locations, affecting fish and fish habitat.	Fish and Fish Habitat Section 6.5.4.2.2. and Surface Water Hydrology Section 6.3.3.1.2.2
	Water diversions for the Whale Tail and Northeast dikes during construction and operations will flood tributary lakes and streams, and will result in the alteration of habitat	FEIS Volume 6, Section 6.5.3.2.2 (Agnico Eagle, 2016) Whale Tail Pit Fish Habitat Offsetting Plan, Table B-2
	The dewatering of the diked area in Lake A17 (Whale Tail Lake) and Lake A16 (Mammoth Lake), and smaller waterbodies in the northeast area for the Expansion Project, will result in the removal and subsequent mortality of fish from the area during the proposed fish-out	Section 6.5.4.2.2
	Release of treated mine effluent (including sources from sewage, WRSF pond, and attenuation pond contact) may cause changes to surface water quality and sediment quality (i.e., nutrient and metal concentrations) in receiving environment lakes in operations and closure.	FEIS Volume 6, Section 6.4.3.3 (water & sediment) and Section 6.5.3.3.2 (lower trophic levels & fish) (Agnico Eagle, 2016) and Section 6.5.4.3
Terrestrial Wildlife and Birds	Ungulates and Upland Birds: Sensory disturbance from vehicles, on-site equipment, human presence and vibrations, can change the amount of different quality habitats, and alter wildlife movement and behaviour	Section 5.5.3
	Ungulates and Upland Birds: Direct loss and fragmentation of wildlife habitat from the Project footprint	

VC	Primary Effect Pathways (Volume 3, Appendix 3-C)	Reference (in Agnico Eagle (2018), unless indicated)
	Ungulates: Barriers to migration, which may affect population connectivity and distribution Upland and Waterbirds: Destruction of nests and flooding from construction activities including increased flows or water levels can increase risk of mortality to individual birds, which can affect population sizes	
Noise	Noise emissions from vehicles on the haul road can increase ambient noise levels. Noise emissions from mining equipment can increase ambient noise levels. Blasting can result in ground vibration and increase ambient noise levels.	Section 4.4.3
Air Quality and Climate	Air Quality: Vehicle emissions and fugitive dust from traffic on the haul road can affect air quality	Section 4.4.3
	Air Quality: Blasting, stationary and mobile combustion sources, and fugitive dust from mining activities in the Whale Tail Pit can affect air quality.	Section 4.4.3
	Climate: Additional 3 years of processing and use of supporting infrastructure at the Meadowbank mine site and the existing AWAR for delivery of materials can produce greenhouse gas emissions that contribute to climate change	Whale Tail Site: FEIS Addendum Section 4.2.3.1 Meadowbank Mill: FEIS Section 4.2.3.1 (Agnico Eagle, 2016)
Vegetation, Terrain, Permafrost & Soils	Vegetation: Physical loss of plants and vegetation communities due to project footprint or alteration of drainage patterns. Vegetation: Dewatering of lakes and diversion of water may change downstream flows and water levels, affecting permafrost, soils, vegetation, and wildlife habitat Vegetation: Air emissions, dust deposition, or chemical contamination on terrain, soils, and vegetation can potentially change the quality and/or chemical properties of soil and affecting vegetation. Dust deposition may cover vegetation and lead to physical and/or physiological damage.	Section 5.4.3
	Soil: Physical loss or alteration of terrain and soil from the Project footprint, impacting vegetation and available wildlife habitat.	Section 5.3.3.1
	Soil: Soil disturbance, stockpiling and transport can change physical, biological, and chemical properties of soils. Site clearing, contouring, excavation and decommissioning can cause admixing, compaction, and soil erosion and change soil quality.	
	Terrain and Soil: Physical changes, including degradation to the permafrost, terrain and soils in the area of the mine site footprint and supporting infrastructure (i.e., haul roads)	
	Terrain and Permafrost: Open Pit mining result in physical loss or permanent alteration of terrain, soils, and permafrost within the mined out areas. Permafrost degradation and retreat due to excavation of open pits and potential groundwater inflows to the open pit during operations if depth extends below the base of permafrost.	
	Permafrost: Underground mining resulting in physical loss or permanent alteration of permafrost within the mined out areas. Permafrost degradation and retreat due to excavation of the mined out areas coupled with the inflow of groundwater to the underground operations, as the proposed underground operation will extend below the permafrost.	
Heritage Sites	(No primary pathways identified)	NA
Traditional Land Use	Wildlife Harvesting: Project activities may affect continued	FEIS Section 7.3.3.2

VC	Primary Effect Pathways (Volume 3, Appendix 3-C)	Reference (in Agnico Eagle (2018), unless indicated)
	opportunities for traditional wildlife harvesting	(Agnico Eagle, 2016)
	Fishing: Project activities Primary may affect continued opportunities for traditional fishing	Section 7.3.2.1.2
	Plant Gathering: Project activities may affect continued opportunities for traditional plant harvesting	FEIS Section 7.3.3.2 (Agnico Eagle, 2016)
	Culturally Important Sites: Project activities may affect continued opportunities for the use of culturally important sites	FEIS Section 7.3.3.2 (Agnico Eagle, 2016)
	Marine Resource Harvesting: Project activities may affect continued opportunities for traditional marine resource harvesting	Section 7.3.2.1.5
Socio-Economics	The Project will contribute to territorial economic activity via expenditures, procurement and Gross Domestic Product contributions	Appendix 7-B, Section 7-B-1.4.2
	The Project will contribute to government revenues through the payment of taxes and royalties	
	The Project will contribute to local business development through procurement and contracting	
	The Project will result in direct, indirect and induced employment opportunities	Appendix 7-B, Section 7-B-1.4.3
	The Project will result in direct, indirect and induced incomes	
	The Project will provide training opportunities for its workforce	
	The Project will contribute to community education	Appendix 7-B, Section 7-B-1.4.4
	Project incomes may enhance individual and community wellness by providing access to education, nutritious food, and recreation, and by reducing poverty	
	The Project may enhance individual and community wellness by continuing community contributions and the IIBA	
	The Project will continue existing individual and family wellness programming (e.g., EFAP)	
	The Project may improve health and safety awareness amongst employees, their families, and their communities	
	The Project may result in accidental injury or emergencies	
	Project incomes may adversely affect family and community cohesion through social ills (e.g., substance abuse, sexual misconduct, family violence, crime)	
	Project incomes may exacerbate income inequality, social disparity, and, potentially, related conflict in families and crime in communities	
	Project rotational employment may adversely affect family and community cohesion related to extended time away from family and community	
	Population growth and demographic change	
	Change in demand for and availability of housing	Appendix 7-B, Section 7-B-1.4.5
	Change in demand for and capacity of services and infrastructure	

12.4 MEADOWBANK PEAMP EVALUATION

For each Meadowbank Mine VC, the completed PEAMP evaluation is presented in Sections 12.4.1 – 12.4.6, below, according to the six categories of assessment included in the FEIS (Aquatic Environment, Wildlife and Terrestrial Environment, Noise Quality, Air Quality, Permafrost, and Socio-Economics).

12.4.1 Aquatic Environment

Key mine development activities that were identified as having the potential to result in changes to the aquatic receiving environment for the Meadowbank Mine include: East Dike construction (2008), Bay-Goose Dike construction (2009-10), Vault Dike construction (2013), dewatering of lakes and impoundments (2009-2011, 2013, 2016), effluent discharge (2012 to present), and dust-generating activities (e.g., roads, tailings storage, rock crushing, blasting, hauling; generally 2008 to present, though blasting ceased in 2019).

Within the FEIS, impacts to the aquatic environment potentially caused by these activities are described for water quantity, water quality, and fish/fish habitat. Predicted and measured residual impacts for each of these VCs are described below.

12.4.1.1 Water Quantity

12.4.1.1.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

A summary of predictions for impacts to surface water quantity (Cumberland, 2005; Table B4.2) and the assessed accuracy of these predictions in 2018 - 2024 (measured impacts) is provided in Table 12-3. Cells are highlighted in grey when measured impacts exceed predictions for the current year. Historical trend analyses and discussions are provided for all water level observations in Section 12.4.1.1.2, since impact predictions were generally qualitative.

Table 12-3 Meadowbank Mine: Predicted and measured impacts to water quantity during the Operations period

Note: Measured impacts exceeding or potentially exceeding predictions are shaded grey and further discussed in Section 12.4.1.1.2

Potential Impact	Potential Cause(s)	Proposed Monitoring	Actual Monitoring	Predicted Impact	Measured Impact						
					2018	2019	2020	2021	2022	2023	2024
Altered (reduced) water levels in Third Portage Lake	Potentially high seepage rates (from lakes into pits); Water diverted from Second Portage Lake drainage into TPL	Monitor pit seepage rates Monitor discharge volumes of non-contact water	Third Portage Lake levels monitored	No change in lake level (FEIS modeled range = 133.82 – 134.19 masl)	See Figure 37 for measured water levels; <i>FEIS prediction exceeded but no change from baseline - see discussion, Section 12.4.1.1.2</i>						
	Freshwater consumption (Third Portage Lake)	Monitor freshwater use	Freshwater use monitored	NWB Water License 2AM-MEA1530 Part E, Item 1: 4,935,000 m ³	1,027,159m ³	2,229,589m ³	2,182,836m ³	1,113,897m ³	1,029,571m ³	886,803m ³	1,003,965m ³
	Discharge from Portage Attenuation Pond	Monitor discharge volumes and timing	Discharge volumes monitored	458,400 m ³ /yr (max)	No discharge						
Altered water levels in Second Portage Lake	Potentially high seepage rates (from lakes into pits); Non-contact water diverted from Second Portage Lake drainage	Monitor pit seepage rates Monitor discharge volumes of non-contact water	Lake levels monitored	Minor effect on lake level (baseline = 133.1 masl)	See Figure 38 for measured water levels; <i>FEIS prediction not quantitative – see discussion, Section 12.4.1.1.2</i>						

Increased water levels in Wally Lake	Discharge from Vault Attenuation Pond	Monitor discharge rates	Monitored discharge rates and lake levels	Minimal increase in water levels. Total average annual discharge: ~456,450 m ³	No discharge. See Figure 39 for measured water levels. <i>FEIS prediction not quantitative – see discussion, Section 12.4.1.1.2</i>
Altered water levels in Turn Lake	Discharge from Phaser Lake for water management purposes during mining of Vault Pit	Monitor outflows at Turn Lake	Turn Lake water levels (2019+)	No significant impact	See Figure 40 for measured water levels; <i>FEIS prediction not quantitative – see discussion, Section 12.4.1.1.2</i>

12.4.1.1.2 Parts 3 & 4: Discussion

Where impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion is provided here.

12.4.1.1.2.1 Changes in Lake Levels

FEIS Prediction:

Third Portage Lake - no change in lake levels (modeled range = 133.82 – 134.19 masl)

Second Portage Lake – minor change in lake levels

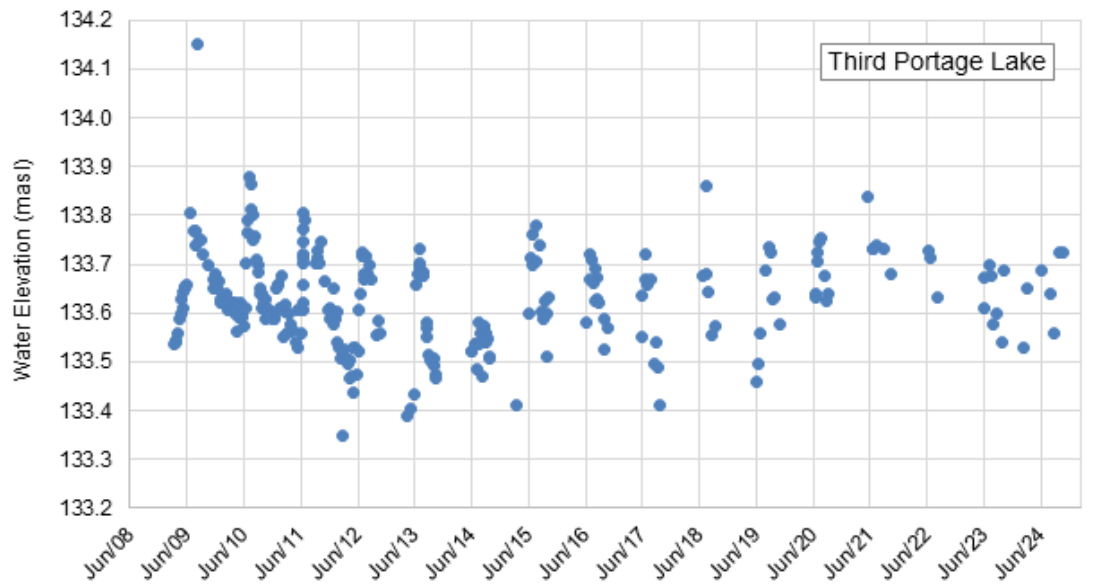
Wally Lake – minor change in lake levels

Turn Lake – no significant impact

Discussion:

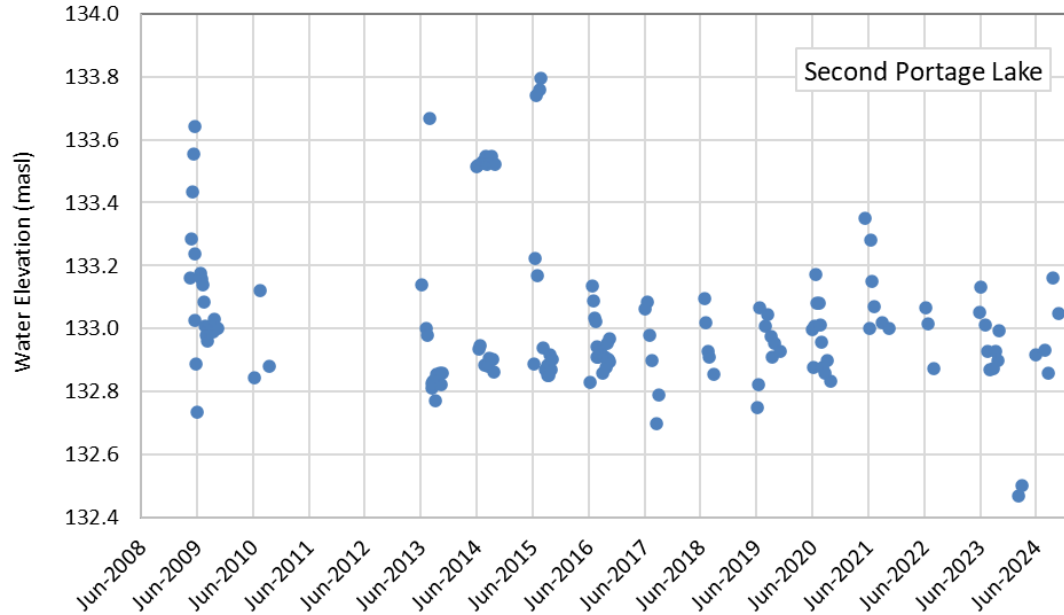
Third Portage Lake: FEIS hydrological modeling predicted the natural range of water levels in Third Portage Lake to be 133.82 – 134.19 masl, and the impact assessment indicated that this range would not be exceeded (Physical Environment Impact Assessment Report, 2005). Although these values accounted for 1-in-100 year precipitation or drought events, water levels were already below this range prior to any significant freshwater consumption or discharge, when monitoring began on March 14th, 2009 (133.54 masl). Pumping rates of freshwater from Third Portage Lake have remained well within license limits, and water levels do not appear to have changed significantly since monitoring began (2009) (see Figure 37). Therefore, the Project does not appear to be having a significant impact on lake levels. Rather natural variation in baseline water levels may not have been well defined in the initial impact assessment

Figure 37 Measured water levels in Third Portage Lake

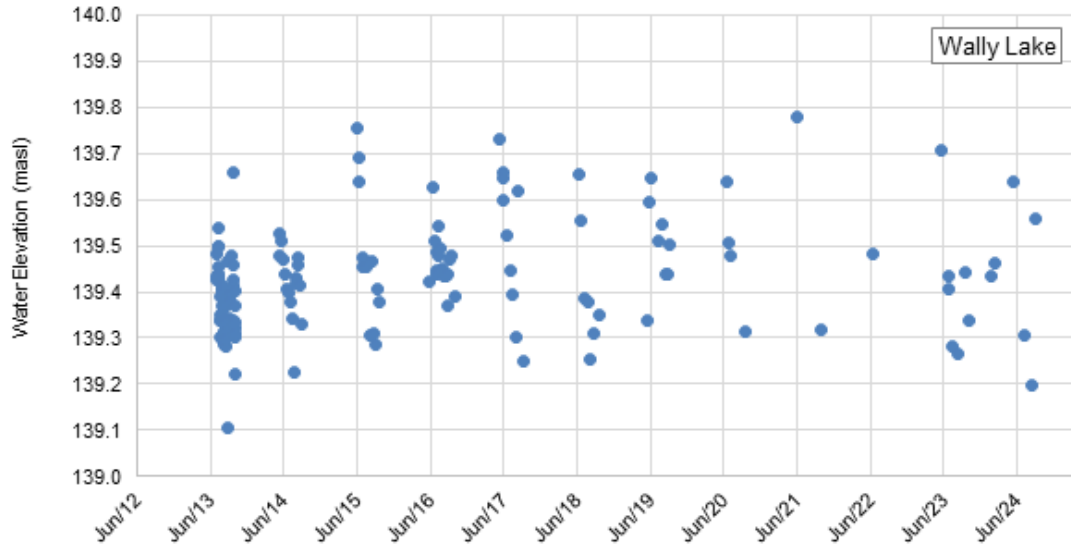


Second Portage Lake: For Second Portage Lake, the FEIS predicted a “minor” effect on water levels. Since that prediction is not quantitative, historical measurements are reviewed here to identify any apparent trends. Although only one measurement of baseline water levels in Second Portage Lake was reported from 2005 in the FEIS (133.1 masl), measured water levels since consistent monitoring began in 2009 appear to be within this range (Figure 38).

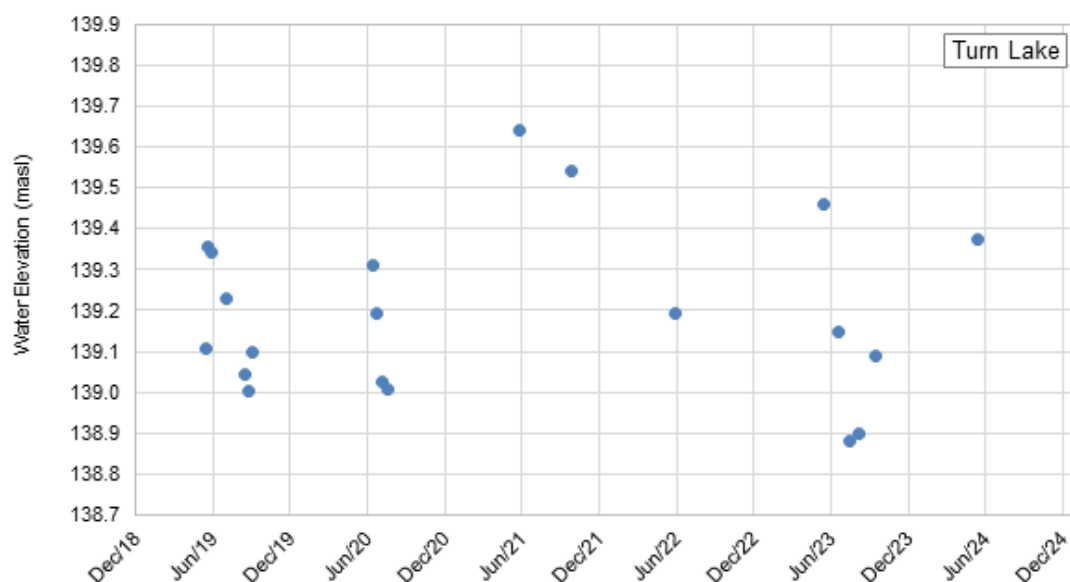
Figure 38 Measured water levels in Second Portage Lake



Wally Lake: For Wally Lake, the FEIS predicted a “minimal” increase in water levels. Since that prediction is not quantitative, historical measurements are reviewed here to identify any apparent trends that might arise. No baseline measurements are available for Wally Lake, but since monitoring was required to begin in 2013, no clear upward or downward trends are observed (Figure 39).

Figure 39 Measured water levels in Wally Lake

Turn Lake: In the Meadowbank FEIS (Cumberland, 2005) water management plans called for discharge from Phaser Lake to Turn Lake during mining of the Vault Pit. No significant impacts on water levels in Turn Lake were anticipated, but monitoring of outflows was recommended. However, in 2015, a FEIS Addendum was submitted to NWB as part of the permitting process for the Vault Pit expansion into Phaser Lake. Under that mine and water management plan, discharge to Turn Lake was no longer required, eliminating the potential residual impact of that activity and requirements for monitoring in Turn Lake. However, in 2019, following recommendation from CIRNAC regarding the 2018 Annual Report, Turn Lake water level monitoring in the next open water season was completed, reported and compared to predictions. No baseline water levels were provided in the 2005 FEIS or 2015 FEIS Addendum for Turn Lake so 2019 was the first year for which measurements are available (Figure 40). Similar water levels have been observed since that time.

Figure 40 Measured water levels in Turn Lake

12.4.1.1.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

Although FEIS predictions for changes to surface water quantity were rarely quantitative, Agnico Eagle continues to assess receiving environment water levels in lakes for which impacts were evaluated. Monitoring programs are therefore considered effective.

Effectiveness of Mitigation

A summary of the FEIS-planned mitigation measures for surface water quantity along with a commentary on implementation in the current year is provided in Table 12-4. Mitigation measures related to water quality and fish and fish habitat are provided in Section 12.4.1.2 and 12.4.1.3, respectively.

Since no exceedances of FEIS predictions, baseline values, or updated license limits (where applicable) occurred, existing mitigation measures are considered to be effective as designed.

Table 12-4 Meadowbank Mine: FEIS-designed mitigation measures to reduce impacts of the project to water quantity and commentary on current implementation.

Planned Mitigation Measure (Cumberland (2005), Section 4.24.2.5)	Implementation (2024)
Reducing the intake of fresh water from the neighbouring lakes by recycling and reusing water where practicable	Yes - Meadowbank continues to recycle reclaim water for mill usage.

Adaptive Management

Since existing mitigation measures are considered to be effective as designed, no adaptive management measures are proposed for 2025.

12.4.1.2 Water Quality

12.4.1.2.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

Aspects of the mine that were identified in the FEIS as potentially leading to significant impacts to water quality during operations (Cumberland, 2005; Table B5.2) are summarized Table 12-5, along with results of the monitoring programs aimed at assessing these impacts. This assessment focuses on comparing current measured effects with predicted impacts described in the Physical Environment Impact Assessment Report (2005) for receiving environment water quality. Associated monitoring programs are the CREMP and effluent monitoring under the MDMER.

The 2024 CREMP Report (Appendix 26) provides a comprehensive assessment of water quality monitoring for the receiving environment, with analysis of inter-annual trends, and a comparison to site-specific trigger values and FEIS predictions. Those results are summarized and referenced here. Complete results of effluent monitoring under the MDMER are provided in Section 8.3 above.

Overall, the FEIS predicted a “low” impact on the receiving environment water quality, which was designated by <1x change in CCME Water Quality Guidelines (CWQG), and no exceedances of MDMER/NWB Water License criteria. Monitoring results are compared to those predictions in Table 12-5 below. If exceedances occurred, cells are highlighted in grey and a discussion is provided in Section 12.4.1.2.2.

In addition, annual mean Meadowbank CREMP water chemistry results were compared to the maximum whole-lake average water quality modelling predictions for Third Portage, Second Portage, and Wally Lakes made in the FEIS (see 2024 CREMP report; Appendix 26). Any exceedances of these model predictions are noted in Table 12-5, and a full discussion is provided in Section 12.4.1.2.2.

Table 12-5 Meadowbank Mine: Predicted and measured impacts to water quality during the Operations period

Note: "Potential impacts" as described in Cumberland (2005); Table B5.2 and the Physical Environment Impact Assessment Report (2005) for receiving environment water quality. Measured impacts exceeding or potentially exceeding predictions are shaded grey and further discussed in Section 12.4.1.2.2.

Potential Impact (Cause)	Proposed Monitoring	Actual Monitoring	Predicted Impact	Measured Impact							
				2018	2019	2020	2021	2022	2023	2024	
Impaired Wally Lake water quality (Vault attenuation pond effluent discharge; dike leaching)	Effluent and receiving environment monitoring	Receiving environment: CREMP water quality monitoring	CREMP results <CWQG except arsenic and cadmium.	CREMP results all <CWQG							
			Measured concentrations within model predictions	Some exceedances of specific model predictions but still “low” significance of impact - see discussion Section 12.4.1.2.2.1							
		Effluent monitored under MDMER, NWB Water License	<MDMER criteria	No effluent discharged to Wally Lake.							
Impaired Second Portage Lake water quality (Portage Attenuation pond effluent discharge; dike leaching (East Dike seepage))	Effluent and receiving environment monitoring	Receiving environment: CREMP water quality monitoring	CREMP results <CWQG except cadmium	CREMP results all <CWQG							
			Measured concentrations within model predictions	Some exceedances of specific model predictions but still “low” significance of impact - see discussion Section 12.4.1.2.2.1							
		Effluent monitored under MDMER, NWB Water License	<MDMER criteria	All effluent <MDMER and NWB Criteria		Two samples (17.5 and 16 mg/L) > max. monthly avg. for TSS (15 mg/L)		One sample (49 mg/L) > grab sample limit for TSS (30 mg/L)		All effluent <MDMER and NWB Criteria	
				Three results above criteria since at least 2018 are not viewed as a significant departure from FEIS predictions – discussed in Section 12.4.1.2.2.2							
Impaired Third Portage Lake water quality (Portage Attenuation pond effluent; dike leaching)	Effluent and receiving environment monitoring	Receiving environment: CREMP water quality monitoring	CREMP results <CWQG except cadmium	CREMP results all <CWQG							
			CREMP measured concentrations within FEIS model predictions	Some exceedances of specific model predictions but still “low” significance of impact - see discussion Section 12.4.1.2.2.1							
		Effluent monitored under MDMER, NWB Water License	<MDMER criteria	No effluent discharge to Third Portage Lake.							
CWQG = Canadian Council of Ministers of the Environment Water Quality Guidelines for the Protection of Aquatic Life											

12.4.1.2.2 Parts 3 & 4: Discussion

Where impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion is provided here.

12.4.1.2.2.1 FEIS Model Predictions for Water Quality

FEIS Prediction: Concentrations <CCME water quality guidelines; “low” magnitude of effects.

Discussion: As described in the 2018 - 2024 CREMP Reports, a number of measured parameters have exceeded quantitative FEIS water quality model predictions when these individual values are compared directly. However, the difference in spatial focus (i.e., the CREMP at the basin scale and the water quality model at the whole-lake scale) warrants caution interpreting any differences. To that end, results were also compared to the FEIS-predicted magnitude of impacts (“Low: concentrations are < 1x the CCME Water quality guideline (WQG)).

Beginning in 2020, annual measured mean concentrations have been screened against FEIS model predictions for maximum whole-lake average water quality concentrations, rather than comparisons for all individual monthly samples. Where CREMP monitoring results have exceeded quantitative FEIS water quality model predictions but did not exceed CCME water quality guidelines, CREMP thresholds, or otherwise determined adverse effects levels (as detailed below), they were still considered to have a “low” magnitude of impact, consistent with general FEIS predictions.

Similar to previous years, parameters with annual means exceeding concentrations predicted in the FEIS water quality model in 2024 were: ionic compounds (calcium and magnesium), hardness, and total alkalinity. Concentrations for these parameters in 2024 along with FEIS predictions are shown in Table 4-6 of the 2024 CREMP Report (Appendix 26), and results are further discussed with historical figures, below.

The parameters that exceeded FEIS predictions in 2024 (calcium, magnesium, hardness, and total alkalinity) have regularly exceeded FEIS predictions since at least 2018, when this evaluation method began. All historical results for these constituents are shown in Figures 41 to 44 below, from the 2024 CREMP Report (Appendix 26). These water quality constituents do not have CCME guidelines and therefore the magnitude of significance was not explicitly predicted in the FEIS. A thorough review of the literature (2019 CREMP Report, Appendix J) suggests that the observed concentrations of these parameters are well below levels of concern for aquatic life. Therefore, following the intent of the FEIS magnitude ratings, these constituents would be considered consistent with a “low” magnitude of impact, because measured values regularly exceed baseline concentrations but are below concentrations associated with adverse effects.

Additional historical exceedances of FEIS predictions for the annual mean have included chloride, fluoride, and sulphate (2020 only). Historical results for these parameters are provided in the 2024 CREMP Report, and are not discussed further here since trends did not extend beyond 2020.

Based on these analyses, overall, CREMP water quality results were determined to be consistent with the “low” significance (i.e., <1x CCME WQG) rating applied to model predictions in the FEIS. Historical results for all other water quality parameters measured under the CREMP are provided in the 2024 CREMP Report (Appendix 26).

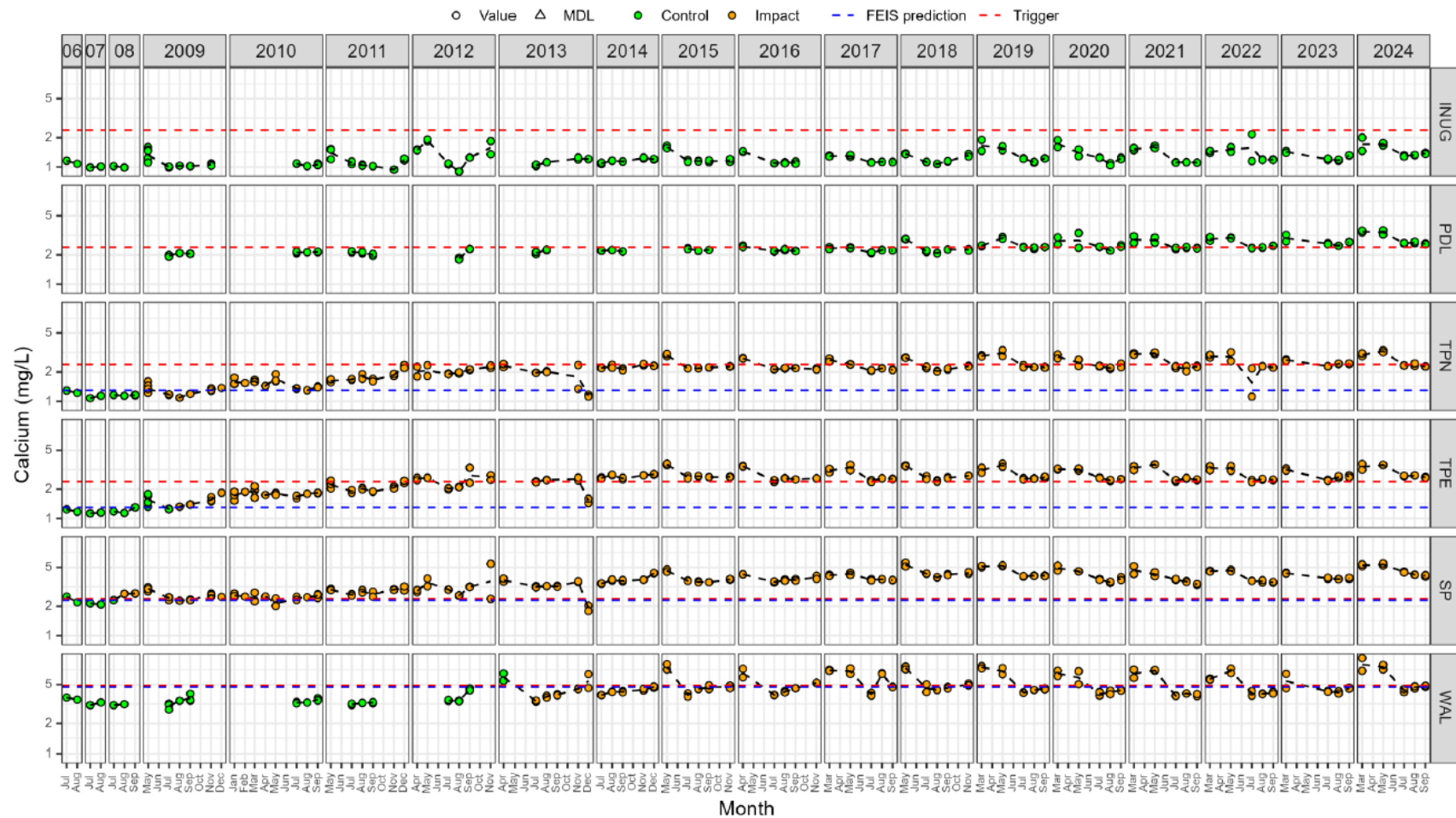
Figure 41 Total calcium (mg/L) in water samples from Meadowbank study lakes since 2006*Note: Figure from the 2024 CREMP Report, Appendix 26.*

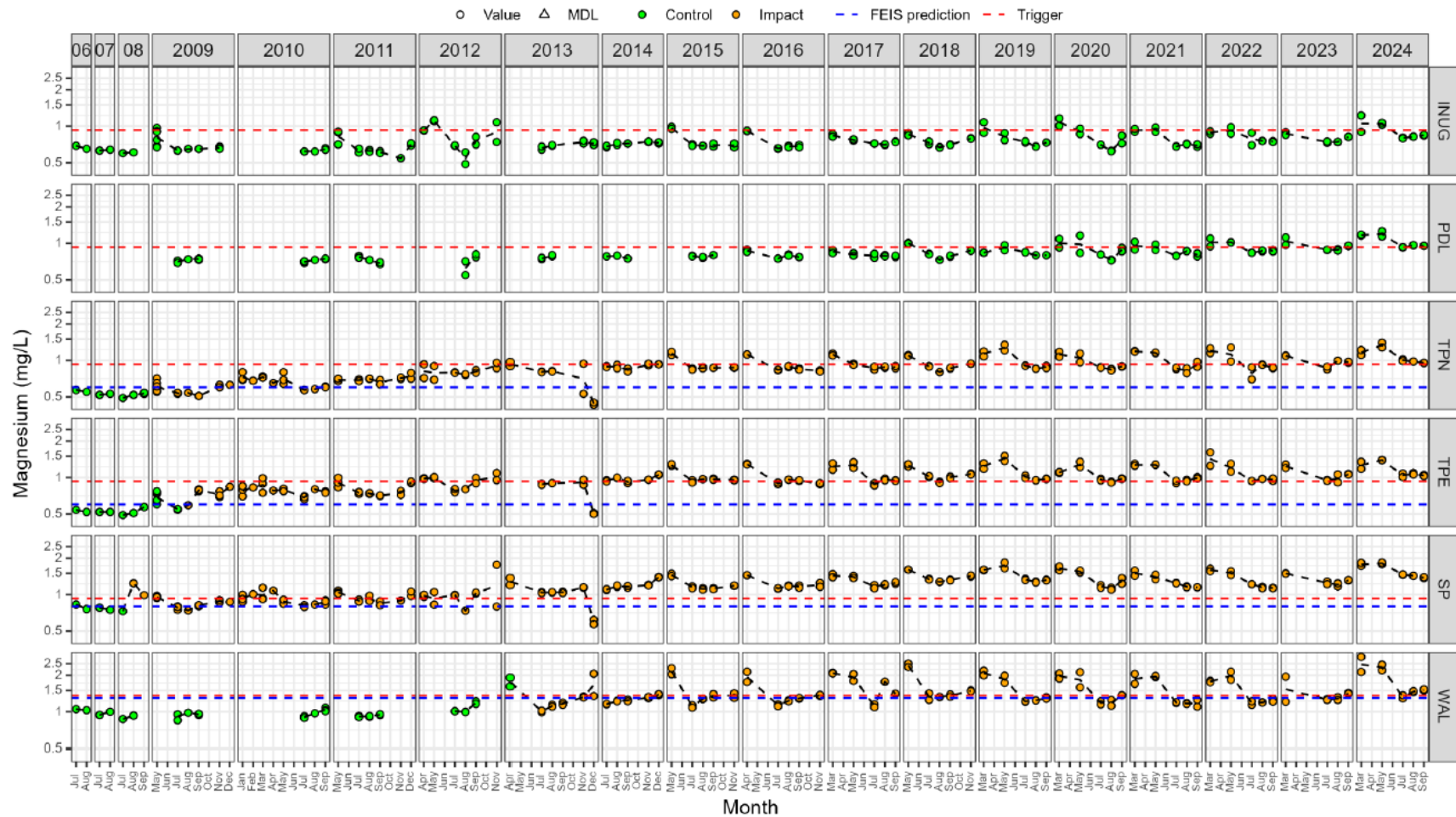
Figure 42 Total magnesium (mg/L) in water samples from Meadowbank study lakes since 2006*Note: Figure from the 2024 CREMP Report, Appendix 26.*

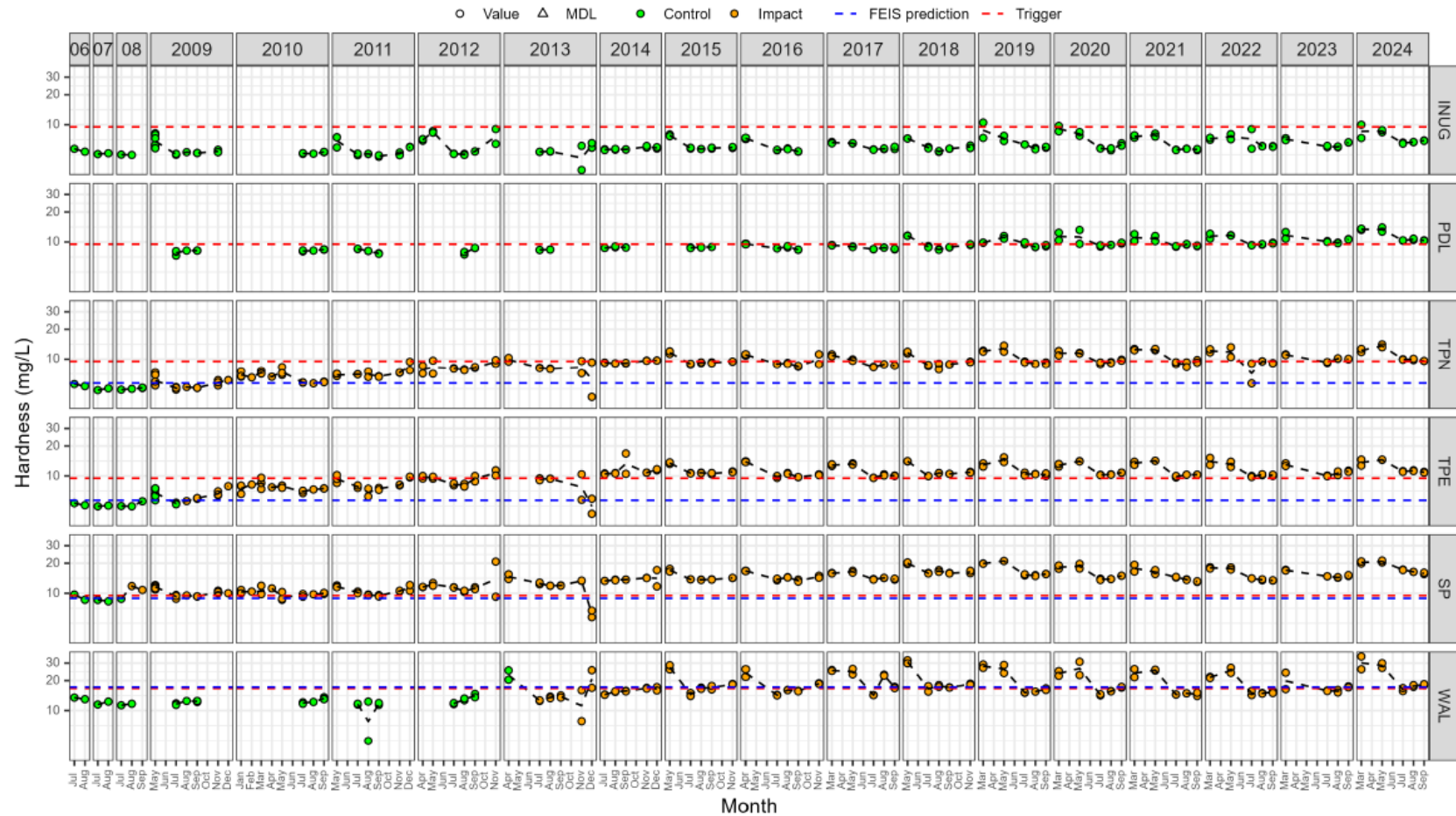
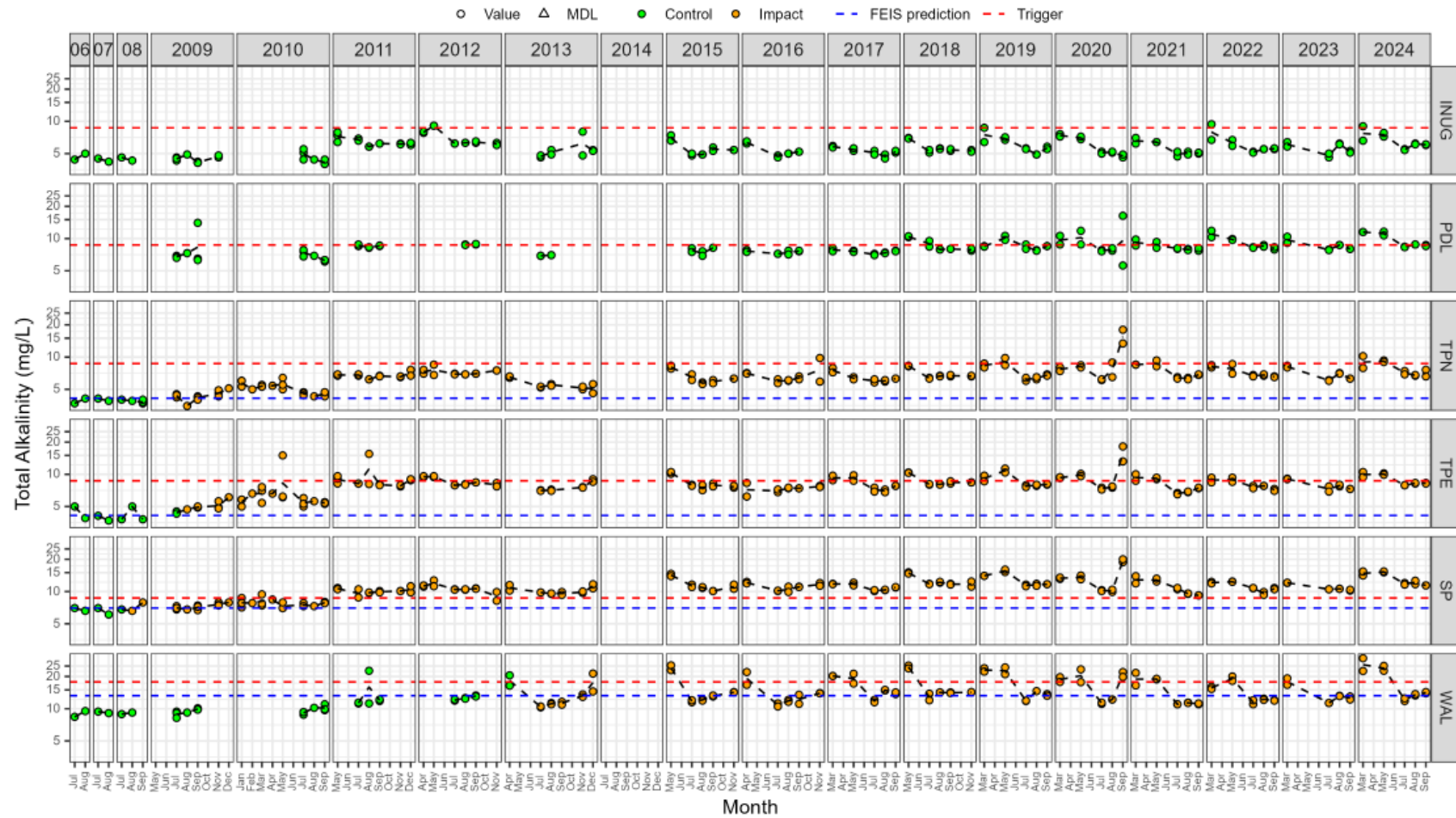
Figure 43 Laboratory-measured hardness (mg/L) in water samples from Meadowbank study lakes since 2006*Note: Figure from the 2024 CREMP Report, Appendix 26.*

Figure 44 Total alkalinity (mg/L) in water samples from Meadowbank study lakes since 2006

Note: Figure from 2024 CREMP Report, Appendix 26.



12.4.1.2.2.2 Effluent Monitoring Results

Discussion: Effluent discharge for the Meadowbank Mine in 2024 only consisted of East Dike seepage discharge as non-contact water (station ST-8/ST-MMER-3) to Second Portage Lake. Discharge occurred between October and December, 2024. All results were in compliance with NWB Water License and MDMER criteria.

Based on the infrequency of MDMER TSS exceedances (three samples since at least 2018), and since the receiving environment triggers for TSS have been met historically for this location in Second Portage Lake (2024 CREMP Report, Appendix 26), these results are not viewed as a significant departure from impact predictions.

12.4.1.2.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

Based on the results in Table 12-5, current monitoring programs are able to address all FEIS impacts for which monitoring was recommended (i.e. monitoring is considered effective).

Effectiveness of Mitigation

A summary of the FEIS-planned mitigation measures for surface water quality, along with a commentary on implementation in 2024 is provided in Table 12-6. Mitigation measures related to water quantity, and fish and fish habitat are provided in Section 12.4.1.1 and 12.4.1.3, respectively, though some overlap may occur.

Table 12-6 Meadowbank Mine: FEIS-designed mitigation measures to reduce impacts of the project to water quality, and commentary on current implementation

Planned Mitigation Measure (Cumberland (2005), Section 4.24.2.5)	Implementation (2024)
Implementing measures to avoid the contact of clean runoff water with areas affected by the mine or mining activities	Yes – Water Quality and Flow Monitoring Plan
Collecting, transporting, and treating mine water, camp sewage, and runoff water that comes into contact with project activities, as necessary	Yes – Water Quality and Flow Monitoring Plan
Managing potentially acid-generating or metal-leaching materials	Yes – Operational ARD-ML Sampling and Testing Plan
Monitoring quality of discharges	Yes – Water Quality and Flow Monitoring Plan
Adjusting management practices if monitoring results indicate discharge quality does not meet discharge criteria	Yes – Water Quality and Flow Monitoring Plan
Winter culvert installation	N/A – No construction occurred in 2024
Sediment control (e.g. use of geotextile for Baker Lake marine barge landing facility)	Yes – Freshet Action Plan, Erosion Management Plan, Site Inspections
Use of riprap to stabilize shorelines around culverts and anchor pipes	N/A – No construction occurred in 2024
Treatment of effluent discharge	Yes – Water Quality and Flow Monitoring Plan
Discharge only during open water, not under ice (Attenuation Pond discharge to Third Portage Lake)	N/A – Attenuation pond discharge is no longer occurring

Adaptive Management

Although some CREMP water quality results (for parameters without CCME guidelines) have exceeded quantitative FEIS predictions, a review of the literature (2019 CREMP Report, Appendix J) suggests that the observed concentrations of these parameters are below levels of concern for aquatic life, so results were determined to be consistent with the FEIS-predicted “low” significance rating. As a result, no changes to current mitigation measures for water quality are planned at this time.

12.4.1.3 Fish and Fish Habitat**12.4.1.3.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts**

In addition to water quality and quantity, monitoring programs were developed to address the predicted residual impacts of mining activities to fish and fish habitat. These are primarily guided by Fish Habitat Offsetting Plans and No Net Loss Plans (NNLP) and associated aquatics monitoring (e.g. CREMP, Habitat Compensation Monitoring Plan, Blast Monitoring Plan). Results of these programs are summarized in relation to FEIS predictions for impacts to fish and fish habitat (Cumberland, 2005; Table B13.2) in Table 12-7, below.

Note: Two pathways that are no longer relevant have been removed in Table 12-7 beginning in 2023. 1 - Impacts of nutrients in treated sewage release is no longer evaluated, since sewage has always been directed to the tailings storage facility, and not to the receiving aquatic environment. 2 – Potential impairment of fish passage at AWAR stream crossings was evaluated from 2008 – 2011. Migrations were not impeded, and the program was concluded at that time in consultation with DFO.

Table 12-7 Meadowbank Mine: Predicted and measured impacts to fish and fish habitat during the Operations period

Note: "Potential impacts" according to Cumberland (2005); Table B13.2. Measured impacts exceeding or potentially exceeding predictions are shaded grey and further discussed in Section 12.4.1.3.2.

Potential Impact	Potential Cause(s)	Proposed Monitoring	Monitoring Conducted	Predicted Impact in FEIS	Measured Impacts							
					2018	2019	2020	2021	2022	2023	2024	
Loss/ impairment of fish habitat	Construction of temporary and permanent in-water features (e.g. TSF, dikes, pits).	Monitoring of compensation features per NNLP inc. dike “pore water” (interstitial water) quality, periphyton growth, fish use).	Structure, interstitial water quality, periphyton growth, fish use under HCMP	Dikes will provide a medium for lower trophic growth; habitat for non-spawning life functions except Goose Island dike where spawning may occur.	NM	Compensation features appear to be functioning as intended (continuing periphyton growth, fish presence around dikes). Interstitial water quality not assessed in 2019.	NM	Compensation features appear to be functioning as intended (water quality <CWQG; continuing periphyton growth; fish presence around dikes).	NM (complete)			
	Construction of barge facility in Baker Lake	Annual monitoring of shoreline stability and integrity (proposed 2016)	CREMP monitoring at Baker Lake barge dock	Negligible impact	No impacts of barge activity on water quality, sediment quality, phytoplankton, benthic invertebrates observed to date.							
Reduced fish egg survival	Metals and particulates from dike leachate	Targeted studies under AEMP (“pore water” (interstitial water) sampling during year 1	Interstitial water quality under HCMP	Dissolved metals may reduce fish egg survival and larval development during overwinter incubation.	NM			Dike leachate (interstitial water quality) <CWQG	NM (complete)			
	Metals and particulates from effluent	MDMER monitoring	MDMER monitoring	<MDMER regulations	Effluent < MDMER			Effluent <MDMER except April & May (marginal exceedance for TSS)	Effluent < MDMER except single TSS grab sample	Effluent <MDMER		
								See discussion, Section 12.4.1.2.2.2				

Potential Impact	Potential Cause(s)	Proposed Monitoring	Monitoring Conducted	Predicted Impact in FEIS	Measured Impacts						
					2018	2019	2020	2021	2022	2023	2024
	Metals and particulates from road dust	Whole-lake water quality under CREMP	Whole-lake water quality under CREMP	Negligible ecological effect, <CWQG except cadmium (TPL), and arsenic and cadmium (Wally Lake)	CREMP results <CWQG						
	Blasting	Blast monitoring	Blast monitoring	Most blasts < DFO overpressure guideline (50 kPa); all blasts < PPV guideline (13 mm/s)	All blasts < DFO overpressure guideline and PPV guideline		NM - mining operations ceased in 2019				
Mortality of fish and fish eggs	Blasting	Blast monitoring	Blast monitoring	Most blasts will not exceed DFO overpressure guideline (50 kPa); no exceedances of PPV guideline (13 mm/s)	All blasts < DFO overpressure guideline and PPV guideline		NM - mining operations ceased in 2019				
	Worker fishing in project area, despite no-fishing policy	Staff interviews	Workers are not allowed to bring up to site fishing equipment. Luggage inspection to ensure policy is followed	Not defined	No recreational fishing						
	Increased fishing in area due to AWAR	Creel survey	Creel survey resumed 2021	Not defined	NM		No increase in fishing pressure due to AWAR or WTHR				
	Accidental spills (e.g. fuel)	Event-based monitoring; spill emergency response plan	Spill Contingency Plan	Not defined	Impacts not defined in FEIS so not suitable for PEAMP evaluation. See Section 7 for spills reporting.						

Potential Impact	Potential Cause(s)	Proposed Monitoring	Monitoring Conducted	Predicted Impact in FEIS	Measured Impacts						
					2018	2019	2020	2021	2022	2023	2024
Fish stress, behavioral changes, avoidance	Increased concentrations of dissolved metals and TSS from dust	Whole-lake water quality monitoring under CREMP	Whole-lake water quality under CREMP	Negligible ecological effect; <CWQG except cadmium (TPL), and arsenic and cadmium (Wally Lake)	CREMP results <CWQG; no mine-related exceedance of TSS trigger.						
	Increased concentrations of dissolved metals and TSS from effluent discharge	MDMER monitoring	MDMER monitoring	Effluent < MDMER criteria	Effluent < MDMER	Effluent <MDMER except April & May (marginal exceedance for TSS)	Effluent < MDMER except single TSS grab sample	Effluent < MDMER			
						See discussion, Section 12.4.1.2.2.2					
Impaired lower trophic levels (incl. loss of phytoplankton, periphyton and benthos)	Leaching of metals (from dikes)	Targeted studies under AEMP ("pore water" sampling; periphyton sampling) during year 1	Interstitial water quality under HCMP	Dike faces will provide a medium for periphyton growth	NM		Dike leachate (interstitial water quality) <CWQG	NM (complete)			
	Sedimentation through dust/particulate dispersion (road dust, wind dispersal, terrain disturbance) and effluent discharge	Water quality monitoring through CREMP	CREMP (water quality, sediment, and lower trophic level monitoring)	Negligible ecological effect; CREMP results <CWQG except cadmium (TPL), and arsenic and cadmium (Wally Lake)	CREMP results <CWQG and no mine-related impairment of phytoplankton, benthic invertebrate communities. The CREMP sediment threshold for Cr has been exceeded in Third Portage Lake. See discussion, Section 12.4.1.3.2.						
		Effluent MDMER monitoring	Effluent MDMER monitoring	Settling of TSS and altered sediment chemistry may impact benthos.	Effluent < MDMER	Effluent <MDMER except April & May (marginal exceedance for TSS)	Effluent < MDMER except single grab sample	Effluent < MDMER			
							See discussion, Section 12.4.1.2.2.2				

Potential Impact	Potential Cause(s)	Proposed Monitoring	Monitoring Conducted	Predicted Impact in FEIS	Measured Impacts						
					2018	2019	2020	2021	2022	2023	2024
NM = not required to be measured CWQG = Canadian Council of Ministers of the Environment Water Quality Guidelines for the Protection of Aquatic Life.											

12.4.1.3.2 Parts 3 & 4: Discussion

Where impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion is provided here.

12.4.1.3.2.1 Exceedance of CREMP sediment thresholds

FEIS Prediction: Sedimentation (and altered sediment chemistry) through dust/particulate dispersion (road dust, wind dispersal, terrain disturbance) and effluent discharge would result in negligible ecological effect on lower trophic levels.

Discussion: To date, Meadowbank Mine CREMP monitoring results have indicated no mine-related negative effects on lower trophic levels in the receiving environment.

Historically, however, CREMP results have indicated mine-related increases in chromium in sediment for one receiving environment location (TPE). As a result, targeted studies assessing the ecological significance (potential for impact to lower trophic levels) of chromium increases in TPE occurred in 2015, 2018, and 2019. At the conclusion of the 2019 studies, results were determined to clearly demonstrate that the increase in sediment chromium at TPE is not adversely affecting the benthos at TPE (i.e. there is negligible ecological effect on lower trophic levels, and FEIS predictions are not being exceeded). No further targeted studies are planned at this time other than annual monitoring of the benthos community as part of the routine CREMP, along with annual sediment grab samples and a sediment coring program every 3 years. A complete description of the targeted chromium investigation is provided in the 2019 CREMP Report.

For reference, historical results for chromium in sediment at TPE and benthic invertebrate abundance are shown in Figures 45 and 46, from the 2023 and 2024 CREMP reports, respectively. Sediment chemistry was last analyzed in 2023, and the CREMP trigger value was exceeded, with a statistically significant difference from baseline/reference. However, the mean chromium concentration was lower than observed in 2017 and 2020. As described in the 2023 CREMP Report, chromium concentrations at this location are considered to have stabilized, and current conditions do not pose risks to benthos.

Analyses of benthic invertebrate communities (e.g. abundance, taxa richness) in 2024 indicated no statistically significant changes at Third Portage Lake locations relative to baseline/reference conditions.

Figure 45 Total chromium (mg/kg) in sediment samples (grabs and cores) from Meadowbank project lakes since 2006

Note: Figure from the 2023 CREMP Report. The red dashed line is the CREMP trigger value

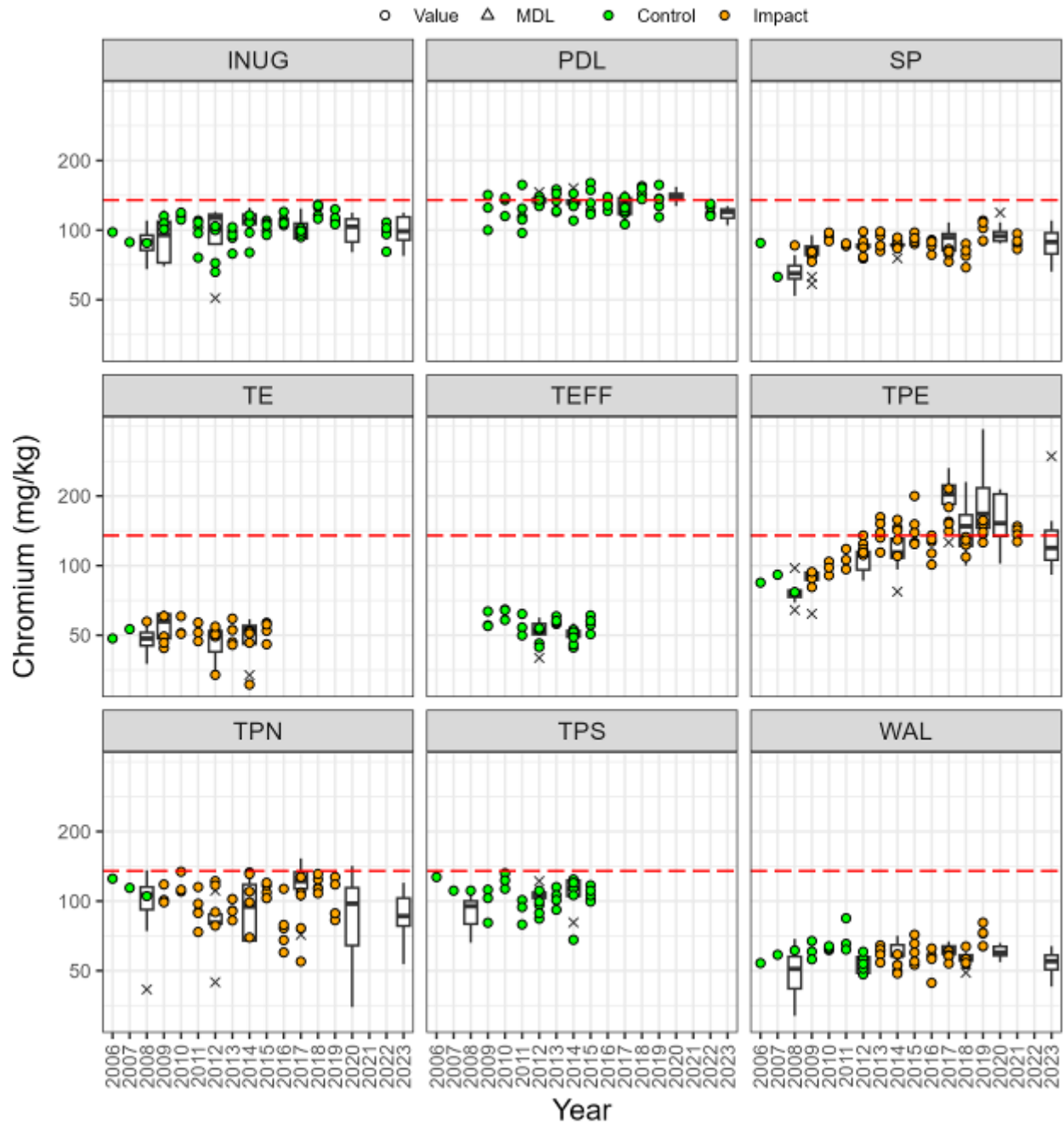
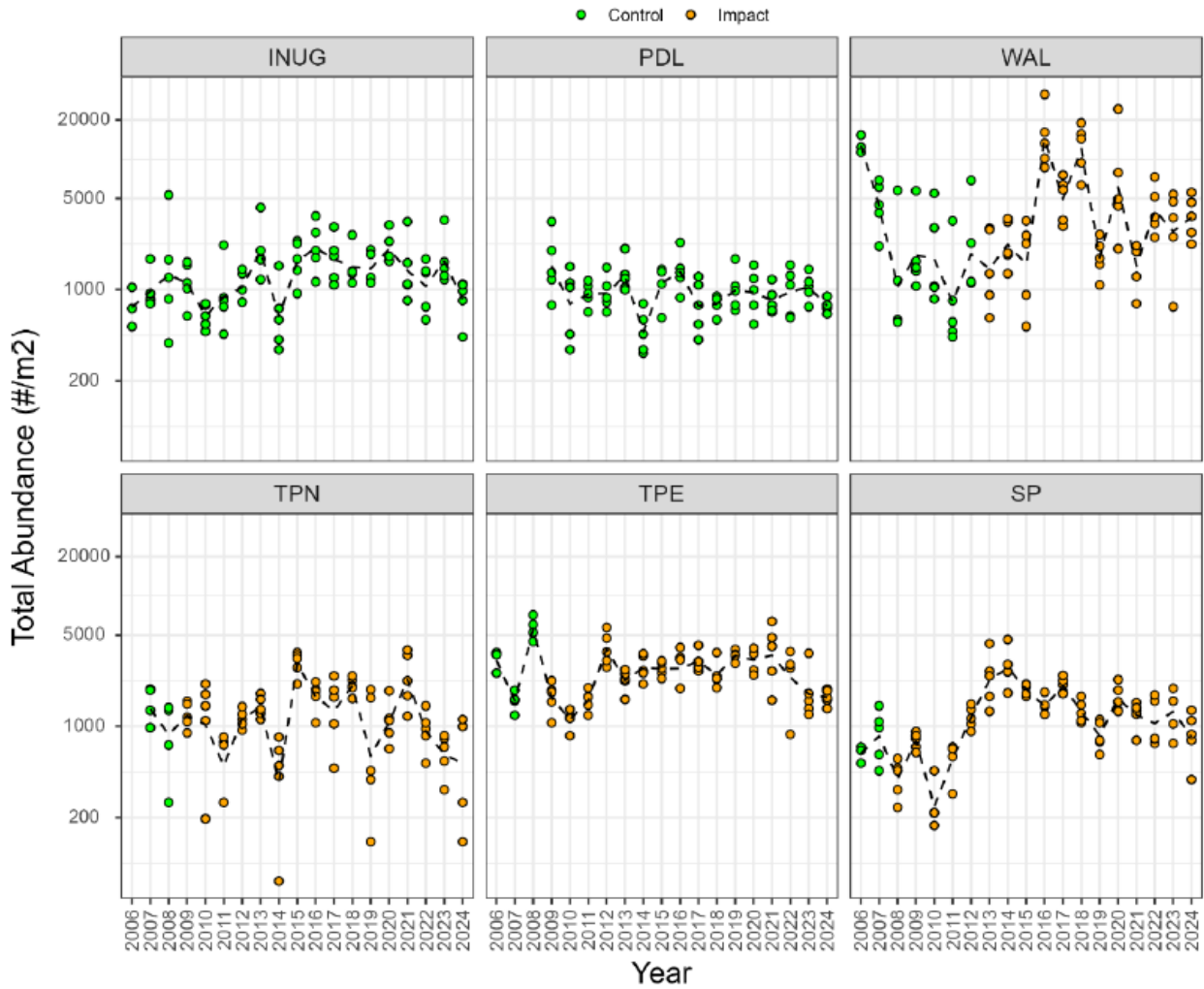


Figure 46 Benthic invertebrate total abundance (#/m²) from Meadowbank project lakes since 2006



12.4.1.3.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

In 2024, monitoring was able to address all potential causes of impacts identified in the FEIS (i.e. monitoring was considered effective), except worker fishing.

While the FEIS proposed staff interviews to assess any fishing being conducted despite a strict no-fishing policy onsite, in practice it has become evident that interviews are not required. To the best of knowledge, no cases of fishing by workers in contravention to the policy have ever been observed or reported. Despite the lack of formal monitoring, it is clear that this is not a significant source of potential impacts to area fish populations.

Effectiveness of Mitigation

A summary of the FEIS-planned mitigation measures related to fish and fish habitat, along with a commentary on implementation in 2024 is provided in Table 12-8. Mitigation measures specifically related to water quantity and water quality are provided in Sections 12.4.1.1.3 and 12.4.1.2.3, respectively, though some overlap may occur.

Table 12-8 Meadowbank Mine: FEIS-designed mitigation measures to reduce impacts of the project to fish and fish habitat, and commentary on current implementation

Planned Mitigation Measure (Cumberland (2005), Section 4.24.2.5)	Implementation (2024)
Winter culvert installation	N/A – None constructed in 2024
Sediment control (e.g. use of geotextile for Baker Lake marine barge landing facility)	Yes – Freshet Action Plan, Erosion Management Plan, Site and Road Inspections
Use of properly sized screens for freshwater intake	N/A – None constructed in 2024
Use of riprap to stabilize shorelines around culverts and anchor pipes	N/A – None constructed in 2024
Modification of the external surface of containment dikes	N/A – None constructed in 2024
Enhancement and improvement of connecting channels between lakes to enhance fish movement	N/A – No longer planned under updated DFO Fisheries Act Authorization NU-03-0191.3 (2013)
Treatment of effluent discharge	Yes – Water Quality and Flow Monitoring Plan
Discharge only during open water, not under ice (Attenuation Pond discharge to Third Portage Lake)	N/A - Attenuation pond discharge is no longer occurring
Construction of fish habitat compensation features (according to DFO Fisheries Act Authorization NU-03-0191.3, 2013)	Yes – Habitat Compensation Monitoring Plan

Adaptive Management

Based on these results, no specific adaptive management actions are planned for 2025.

12.4.2 Vegetation, Terrestrial Wildlife, and Birds

12.4.2.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

The 2024 Wildlife Monitoring Summary Report (Appendix 39) provides a complete assessment of wildlife monitoring programs including a comparison to monitoring thresholds detailed in the Terrestrial Ecosystem Management Plan and FEIS impact assessment (Cumberland, 2005), where available. Results are summarized here in the PEAMP format.

For each terrestrial VC, a summary of predicted impacts and the accuracy of those predictions (observed impacts) as determined through various monitoring programs conducted under the TEMP is provided in Table 12-9. Thresholds for the implementation of adaptive management, as developed in the TEMP were used in this comparison because most impact predictions in the Terrestrial Ecosystem Impact Assessment of the FEIS (Cumberland, 2005) were qualitative only. The TEMP is developed in consultation with the Terrestrial Advisory Group (TAG), and thresholds represent quantitative measurement endpoints that trigger management action. It is noted that many thresholds related to impacts for the Meadowbank Complex as a whole (Meadowbank and Whale Tail Mines combined). These cases are identified in Table 12-9.

Note: Beginning in 2024, the following five potential impacts which are not quantitative and have not had monitoring thresholds since at least 2019 were removed from the Table 12-9. The implementation of monitoring and mitigation related to these potential impacts continues to be discussed in the Wildlife Monitoring Summary Report (Appendix 39).

- *Ungulates: Sensory disturbance for caribou (avoidance due to noise and activity (roads, airstrip, mine site));*
- *Small mammals: Project-related mortality (caused by vehicular or air traffic collisions, falling into pits, TSF or other means);*
- *Small mammals: Habitat losses (caused by mine site footprint, pits, roads, water management and collection systems);*
- *Raptors: Healthy prey populations (caused by mine site footprint, dust and exhaust, noise (road, airstrip, mine site, Baker Lake barge area); and*
- *Other breeding birds: Project-related mortality (vehicle collisions).*

Table 12-9 Meadowbank Mine: Predicted and measured impacts to terrestrial VECs during the Operations period

*Note: Potential impacts according to Cumberland (2005). Predictions/thresholds and monitoring results according to the Wildlife Monitoring Summary Report (Appendix 39). NM = not required to be measured in the identified year. NA = no threshold or impact no longer required to be assessed. ^Threshold and results for Meadowbank Complex (Meadowbank + Whale Tail Mines combined). *Changes to methods for habitat footprint losses occurred in 2024 – see complete description in Appendix 39. Measured impacts exceeding or potentially exceeding impact predictions/thresholds are shaded grey and further discussed in Section 12.4.2.2.*

Potential Impact	Potential Cause(s)	Proposed Monitoring	Current Monitoring	Threshold/ Prediction	Measured Impact						
					2018	2019	2020	2021	2022	2023	2024
VEGETATION (WILDLIFE HABITAT)											
Habitat Loss	Mine site footprint, pits, roads, water management and collection systems	Pit and mine-site ground surveys, Mapping, GIS Analysis	Pit and mine-site ground surveys, Mapping, GIS Analysis	*Permitted Area + threshold over prediction: Mine Site – 1532 ha + 5% AWAR – 455 ha + 5%	Mine Site - 1,129 ha AWAR – 173 ha	NM		Mine Site – 1,130 ha AWAR – 180 ha	NM	NM	Mine Site – 1,113 ha AWAR – 184 ha
Habitat Degradation by Contamination	Dust from roads, TSF, airstrip	Vegetation and Soil Samples (SLRA)	Vegetation and Soil Samples (SLRA)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM	NM (2020 assessment postponed to 2021)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM	No excess mine-related risk (or measured concentrations <screening values)
UNGULATES											
Project-related Mortality	Mine-related activities (e.g., falling into pits, tailing, sludge or other means)	Pit and mine-site ground surveys	Pit and mine-site ground surveys, Incidence reports	Two (2) Caribou or Muskoxen mortalities per year^	None	None	None	None	None	None	None
Vehicle Collisions	Vehicular collisions	Pit and mine-site ground surveys, Incidence reports	Pit and mine-site ground surveys, Incidence reports, road surveys	Two (2) Caribou or Muskoxen mortalities per year^	None	None	1 caribou mortality	None	None	1 muskox mortality	1 caribou mortality
Habitat Loss and Degradation	Mine site footprint, pits, roads, water management and collection	Pit and mine-site ground surveys, Mapping, GIS Analysis	Pit and mine-site ground surveys, Mapping, GIS Analysis	*High Suitability Habitat Permitted Area + threshold over prediction:	Growing – 372 ha Winter – 280 ha	NM	NM	Growing – 372 ha Winter – 280 ha	NM	NM	Growing – 20 ha Winter – 366 ha

Potential Impact	Potential Cause(s)	Proposed Monitoring	Current Monitoring	Threshold/ Prediction	Measured Impact						
					2018	2019	2020	2021	2022	2023	2024
	systems			Growing – Permitted Losses: 531 ha + 10% *Winter – Permitted Losses: 407 ha + 10% (Note: Meadowbank Mine Site values, excludes AWAR)							
Hunting by Baker Lake Residents	Improved access to hunting along the AWAR	Hunter Harvest Study	Hunter Harvest Study	< 20% increase of historical harvest activities within the RSA; no significant impact to herds	NM	Threshold not exceeded (<20% increase in RSA)					
Exposure to Contaminated Water or Vegetation	Consumption of contaminated dust deposited on vegetation	Vegetation and Soil Samples (SLRA)	Vegetation and Soil Samples (SLRA)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM	NM (2020 assessment postponed to 2021)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM	No excess mine-related risk (or measured concentrations <screening values)
PREDATORY MAMMALS											
Project-related Mortality	Mine-related mortality (falling into pits, TSF or other means)	Pit and mine-site ground surveys, Incidence reports	Pit and mine-site ground surveys, Incidence reports	Destruction of two (2) problem Grizzly Bear, Wolverine, or Wolf per year^	One wolverine dispatched	One wolverine dispatched at Amaruq Camp	Two wolverine dispatched	One wolverine dispatched	One wolverine dispatched	Three wolverine and three wolves dispatched	None
	Vehicular collisions	Pit and mine-site ground surveys, Incidence reports	Pit and mine-site ground surveys, Incidence reports, road surveys	Two mortalities of Grizzly Bear, Wolverine, or Wolf per year due to vehicle collisions^	None	None	None	None	One wolverine	None	One wolverine
Sensory Disturbance to Denning Predators*	Blasting, vehicles, and ground personnel near active dens	Active den site surveys (WT FEIS)	Ground surveys, vehicle surveys, and Viewshed	1 den failure	NA	NA (not conducted in 2019 - no potential for impacts	No dens observed or monitored				

Potential Impact	Potential Cause(s)	Proposed Monitoring	Current Monitoring	Threshold/ Prediction	Measured Impact						
					2018	2019	2020	2021	2022	2023	2024
			surveys. Active den sites identified during baseline studies will also be monitored.			identified)					
SMALL MAMMALS											
Exposure to Contaminated Water or Vegetation	Consumption of contaminated dust deposited on vegetation	Vegetation and Soil Samples (SLRA)	Vegetation and Soil Samples (SLRA)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM	NM (2020 assessment postponed to 2021)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM	No excess mine-related risk (or measured concentrations <screening values)
RAPTORS											
Disturbance of Nesting Raptors	Noise and Activity	Active Nest Monitoring	Pit and mine site ground surveys; Incidental wildlife reporting; Dedicated raptor nest surveys; Road surveys	One nest failure per year^	Threshold not exceeded			No confirmed mine-related nest failures			
					Note – A supplemental raptor monitoring program is in place to evaluate mine-related impacts on nest occupancy (population impacts). Further discussion is provided in Section 12.4.2.3.						
Project-related Mortality	Vehicle collisions	Road/Ground Surveys, Incidence reports	Road surveys, Incidence reports	One mortality per year^	Threshold not exceeded	None	None	None	None	None	None
WATERBIRDS											
Disturbance of Nesting Waterfowl	Noise and Activity; dewatering	Waterfowl Nest Surveys	Waterbird Nest Surveys (ended 2019); Pit and mine site ground surveys	One nest failure per year^	Threshold not exceeded	Waterbird Nest Survey program ended 2019. Replaced for the Whale Tail site with Migratory Bird Protection Plan. Threshold for nest failure not exceeded in pit and mine site ground surveys.		Threshold not exceeded			

Potential Impact	Potential Cause(s)	Proposed Monitoring	Current Monitoring	Threshold/ Prediction	Measured Impact						
					2018	2019	2020	2021	2022	2023	2024
Habitat Loss and Degradation	Mine site footprint, pits, roads, water management and collection systems	Ground Surveys, Mapping, GIS Analysis	Ground Surveys, Mapping, GIS Analysis	*High Suitability Habitat Permitted Area + threshold over prediction: *Mine Site Permitted: 417 ha + 10% (Note: Meadowbank Mine Site values, excludes AWAR)	NM	NM		Mine Site - 274 ha	NM	NM	Mine Site - 151 ha
Exposure to Contaminated Water or Vegetation	Mine site dust; Secondary containment structures and tailings storage facilities	Vegetation and Soil Samples (SLRA)	Vegetation and Soil Samples (SLRA)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM	NM (2020 assessment postponed to 2021)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM	No excess mine-related risk (or measured concentrations <screening values)
Project-related Mortality	Vehicle collisions	Road Surveys, Incidence reports	Road Surveys, Incidence reports	One mortality per year due to vehicle collision^	Threshold not exceeded	None	None	None	None	None	None
Project-related Mortality	Mine site-related mortality	Pit and mine-site ground surveys	Pit and mine-site ground surveys	One mortality per year due to mine activity other than vehicle collisions^	Two Long-tailed ducks found dead onsite. Last discussed in 2022 Annual Report	None	None	None	None	None	Six Long-tailed duck mortalities through mid-flight collision with building.
OTHER BREEDING BIRDS											
Habitat Loss and Degradation	Mine site footprint, pits, roads, water management and collection systems	Pit and mine-site ground surveys, Mapping, GIS Analysis	Pit and mine-site ground surveys, Mapping, GIS Analysis	*High Suitability Habitat Permitted Area + threshold over prediction: *Mine Site – 736 ha + 10% (Note: Meadowbank Mine Site values,	NM	NM		594 ha	NM	NM	313 ha

Potential Impact	Potential Cause(s)	Proposed Monitoring	Current Monitoring	Threshold/ Prediction	Measured Impact						
					2018	2019	2020	2021	2022	2023	2024
				<i>excludes AWAR)</i>							
Exposure to Contaminated Water or Vegetation	Mine site dust	Vegetation and Soil Samples (SLRA)	Vegetation and Soil Samples (SLRA)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM (next assessed in 2020)	NM (2020 assessment postponed to 2021)	No excess mine-related risk (or measured concentrations <screening values)	NM	NM	No excess mine-related risk (or measured concentrations <screening values)
Changes in Breeding Bird Populations	Mine Footprint, dewatering dust and exhaust, noise (road, airstrip, mine site, Baker Lake barge area)	Breeding Bird Prism Plots and Transects	Suspended in 2015. Resumed in 2022.	2022+: None	NA	Analytical report to be completed for CWS in 2020 to determine ongoing monitoring requirements.	Analytical report provided to CWS in 2020. Response pending.	NA – Agnico Eagle /ECCC agreement for PRISM and BBS to begin in 2022. There will be no threshold.	Surveys started but not completed due to medical issue.	Surveys completed as designed with ECCC	

12.4.2.2 Parts 3 & 4: Discussion

Where impacts are exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion is provided here. In 2024, only the threshold for waterbird mortality was exceeded for the Meadowbank Mine, as discussed below. One additional threshold exceedance has occurred in the past 5 years (2023 threshold for predatory mammal mortalities), and that discussion is maintained.

1. Project-related Mortality of Waterbirds (2024)

TEMP Threshold: One mortality per year due to mine activity other than vehicle collisions (Meadowbank Mine and Whale Tail Mine combined).

Discussion: In 2024, a small group of ducks flew into the side of the Mill building in between Mill Door B and Mill Door C (Meadowbank Mine site). One of the seven birds survived. These were originally believed to be black scoters but have since been identified as long-tailed ducks. As per the migratory bird regulation, ECCC was emailed at the time of the mortality. At the Whale Tail Mine, there were no project related mortalities for waterbirds.

2. Project-related Mortality of Predatory Mammals (2023)

TEMP Threshold: Destruction of two (2) problem Grizzly Bear, Wolverine, or Wolf per year (Meadowbank Mine and Whale Tail Mine combined).

Discussion: In 2023, six incidents of project-related mortality for predatory mammals occurred at the Meadowbank Mine, including three wolves and three wolverines. These mortalities occurred when animals were required to be dispatched following unsuccessful deterrence actions. In all cases, destruction permits were first issued by a GN Wildlife Officer. In response to this threshold exceedance, reminder notices were sent to all mine crews regarding wildlife procedures, focused on wildlife attractants, rights-of-way, and incident reporting requirements. In 2024, one wolverine mortality occurred due to a vehicle collision, but this was within the threshold for predatory mammals (Grizzly Bear, Wolverine, or Wolf).

12.4.2.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

As indicated in Table 12-9, some monitoring requirements have been eliminated in the TEMP since the FEIS was developed, in consultation with regulators (e.g. habitat loss for small mammals, waterbird surveys outside of the Whale Tail flood zone).

Based on the results in Table 12-9, current TEMP monitoring programs are able to address most other FEIS impacts for which monitoring was recommended (i.e. monitoring is considered effective), with the exception of individual raptor nesting success. Monitoring programs are in place to assess impacts to raptors, but the structure of the monitoring and mitigation program and small number of nests observed in recent years do not allow analysts to confirm specifically whether potential nest failures are mine-related. Although compliance with the existing raptor TEMP threshold has been difficult to assess, management and mitigation approaches are enacted to protect nesting raptors according to the 'Peregrine Falcon Management and Protection Plan on the Meadowbank Gold Project Site' (an appendix of the TEMP).

Further, Agnico Eagle has engaged Arctic Raptors since 2015 to conduct analyses of mine-related impacts on raptors, including statistical analysis of nest occupancy (population) beginning in 2021. Results of the analysis did not indicate project-related effects on rough-legged hawk occupancy and the population is considered stable. Similarly, there were no indicated project effects on gyrfalcon occupancy and results indicate the population is stable. Peregrine falcon occupancy is considered to be stable and observed occupancy was higher closer to disturbance.

Effectiveness of Mitigation

FEIS-planned mitigation measures to limit impacts of the Project on terrestrial wildlife were originally described in the Terrestrial Ecosystem Management Plan (Version 1, October 2005), a component of the Project FEIS (Cumberland, 2005). This plan is regularly updated, and a mitigation audit is a component of the current plan.

The audit evaluates:

- What mitigation was implemented;
- Which mitigation is perceived or shown to be effective;
- Whether new mitigation has been implemented in response to new issues; and
- Whether some mitigation is redundant or unnecessary.

In 2024, all required monitoring and mitigation measures were conducted according to the TEMP and protocols agreed with the TAG. In the context of the PEAMP evaluation, mitigation is considered effective if impact predictions (or in this case, TEMP thresholds) are not being regularly exceeded. Since few thresholds have been exceeded historically and without consistent causation, mitigation is considered effective overall in restricting impacts of the Project to those predicted or otherwise permitted.

Adaptive Management

Following the exceedance of thresholds related to mortality of predatory mammals in 2023, reminders were sent to all departments regarding wildlife procedures, and related existing TEMP management measures were emphasized for implementation in 2024. Following the decommissioning of the incinerator, it was decided to reorganize the composter building (the composter and incinerator were housed in the same building). This reorganization is expected to alleviate some challenges encountered with wildlife in this sector. Furthermore, due to the increase in wildlife observation around the landfill, towards the end of summer 2023, it was decided to relocate and compact the waste present within the landfill. The new landfill location minimizes exposed waste wall, reducing possible wildlife attractants.

In addition, Agnico Eagle has been working with the TAG in 2024 to update the TEMP in efforts to continually improve terrestrial monitoring, mitigation, and reporting, and will be submitting an updated version with the submittal of this report.

12.4.3 Noise

12.4.3.1 *Parts 1 & 2: Summary of Predicted and Measured Residual Impacts*

While noise generation was predicted in the FEIS for many mine site components, a significant environmental effect of noise (disturbance of wildlife; reduced habitat effectiveness) requiring monitoring was determined in association with pit development, tailings handling, and the mill (Cumberland, 2005; Table B3.2). Monitoring sites were established around the site and along access roads, as described in the current Noise Monitoring and Abatement Plan.

Table 12-10, below, compares FEIS predictions for sound levels produced by the Project (Cumberland, 2005 – Noise Impact Assessment) with the results of noise surveys (measured ambient sound levels) conducted since 2018 when this PEAMP evaluation process began.

It is noted that while noise modeling for FEIS purposes determines a single sound pressure level produced by a specified combination of Project-related activities at a given location under certain assumed atmospheric conditions, in reality, measured noise levels vary over time, depending on contributions from background sources, wind direction, ground cover, irregular or occasional activities, etc. While most Meadowbank FEIS noise predictions were not specifically time-averaged, they were assumed to be constant over the course of a day, and they are primarily compared here to the measured 24-h L_{eq} . This value represents the average sound pressure level produced by all sources during a 24 h period, under various climatic conditions including wind speeds and direction. While data is filtered in keeping with standard methods to minimize the range of weather conditions represented (see Noise Monitoring Report, Appendix 41), these differences in the derivation of model-predicted values and measured noise levels are noted, and this evaluation is considered a screening-level comparison for the purposes of noise management, and not a comprehensive validation of FEIS model predictions.

Since the potential impacts of Project-related noise were all identified as wildlife disturbance, the accuracy of noise-related predictions is also monitored through the terrestrial environment monitoring programs, as discussed in Section 12.4.2.

To date, measured ambient noise levels have only exceeded FEIS predictions as a result of infrequent events excluded from standard noise modeling (aircraft flyovers). However since this does occur from time to time, a discussion and historical trend analysis is provided in Section 12.4.3.2.

Table 12-10 Meadowbank Mine: Predicted and measured ambient sound levels during the Operations period

*Note: *Values estimated from sound level contour plots in Cumberland (2005) – Noise Impact Assessment. Measured impacts exceeding or potentially exceeding predictions are shaded grey and further discussed in Section 12.4.3.2.*

Potential Impact	Proposed Monitoring	Monitoring Station	FEIS Predicted Value (dBA)*	Measured Value Leq, 24-h (dBA)						
				2018	2019	2020	2021	2022	2023	2024
Moderate and high noise levels from blasting, drilling, TSF berm construction and material handling will disturb wildlife and result in reduced habitat effectiveness.	Monitor noise levels (and behavioural responses of wildlife)	R1	58-63	37.2	47.6	35.5	35.8	45.6	33.6	-
				43.4	-	37.2	36.7	-	42.3	-
				-	-	-	-	-	40.5	-
		R2	58-63	40.7	36.8	32.0	48.5	34.6	46.7	46.0
				37.5	34.1	-	44.2	-	49.6	-
		R3	49-53	38.8	38.9	34.0	36.1	-	42.0	33.3
				-	-	39.4	37.4	-	41.4	34.2
		R4	58-63	57.3	-	34.3	34.0	34.0	33.4	36.5
				36.7	-	32.1	-	-	39.3	-
		R5	Max 1 h Leq = 57**	All 1 h Leq <57	All 1 h Leq <57	All 1 h Leq <57	-	All 1 h Leq <57	All 1 h Leq <57	All 1 h Leq <57
				(1 of 22 Leq 1-h > 57 dBA)	(1 of 32 Leq 1-h > 57 dBA)	All Leq 1 h <57	-	-	(2 of 44 Leq 1-h > 57)	(1 of 31 Leq 1-h > 57)

**For the R5 location, FEIS predictions specify the maximum modelled 1-h Leq value.

“-“ Indicates no data point or invalid survey. In each year, attempts are made to obtain a minimum of two valid surveys for each monitoring station. Surveys are invalidated for a variety of reasons, including unacceptable weather conditions (e.g. winds >15 km/h), equipment malfunction (e.g. fallen microphone, battery failure), and occasionally, accidental data loss (e.g. lost or erased SD card).

12.4.3.2 Parts 3 & 4: Discussion

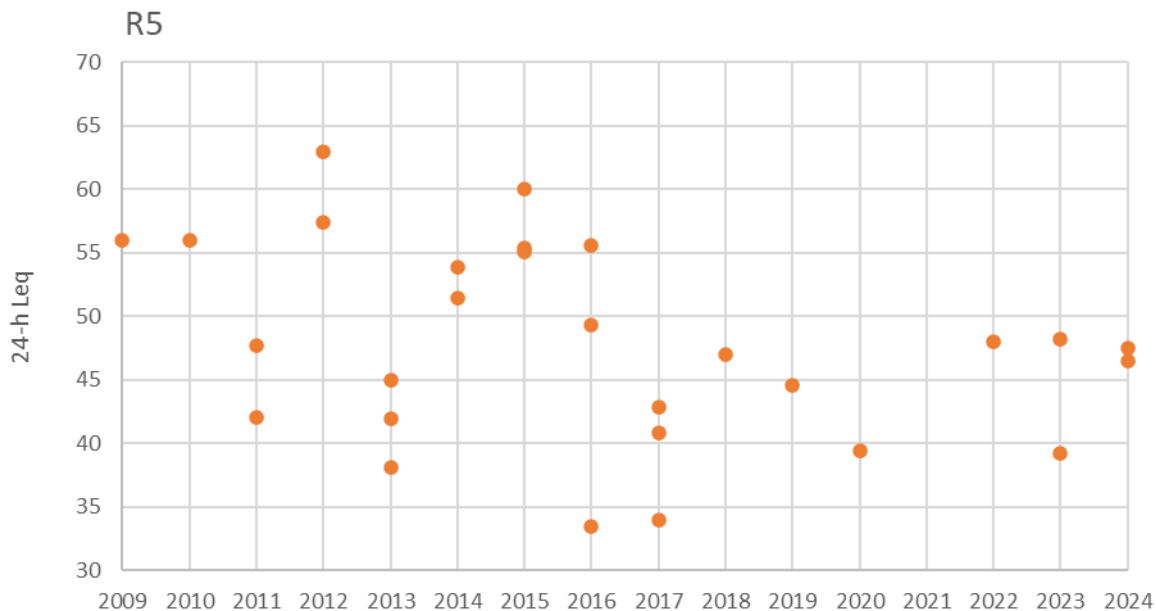
Where impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion is provided here.

12.4.3.2.1.1 Noise Levels at R5

FEIS Prediction: For station R5, FEIS predictions specified that one-hour L_{eq} values would not exceed 57 dBA.

Discussion: In 2018, 2019, 2023, and 2024 this prediction was exceeded for one or two hours within the datasets. In all cases, peaks above 57 dBA were short in duration (1 – 2 peaks per hour, lasting less than 3 min). In 2019, 2023, and 2024, sound recordings were reviewed and peaks were determined to be caused by helicopter or aircraft flyovers. These were not included in FEIS noise models (as is standard) because of their infrequent occurrence and short duration. Helicopters are also regularly used for exploration activities, so may not have been related to operations. These survey results are therefore not specifically considered to have exceeded impact predictions. Nevertheless, 24-h L_{eq} measurements since 2009 were reviewed to understand if any trends towards increasing noise levels above FEIS predictions are occurring for any monitoring location. Results for all stations are provided in the Noise Monitoring Report (Appendix 41) and results for R5 are shown in Figure 47. From this review, there is no clear trend towards increasing sound levels above FEIS predictions at any noise monitoring station.

Figure 47 Historical 24-h L_{eq} values for monitoring station R5 at the Meadowbank Mine



Note: No valid surveys were obtained in 2021 despite three attempts, primarily due to weather outside of acceptable conditions.

12.4.3.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

Based on the results in Table 12-10, current monitoring programs are able to address all FEIS impacts for which monitoring was recommended. Monitoring is therefore considered effective.

Effectiveness of Mitigation

FEIS-planned mitigation measures to limit impacts of the Project on area noise levels were originally described in the Air Quality and Noise Management Plan (October 2005). This plan was most recently updated in December 2018. A summary of the mitigation measures in place to ensure impacts to area noise levels are minimized is provided in Table 12-11, with a commentary on implementation in 2024.

Since no consistent exceedances of FEIS predictions has occurred, existing mitigation measures are considered to be effective.

Table 12-11 Meadowbank Mine: Mitigation measures described in the Noise Abatement and Monitoring Plan to reduce impacts of the project on area noise levels, and implementation in 2024

Noise Source	Planned Mitigation Measure (Noise Abatement and Monitoring Plan, December 2018)	Implementation (2024)
Whale Tail Haul Road Construction and Widening	Operate construction equipment within specification and capacity (i.e. don't overload machines)	N/A – No WTHR construction occurred
	Adequate equipment maintenance	
	Avoid operating numerous pneumatic tools at the same time, and spread operation throughout working periods	
	Avoid prolonged idling	
	If blasting is required, preference for daytime blasting	
Road traffic (mine site, AWAR) and Haul Roads operation	During maintenance, check that noise abatement devices are in good order (e.g., brakes, exhaust mufflers, engine hoods)	Yes – Maintenance logs
	Enforce speed limits	Yes – AWAR Transportation Management Plan
	Use shallow slopes for haul road	N/A – No construction occurred
	Educate truck drivers about the characteristics of diesel engines (i.e., that the flat torque characteristic allows ascending an incline in a higher gear, which is a less noisy operation)	Yes – SOP and best practices
	Keep road surfaces in good repair to reduce tire noise	Yes – AWAR Transportation Management Plan, road Inspection
	Avoid prolonged idling	Yes – No Idling Policy
	Avoid trucking operation during night time on access road, when possible	Yes – When possible
Air traffic (Meadowbank)	Avoid low altitude flights (not lower than 610 m in sensitive bird/wildlife areas), except on take-off and landing	Yes – Terrestrial Ecosystem Monitoring Plan
	Restrict air traffic to daytime hours except for emergencies	Yes – Ongoing

Noise Source	Planned Mitigation Measure (Noise Abatement and Monitoring Plan, December 2018)	Implementation (2024)
Impact equipment (pile drivers, jack hammers, drills, pneumatic tools)	Avoid operating numerous pneumatic tools at the same time, and spread operation throughout working periods	Yes – Best practices
Stationary equipment (compressors, generators, pumps)	Keep equipment in good condition	Yes – Maintenance logs, best practices
Blasting	Use delays, both surface and down hole	N/A – No blasting occurred
	Preference for daytime blasting	N/A – No blasting occurred
	Blasting in depressed pits (normal production practice)	N/A – No blasting occurred
Outdoor material handling equipment (crushers, concrete mixers, cranes)	Place crushers in sheltered/enclosed locations if possible	Completed
	Maintain equipment in good working condition	Yes – Maintenance logs, best practices
	Turn equipment off when not in use if practicable	Yes – No Idling Policy, best practices
Earth moving equipment (trucks, loaders, dozers, scrapers)	Aim to restrict equipment age so only newer, more efficient machinery will operate onsite	Yes – Maintenance logs
	Operate equipment within specification and capacity (i.e., don't overload machines)	Yes – Maintenance logs
	Use noise abatement accessories such as sound hood and mufflers	Yes – Maintenance logs
Primary plant facilities (gyratory primary crusher, SAG mill, ball mill, power plant)	Provide building with walls absorbing noise	Completed
	Maintain equipment on a regular basis, replace worn parts, lubricate as required	Yes – Preventive maintenance
	Provide diesel plant units with efficient intakes and exhaust silencers	Completed
	Use conveyor system with low noise output, paying particular attention to rollers	Completed
	Enclose conveyors where necessary	Completed
Utilities and services	Ensure that a rotating biological contactor treatment system operates quietly	Completed
	Dump solid waste behind barriers	N/A

Adaptive Management

Since measured ambient noise levels have only exceeded FEIS predictions as a result of infrequent events excluded from standard noise modeling (aircraft flyovers) and there are no clear trends towards increasing noise levels around the Meadowbank Mine, no adaptive management actions are planned based on this PEAMP analysis.

12.4.4 Air Quality

12.4.4.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

In order to estimate potential impacts of the Project on air quality, modeling exercises were conducted as a component of the original project FEIS to determine emission rates and dispersion of various criteria air

contaminants from different sources (Air Quality Impact Assessment, Cumberland, 2005)⁵. This included modeling the emissions of three size fractions of suspended particulates (PM_{2.5}, PM₁₀ and TSP) originating from the TSF, WRSF, and ore stockpile, for 24 h and annual averaging times. Deposition rates for dust from these sources were also calculated (g/m²/30d). Maximum ground level concentrations were described in the FEIS document for all size fractions, and figures from dispersion modelling were provided for TSP and deposition rates (Air Quality Impact Assessment, Cumberland, 2005). In addition, modeling was conducted for criteria pollutants (CO, NO₂, SO₂, PM₁₀, and PM_{2.5}) emitted from the power plant and mobile sources for 1h, 24h and annual averaging times, and dispersion modelling figures were provided for these analyses.

The monitoring program for air quality recommended in the Meadowbank FEIS included only static dustfall, which is being continuously monitored at four locations around the mine site. In addition, Agnico Eagle conducts monitoring of TSP, PM₁₀, PM_{2.5} and NO₂, in accordance with the current Air Quality and Dustfall Monitoring Plan. Carbon monoxide and sulphur dioxide are not required to be monitored as part of the program developed by Agnico Eagle in consultation with regulatory agencies.

Based on available FEIS modelling results, the following predicted values were able to be compared to measured values: NO₂ (annual average), PM_{2.5}, and PM₁₀ (annual and 24-h average). Monitoring results for these parameters are considered adequately comparable to FEIS predictions, since modelling included all reasonably significant emission sources for these parameters. FEIS predictions for TSP and dust deposition (30 d rate) are not suitable for comparison to field measurements (i.e. monitoring results) since only emissions from three specific point sources were required to be modeled (TSF, WRSF, ore stockpile). For reference, all historical results for TSP and dustfall monitoring are provided in the 2024 Air Quality and Dustfall Monitoring Report (Appendix 42).

Even for those measured parameters which are compared here to FEIS predictions (NO₂, PM_{2.5}, PM₁₀), it should be noted that while field monitoring captures emissions from all mine-related sources, as well as background sources, the FEIS presents modeled outputs from combinations of specific sources as described above. Therefore, accuracy of these quantitative predictions cannot specifically be assessed through field monitoring. However, if measured concentrations or deposition rates are lower than predicted values, it can be concluded that FEIS predictions are not being exceeded. In some cases, as described below, measured or estimated background concentrations were able to be added to predicted values to improve the comparison. The following specific methods were used:

- Modeled values for suspended particulates (PM_{2.5} and PM₁₀) were obtained for the two monitoring locations (DF-1 and DF-2) from the FEIS Air Quality Impact Assessment Figures 6.2 – 6.24. PM₁₀ values were derived from Figures 6.7 and 6.8, based on references in the text (Table 6.1), although these figures are labelled as SP. Model values for a TSF size of 960x560m were used in the comparison.
- A recent impact assessment for the Whale Tail site at Meadowbank calculated background values for PM_{2.5} of 6.7 and 3.6 µg/m³ for 24-h and annual averaging times, respectively (Whale Tail Pit FEIS, Appendix 4-A). No background data was available for other size classes of

⁵ As part of the FEIS for the Whale Tail Project (Agnico Eagle, 2016), qualitative assessments were performed to predict potential changes to modeled impacts that would occur from the extended use of the Meadowbank site infrastructure (mill and AWAR), but changes were not quantified.

suspended particulates, but these PM_{2.5} values were added to predicted concentrations of PM_{2.5} and PM₁₀ for the comparison, since PM_{2.5} forms a subset of PM₁₀.

- It is noted that for NO₂, modeling results were only provided in the FEIS for the maximum predicted ground-level concentration, which occurred adjacent to the power plant. The closest NO₂ monitoring station (DF-2) is at a distance of approximately 1 km southwest (cross-wind) from this location.

Table 12-12 summarizes the predicted residual impacts to air quality and results of the FEIS-comparable monitoring conducted in 2018 - 2024.

Note: One potential impact has been removed from Table 12-12 beginning in 2023. Generation of dust during placement of dike material is no longer evaluated, since dike construction has been complete since 2011. In addition, GHG emissions are assessed collectively for the Meadowbank and Whale Tail sites in Section 12.5.4.

Table 12-12 Meadowbank Mine: Predicted and measured impacts to air quality during the Operations period

Note: Predicted impacts according to Cumberland (2005) - Air Quality Impact Assessment. Measured impacts exceeding or potentially exceeding predictions are shaded grey and further discussed in Section 12.4.4.2.

Project Component	Potential Impact	Proposed Monitoring	Monitoring Conducted	Max. Predicted Value + Est. Partial Background*	Measured Value					
					2018	2019	2020	2021	2023	2024
Dewatering	Generation of dust from exposed lake sediment	Static dustfall	Static dustfall, NO ₂ and suspended particulates	NO ₂ (ppb; annual avg.) = 4.97	Predictions rarely exceeded; See figures and discussion, Section 12.4.4.2.1					
Pits	Generation of dust and gases from blasting, excavation etc.	Static dustfall		PM _{2.5} (µg/m ³ ; 24 h avg.): DF-1: 26.7 DF-2: 16.7						
Waste Rock Facility and Tailings Storage Facility	Generation of dust from material deposited on waste rock pile or tailings	Static dustfall		PM _{2.5} (µg/m ³ ; annual avg.) DF-1: 4.6 DF-2: 4.1						
Onsite Roads and Traffic, Airstrip	Generation of dust and emissions from use of roads and airstrip	Static dustfall		PM ₁₀ (µg/m ³ ; 24 h avg.): DF-1: 26.7 DF-2: 46.7						
All-Weather Access Road	Generation of dust and emissions from frequent activity by service vehicles accessing staging facility	Static dustfall	Static dustfall transects	< Vault Haul Road results	< Vault Haul Road results; See discussion, Section 12.4.4.2.2					
*Addition of background values, as described above in Section 12.4.4.1.										

12.4.4.2 Parts 3 & 4: Discussion

If air quality impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion is provided here.

12.4.4.2.1 NO₂, PM_{2.5} and PM₁₀

To facilitate review, figures are provided below for all comparisons of measured concentrations of NO₂, PM_{2.5}, and PM₁₀. Annual averages are provided here for all years since 2018, when the current PEAMP evaluation method began.

Historically, all measured annual average concentrations of NO₂ have been less than the FEIS prediction (Figure 48).

Among results for PM_{2.5} and PM₁₀ (Figures 49 to 51), several 24-h samples exceeded FEIS predictions in 2022 at location DF-2, as did annual average PM_{2.5}. These were likely associated with a large structure fire that occurred adjacent to the DF-2 location in March 2022, and the subsequent re-construction activities, resulting in a significant new source of particulate matter in that vicinity. Since this was an isolated event and annual averages have not exceeded regulatory guidelines to date (Figure 57), results in 2022 are not considered to represent a trend towards increasing air quality concerns beyond FEIS predictions. In addition, and as described in Section 12.4.4.1, FEIS predictions only include emissions from specific Project-related sources, so individual samples may be expected to exceed these values as a result of localized events (mine-related or otherwise), as occurred in 2023 and 2024 (two of approximately 200 total samples for PM_{2.5} and PM₁₀ combined in each year).

Figure 48 Arithmetic mean of the measured 1-month NO₂ concentrations each year as measured by passive samplers at location DF-2, along with the FEIS maximum model prediction

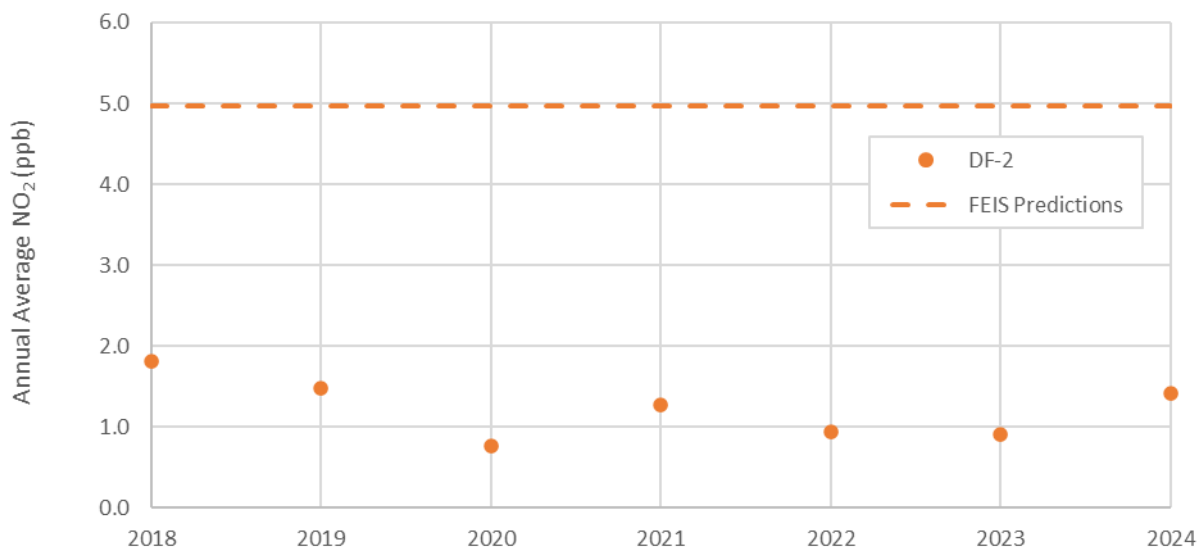


Figure 49 Arithmetic mean of the measured 24-h average concentrations of PM_{2.5} annually, and FEIS-modeled maximum annual average concentrations of PM_{2.5} for monitoring stations DF-1 and DF-2 at the Meadowbank Mine

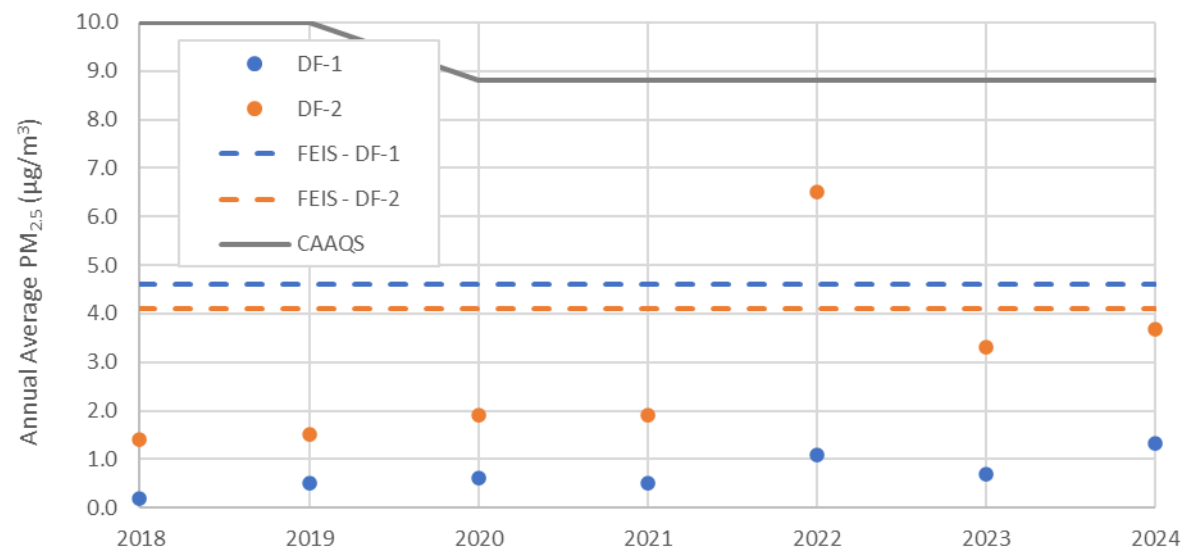


Figure 50 Measured 24-h average concentrations of PM_{2.5} at Meadowbank Mine monitoring stations DF-1 and DF-2, and the FEIS-modeled maximum predicted concentrations for these locations, for specified Project-related sources (see description in text)

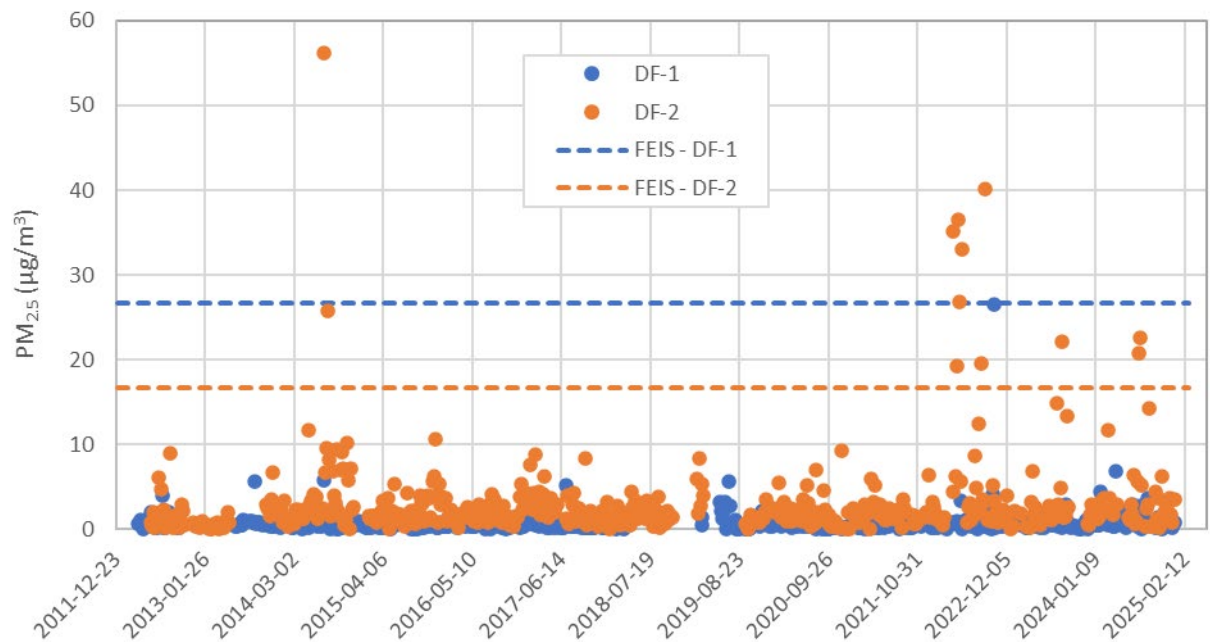
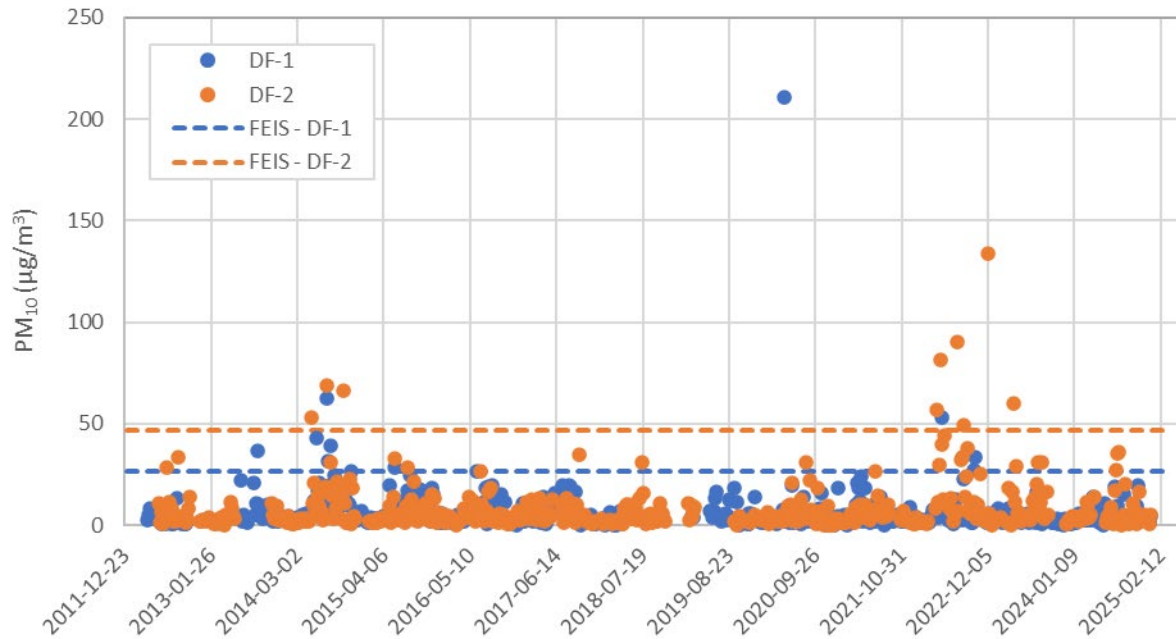


Figure 51 Measured 24-h average concentrations of PM₁₀ at Meadowbank Mine monitoring stations DF-1 and DF-2, and the FEIS-modeled maximum expected concentrations for these locations for specified Project-related sources (see description in text)



12.4.4.2.2 AWAR Dustfall

In their 2018-2019 Annual Monitoring Report for the Meadowbank Gold Project and the Whale Tail Pit Project, the NIRB requested a discussion of whether the predictions in the FEIS may have potentially underestimated the amount of dust produced on the mine site, including along the All-Weather Access Road (AWAR). In the 2019 Annual Report, Agnico Eagle provided this review of FEIS modelling, and supplemental comparisons of dustfall results. While the full discussion is not re-visited here, the comparison of Vault Haul Road dustfall and AWAR dustfall is carried forward along with 2024 results.

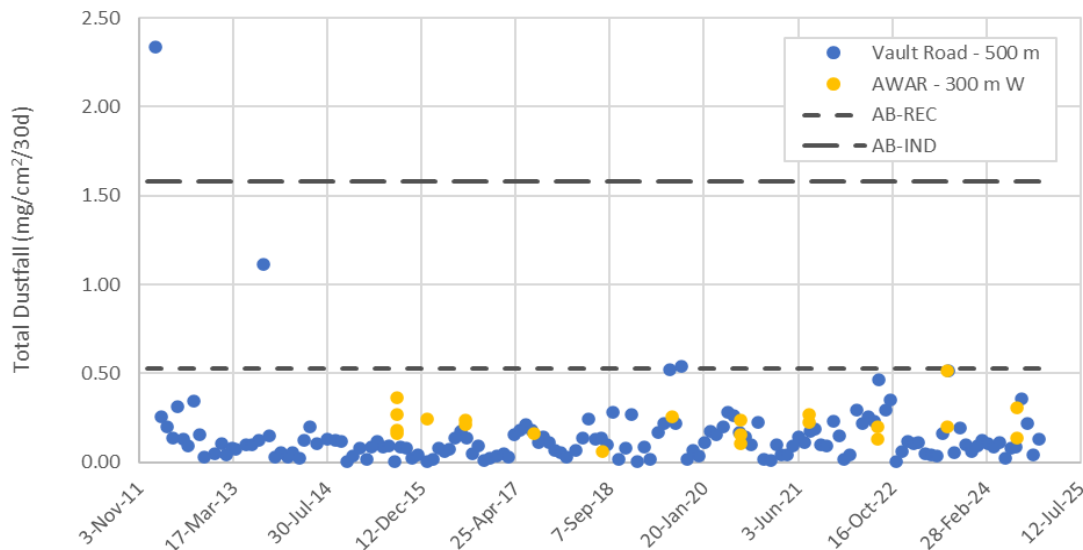
Within the FEIS, air quality modeling was completed for the Vault Haul Road. That modeling indicated that the worst-case level of air pollution (mainly due to fugitive dust) would be in the range of, or less than, air quality objectives. Since traffic rates along the AWAR were predicted to be lower than the Vault Haul Road, air quality modeling was not specifically conducted for the AWAR - i.e., impacts of the AWAR on air quality were assumed to be lower than impacts of the Vault Haul Road. To validate this assumption of the FEIS, dustfall monitoring results from the Vault Haul Road area were compared with those collected along the AWAR, to determine whether air quality impacts (as measured through this FEIS-recommended monitoring method) are similar.

Dustfall results for DF-4 (500 m west of the Vault Haul Road) and the most comparable location with respect to the AWAR (km 18 and 78; 300 m west of the road) are provided in Figure 52. The following differences in sample collection methods are kept in mind while interpreting this data:

- Samples collected along the Vault Haul Road are collected on a 2 m stand (ASTM method), while those collected historically (prior to 2020) along the AWAR were at ground level, due to logistical constraints. As described in the 2019 Air Quality and Dustfall Monitoring Report, results for ground level samples have always been higher than results for associated samples at 2-m height;
- Samples collected along the Vault Haul Road are at a distance of approximately 500 m from the road, while those used in this comparison for the AWAR are at a distance of 300 m. No samples have been collected at 500 m from the AWAR, and results at 300 m are expected to provide a conservatively high comparison; and
- Results for the AWAR are only available for the summer season, when higher traffic rates and dry road conditions prevail. Results used in historical comparisons are from the August sampling event only. These results can therefore be considered peak values, and averages based on these are likely inflated compared to the true annual average (as calculated for the Vault Haul Road dataset).

Despite these differences which generally result in a very conservative comparison of dustfall rates between the Vault Haul Road location and AWAR samples, measured dustfall rates in both locations are historically similar. These results suggest that the FEIS assumption of lower air quality impacts along the AWAR as compared to the Vault Haul Road was valid.

Figure 52 30-d rates of total dustfall measured at monitoring station DF-4 (500 m west of the Vault Haul Road) and along the AWAR (km 18, 78; 300 m west)



Note: Alberta Environment dustfall guidelines for recreational areas (AB-Rec) and industrial areas (AB-Ind) are shown for comparative purposes. These guidelines relate to nuisance or aesthetic concerns.

12.4.4.3 Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

As described in Section 12.4.4.1, only a subset of FEIS air quality predictions are suitable for comparison to monitoring results, and a variety of caveats are applicable, as discussed. However, the air quality monitoring program at the Meadowbank Mine was designed in consultation with regulators (ECCC) for the purpose of monitoring changes in ambient air quality at the site and for comparisons to regulatory guidelines, and is therefore considered effective as designed. A complete analysis of air quality monitoring results in comparison to regulatory criteria is provided in the 2024 Air Quality and Dustfall Monitoring Report (Appendix 42).

Effectiveness of Mitigation

A summary of the planned mitigation measures for air quality (per Air Quality and Noise Management Plan, 2005) is provided in Table 12-13, along with a commentary on current implementation.

As described in the Air Quality and Dustfall Monitoring Report (Appendix 42), monitoring thresholds were established within the current Air Quality and Dustfall Monitoring Plan to confirm effectiveness of existing mitigation. For the Meadowbank Mine, thresholds relate to dustfall measurements for onsite and AWAR locations. In 2024, a single monthly sample across all five year-round monitoring stations exceeded this threshold. Given the high variability in dustfall samples, occasional results above the threshold are not considered indicative of trends requiring changes in dust mitigation measures. Mitigation to limit dust generation for the Meadowbank Mine is therefore considered to have been effective overall in 2024.

Table 12-13 Meadowbank Mine: FEIS-designed mitigation measures to reduce impacts of the project on area air quality, and commentary on current implementation

Emission Source	Planned Mitigation Measure (Cumberland (2005) - Air Quality and Noise Management Plan)	Implementation (2024)
Plant Production Facilities	Select the diesel power plant engines with low NOx emissions to prevent ozone formation and with low hydrocarbon emissions to lower GHG emissions	N/A
	Use low sulphur content diesel fuel to mitigate SO2 emissions	Yes - Use of summer fuel
	Collect and vent any process emissions (flotation, CIP circuit, carbon treatment, gold refining, and cyanide detoxification) into the atmosphere	Yes - All process enclosed in the mill facility except leach tank
	Design all stacks using good engineering practice (including accessible sampling ports and adequate height) to ensure the required dispersion to meet ambient air quality objectives	Yes - Design to meet engineering practice
	Implement fleet maintenance program to ensure that all diesel-powered equipment will operate efficiently, thereby reducing air emissions	Yes - Preventive maintenance per manufacture recommendation
	Install dust filters at the primary crusher building and at fine grinding facilities (SAG mill and ball mill) and provide dust suppression equipment (dust covers, sonic sprays, etc.)	Yes - Filter installed at major dust generating equipment
	Install enclosure of feed conveyor to avoid fugitive emissions during windy weather	Yes - All conveyers are enclosed
	Provide crushed ore stockpile enclosure to limit any	Yes - Enclosed in a dome

Emission Source	Planned Mitigation Measure (Cumberland (2005) - Air Quality and Noise Management Plan)	Implementation (2024)
	dust to indoor environment	
Transportation	Impose vehicle speed limit on Vault haul road to mitigate fugitive dust and reduce engine emissions	Yes - Speed limit enforcement on Vault Haul Road and AWAR
	Apply dust suppressants (water, calcium chloride) to haul and service roads during dry weather to mitigate fugitive dust	Yes - AWAR Transportation Management Plan, Air Quality and Dustfall Monitoring Plan
	To reduce vehicle emissions, do not let motors idle, except when necessary	Yes - No idle policy
	Upgrade road-surfacing materials using local coarse rocky aggregates	Yes - AWAR Transportation Management Plan
Blasting & Waste Disposal	Limit blasting to calm days or use delay blasting technique; natural mitigation to take place when mining pits are from 85 to 175 m below the ground level; ore and waste to be coarse run-of-mine muck not prone to generating excessive dust	N/A – No blasting occurred
	Cover dewatered tailings with non-potentially acid-generating (non-PAG) aggregates to control wind erosion	Yes – Progressive reclamation was ongoing in the TSF, including placement of a cover
Miscellaneous	Provide pressure valves to control fuel vapour fugitive emissions from the storage tanks	Yes - Installed at all locations
	Use water spray instead of pneumatic flushing while cleaning equipment and working areas when temperature is above the freezing point	Yes - All machine cleaning is done inside shop (wash bay)
	Use site-generated mineral material (dirt, aggregate, etc.) to cover disposed solid waste at the waste dump	Yes - Waste dump is located in the Portage Waste Rock Facility and is covered with waste rock created by mining activities, Mine Waste Management Plan
	Select waste incinerator with build-in emission control system (secondary combustion chamber, catalytic converter, etc.) and install a stack to disperse emissions to concentrations below ambient air quality objectives	N/A – Incinerator dismantled
	Apply vegetation cover on stripped areas and long-term stockpiles	N/A - Natural revegetation to occur during the reclamation phase. Revegetation option to be considered in the Final Closure and Reclamation Plan.

Adaptive Management

Since current mitigation is considered to have been effective, no changes to management actions with regards to ambient air quality are planned for 2025 for the Meadowbank Mine as a result of this PEAMP analysis.

12.4.5 Permafrost

12.4.5.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

A summary of predicted residual impacts to permafrost (after mitigation), as described in the FEIS (Cumberland, 2005; Table B1.2), and results of monitoring being conducted to assess the accuracy of these predictions is provided in Table 12-14 below. A complete description of monitoring results is

provided in the 2024 Geotechnical Inspection Report (Appendix 7), which reviewed instrument data for the 2023-2024 period.

In general, degradation of permafrost was predicted in association with the construction of mine buildings, and development of permafrost was predicted in association with dikes, TSF, and WRSF construction. Predictions are typically related to closure-phase impacts. Therefore, results of monitoring to date are presented here to demonstrate progress, but validity of the prediction (i.e. whether or not the prediction is supported by the monitoring data) cannot be determined at this time.

Table 12-14 Meadowbank Mine: Predicted and measured impacts to permafrost for the Meadowbank site

Note: Predicted impacts according to Cumberland, 2005, Table B1.2. Measured impacts according to the 2024 Geotechnical Inspection Report (Appendix 7).

Potential Impact	Potential Cause(s)	Proposed Monitoring	Monitoring Conducted	Predicted Impact in FEIS	Measured Impacts			
					2018	2019	2020 - 2022	2023-2024
Permafrost aggradation and stabilization of new active layer in dikes	Dike design	Monitor ground temperatures; monitor slopes; monitor sub-permafrost pore pressures (tailings dike)	Ground temperature monitoring (thermistors)	Net increase in permafrost distribution and/or decrease in ground temperatures.	East Dike, Bay-Goose Dike, South Camp Dike: similar to historical trends, partially frozen foundations. Vault Dike: frozen foundation Central Dike: similar to historical trends, partially frozen foundation SD1&2: frozen foundations; SD3,4,5: partially frozen foundations; Stormwater Dike: partially frozen foundation		East Dike, Bay-Goose Dike, South Camp Dike: similar to historical trends, partially frozen foundations with cooling trends at edges of seepage zones. Vault Dike: frozen foundation Central Dike: similar to historical trends, partially frozen foundation SD1&2, 4&5: frozen foundations; SD3: partially frozen foundations; Stormwater Dike: partially frozen foundation	
Permafrost changes in Second Portage Lake (2PL) NW arm area	Dewatering, reclaim and attenuation pond filling, and tailings deposition	Representative monitoring of ground temperatures; assessment of anticipated ice entrapment (i.e. ground ice development)	Thermistor monitoring in TSF (thermistors NC-T1, NC-T2, NC-17-01 through 08)	Net increase in permafrost distribution and/or decrease in ground temperatures	Thermistors indicate tailings are not completely frozen.		Thermistors indicate tailings are not completely frozen. Freezeback and progression of freezing front is occurring in the North Cell in sections not entirely frozen. Data are showing quicker freezeback than anticipated	
Permafrost changes in Third Portage Lake (TPL) north central shoreline and Portage Pit area	Portage pit development	Assessment of suspected ground ice development in conjunction with permafrost aggradation. Assessment of ground ice content of select shoreline polygons.	None	Net increase in permafrost distribution and/or decrease in ground temperatures	General increase in permafrost aggradation due to structures; permafrost is developed in part of the Portage Pit and Goose Pit walls, under the Goose Dike.			
Permafrost changes in waste rock area	Construction of waste rock facility	Internal and foundation temperatures to be monitored	Thermistor monitoring of internal and foundation temperatures	Fall, winter and spring placement will continue to bury the natural ground surface and permafrost will aggrade into the	Frozen ground conditions under the Portage WRSF for all thermistor locations. Rockfill temperature below 0 °C for at least 10m above ground surface for all instruments. Decreasing trends in active zone depth are recorded at most thermistor locations. Temperature trends in		Frozen ground conditions under the Portage WRSF for all thermistor locations. Rockfill temperature below 0 °C for at least 10m above ground	

Potential Impact	Potential Cause(s)	Proposed Monitoring	Monitoring Conducted	Predicted Impact in FEIS	Measured Impacts			
					2018	2019	2020 - 2022	2023-2024
				waste rock where a new and temporary active layer will form. Placement of lifts on natural ground in the summer may continue to cause temporary and localized deepening of the active layer, warming of near surface permafrost and possible subsidence, particularly in low lying areas.	the structure are becoming more consistent with predicted temperature over time.			surface for all instruments. Variable active layer thickness, influenced by annual temperature trends in most instruments as well as long-term permafrost aggradation.
Potential settlement of buildings	Loss of permafrost under heated structures	Ground temperature measurements where there is a need to monitor foundation temperatures	None	Net decrease in permafrost distribution and/or increase in ground temperatures	No ground temperature measurements have been undertaken at or near buildings on site. To date there has been no observed thawing of foundations.			
Permafrost changes below pipelines	Stabilization of permafrost temperature and active layer thickness	Monitor pipeline alignment for potential permafrost degradation	None	Minor any undifferentiated net gain or loss of permafrost	No ground temperature measurements but no observations of thawing due to pipelines.			

12.4.5.2 Parts 3 & 4: Discussion

Permafrost conditions continue to be monitored, but since final impact predictions relate to the closure/post-closure phase, no commentary on potential exceedances is made at this time.

Nevertheless, to help demonstrate the current status towards achieving these predictions, historical trends for all thermal monitoring results are provided in the 2024 Thermal Monitoring Report (Appendix 19).

12.4.5.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management**Effectiveness of Monitoring**

Based on Table 12-14, all FEIS predictions for which monitoring was recommended are being addressed through current programs. Monitoring is therefore considered effective.

Effectiveness of Mitigation

A summary of the planned mitigation measures for permafrost during the current operations phase of the project (FEIS Physical Environment Impact Assessment Report (2005), Table C.2) along with implementation in 2024 is provided in Table 12-15. Mitigation measures proposed for operations-phase components which have already occurred (e.g. dewatering) or those associated with design-phase planning are not included.

Table 12-15 Meadowbank Mine: Mitigation measures described in the FEIS to reduce impacts of the project on permafrost, and commentary on current implementation

Project Component	Planned Mitigation Measure (Cumberland 2005, Appendix B - FEIS Section 4.24.2.4)	Implementation (2024)
Waste Rock Storage	Schedule placement of waste rock on thaw-sensitive polygons during winter months, possibly in conjunction with proactive measures to enhance ground chilling prior to placement (e.g. snow removal and/or compaction); use flatter side slopes	N/A - Portage WRSF no longer active Annual geotechnical inspection completed by third party Annual revision of the Waste Rock and Tailings Management Plan
Tailings Storage Facility	Management of ice entrapment	Yes - Follow up done on ice entrapment and best practices
Ditches (roads, airstrip, contact water)	Silt fences as required to manage sediment loss; rock aprons as required to slow the rate of thaw penetration and stabilize the underlying soils	N/A - Silt fences not required as of yet
Freshwater intake & pipeline	Use insulated pipe with heat tracing; elevate pipeline across thaw sensitive terrain	Yes - Insulated pipe and elevated (freshwater line)
Discharge facilities & pipeline	Use insulated pipe with heat tracing; elevate pipeline across thaw sensitive terrain	Yes - Insulated pipe and elevated
Non-contact diversion facilities	Silt fences as required to manage sediment loss; rock aprons as required to slow the rate of thaw penetration and stabilize the underlying soils	N/A - Silt fences not required as of yet
Vault access road culverts (Turn Lake)	Maintenance, as required, to restore smooth grade where thaw settlement is a problem; avoid culverts in areas susceptible to thaw settlement	N/A - No maintenance as yet required

Adaptive Management

No changes to permafrost monitoring or management programs are planned in 2025, based on this PEAMP analysis.

12.4.6 Socio-Economic Impacts

A comprehensive assessment of socio-economic indicators, comparison to FEIS predictions, and review of management/mitigation measures is provided in the 2024 Socio-Economic Monitoring Report (Appendix 47) and summarized here in the PEAMP format. Since, in many cases, is it not possible to distinguish impacts of the Meadowbank mine from those of the Whale Tail mine, the PEAMP evaluation is combined for this sector.

12.4.6.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

Based on results of the 2024 Socio-Economic Monitoring Report (SEMR), the accuracy of Project impacts as predicted in the FEIS documents (Cumberland, 2005 - Table B15.2; Golder, 2018) is assessed for each identified valued socio-economic component in Table 12-16, below. When specific impact predictions are not being met, further discussion is provided in Section 12.4.6.2.

Table 12-16 Summary of FEIS predictions for VSECs, observed trends, and interpretation of monitoring results in comparison to FEIS predictions

Note: FEIS predictions from Cumberland, 2006; Golder, 2018. Measured impacts that are trending in a negative manner outside of predictions are further discussed in Section 12.4.6.2.

Sector and Overarching FEIS Prediction	Metric	2024 Overview	Specific FEIS Prediction	Accuracy of the FEIS Prediction	
1. Employment	1.1 Total project employment (Agnico Eagle & contractors)				
MEADOWBANK: “The potential impacts of employment are likely to take some time to gain full momentum, and overall are considered of high magnitude, positive, long term and of high significance, specifically to those individuals and their families who are able to benefit” (Cumberland Resources, 2006, p. 120) WHALE TAIL: “The Expansion Project will create direct, indirect and induced employment opportunities.” (Golder Associates, 2018, p. 9)	Project employment (permanent, temporary & contractor)	Employment at Meadowbank / Whale Tail decreased by 1.2% in 2024 to 1,875. Contractors account for 39% of Meadowbank / Whale Tail employment.	MEADOWBANK “It is expected that the construction phase workforce will average 160 and peak at 310, and the operation phase workforce is estimated at 370.” (Cumberland Resources, 2006, p. 119) WHALE TAIL “Direct average operational employment is expected to be 1,166 positions.” (Golder Associates, 2018, p. 9)	MEADOWBANK – Prediction is exceeded WHALE TAIL – Prediction is exceeded	
	1.2 Project Inuit employment (Agnico Eagle and contractors)				
	Project employment (Inuit & non-Inuit)	Inuit employment at Meadowbank / Whale Tail decreased in 2024 to 145 FTEs (decrease by 34 FTEs over 2023 levels).	MEADOWBANK – none WHALE TAIL (inc. contractors) “Excluding the final year of operations when Project employment ramps down, direct average operational employment is expected to be 1,166 [...] Of these, nearly half (491 or 42%) are expected to be filled by Nunavummiut, the majority of which are employed at the Meadowbank Mine and will move over to the Expansion Project.” (Golder Associates, 2018, p. 9)	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – Prediction is not supported	
	Inuit FTEs	Inuit employment as a proportion of total was 13% in 2024, representing a decrease from 16% in 2023.			
	Inuit FTE rate				
	Project contractor employment (Inuit & non-Inuit)	At Meadowbank / Whale Tail, Inuit contractor employment increased by 7 FTE to 30 FTEs in 2024.			
	Inuit FTEs	Inuit FTE for contractors was 4% in 2024 compared to 3% 2023.			
	Inuit FTE rate				
	1.3 Project employment by Kivalliq community				
	Project employment by Kivalliq community (Inuit & non-Inuit)	The number of Kivalliq-based employees generally trended downward year-over-year at Meadowbank / Whale Tail, decreasing by 26% in 2024, and reaching 128 employees in 2024. In 2024, 71% (91) Meadowbank / Whale Tail’s Kivalliq-based employees were from Baker Lake.	MEADOWBANK – none WHALE TAIL Baker Lake is expected to fill 3 management jobs, 16 skilled jobs, 187 semi-skilled jobs, and 66 entry level jobs, for a total of 272 jobs (Golder Associates, 2018, p.10-11).	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – Prediction is not supported	
	Project contractor employment by Kivalliq community (Inuit & non-Inuit)	In 2024, 23 contractor employees were hired from Kivalliq communities (an increase from 20 in 2023), of which 15 contractors were hired from Baker Lake.			
	1.4 Employee turnover				
	Agnico Eagle Inuit turnover by reason	Resignation / voluntary departures accounted for the majority (47) or 62 % of reasons for turnover among Agnico Eagle Inuit employee in 2023. In 2024, there were 78 departures in total, compared to 80 in 2022.	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)	
	Turnover rates (Inuit & non-Inuit)				
	Inuit rates	Inuit turnover rates at Meadowbank / Whale Tail increased from 35% in 2023 to 42% in 2024.			
	Non-Inuit rates				Turnover rates for non-Inuit employees slightly decreased from 13% in 2023to 7% in 2024. By community, turnover rates increased for Baker Lake and Rankin Inlet and decreased in other communities.
	Turnover rate by Kivalliq community				
2. Gender	2.1 Gender-specific initiatives				
None	Overview and assessment of gender-specific initiatives	Agnico Eagle is continuing to develop its policy and programs to encourage greater gender equality. At present, 13 programs are active.	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)	
	2.2 Project employment by gender				
	Project and contractor employment (gender; Inuit & non-Inuit) – FTE	There were 152 Agnico female FTEs at Meadowbank / Whale Tail in 2024, down from 167 in 2023. There were 54 female contractor FTEs at Meadowbank / Whale Tail in 2024, an increase from 52 in 2023.	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)	
	Project and contractor employment (gender; Inuit & non-Inuit) – rate	The proportion of Agnico female employment at Meadowbank / Whale Tail decreased from 15% in 2023 to 14% in 2024. The proportion of contractor female employment at Meadowbank / Whale Tail in 2024 was unchanged at 7%.			
	2.3 Project employment by gender and skill level				
	Agnico Eagle female employment by skill level	For Meadowbank / Whale Tail, in 2024, 58 female employees were in management & professional roles (compared to 50 in 2023), 18 in skilled positions (compared to 25 in 2023), 51 in semi-skilled positions (compared to 53 in 2023), and 26 in unskilled positions (compared to 39 in 2023).	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)	
	Proportion of skills levels held by female employees	In 2024, female employees held 37% of all unskilled jobs (down from 41% in 2023). In all other categories, females held less than one-fifth of the available positions in 2024: 20% for management and professional (compared to 18% in 2023), 12% for semi-skilled (compared			

Sector and Overarching FEIS Prediction	Metric	2024 Overview	Specific FEIS Prediction	Accuracy of the FEIS Prediction
		to 11% in 2023), and 7% for skilled (compared to 8% in 2023).		
3. Income	3.1 Income paid to projects' Inuit employees			
MEADOWBANK: "The potential impacts of increased income are considered of high magnitude, positive, long-term and of high significance, particularly to those individuals and their families who are able to benefit. It is expected that overall community effects, moderate in significance, are likely to be most experienced in Baker Lake, as most direct employment will occur here." (Cumberland Resources Ltd., 2006, p. 121)	Income paid to Agnico Eagle project Inuit employees	Total income paid to Meadowbank /Whale Tail Inuit employees (excluding contractors) in 2024 was \$18.2M (compared to \$20.8M in 2023).	MEADOWBANK "Direct project wages paid to people in Kivalliq Region, primarily Baker Lake, could exceed \$4M annually." (Cumberland Resources, 2006, p. 121). WHALE TAIL "During operations, the Expansion Project is projected to generate \$421.1 million (cumulatively) in direct labour income in Nunavut, and \$509.3 million in total territorial labour income." (Golder Associates, 2018, p. 12)	MEADOWBANK – Prediction is exceeded WHALE TAIL – Prediction is not supported
	3.2 Income by Kivalliq community			
WHALE TAIL: "The Expansion Project will generate direct, indirect and induced incomes." (Golder Associates, 2018, p. 12)	Median employment income of tax filers by Kivalliq community	Baker Lake and Rankin Inlet have had the highest median incomes in the Kivalliq region up to 2017, but more recent data is unavailable.	MEADOWBANK The Meadowbank FEIS makes no specific predictions regarding changes in the median income of Kivalliq communities but does predict that Baker Lake will experience the most positive effects of increased income. WHALE TAIL – none	MEADOWBANK – Prediction is supported WHALE TAIL – TBD (cannot be determined at this time)
4. Education and Training	4.1 Investment in education-based initiatives			
MEADOWBANK: "The potential impacts of education and training are considered of medium magnitude, positive, long term and of high significance, specifically to those individuals and their families who are able to benefit." (Cumberland Resources Ltd., 2006, p. 121) WHALE TAIL: "The Expansion Project will provide workforce training and support community education" (Golder Associates, 2018, p. 12).	Agnico Eagle investments in education-based initiatives	In 2024, Agnico Eagle made \$578,300 in contributions to education-based initiatives, down from \$586,000 in 2023.	MEADOWBANK "Cumberland and KIA will address the need for a broader based project education and training initiatives [sic] to assist those who wish to develop skills that will position them for project employment." (Cumberland Resources Ltd., 2006, p. 121) WHALE TAIL "The Expansion Project will provide workforce training and support community education" (Golder Associates, 2018, p. 12)	MEADOWBANK – Prediction is supported WHALE TAIL – Prediction is supported
	Enrolment in Agnico Eagle summer student program (Inuit & non-Inuit)	In 2024, Agnico Eagle had one (1) Summer Student based in Baker Lake working with the Community Relations department program for the Meadowbank Environmental Department (a total of 1 in 2024 and 3 in 2023).	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)
	4.2 Secondary school graduation by region			
	Secondary school graduation rate by region	In 2017, graduation rates in the Kivalliq region were at an all-time high, consistently higher than those in the other two regions (since 2010). However, in 2018, graduation rates in Nunavut decreased. Graduation rates for 2021 were estimated based on 2021 Census of Population data, showing increased graduations in all three regions. More recent graduation rates are not available. This metric was supplemented with data on the number of graduates in the Kivalliq region. There were 115 graduates in the Kivalliq region in 2024, up from 75 in 2023.	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)
4.3 Project training and education				
	Agnico Eagle investments in mine training and education initiatives	Investments in externally delivered training programs have dropped substantially since 2016 due to the discontinuation of the Kivalliq Mine Training Society (KMTS) and the suspension of the Arviat Community Training Program in 2019.	MEADOWBANK "Cumberland and KIA will address the need for broader based project education and training initiatives to assist those who wish to develop skills that will position them for project employment" (Cumberland Resources Ltd., 2006, p. 121). WHALE TAIL "The Project will continue the workforce training programs in place at Meadowbank Mine" (Golder Associates, 2018, p. 12).	MEADOWBANK – Prediction is supported WHALE TAIL – Prediction is supported
	Average specific training hours (Inuit & non-Inuit)	Agnico Eagle has upheld its commitment to workforce development by maintaining a minimum annual investment of \$3.6 million plus a \$500,000 investment in mine training and education in accordance with the IIBA. As of December 31, 2024, Agnico Eagle had fully utilized the required training investment funds, bringing the unspent balance to \$0.		
	Participation in career and skills programs	Specific training provided at Meadowbank /Whale Tail for Inuit employees decreased from 37 hours in 2023 to 25 hours in 2024 and increased from 9 hours in 2023 to 10 hours in 2024 for non-Inuit employees.		
	Inuit Participation in pre-apprenticeship and apprenticeship programs by type	In 2024, there were 3 Inuit apprentices in 2024 (one in Heavy Duty Technician, one Plumber, and one Electrician), compared to 1 in 2023.		
4.4 Project employment by skill level				
	Agnico Eagle Inuit employees by skill level	In 2024, the number of Inuit employees in unskilled roles decreased to 66 from 90 in 2023 and in semi-skilled roles to 91 from 99 in 2023. Numbers in management and professional roles increased from 0 in 2023 to 1 in 2024, and for skilled roles, it remained unchanged at 2 in 2024; Inuit employees continue to be underrepresented in both roles.	MEADOWBANK – none WHALE TAIL "As Nunavummiut employees achieve further training and education, it is expected that they will be better poised to advance to more skilled positions as they arise, thereby increasing representation of Nunavut residents in the skilled, professional and management employment categories" (Golder Associates, 2018, p. 12) Total composition of employment includes 154 entry level jobs, 493 semi-skilled jobs, 323 skilled jobs, and 202 professional and management jobs. Workers from Nunavut are expected to fill 154 entrv level positions.	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – Prediction is not supported
	Agnico Eagle FTE/employment by skill level (Inuit & non-Inuit)	FTE Agnico Eagle employment by skill level: - Unskilled (59 Inuit and 5 non-Inuit) - Semi-skilled (84 Inuit and 373 non-Inuit) - Skilled (1 Inuit and 259 non-Inuit) - Management and professional (1 Inuit		

Sector and Overarching FEIS Prediction	Metric	2024 Overview	Specific FEIS Prediction	Accuracy of the FEIS Prediction		
		and 292 non-Inuit)	305 semi-skilled positions, 29 skilled positions, and 4 management positions (Golder Associates, 2018, p.10-11).			
	4.5 Trade certificates / apprenticeships in Nunavut					
	Trade certificates / apprenticeships by community	At the time of this report, data on trade certificates / apprenticeships by Kivalliq community was not available.	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK– TBD (cannot be determined at this time) WHALE TAIL– TBD (cannot be determined at this time)		
5. Contracting and Business Opportunities	5.1 Contract expenditures					
MEADOWBANK: “The potential impacts of employment are likely to take some time to gain full momentum, and overall are considered of high magnitude, positive, long term and of high significance, specifically to those individuals and their families who are able to benefit.” (Cumberland Resources Ltd., 2006, p. 120) WHALE TAIL: The Project will generate “continued local economic activity” (Golder Associates, 2018, p. 6). “The Expansion Project will sustain local business development and contracting” (Golder Associates, 2018, p. 8).	Contract expenditures on NTI-registered businesses	In 2024, Meadowbank / Whale Tail procurement from NTI registered businesses was \$461M, down from \$495 in 2023.	MEADOWBANK “With continuing preferential contracting, local business participation in the project is expected to grow with time.” (Cumberland Resources Ltd., 2006, p. 7) WHALE TAIL “...about \$271 million procured from Nunavut-registered companies. Of this, roughly 84% (\$223 million) will be through Kivalliq-registered businesses... [of which] ...67% is expected to accrue to those in Rankin Inlet, with 32% accruing to those in Baker Lake.” (Golder Associates, 2018, p. 19)	MEADOWBANK – Prediction is supported WHALE TAIL – Prediction is partially supported		
	NTI expenditures	NTI expenditures, as a proportion of total spend remained at 69% in 2024.				
	Proportion NTI					
	NTI-registered business expenditures by Nunavut community	Procurement from NTI-registered businesses (across all Projects) located in Baker Lake decreased to \$48M in 2024 (from \$54M in 2023). Expenditures in Rankin Inlet increased in 2024 to \$602M (from \$591M in 2023). Expenditures in Arviat decreased to \$43M in 2024 (from \$47M in 2023). Other NTI spending decreased to \$131M in 2024 (from \$159M in 2023).				
	Contract expenditures on Nunavut-based businesses	Meadowbank / Whale Tail contract expenditures on Nunavut-based businesses (including NTI-registered businesses) decreased to \$498M in 2024 from 523M in 2023.				
	Nunavut-based expenditures	As a proportion of total expenditures, this increased slightly from 73% in 2023 to 75% in 2024.				
	Proportion Nunavut-based					
	Project contract expenditures on Nunavut-based businesses by business location	Meadowbank / Whale Tail contract expenditures at Baker Lake businesses decreased to \$33M in 2024 from \$43M in 2023.				
6. Health and Safety	6.1 Health and safety training					
MEADOWBANK: “Health and safety of workers and the population at large is subject to legislation and perhaps more importantly to best practices. Health and safety training also has applications in personal life – workers often not only use new health and safety training on-the-job, but also at home in the course of daily tasks.” (Cumberland Resources Ltd., 2006, p. 126) WHALE TAIL: “The Expansion Project may improve worker and public health and safety.” (Golder Associates, 2018, p. 13)	Average mandatory training hours provided to Agnico Eagle employees (Inuit & non-Inuit)	Mandatory training hours at Meadowbank / Whale Tail increased from 11 hours in 2023 to 12 hours in 2024 for Inuit employees, and from 20 hours in 2023 to 26 hours in 2024 for non-Inuit employees.	MEADOWBANK – none WHALE TAIL “The Expansion Project may improve worker and public health and safety.” (Golder Associates, 2018, p. 13)	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – Prediction is supported		
	6.2 Health and safety on-site					
	Visits by project employees to Agnico Eagle clinic for work-related and other reasons	Visits by Agnico Eagle employees to Meadowbank / Whale Tail on-site clinics went up from 4.5 in 2023 to 5.6 in 2024 for non-work-related visits and down from 0.9 in 2023 to 0.8 in 2024 for work-related visits.	MEADOWBANK – none WHALE TAIL While the Expansion project’s planned activities are expected to yield an overall positive effect on worker and public health and safety, there remains “potential risks associated with accidents and emergencies.” (Golder Associates, 2018, p. 13)	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – Prediction is supported		
	Project combined lost-time and light duty accident frequency (per 200,000 person-hours)	Project combined lost-time and light duty accident frequency decreased from 0.55 in 2023 to 0.37 in 2024.				
7. Population Demographics	7.1 Employee Migration					
MEADOWBANK: “The potential impacts of migration are complex and are likely to have both positive and negative components, but of low magnitude. Any effects of migration are long term but are likely to be low significance. It is not likely that migration to any other community than Baker Lake would be significant.” (Cumberland Resources Ltd., 2006, p. 126) WHALE TAIL: “Expansion Project employment opportunities could spur migration to Baker Lake and Rankin Inlet...dependent on scale of speculative migration.” (Golder Associates, 2018, p. 18)	Project Agnico Eagle Inuit employees residing outside Nunavut	At Meadowbank / Whale Tail, the number of Inuit employees residing outside Nunavut increased from 26 in 2023 to 29 in 2024.	MEADOWBANK The Meadowbank FEIS suggests that in-migration of Southerners to Baker Lake would be the primary concern. WHALE TAIL “Project employment opportunities could spur migration to Baker Lake and Rankin Inlet.” (Golder Associates, 2018, p. 15).	MEADOWBANK – Prediction is not supported WHALE TAIL – Prediction is not supported		
	Total Inuit employees	As a proportion of total Inuit employees residing outside Nunavut, this was 18% in 2024, up from 13% in 2023.				
	Proportion of Inuit employees residing outside Nunavut					
	Project contractor Inuit employees residing outside Nunavut	In 2024, Meadowbank / Whale Tail had 6.4 FTEs worked by Inuit employees employed by contractors who resided outside Nunavut.				
	Total Inuit contractors	As a proportion of total Inuit contractors residing outside Nunavut, this was 21% in 2024, up from 13% in 2023.				
	Proportion of Inuit contractors residing outside Nunavut					
	7.2 Population estimates in Kivalliq communities					
	Population estimates in Kivalliq communities (Inuit & non-Inuit)	Data regarding Inuit and non-Inuit residents in Rankin Inlet and Baker Lake is not available since 2016.			MEADOWBANK “It is not likely that migration to any other community than Baker Lake would be significant,” but does not provide any specific predictions on changes to populations in Kivalliq communities. (Cumberland Resources, 2006, p. 126) WHALE TAIL “Project employment opportunities could spur migration to Baker Lake and Rankin Inlet.” (Golder Associates, 2018, p. 15).	MEADOWBANK – Prediction is not supported WHALE TAIL – Prediction is not supported
Estimates in communities Annual percent change	Population changes in Kivalliq communities in 2022 were on par with those in previous years.					
8. Community Infrastructure and Services	8.1 Use of GN health services					
MEADOWBANK:	Kivalliq community health	Data on Kivalliq community health centre	MEADOWBANK	MEADOWBANK –		

Sector and Overarching FEIS Prediction	Metric	2024 Overview	Specific FEIS Prediction	Accuracy of the FEIS Prediction	
“The impacts on social services and infrastructure, of low to medium magnitude, are considered largely positive in the medium term and of moderate significance. There is some potential for closure to have a negative impact on social service delivery.” (Cumberland Resources Ltd., 2006, p. 128) WHALE TAIL: “Project-induced in-migration could increase demand for services and infrastructure in Baker Lake and Rankin Inlet.” (Golder Associates, 2018, p. 17-18).	centre visits per capita	visits has not been available since 2016.	“Increased employment and business opportunities will result in increased income, a measure of economic security, capacity building that will contribute to employability over the long term, and improved self-image of employees and their families. This could result in reducing dependence on government social services.” (Cumberland Resources Ltd., 2006, p. 128)	TBD (cannot be determined at this time)	
	Employees referred to community health care centre for personal or work-related reasons	In 2024, there was 8 personal and 11 work-related referrals to community health care centres at Meadowbank / Whale Tail.		WHALE TAIL “Project-induced in-migration could increase demand for services and infrastructure in Baker Lake and Rankin Inlet ... [including] healthcare services.” (Golder Associates, 2018, p. 17)	WHALE TAIL – TBD (cannot be determined at this time)
	Incidents requiring use of GN health services	Incidents requiring use of GN health services decreased at Meadowbank / Whale Tail from 16 in 2023 to 6 in 2024.			
	8.2 Use of public infrastructure				
	Estimates of use of public physical infrastructure directly related to Project (airports, port, meeting facilities, roads)	In 2024 estimates of use for this infrastructure directly related to Meadowbank are as follows: Flights: 268 charter passenger flights, 11 cargo flights and 52 Kivalliq flights. Airport: The use of Baker Lake Airport to access commercial flights from January to November 2024. Shipments: Two (2) Barges received in Baker Lake, three (3) Full Vessels and four (4) shared with Meliadine (total volume of 127,000m3). Community Infrastructure: Information on the use of Baker Lake Community Centre was not available Other: The use of other Nunavut airports to access commercial/chartered flights, including no flights from January to November. In November and December, this included chartered flights to Coral Harbour, Naujaat, Arviat, and Rankin Inlet, and commercial flights to Whale Cove and Chesterfield Inlet.	MEADOWBANK “The impacts on social services and infrastructure, of low to medium magnitude, are considered largely positive in the medium term and of moderate significance. There is some potential for closure to have a negative impact on social service delivery.” (Cumberland Resources Ltd., 2006, p. 128)	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)	
	8.3 Social assistance				
	Per capita social assistance expenditures by Kivalliq community	Data for capita social assistance expenditures and percentage of households receiving social assistance is not available since 2018.	MEADOWBANK “The impacts on social services and infrastructure, of low to medium magnitude, are considered largely positive in the medium term and of moderate significance. There is some potential for closure to have a negative impact on social service delivery.” (Cumberland Resources Ltd., 2006, p. 128)	MEADOWBANK – TBD (cannot be determined at this time)	
	Percentage of households receiving social assistance by Kivalliq community			WHALE TAIL – TBD (cannot be determined at this time)	
	WHALE TAIL – none				
	9. Individual and Community Wellness	9.1 Agnico Eagle’s Programs			
MEADOWBANK: “Individual and community wellness is intimately associated with potential impacts on traditional ways of life as discussed above. In addition, however, individual decisions on the use of increased income, household management in relation to rotational employment, migration, public health and safety, disturbance particularly during the construction phase, and Cumberland’s support for community initiatives are being negotiated in the IIBA are [sic] the other drivers that have the potential to effect [sic] individual and community wellness.” (Cumberland Resources Ltd., 2006, p. 123) WHALE TAIL: “The Expansion Project is not expected to change the impacts on community health and cohesion stemming from additional incomes predicted in the Approved Project FEIS, including Substance abuse, Sexual misconduct, Family violence, Crime, Income disparity, Social disparity.” (Golder Associates, 2018, p. 14) “Expansion Project-induced in-migration could increase demand for housing in Baker Lake and Rankin Inlet... dependant on scale of speculative migration.” (Golder Associates, 2018, p. 18)	Agnico Eagle wellness programs offerings & utilization by project employees and community members	Agnico Eagle has various initiatives to support individual and family wellness, including wellness programs for on-site employees, mental health and first aid training, preventative health outreach (e.g., vaccination programs, etc.), spouse visits during the holidays, and mental health awareness and support. Agnico Eagle supports the Inunnguiniq Initiative, a \$5M investment supporting community mental health. Key components include Agnico Eagle investing: - \$2.25M to expand mental health program delivery capacity in Nunavut; - \$2.5M to Breakfast Club of Canada; and - \$2.5M to The Arctic Rose Foundation.	MEADOWBANK – none WHALE TAIL “The Expansion Project continues the benefits [positive wellness effects] to communities predicted in the Approved Project FEIS” (Golder Associates, 2018, p. 18).	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – Prediction is supported	
	9.2 Perceptions of health & wellness				
	Self-reported effect of project on health & wellness	The 2024 Inuit and Nunavummiut Employment Survey results show that while most personal relationships have remained stable among those who responded to the survey, respondents often worried about families when on-site, felt lonely, and/or worried about keeping their jobs. Many also struggle with their financial situation and often struggle to pay all bills and debt.	MEADOWBANK – none WHALE TAIL “Project incomes [and rotational employment] may affect family and community health and cohesion.” (Golder Associates, 2018, p. 14-15).	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)	
	9.3 Criminal violations				
	Criminal violations per hundred people by community	In 2023, the latest year for which data is available, crime rates across the Kivalliq region averaged 37 violations per 100 people, a slight increase from 31 in 2022.	MEADOWBANK – none WHALE TAIL “Project incomes may affect family and community health and cohesion [crime].” (Golder Associates, 2018, p. 14).	MEADOWBANK – TBD (cannot be determined at this time)	
	Criminal violations per hundred people by type and community	Crime rates tend to be higher in Rankin Inlet, with Baker Lake and Coral Harbour also having higher crime rates since 2018.		WHALE TAIL – TBD (cannot be determined at this time)	
	Baker Lake	Mischief, impaired driving, and disturbing the peace were the most common violations in Rankin Inlet, Baker Lake, and Chesterfield Inlet.			
	Rankin Inlet				
	Chesterfield Inlet				
	9.4 Health centre visits				
Kivalliq community health centre visits by reason	Data for this indicator has not been available since 2016.	MEADOWBANK “The potential public health and safety impacts of the project, of unknown magnitude, are negative, and, because there is such high impact at the individual level in the event that a risk is realized, the effects must be considered long term and of high significance.” (Cumberland Resources	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)		

Sector and Overarching FEIS Prediction	Metric	2024 Overview	Specific FEIS Prediction	Accuracy of the FEIS Prediction
			Ltd., 2006, p. 126) WHALE TAIL "Project-induced in-migration could increase demand for services and infrastructure in Baker Lake and Rankin Inlet [health care]." (Golder Associates, 2018, p. 17).	
	9.5 Housing			
	Persons on waitlist for public housing by community	In 2024, 1,224 people were on a public housing waitlist in the Kivalliq region, representing a 5% increase over 2023 demand.	MEADOWBANK – none WHALE TAIL "Project-induced in-migration could increase demand for housing in Baker Lake and Rankin Inlet" (Golder Associates, 2018, p. 16).	MEADOWBANK – TBD (cannot be determined at this time)
	Housing needs by community as a percentage of housing stock	In 2024, Kivalliq communities with the highest needs are Arviat (90%), Baker Lake (75%), Rankin Inlet (65%), Coral Harbour (62%), Nauyasat (61%), and Whale Cove (51%) (all rated as critical), and Chesterfield Inlet (26%, rated as having comparatively less severe need).		WHALE TAIL – TBD (cannot be determined at this time)
	Number of people in core housing need by type and community	An investigation of unsuitable, inadequate, or unaffordable housing conditions confirms the general worsening of housing conditions in Kivalliq communities in 2021. More recent data is not available.		
	Self-reported home ownership aspirations by community	In the 2024 Inuit and Nunavummiut Employment Survey, 70% of respondents indicated they wished to own a home in the last 12 months and 85% want to buy a house / condo in the future.		
	9.6 Food security			
	Self-reported concerns on food availability by community	The 2024 Inuit and Nunavummiut Employment Survey showed that three-quarters of respondents (75%) worried about food running out, representing a slight increase in these metrics over 2023 results (67%).	MEADOWBANK – none WHALE TAIL "Regular incomes can help lift or keep people out of poverty; provide access to nutritious food." (Golder Associates, 2018, p. 20).	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – Prediction is supported
	Cost of the Revised Northern Food Basket (RNFB)	The cost of the RNFB increased overall in 2021, in line with the high inflation experienced overall in Canada. Annual changes ranged in 2021 from a 2% decrease in the RNFB in Chesterfield Inlet to a 13% increase in the RNFB in Coral Harbour. Information since 2021 was not available at the time of PEAMP preparation.		
	Agnico Eagle investments in food security initiatives	Agnico Eagle continues to make notable efforts to reduce food insecurity in the Kivalliq Region, and in 2024, invested \$357,100 in food security initiatives. Agnico Eagle's Meadowbank Complex also delivered \$6,650 of meat pie and \$600 worth of pop to the Abluqta Society for the 2024 holiday season.		
	9.7 Suicide			
	Suicides per 10,000 people by region	The Kivalliq region had the lowest suicide rate in Nunavut, but only marginally. Despite a drop in 2020 (the latest year for which data is available), suicide rates remain at crisis levels, being 6 times the rate of suicide in Canada in 2020. Information since 2021 has not been available at the time of PEAMP preparation	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)
10. Culture and Traditional Lifestyle		10.1 Perceptions of culture and traditional lifestyle		
MEADOWBANK: "There is potential for both negative and positive impacts, of any magnitude, on traditional ways of life, which could be of high significance. Any net impact, since it would be an impact of cultural change, would be long term and continue beyond the life of the project. The impact would be experienced primarily in Baker Lake." (Cumberland Resources Ltd., 2006, p. 123) WHALE TAIL: "Rotational employment can [...] have negative effects on cohesion, taking workers away from their communities and families for extended periods of time, and can erode traditional values" (Golder Associates, 2018, p. 12)	Self-reported effect of project on overall communities and on cultural and traditional activities	According to the 2024 Inuit and Nunavummiut Employment Survey, Inuit employees indicated that Agnico Eagle had a positive (60%), neutral (35%), and negative (5%) impacts on their community. The results show a mixed change in employees' participation in cultural activities compared to 2023 - 12% indicated they participated more in traditional activities, 53% stated that their participation had not changed, and 35% indicated that their participation had decreased. In 2024, all survey participants indicated they had participated in some form of traditional and cultural activities in the last 12 months.	MEADOWBANK – none WHALE TAIL "Rotational employment can [...] have negative effects on cohesion, taking workers away from their communities and families for extended periods of time, and can erode traditional values" (Golder Associates, 2016, p. 12).	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – Prediction is supported
	10.2 Culture and traditional lifestyle			
	Population identifying Inuktitut as their mother tongue, by Kivalliq community	The proportion of the population that identified Inuktitut as their mother tongue declined in all communities from 2006 to 2021.	MEADOWBANK "The project will not significantly restrict access to, or productivity of lands used for traditional activity." (Cumberland Resources Ltd., 2006, p. 122)	MEADOWBANK – TBD (cannot be determined at this time)
	Number of Agnico employees identifying Inuktitut as their first language	The number of Agnico Eagle Inuit employees at Meadowbank / Whale Tail with Inuktitut as a first language fell from 91 (45%) in 2023 to 69 (43%) in 2024.	WHALE TAIL "Rotational employment can [...] have negative effects on cohesion, taking workers away from their communities and families for extended periods of time, and can erode traditional values" (Golder Associates, 2018, p. 12).	WHALE TAIL – TBD (cannot be determined at this time)
	Self-reported effect of project on use of Inuktitut	The 2024 Inuit and Nunavummiut Employment Survey results confirmed that it is important to Inuit employees to speak Inuktitut at the mine site and that, for most, working at the mine had not impacted their use of Inuktitut at home. However, 11% of respondents indicated that they felt they spoke Inuktitut now less at home as a result of working at the mine.		
	Use of AWAR by community	There was a decrease in usage of the Meadowbank AWAR from 3,142 in 2023 to 2,737 uses in 2024.		
	Number of consultations with Elder's Advisory Committee on integrating Inuit knowledge	In 2024, KEAC played an active role in shaping community and environmental initiatives, participating in nine (9) meetings, two (2) site visits, and 12 initiatives.		

Sector and Overarching FEIS Prediction	Metric	2024 Overview	Specific FEIS Prediction	Accuracy of the FEIS Prediction
	Agnico Eagle investments to support community and traditional activities	In 2024, \$47,100 was invested to support community traditional activities, a decrease from \$69,160 in 2023.		
	10.3 Country food use at project			
	Country food kitchen usage	The country kitchen is accessible year-round, and tea and bannock are occasionally served in the cafeteria.	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK – TBD (cannot be determined at this time)
	Country food night events attendance	There were five (5) country food nights hosted in 2024 same as 2023.		WHALE TAIL – TBD (cannot be determined at this time)
11. Nunavut Economy	11.1 Royalties and taxes			
MEADOWBANK: “The economic impacts on the economy of Nunavut, of high magnitude, are positive over the medium term and of high significance, particularly during the construction phase.” (Cumberland Resources Ltd., 2006, p. 129) WHALE TAIL: “The Expansion Project will continue to contribute to territorial economic activity.” (Golder Associates, 2018, p. 7)	Project payments, royalties and taxes	In 2024, for Meadowbank / Whale Tail, payments from taxes, royalties, and IIBA commitments to the NTI and KIA increased from \$109.2M in 2023 to \$122.0M in 2024.	MEADOWBANK – none WHALE TAIL “The Project's operational government revenue impact from taxes is projected to be approximately \$307 million, of which 14% (\$41.5 million) would accrue to Nunavut.” (Golder Associates, 2018, p. 8).	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – Prediction is supported
	11.2 Trade Balance			
	Nunavut trade balance	In 2023, the trade deficit was \$1,125M, up from \$912M in 2022 (in contrast to the downward trend from 2018 to 2021). Information for 2024 was not available at the time of PEAMP preparation	MEADOWBANK – none WHALE TAIL – none	MEADOWBANK– TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)
	11.3 Nunavut GDP			
	Nunavut GDP (all industries), Nunavut GDP (mining, quarrying and oil & gas)	Nunavut’s GDP has been trending upward since 2010. In 2023, mining accounted for approximately \$1,338M or 35% of total GDP (\$3,832M). Information for 2024 was not available at the time of PEAMP preparation.	MEADOWBANK – “The results indicate that during the construction phase, the project would contribute \$120.3 M to the GDP of Nunavut ... During the operations phase, the annual contribution to GDP would be \$35.5M...” (Cumberland Resources, 2006, p. 119) WHALE TAIL “During operations, the Expansion Project will represent a contribution to the territorial economy, with total annual GDP contributions of \$100 million to \$120 million annually.” (Golder Associates, 2018, p. 7)	MEADOWBANK – TBD (cannot be determined at this time) WHALE TAIL – TBD (cannot be determined at this time)

12.4.6.2 Parts 3 & 4: Discussion

For each metric with a specific FEIS prediction that is not supported (as identified in Table 12-16), a trend analysis and discussion is provided here from the 2024 Socio-Economic Monitoring Report (Appendix 47). That report further provides trend analyses and discussions for every metric assessed in Table 12-16, above.

12.4.6.2.1 Project Inuit Employment (Agnico Eagle and Contractors)

A complete discussion of this issue is provided in Section 1.2 of the 2024 SEMR (Appendix 47), as summarized below.

FEIS Prediction:

MEADOWBANK – none

WHALE TAIL (inc. contractors) – “Excluding the final year of operations when Project employment ramps down, direct average operational employment is expected to be 1,166 [...] Of these, nearly half (491 or 42%) are expected to be filled by Nunavummiut, the majority of which are employed at the Meadowbank Mine and will move over to the Expansion Project.” (Golder Associates, 2018, p. 9)

Discussion: Trends in Agnico Eagle and contractor employment numbers are provided in Figures 53 and 54.

In 2024, Agnico Eagle’s Inuit employees worked the equivalent of 242 FTEs, while another 127 FTEs were filled by contractors’ Inuit employees, for a total of 369 FTEs. Considering year-over-year change, in 2024, Agnico Eagle’s Inuit employment decreased at Meadowbank / Whale Tail by 34 FTEs whilst contractors increased by 2 FTEs at Meadowbank / Whale Tail.

At Meadowbank / Whale Tail, Agnico Eagle’s Inuit FTEs comprised 13% of the total employee base in 2024, down from 16% in 2023. For contractors, Inuit FTEs were at 4% of total FTEs in 2023 and 2024. The combined (Agnico Eagle and contractors) Inuit FTE effort for Meadowbank / Whale Tail was 175 FTEs 10% in 2024, being notably lower than the FEIS prediction of 149 FTEs or 42% for Whale Tail.

In 2022, Agnico Eagle started to track missed work hours for Inuit employees as a retention initiative. The aim is to better support employee well-being and prioritize work-life balance following inuuqatigiitsiarniq. In 2024, Meadowbank / Whale Tail had 33.7 FTEs in missed hours. The reason for missed hours varies but the most common reasons include not showing up for work, calling in sick, and family reasons. This greatly impacts the overall Inuit FTE count annually.

The level of Inuit employment at Agnico Eagle is explored in detail in the Kivalliq Labour Market Analysis (KLMA). The 2021 KLMA repeats findings of previous analyses that the Kivalliq Inuit labour supply does not meet Agnico Eagle’s labour demands due to a combination of factors related to demographics, education and skills, and willingness to work.

Sanajiksanut (or the Sanajiksanut Program) is the primary vehicle through which Agnico Eagle recruits and hires new Inuit employees. In 2021, Agnico Eagle and KivIA agreed to modify the existing process through a Memorandum of Understanding (MoU). As a result, the Work Readiness and the Mandatory Trainings were combined to become the Pre-employment Training Program (10-day community-based

training). This change reduced the number of steps for applicants and decreased the delay in applicants gaining employment.

In 2024, the Sanajiksanut Program supported different initiatives to facilitate access to employment for the Inuit workforce. Community-based and on-site training initiatives were supported and implemented to develop new training programs and create career opportunities. Job specific recruitment process was put in place to streamline the recruitment process and give more exposure to the different careers offered at the mine site. Focus was also put on Mining Awareness activities with high school and college students. In total in 2024, the Sanajiksanut program hired 65 Inuit employees at the Meadowbank Complex.

Figure 53 Project Agnico Eagle employment (Inuit & non-Inuit)

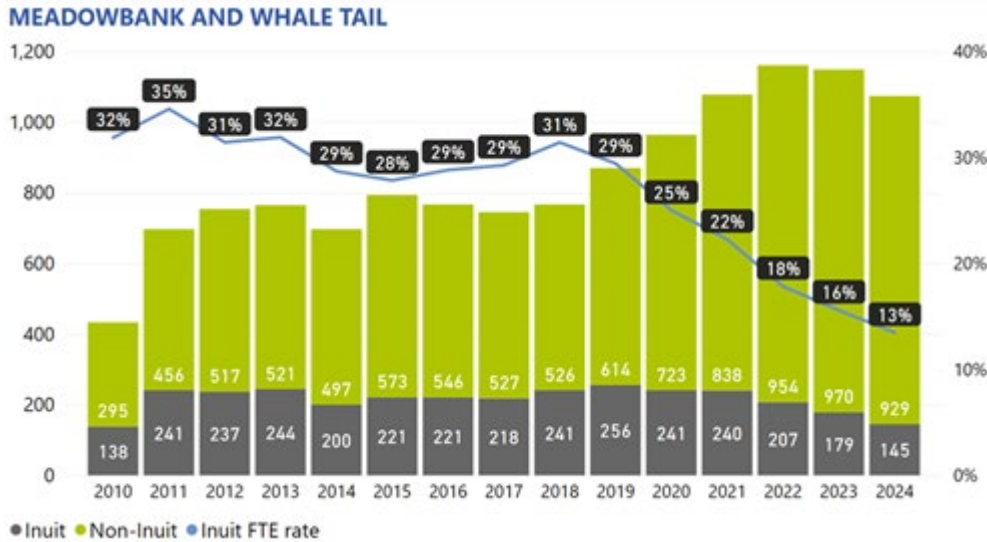
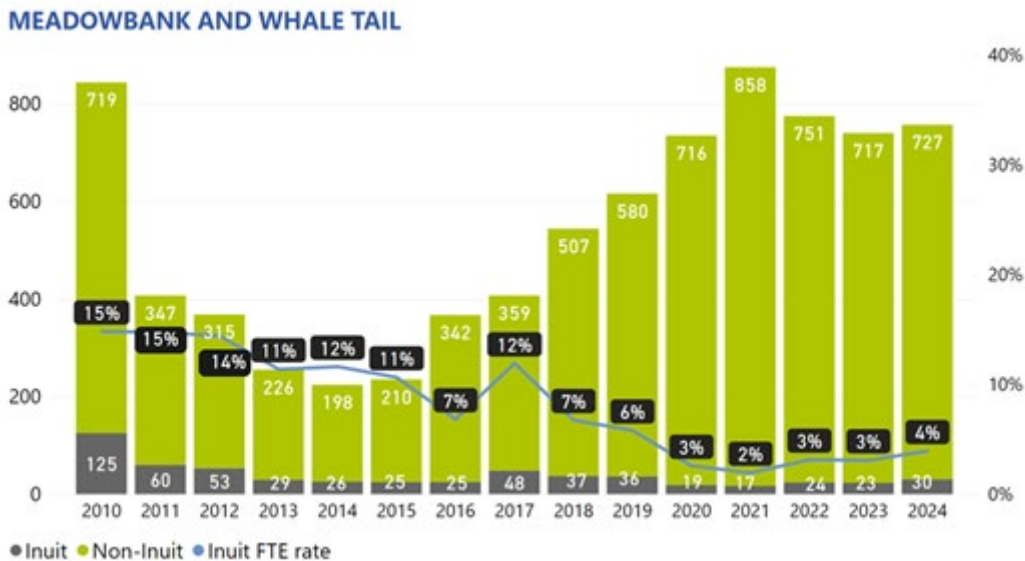


Figure 54 Project contractor employment (Inuit & non-Inuit) ⁶



⁶ Due to data availability, post 2017 Meadowbank / Whale Tail contractor data and all Meliadine contractor data represent full time equivalents (FTEs), derived based on person-hours worked. The remainder of data points (Meadowbank 2010 to 2016) represent the number of employees as a snapshot at one time of year. Trends between these years should be interpreted with caution.

12.4.6.2.2 *Project Agnico Eagle Employment by Kivalliq Community*

A complete discussion is provided in Section 1.3 of the 2024 SEMR (Appendix 47), and the issue is summarized below.

FEIS Prediction:

MEADOWBANK – none

WHALE TAIL – The FEIS estimates Baker Lake is expected to fill 3 management jobs, 16 skilled jobs, 187 semi-skilled jobs, and 66 entry level jobs, for a total of 272 jobs (Golder Associates, 2018, p.10-11)

Discussion: Since 2020, the number of Agnico Eagle's Kivalliq-based employees at Meadowbank / Whale Tail has generally trended downward year-over-year, further decreasing by 26% in 2024, reaching 128 employees. Contractors' employment of Kivalliq-based employees increased from 20 employees in 2023 to 23 in 2024. In total, 151 Kivalliq-based employees were employed at Meadowbank / Whale Tail in 2024.

Agnico Eagle continues to prioritize workforce development through sustained investment in training, education, and career advancement programs. At the Meadowbank Complex and Meliadine Mine, a wide range of in-house trainee programs and apprenticeship pathways have been implemented to increase Inuit representation in skilled and leadership roles.

Skilled Trades and Technical Trainee Programs:

To develop a pool of skilled and semi-skilled Inuit employees, Agnico Eagle has introduced several targeted training programs:

Underground Trainee Programs:

At Meadowbank, 42-day intensive programs (462–504 hours) are delivered in partnership with Nunavut Arctic College and CMAC. These programs equip participants with foundational knowledge and hands-on experience in underground mining, preparing them for entry-level roles in the underground department.

Haul Truck Trainee Program (Meadowbank):

A 42-day (504-hour) program targeting existing entry-level employees (e.g., janitors, dishwashers), this training includes simulator practice, classroom instruction, and on-the-job experience. A maximum of four trainees are paired with one instructor to ensure personalized learning.

Process Plant and Super Operator Programs:

The 28-day Process Plant Trainee Program prepares employees for roles such as process plant helpers or utility workers. Graduates may continue into the Super Operator Program (168 hours), which focuses on basic maintenance and equipment operation across the plant.

Long-Haul Truck Trainee Program:

This 28-day (336-hour) program trains employees from the mining department to become certified long-haul truck operators. Training includes simulator use, classroom sessions, and on-the-job application.

Agnico Eagle offers pre-apprenticeship and apprenticeship programs to support Inuit employees in pursuing skilled trades through combined on-the-job experience and technical education. These programs aim to build a sustainable, skilled Inuit workforce over time.

The Nunavut Leadership Development Program (LDP) is designed to equip Inuit employees with the necessary skills for supervisory and leadership roles. This includes training in communication, resilience, managerial courage, and team management.

Despite Agnico Eagle's investments, systemic barriers continue to impact the representation of Inuit in higher-skilled and leadership positions. Key challenges identified in the Kivalliq Labour Market Analysis (KLMA) and other regional studies include:

- **Education and Skill Gaps:** Limited access to quality math and science education, lower high school graduation rates, and gaps in foundational skills hinder eligibility for technical training programs. High absenteeism and limited training resources at site also create obstacles to internal advancement;
- **Family and Community Responsibilities:** Many Inuit employees balance work with caregiving roles and community obligations, making rotational work schedules more difficult to sustain; and
- **Housing and Infrastructure Challenges:** Overcrowding, limited housing options, and high costs of living further reduce the flexibility and stability needed for long-term employment.

Agnico Eagle recognizes these ongoing barriers and is working to address them through targeted programs and partnerships. While progress is steady, enhancing Inuit participation in skilled and leadership roles will require continued collaboration, long-term investment, and community-led solutions.

12.4.6.2.3 Income Paid to Projects' Inuit Employees

A complete discussion is provided in Section 3.1 of the 2024 SEMR (Appendix 47), and the issue is summarized below.

FEIS Prediction:

MEADOWBANK - "Direct project wages paid to people in Kivalliq Region, primarily Baker Lake, could exceed \$4M annually." (Cumberland Resources, 2006, p. 121).

WHALE TAIL - "During operations, the Expansion Project is projected to generate \$421.1 million (cumulatively) in direct labour income in Nunavut, and \$509.3 million in total territorial labour income." (Golder Associates, 2018, p. 12). The FEIS estimates 217 positions will be filled by employees from Baker Lake." (Golder Associates, 2016, pp. 7-53)"

Discussion: Total income paid to Inuit employees (excluding contractors) in 2024 was \$32.5M, representing a 4% decrease since 2023. Income paid to Inuit workers represented 11% of total income paid to Agnico Eagle employees on both sites in 2024. With 75% of Inuit employees residing in the Kivalliq communities, there continues to be a significant and positive impact on the personal income of people in the region, in line with FEIS predictions. By the end of 2024, Agnico Eagle has paid a cumulative total of \$338.3M of employment income to Inuit employees of all Agnico Eagle projects since 2010.

12.4.6.2.4 Project Employment by Skill Level

A complete discussion of this issue is provided in Section 4.4 of the 2024 SEMR (Appendix 47), as summarized below.

FEIS Prediction:

MEADOWBANK - none

WHALE TAIL - “As Nunavummiut employees achieve further training and education, it is expected that they will be better poised to advance to more skilled positions as they arise, thereby increasing representation of Nunavut residents in the skilled, professional and management employment categories” (Golder Associates, 2016, pp. 7-55).

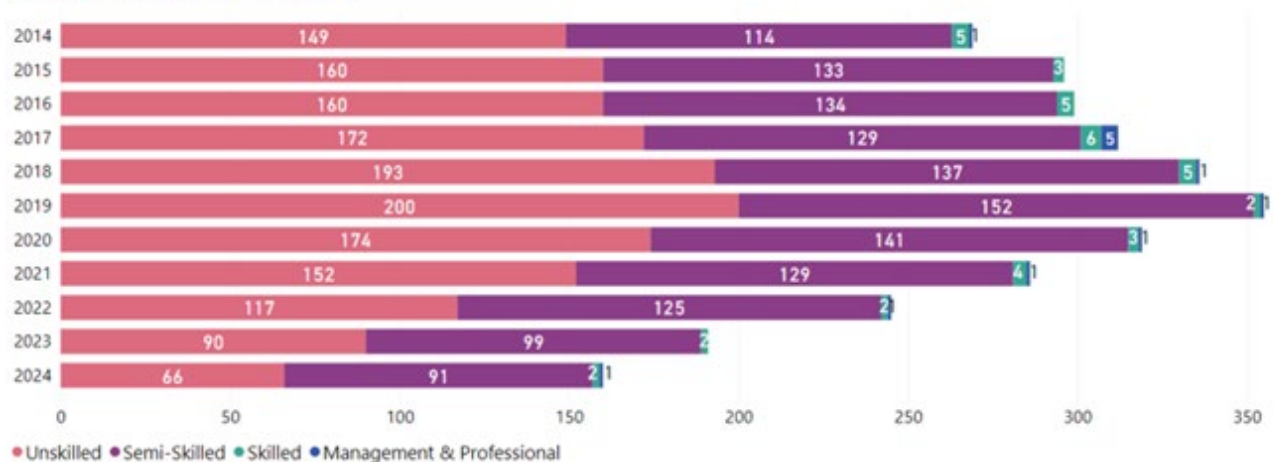
Discussion: Figure 55 shows the number of Inuit employees at each skill level between 2014 and 2024. Agnico Eagle changed how various skill levels are classified in 2013 and 2014, and consequently year-over-year trends of Inuit employment by skill level cannot be drawn pre-2014.

In 2024, the number of Agnico Eagle direct Inuit employees continued to decrease in semi-skilled and unskilled job categories at Meadowbank, but remained constant for skilled, and decreased for management & professional positions. Overall, most unskilled jobs and less than a quarter of semi-skilled jobs are held by Inuit employees, while Inuit employees are underrepresented in management & professional / skilled roles.

There are several longer-term barriers identified in the KLMA to retention and advancement of Inuit in the workplace. These include family needs, cultural priorities, language barriers, and access to support programs. Ultimately, there are three (3) pathways through which higher skilled employment can be achieved: (1) direct hiring, (2) greater retention, or (3) internal career progression. The IWBS Study (Mining Industry Human Resources Council (MiHR), 2018a) also identified several challenges to increasing Inuit representation in higher skilled positions through internal advancement programs, including inadequate skillsets, high absentee rates, impact of cultural norms, and lack of adequate time and space for training.

Figure 55 Project Agnico Eagle Inuit employees by skill-level

MEADOWBANK AND WHALE TAIL



12.4.6.2.5 Employee Migration and Population estimated in Kivalliq communities

A complete discussion of this issue is provided in Appendix 47 (Section 7.1) as summarized below.

FEIS Prediction:

Employee Migration:

MEADOWBANK - The Meadowbank FEIS suggests that in-migration of Southerners to Baker Lake would be the primary concern.

WHALE TAIL – Project is not expected to generate employment-driven migration.” (Golder Associates, 2016, 3-C-38)

Population estimated in Kivalliq communities:

MEADOWBANK- “It is not likely that migration to any other community than Baker Lake would be significant,” but does not provide any specific predictions on changes to populations in Kivalliq communities. (Cumberland Resources, 2006, p. 126)

WHALE TAIL - “Project employment opportunities could spur migration to Baker Lake and Rankin Inlet.” (Golder Associates, 2018, p. 15)

Discussion: Agnico Eagle monitors the movement of employees into- and out of Nunavut.

At Meadowbank / Whale Tail, the number of Inuit employees who resided outside Nunavut in 2024 increased to 29 from 26 in the previous year. Overall, it has remained relatively stable since 2015, with the exception of 2021 when there was a peak of 28 employees living outside the region (likely attributable to the fact that Nunavummiut employees did not have access to the site for extended periods in 2021 to prevent the spread of COVID-19 to communities).

In 2024, net employee movements included:

- Nine (9) Inuit employees moving out of Nunavut;
- No (0) employees moved;
- No net migration was reported for Baker Lake; and
- Zero (0) non-Inuit moving in and out of the territory.

The movement of both Inuit and non-Inuit employees into and out of Nunavut—and between Baker Lake and Rankin Inlet—remains minimal. However, employment at Agnico Eagle’s projects provides Inuit workers with income and skills that may facilitate relocation outside the territory. Other factors, such as Nunavut’s housing shortage, lower cost of living elsewhere in Canada, and greater access to educational and job opportunities, may also contribute to out-migration.

Agnico Eagle’s employee migration data indicates minimal impact on Kivalliq communities. Based on available and current data, there is no indication of mining-induced in-migration, countering FEIS predictions for both mine sites.

12.4.6.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

Existing monitoring programs are able to address most FEIS predictions (Table 12-16), so these monitoring measures are considered to be effective. In some cases, existing monitoring programs (mainly those run at the community- or territory-level) cannot specifically determine the impact of Agnico Eagle's operations on observed changes. Namely these metrics include health centre visits, social assistance use, and health and safety awareness among families and communities.

Effectiveness of Mitigation

A summary of the planned mitigation measures for socio-economic impacts for the Meadowbank operations phase (per FEIS, Appendix B, Table B.15-2) along with implementation in 2024 is provided in Table 12-17.

A summary of the planned mitigation measures for socio-economic impacts for the Whale Tail construction and operations phase (per FEIS, Volume 3, Table 3-C-8, Table 3-C-9, Table 3-C-10) along with implementation in 2024 is provided in Table 12-18.

Overall, the only potentially significant departures from FEIS predictions identified in Section 12.4.6.1 are regarding Project Inuit employment, and Project employment by skill level. Agnico Eagle continues to recognize and address these gaps through new management and mitigation initiatives such as the improved Leadership Development program, Adult Educators Program, Career Path training programs, the Cross-Cultural training and others, which are described in the 2024 SEMR.

Table 12-17 Mitigation measures described in the Meadowbank Project FEIS to reduce impacts of the project on socio-economic VECs (sub-headings in italics), and implementation in 2024

Planned Mitigation Measure (FEIS, Appendix A, Table B.15-2)	Implementation (unless indicated, reference to 2024 Socio-Economic Monitoring Report, Appendix 47)
<i>Employment, training, and business opportunities</i>	
Preferential employment and contracting	Yes - See Section 1.1, 5.1 and "Existing Management and Mitigation"
Preferential hiring	Yes - See Section 1.1, 5.1 and "Existing Management and Mitigation"
Preferential procurement	Yes - see Section 5.1
Education and training initiatives	Yes – Section 4
Education initiatives directed at specific concern around youth and their future in a mixed economy	Yes – Section 4.1 and 4.2 and "Existing Management and Mitigation"
<i>Traditional ways of life</i>	
Allowing use of project winter road to traditional land users	Yes – Section 10.2
Income and workforce management practices that value and provide opportunity for traditional activity	Yes – Section 3
Workforce management and community initiatives in support of traditional activity	Yes – Section 10
<i>Individual and community wellness</i>	
Assistance to individuals experiencing problems and their families, zero tolerance policies	Yes – Section 9
Short rotations	Yes – Inuit Workforce Barriers and Strategies (IWBS) report (Appendix 61 of the 2018 Annual Report)
Workforce management best practice, including codes of conduct, rotation to point of hire, etc.	Yes – Inuit Workforce Barriers and Strategies (IWBS) report (Appendix 61 of the 2018 Annual Report)
Driver training, public education to	Yes - Driver training is part of Mandatory Training, public education to

Planned Mitigation Measure (FEIS, Appendix A, Table B.15-2)	Implementation (unless indicated, reference to 2024 Socio-Economic Monitoring Report, Appendix 47)
reduce potential for traffic accidents	reduce potential for traffic accidents is done through annual AWAR public meetings
Operations best practice to minimize emergencies, emergency response planning in the event of an emergency	Yes – e.g. Emergency Response Team (ERT) Training, Crisis Management Plan (CMP), Emergency Response Plan
Support for community wellness initiatives	Yes – Section 9
Infrastructure and social services	
Employment at good wages	Yes – Section 1 and 3
Avoidance of sites of heritage significance, protocol in place in event that new sites are identified	Yes – Archaeology Management Plan: Always conduct archeology studies or consultation of previous archaeology studies before construction to confirm present or not of heritage sites. Mitigation measure to be implemented as per the consultant recommendation and Government of Nunavut

Table 12-18 Mitigation measures described in the Whale Tail FEIS to reduce impacts of the project on socio-economic valued components (sub-headings in italics), and implementation in 2024

Note: Excludes environmental design features, as these are a component of completed design plans and not ongoing mitigation. TEMP = Terrestrial Ecosystem Management Plan.

Planned Mitigation Measure (FEIS Table 3-C-1)	Implementation (2024)
<i>Heritage Sites</i>	
Complete heritage assessment for the Project footprint to identify archaeological sites present.	Yes –Archeology Management Plan - Always conduct archeology studies or consultation of previous archaeology studies before construction to confirm present or not of heritage sites. Mitigation measure to be implemented as per the consultant recommendation and Government of Nunavut.
Alter or adjust the location of a Project component or activity to fully avoid impacts on culturally important sites such as graves; otherwise mitigate and conduct heritage resource surveys in accordance with the GN department of Culture and Heritage.	
For archaeological sites that will be adversely affected by the Project, and where more passive mitigation strategies (e.g., capping, relocation) are not viable for those locations, preservation by systematic recording (i.e., excavation or documentation) is an option.	
Complete additional heritage baseline assessment for any changes to the Project footprint in areas considered to have potential to contain heritage resources.	
Agnico Eagle will mark the perimeter of heritage sites to be avoided with flagged stakes or similar, will erect “no work zone” signage, and, if in a potentially high traffic area, will erect snow fencing or similar barrier to prevent entry. Agnico Eagle will monitor condition of site barriers.	N/A
Agnico Eagle will include no work areas on project drawings.	Yes – Archaeology Management Plan
Provide awareness training for Agnico Eagle and Contractors that includes general guidelines for the appropriate response to the inadvertent discovery of known or suspected archaeological materials.	Yes – Archaeology Management Plan
<i>Traditional Land Use – Wildlife Harvesting</i>	
Surveys of proposed granular sources for dens and nests will take place prior to construction.	Yes – TEMP
Wildlife will have the right-of-way and vehicle traffic will be minimized according to the TEMP. Maximum speed limits of 50 km/hr will be enforced.	Yes – TEMP
Traffic volumes will be managed and roads closed when large numbers of caribou are present, in consultation with the HTO, GN, and KIA according to the TEMP.	Yes – TEMP
All employees will be provided with wildlife environmental awareness training.	Yes – TEMP
Drivers will be alerted when caribou are observed near the haul road.	Yes – TEMP
Littering and feeding of wildlife will be prohibited.	Yes – TEMP
Employees will be notified when caribou, muskox and predatory mammals are observed in the local study area.	Yes – TEMP
Land will be cleared outside the breeding season (June 1 to August 1). Mitigation to reduce impacts to nesting birds will be discussed with Environment Canada.	Yes – TEMP
All spills will be immediately reported, cleaned up and/or isolated from the receiving environment. Ready access to emergency spill kits. Regular maintenance of equipment to reduce oil leakage. Training in refueling procedures for site staff. Hazardous materials and fuel will be stored according to regulatory requirements.	Yes - Detailed mitigation is provided in the Emergency Response Plan, Hazardous Materials Management Plan, Whale Tail Haul Road Management Plan and Spill Contingency Plan.
Monitoring for bird nesting activity. Birds showing nesting activity will be discouraged from nesting and roosting on site infrastructure.	Yes - Detailed mitigation is described in the TEMP.
Attenuation Ponds will be monitored for use by water birds. Deterrents will be used if required. Attenuation Ponds will be monitored for water quality.	Yes - Detailed mitigation is described in the TEMP.
Enforce no hunting, trapping, harvesting or fishing policy for employees and contractors. Hunter harvest survey, consistent with the Meadowbank Mine will continue. Access to the Project will be controlled (gated at Meadowbank); Restricting public vehicle access beyond km 85 of Meadowbank All-weather Access Road. All efforts will be made to enforce a no shooting zone for the public along the road and around the Project site.	Yes - Detailed mitigation is provided in the Whale Tail Haul Road Management Plan, Interim Closure Plan and Reclamation Plan and TEMP.
Any PAG or high metal leaching waste rock will be segregated at source and placed into designated areas within waste rock storage facilities to control acid generating reactions and the migration of contaminants. Leachate from the waste rock piles will be monitored and controlled and not released to the natural environment.	Yes - Detailed mitigation is provided in the Operational ARD-ML Sampling and Testing Plan, Landfarm Design and Management Plan, Landfill Design and Management Plan, and Mine Waste Rock and Tailings Management Plan, Air Quality and Dustfall Monitoring Plan, Road Management Plan, Water Management Plan, AEMP, CREMP and the TEMP.
<i>Traditional Land Use – Fishing</i>	
Best management practices for erosion and sedimentation control (e.g., ground cover, silt fences and curtains, runoff management), where needed.	Yes – Water Management Plan
Quarries will be inspected on a regular basis to monitor water ponding, particularly at spring melt; when there is flow from a quarry that could enter a waterbody, a water quality sample will be collected and analyzed.	Yes – Water Quality and Flow Monitoring Plan, Road Management Plan
The dike will be constructed using non- potentially acid-generating rock or low potential for metal leaching material	Yes – Construction Design Report, ARD-ML Sampling and Testing Plan
In-stream works will be constructed in winter, when possible, to avoid increased TSS and turbidity, and changes to water and sediment quality.	Yes - Best practices
Mining staff will not be allowed to hunt or fish while on their work rotation; Agnico Eagle will develop and enforce “no hunting, trapping, harvesting or fishing policy” for employees and contractors, which will be consistent with the Meadowbank Mine.	Yes
Runoff and seepage from the Project site will be diverted to sumps and attenuation ponds (and treated if required), prior to release.	Yes – Water Management Plan, Water Quality and Flow Monitoring Plan
Water quality in attenuation ponds will be monitored and managed such that the discharge meets discharge limits.	Yes – Water Quality and Flow Monitoring Plan
Any potentially acid generating (PAG) or high metal leaching waste rock will be segregated at source and placed into designated areas within the waste rock storage facility.	Yes – Operational ARD-ML sampling and testing plan, Waste rock management plan
<i>Traditional Land Use – Plant Gathering</i>	
Implement the spill plan for potential chemical spills, including hydrocarbons.	Yes - Spill Contingency Plan
Best management practices for erosion and sedimentation control (e.g., silt curtains, runoff management, armouring of banks, sloping of banks), where needed.	Yes – Erosion Management Plan, Freshet Action Plan, Site/Road inspection
Use of non-acid generating materials for road bed and fills.	Yes – Operational ARD-ML sampling and testing plan
Implement dust control measures on mine roads, when required, including enforcing speed limits.	Yes – Air Quality and Dustfall Monitoring Plan, Road Management Plan
Road surfaces will be maintained through grading and the addition of granular material.	Yes – Road Management Plan, Best practices
Equipment and vehicles will comply with relevant non-road emission criteria at that time of purchase.	Yes
Waste rock management procedures developed for potentially problematic waste rock/overburden material. Implement the Mine Waste Rock and Tailings Management Plan.	Yes - Mine Waste Rock and Tailings Management Plan.
Hazardous materials and fuel will be stored according to regulatory requirements to protect the environment and workers.	Yes – Hazardous Management Plan
Adherence to the AWAR and Whale Tail Pit Haul Road Dustfall Monitoring Plan (Appendix B of the TEMP).	Yes – Air Quality and Dustfall Management Plan
<i>Traditional Land Use – Culturally Important Sites</i>	
See measures listed under Heritage Resources, above.	N/A
Provide ongoing consultation with the community of Baker Lake (specifically Elders	Yes

Planned Mitigation Measure (FEIS Table 3-C-1)	Implementation (2024)
and the HTO Members), and provide opportunities for participation in heritage resource surveys and mitigation measures.	
Best Management practices for controlling equipment noise emissions, including: • Use of silencers on all trucks • Enforcing speed limits • Regular maintenance will be implemented for equipment and vehicles	Yes – Noise monitoring and abatement plan
Implement the mitigation measures outlined in the Noise Monitoring and Abatement Plan that was developed for the Meadowbank mine site in 2009 (Agnico Eagle 2009) and refined in 2013 (Agnico Eagle 2013).	Yes – Noise monitoring report
Traditional Land Use Access	
The haul road will be closed to the public. Access to the Project will be controlled (gated at Meadowbank); Restricting public vehicle access beyond km 85 of Meadowbank All-weather Access Road.	Yes – Road management plans
Enforce no hunting, trapping, harvesting or fishing policy for employees and contractors.	Yes
Hunter harvest survey, consistent with the Meadowbank Mine will continue.	Yes - TEMP
Agnico Eagle will work with local wildlife harvesters to ensure the preferred ATV and snowmobile crossing areas are well identified for both hunters and operators on the road.	Yes – HTO/Elders consultation
Socio-Economics	
Use of existing Meadowbank Mine workforce.	Yes
Continue existing training initiatives for the Project's workforce.	Yes – See 2024 Socio-Economic Monitoring Program Report section “Existing Management and Mitigation”
Housing out-of-area workers in on-site camp; Fly-in/fly-out to and from Kivalliq communities	Yes
Continue social management approach identified in the Socio-Economic Management and Monitoring Plan (Appendix 8-E.6).	Yes
Implement noise and air quality mitigations including: Adherence to the • Air Quality Monitoring Plan. • Enclosures are used to reduce fugitive emissions at the processing facility. • Adherence to the Incinerator Waste Management Plan • Adherence to the AWAR and Whale Tail Pit Haul Road Dustfall Monitoring Plan (Appendix B of the TEMP). • Best Management practices for controlling equipment noise emissions, including use of silencers on all trucks • Enforcing speed limits. • Regular maintenance will be implemented for equipment and vehicle.	Yes- Air and Noise monitoring reports

Adaptive Management

Existing management and mitigation related to VSECs are described in the 2024 SEMR (Appendix 47).

These include, for example:

- Cross Cultural training: Agnico Eagle provides cross cultural training program, an in-class training course for employees from different cultures and backgrounds to understand cultural differences and improve communication in the workplace;
- Leadership development program: This program is designed specifically for employees in supervisory roles with the aim of honing their leadership skills. The program consists of 5 five modules that covers various aspects of leadership. In 2024, a total of 67 sessions were delivered across all sites;
- Adult Educator: For employees who are pre-apprentices and apprentices, the Adult Educator works with the employees to improve math skills based on the types of questions they may see in technical training, test taking skills, reading comprehension, and scientific concepts. The goal is for the apprentice to be well prepared to attend technical training;
- KEAC: The Kivalliq Elders Advisory Committee which is made up of 21 Elders from Baker Lake, Chesterfield Inlet, Rankin Inlet, Whale Cove, and Arviat was created in 2021 to integrate ISV, IQ and community knowledge into Agnico Eagle's operations. In 2024, multiple activities took place with the KEAC to support with employment and recruitment initiatives, training and other important operational activities; and
- Education Initiatives Portfolio promotion: Agnico Eagle developed a portfolio summarizing all the education initiatives available for the Kivalliq schools. These include Trades Awareness Skills and Knowledge Week (TASK week), Spokesperson visits, career fairs, life skills workshops, Take Our Kids to Work (TOKTW), regional and local summer camps, financial workshops, and Mining Matters programs. In 2024, with the support of Mining Matters, Agnico Eagle conducted two (2) Career Days, one (1) for each community: Arviat and Rankin Inlet. The event was attended by high school students and was opened to the public in the evening.

12.5 WHALE TAIL PEAMP EVALUATION

For each valued component (VC) in the FEIS Addendum for the Whale Tail Pit – Expansion Project (Agnico Eagle, 2018), a summary of the primary effects pathways that were evaluated is provided in Section 12.3, above. The completed PEAMP evaluation for residual effects associated with those pathways is presented in Sections 12.5.1 – 12.5.6, below.

VCs in this FEIS Addendum include Climate, Air Quality, Noise, Permafrost, Terrestrial Environment (vegetation, wildlife and birds), Aquatic Environment (surface water quantity, surface water quality, hydrogeology and groundwater, fish and fish habitat), Heritage Resources, Traditional Land Use, and Socio-Economics. These are generally the same VCs as identified and assessed for the original Meadowbank FEIS (Cumberland, 2005). For two (2) VCs (hydrogeology and groundwater, heritage resources) no primary effects pathways or residual impacts were identified. For the remaining VCs, predicted residual impacts and measured residual impacts are examined here.

12.5.1 Aquatic Environment

Key mine development activities that could result in changes to the aquatic receiving environment for the Whale Tail Mine include: Whale Tail and Mammoth Dike construction, dewatering of Whale Tail Lake – North Basin and the IVR area waterbodies, effluent discharge, and dust generated through onsite activities including roads.

Within the Project FEIS Addendum (Agnico Eagle, 2018), impacts to the aquatic environment potentially generated through these activities are described for water quantity, water quality, and fish/fish habitat. Predicted and measured residual impacts for each of these VCs are described below.

12.5.1.1 Water Quantity

12.5.1.1.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

A summary of predictions for impacts to surface water quantity (FEIS Addendum, Section 6.3, as summarized in Table 3-C-5) and the accuracy of these predictions in each monitoring year (measured impacts) are provided in Table 12-19. Cells are highlighted in grey when measured impacts deviate from predictions for the current year. In general, supplemental discussion of trends in relation to predictions is provided for water levels in Whale Tail Lake, Kangislulik Lake, and Nemo Lake.

Note: Flooding and water level monitoring related to the Northeast Diversion is no longer applicable under the Whale Tail Expansion Project, and was removed in 2024. The last discussion for this impact was provided in the PEAMP Section of the 2020 Meadowbank Complex Annual Report.

Table 12-19 Whale Tail Mine: Predicted and measured impacts to surface water quantity for the Whale Tail Mine during the construction and operations period

Note: Primary pathways according to FEIS Addendum (Agnico Eagle, 2018), Table 3-C-5. Measured impacts exceeding or potentially exceeding predictions are shaded grey and further discussed in Section 12.5.1.1.2.

Primary Effect Pathways	Residual Impact	Proposed Monitoring	Key Monitoring Parameters	Key Predicted Impact	Measured Impact					
					2019	2020	2021	2022	2023	2024
Project footprint, which will physically alter watershed areas and drainage patterns, may change downstream discharge, water levels, and channel/bank stability in streams, and affect water quality, fish habitat, and fish	Change in discharge rate and the spatial distribution of water	Monitoring of flows and water levels at key locations	Whale Tail South water level	Dewatering (2019): peak 155.7 masl	2019 flood peak was slightly higher than predicted for that year, but did not exceed final flood level prediction. 2020+ flood peaks are slightly lower than predicted due to minor infrastructure design changes. See discussion, Section 12.5.1.1.2.1					
		All piped and/or pumped discharges to waterbodies will be monitored continuously		Operations (2020+): 156.0 masl						
		Climate monitoring, including continuous measurements of rainfall and temperature, will be performed to allow validation of the hydrological model, assessment of seasonal conditions and to provide input to water management.								
Dewatering of lakes may change discharges, water levels, and channel/bank stability in receiving and downstream waterbodies, and affect water quality, fish and fish habitat		Whale Tail Haul Road Management Plan	Kangislulik Lake water level	Dewatering (2019): Slight decrease from baseline	Kangislulik Lake levels have varied slightly around predictions. See discussion, Section 12.5.1.1.2.2					
				Operations (2020+): Slight increase from baseline						
			Nemo Lake	Operations	Nemo Lake levels similar to baseline. See discussion, Section					

Primary Effect Pathways	Residual Impact	Proposed Monitoring	Key Monitoring Parameters	Key Predicted Impact	Measured Impact					
					2019	2020	2021	2022	2023	2024
			water level	(2020+): similar to or slight decrease from baseline	12.5.1.1.2.3.					
Alteration of watershed flow paths may change flows, water levels, and channel/bank stability in diverted and receiving waterbodies, and affect water quantity, water quality, fish and fish habitat			Whale Tail Lake dewatering discharge monitoring	Total discharge will occur in 2019, with a volume of 4,643,712 m ³	4,940,198 m ³	741,620 m ³	No dewatering			
					Some discharge was ongoing until 2020 instead of completion in 2019. Discussed in 2020 and 2021 PEAMP Evaluation.					
			Freshwater withdrawal monitoring (Nemo Lake)	Operations – 2020+: 125,143 m ³ /year NWB Water License 2AM-WTP1830: 209,544 m ³	50,559 m ³	43,252 m ³	67,816m ³	75,408 m ³	81,986 m ³	108,617 m ³

12.5.1.1.2 Parts 3 & 4: Discussion

Where impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion is provided here.

12.5.1.1.2.1 Whale Tail Lake Water Levels

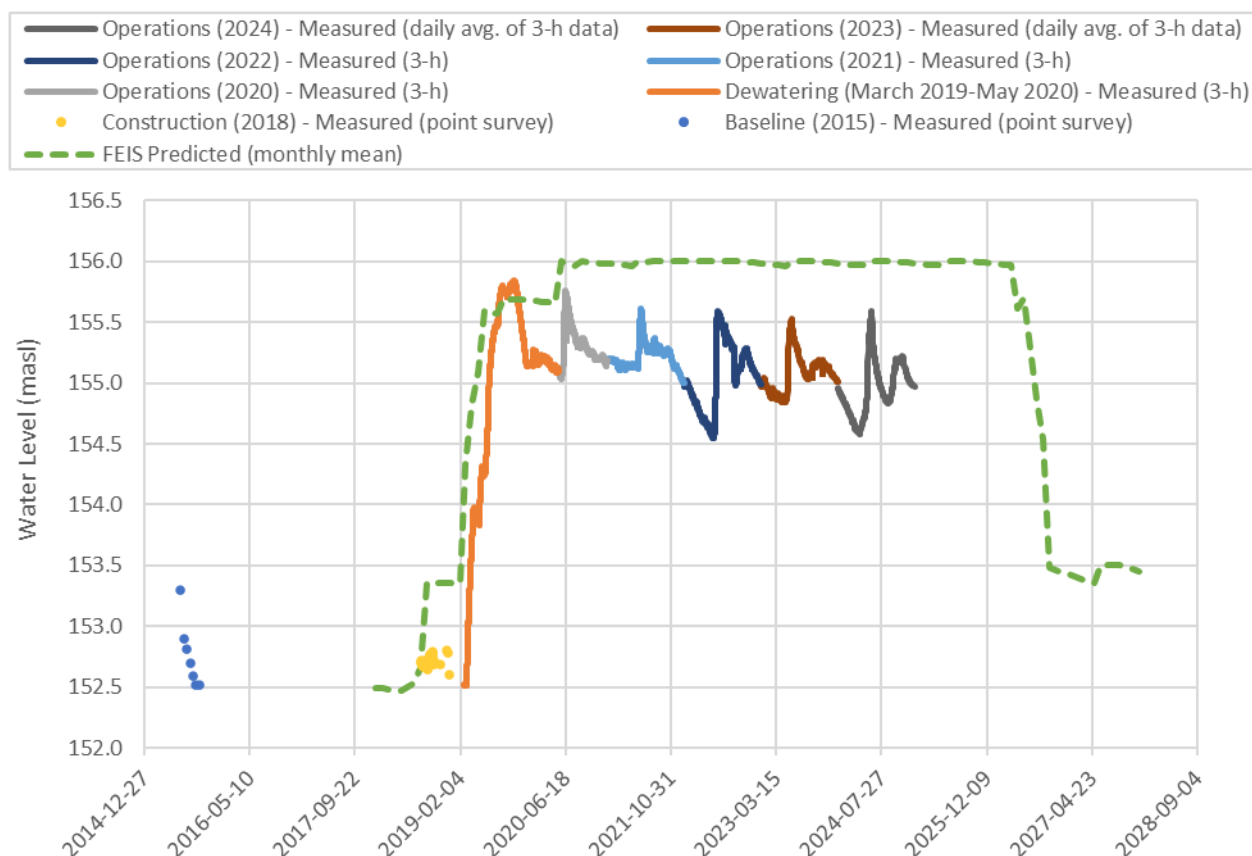
Water levels in Whale Tail Lake South Basin as measured from 2019 - 2024 using piezometric data are shown in Figure 56, below, along with measurements during the construction phase (2018; measured by GPS survey), available baseline measurements (2015), and FEIS Addendum predictions (from FEIS Appendix 6-F). It is noted that FEIS-predicted water levels were calculated as monthly timesteps in a mean annual water balance, whereas measured water levels are assessed every three (3) hours. Measured values may therefore be expected to vary around the prediction, due to both inter-annual climate variability and scale of measurement.

Due to record rainfall, peak water levels in 2019 exceeded predictions in July (up to 155.8 masl), but did not reach the maximum predicted final flood level of 156.0 masl, which was planned to occur in 2020. Following discussions with NWB, Agnico Eagle pumped non-contact water from the Whale Tail South flood zone directly to Kangislulik Lake beginning in October, 2019. This activity temporarily substituted for the passive flow which now (since freshet 2020) occurs through the South Whale Tail Channel (SWTC).

Beginning in 2020, water levels in Whale Tail South were lower than FEIS Addendum models, which predicted a mean level of 156.0 masl would be maintained throughout the operations period. This change follows an amendment to the final design of the South Whale Tail Channel, which decreased the channel inlet invert elevation, in order to reduce peak water levels against the Whale Tail Dike. Operational water levels moving forward were therefore predicted to remain lower than the FEIS prediction of 156.0 masl. Since construction of the channel (2020 - 2024) water levels measured at the Whale Tail Dike have remained between approximately 154.55 and 155.75 masl over the course of any given year.

Figure 56 Measured and predicted water levels in the Whale Tail South flood zone

Note: Predicted water levels from FEIS Addendum for the Whale Tail Pit Expansion Project (Agnico Eagle, 2018), Appendix 6-O, Table D-14.



12.5.1.1.2.2 Kangislulik Lake Water Level

Water levels in Kangislulik Lake as measured primarily throughout the open water seasons of 2018 (construction period) and 2019 (dewatering period) by GPS survey are shown in Figure 57 along with available baseline measurements (2015), 2020-2024 piezometer results, and FEIS predictions for the operations period (months of June – September, annually; from data in FEIS Addendum Section 6.3.3.1.4.2 and ERM, 2020-App. I).

As shown in Table 12-20, FEIS predictions (Agnico Eagle, 2016 - Appendix 6-E) indicated that mean monthly water levels in Kangislulik Lake would decline up to 12 cm below baseline values during the dewatering phase. Predictions for the operations phase were updated in the FEIS Addendum (Section 6.3.3.1.4.2, Table 6.3-3) and indicated that mean monthly water levels may increase up to 5 cm from baseline.

Median, low-flow year, and high-flow year modeled baseline water levels were provided in ERM (2020) – Appendix I, facilitating comparison to FEIS Addendum predictions for changes. Low-water thresholds for ensuring non-measurable residual impacts to fish habitat are also provided in that document. In ERM (2020), predicted water levels were compared to modeled baseline water levels for a low-flow year, as well as modeled baseline median water levels values minus 10%, and the water elevation change

associated with a 10% under-ice withdrawal volume (for Kangislulik Lake, median water level minus 0.34 m, as shown in Figure 57).

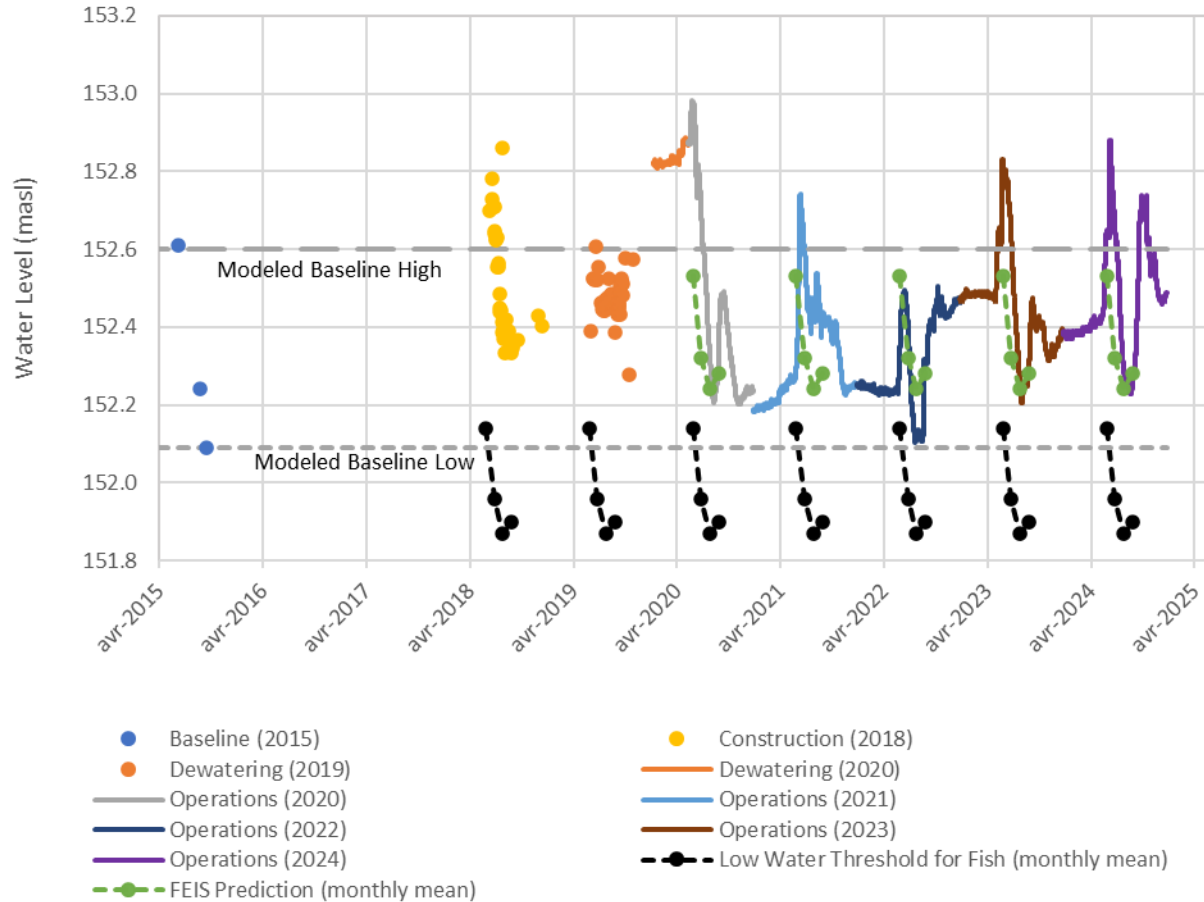
In 2020, 2021, 2023, and 2024, measured water levels were similar to or higher than predicted monthly means, and in 2022, measured water levels were similar to or slightly lower than predicted monthly means. The late-summer drop in water levels recorded at Kangislulik Lake in 2022 was anecdotally observed in area reference lakes as well and likely represents natural inter-annual variability. To date, water levels have not declined below measured baseline values or impact thresholds for fish.

Table 12-20 Predicted change in water levels from baseline in Kangislulik Lake during the construction and dewatering phases operations phase, and closure phase under mean monthly discharge scenarios

Project Phase	Year (approx.)	June	July	August	September	October
Construction (m)*	2018	-0.16	-0.16	-0.11	-0.14	-0.13
Dewatering (m)*	2019	-0.12	-0.04	-0.05	-0.09	-0.10
Operations (m)**	2020 – 2026	+0.05	+0.02	+0.03	+0.04	+0.03
Closure (m)**	2026+	-0.20	-0.20	-0.14	-0.14	-0.13
*Agnico Eagle (2016), Appendix 6-E						
**Agnico Eagle (2018), Section 6.3.3.1.4.2, Table 6.3-3						

Figure 57 Operations-phase FEIS predictions and measured water levels in Kangislulik Lake

Note: FEIS predictions are the monthly mean for June to September, annually; from data in Agnico Eagle (2018), Section 6.3.3.1.4.2 and ERM, (2020), App. I. Low water threshold for fish from App. I of ERM (2020) (median baseline water level minus 0.34 m). Monitoring results from 2015 – 2019 are by GPS survey, and results for 2020+ are piezometric data (3-h intervals).

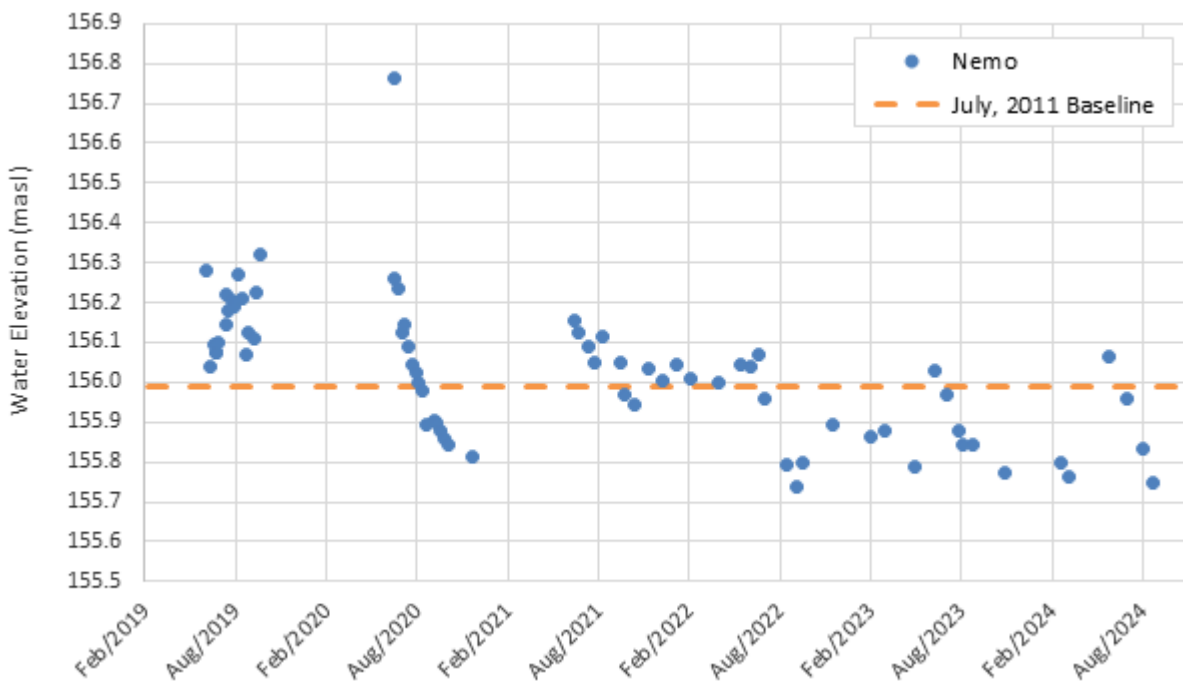


12.5.1.1.2.3 Nemo Lake Water Levels

In the FEIS Addendum (Agnico Eagle, 2018), expected changes to Nemo Lake water levels as a result of planned freshwater intake and surface water diversions were assessed. During the operations phase, mean monthly water levels were expected to remain similar to baseline values in May and decrease by 0.07 m in June, 0.09 m in July, 0.08 m in August, 0.07 m in September, and 0.04 m in October, from the baseline values. Measured water levels are shown in Figure 58. Since only a single baseline water level estimate is available (from July, 2011 imagery – C. Portt and Associates, 2018), a quantitative comparison to FEIS Addendum predictions of change is not feasible. However, water levels have generally remained similar to baseline.

Figure 58 Measured water levels in Nemo Lake

Note: A single baseline water level estimate from July, 2011 imagery is available and water levels may be expected to vary about that point.



12.5.1.1.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

Although FEIS recommendations for monitoring related to surface water quantity were not always specific, and comparisons of measured results to quantitative FEIS predictions was not always feasible, the monitoring programs being implemented at the Whale Tail Mine are able to measure changes in receiving environment water levels in key locations. Monitoring programs are therefore considered effective as designed.

Effectiveness of Mitigation

A summary of the FEIS-planned mitigation measures for surface water quantity along with a commentary on implementation in 2024 is provided in Table 12-21. This summary excludes Environmental Design Features, which are incorporated into construction plans but are not ongoing mitigation measures included in this annual review.

Since water levels are generally within the range of FEIS predictions accounting for design changes, baseline levels, and/or above low-water thresholds for fish, existing mitigation measures are considered effective at this time.

Mitigation measures related to water quality and fish and fish habitat are provided in Sections 12.5.1.2.3 and 12.5.1.3.3, respectively.

Table 12-21 Whale Tail Mine: FEIS-designed mitigation measures to reduce impacts of the project to water quantity during the construction and operations phases, and commentary on current implementation

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018), Section 3, Table 3-C-5)	Implementation (2024)
Mine Infrastructure Footprint (e.g. open pits, site roads, access roads)	Best management practices for erosion and sedimentation control (e.g., ground cover, silt fences and curtains, runoff management), where needed.	Yes – Erosion Management Plan, Freshet Action Plan, Site inspections
Site Water Management: Dewatering of Project Footprint Lakes to Downstream Receiving Lakes	Pumped discharge will be directed to the lake environment, and not directly to outlets, to attenuate flow changes.	Yes – Water Management Plan
	If feasible, pumped discharge to the receiving environment will cease during the winter.	N/A - No lake dewatering occurred
Site Water Management: Watershed Modification by Diversion of Water	Best management practices for erosion and sedimentation control (e.g., silt curtains, runoff management, armouring of banks, sloping of banks), where needed.	Yes – Erosion Management Plan, Freshet Action Plan
	Where practical, natural drainage patterns will be used to reduce the use of ditches or diversion berms.	Yes – Construction design reports
General construction and operation of the Whale Tail Haul Road	Where deemed appropriate, use of staggered culvert configuration, and removal of snow at the culvert inlet and outlet prior to the freshet to promote drainage during spring thaw and freshet.	Yes – Freshet Action Plan
	Inspection prior to spring melt period to identify build-up of snow or ice, and take remedial action.	Yes – Freshet Action Plan, Road inspections
	Regular inspection of the road to identify any areas where ponding of water along the road represents a risk, and installing additional culverts or drains to alleviate the risk.	Yes – Freshet Action Plan, Road Inspection
Open Pits	Mined-out pit flooding will be augmented by active freshwater diversion active flooding will reduce the period required to flood the pits, and the period of time with increased hydraulic gradients between waterbodies.	Yes – Water Management Plan
Existing Meadowbank Infrastructure	See Meadowbank site PEAMP for water quantity	-

Adaptive Management

Since mitigation measures are considered to have been effective, no additional adaptive management measures for water quantity are proposed for 2025 at this time, based on results of the above PEAMP analysis

12.5.1.2 Water Quality

12.5.1.2.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

A summary of predictions for residual impacts to surface water quality (FEIS Addendum, Section 6.2, as summarized in Table 3-C-6) and the accuracy of these predictions in 2019 - 2024 (measured impacts) are provided in Table 12-22. Cells are highlighted in grey when measured impacts exceed predictions for the current year.

To assess potential impacts of the Whale Tail Mine on water quality, site-wide water quality modeling was conducted for the full suite of parameters (nutrients, metals, major ions) for the operations and closure phases as part of the FEIS Addendum (Agnico Eagle, 2018). Water quality predictions were developed for locations within the mine footprint (attenuation ponds [Whale Tail and IVR], flooded Whale Tail Pit,

flooded IVR Pit) and the downstream receiving environment (Kangislulik Lake, Lake A15, Lake A12, Lake A76, Downstream Node 1, and Downstream Node 2) (FEIS Addendum Table 6.2-3 and Figure 6.2-1).

This PEAMP evaluation focuses on a comparison of general water quality predictions for effluent and receiving environment locations with monitoring results from the Water Quality Monitoring Plan for Dike Construction and Dewatering, the Water Quality and Flow Monitoring Plan, and the Core Receiving Environment Monitoring Program. Water quality monitoring results for onsite locations are not specifically included in this review, since any discharge from those locations to the receiving environment is assessed under the above (effluent monitoring).

Given the inherent uncertainties associated with the FEIS Addendum water quality modelling exercise (i.e., the development stage of the Project, laboratory-based input values, assumptions where data did not exist and consideration of an average climate year), the predicted concentrations are considered by the modellers to be order-of-magnitude estimates (FEIS Addendum Section 6.2.3.3.1). This uncertainty is considered in comparisons of annual water quality monitoring data with FEIS predictions.

The 2024 CREMP Report (Appendix 26) provides a comprehensive assessment of water quality monitoring for the receiving environment, with analysis of inter-annual trends, and a comparison to site-specific trigger values and FEIS predictions. For 2020 and onwards, water chemistry data (monthly measured concentrations for each parameter) from Whale Tail South and Kangislulik Lake are compared to water quality predictions in the 2018 Whale Tail FEIS Addendum. These are the only downstream lakes for which both model predictions and monitoring results are available. In previous CREMP/PEAMP assessments (2019), model results were only available for Kangislulik Lake, according to the 2016 FEIS.

Exceedances of FEIS water quality model predictions are noted in Table 12-22, and a full discussion is provided in Section 12.5.1.2.2.

Table 12-22 Whale Tail Mine: Predicted and measured impacts to surface water quality during the construction and operations period

Note: Primary pathways according to Agnico Eagle (2018) Section 3, Table 3-C-6. Measured impacts exceeding or potentially exceeding predictions are shaded grey and further discussed in Section 12.5.1.2.2.

Effects Pathway	Proposed Monitoring	Current Monitoring	Predicted Impact	Measured Impact					
				2019	2020	2021	2022	2023	2024
Project footprint, which will physically alter watershed areas and drainage patterns, rates and quantities of diverted non-contact water to new watersheds, change downstream flows through flooding and dewatering, water levels, channel/bank stability in streams, and disturb lakes and may affect water quality and sediment quality	Dike Construction and Monitoring Plan (FEIS Addendum – Construction Phase only)	Water Quality Monitoring Plan for Dike Construction and Dewatering	Dewatering effluent: <NWB criteria***	Dewatering effluent: Four exceedances for TSS occurred (discussion last provided in 2023 PEAMP)	Dewatering effluent: < NWB criteria	N/A (no lake dewatering)			
Water management activities (dams, drainage, diversion, discharge, and dewatering) that will alter natural drainage paths and create a reservoir may cause a change in mercury cycling and bioaccumulation									
Activities from construction activities and mining operations (e.g., equipment, vehicles, buildings, open-pit mining, blasting) can create fugitive dust emissions and subsequent dust deposition may cause a change in water quality	CREMP	CREMP (inc. Mercury Monitoring Plan)	Receiving environment comparable to FEIS water quality model predictions*	Water quality results to date are consistent with the predicted magnitude of impact (<i>low or medium</i>). See discussion, Section 12.5.1.2.2					

Effects Pathway	Proposed Monitoring	Current Monitoring	Predicted Impact	Measured Impact					
				2019	2020	2021	2022	2023	2024
Activities from construction activities and mining operations (e.g., equipment, vehicles, buildings, open-pit mining, blasting) can alter air and dust emissions (including sulphur dioxide, nitrogen oxides, and particulate matter) and subsequent deposition may cause a change in water quality			Total Mercury** - WTS: 5.21 ng/L KAN: 8.43 ng/L	NM (see 2019 CREMP Report)	WTS: <5.21 ng/L MAM: <8.43 ng/L				
Release of treated mine effluent (including sources from sewage, WRSF pond, and attenuation pond contact) may cause changes to surface water quality and sediment quality (i.e., nutrient and metal concentrations) in Kangislulik Lake in operations and closure.	Water Quality and Flow Monitoring Plan	Water Quality and Flow Monitoring Plan	Effluent <NWB criteria***	Effluent <NWB criteria		Effluent < NWB criteria except one sample and the monthly mean for total arsenic in April (discharge to WTS) – see discussion, Section 12.5.1.2.2		Effluent <NWB criteria	
Dewatering of waterbodies may change flows, water levels, channel/bank stability, and water quality (e.g., suspended sediments, nutrients, metals) in receiving and downstream waterbodies.									
*FEIS Addendum, Appendix 6-H – as described in Section 6.2.3.3.1, these are expected to be accurate within an order of magnitude. **Appendix G of the 2021 CREMP Report. ***FEIS Addendum Section 6.2.3.3.2.1									

12.5.1.2.2 *Parts 3 & 4: Discussion*

Where impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), or require further explanation, a discussion is provided here.

12.5.1.2.2.1 *Core Receiving Environment Monitoring Program Results*

FEIS Prediction: Within the receiving environment, impact predictions in the form of water quality models are available for Kangislulik Lake (2019 onwards), and WTS (2020 onwards). Overall, FEIS analysis predicted the magnitude of potential effect on water quality in each of the lakes would be *low* (<1x CCME Water Quality Guidelines for the Protection of Aquatic Life) for all parameters with CCME guidelines, except for total phosphorus which was *medium* (1 to 10x CCME WQGs).

Discussion: In the 2024 CREMP Report (Appendix 26), monthly mean results for water quality parameters were screened against FEIS Addendum monthly predictions for Kangislulik Lake and WTS. As described in Section 6.4.3.3.1 of the FEIS Addendum, these model predictions are estimated to be accurate within an order of magnitude (10x).

In 2024, specific monthly predictions for the majority of modelled parameters were exceeded in field measurements for at least one of the five months when sampling occurred. However, the 10x range of prediction uncertainty was only (and marginally) exceeded in a single sample (one of two May samples for sulphate in Kangislulik Lake), and in this case the CREMP trigger was not exceeded. Furthermore, of the parameters that exceeded both their respective CREMP trigger values (generally set at the 95th centile of baseline data) and FEIS model predictions in 2024, the absolute concentrations of these parameters remain low (<CCME WQG, where available).

Historically, individual monthly concentrations of nitrate and manganese have also exceeded the 10x range of prediction uncertainty in a small subset of samples for WTS (March and May, 2020 and/or 2021) but CREMP trigger values were not exceeded. Prior to 2024, no measurements have exceeded 10x the FEIS monthly prediction in Kangislulik Lake.

Therefore, overall, following the intent of the FEIS magnitude ratings, results overall would be considered consistent with the predicted magnitudes of impact (“low” or <1x CCME WQG, or otherwise determined adverse effects levels; except for TP which was predicted at 1 - 10x CCME WQG, or a medium magnitude of impact).

12.5.1.2.2.2 *Effluent Monitoring Results*

FEIS Prediction: Effluent concentrations <MDMER criteria

Discussion: Discharge from the Whale Tail/IVR Attenuation Ponds occurred through the Whale Tail South Diffuser periodically throughout 2024. Effluent samples were collected weekly for water chemistry analysis and comparison to NWB Water License limits (station ST-WT-24) and MDMER criteria (station ST-MDMER-11). Complete results are provided in Sections 8.5.2.2 and 8.3.2. All results met NWB Water License and MDMER criteria.

Historically, a single exceedance of these limits occurred for this location (April, 2022, for total arsenic). Since arsenic results declined below NWB/MDMER effluent limits after the single exceedance was

recorded, this was considered to have been an isolated event and no additional measures were required, outside of identified corrective measures at the time of the event.

In addition, discharge through the Kangislulik Lake Diffuser occurred periodically in 2024. All results met NWB Water License and MDMER criteria.

12.5.1.2.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

Based on the results in Table 12-22 and discussed above in Section 12.5.1.2.2, current monitoring programs are able to address all FEIS impacts for which monitoring was recommended (i.e. monitoring is considered effective).

Effectiveness of Mitigation

A summary of the FEIS-planned mitigation measures for surface water quality, along with a commentary on implementation in 2024 is provided in Table 12-23. Since receiving environment water quality to date is within the range of FEIS predictions (specific monthly values or predicted magnitude of effects), and any exceedances of effluent quality limits have been isolated, existing mitigation measures are considered effective at this time.

Mitigation measured related to water quantity, and fish and fish habitat are provided in Sections 12.5.1.1.3 and 12.5.1.3.3, respectively, though some overlap may occur.

Table 12-23 Whale Tail Mine: FEIS-designed mitigation measures to reduce impacts of the project on surface water quality during the construction and operations phases, and commentary on current implementation

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018), Section 3, Table 3-C-6)	Implementation (2024)
Whale Tail Pit Infrastructure Footprint (e.g. open pits, site roads, access roads)	Erosion and sedimentation control (e.g., silt curtains, runoff management, armouring of banks, sloping of banks), where needed.	Yes – Erosion Management Plan, Freshet Action Plan
	Regular road inspections to check for ponding.	Yes – Freshet Action Plan, Road Inspections
	Monitoring during activities and use of adaptive management where necessary.	Yes – Site inspections, Adaptive Management Plan
	Pumped water from the dewatered waterbodies will be directed through properly designed structures to the lake environment, and not to lake outlets, to prevent erosion in the receiving waterbodies and to attenuate flows.	N/A - No dewatering occurred
	During dewatering activities, TSS will be monitored, and if necessary, treated before release downstream.	N/A - No dewatering occurred
Site Water Management (drainage and diversions)	Water that does not meet discharge criteria will be treated prior to discharge into Kangislulik Lake.	Yes – Water Management Plan
	A Water Management Plan has been developed and describes designs to reduce changes to local flows, drainage patterns, and drainage areas (adherence to Water Management Plan).	Yes – Water Management Plan
	Use of turbidity curtains during dike construction to limit disturbance to lakes and waterbodies	N/A - No dike construction occurred
	Monitoring during activities and use of adaptive	Yes – Water Management

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018), Section 3, Table 3-C-6)	Implementation (2024)
	management where necessary.	Plan, Adaptive Management Plan
	Use of the Dewatering Dikes, Operations, Maintenance and Surveillance Manual developed by Agnico Eagle.	Yes – Dewatering Dike OMS
Earthworks: Drilling, blasting and excavation (includes Quarry/Borrow Pit) and Crushing activities for the haul road and Whale Tail Pit development	Where possible, stockpiling of rock and fill from quarries and borrow sites will be placed such that surface water is not diverted through the piles with runoff to surface waterbodies; drainage from quarries will not flow directly into any waterbodies or watercourses.	Yes – Mine Waste Rock Management Plan
	When there is seepage from a quarry that could enter a waterbody, a water quality sample will be collected and analyzed.	Yes – Mine Waste Rock Management Plan, Whale Tail Haul Road Management Plan, Site inspections
	Quarries will be inspected on a regular basis to monitor water ponding, particularly at spring melt.	Yes – Freshet Action Plan, Site inspections
	Best management practices for erosion and sediment control.	Yes – Erosion Management Plan
Site Water Management along the road (seepage and runoff)	Use of non-acid generating material at any watercourse crossings. Testing will verify lack of acid rock drainage and metal leaching potential. Testing will continue on new sources identified for road building.	Yes – Operational ARD-ML sampling and testing plan
	Road contact water will be monitored during construction.	N/A – No construction occurred
Mining and supporting infrastructure for the Whale Tail Mine and haul road	Implement dust control measures, if needed on mine roads.	Yes – Air Quality and Dustfall Monitoring Plan, Whale Tail Haul Road Management Plan
	Equipment and vehicles will comply with relevant non-road emission criteria at the time of purchase	Yes
	Enforcing speed limits (maximum speed 50 km/h) to suppress dust production.	Yes – Whale Tail Haul Road Management Plan, Road logs
	If deemed necessary through monitoring, dust from roads will be managed through use of dust suppressant.	Yes – Air Quality and Dustfall Monitoring Plan, Whale Tail Haul Road Management Plan
	The running surface of the road will be maintained thereby reducing the generation of dust.	Yes – Air Quality and Dustfall Monitoring Plan, Whale Tail Haul Road Management Plan
	Adherence to the Air Quality and Dustfall Monitoring Plan	Yes – Air Quality and Dustfall Monitoring Plan
	Most personnel arriving at or leaving the site will be transported by bus, thereby reducing the amount of traffic (and dust).	Yes
	Construction equipment and trucks will be equipped with industry-standard emission control systems.	Yes
	Exhaust emissions from non-road vehicles will be managed through regular and routine maintenance of vehicles.	Yes - Maintenance logs
	SO ₂ emissions from non-road vehicles and stationary equipment will be reduced through the use of low emission diesel fuel.	Yes

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018), Section 3, Table 3-C-6)	Implementation (2024)
	Adherence to existing air quality monitoring plan to detect changes in air quality	Yes – Air Quality and Dustfall Monitoring Plan
	Adherence to water quality monitoring and adaptive management in the CREMP to detect changes in water quality	Yes - CREMP
Dike Construction	Erosion and sediment control measures will be implemented during dike construction, where appropriate (e.g., installation of silt curtains for turbidity control)	N/A – No dike construction occurred
	The dike will be constructed using non-potentially acid-generating rock or low potential for metal leaching material	N/A – No dike construction occurred
	Adherence to the Water Quality Monitoring and Management Plan for Dike Construction and Dewatering, including installation of turbidity curtains and monitoring.	N/A – No dike construction occurred
Development of Supporting Infrastructure for Whale Tail Mine and the haul road	Best management practices for erosion and sedimentation control (e.g., silt curtains, runoff management, armouring of banks), where needed to limit disturbance to lakes.	Yes – Erosion Management Plan, site inspection
	In-stream works will be constructed in winter, when possible, to avoid increased TSS and turbidity, and changes to water and sediment quality.	N/A – No in-water construction occurred
	Where applicable, construction runoff will be captured and managed to minimize suspended solids.	N/A – No construction occurred near water
	Regular road inspections to check for ponding.	Yes – Freshet Action Plan, Whale Tail Haul Road Management Plan, Road and Site Inspections
Mine Site Operations and Maintenance, including the use of existing infrastructure at Meadowbank Mine and the haul road	Best management practices for erosion and sediment control (e.g., silt curtains, runoff management) will be implemented, as needed to limit disturbance to lakes.	Yes – Freshet Action Plan, Erosion Management Plan, site inspection
	Water Management Plan is approved and adhered to at existing facilities and Water Management Plan specific to the Whale Tail Pit areas has been developed and these plans have considered the containment and management of contact site water	Yes – Water Management Plan
	Runoff and seepage from the Project site will be diverted to sumps and attenuation ponds (and treated if required), prior to release	Yes – Water Management Plan
	Water quality in attenuation ponds will be monitored and managed such that the discharge meets discharge limits	Yes – Water Management Plan
	Any potentially acid generating (PAG) or high metal leaching waste rock will be segregated at source and placed into designated areas within the waste rock storage facility	Yes - Mine Waste Rock Management Plan, Operational ARD-ML sampling and testing plan
	Adherence to the Operational ARD/ML Testing and Sampling Plan and the Mine Waste Rock and Tailings Management Plan	Yes - Operational ARD/ML Testing and Sampling Plan
Construction and operation of roads	Regular road inspections to check for ponding	Yes – Freshet Action Plan, Whale Tail Haul Road Management Plan, Road and Site Inspections
	Removal of snow at the culvert inlet prior to	Yes – Freshet Action Plan,

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018), Section 3, Table 3-C-6)	Implementation (2024)
	freshet.	
Development of Supporting Infrastructure for Whale Tail Pit and the haul road	Regular inspection of the road to identify any areas where ponding of water along the road represents a risk, and installing additional culverts to alleviate the risk.	Yes – Freshet Action Plan
Site Water management: Seepage and Runoff	A Water Management Plan has been developed and describes the containment and management of contact water on-site	Yes – Water Management Plan
	Seepage will be captured at sumps and diverted to the Attenuation Pond.	Yes – Water Management Plan
	Facility discharge water will be monitored for water quality, and treated as required, prior to discharge	Yes – Water Management Plan
	Performance of the dikes will be monitored and appropriate remediation applied, if required	Yes – Water Management Plan
Fuel Storage and use (includes Chemical and Hazardous material Storage and Explosives Storage Area)	The Spill Contingency Plan will be implemented, including ready access to an emergency spill clean-up kit for cleaning up any spills.	Yes – Spill Contingency Plan
	Hazardous materials and fuel will be stored according to regulatory requirements to protect the environment and workers and will be stored at the Meadowbank Mine.	Yes – Hazardous Management Plan
	Storage tanks (e.g., fuel, engine oil, hydraulic oil, and waste oil and coolant) will be double walled, or located in lined and bermed containment areas	Yes – Best practices, site inspection
	Hazardous wastes will be temporarily stored at Whale Tail Pit and then transported to the Meadowbank Mine in appropriate containers to prevent exposure until they are shipped off site to an approved facility.	Yes – Hazardous Management Plan
	Individuals working on site and handling hazardous materials will have appropriate training (e.g. WHMIS)	Yes – Hazardous Management Plan
	Soils from petroleum spill areas will be deposited at the Meadowbank Mine Landfarm	Yes – Landfarm Management Plan
	Equipment will be re-fueled, serviced, or washed away from the watercourse crossings	Yes – Best practices
	Fuel, lubricants, hydraulic fluids, and other chemicals will be stored at least 31 m away from the high water mark of any waterbody.	Yes – Hazardous Materials Management Plan
	Construction equipment will be regularly maintained	Yes – Maintenance logs
	Emergency spill kits will be available wherever toxic materials or fuel are stored and transferred	Yes – Spill Contingency Plan
	Enforced speed limits	Yes – Whale Tail Haul Road Management Plan, road logs
	Adherence to Water Management Plan	Yes
Mining Activities and Water Management	Treated sewage will be piped to the attenuation pond	Completed
	Water quality in attenuation ponds will be monitored and managed such that the discharge entering Kangislulik Lake meets Type A Water License discharge limits. If water quality does not meet discharge limits, it will be circulated and re-treated.	Yes – Water Management Plan
	Other applicable design features and mitigation, as outlined in the Interim Closure and Reclamation Plan	Yes - Interim Closure and Reclamation Plan

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018), Section 3, Table 3-C-6)	Implementation (2024)
Water Management Infrastructure, including existing infrastructure that will be used the Meadowbank Mine site, the haul road, and the Whale Tail Pit	Manage pumping rates so total annual discharge from Whale Tail and Nemo Lake does not drop below the 10-year dry condition	Yes – Water Management Plan
	Water withdrawal rate(s) will be controlled to avoid effects on the source water lake(s).	Yes – Water Management Plan
	Capture and reuse site water to reduce freshwater requirements	Yes – Water Management Plan
	During dewatering activities, TSS will be monitored, and if necessary, treated before release downstream	N/A – No dewatering occurred
	Pumped water from the dewatered waterbodies will be directed through properly designed structures to the lake environment, and not to lake outlets, to prevent erosion in the receiving waterbodies and to attenuate flows.	N/A – No dewatering occurred
	Erosion and sedimentation control (e.g., silt curtains, runoff management, armouring of banks, sloping of banks), where needed	Yes – Construction design reports, Erosion Management Plan, Freshet Action Plan, site inspection
Open Pits	Groundwater inflow to the pits or other dewatered areas will not be directly released to local watersheds	Yes – Groundwater Management Plan
	All pit water will be pumped to the Attenuation Pond for management and treated prior to release	Yes – Water Management Plan
	Mined-out pit flooding will be augmented by freshwater diversion	Yes – Water Management Plan

Adaptive Management

Since no exceedances of FEIS predictions occurred for water quality programs in 2024, no new adaptive management measures are planned at this time based on this PEAMP analysis.

12.5.1.3 Fish and Fish Habitat

12.5.1.3.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

The FEIS documents for the Whale Tail Mine assessed potential direct and indirect impacts to fish and fish habitat as a result of Project activities. Residual impacts were associated with dewatering dike construction, lake dewatering, water diversion (flooding), pit re-flooding, and effluent discharge. A summary of predictions for residual impacts to fish and fish habitat (FEIS Volume 6, Section 6.5, as summarized in Volume 3, Table 3-C-7; FEIS Addendum Section 6.5, as summarized in Table 3-C-7) and the accuracy of these predictions in 2019 - 2024 (measured impacts) is provided in Table 12-24. Results are from a variety of monitoring plans (e.g. CREMP, Water Quality and Flow Monitoring Plan, Fish Habitat Offsets Monitoring Plan/Habitat Compensation Monitoring Plan, etc.) as indicated in the FEIS.

Note: Effects pathways associated with the Northeast Flood Zone are excluded from this table beginning in 2023, since this area was dewatered in 2020 to permit construction of the IVR Pit and previously predicted impacts are no longer applicable. Beginning in 2024, effects associated with zooplankton are also removed, since zooplankton monitoring has been previously discussed and demonstrated not to be statistically feasible due to extreme natural variability

Table 12-24 Whale Tail Mine: Predicted and measured impacts to fish and fish habitat during the construction and operations period

Note: Primary pathways according to Agnico Eagle (2016 and 2018) Tables 3-C-7. Effects Pathways added for the Whale Tail Pit Expansion Project (from Agnico Eagle, 2018) are in italics. Measured impacts exceeding or potentially exceeding predictions are further discussed in Section 12.5.1.3.2.

Effects Pathway	Predicted Impact	Current Monitoring	Measured Impact					
			2019	2020	2021	2022	2023	2024
Construction-related direct loss or alteration of fish habitat.	Areas (ha) specified in FEIS and Fish Habitat Offsetting Plan for Whale Tail Pit (March, 2018)	As-built Reports for Mammoth and Whale Tail Dike	NA – will be part of final net gain calculations reported under the Fish Habitat Offsets Monitoring Plan after construction of offsets.					
	Areas (ha) specified in FEIS Addendum and Fish Habitat Offsetting Plan for Whale Tail Pit Expansion Project (June, 2020)	As-built Reports for IVR Pit, WRSF, Attenuation Pond						
Flood-related habitat alterations (WTS and tributary streams/lakes).	<i>Operations phase:</i> +3.5m to 156 masl, resulting in 131 ha of flooding, access to new habitat and potential increase in population productivity. (Not assumed to provide offsetting habitat until after construction of the permanent sills)	Water level monitoring & surface area calculation Fish Habitat Offsets Monitoring Plan	NA – flooding not complete in 2019 (peak 155.84 masl)	Annual range of approx. 154.55 – 155.75 masl, and approx. 117 ha of flooding at peak. See full discussion, Section 12.5.1.3.2 Since the flood zone is not considered offsetting habitat prior to permanent sill construction, final flood zone habitat area will be calculated at that time.				
Fish-out related mortalities (WT Lake and IRV area lakes)	<i>Whale Tail Lake est. loss:</i> 870 kg or 3,346 fish <i>IVR area waterbodies est. loss:</i> 197.9 kg	2018 Whale Tail Lake Fishout Report 2020 Whale Tail Expansion Project Fishout Report	<i>Whale Tail Lake loss:</i> 776.6 kg or 3,078 fish	<i>IVR area waterbodies loss:</i> 69.8 kg	NA (fishouts complete)			
Habitat fragmentation – fish passage eliminated between Whale Tail and Kangislulik Lake	Isolated population above the barrier, potential minor effect on abundance of VEC fish species (not quantified)	None	NM - While this effects pathway was likely mitigated with construction of the South Whale Tail Channel (which connects the Whale Tail flood zone with Kangislulik Lake and is passable to fish), it is also not considered feasible to specifically evaluate the incremental impacts of this altered habitat connectivity on large-bodied fish populations in this area, amidst the variety of other mine-related physical changes (e.g. flooding) and with limited quantitative baseline data on fish movements between lakes.					
Reduced water levels in Kangislulik Lake and downstream locations during some project phases.	No measurable residual impacts to fish (App. I - 2020 Fish Habitat Offsetting Plan for the Whale Tail Pit Expansion Project)	Water level monitoring	Kangislulik Lake levels have not declined below baseline or below low-water thresholds for fish. See discussion, Section 12.5.1.3.2					
Release of treated mine	Total phosphorus:	CREMP	Below predicted	Some exceedances of specific monthly predictions but average values within or below predicted trophic				

Effects Pathway	Predicted Impact	Current Monitoring	Measured Impact					
			2019	2020	2021	2022	2023	2024
effluent (including sources from sewage, WRSF pond, and attenuation pond contact) may change trophic status in Kangislulik Lake, <i>Whale Tail Lake</i> , and <i>downstream waterbodies</i> in operations and closure.	WTS: Oligotrophic (4 – 10 ug/) through 2022, and mesotrophic (10-20 µg/L) from 2022 – 2028, to a max. of 20 µg/L (2026). KAN: Increase from oligotrophic (<10 ug/L) in 2019 to meso-eutrophic in 2021 (max. of 29 µg/L) and back to mesotrophic from 2022 - 2029.		concentrations.	range.				
	Phytoplankton: Increase in phytoplankton biomass and possibly altered species composition in Kangislulik Lake, Whale Tail Lake, A15, A12, A76 and potentially further downstream to DS1.	CREMP (comparisons to baseline/reference)	Increase in phytoplankton biomass.	Non-significant increases and decreases in phytoplankton biomass. Significant reduction in taxa richness in WTS.	Increase in phytoplankton biomass (significant in A20 only), no change in species composition.	Non-significant increases in phytoplankton biomass, no change in species composition.	Increase in phytoplankton biomass in WTS, KAN, and A20 (significant in WTS and A20 only), no significant change in species composition.	No significant differences in biomass; significant decrease in taxa richness (KAN, A76, (and NEM)).
	Benthic Invertebrates: Possible delayed increase in benthic invertebrate abundance and biomass.	CREMP	No mine-related changes in benthic invertebrate abundance and/or richness.			Statistically significant increases in abundance and/or richness at some near-field lakes.		
		EEM Biological (Kangislulik Lake)	N/A	Significant increase in density below critical effect size (KAN)	N/A	N/A	Significant increase in density at effluent exposure area.	N/A
	Forage Fish: Possible increase in forage fish abundance.	Fish Habitat Offsetting Plan	Research study underway as described in the 2024 Fish Habitat Offsets Monitoring Report (Appendix 37) with final results planned for 2025.					
	Large-bodied Fish: Possible minor increase in growth and reproduction rates for large-bodied fish (not measurable).	EEM Biological (Kangislulik Lake)	N/A	No difference in key effect indicators for lake trout	N/A	N/A	No differences in key effect indicators above critical effect size for lake trout	N/A
		FHOMP (Whale Tail Lake)	N/A	N/A	N/A	N/A	Increased lake trout density, growth rate, and recruitment compared to baseline/reference	N/A

Effects Pathway	Predicted Impact	Current Monitoring	Measured Impact					
			2019	2020	2021	2022	2023	2024
	Since in many cases FEIS predictions for impacts of effluent release were not quantitative, further discussion is provided in Section 12.5.1.3.2, below.							

12.5.1.3.2 Parts 3 & 4: Discussion

Where impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), or for pathways where further details are warranted, a discussion is provided here.

Most quantitative FEIS and FEIS Addendum predictions for impacts to fish and fish habitat were for changes to habitat areas and direct loss of biomass as a result of the dewatering and fish-out of Whale Tail Lake North and the IVR Pit area.

12.5.1.3.2.1 Whale Tail South Flooding

FEIS Prediction: FEIS (2016) predictions indicated that during operations, water levels in Whale Tail South would increase in elevation by 3.5 m (from 152.5 to 156.0 masl) and increase in surface area from 369 ha to 513 ha, resulting in 144 ha of flooding (Volume 6, Section 6.5.3.2). Refined water level modelling in the FEIS Addendum predicted 148.5 ha of flooding at elevation 156.0 masl (FEIS Addendum, Appendix 6-F, Table 6-F-1). The resulting impacts on fish were only assumed to occur at the individual level (access to new habitat). No population-level changes were assumed as a result of this additional aquatic habitat.

Within the Fish Habitat Offsetting Plan for Whale Tail Pit (March, 2018), the calculated expansion of aquatic habitat during operations was 131 ha, which is smaller than FEIS calculations. This is due to differences in assumed baseline water levels (152.5 masl in the FEIS, 153.02 masl in the offsetting plan). Although a potential increase in fish population productivity during the operations phase was noted in this Plan, the flooded terrestrial zone was not assumed to provide fish habitat for offsetting purposes until after drawdown to +1 m above baseline (154.02 masl, from a baseline of 153.02 masl), during the closure phase. This drawdown was planned to occur from 2022 – 2026, and the permanent flooded habitat would occur in Whale Tail Lake only.

No change to these assumptions was presented in the Whale Tail Pit Expansion Project's Fish Habitat Offsetting Plan (ERM, 2020), except the drawdown would not begin until 2026, but would still be completed within the same year. Under this plan, a sill will be constructed between Lake A18 and Whale Tail Lake (South Basin) to maintain some of the flooding in upstream areas. The new permanent water level throughout this area would be 155.3 masl, which is 1.3 m above baseline in A18 (as measured using July 2011 imagery).

Discussion: Measured water levels in the Whale Tail South flood zone to date are shown in Section 12.5.1.1.2.1. To help preserve integrity of the Whale Tail Dike, construction designs for the South Whale Tail Channel were changed prior to construction in early 2020. The inlet invert elevation was decreased and as a result, operational water levels in the Whale Tail South area have been lower than the FEIS prediction of 156.0 masl (generally 154.55 – 155.75 masl during any given year since 2020). These water levels correspond to a terrestrial flood zone range of approximately 50 - 117 ha (FEIS Addendum, Appendix 6-F, Table 6-F-1) which is 14 – 81 ha smaller than the 2018 offsetting plan calculation for the operations period (131 ha). However, as noted above, no offsetting habitat was associated with temporary operations-phase flooding, and the assumptions for permanent habitat creation (post-closure habitat) in both the 2018 and 2020 offsetting plans are still expected to be met once a permanent sill is constructed to maintain water levels at the specified elevation in Lake A18.

12.5.1.3.2.2 Kangislulik Lake and Downstream Water Levels

FEIS Predictions: FEIS and FEIS Addendum predictions indicated that “*during the construction and operation of the Whale Tail, Mammoth, and WRSF dikes, water diversions will result in a reduction of water levels in Kangislulik Lake and downstream locations, affecting fish and fish habitat*” (FEIS Addendum, Section 6.5.4.3). The predicted change in water levels is summarized above in Section 12.5.1.1.2.2 (Kangislulik Lake Water Level). Discharges and water levels were expected to be slightly reduced at Lake A15, and changes were not expected to be measurable at Lake DS1, so the evaluation focused on Kangislulik Lake. Modelled declines in water levels during the construction and closure phases (up to 0.2 m reduction in mean monthly lake level) were predicted to result in a “*moderate effect to population abundance and distribution*” of VC fish species.

However, as part of offset planning for the Whale Tail Pit Expansion Project (Appendix I in ERM, 2020), potential impacts of water level changes in Kangislulik and downstream lakes on fish habitat were assessed in more detail. Predicted water levels were compared to modeled baseline water levels for a low-flow year, as well as modeled baseline median water levels values minus 10%, and finally, the water elevation change associated with a 10% under-ice withdrawal volume (for Kangislulik Lake, median water level minus 0.34 m – low flow threshold for fish, as shown in Section 12.5.1.1.2.2). Based on this comparison, predicted changes (including up to a 20 cm decline in Kangislulik Lake water levels during the closure phase) were expected to have “*a low probability of detectable residual impacts on the downstream aquatic ecosystem*”. Monitoring of water levels in Lake A16 (Kangislulik Lake), and if required, in Lakes A12, A15, and A76 during closure was recommended to confirm predictions.

Under the existing water management strategy and as described in the Project FEIS Addendum – Whale Tail Pit Expansion Project (December, 2018; Section 6.3.3.1.4, Table 6.3-3, copied below), no flow reduction is predicted for Kangislulik Lake and downstream lakes under the current Operational Phase of the Project (2020 – 2026). During this Project phase, there is no significant water storage onsite and no diversion of water out of the Whale Tail watershed. While the inflow location for Whale Tail Lake to Kangislulik Lake has changed from the eastern inlet to the constructed South Whale Tail Channel, all flows still fully report to Kangislulik Lake. The combined effect of all permitted Operational Phase project activities (including effluent discharge to Whale Tail South and Kangislulik Lake) is a minor increase in mean monthly water levels for Kangislulik Lake (up to +5 cm above baseline was predicted) during this Project phase.

Discussion: Although no decline in water levels is predicted for the current operations phase, and monitoring was not specifically recommended until the closure phase, Agnico Eagle has measured water levels in Kangislulik Lake since 2018. Monitoring by GPS survey occurred in 2018 – 2019, at which time piezometers were installed in the Mammoth Dike with 3-h data logging. These measured water levels along with FEIS predictions for the operations period (months of June – September, annually; from data in FEIS Addendum Section 6.3.3.1.4.2 and ERM, 2020-App. I), modeled baseline low flow conditions (ERM, 2020), and the identified low flow threshold for fish (median water level minus 34 cm for June – September; ERM, 2020 – App. I) are shown in Section 12.5.1.1.2.2.

In 2020, 2021, 2023, and 2024, measured water levels were similar to or higher than predicted monthly means, and in 2022, measured water levels were similar to or slightly lower than predicted monthly means. The late-summer drop in water levels recorded at Kangislulik Lake in 2022 was anecdotally

observed in area reference lakes as well and likely represents natural inter-annual variability. To date, water levels have not declined below measured baseline values or impact thresholds for fish.

12.5.1.3.2.3 Lake Ecosystem Productivity

Since residual impacts on fish and fish habitat due to changes in lower trophic levels were predicted, but those predictions were not quantitative, a discussion is provided here.

FEIS-predicted impacts to fish and fish habitat during the operations period were associated with changes in lower trophic levels, and these stem from a predicted increase in nutrient concentrations due to effluent discharge. As a result of effluent inputs, increased phytoplankton biomass and possibly altered species composition was predicted but not quantified for Kangislulik Lake, Whale Tail Lake, A15, A12, A76 and potentially further downstream to DS1. An increase in zooplankton populations was predicted, along with a potentially delayed increase in benthic invertebrate abundance and biomass. Finally, an increase in forage fish abundance was identified, with a possible minor increase in growth and reproduction rates for large-bodied fish (not measurable).

For this effects pathway, impact predictions were primarily planned to be evaluated by tracking total phosphorus measurements under the CREMP. However, Agnico Eagle also monitors changes to phytoplankton communities and benthic invertebrate communities through this program. In addition, forage fish populations are evaluated through an academic research study under the Whale Tail Pit Fish Habitat Offsetting Plan (C. Portt & Associates, 2018), and effluent-related impacts to both forage and large-bodied fish populations are also evaluated through the Environmental Effects Monitoring requirement of MDMER legislation.

Total Phosphorus Concentrations

For Kangislulik Lake, phosphorus concentrations were predicted to increase briefly beyond the CCME mesotrophic range (10 - 20 µg/L) during the operations phase, to a maximum of 29 µg/L (in 2021; Figure 59). Measured concentrations of total phosphorus in Kangislulik Lake are shown in Figure 60, and have remained below predictions to date with the exception of a few individual samples.

For Whale Tail South, concentrations in 2019 – 2022 were predicted to be in the oligotrophic range, or 4 – 10 µg/L, followed by a period in the mesotrophic range during operations (2022 – 2028; 10 – 20 µg/L). Peak concentrations were expected to reach a maximum of 20 µg/L, in 2026 (Figure 59). Predicted and measured values to date are shown in Figure 60. While some measured concentrations of total phosphorus have exceeded monthly FEIS predictions in WTS (particularly in 2020), all were within an order of magnitude (the level of uncertainty assigned to these predictions in the FEIS), and average concentrations have been within predicted trophic levels to date.

Figure 59 Predicted concentrations of phosphorus for various receiving environment locations

Note: From FEIS Addendum for Whale Tail Pit Expansion Project (Agnico Eagle, 2018) – Appendix 6-H, Section 4.1.3.

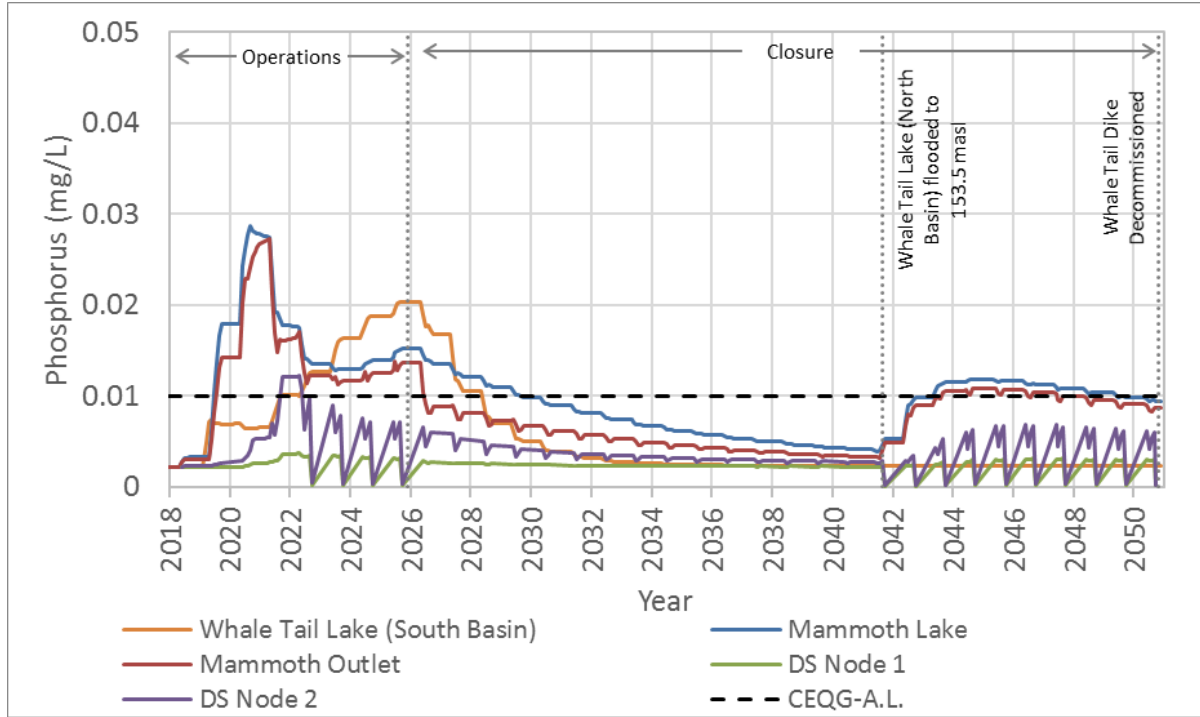
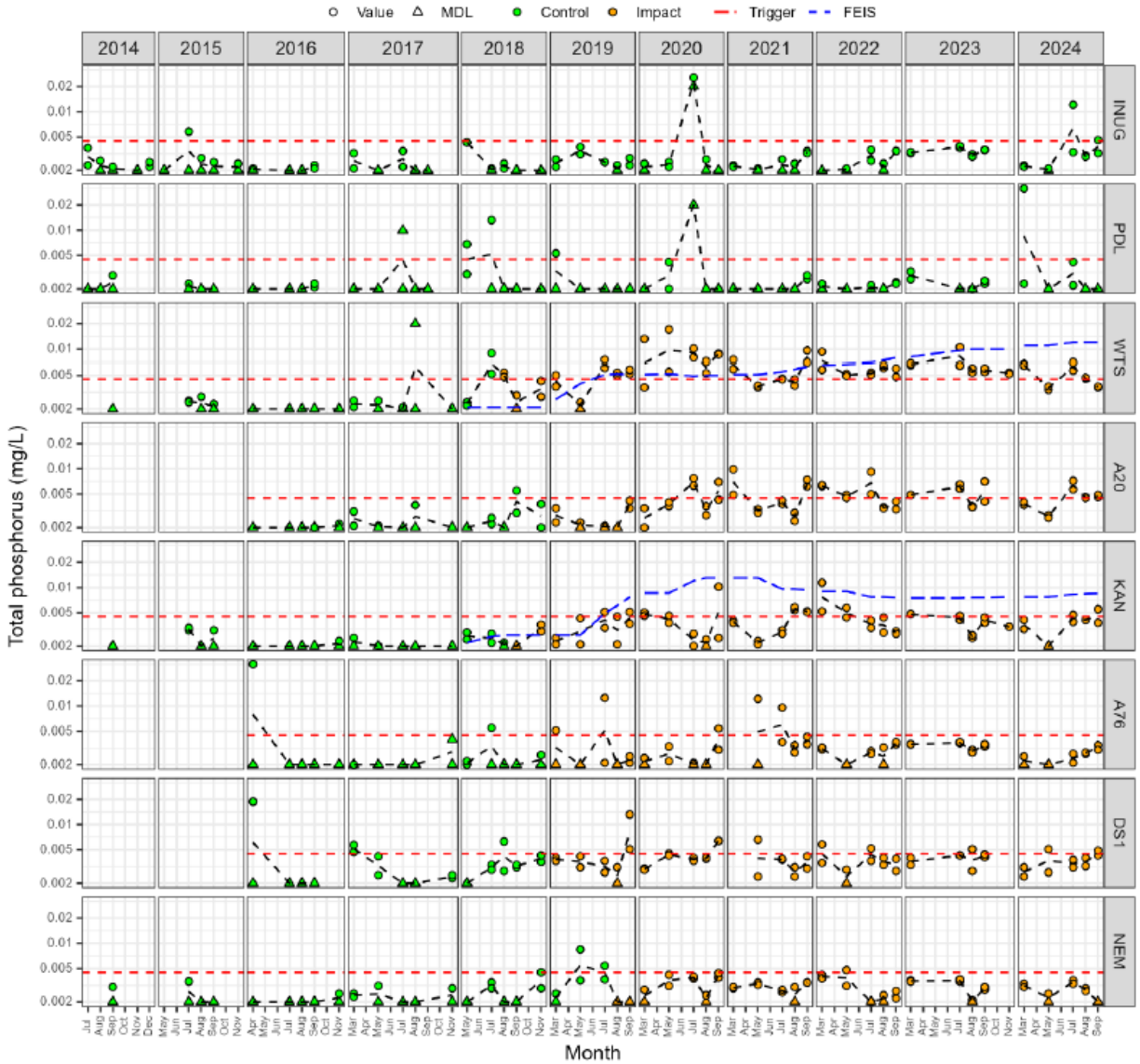


Figure 60 Total phosphorus in water samples from Whale Tail study area lakes since 2014

Note: From 2024 CREMP Report, Appendix 26.



Phytoplankton

Overall, the increases in phytoplankton biomass that have been observed in WTS, A20, and Kangislulik Lake since the onset of mining activities are consistent with predictions made in the FEIS regarding increasing nutrient concentrations in these lakes. Increases in biomass (compared to baseline/reference) have generally been observed in near-field lakes since 2019, but have only been statistically significant and/or above the CREMP's 20% effect size threshold in a few lake/year combinations. In 2024, biomass was not different from baseline/reference, and the observed trend appears to have stabilized and

corrected. Potential impacts on species composition were qualitatively predicted in the FEIS, and to date, this metric (significantly reduced taxa richness) has only been affected in WTS in 2020, and in WTS, KAN and A76 (and NEM, which does not receive effluent) in 2024. These apparent changes in 2024 appear to be driven in part by the stable trends at reference area, but may also in part be related to observed changes in water quality, and will continue to be monitored.

Figure 61 Total phytoplankton biomass (mg/m³) from the Whale Tail Mine CREMP study lakes since 2014

Note: Figure from the 2024 CREMP Report, Appendix 26.

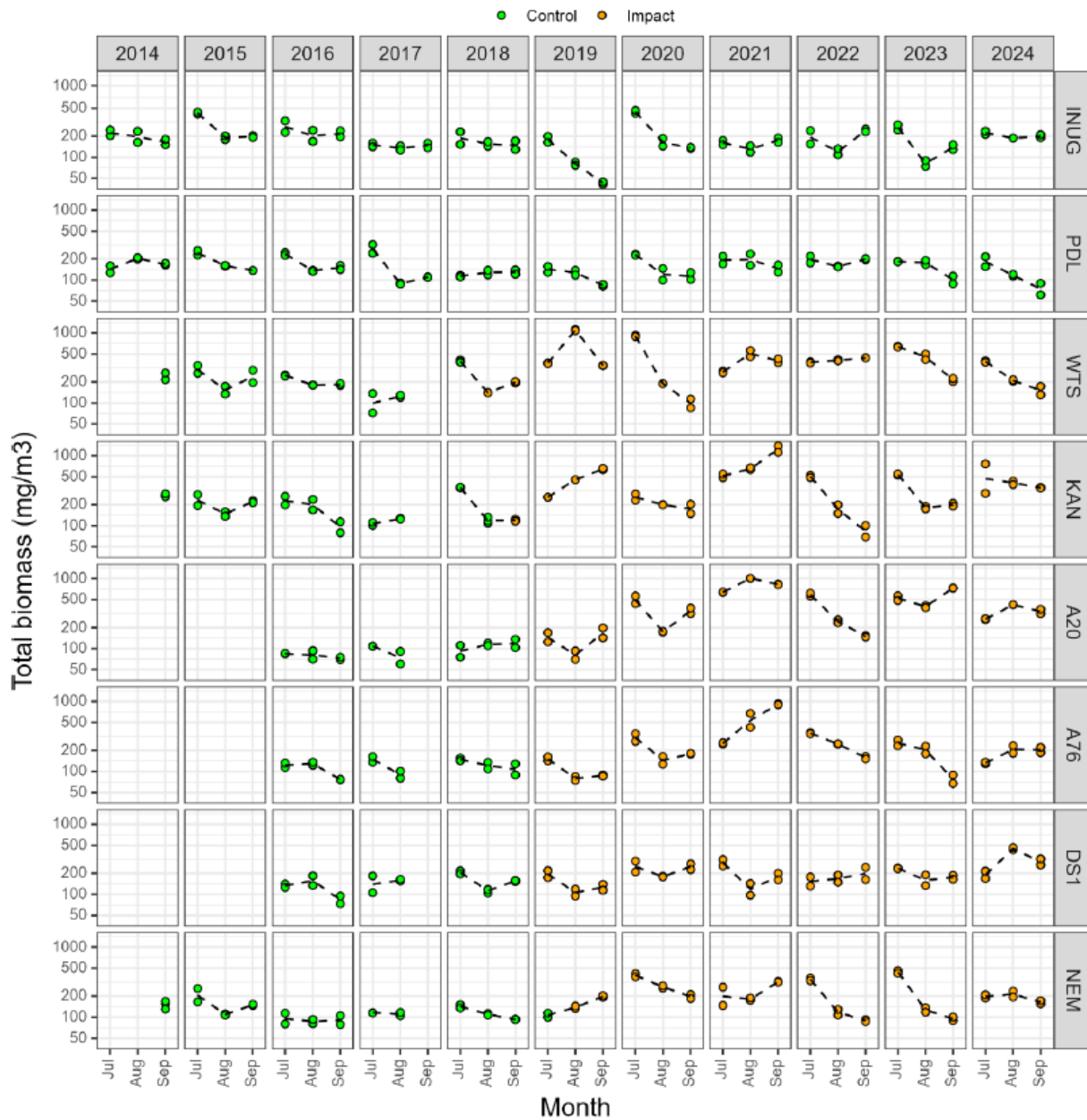


Figure 62 Relative phytoplankton density by major taxa group from Whale Tail study area lakes since 2014

Note: Figure from the 2024 CREMP Report, Appendix 26.



Benthic Invertebrates

While not quantified, the Whale Tail FEIS (Agnico Eagle, 2018) predicted a possible delayed increase in benthic invertebrate abundance and biomass in relation to water quality changes from effluent release.

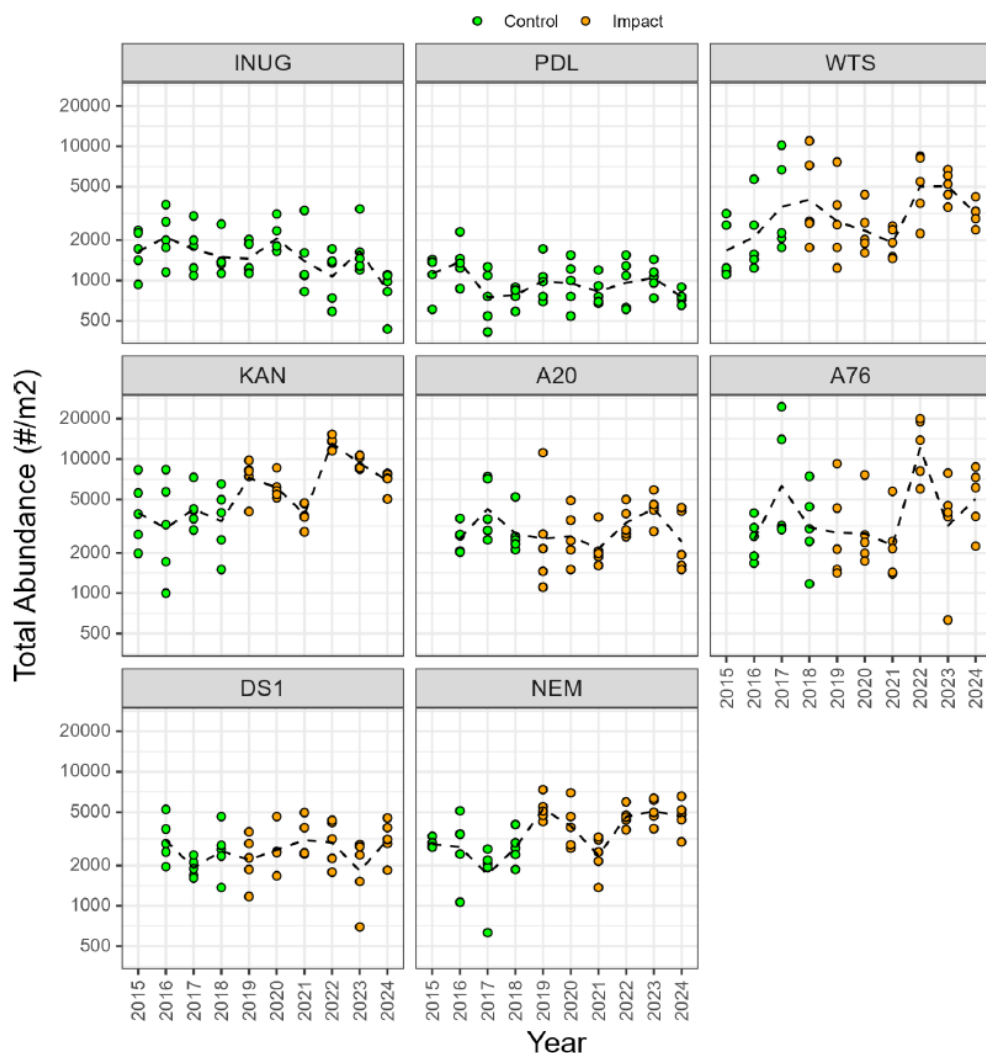
For benthos abundance and richness, the CREMP BACI statistical analysis tests for changes relative to baseline/reference conditions for four time periods: the current year, last two years, last three years, and last four years. For all time periods, there were statistically significant increases in abundance at WTS and KAN. There have also been statistically significant increases in taxa richness at KAN and NEM for the four-year time period. However, in general total abundance and richness in these lakes remained within historical ranges, while both metrics declined in both reference lakes, resulting in the “apparent” increases at WTS, KAN, and NEM.

The apparent changes compared to reference lakes could indicate the influence of mining activity, however, there are number of environmental factors that could also result in these patterns, and currently, CREMP reporting indicates there is more evidence for natural variability rather than mine influence. This determination was made primarily based on trends in nutrient and sediment chemistry (no change in sediment TOC, an important nutrient pathway for the benthic community). Analyses will continue in subsequent years to help understand causation (whether trends continue).

It is noted that in the 2023 EEM biological monitoring field program, density of benthic invertebrate communities in the effluent exposure area in Kangislulik Lake was also observed to be significantly greater than reference lakes. An investigation of cause is proposed in the next EEM study to determine the likelihood of this observation being effluent-related.

Figure 63 Benthic invertebrate total abundance (#/m²) from Whale Tail study area lakes since 2015

Note: From the 2024 CREMP Report (Appendix 26).



Forage Fish

Potential increases in forage fish abundance were also predicted to occur as a result of trophic changes associated with effluent discharge. Populations of slimy sculpin and ninespine stickleback in the Whale Tail area lakes were monitored through a research study agreement with the University of Waterloo (Section 8.9), primarily from 2018 – 2021. Data collection for some endpoints (CPUE, length, weight) was continued in 2022 and 2023 by Agnico Eagle. Final results of this University of Waterloo study are now expected in 2025, but preliminary conclusions suggest the presence of small-bodied fish in flood-zone lakes at rates no lower than reference.

Small-bodied fish (slimy sculpin) are also included in Environmental Effects Monitoring studies (2020, 2023; described below for large-bodied fish), but evaluation of abundance is not specified in that program.

Large-Bodied Fish

A possible minor increase in growth and reproduction rates for large-bodied fish as a result of trophic changes was noted as a FEIS prediction, though this change was not expected to be measurable. These metrics were not specifically planned to be monitored, but Agnico Eagle is required under the Metal Mining Effluent Regulations (MDMER) to monitor effects of effluent on various fish health endpoints. According to these regulations, Environmental Effects Monitoring studies are designed in consultation with Environment and Climate Change Canada on a 3-year cycle. To date, results for large-bodied fish are available for the studies conducted in 2020 and 2023, which examined differences in pre-established indicators for lake trout populations between the effluent exposure area (Kangislulik Lake) and two reference lakes. In both years, no significant differences above critical effect sizes were observed for comparisons to one or both reference lakes (e.g. total weight at length, total weight at age, liver weight per body weight, liver weight at age).

In addition, Agnico Eagle conducted field programs to monitor lake trout populations in flood zone lakes (WTS, A20) in 2023 as a component of the Fish Habitat Offsets Monitoring Plan. Results (including analyses related to growth and reproductive status) were provided to DFO in spring, 2024. The results of this study indicate that Lake Trout density and growth rate were both higher post-flooding than during the baseline period and that recruitment has increased. An increase in nutrients, along with increases in TDS and constituent ions were suggested to be the main drivers of the observed changes.

Summary

Overall, nutrient concentrations have increased (as predicted) at near-field lakes where effluent is released (Kangislulik Lake, Whale Tail South). Terrestrial contributions post-flood are also considered likely inputs to observed changes in nutrients in recent years for both lakes, since they are connected via the South Whale Tail Channel. Changes are within the range of or less than (2024) FEIS predictions.

FEIS predictions for subsequent changes to lower trophic levels, primary producers, and fish were not quantitative but were predicted as possible effects of nutrient inputs. Phytoplankton monitoring through the CREMP suggests enrichment (increase in biomass) occurred for several years, but has now corrected. Some evidence for declines in phytoplankton taxa richness was observed in 2024 only, but this apparent difference from baseline/reference is considered to be in part due to natural variability. While increases in benthic invertebrate abundance and taxa richness have also been observed (as predicted), these changes are still considered unlikely to be mine-related. However, an investigation of cause is proposed as part of the regular EEM program. Analyses of data for small-bodied fish populations continue, but current results suggest they are present in Whale Tail and Kangislulik Lakes at rates no lower than reference. A potential increase in abundance was identified in the FEIS for this metric. EEM indicators for large-bodied fish evaluated in 2020 and 2023 (relationships in length, weight, age, gonad weight, liver weight) did not differ above critical effect sizes between Kangislulik Lake and one or both reference lakes. However, both density and growth rates were higher in Whale Tail flood zone lakes compared to baseline/reference (data collected intermittently between 2015 – 2023).

12.5.1.3.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management**Effectiveness of Monitoring**

Based on the results in Table 12-24, existing monitoring is able to effectively address all FEIS predictions for changes to fish and fish habitat, with the exception of predicted potential increases in zooplankton (discussed in the 2019 PEAMP) and impacts of altered habitat connectivity between Whale Tail and Kangislulik Lakes (discussed in Table 12-24).

Effectiveness of Mitigation

A summary of the FEIS-planned mitigation measures related to fish and fish habitat, along with a commentary on implementation in 2024 is provided in Table 12-25. Mitigation measures specifically related to water quantity and water quality are provided in Sections 12.5.1.1.2 and 12.5.1.2.2, respectively, though some overlap may occur.

Table 12-25 Whale Tail Mine: FEIS-designed mitigation measures to reduce impacts of the project to fish and fish habitat, and commentary on current implementation

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018), Table 3-C-7)	Implementation (2024)
Mine infrastructure footprint	Best management practices for erosion and sedimentation control (e.g., ground cover, silt fences and curtains, runoff management), where needed.	Yes – Erosion Management Plan, Freshet Action Plan
Site water management (road infrastructure) and Whale Tail Haul Road operation	Where possible, in-stream works will be constructed in winter when watercourses are frozen. In-stream works will be conducted according to DFO timing windows to avoid critical periods for fish.	N/A – No construction in fish-bearing watercourses occurred
	Mining staff will not be allowed to hunt or fish while on their work rotation; Agnico Eagle will develop and enforce “no hunting, trapping, harvesting or fishing policy” for employees and contractors, which will be consistent with the Meadowbank Mine.	Yes
	Watercourses will be inspected upstream and downstream of the crossings for, erosion, scour, and flow blockages	Yes – Road Inspection, Erosion Management Plan, Freshet Action Plan
	Regular inspection of the road to identify any areas where ponding of water along the road represents a risk, and installing additional culverts or drains to alleviate risk, where required.	Yes – Road Inspection, Erosion Management Plan, Freshet Action Plan
	Rock aprons at culvert inlets and outlets will provide erosion protection and prevent localized erosion from concentrated high velocity flows above the peak 1:10 year rainfall event.	Yes – Design Reports
	Use of staggered culvert configuration, and removal of snow at the culvert inlet and outlet prior to the freshet to promote drainage and increased conveyance of flow during spring thaw and freshet.	Yes – Road Inspection, Freshet Action Plan
Earthworks: Drilling, blasting and excavation (includes Quarry/Borrow Pit) and Crushing activities	Only the required amount of explosive will be used as necessary for the amount of rock or borrow material to be blasted	Yes – Blast Monitoring Program
	Applicable guidelines for set-back distances and quantities of explosives will be followed.	Yes – Blast Monitoring Program
	Where possible, stockpiling of rock and fill from quarries and borrow sites will be placed such that surface water is not diverted through the piles with runoff to surface waterbodies; drainage from quarries will not flow directly into any waterbodies or watercourses.	Yes - Mine Waste Rock Management Plan
	Borrow and rock quarry activity will be at least 31 m from the high water mark of any waterbody	Yes - Mine Waste Rock Management Plan
	Borrow pits and quarry will be excavated and sloped for positive drainage	Yes - Mine Waste Rock Management Plan
	Quarries will be inspected on a regular basis to monitor water ponding, particularly at spring melt.	Yes - Mine Waste Rock Management Plan
	Drainage from borrow pits and quarry will not flow directly into any waterbodies or watercourses.	Yes - Mine Waste Rock Management Plan
	When there is ponded water in the rock quarry or borrow pits that could enter a waterbody or watercourse, a water quality sample will be collected and analyzed, and the results used to determine appropriate mitigation measures (e.g., prevent runoff from entering waterbody or watercourse).	Yes - Mine Waste Rock Management Plan
	To avoid and mitigate Serious Harm to Fish, Agnico Eagle will continue to adhere to blasting requirements and will continue to use practices consistent with those used at the Meadowbank Mine. Agnico Eagle will engage with DFO, when required.	Yes – Blast Monitoring Program
	Use of non-acid generating material at watercourse crossings; testing will verify lack of acid rock drainage and metal leaching potential.	Yes - Mine Waste Rock Management Plan
General Construction /Decommissioning Activities	Any PAG or high metal leaching waste rock will be segregated at source and placed into designated areas within the waste rock storage facilities.	Yes - Mine Waste Rock Management Plan
	Best management practices for erosion and sedimentation control (e.g., silt curtains, runoff management, armouring of banks), where needed to limit disturbance to lakes and streams.	Yes – Construction Design Reports, Erosion Management Plan, Freshet Action Plan, Site Inspections
	In-stream works will be in winter, when possible, to avoid increased TSS and turbidity, and changes to water quality	N/A – No in-water construction occurred
	Where applicable, runoff from construction / decommissioning activities will be captured and managed to minimize suspended solids (e.g., discharged into an attenuation pond to settle out suspended sediments)	Yes – Construction Design Reports, Erosion Management Plan, Freshet Action Plan, Site Inspections
	Where possible, in-stream works will be constructed in winter when watercourses are frozen. In-stream works will be conducted according to DFO timing windows to avoid critical periods for fish.	N/A – No in-water construction occurred
	Bridge abutment installation will span majority of the active channel (i.e., outside of the high-water mark), and if feasible, construction will occur in winter	N/A – No bridge installation occurred
Site Water Management	Disturbed areas along the streambanks will be stabilized and allowed to revegetate upon completion of work	Yes – Streambanks allowed to revegetate
	A Surface Water Management Plan will be implemented	Yes – Water Management Plan
Dike Construction / Decommissioning causing release of sediment	Use of the Dewatering Dikes, Operations, Maintenance and Surveillance Manual developed by Agnico Eagle.	N/A – No dike construction occurred
	Best management practices for erosion and sedimentation control (e.g., ground cover, silt fences and curtains, runoff management), where needed.	N/A – No dike construction occurred
	During summer construction, turbidity curtains will be installed near the portion of the alignment where dike construction will occur, which is an approach demonstrated at other northern mining projects	N/A – No dike construction occurred
	Non- potentially acid generating, chemically inert material (i.e., granite) will be used to construct the dike to prevent leaching of metals into water.	N/A – No dike construction occurred
	Turbidity monitoring will be conducted at designated locations throughout open water and under-ice conditions, within and outside of the zone of the turbidity curtains. In the event that TSS concentrations approach monitoring thresholds, a review of local conditions and activities will be conducted.	N/A – No dike construction occurred
General mining activities and use of vehicles causing fugitive dust & other air emissions	Implement dust control measures, if needed on mine roads.	Yes – Air Quality and Dustfall Monitoring Plan, Whale Tail Haul Road Management Plan
	Equipment and vehicles will comply with relevant non-road emission criteria at the time of purchase	Yes
	Enforcing speed limits (maximum speed 50 km/h) to suppress dust production.	Yes – Whale Tail Haul Road Management Plan, Road logs
	If deemed necessary through monitoring, dust from roads will be managed through use of dust suppressant	Yes – Air Quality and Dustfall Monitoring Plan, Whale Tail Haul Road Management Plan
	The running surface of the road will be maintained thereby reducing the generation of dust.	Yes – Air Quality and Dustfall Monitoring Plan, Whale Tail Haul Road Management Plan
	Adherence to the Air Quality and Dustfall Monitoring Plan	Yes – Air Quality and Dustfall Monitoring Plan
	Most personnel arriving at or leaving the site will be transported by bus, thereby reducing the amount of traffic (and dust).	Yes
	Adherence to water quality monitoring and adaptive management in the CREMP to detect changes in water quality	Yes - CREMP
	Construction equipment and trucks will be equipped with industry-standard emission control systems.	Yes

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018), Table 3-C-7)	Implementation (2024)
	Compliance with regulatory emission requirements will be met.	Yes
	Exhaust emissions from non-road vehicles will be managed through regular and routine maintenance of vehicles	Yes – Maintenance logs
	SO ₂ emissions from non-road vehicles and stationary equipment will be reduced through the use of low emission diesel fuel.	Yes
Waste Rock Storage Areas and Stockpiles	A Water Management Plan has been developed and describes the containment and management of contact water on-site.	Yes – Water Management Plan
	Contact water will be monitored and managed through the Storage and Attenuation Ponds. The IVR Diversion will divert clean runoff from the upper watershed of the IVR Pit to the Nemo Lake watershed.	Yes – Water Management Plan
	Seepage will be captured at sumps and diverted to the Attenuation Pond.	Yes – Water Management Plan
	Facility discharge water will be monitored for water quality, and treated as required, prior to discharge	Yes – Water Management Plan
	Performance of the dikes will be monitored throughout their construction and operating life.	Yes – Water Management Plan
Site Water Management	Manage pumping rates so total annual discharge from Whale Tail and Nemo Lake does not drop below the 10-year dry condition	Yes – Water Management Plan
	Water withdrawal rate(s) will be controlled to avoid effects on the source water lake(s).	Yes – Water Management Plan
	Capture and reuse site water to reduce freshwater requirements	Yes – Water Management Plan
	Pumped water from the dewatered lakes will be directed through properly designed structures to prevent erosion in the receiving waterbodies	Yes – Water Management Plan
	Pumped discharge will be directed to the lake environment, and not directly to outlets, to attenuate flow changes	Yes – Water Management Plan
	Best management practices for erosion and sedimentation control (e.g., silt curtains, runoff management, armouring of banks, sloping of banks), where needed	Yes – Water Management Plan
	Water Management Plan will be implemented	Yes – Water Management Plan
	A fish-out of the diked area of Whale Tail and Kangislulik lakes, and smaller waterbodies in the northeast area for the Expansion Project, will be conducted before and during dewatering phase; the fish-out plan will be designed and implemented in consultation with DFO and local Inuit communities, and will consider recommendations in Tyson et al. (2011).	N/A - Fishout complete
	Appropriately sized fish screens, which meet DFO guidelines, will be fitted to pumps to limit fish access and to limit fish entrained to the smaller species and life stages	Yes – Water Management Plan
	Runoff and seepage from the Project site will be diverted to sumps and the attenuation pond (and treated if required) prior to release.	Yes – Water Management Plan
	Water quality in attenuation ponds will be monitored and managed such that the discharge meets discharge limits.	Yes – Water Management Plan
Fuel Storage and use (includes Chemical and Hazardous material Storage and Explosives Storage Area)	Potential acid generating rock and metal leaching waste rock will be segregated at source and placed into designated areas within waste rock locations	Yes - Mine Waste Rock Management Plan
	The Spill Contingency Plan will be implemented, including ready access to an emergency spill clean-up kit for cleaning up any spills	Yes - Spill Contingency Plan
	Hazardous materials and fuel will be stored according to regulatory requirements to protect the environment and workers and will be stored at the Meadowbank Mine.	Yes – Hazardous Management Plan
	Storage tanks (e.g., fuel, engine oil, hydraulic oil, and waste oil and coolant) will be double walled, or located in lined and bermed containment areas	Yes – Hazardous Management Plan
	Hazardous wastes will be temporarily stored at Whale Tail Pit site and then transported to the Meadowbank Mine in appropriate containers to prevent exposure until they are shipped off site to an approved facility	Yes – Hazardous Management Plan
	Individuals working on site and handling hazardous materials will have appropriate training (e.g. WHMIS)	Yes – Hazardous Management Plan
	Soils from petroleum spill areas will be deposited at the Meadowbank Mine Landfarm	Yes – Landfarm Management Plan
	Equipment will be re-fueled, serviced, or washed away from the watercourse crossings.	Yes – Best practices
	Fuel, lubricants, hydraulic fluids, and other chemicals will be stored at least 31 m away from the high water mark of any waterbody.	Yes – Hazardous Materials Management Plan
	Construction equipment will be regularly maintained	Yes – Maintenance Logs
	Emergency spill kits will be available wherever toxic materials or fuel are stored and transferred	Yes – Spill Contingency Plan
	Enforced speed limits	Yes – Whale Tail Haul Road Management Plan, road logs
Mining Activities and Water Management – effluent release	Adherence to Water Management Plan	Yes – Water Management Plan
	Runoff and seepage from the Project site will be diverted to sumps and the attenuation pond	Yes – Water Management Plan
	Treated sewage will be piped to the attenuation pond	Completed
	Water quality in Attenuation Ponds will be monitored and managed such that the discharge entering Kangislulik Lake, Whale Tail Lake, or the alternative discharge locations (Lake 1 or Lake 5) meets discharge limits. If water quality does not meet discharge limits, it will be circulated and re-treated.	Yes – Water Management Plan

Adaptive Management

Since existing mitigation measures are considered effective at this time, no adaptive management actions are planned as a result of this 2024 PEAMP evaluation.

12.5.2 Vegetation, Terrestrial Wildlife, and Birds

12.5.2.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

The 2024 Wildlife Monitoring Summary Report (Appendix 39) provides a complete assessment of wildlife monitoring programs including a comparison to monitoring thresholds detailed in the Terrestrial Ecosystem Management Plan and impacts predicted in the *FEIS for the Whale Tail Pit Project* (Agnico Eagle, 2016) and *FEIS Addendum for the Whale Tail Pit Expansion Project* (Agnico Eagle, 2018). Results are summarized here in the PEAMP format.

For each wildlife VC, a summary of residual predicted impacts and the accuracy of those predictions (observed impacts) as determined through various monitoring programs conducted under the TEMP is provided in Table 12-26. Thresholds for the implementation of adaptive management, as developed in the TEMP were used in this comparison because most impact predictions in the Terrestrial Ecosystem Impact Assessment of the FEIS (Agnico Eagle, 2016) and FEIS Addendum (Agnico Eagle, 2018) were qualitative only. The TEMP thresholds were developed in consultation with the TAG, and represent quantitative measurement endpoints that trigger management action.

Table 12-26 below presents residual impacts that relate to the Whale Tail Mine alone. Results for all additional TEMP monitoring endpoints have thresholds that were developed for the Meadowbank Complex as a whole, and these results are described in the Meadowbank Mine PEAMP evaluation, Section 12.4.2.

Note: The following primary pathways do not have monitoring thresholds in the TEMP or quantitative impact predictions, and were removed from Table 12-26 in 2024. Monitoring and mitigation measures associated with these potential impacts continue to be implemented according to the TEMP (e.g. caribou management decision tree, remote camera program, PRISM/BBS program), and results of those programs are described in the Wildlife Monitoring Summary Report (Appendix 39).

- *Wildlife Habitat: Loss or alteration of local flows, drainage patterns (distribution), and drainage areas from the Project footprint and haul road that can cause changes to vegetation;*
- *Ungulates: Sensory disturbance from vehicles, on-site equipment, human presence and vibrations, can change the amount of different quality habitats, and alter wildlife movement and behaviour;*
- *Ungulates: Barriers to migration, which may affect population connectivity and distribution; and*
- *Upland breeding birds: Sensory disturbance from vehicles, on-site equipment, human presence and vibrations, can change the amount of different quality habitats, and alter wildlife movement and behaviour.*

Table 12-26 Whale Tail Mine: Predicted residual impacts to terrestrial environment and wildlife VCs during the construction and operations period

*Note: Primary effect pathways according to Agnico Eagle (2016) Volume 5, and updated to reflect Agnico Eagle (2018), Section 5.4 and 5.5 as indicated; thresholds/predictions and measured impacts according to the annual Wildlife Monitoring Summary Report (Appendix 39). NM = not required to be measured in the identified year. NA = no threshold. *Changes to methods for habitat footprint losses occurred in 2024 – see complete description in Appendix 39.*

Effect Pathway	Proposed Monitoring	Current Monitoring	Threshold/ Prediction	Measured Impact					
				2019	2020	2021	2022	2023	2024
VEGETATION (WILDLIFE HABITAT)									
Direct loss and fragmentation of vegetation habitat from the Project footprint	TEMP	TEMP - Ground Surveys, Mapping, GIS Analysis	*Permitted area + threshold over prediction (Whale Tail site and haul road): 1505 ha + 5% (2021 calculation) OR 1584 ha +5% (2024 calculation)*	NM		775 ha	NM	NM	844 ha
Dust deposition on vegetation from haul roads and mining activities (air emissions, dust deposition, or chemical contamination on terrain, soils, and vegetation can potentially change the quality and/or chemical properties of soil and effecting vegetation)	TEMP	TEMP (Screening Level Risk Assessment)	<i>Prediction (Proponent Response to IRs for the Whale Tail Pit Expansion Project FEIS Addendum, “Human Health and Ecological Risk Assessment – Whale Tail Pit Expansion Project” – Golder, May 2019):</i> All soil concentrations <CCME guidelines or max. baseline + 10%. All water concentrations <screening values.	NM	NM (2020 assessment postponed to 2021)	All soil concentrations <CCME guidelines or max. baseline + 10%, or exceedances not mine-related. All water concentrations <screening values.	NM	NM	All soil concentrations <CCME guidelines or max. baseline, or exceedances not mine-related. All water concentrations <screening values.
UNGULATES									
Direct loss and fragmentation of wildlife habitat from the Project footprint	Ground Surveys, Mapping, GIS Analysis	Ground Surveys, Mapping, GIS Analysis	High Suitability Habitat Permitted Area + threshold over prediction: Growing – 56 ha + 10% (2021 calculation) OR 58 ha +10% (2024 calculation)* Winter – 1057 ha + 10% (2021 calculation) OR 1116 ha + 10% (2024 calculation)*	NM		Growing – 21 ha Winter – 561 ha	NM	NM	Growing – 22 ha Winter – 614 ha
PREDATORY MAMMALS									
NONE (See Table 12-9)	-	-	-	-	-	-	-	-	-
SMALL MAMMALS									
NONE (See Table 12-9)	-	-	-	-	-	-	-	-	-
RAPTORS									
NONE (See Table 12-9)	-	-	-	-	-	-	-	-	-
WATERBIRDS									
Destruction of nests and flooding from construction activities including increased flows or water levels can increase risk of mortality to individual birds, which can affect population sizes	None	Trent University/ECCC migratory bird deterrent studies (2018 – 2020); Migratory Bird Protection Report (Appendix 47)	<i>Prediction (FEIS Section 5, Table 5.5-11):</i> Total 89 nests displaced (waterbirds and upland birds)	Prelim est. 32 – 62 nests displaced		Final estimate: 31 – 50 nests lost through flooding	-	-	-
UPLAND BREEDING BIRDS									
Destruction of nests and flooding from construction activities including increased flows or water levels can increase risk of mortality to individual birds, which can affect population sizes	None	Trent University/ECCC migratory bird deterrent studies (2018 – 2020); Migratory Bird Protection Report (Appendix 47)	See Waterbirds section, above.	See Waterbirds section, above.					

12.5.2.2 Parts 3 & 4: Discussion

Where impacts are exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion is provided here. To date, no thresholds have been exceeded.

12.5.2.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

Based on the results in Table 12-26, current TEMP monitoring programs are able to address all FEIS impacts for which TEMP monitoring was recommended (i.e. monitoring is considered effective).

Effectiveness of Mitigation

See Section 12.4.2.3 for discussion of the mitigation audit, completed as a component of the TEMP.

In the context of the PEAMP evaluation, mitigation is considered effective if impact predictions (or in this case, TEMP thresholds) are not being exceeded. Therefore, since no TEMP thresholds were exceeded (Table 12-26) in 2024, mitigation for these impacts is considered effective.

Adaptive Management

Management recommendations are summarized in the PEAMP for the Meadowbank Mine, above (Section 12.4.2.3).

12.5.3 Noise

12.5.3.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

In the initial FEIS (Agnico Eagle, 2016), noise impacts were modeled and assessed for three primary pathways: construction of the Whale Tail Haul Road, operation of the Whale Tail Haul Road, and operation of the Whale Tail Pit. In the FEIS Addendum for the Whale Tail Pit Expansion Project (Agnico Eagle, 2018), no new primary pathways were identified but updated noise modeling for the Project incorporated new activities (haul road widening, surface and underground mine operations) and modeling approaches (modeling for the full length of the haul road during operation). Modeling reflected mining activities during the year 2022, which was planned to be the year of highest production for the Project, and anticipated highest sound emissions.

In the FEIS noise assessment, modeled Project sound levels at the local study area (LSA) boundary were compared with Permissible Sound Levels (PSLs) from AER Directive 038 (40 dBA night-time, 50 dBA daytime) to provide a reference for Project impacts. However, residual impacts were not specified or classified as significant or non-significant because noise does not have an assessment endpoint. Any potential effects associated with the primary pathways are captured in the assessment of potential effects to other VCs (e.g. wildlife and the aquatic environment).

As described in the Noise Monitoring and Abatement Plan, noise monitoring stations have been established around the mine site and along the Whale Tail Haul Road to evaluate ambient noise levels on an annual basis. For the purposes of this PEAMP, measured sound levels in those locations are

compared to model predictions from the FEIS Addendum (Agnico Eagle, 2018). In accordance with noise mitigation measures listed in the FEIS Addendum (Volume 3, Appendix 3-C, Table 3-C-1 and see below Table 12-27), periodic far-field monitoring is also conducted to confirm adherence with the PSL.

Table 12-27, below, compares FEIS predictions for area sound levels with the results of noise monitoring conducted under the current Noise Monitoring and Abatement Plan. For all monitoring stations, FEIS predictions were derived from the maximum sound emissions scenario: summertime, haul road widening plus surface and underground operations (Agnico Eagle, 2018 - Volume 4, Figure 4.4-3). Measured background sound levels (Agnico Eagle, 2016 - Volume 4, Appendix 4-D) were added to all predictions.

It is noted that while noise modeling for FEIS purposes determines a single sound pressure level produced by a specified combination of Project-related activities at a given location under certain assumed atmospheric conditions, in reality, measured noise levels vary over time, depending on contributions from background sources, wind direction, ongoing or punctual activities, etc. While FEIS predictions are not specifically time-averaged, they are compared here to the 24-h L_{eq} calculated from monitoring results, which represents the average sound pressure level produced by all sources over the course of a day, under varying climatic conditions including wind speeds and direction. This evaluation is therefore considered a screening-level comparison for the purposes of noise management, and not a comprehensive validation of specific FEIS model predictions.

Table 12-27 Whale Tail Mine: Predicted and measured ambient noise levels

Note: FEIS predictions (2020+) identified from sound level contour plots in Agnico Eagle (2018); Section 4, Figure 4.4-3 plus measured background levels (Agnico Eagle, 2016; Appendix 4-D). Value for 2019 is from Agnico Eagle (2016); Volume 4).

Effect Pathway	Monitoring Station	FEIS Addendum Predicted Max. Value (dBA)	Measured Values L _{eq} , 24-h (dBA)					
			2019	2020	2021	2022	2023	2024
Noise emissions from vehicles on the haul road can increase ambient noise levels.	R6	2019: 50.0 2020+: 42.5	41.8	33.1	-	33.4	35.4	29.2
			-	28.2	34.2	-	40.0	34.8
	R7	40.4	-	36.8	37.9	-	37.8	35.5
			-	-	-	-	31.1	-
Noise emissions from mining equipment can increase ambient noise levels. Blasting can result in ground vibration and increase ambient noise levels.	R8	45.1	-	32.8	39.3	(monitoring ceased at this location)		
			-	-	40.6			
			-	-	41.4			
	R8a (replaced R8 after 2021)	40.4	(monitoring not yet initiated at this location)			29.5	38.2	34.8
						-	22.7	35.9
						-	-	36.6
	R9	45.1	-	35.5	39.8	(monitoring ceased at this location)		
			-	30.9	35.5			
	R9a (replaced R9 after 2021)	45.1	(monitoring not yet initiated at this location)			34.0	37.2	33.5
						-	30.7	33.5
	R10	50.0	-	-	41.3	(monitoring ceased at this location)		
	R10a (replaced R10 after 2021)	40.4	(monitoring not yet initiated at this location)			29.9	33.5	33.4
						-	31.8	37.3
						-	-	31.1
	R11	50.0	-	38.8	(monitoring ceased at this location)			
			-	34.7				
	R11a (replaced R10 after 2020)	50.0	(monitoring not yet initiated at this location)		37.4	-	37.5	36.3
					35.0	-	38.8	27.4
PSL check	R12	35	-	-	-	31.0	-	-
“-”Indicates no data point or invalid survey. In each year, attempts are made to obtain a minimum of two valid surveys for each monitoring station, except R12 (only required in 2022). Surveys are invalidated for a variety of reasons, including unacceptable weather conditions (e.g. winds >15 km/h), equipment malfunction (e.g. fallen microphone, battery failure), and occasionally, accidental data loss (e.g. lost or erased SD card).								

12.5.3.2 Parts 3 & 4: Discussion

Where impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion will be provided here.

To date, measured 24-h L_{eq} values have not exceeded FEIS-modeled maximum sound levels for near-site locations, or the PSL at the local study area boundary.

12.5.3.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

The noise monitoring program that was implemented in 2024 at the Whale Tail Mine was conducted in accordance with the approved Noise Monitoring and Abatement Plan, which was designed in conjunction with the FEIS Addendum's noise impact assessment. This monitoring program is therefore considered effective as designed.

Effectiveness of Mitigation

FEIS-planned mitigation measures to limit impacts of the Project on area noise levels were described in the FEIS Addendum Volume 3, Table 3-C-1 and the associated Noise Monitoring and Abatement Plan for the Project. This Plan includes noise mitigation measures for both the Meadowbank and Whale Tail Mines, and implementation of the planned abatement measures in the current year is detailed in Section 12.4.3.

Since measured ambient 24-h noise levels have not exceeded FEIS maximum model predictions, existing mitigation measures are considered to be effective.

Adaptive Management

No adaptive management actions are planned based on this evaluation, since the monitoring program is able to effectively measure ambient area noise levels and all planned mitigation practices are in place.

12.5.4 Air Quality and Climate

12.5.4.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

In the Whale Tail Mine FEIS documents, residual impacts were not classified for air quality as a VC, because air quality does not have an assessment endpoint, only measurement endpoints (i.e., comparison to relevant ambient air quality guidelines or standards). Any potential effects associated with the primary pathways are captured in the assessment of potential effects to, and residual impact classifications for, other VCs. Nevertheless, quantitative predictions were made in relation to air quality guidelines, so the validity of those predictions is assessed here, where feasible using results from approved monitoring programs.

In order to estimate potential impacts of the Project on air quality, modeling exercises were conducted as a component of the FEIS Addendum to determine emission rates and dispersion of various criteria air

contaminants (CACs) from different Project sources (Agnico Eagle, 2018; Section 4). These included assessments for the Whale Tail Site and the Whale Tail Haul Road.

For the Whale Tail Haul Road, calculation of CAC emissions included the following sources:

- Exhaust from vehicles operating on the haul road; and
- Road dust from the un-paved haul road.

Air quality dispersion modelling of a representative one (1) km section of the haul road-oriented northeast to southwest was used to predict the following:

- Maximum plus background concentrations of CACs as a function of distance from the haul road; and
- Maximum dust deposition as a function of distance from the haul road.

For the Whale Tail Mine, calculation of CAC emissions included the following sources:

- Whale Tail Pit activities, including:
 - in pit and underground drilling and blasting;
 - in pit and underground material handling;
 - un-paved road dust from mining operations; and
 - exhaust from off-road equipment operating in the Whale Tail Mining area;
- Wind erosion from ore pad and waste storage pile;
- Stationary combustion emissions from the camp heating and camp power;
- Un-paved road dust and vehicle exhaust from the section of haul road within the Property boundary; and
- Emissions from an incinerator.

Air quality dispersion modelling was then conducted to predict maximum plus background concentrations of CACs at the Property boundary. Associated monitoring was recommended and is conducted according to the Air Quality and Dustfall Monitoring Plan, as follows:

Table 12-28 Air quality monitoring locations and parameters for the Whale Tail Site and Haul Road

Monitoring Location (Air Quality and Dustfall Monitoring Plan, March 2022)	Measured Parameters
DF-6a or b	TSP, PM ₁₀ , PM _{2.5} , passive NO ₂ , dustfall
DF-7	Continuous active NO ₂
DF-8 (co-located with DF-7) [^]	Passive NO ₂
Whale Tail Haul Road km 134	Dustfall transect
DF-9 [^] /Whale Tail Haul Road km 151	Passive NO ₂ , dustfall transect
Whale Tail Haul Road km 169	Dustfall transect
[^] Installed 2021	

For the Whale Tail Haul Road, dust deposition is measured over three transects using static dustfall collectors that are deployed in the field for a 30-d period. However, due to differences in particle sizes collected by static dustfall monitors (typically < 0.85 mm) and those assessed through air quality emissions and dispersion modelling (typically < 30 µm), these are considered screening-level comparisons only. Since dustfall canisters collect particles across a much wider range of sizes than included in standard modeling, they are very likely to measure higher rates of total dustfall than those specified in the FEIS. However, if measured dustfall is lower than predicted dustfall, model results can be verified as conservative. To improve the comparison, maximum measured background rates of static dustfall in this area during baseline studies (0.27 mg/cm²/30d) are added to FEIS predicted deposition rates (see 2024 Air Quality and Dustfall Monitoring Report in Appendix 42 for further details).

For the Whale Tail Mine, concentrations of suspended particulates are assessed using automated air samplers (Partisol 2025 Sequential Air Samplers). These samplers measure concentrations of suspended particulates over a 24-h period every 6 days. Again, field-measured suspended particulate matter concentrations are considered appropriate for comparison with model predictions for screening purposes only, for various reasons. For example, models incorporate emissions from specific sources, under set meteorological conditions, and terrain considerations. Further, much like dustfall, differences in size fractions between modeled and measured values are a consideration for TSP. Finally, for the Whale Tail Mine, the suspended particulate monitoring station is located near the centre of project activity, close to sources and adjacent to various buildings where power is available, and model results in these conditions are generally considered particularly variable from field measurements, compared to assessments at the property line or further receptor locations. As a result, total suspended particulate monitors at the Whale Tail Mine are most appropriate for assessing trends over time and comparisons to management thresholds, rather than specific modelled impact predictions.

Onsite concentrations of NO₂ by volume (ppb) are analyzed over one-month periods using a passive sampling device provided by an accredited laboratory. A continuous (active) NO₂ monitoring station was installed in 2021, sited in consultation with ECCC.

Dustfall (deposition of particulate matter) onsite is measured using the static dustfall collectors described for the Whale Tail Haul Road, above.

For reference, all data handling methods and results for air quality and dustfall monitoring are provided in the 2024 Air Quality and Dustfall Monitoring Report (Appendix 42), along with comparisons to regulatory guidelines, FEIS predictions, and historical measurements.

Impact predictions associated with these air contaminants and monitoring locations are summarized in Table 12-29, along with monitoring results to date. Measured impacts exceeding or potentially exceeding predictions are shaded grey and further discussed in Section 12.5.4.2.

Note: One effect pathway was removed from Table 12-29 beginning in 2023 since it is evaluated under the Meadowbank PEAMP – “Additional 3 years of processing and use of supporting infrastructure at the Meadowbank mine site and the existing AWAR for delivery of materials can continue to affect air quality”.

Table 12-29 Whale Tail Mine: Predicted and measured impacts to air quality and climate

Note: 2019 measurements are compared to predictions from the FEIS for the Whale Tail Pit Project (Agnico Eagle, 2016). 2020+ measurements are compared to predictions from the FEIS Addendum for the Whale Tail Pit – Expansion Project (Agnico Eagle, 2018). Measured impacts exceeding or potentially exceeding predictions are shaded grey and further discussed in Section 12.5.4.2.

Effect Pathway	Proposed Monitoring	Monitoring Conducted	FEIS Prediction + Background*	Measured Value	FEIS Addendum Prediction + Background*	Measured Value				
				2019		2020	2021	2022	2023	2024
Vehicle emissions and fugitive dust from traffic on the haul road can affect air quality	Static dustfall	Static dustfall	Max. deposition* (mg/cm ² /30d): 25 m: 1.46 100 m: 0.83 300 m: 0.53 1000 m: 0.38	25 m: 8.04 100 m: 2.24 300 m: 1.42 1000 m: 0.46	Max. deposition* (mg/cm ² /30d): 25 m: 3.67 100 m: 2.17 300 m: 0.86 1000 m: 0.38	25 m: <3.67 100 m: <2.17 300 m: <0.86 1000 m: <0.38	25 m: 10.08 100 m: <2.17 300 m: <0.86 1000 m: <0.38	25 m: 10.93 100 m: <2.17 300 m: 1.26 (not mine-related) 1000 m: <0.38	25 m: 13.17 100 m: <2.17 300 m: <0.86 1000 m: <0.38	25 m: 7.6 100 m: <2.17 300 m: <0.86 1000 m: <0.38
Blasting, stationary and mobile combustion sources, and fugitive dust from mining activities in the Whale Tail Pit can affect air quality.	TSP, PM ₁₀ , PM _{2.5} , NO ₂ , dustfall	TSP, PM ₁₀ , PM _{2.5} , NO ₂ , dustfall	NO ₂ : 4.4 ppb (annual avg)	1.46 ppb	NO ₂ : 8 - 16 ppb (annual avg)	1.29 ppb	1.66 ppb	2.17 ppb	2.00 ppb	1.77 ppb
			TSP: 24-h: 174 µg/m ³ Annual: 16.9 µg/m ³	NM	TSP^: Annual: 30 - 45 µg/m ³	35.0 µg/m ³	24.3 µg/m ³	64.9 µg/m ³	37.1 µg/m ³	41.7 µg/m ³
			PM ₁₀ 24-h: 52.4 µg/m ³	NM	PM ₁₀ : NA^	-	-	-	-	-
			PM _{2.5} 24-h: 20.1 µg/m ³	NM	PM _{2.5} 24-h: 21 - 28 µg/m ³	< 28 µg/m ³			Max: 31 µg/m ³	Max: 36 µg/m ³
			PM _{2.5} Annual: 4.3 µg/m ³	NM	PM _{2.5} Annual: 5 – 7.5 µg/m ³	1.44 µg/m ³	1.82 µg/m ³	3.9 µg/m ³	4.5 µg/m ³	3.7 µg/m ³
Greenhouse gas emissions from the Project can contribute to climate change.	Report emissions	GHG emissions reported	Whale Tail Site: 64.2 kt CO ₂ e/yr Meadowbank Mill: 180 kt CO ₂ e/yr	189,867 t CO ₂ e total (2020 recalc. = 195,564 t CO ₂ e total)	Whale Tail Site: 164.2 kt CO ₂ e/yr Meadowbank Mill: 180 kt CO ₂ e/yr	225,385 t CO ₂ e total	243,893 t CO ₂ e total	249,362 t CO ₂ e total	253,808 t CO ₂ e total	267,716 t CO ₂ e total (prelim.)
NM = Not measured *Addition of background values described in text above. ^Predictions for the 24-h average are open-ended (> 120 µg/m ³ or >50 µg/m ³) and therefore are not compared to measured values.										

12.5.4.2 Parts 3 & 4: Discussion

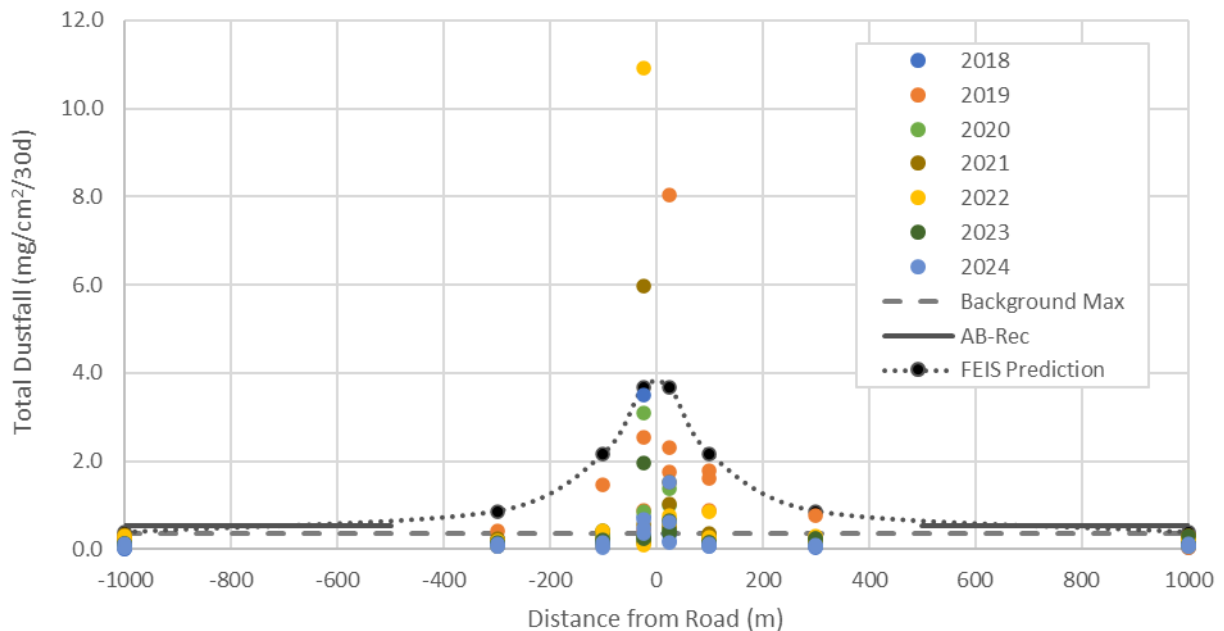
Where air quality impacts are exceeded or potentially exceeded based on monitoring results (as identified in Parts 1 & 2, above), a discussion is provided here.

12.5.4.2.1.1 Whale Tail Haul Road Dustfall

Since 2021, one or two samples across all three transects and sampling dates have exceeded specific FEIS predictions for dust deposition. This has occurred only at the 25 m distance. The overarching FEIS prediction that maximum deposition rates would decline below $0.53 \text{ mg/cm}^2/30 \text{ d}$ within 500 m of the road has been met in all monitoring events. As discussed above, field dustfall monitoring represents a very conservative comparison to FEIS predictions, particularly in close proximity to sources such as in this case, so the isolated exceedances that have occurred to date are anticipated. Historical results for August (the time period with the driest conditions and generally highest rates of traffic) are shown in Figure 64.

Figure 64 Total dustfall rates ($\text{mg/cm}^2/30\text{d}$) for all samples collected in August along the Whale Tail Haul Road to date

Note: 2018 and 2019 data was collected at ground level, while all 2020+ samples were collected on stands. Negative distances represent the east side of the road, and positive distances represent the west side. FEIS Prediction values are from the FEIS Addendum Appendix 4C, Table 4-C-24 (Agnico Eagle, 2018).



12.5.4.2.1.2 Total Suspended Particulates

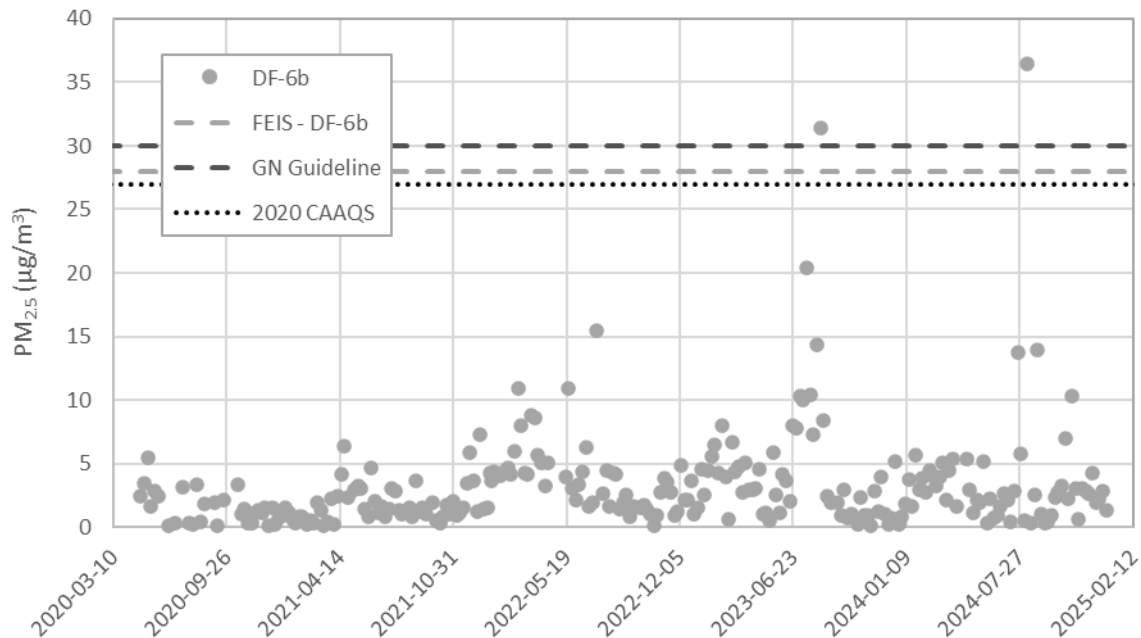
Annual average TSP measured at Whale Tail Mine onsite location DF-6b ($65 \mu\text{g/m}^3$) in 2022 exceeded the maximum FEIS Addendum prediction for this location ($45 \mu\text{g/m}^3$). As discussed above, TSP monitoring provides a conservative comparison to model predictions, due to a variety of differences in methodology. The DF-6b monitoring station is located near the centre of the project footprint (adjacent to

and downwind of the camp facility), so it is likely that measured suspended particulate concentrations were influenced by larger particle sizes, potentially from nearby construction activities, that are not included in air quality modelling. Typically, modeled TSP only includes particles with an aerodynamic diameter $<30\ \mu\text{m}$, whereas Partisol TSP units are not size-selective. It is noted that annual average TSP did not exceed the GN regulatory guideline, and FEIS Addendum predictions were not exceeded for other size fractions. In the FEIS Addendum, 2022 was planned to be the year of highest production, and the increase in measured particulate may have been caused by a general rise in site activity. Onsite air quality management measures were planned to be reviewed to help minimize future emissions. Results since that time (2023, 2024) have remained below the FEIS prediction for the annual average.

12.5.4.2.1.3 $\text{PM}_{2.5}$

In each of 2023 and 2024, a single particulate sample at the Whale Tail Mine monitoring station exceeded the FEIS Addendum prediction for $\text{PM}_{2.5}$. Historical results are shown in Figure 65. As described in Section 12.5.4.1, field monitoring results are expected to differ from model estimates in some portion of field samples due to various differences in modeling assumptions and measurement methods. These are considered to have been localized events, and not a significant deviation from FEIS predictions.

Figure 65 Measured 24-h average concentrations of $\text{PM}_{2.5}$ at Whale Tail Mine monitoring station DF-6b, and the FEIS-modeled maximum expected concentration for this location, for specified sources (see description in text).



12.5.4.3 Effectiveness of Monitoring and Mitigation, and Adaptive Management

Effectiveness of Monitoring

In 2024, all monitoring recommended in the FEIS to assess air quality impacts was conducted according to the Air Quality and Dustfall Monitoring Plan.

Overall, it is considered difficult to compare air quality model outputs with specific monitoring results. Air quality modelling is a statistical exercise which captures the maximum and average concentrations expected from an emissions source, under specific meteorological conditions, and terrain factors. Additionally, air quality modelling considers only the sources in the model which typically does not include transboundary transport or other background sources of contaminants.

However, air quality monitoring at the Whale Tail Mine is able to effectively measure ambient concentrations of CACs, and compare with regulatory guidelines and management thresholds. When field-measured values are lower than model results, those predictions can be confirmed as conservative.

Effectiveness of Mitigation

A summary of the planned mitigation measures for air quality during the construction and operations phases is provided in Table 12-30, along with a commentary on current implementation.

As described in the Air Quality and Dustfall Monitoring Report (Appendix 42), monitoring thresholds were established within the Air Quality and Dustfall Monitoring Plan to confirm effectiveness of existing mitigation. Thresholds relate to dustfall and suspended particulate measurements. In 2024, thresholds for the Whale Tail Mine and Haul Road were met, with the exception of the single measurement for PM_{2.5} (described in Section 12.5.4.2.1.3), so existing mitigation (Table 12-30) is considered to have been effective.

Adaptive management is described further below.

Table 12-30 Whale Tail Mine: FEIS-designed mitigation measures to reduce impacts of the project on area air quality and climate, and commentary on current implementation

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018) Volume 3, Table 3-C-1)	Implementation (2024)
General construction, operations, and decommissioning activities associated with the Whale Tail Pit and the haul road; and Mining of the Whale Tail Mine	All vehicles will adhere to the 50 km/h speed limit.	Yes – Whale Tail Haul Road Management Plan
	Regular maintenance will be implemented for equipment and vehicles.	Yes – Maintenance logs
Upgrading of the haul road from the Whale Tail Mine to the Meadowbank Mine	Implement dust control measures, if needed on mine roads.	Yes – Air Quality and Dustfall Monitoring Plan, Whale Tail Haul Road Management Plan
	Equipment and vehicles will comply with relevant non-road emission criteria at the time of purchase.	Yes
	Regular maintenance will be implemented for equipment and vehicles.	Yes – Maintenance logs

Project Activity	Planned Mitigation Measure (Agnico Eagle (2018) Volume 3, Table 3-C-1)	Implementation (2024)
Traffic on the haul road from the Whale Tail Mine to the Meadowbank Mine	Watering of roads and enforcing speed limits to suppress dust production.	Yes – Air Quality and Dustfall Monitoring Plan, Whale Tail Haul Road Management Plan
	Equipment and vehicles will comply with relevant non-road emission criteria at the time of purchase	Yes
	Regular maintenance will be implemented for equipment and vehicles	Yes – Maintenance logs
Construction of the Whale Tail Mine	Best Management practices for controlling fugitive dust from construction activities	Yes – Best practices
	Equipment and vehicles will comply with relevant non-road emission criteria at the time of purchase	Yes
	Regular maintenance will be implemented for equipment and vehicles	Yes – Maintenance Logs
Mining of the Whale Tail Mine	Watering of pit roads and enforcing speed limits to suppress dust production.	Yes
	Equipment and vehicles will comply with relevant non-road emission criteria at the time of purchase.	Yes
	Regular maintenance will be implemented for equipment and vehicles.	Yes – Maintenance logs
	Enclosures are used to reduce fugitive emissions at the processing facility	Yes – Mine site design
	Adherence to the Incinerator Waste Management Plan	N/A – No incinerator onsite

Adaptive Management

Thresholds were met in 2024, so no further adaptive management actions are planned based on this PEAMP analysis.

12.5.5 Soil, Terrain, and Permafrost

12.5.5.1 Parts 1 & 2: Summary of Predicted and Measured Residual Impacts

Although primary pathways of effects were identified for soil, terrain, and permafrost, no residual impact predictions were made because soil, terrain, and permafrost do not themselves have measurable effects endpoints. Any potential effects associated with the primary pathways for soil, terrain, and permafrost are captured in the assessment of the potential effects to, and residual impact classifications for other VCs.

12.5.5.2 Parts 3 & 4: Discussion

N/A – residual impacts are not measured for permafrost directly. Potential effects are captured in the assessment of other VCs.

12.5.5.3 Part 5: Effectiveness of Monitoring and Mitigation, and Adaptive Management**Effectiveness of Monitoring**

Soil, terrain, and permafrost conditions will be continuously monitored and inspected during all phases of the Project to ensure the effectiveness of the design criteria. Where required, adaptive management strategies will be implemented. Full details on management plans and monitoring for the waste rock pile, dewatering of the dikes, and haul road are provided in the Waste Rock Management Plan, Water Management Plan, and Whale Tail Haul Road Management Plan, respectively.

However, since no predictions were made with respect to residual impacts of permafrost directly, these programs are not designed to validate any predictions. Rather, impacts of permafrost are measured through measurement indicators for other VCs and effectiveness of those monitoring programs are assessed in the relevant sections of this report.

Effectiveness of Mitigation

A summary of the planned mitigation measures for permafrost according to the FEIS Volume 3, Table 3-C-2 is provided in Table 12-31, along with a commentary on current implementation. Similarly, planned mitigation measures for soil and terrain are provided in Table 12-32, along with current implementation. If impacts to other VCs are occurring beyond FEIS predictions and those effects are potentially due to impacts on soil, terrain, or permafrost, this record of mitigation can be reviewed. For the purposes of this annual review, the mitigation summary does not include Environmental Design Features, which are incorporated into construction plans but are not ongoing mitigation measures.

Table 12-31 Mitigation measures described to reduce impacts of the project on permafrost during the construction and operations phases, and commentary on current implementation.

Note: Whale Tail FEIS (Table 3-C-2). Mitigation measures listed here do not include Environmental Design Features that are factored into construction plans.

Project Activity	Planned Mitigation Measure (FEIS Table 3-C-2)	Implementation (2024)
Mine infrastructure footprint	Implement slope stability criteria to manage erosion.	Yes - Slopes were designed and built to angle of repose to minimize erosion. Slopes were built using properly graded material to minimize erosion.
	Best management practices for erosion and sedimentation control (e.g., silt curtains, runoff management, armouring of banks, sloping of banks), where needed.	Yes - Silt curtains not required as of yet. Infrastructure was designed and built with erosion and sedimentation control as needed (such as channels and dikes).
Earthworks: Drilling, blasting, grading, trenching, excavation and backfilling, crushing activities, and dike construction	Minimize footprint areas for stripping and removal of material. Use appropriately designed structural fill and thickness to maintain and promote permafrost conditions.	Yes - All footprint areas were minimized as much as possible. Fill thicknesses were designed with maintaining permafrost in mind.
	Where possible, stockpiling of rock and fill from quarries and borrow sites will be placed such that surface water is not diverted through the piles.	Yes - Stockpiles were placed in areas away from surface water flow. Location planning for stockpiles considers the topography and watersheds.
	Minimum setback distance of 31 m from the ordinary high water mark of waterbodies.	Yes - The minimum setback distance of 31m from the high water mark was respected.
	Thick drifted snow greater than 1 m thick will be removed before the road fills are placed.	Yes - Snow removal took place before any fill was placed.
	Minimize depth of excavations to limit impact on active layer.	Yes - Excavation of any kind was avoided when possible and the depth was minimized as much as possible.
	Monitoring of the Whale Tail Dike will be undertaken to understand the hydraulic and thermal behaviour of the dike during filling of Whale Tail (South Basin)	Yes - Regular instrument monitoring continues.
	Minimize depth of quarrying to limit impact on active layer. Maximum quarry depths of 3 m are currently planned.	Yes - Quarry depths were limited as much as possible.
	Appropriate design of quarry walls to promote stability, and to minimize annual slope degradation.	Yes - All quarry walls were designed and built to slope angles that would minimize slope degradation.
	Appropriate design of quarries to manage water and minimize ponding of water within the quarries which would result in a deeper active layer.	Yes - All quarries were designed and built with floors sloped to promote drainage.
	Where possible, stockpiling of rock and fill from quarries and borrow sites will be placed such that surface water is not diverted through the piles with runoff to surface waterbodies.	Yes - Stockpiles were placed in areas away from surface water flow. Location planning for stockpiles considers the topography and watersheds.
	Drainage from quarries will not flow directly into any waterbodies or watercourses	Yes - It was ensured that drainage from quarries would not go into any waterbodies or watercourses.
	Submission of all design drawings to the Nunavut Water Board for approval, prior to construction.	Yes - Design drawings were submitted to the Nunavut Water Board for approval prior to construction, as needed.
Mine Site Facilities Construction	Where possible, use thaw-stable road fills for construction.	Yes - Very few options are available for road fills but placement and design are always done with maintaining permafrost in mind.
	Road fill material will be placed directly over the existing soil layer without cutting, stripping, or grubbing to avoid disturbing the subgrade soils.	Yes - Road fill material was always placed directly over the existing soil layer.
	Placement of the road construction materials during winter will minimize disturbance to the permafrost.	Yes - Roads were constructed during the winter whenever possible.
	Thick drifted snow greater than 1 m thick will be removed before the road fills are placed.	Yes - Snow removal took place before any road fill was placed.
	Stockpile snow on thaw-stable materials, or in areas that are insensitive to thaw settlement.	Yes - Snow was placed in designated snow dump areas.
Mine Site Operations and Maintenance, including use of existing facilities and AWAR	Use appropriate drainage and water diversion structures to minimize water ponding during thaw.	Yes - Water ponding was minimized through pumping during the spring thaw.
	Stockpile snow on thaw-stable materials.	Yes - Snow was placed in designated snow dump areas.
	Use snow fencing where appropriate to minimize snow clearing requirements.	Yes - Snow fencing was not required yet.
	Annual road maintenance as required.	Yes - All roads are maintained and inspected frequently.
	Continue to use appropriate facilities management methods to reduce the amount of ice trapped within the facility.	Yes - At the Meadowbank TSF tailing deposition planning was done to reduce ice entrapment as much as possible.
	Use appropriate deposition planning (i.e., tailings placed in layers to promote freezing).	Yes - During in-pit deposition, one deposition point is used in each pit. The method of tailings discharge ensures that ice forms on the wall but not within the tailings body in the pit.
Waste Rock Storage Areas and Stockpiles	Where possible begin construction during winter months, when active layer is frozen.	Yes - Starting construction of the WRSF and stockpiles was planned for winter months whenever possible.
	Place waste rock in lifts to promote freezing of pile.	Yes - Waste rock was always placed in lifts to promote freezing.
Water Management Infrastructure	Use appropriate water management methods to avoid water ponding and to control high volume potentially erosive flows.	Yes - Water ponding and erosive flows were minimized through pumping during the spring thaw.
	Manage snow accumulation locally.	Yes - Snow removal was performed according to a plan with designated snow dump areas.
	Regular inspection of the road to identify any areas where ponding of water along the road represents a risk, and installing additional culverts or drains to alleviate the risk.	Yes - Regular inspection of the road was performed to identify the spots where water may pond or was ponding. Culverts were inspected and if they were frozen or plugged they were fixed. If culverts could not be fixed they were replaced.
	Pumped discharge to receiving lake will only occur while water quality discharge criteria are met.	Yes - Frequent testing of all water pumped to the receiving environment was performed. If water quality discharge criteria were not met the water was treated by the WTP and only pumped once the criteria were met.
	Pumped discharge will be directed to the lake environment, and not directly to outlets, to attenuate flow changes.	Yes - Pumped discharge was only directed to approved area and not directly to outlet.
	Shoreline areas susceptible to extensive erosion will be addressed by appropriate erosion protection measures, mitigation measures based on adaptive management, or a combination of both, to reduce erosion and associated re-suspension of fine sediment.	Yes - Water management was planned and executed in order to avoid causing erosion on shorelines. Examples include using sunken diffusers, discharging water only on boulder pads, and discharging water to lakes at low enough rates to prevent quick rises in water elevation.
	Use appropriate back filling methods for the placement of fill material. Initial permafrost retreat that may occur during the placement of backfill may be replaced by permafrost re-establishing within the backfilled areas.	Yes - Fill material was placed in thin lifts and compacted to promote the establishment of permafrost.
Open Pits	Water inflows to the pit will require sumps and be pumped to the Attenuation Pond.	Yes - Water inflows to the pit were directed to sumps and pumped to approved location (Whale Tail and IVR Attenuation Ponds).

Project Activity	Planned Mitigation Measure (FEIS Table 3-C-2)	Implementation (2024)
	Insulate water lines as they produce heat and can thaw adjacent frozen ground.	N/A
Underground Mining	Water inflows to the underground excavations will require sumps and be pumped to the Attenuation Pond.	Yes - Underground water inflows are pumped to the Groundwater Storage Pond (GSP).
	Appropriate operations and maintenance procedures in place for the operation of the fuel tank farm.	Yes - To prevent fuel spills procedures were put in place to safely operate the fuel tank farm. These procedures include fuel spill protocols, inspections, and maintenance practices.
Fuel Storage and use (includes Chemical and Hazardous material Storage and Explosives Storage Area)	Appropriate re-fueling areas and procedures to minimize and capture spills.	Yes - All re-fueling areas are equipped with safeguards to prevent and capture spills. Re-fueling procedures are in place and employees are trained how to re-fuel before operating vehicles.
	Implement the spill plan for potential chemical spills, including hydrocarbons.	Yes - Spill plans are in place for all types of chemical, including hydrocarbon, spills. Employees are trained on how to apply the spill plan to their work.
	Minimize ground disturbance.	Yes - Ground disturbance was minimized as much as possible.
Waste Management: Landfill, Landfarm, Sewage Treatment	Use appropriate waste management methods to operate the facilities within the proposed waste rock piles, to promote permafrost growth.	Yes - Waste management methods are in place and followed closely to promote permafrost growth, including the creation of small sub-landfills which are encapsulated by waste rock. Inspections and surveys are performed to ensure the landfill is being constructed properly.

Table 12-32 Additional mitigation measures (beyond those in Table 12-31 above) to reduce impacts of the project on soil and terrain during the construction and operations phases, and commentary on current implementation

Note: FEIS Addendum for the Whale Tail Pit Expansion Project (Table 3-C-2). Mitigation measures listed here do not include Environmental Design Features that are factored into construction plans.

Project Activity	Planned Mitigation Measure (FEIS Addendum Table 3-C-2)	Implementation (2024)
Mine Infrastructure Footprint (e.g. open pits, site roads, access roads)	Locating borrow sites as close to the haul road as practical.	Yes
	Minimizing borrow areas by using suitable waste rock (e.g., Vault Pit waste rock) to the greatest extent practicable	Yes
	Avoid new disturbances by using existing ones where possible	Yes
Earthworks: Drilling, blasting, grading, trenching, excavation and backfilling, crushing activities, and dike construction	Most of the overburden will be placed in the Waste Rock Storage Facility, except for a small amount used in operations, which will only be temporarily stockpiled. Overburden will be piled at the base of the Whale Tail WRSF and surrounded with waste rock to stabilize the material and then all the overburden stockpiled in the Whale Tail WRSF will be eventually covered with waste rock.	Yes - Mine Waste Rock Management Plan
	Erosion control practices on steep slopes to limit wind and water erosion.	Yes – Site inspection, design construction, best practices.
Mine Site Facilities Construction	Use of non-acid generating material for road construction.	Yes - Operational ARD/ML Testing and Sampling Plan, design construction.
Mine Site Operations and Maintenance, including use of existing facilities and AWAR	Implement dust control measures on mine roads, when required.	Yes - Air Quality and Dustfall Monitoring Plan.
	Road surfaces will be maintained through grading and the addition of granular material.	Yes - Air Quality and Dustfall Monitoring Plan.
	Equipment and vehicles will comply with relevant non-road emission criteria at that time of purchase.	Yes
	Use of non-acid generating materials for road bed and fill.	Yes - Operational ARD/ML Testing and Sampling Plan, design construction.
	Enforcing speed limits will assist in reducing dust emissions.	Yes
	Implement the spill plan for potential chemical spills, including hydrocarbons.	Yes – Spill Contingency Plan.
	Adherence to the Air Quality and Dustfall Monitoring Plan.	Yes - Air Quality and Dustfall Monitoring Plan.
	Complete a Wildlife Screening Level Risk Assessment every 3 years.	Yes – TEMP. Assessment performed in 2024 (Appendix 39).
	Water Management Plan is approved and adhered to at existing facilities and Water Management Plan specific to the Whale Tail Pit areas has been developed and these plans have considered the containment and management of contact site water.	Yes – Water Management Plan
	Natural construction materials will be tested before they are used to confirm that they are not potential acid draining or potential sources of metal leaching.	Yes - Operational ARD/ML Testing and Sampling Plan
Waste Rock Storage Areas and Stockpiles	(see Fish and Fish Habitat section, above)	N/A
Water Management Infrastructure	(see Water Quantity, Water Quality, and Fish and Fish Habitat sections above).	N/A
Fuel Storage and use (includes Chemical and Hazardous material Storage and Explosives Storage Area)	(see Water Quality section above)	N/A

Adaptive Management

Adaptive management consists of changes to permafrost, soil and terrain mitigation methods in response to results of monitoring programs which indicate exceedances or potential exceedances of impact predictions. In this case, the validity of impact predictions related to permafrost, soil and terrain are measured through effects on other VCs. If impacts to other VCs are exceeding predictions as a result of permafrost changes, adaptive management will be considered and reported here.

No adaptive management has been required to date.

12.5.6 Archaeology, Traditional Land Use, and Socio-Economics

Since, in many cases, is it not possible to distinguish impacts of the Meadowbank project from those of the Whale Tail project on Archaeology, Traditional Land Use, and Socio-Economics, the PEAMP evaluation is combined for this section and provided under Section 12.4.6.

12.6 Contributions to Regional Monitoring

In fulfillment of Item E in Appendix D of the Project Certificate, a description of Meadowbank's investments in regional monitoring initiatives, academic research studies and ongoing data sharing programs is provided in Table 12-33. These are programs in addition to publication of compliance-related onsite monitoring results. They contribute to the general advancement of environmental management in the North, and help ensure continued optimization of environmental mitigation and monitoring programs at Meadowbank Complex and elsewhere.

Table 12-33 Contributions of the Meadowbank Complex to regional monitoring initiatives, academic research studies, and ongoing data sharing programs

Program Type	Program Title	Contribution/Program Summary	Dates
Multi-Stakeholder Advisory Groups	Terrestrial Advisory Group	To reach consensus on research projects, needs for future monitoring and research, gain approval and ensure consistent endpoints of success, a Terrestrial Advisory Group (TAG) was created. Example of projects completed/ongoing (zone of influence (ZOI) study, caribou behaviour study, snow study, blast study, camera study)	2017 - present
	Meadowbank Fisheries Research Advisory Group	Created to oversee the implementation of fisheries research projects related to offsetting for Whale Tail Pit, the Meadowbank Fisheries Research Advisory Group (MFRAG) meets annually and provides a forum for input and recommendations on these studies. Members are: DFO, HTO, KivIA, appointed external advisor, and Agnico Eagle.	2019 - present
Regional Monitoring Studies	GN Caribou Collaring Program	Meadowbank continues to contribute to the GN DOE caribou collaring program which started in 2008. Seven deployments, with a total of 117 collars, have been completed in the area around Baker Lake since Agnico Eagle became involved in the collaring program. In 2017, Agnico Eagle finalized discussions with the GN and entered into a renewed Memorandum of Understanding to commit to another term contribution in support of the regional GN caribou monitoring program. Wildlife branch in directing the implementation, data analysis and management of caribou populations in the Kivalliq region. Agnico Eagle signed a data sharing agreement with the GN DoE in March 2023, regarding the caribou satellite-collaring program, which includes data collected within the Meadowbank Complex RSA. The collaring program is owned and manage by the GN, and Agnico Eagle supports as required. With the agreement, Agnico Eagle receives daily collared-caribou maps, which helps guide operational decision in the Meadowbank Complex. The data of the collared caribou was used in various studies in 2023 and 2024, including an update to the Caribou Migration Timing Analysis, and a review of caribou herd ranges.	MOU: 2008 –March 2020 DSSA: March 2023- present
Academic Research Programs	Whale Tail Complementary Measures Suite	Suite of six (6) research programs related to fish and fish habitat in the Meadowbank region. Included in Agnico Eagle's Fish Habitat Offsetting Plan for the Whale Tail Mine. Projected total contributions from Agnico Eagle of \$1.6 M. Further information in: Fish Habitat Offsetting Plan for Whale Tail Mine, Appendix C (May, 2018).	2018 – 2034 (est).
	Baker Lake Wastewater Study	Industry partner in NSERC CRD project “Validating Environmental and Human Health Improvements Associated with Wastewater Treatment Upgrades in Arctic Communities”. Total contributions from Agnico Eagle of \$590,000.	2019 – 2026
	Arctic Raptors	Collaboration with Dr. Alastair Franke/Arctic Raptors to conduct annual raptor monitoring at the Meadowbank and Meliadine sites. The Arctic Raptors program has been monitoring raptor populations in the Arctic since the 1980s.	2015 – 2024
	Migratory Bird Ecology and Effectiveness of Deterrents	As part of commitments made during the permitting process for Whale Tail Mine, Agnico Eagle funded and facilitated a study on effectiveness of deterrents for minimizing impacts of flooding on nesting waterbirds in the Whale Tail area (Dr. Erica Nol, Trent University; Dr. Paul Smith, ECCC). Total contributions from Agnico Eagle are \$120,000 plus in-kind support. As part of these contributions, Agnico Eagle has also agreed to support a study on ecology and nest site selection factors for area waterbirds (Dr. Erica Nol, Trent University). Finally, results of these studies will also contribute to the ArcticNet funded study “Modernizing Ecosystem Monitoring to Support Sustainable Development in the Eastern Canadian Arctic” (Dr. Paul Smith, ECCC; Dr. Christina Semeniuk, University of Windsor). This project uses advanced technology to track birds' movements across the Eastern Arctic, and behaviour in relation to human development and disturbance. Results will inform environmental impact mitigation efforts by industry, and simultaneously, contribute to national and international efforts to conserve Arctic biodiversity.	2018 – 2021
Other Information Sharing Programs	DFO Fishout Database	Agnico Eagle contributes raw data files from all fishout programs to DFO's Fishout Database.	2009 – 2020 (last fishout program)

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