MELIADINE GOLD MINE

2023 Annual Report

Prepared for:
Nunavut Water Board
Nunavut Impact Review Board
Government of Nunavut
Fisheries and Oceans Canada
Crown-Indigenous Relations and Northern Affairs Canada
Kivalliq Inuit Association

Prepared by:
Agnico Eagle Mines Limited – Meliadine Division

March 2024

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ABBREVIATIONS

Agnico Eagle	Agnico Eagle Mines Limited
ABA	Acid/Base Accounting
AEMP	Aquatic Ecosystem Monitoring Program
AP	Acid Potential
ARD	Acid Rock Drainage
AWAR	All Weather Access Road
BAP	Best Applicable Practices
BAT	Best Available Technology
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
BV	Emission Services Group of Bureau Veritas
CALA	Canadian Association of Laboratory Accreditation (CALA)
CCME	Canadian Council of Ministers of the Environment
CDMO	Cyanide Management Decommissioning Overview
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
CLO	Community Liaison Officer
COQ	Certificate of Qualification
CP	Collection Pond
DDH	Diamond Drill Hole
DFO	Department of Fisheries and Oceans Canada
EAP	Employee Assistance Program
EC	Electrical Conductance
ECC	Employment and Culture Committee
ECCC	Environment and Climate Changes Canada
EEM	Environmental Effect Monitoring
E&I	Energy & Infrastructure
ERT	Emergency Response Team
EWTP	Effluent Water Treatment Plant
FDP	Final Discharge Point
FEIS	Final Environmental Impact Statement
FTE	Full Time Equivalent
GHGRP	Greenhouse Gas Emissions Reporting Program
GN	Government of Nunavut
GPS	Global Positioning System
GTC	Ground Temperature Cable
GWMP	Groundwater Management Plan
HC	Health Canada
HDET	Heavy Duty Equipment Technician
HHS	Hunter Harvest Study
HR	Human Resources
ICMC	International Cyanide Management Code
ICMI	International Cyanide Management Institute
ICRP	Interim Closure and Reclamation Plan
IEP	Internal Environmental Permit
IIBA	Meliadine Inuit Impact and Benefit Agreement
IOL	Inuit Owned Land
IQ	Inuit Qaujimajatuqangit

ISV	Inuit Societal Values
KEAC	Kivalliq Elders' Advisory Committee
KETAP	Kivalliq Employment and Training Action Plan
KHTO	Kangiqliniq Hunter Trapping Organization
KIA	Kivalliq Inuit Associated
KivIA	Kivalliq Inuit Association
KLMA	Kivalliq Labour Market Analysis
KvSEMC	Kivalliq Socio-Economic Monitoring Committee
LOA	Letter of Advice
LMS	Learning Management System
LOM	Life of Mine
LSA	Local Study Area
MAC	Mean Annual Concentration
MAMMC	Maximum Authorized Monthly Mean Concentration
MDL	Method Detection Limit
MDMER	Metal and Diamond Mining Effluent Regulations
MELCC	Ministère de l'Environnement et de la Lutte contre les Changements Climatique
MF	Mid-Field
MiHR	Mining Industry Human Resources Council
MMSO	Marine Mammal and Observation
MoU	Memorandum of Understanding
MSB	Multi-Service Building
MWMP	Mine Waste Management Plan
NDVI	Normalized Difference Vegetation
NIRB	Nunavut Impact Review Board
NMHSF	Northern Mining Health and Safety Forum
NP	Neutralization Potential
NPAG	Non-Potentially Acid Generating
NPR	Neutralization Potential Ratio
NWB	Nunavut Water Board
OMS	Operation, Maintenance and Surveillance
OP	Ore Storage Pad
OSMP	Ore Storage Management Plan
PAG	Potentially Acid Generating
PPV	Peak Particle Velocity
PRISM	Program for Regional and International Shorebird Monitoring
PVS	Peak Vector Sum
QA/QC	Quality Assurance and Quality Control
QEP	Qualified Environment Professional
RIBR	Rankin Inlet Bypass Road
RO	Reverse Osmosis
RPD	Relative Percent Difference
SAO	Senior Administrative Official
SEMC	Socio-Economic Monitoring Committee
SEMP	Socio-Economic Monitoring Program
SEMR	Socio-Economic Monitoring Report
SEMWG	Socio-Economic Monitoring Working Group

SETP	Saline Effluent Treatment Plant
SOP	Standard Operating Procedure
SMP	Shipping Management Plan
SP	Saline Pond
STP	Sewage Treatment Plant
TAG	Terrestrial Advisory Group
TC	Transport Canada
TDS	Total Dissolved Solids
TEMMP	Terrestrial Environment Management and Monitoring Plan
TEMMP Report	Terrestrial Environment Management and Monitoring Plan Report
TIRI	Tiriganiaq Open Pits
TMS	Training Management System
TOR	Term of Reference
TSF	Tailings Storage Facility
TSP	Total Suspended Particulate
TSS	Total Suspended Solids
VEC	Valued Ecosystem Component
WBWQM	Water Balance and Water Quality Model
WRSF	Waste Rock Storage Facility
WTC	Water Treatment Complex

Units

%	Percent
°C	Degrees celsius
dBA	Decibels A
ft	feet
kg	Kilogram
kPa	Kilopascal
L	Litre
Leq	Equivalent Continuous Noise Level
m	Metre
m^3	Cubit M\metre
m^3/day	Cubic metre per day
m^3/year	Cubic metre per year
mg/kg	Milligram per kilogram
mg/L	Milligram per litre
mm	Millimetre
mm/s	Millimetre per second
Mm^3	Million cubic metre
ppm	Parts per million
t	Tonne
tCO2e	Tonne carbon dioxide equivalent
uS/cm	Microsiemens per centimetre

DOCUMENT CONTROL

Version	Date (YMD)	Section	Page	Comment
1	2024/03/31	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: Meliadine Environment Department

Approved By:

Anne-Laurence Paquet
Compliance Coordinator

Sara Savoie
Environment Superintentent

SECTION 1. INTRODUCTION

As required by water license 2AM-MEL1631 Part B Item 2: ***The Licensee shall file an annual report with the Board no later than March 31st in the year following the calendar year being reported. The annual report shall be developed in accordance with Schedule B.***

And

As required by water license 2BB-MEL1424 Part B Item 6: ***The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board no later than March 31st of the year following the calendar year being reported,***

The Meliadine Gold Mine operated by Agnico Eagle Mines Limited - Meliadine Division (Agnico Eagle) is located approximately 25 kilometres (km) north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet in the Kivalliq Region of Nunavut. Situated on the western shore of Hudson's Bay, the Project site is located on a peninsula between the east, south, and west basins of Meliadine Lake (63°1'23.8''N, 92°13'6.42''W), on Inuit Owned Land (IOL). The Project components include the 30 km All Weather Access Road (AWAR) between Rankin Inlet and Meliadine, the Itivia fuel farm and laydown area, and the mine site.

Commercial production began at Meliadine on May 14th 2019.

The 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), the Nunavut Impact Review Board (NIRB), the government of Nunavut (GN), Kivalliq Inuit Association (KivIA), Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC); Environment and Climate Change Canada (ECCC), and Department of Fisheries and Oceans Canada (DFO).

This report is written to address all of the 2023 annual reporting requirements of the project under these authorizations:

- NWB Type A Amended Water License 2AM-MEL1631;
- NWB Type B Water License 2BB-MEL1424;
- NIRB Project Certificate No. 6 (Amendment No.002);
- KivIA Permit KVCA07Q08;
- KivIA Permit KVCA11Q01;
- KivIA Production Lease KVPL11D01; and
- The Meliadine Inuit Impact and Benefit Agreement (IIBA).

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

Several appendices complement this report. A summary table of the 2023 Annual Report Appendices is provided in Appendix 1.

The following Figure 1 shows the Meliadine site and Itivia facilities.

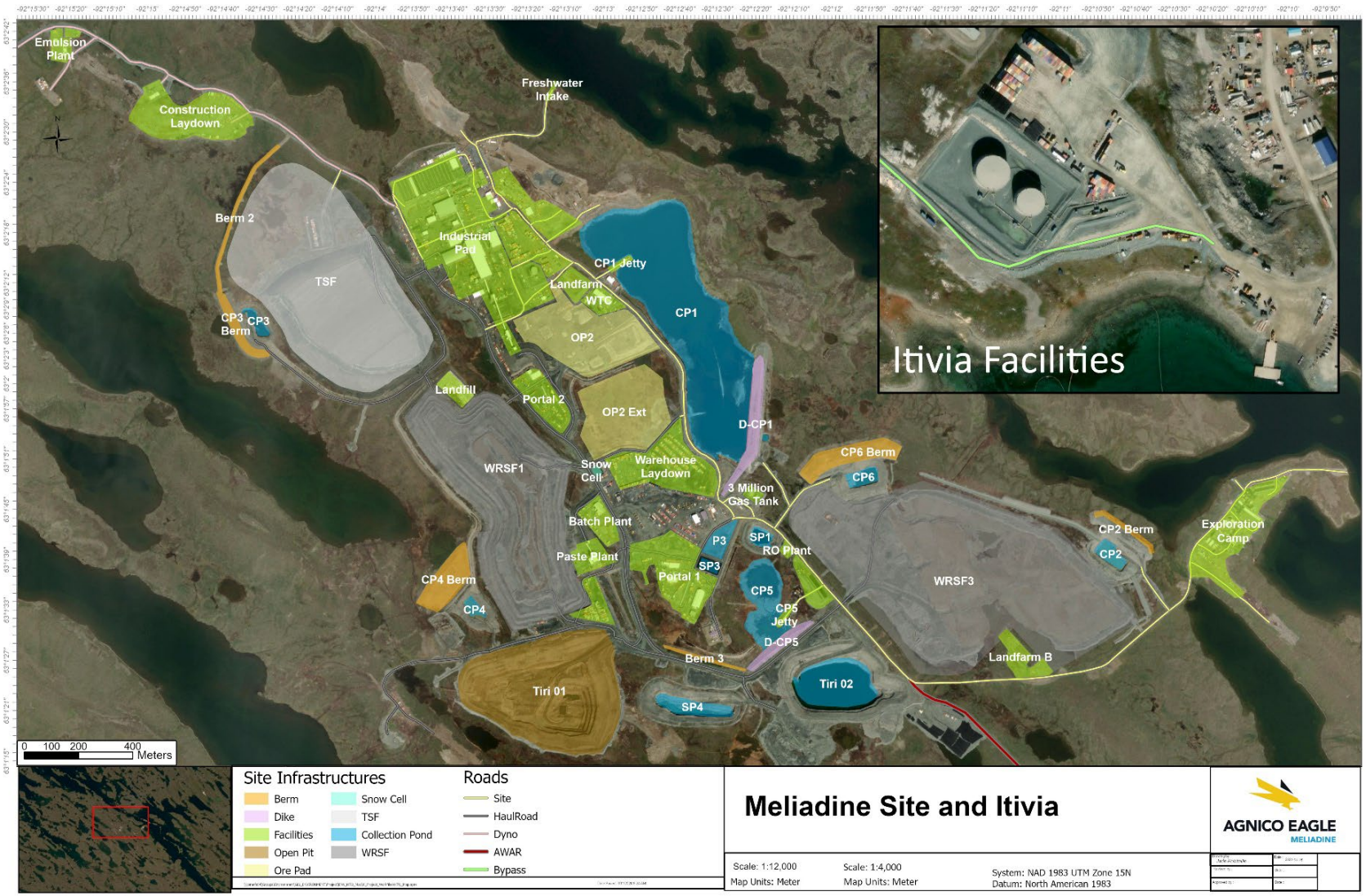

Figure 1: Meliadine Site and Itivia

SECTION 2. SUMMARY OF ACTIVITIES

2.1 2023 ACTIVITIES

2.1.1 Exploration activities

As required by water license 2BB-MEL1424 Part B Item 6i*: A summary of drilling/trenching activities and progressive reclamation of drill/trench sites;*

No trenches were dug in 2023 under this Water Licence, and a total of 250 holes were drilled. Among these, 143 were located inside the production lease KVPL11D01 and were drilled under NWB Water License 2BB-MEL1424. The drill site locations are located in Appendix 2.

The contractor for the drilling was Sarliaq Orbit Garant, and drilling was conducted using diamond drills between January and December 2023. Activities included both on-ice and on-land drilling. Drill site reclamation included removing remaining material and drill casings at each site once drilling was completed. Casings were cut at ground level when they could not be removed.

2.1.2 Construction activities

As required by water license 2AM-MEL1631 Part D Item 4*: The Licensee shall provide a brief summary of the Construction Summary Report required by Part D, Item 3, within the Annual Report required by Part B, Item 2; and*

As required by NIRB Project Certificate No.006 Condition 18: *The Proponent shall provide the NIRB with copies of as-built drawings and final design plans for Project infrastructure as they are developed/finalized to assist with the Board's ongoing monitoring efforts.*

In 2023 and early 2024, Agnico Eagle submitted the following Construction Summary (As-Built) Reports:

- Ore Storage Pad 2 (OP2) (Stage 2) on April 14th, 2023;
- Channel 2 Berm on August 2nd, 2023;
- Jetty- Collection Pond (CP)1 and Jetty-CP5 Upgrade on November 1st, 2023;
- CP6 Ramp Extension on March 18th, 2024; and
- Landfill Stage 4 Berm Raise on March 18th, 2024.

The Construction Summary (As-Built) Report for the replacement of the Itivia Culvert will be submitted to the NWB in April 2024.

Submitted as-built reports and drawings can be found on the NWB Public Registry at the following link: ftp://ftp.nwb-oen.ca.

The main 2023 construction activities are summarized in Table 1 below.

Table 1: Status of the construction activities undertaken in 2023

Activity	Status as of Dec 31, 2023
Continuation of Waste Rock Storage Facility 1 (WRSF1)	Ongoing
Continuation of Waste Rock Storage Facility 1 (WRSF3)	Ongoing
Continuation of Tiriganiaq Open Pit 1 (TIRI01)	Ongoing

Activity	Status as of Dec 31, 2023
Construction of Water Treatment Complex	Ongoing
Addition of second grinding thickener tank	Ongoing
Addition of cement handling facility at the Paste Plant	Completed
Construction of the CIL/Filter Press extension	Ongoing
Construction of the Power Plant extension	Ongoing
Rehabilitation of different infrastructures on site: Maintenance of Channel 5, reconstruction of Channel 3, Placement of thermal fill at CP2, CP3, CP4 and between the Tailing Storage Facility (TSF) and Channel 3	Completed
Construction of the Operations Landfill (Stage 4) berm raise	Completed
Construction of the Channel 2 Berm	Completed
Construction of the Containment Pond 6 ramp extension	Completed
Construction of the waterline discharge to sea	Commenced in 2023. To be completed in 2024
Construction of the secondary air intake ventilation system	Ongoing

2.1.2.1 *Waterline Construction Update*

In 2023, Agnico Eagle commenced construction of the waterline, focusing on the section from KM15 to KM30. Construction of the waterline and of associated infrastructures (e.g., required earthworks, containers to shelter drain valves at low points, containers at high points for release of air in waterline, traditional land use crossings, fiber optic leak detection system, markers, and construction pull outs) will continue in 2024. The status of the waterline construction is detailed below:

- 2023 season:
  - Recirculation loop on the mine site completed
  - Mechanical installation (pumps at the plant, high pressure, and low point containers along the AWAR)
  - Piping, optic fiber, and earthworks from KM30 (mine site) to KM15 completed
  - Material (aggregates) generation from Esker B10.

- 2024 season:
  - Piping, optic fiber, and earthworks from KM15 to KM08
  - Remaining mechanical installation
  - Directional drilling and diffuser installation preparation at Itivia

- 2025 season:
  - Piping, optic fiber, and earthworks from KM08 to Itivia
  - Commissioning.

All sections of the waterline installed to date were covered by material to ensure passage of wildlife. It should be noted that waterline construction was paused during the 2023 caribou migration as per the caribou work suspension protocol.

2.1.3 Mining Activities

The Meliadine Gold Mine began commercial gold production on May 14th 2019.

In 2023, the Meliadine Gold Mine continued commercial gold production from the Tiriganiaq Open Pit 1 (TIRI01) and underground operations.

In 2023, a total of 1,924,273 tonnes of overburden waste and 3,358,879 of waste rock were excavated from TIRI01. A total of 366,731 tonnes of ore was mined from the pit.

In 2023, no overburden waste, waste rock or ore were mined from Tiriganiaq Open Pit 2 (TIRI02). Mining activities at TIRI02 were paused since Q2, 2021 and TIRI02 is currently being used for underground saline contact water storage.

From the underground operation, a total of 301,877 tonnes of underground waste was trucked to surface, and a total of 1,358,913 tonnes of ore was mined and trucked to surface.

2.2 2024 MINE WORK PLAN

The 2024-2025 Mine Plan for the Meliadine Gold Mine was prepared and submitted to KivIA as part of the 2024 Amendment application for the Production Lease KVPL11D01. The Amendment application was submitted to integrate components of the 2024 Water Licence 2AM-MEL1631 Amendment Application.

In 2024, Agnico Eagle's mining plan is to continue to operate Tiriganiaq Underground Mine and TIRI01 at the Meliadine Mine site. A general site print is available in Appendix 3.

Environmental monitoring (wildlife, aquatic effects, groundwater, geochemistry, noise and air) will continue through 2024 in support of all operational undertakings at the Meliadine site as required by the NWB Type A Amended Water License 2AM-MEL1631, NWB Type B Water License 2BB-MEL1424, NIRB Amended Project Certificate No.006, and Metal and Diamond Mining Effluent Regulations (MDMER) regulations.

In 2024 and 2025, Agnico Eagle is planning to conduct the following activities under production lease KVPL11D01:

- Construction of 2 additional fuel tanks in Rankin Inlet within existing fuel containment area (on municipal lands)
- Start of the Water Treatment Complex (WTC) expansion work;
- Completion of the secondary grinding system;
- Completion of the Power plant expansion;
- Completion of the secondary air intake ventilation system;
- Completion of the CIL/Filter Press expansion;
- Completion of the cement handling facility at the Paste Plant;
- Completion of the waterline installation, including Apachee pass bypass;
- Directional drilling and diffuser installation for the waterline discharge;
- Culvert works on the AWAR and Bypass Road;
- Maintenance of different infrastructures on site: Channel 5 (continued), placement of rockfill as thermal cover in area between CP2, Channel 9, Channel 10 and WRSF3; filling of a small ponding area between CP6 access ramp and CP6 thermal berm; improving the berms at the bottom of the access ramp into Saline Pond 1 (SP1), maintenance of the collection channel downstream of D-CP1.
- Pending regulatory approval:

- Construction activities related to Pump Deposit (e.g., construction of haul roads, dewatering and fish out of ponds, Construction of Berm CP9, Channel 11, Channel 12, prepare WRSF6 for storage, etc.)
- Dewatering and fish out of Lake B7
- Construction of water management infrastructures for SP6

2.2.1 Culvert repairs work update

Two meetings took place between Agnico Eagle and DFO at the end of 2023 to discuss specific issues identified by DFO during previous inspections, mitigation measures/actions to address those issues, and tentative timelines.

A Request for Review was submitted to DFO on December 22nd, 2023, to replace Culverts 7 and 10 along the All-Weather Access Road and Culvert 11 along the Rankin Inlet Bypass Road at crossing locations containing salmonids. Replacement of the culverts is required to ensure safe fish passage. On February 29th, 2024, DFO issued a Letter of Advice authorizing the works, which are planned to be conducted in 2024. A design report will be submitted to the NWB for this work in accordance with the Water Licence.

One additional location along the AWAR (near KM 15) requires further fish habitat assessment to evaluate the need for and design of fish passage. Agnico Eagle aims to begin this assessment in 2024 and will continue to keep DFO apprised of work progress at this location.

Through various discussions with DFO, Agnico Eagle is also investigating the application of a modular open-bottom culvert system that maintains a watercourse's natural bottom substrate and hydraulic capacity. A trial has been proposed to determine if this type of crossing can be practically implemented in arctic regions.

Agnico Eagle will report on 2024 culvert repairs work in the 2024 Annual Report.

2.3 QUARRIES

In 2023, a total of 32,465 m^3 of material was taken from borrow pit B10 under permit KVCA11Q01. The total amount of material taken to date under this permit is 493,875 m^3 and the maximum allowed quantity to be taken is 750,000 m^3, as per 2022 Quarry Permit KVCA11Q01 Amending Agreement.

In 2023, 2,156 m^3 of material was taken from Meliadine esker under permit KVCA07Q08. Approximately 2,000 m^3 of material was taken from the same esker between 2020 and 2022. The total amount of material taken to date under this permit is 420,744 m^3. The maximum allowed quantity is 690,000 m^3, as per 2021 Quarry Permit KVCA07Q08 Renewal Agreement.

SECTION 3. WATER MANAGEMENT ACTIVITIES

3.1 WATER MOVEMENT

3.1.1 Fresh water obtained from Meliadine Lake

As required by Water Licence 2AM-MEL1631, Schedule B, Item 2: ***Monthly and annual volume of fresh Water obtained from Meliadine Lake*.**

Monthly and annual volume of fresh Water obtained from Meliadine Lake (MEL-11) under Licence type A.

A total of 501,196 m³ of fresh Water was withdrawn from Meliadine Lake in 2023, or approximately 67.5% of the total authorized volume of fresh water (742,000 m³/year) under the current Licence. The monthly distribution of fresh Water use is presented in Table 2.

Table 2: Monthly and annual volume of Fresh Water withdrawn from Meliadine Lake at monitoring station MEL-11 in 2023 under Licence A.

	January	February	March	April	May	June	July	August	September	October	November	December	**2023 Total**
Water withdrawn, m³	36,021	37,240	43,453	40,082	44,346	38,080	47,136	44,663	40,080	48,121	38,470	43,506	**501,196**

As required by Water Licence 2BB-MEL1424 Part B, Item 6a: ***The daily, monthly and annual quantities in cubic meters of all freshwater obtained from Meliadine Lake at Monitoring Station MEL-1 and MEL-2.***

Monthly and annual volumes of fresh Water obtained for camp or domestic uses from Meliadine Lake (MEL-1) and for drilling from Meliadine, A8 Lakes or small lakes and ponds proximal to the drilling targets (MEL-2) under Licence type B.

The monthly distribution and annual water usage volumes from MEL-1 and MEL-2 are summarized in Table 3. below; a total of 8,910 m³ or approximately 8.4% of the total authorized volume (299 m³/day; 106,000 m³/year) was withdrawn in 2023.

Table 3: Monthly and annual quantity of freshwater obtained from Meliadine Lake at monitoring stations MEL-1 and MEL-2 in 2023 under Licence B.

	January	February	March	April	May	June	July	August	September	October	November	December	**2023 Total**
Water withdrawn, m³	0	0	381	822	506	0	441	3,109	3,398	254	0	0	**8,910**

3.1.2 Fresh water obtained from Meliadine River.

As required by Water Licence 2AM-MEL1631 Schedule B, Item 4: ***Monthly and annual volume of fresh Water obtained from Meliadine River for road dust suppression activities.***

In 2023, no water was obtained from Meliadine River for road dust suppression activities. Further, no water from ponds proximal to the road was used for dust suppression on the AWAR in 2023.

As required by Water Licence 2AM-MEL1631 Schedule B, Item 3: ***Monthly and annual volume of fresh Water transferred to Meliadine Lake as a result of dewatering activities.***

No dewatering activities where water was transferred to Meliadine Lake took place in 2023.

3.1.3 Mine Water pumped from underground

As required by Water Licence 2BB-MEL1424 Part B, Item 6b: ***The daily, monthly and annual quantities, in cubic meters, of Mine water pumped from the underground.***

And

As required by Water Licence 2BB-MEL1424 Part B, Item 6j: ***Report all artesian flow occurrences.***

There were no occurrences of artesian flow in 2023. The monthly and annual volumes of mine water pumped from the underground are summarized in Table 4 below.

Table 4: Monthly and Annual flow volumes of underground mine water pumped to surface in 2023.

	January	February	March	April	May	June	July	August	September	October	November	December	**2023 Total**
Water pumped, m^3	1,589	3,069	3,670	5,269	4,673	5,615	9,183	7,765	7,794	8,515	8,447	6,384	**71,971**

3.1.4 Effluent discharged from CP1 to Meliadine Lake

The monthly and annual volumes of effluent discharged from CP1 to Meliadine Lake over 2023 are summarized in Table 5 below.

Table 5: 2023 Monthly and Annual volumes of water discharged from CP1 to Meliadine Lake

	January	February	March	April	May	June	July	August	September	October	November	December	**2023 Total**
Water pumped, m^3	-	-	-	-	-	209,024	81,119	54,894	184,508	-	-	-	**529,545**

3.1.5 Sludge produced by the EWTP-WTC and SETP-WTC

The monthly and annual volumes of sludge production from the Effluent Water Treatment Plant (EWTP-WTC) treatment process over 2023 are summarized in Table 6 below. Sludge produced by the EWTP-WTC treatment process was pumped to SP1. Sludge management is further discussed in section 3.9.4.3 of Version 13 of the Water Management Plan.

Table 6: 2023 Monthly and Annual volumes of sludge produced by the effluent water treatment plant

	January	February	March	April	May	June	July	August	September	October	November	December	**2023 Total**
Water pumped, m^3	-	-	-	-	-	2,061	1,612	362	811	-	-	-	**4,847**

3.1.6 Saline Effluent Discharged to Marine Environment at Melvin Bay

No saline effluent was discharged to sea in 2023.

3.1.7 Adaptive Management of Discharge to Meliadine Lake

As required by Water Licence 2AM-MEL1631, Schedule B, Item 6: ***Summary of the Adaptive Management procedures implemented to minimize the discharges into Meliadine Lake during the pre-freshet, open-water and pre-freeze periods.***

Schedule B, Item 6 of the Amended Water Licence 2AM-MEL1631 will come into effect following commissioning of the Waterline (approved by the Minister of Northern Affairs on January 31st 2022).

Operation of the waterline for discharge to Melvin Bay will be primarily used for the removal of saline groundwater from site. Residual capacity of the waterline will then be used to minimize or eliminate discharges to Meliadine Lake as an Adaptive Management approach throughout the open water season each year. A summary of the Adaptive Management procedures implemented following commissioning of the Waterline will be available in future annual reports, once the Waterline is operational.

More information regarding applicable Adaptive Management strategies can be found in the most up to date version of the Adaptive Management Plan (Agnico Eagle, 2022).

3.1.8 TDS Concentrations Reporting to CP1

As required by Water Licence 2AM-MEL1631, Schedule B, Item 8: ***Discussion on the behavior of the Total Dissolved Solids (TDS) concentrations in surface Contact Water reporting to CP1 during the reported year, and, if any TDS concentration peaks are observed, identification of potential sources that might have contributed to higher loads of TDS.***

Total Dissolved Solids (TDS) has been a chemical parameter of interest since the onset of operations at Meliadine. Frequent measurements of electrical conductance (EC) of surface contact water were collected from the surface contact water collection ponds and other surface contact runoff infrastructure from the onset of freshet to the start of ice formation in 2023. The intent of this monitoring program is to identify any anomalous trends in TDS loading behaviours across the site.

The processes which may impact TDS patterns in surface runoff on site are numerous and their interactions are complex:

- freshet often brings large volumes of runoff with low TDS concentrations into the water management system, contributing to the dilution of existing surface waters within the mine collection ponds;
- once ice and snow covers are melted, surface runoff following significant rainfall events exceeding the ground infiltration capacity could allow the mobilization and connection of water that has a higher TDS content (e.g., surficial ponding water on pads, pore water in waster rock or ore) with the collection ponds;
- thawing of the active layer may result in the release of solutes locked in the soil from the previous year active layer freeze-back;
- significant rainfall events may flush pre-event solutes from the active layer or may result in infiltration-excess overland flow of rainfall entering collection ponds, depending on the antecedent soil moisture conditions;
- exclusion of solutes as water freezes in ponds can cause TDS concentrations to rise in the water held below-ice during winter (cryo-concentration).

The results of the monitoring program are provided in units of mg/L-TDS rather than the field measurement units of µS/cm-EC for ease of comparisons with the laboratory analyzed TDS datasets and with the TDS concentration limits required by the Licence for discharge to Meliadine Lake.

TDS was computed using the following equation:

$$TDS = ke \cdot EC$$

where TDS is in mg/L and EC is measured in µS/cm at 25°C (specific conductance). The correlation factor, ke, used in the conversions of EC to TDS in the monitoring program was 0.6, derived as an approximate average from ratios of TDS to EC analyzed in MEL-14 samples collected from 2018 to 2023.

Field parameter readings of surface contact runoff collection ponds were generally collected on a daily to weekly basis. This frequency ensured a robust dataset of potential TDS fluctuations could be captured following normal pond water level rise and fall throughout the season.

When establishing a monitoring program for EC data in the collection ponds on site, variation in the water quality within the vertical water column must be considered. One process significantly driving variation across the water column is due to a TDS-exclusion effect in which ice formation leads to migration of TDS from ice into the underlying water (Zhang et al., 2012)[1]. Freeze-thaw cycles – particularly in water bodies which not only maintain a volume over the winter but also do not freeze to the bottom – may result in stratified layers of varying TDS concentrations, often coinciding with thermoclines (Zhang et al., 2012). This process can be amplified by the influent of high volumes of runoff with low TDS concentrations which, due to warmer temperatures and lower density, may create an additional stratified layer on the surface of the water body. Thus, readings collected at a single elevation within the water column could misrepresent the average TDS of the total volume contained within the collection pond.

Measurements of EC were normally collected at an approximate depth of one meter below each pond surface, generally coinciding with the location of pump intakes in the ponds (to account for stratification of

water quality) and subsequently the approximate quality of the water being discharged directly to (in the case of CP2, CP5 and CP6) and towards (in the case of CP3 and CP4 via Channel 1) CP1. Given the shallower nature of CP5, EC measurements at one meter depth were not always possible. As such, measurements were collected near the bottom of the water column in CP5 which was noted to be mostly representative of the rest of the water column.

3.1.8.1 *CP1 Water Volume*

Figures 2 to 7 below provide the results of the EC monitoring conducted at each surface runoff collection pond on site: CP1, CP2, CP3, CP4, CP5, and CP6. TDS-converted EC measurements are supplemented with TDS data collected from compliance monitoring stations associated with each collection pond (e.g. MEL-12 for CP1, MEL-19 for CP2, etc.). TDS-converted EC measurements of CP1 were also supplemented with TDS-converted EC measurements from continuous monitoring of the EWTP-WTC treatment stream, as well as TDS data collected from the final-discharge-point compliance station MEL-14. The figures also present the water volume data for each pond to highlight TDS behaviours associated with changing water volumes.

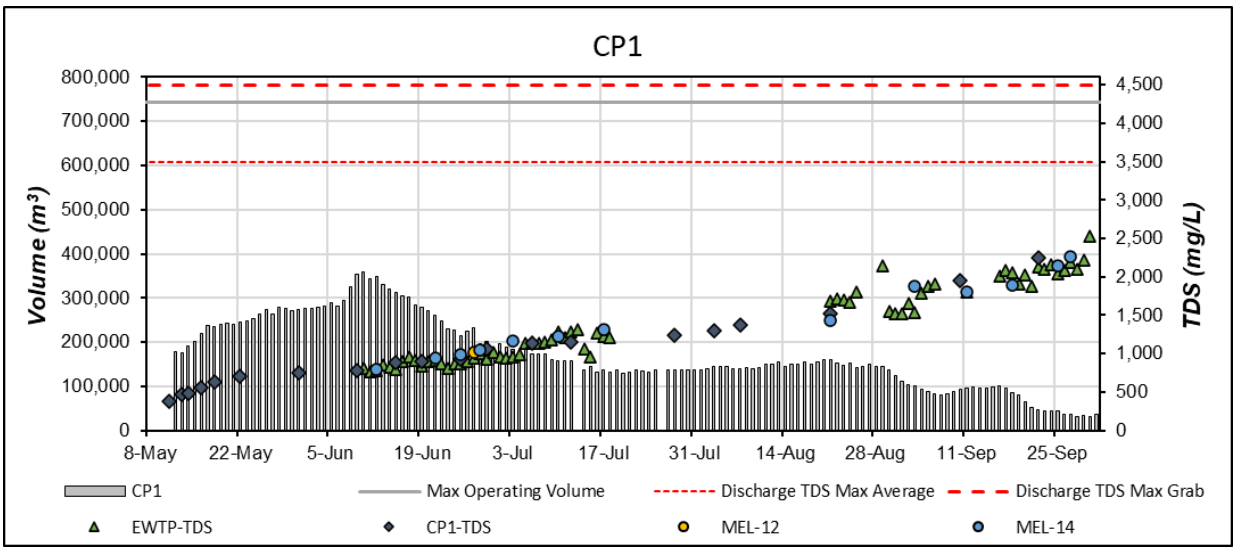

Figure 2: CP1 pond volumes and TDS measurements from water sample analysis and in situ EC readings.

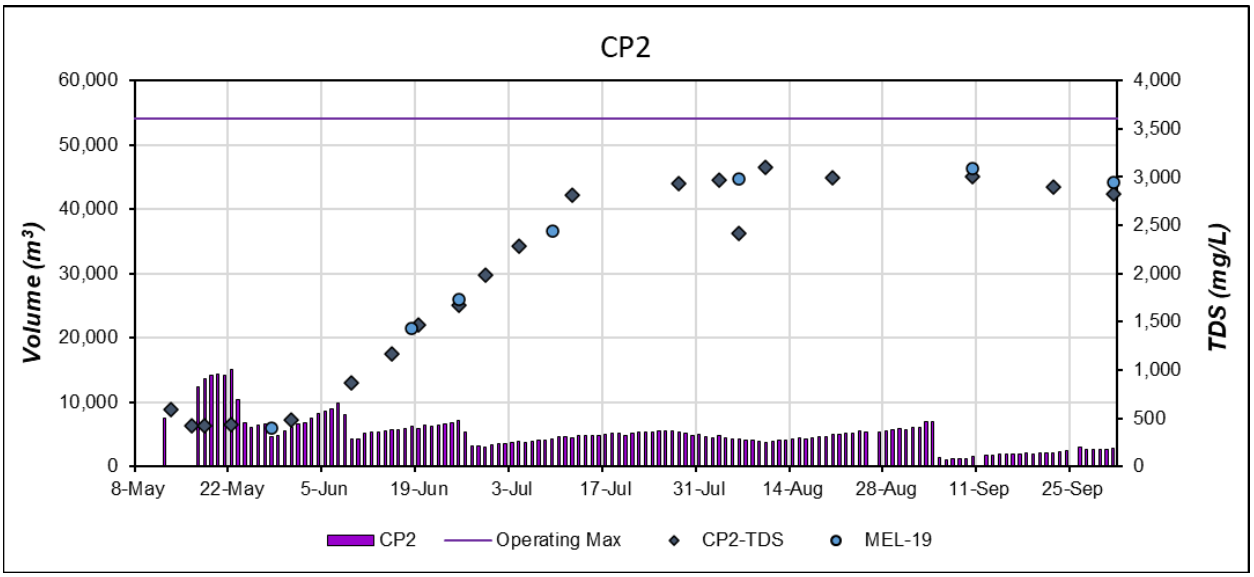

Figure 3: CP2 pond volumes and TDS measurements from lab water quality analyses and in situ EC readings.

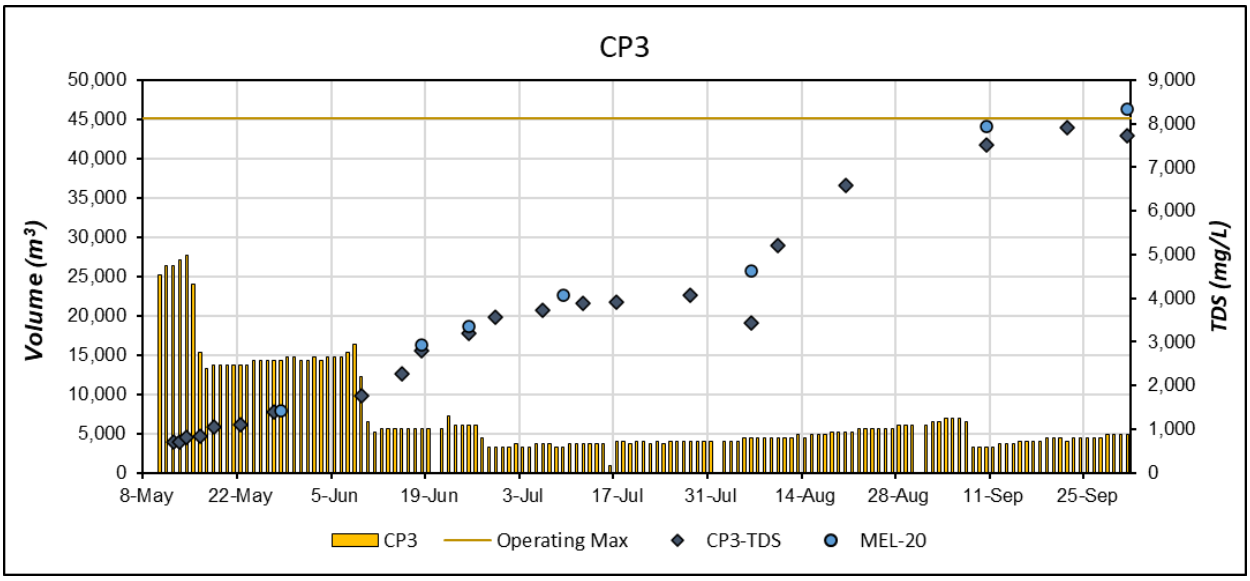

Figure 4: CP3 pond volumes and TDS measurements from lab water quality analyses and in situ EC readings.

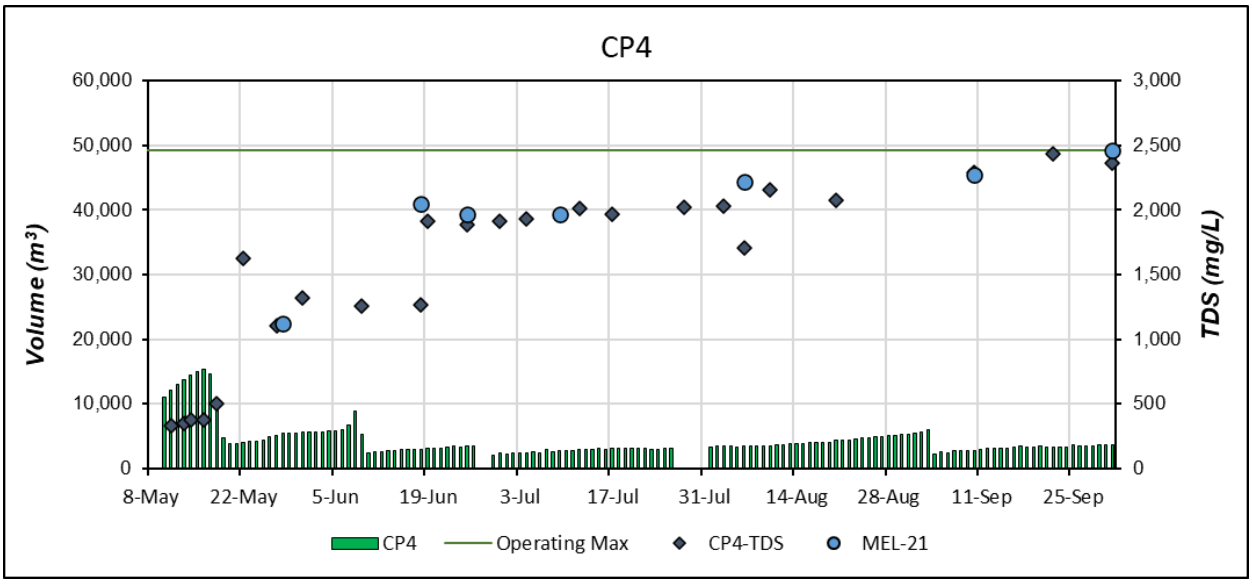

Figure 5: CP4 pond volumes and TDS measurements from lab water quality analyses and in situ EC readings.

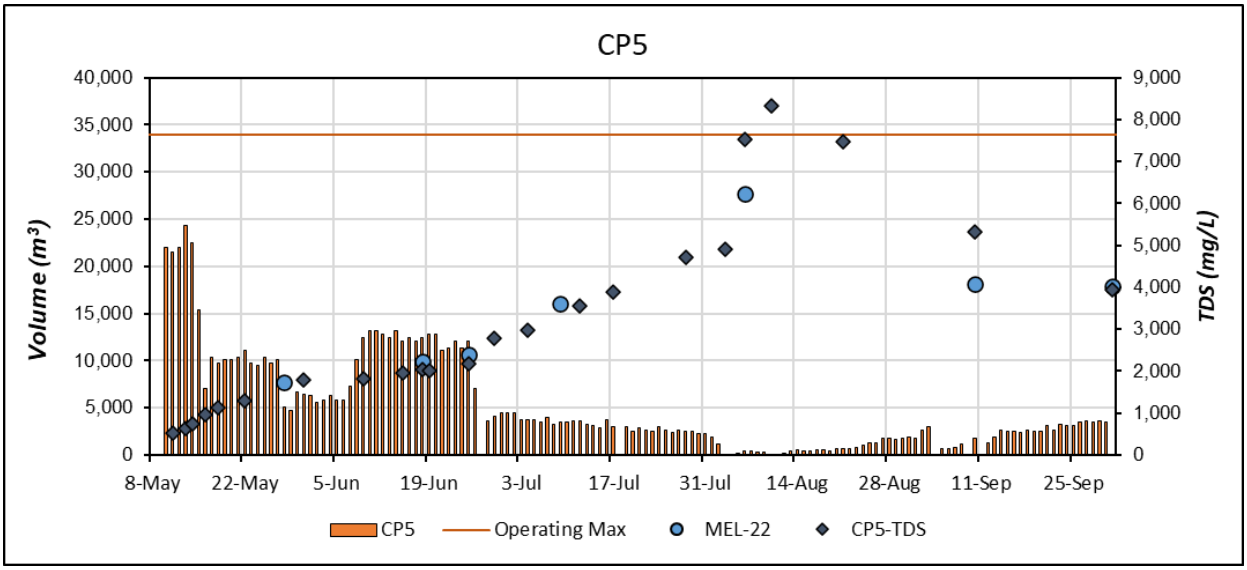

Figure 6: CP5 pond volumes and TDS measurements from lab water quality analyses and in situ EC readings.

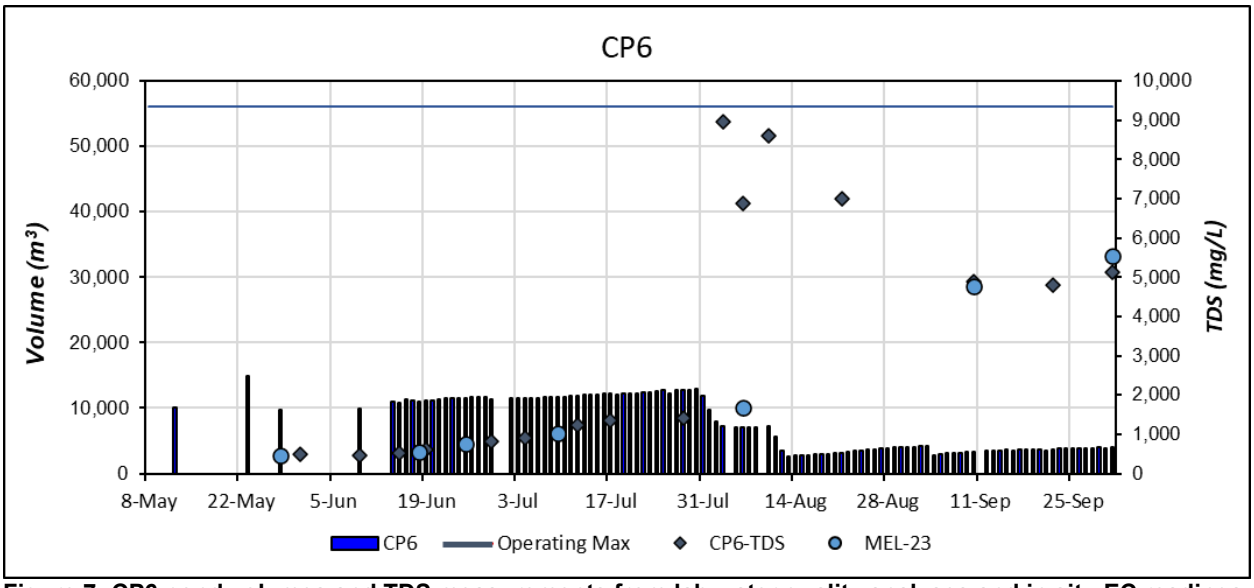

Figure 7: CP6 pond volumes and TDS measurements from lab water quality analyses and in situ EC readings.

A general trend observed at each facility is an increase in TDS over the duration of the open water season. This seasonal trend has been observed in previous years and is generally attributed to active layer thaw, resulting in the release of any solutes trapped in the active layer, and evaporative processes. A strong correlation between water volume and TDS concentration can also be observed in each pond, in which larger volumes of water correlate to reduced concentrations of TDS. Examples of this can be seen where lower TDS concentrations are observed during the freshet period, and subsequently increase after pumping commences and water is drawn down in each facility. In 2022, a drop in TDS was observed after significant rainfall events. The year 2023 was comparatively dry, and a consistent rise or consistently higher TDS values are observed for all ponds after freshet.

Overall, 2023 can be characterized by dry conditions and correspondingly low volumes retained in storage throughout the open water season. These conditions favoured elevated concentrations of TDS relative to normal climate years, but do not represent elevated loads of TDS reporting to CP1, as shown in Figure 2 where TDS concentrations remain well below Licence criteria for discharge to Meliadine Lake. No discrete or anomalous sources of TDS loads were thus observed in 2023.

3.1.8.2 *Ore stockpile runoff monitoring program*

As recommended by CIRNAC-01 through 2021 Annual Report Comments: Establish a program to measure runoff quantity and quality from Ore Stockpile 2 (OP2).

Following submission of the 2020 Annual Report in 2021, Agnico Eagle received a recommendation from CIRNAC (CIRNA-01) to provide more information on the nature and make-up of “rest of site” areas/facilities (as defined in the Water Balance and Water Quality Model (WBWQM) at that time) that contributed significantly to the predicted TDS loadings to CP1. Agnico Eagle identified this land area-type to represent other surfaces within the CP1 watershed including natural ground with vegetation, disturbed ground, a portion of WRSF1, a portion of the Tailing Storage Facility (TSF), the Landfill area, and OP2, as well as effluent produced by the Sewage Treatment Plan (STP), Landfarm Oil-Water treatment, and Reverse Osmosis (RO) Plant.

In a follow-up comment for the 2020 Annual Report (CIRNA-01), CIRNAC requested Agnico Eagle provide further clarification on the TDS loading contribution from these land area-types, to which Agnico Eagle committed to improve clarity when reporting on model methods in future annual reports.

In the 2021 Annual Report submission, Agnico Eagle provided a significantly reworked WBWQM, developed using the GoldSim software, and included discussions pertaining to new Licence requirements (under Part E, Item 13) related to assessing trends in predicted water quality. Additionally, Agnico Eagle included a discussion on TDS concentrations reporting to CP1 per Schedule B, Item 8 of the Amended Licence, which included a seepage and push-piezometer monitoring program across site.

Following submission of the 2021 Annual Report, Agnico Eagle received a comment from CIRNAC (CIRNAC-1.2) recommending Agnico Eagle to update the WBWQM submitted in the 2020 Annual Report and report on the actual versus predicted trends of TDS loads reporting to CP1 with emphasis on the "rest of site" area. As this model had been superseded by the GoldSim model developed and submitted in the 2021 Annual Report, Agnico Eagle stated they would not update the previous model and would focus on model updates per Schedule B, Item 5 of the Amended Licence. Additionally, clarification was made that the components that made up the "rest of site" land area-types from the previous model were represented by individual source terms in the updated GoldSim model.

In a follow-up comment received from CIRNAC (CIRNA-01), which followed-up on the 2020 Annual Report comment CIRNA-01, it was recommended Agnico Eagle establish a program to measure runoff quantity and quality from OP2, provide additional details and discussion of OP2 as it relates to the WBWQM, and provide additional information on the nature of OP2 with emphasis on TDS loadings to CP1. Agnico Eagle responded to this comment describing the nature of TDS loadings from OP2 and included consideration of implementing an OP2 monitoring program for the 2022 open water season.

Section 3.1.8.1 of the 2022 Annual Report provided a discussion on the results of a runoff monitoring program at OP2 that was conducted during the 2022 open water season. In the 2022 Annual Report, Agnico Eagle committed to continuing OP2 monitoring in 2023 and work on areas of uncertainty.

This section presents the results of the continued monitoring program of OP2 runoff quality, as well as a revisited approach to assess runoff volume generated by the ore pad and its impact on the global CP1 TDS mass balance.

OP2 Context

OP2 is divided into two separate pads: OP2 Stage 1, constructed in 2019 (Agnico Eagle Mines Limited, 2018), and OP2 Stage 2, (also referred to as the OP2 extension, or OP2-ext) completed at the end of 2022 (Agnico Eagle Mines Ltd, 2023). Runoff from a large area of OP2 is captured by Channel 1 which runs in between the pads, which also collects the converging drainage from the Industrial Pad, the TSF and a portion of WRSF1. Channel 1 empties into the internal waterbodies H9 and H8 prior to flowing through Culvert 3 into final collection pond CP1.

As presented in section 3.1.8, field measurements of electrical conductance (EC) are routinely measured and used to approximate (see conversion equation in section 3.1.8) the TDS concentration of water bodies across the site. TDS concentrations in surface water upstream of Channel 1 (i.e., water directly in

Channel 1, upstream of Culvert 2, from CP3 and from CP4) and downstream of Channel 1 were used to aid the investigations into OP2 TDS loading.

To characterize the TDS behavior of seepages originating from OP2, a total of 8 drive point piezometers, (*Solinst 615 Stainless Steel*) were installed on the margin of OP2 to capture subsurface flows and measure TDS concentrations. 2 of the 8 installed piezometers (PZ-7 and PZ-8) yielded no water throughout the season and were thus excluded from the analysis. Locations of piezometers were determined in the aim of capturing areas of both wetter and dryer soil conditions. Other conditions such as ground cover, sun exposure, and active layer depth allow the locations to be representative of most conditions found within the area of OP2. Figure 8 shows the drainage areas of Channel 1 and OP2, as well as the locations of the piezometers within the surrounding of OP2.

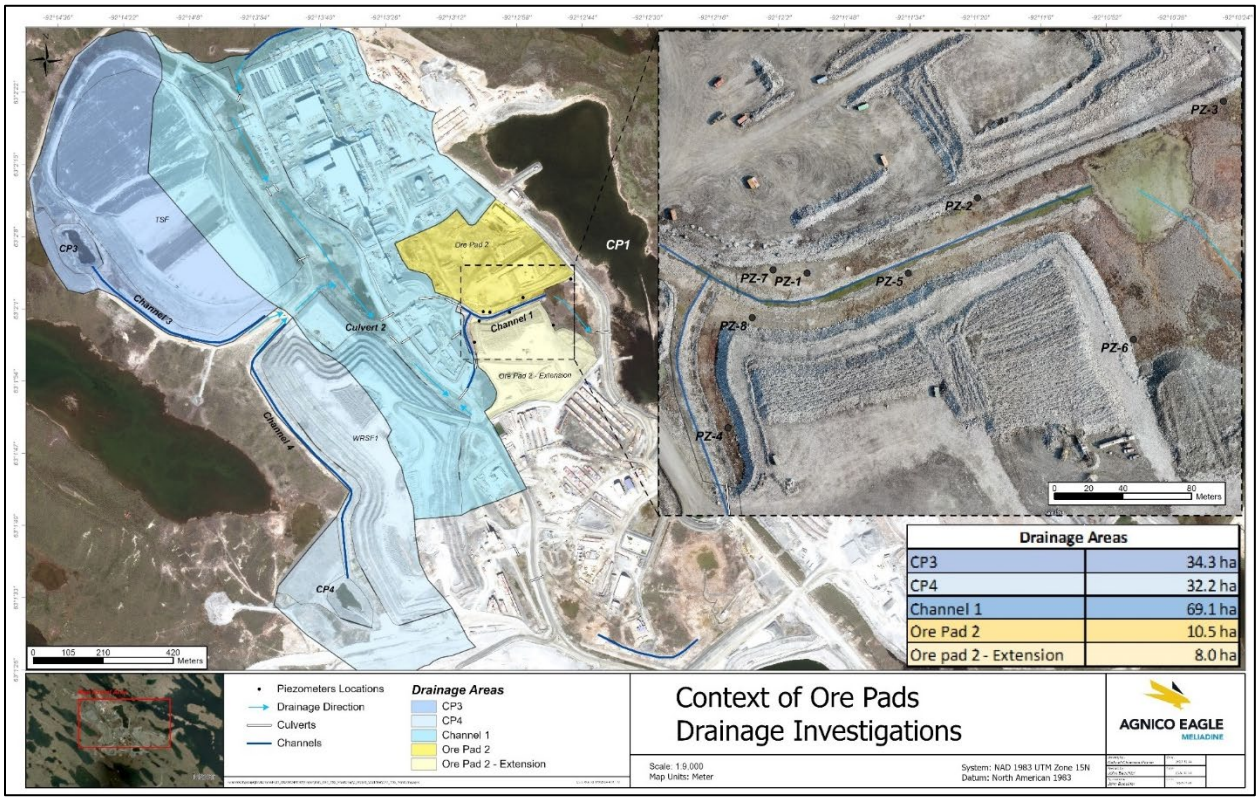

Figure 8: Drainage of OP2 and position of the piezometers installed for seepage monitoring.

TDS monitoring

Sampling of water in piezometers and measurements of TDS concentrations were conducted between July 1st and October 20th2023. A wide range of TDS concentrations were observed among piezometers, but also between sampling dates for some piezometers (i.e., PZ-4 and PZ-5). To determine a reference trend for OP2 seepages that could be used in further modelling analysis of the Channel 1 and CP1 mass balance, an average of the TDS concentrations measured across all piezometers was calculated for each sampling date. The first graph on Figure 9. shows the resulting seepage TDS average, referred to as the reference trend.

TDS concentrations measured respectively upstream and downstream of Channel 1 were used to assess the potential impact of runoff and seepages from OP2 on the TDS mass balance of Channel 1. To distinguish the potential impacts of OP2 seepages from the surface runoff, a reference surface runoff TDS trend has been estimated from an average of TDS concentrations measured in CP3, CP4, and in surface water just upstream of Culvert 2. The use of these waterbodies to define a TDS reference trend for surface runoff (green line in Figure 9) is deemed to be a conservative TDS concentration estimate, since they capture the drainage from WRSF1 and the TSF, which present similar hydrothermal dynamics as OP2 (*Okane Consultants Inc., 2022*).

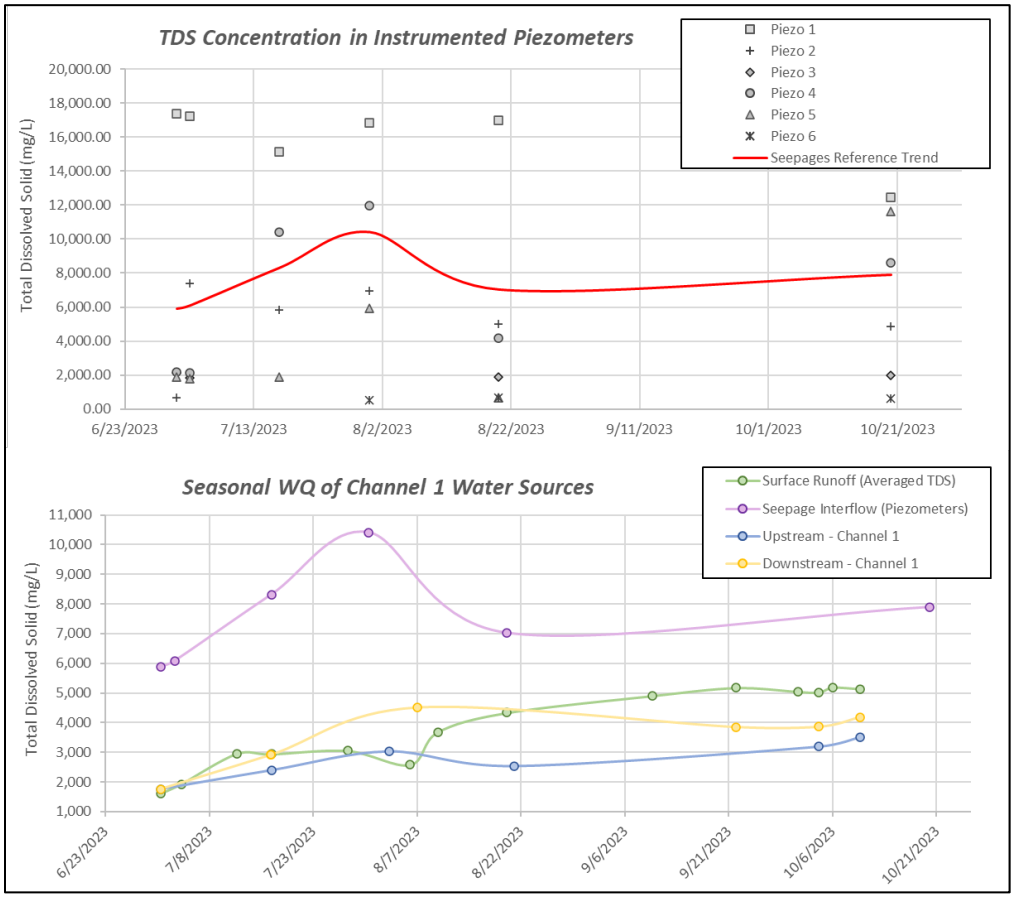

Figure 9. Trend in TDS concentrations from piezometer measurements used as reference for OP2 seepage and TDS concentration of other key sources involved in the Channel 1 mass balance.

Improvement of Runoff Contributions Modelling

The volumes of water flowing into Channel 1 to be included along the TDS trends in the mass balance computation were determined through hydrological modelling using the site-wide WBWQM, built in the GoldSim v14 software platform (*See section 3.2 and Water Management Plan Section 5.1*).

For the disturbed mine areas (like OP2), only surficial runoff or quick flow component is considered, as the subsurface runoff or deeper baseflow are considered null. Quick flow on disturbed areas is determined as a proportion of the natural surface runoff coefficient. The proportion is adapted/calibrated

to the characteristics of the disturbed surface (e.g., for OP2, a runoff coefficient of 0.8 is applied to the total rainfall and snowmelt).

For the purpose of the simulation on a site-wide scale, this modelling strategy has proven to be effective based on existing validation of WBWQM methods (Lorax Environmental Services, 2024, pp. 4-12 – 4-17). However, for the purposes of investigation on the impact of the OP2 runoff on the CP1 TDS mass balance, the model was slightly refined to better simulate the processes at the scale of the pad and distinguish contributions from seepages versus surface runoff. For that purpose, the following modelling process was applied to the OP2 catchments:

1. Apply the three flow components system to the OP2 catchment. This system partitions the runoff into quick, inter and base flows, that respectively correspond to surface flow generated by storm or snowmelt, the lateral movement of infiltrated meteoric water through the shallow overburden and active layer, and the groundwater discharge (note that the baseflow component was considered as null due to the ice-rich and frozen state of the soil beneath the active layer, [Lorax Environment Services, 2024]. More detail on the three-flow system can also be found in this report).
2. Implementation of an evolution of the runoff and infiltration coefficients throughout the open water season to better reflect the dynamic state of the active layer and its impact on runoff generation.

Due to its flat structure of compacted media, snowmelt or rainfall events often result in stagnant surficial ponding water on OP2's surface, infiltration and percolation are thus important processes. Lateral drainage produced by OP2 originates from the margin slopes or the displacement of the excess infiltrated water along the ice-rich layer which are both greatly influenced by the development of the active layer. Moreover, the connections between OP2 and Channel 1 are controlled by a riparian buffer which is in turn also greatly influenced by the dynamic state of the active layer. This adapted modelling strategy shouldbetter reflect the runoff (volume, path, timing) generated at the scale of the ore pad.

The daily simulated inflow volume to Channel 1 (i.e., upstream of Channel 1 and OP2 surface runoff and seepage) were combined with the TDS concentration trends presented above to establish a continuous daily TDS concentration series for Channel 1. The resulting modelled TDS series is presented in Figure 10 along with the periodic TDS measurements conducted downstream of Channel 1. Good agreement between the modelled TDS concentration and the field measured values is observed, suggesting that the used TDS signatures and the modelled inflows are representative of the actual dynamics that occurred during the 2023 open water season.

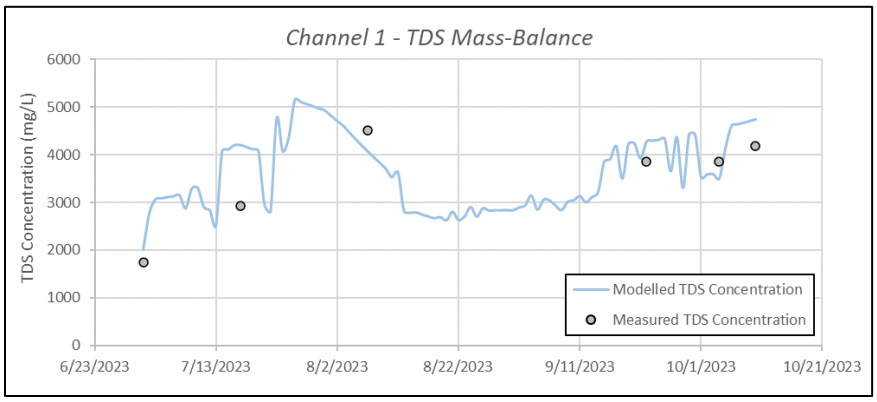

Figure 10: Results of the modelled Channel 1 TDS mass balance compared to measured TDS concentrations downstream of Channel 1 during the 2023 season.

The computed Channel 1 mass balance using the TDS concentration trends and the modelled inflows was integrated to the CP1 TDS mass balance simulated using the WBWQM (see Annual Report section 3.2). Modelling of the runoff contributions from OP2 conducted here, in addition to the seepage TDS measurements and establishment of continuous trends improve the accuracy of OP2 loading contributions to the CP1 TDS mass balance that are normally simulated with a single source term water quality in the WBWQM.

Two specific periods were investigated regarding the impact on CP1 TDS: July 1st to October 20th and May 1st to October 20th. The first period corresponds to the period for which TDS measurements were available downstream of Channel 1 and used for the validation of the modelled mass balance. The second period covers the whole open water season including freshet and should be interpreted with more caution since TDS is not validated for the entire period. Figure 11 shows the impact of OP2 runoff and seepage relative to all other sources of water, on the CP1 TDS mass balance for the two aforementioned periods.

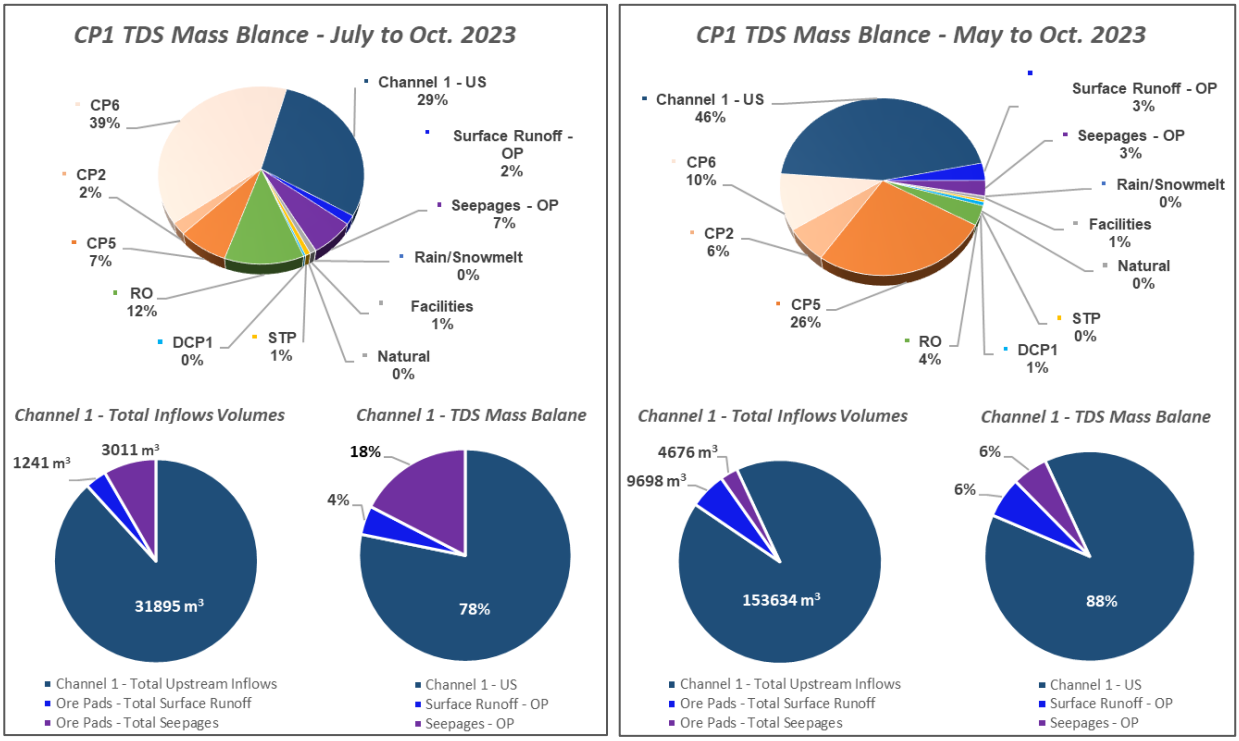

Figure 11. Results of the CP1 and Channel 1 TDS mass balance computation and proportion of the inflows volumes to Channel 1 for the a) July to October and b) May to October periods.

The period of July 1st to October 20th of the 2023 open water season was one of the driest years recorded on site. The modelled TDS contributions from OP2 represent 7% of the CP1 TDS mass through seepage and 2% through surface runoff. This is explained by the limited contributions of all other sources dominated by surface runoff, which was negligible due to dry conditions during that period. In comparison, the contribution of TDS by OP2 over the whole open water season (May 1st to October 20th) on the CP1 mass balance is significantly less (3% seepage; 3% surface runoff). These results suggest that the impact of seepage and runoff from OP2 on CP1 TDS concentrations is limited and does not warrant additional intervention to manage this source.

3.1.9 Use of Reclaim Water from Contact Water management facilities

As required by Water Licence 2AM-MEL1631 Part E, Item 1: ***The Licensee shall maximize to the greatest practical extent, the use of Reclaim Water from Contact Water management facilities for use in the mill, drilling, and for dust suppression. The Licensee may use Reclaim Water for dust suppression in areas where any direct flow into a waterbody is not possible and no additional impacts are created.***

In 2023, no water from the Contact Water management facilities was used as reclaim water for milling purposes. The average pore water salinity of the tailings was slightly below the design assumption in 2023, however results were elevated above the design assumption for the open water seasons. The oscillating downward trend that has been observed from late 2020 continued in 2023. The average pore water salinity decreased about 2% from 2022 to 2023, indicating a favourable trend towards the design assumption.

The pore water salinity of the filtered tailings is elevated due to the saline moisture entrained in the ore being hauled from underground and processed. Previously, when Contact water was used as reclaim water for milling purposes, the pore water salinity of the tailings increased significantly. The pore water salinity of the filtered tailings is a control parameter for the thermal performance of the dry stack TSF.

For 2023 the decision was made to continue monitoring the pore water salinity of the tailings and see if the downward trend in the pore water salinity continues throughout 2024 to protect the thermal performance of the TSF.

In 2023, a trial was conducted to evaluate the potential use of the RO Plant permeate water as a source of reclaim water for the mill. The intention with this study was to simulate the treatment of site contact water to provide a low salinity source of reclaim water to the mill. As the salinity of permeate would be lower when treating surface contact water, impacts to milling processes and tailings salinity would be minimal. At present, the RO Plant is used to treat higher salinity sources of water on site (described in section 3.9.6 of the Water Management Plan) and thus the permeate water salinity is not low enough for direct mill water feed based on the reasoning previously described. Once the waterline is available, AEM will further assess using the RO Plant to treat surface contact water for the purpose of generating low-salinity reclaim water for use at the mill.

In 2023, approximately 6,000 m^3 of Reclaim Water was used for dust suppression purposes. Water was withdrawn from CP2 and a natural depression on the south side of WRFS3 (within the mine water management footprint) and use for dust suppression was localized to the mining footprint area, including the hauling roads and open pit areas. Runoff from these areas is captured by the Contact Water management facilities reporting back to CP1.

216 m^3 of Reclaim water was used for surface drilling in 2023. The water was picked up from a natural sump on the south side of WRSF3 and rather than moving it to CP1, the water was delivered to the drills. The drills were operating within the current mine footprint.

3.2 WATER BALANCE WATER QUALITY MODEL REPORTING SUMMARY

As required by Water Licence 2AM-MEL1631 Schedule B, Item 5: ***Updated Water Balance and Water Quality Forecast, as required under Part E, Item 13***

The Licensee shall, at a minimum of once every year following commencement of Operations, submit to the Board for review an updated Water Balance and Water Quality Forecast. This update shall include all monitoring parameters and shall identify which Mean Annual Concentrations are within 10% of the respective maximum authorized Monthly Mean Concentrations for regulated parameters. Additionally, the Mean Annual Concentrations for all monitoring parameters in the current reporting year shall be compared to those reported in the previous year, and if the respective concentrations are increased by more than 20%, a detailed technical assessment identifying specific sources of loadings and the proposed parameter forecasts shall be provided to the Board for review.

And

As required by Water Licence 2AM-MEL1631 Schedule B, Item 7: ***Discussions on the available storage capacity for both saline and fresh Water, including the volumes of Water transported to Melvin Bay and the volumes of Water discharged to Meliadine Lake, as well as the projected volumes of water requiring storage in the upcoming year.***

A Water Balance and Water Quality Model (WBWQM) was developed for the Meliadine project in 2021, superseding previous WBWQM models. The main changes to the new model were the use of the GoldSim modelling platform (v14) with a revised framework and revised inputs from previous models. The site-wide water balance and water quality model (WBWQM) is set up to run on a daily time-step. The primary modelling objective is the prediction of water volume and solute load transfers across the different infrastructures of the mine site, and, after being treated to the receiving environment during the current Meliadine operation. The water balance component of the model is based on a distributed catchment approach, where water volumes are estimated from water inputs (i.e., rainfall and snowmelt) and runoff coefficients calibrated for natural or undisturbed areas, and for each distinct altered area of the site (e.g., facilities, stockpiles, tailings storage facility, open pits and underground mine). Like the distribution of the runoff coefficients, water quality across site is modelled using reference signatures (source terms) assigned to non-contact (undisturbed) and altered areas. The combination of source terms with the modelled flows allows the prediction of the water quality using a mass balance approach. Water management facilities (i.e., collection ponds, sumps, open pits, etc.,) are represented by 'pool' elements in GoldSim WBWQM model. The pool elements allow the model to track multiple inflows and outflows simultaneously, and to simulate the mixing of the mass balance simulated water quality of the inflows, while also ensuring the conservation of all elements mass within the pool.

For a detailed explanation of the site water balance model setup and methods, including modeling inputs and assumptions, refer to section 5.1 of the Water Management Plan.

The model was updated in early 2024 for submission in the 2023 Annual Report. The following section presents the results of the WBWQM following the update of the climate input data, pumping records and pond levels recorded over the past year.

3.2.1 Water Balance Model Results

The water balance model predictions for key nodes are presented in this section.

3.2.1.1 *CP1 Water Volume*

As shown in Figure 12 , the model results indicate a cyclical water elevation and volume response in CP1 each year, characterized by a slight increase via winter inflows and a rapid increase during freshet. Water elevations are then drawn down through each discharge season before freeze-up in Q4 of each year.

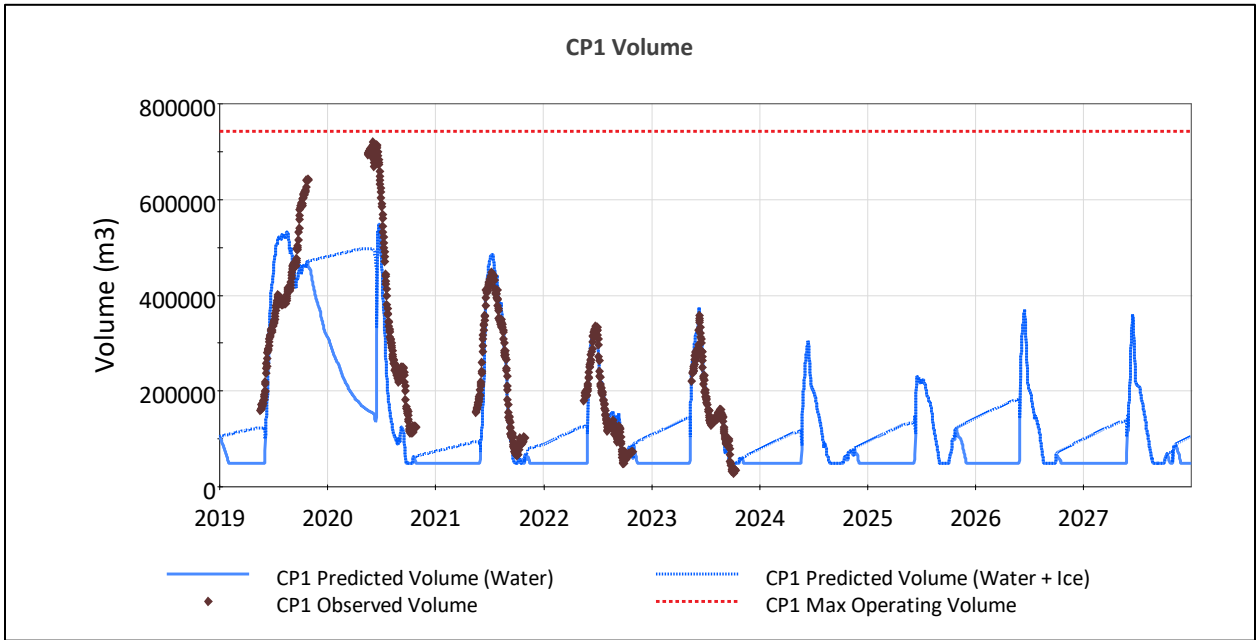

Figure 12: Forecasted and observed CP1 volume.

3.2.1.2 *CP1 Water Quality*

Figure 13 shows the model results for the TDS concentration in CP1. The TDS trend is characterized by reduced TDS concentration at the onset of freshet followed by increasing TDS concentration as the discharge season progresses. As CP1 volume is reduced, the TDS concentration in the pond is more influenced by the upstream feed water quality as there is less buffering capacity of the water in the pond.

The TDS trend is also characterized by elevated TDS concentration during the winter periods. As lake ice grows, the liquid quantity within the pond is reduced while maintaining the pre-ice chemical mass within the pond. As such, the concentration of TDS in the liquid water portion elevates. After the winter period, ice melt occurs and the volume held in ice is returned to the liquid portion, reducing the TDS concentration at freshet.

An anomalously high TDS concentration is predicted in the 2025 to 2026 winter period. The model predicts a significant rainfall in October 2025, following the discharge period. This increase in volume corresponds to an increase in the mass of TDS in CP1 prior to ice formation. As ice forms in the 2025 to 2026 winter period, the liquid portion of water is reduced (driven by the ice growth algorithm), resulting in a higher concentration of TDS in the liquid portion, as the mass of TDS is held constant. The concentration then decreases at freshet, prior to the start of the 2026 discharge period. It is worth emphasizing that this predicted increase in TDS occurs outside of the discharge season (i.e., during winter months).

Similarly, it should be noted that although TDS concentrations rise above the Maximum Authorized Monthly Mean Concentration (MAMMC) of 3500 mg/L most winters, there is no discharge taking place during these periods. The TDS concentration in CP1 during the annual discharge period is predicted to remain below the MAMMC over the life of mine.

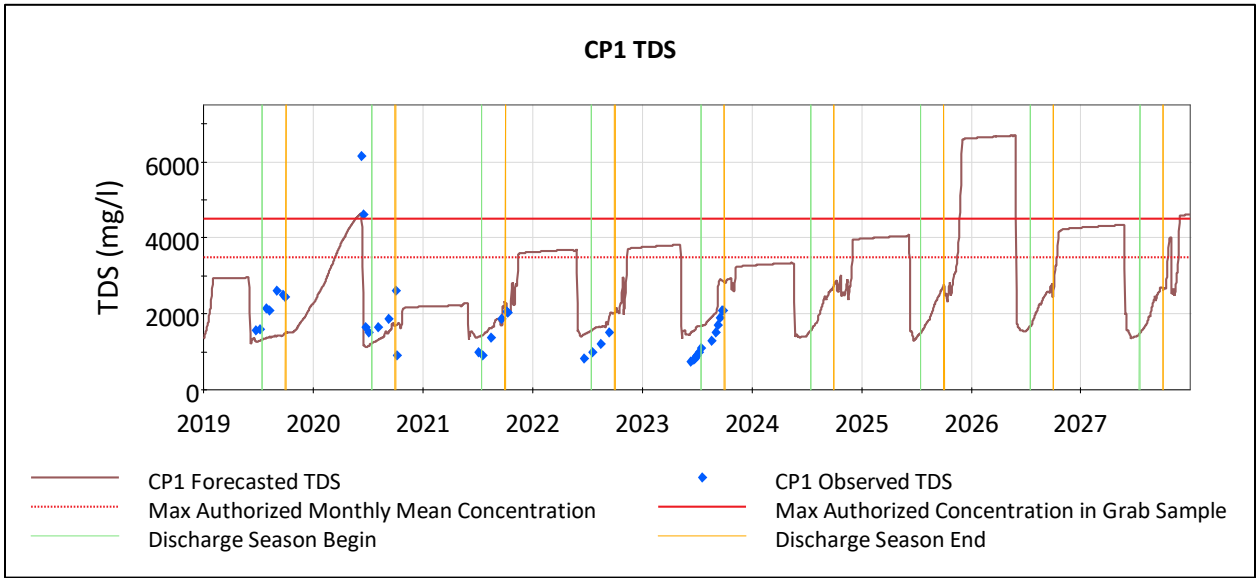

Figure 13: CP1 TDS concentrations for life of mine

All remaining water quality parameters required by the Type A Water Licence 2AM-MEL1631 Part F, Item 3 are within the required criteria (maximum authorized monthly average or sample grab concentration limits). Charts displaying forecasted versus observed concentrations of all Licence parameters in CP1 can be found in Appendix 4.

In previous annual reports, it was indicated that model predictions overestimated the concentrations of total ammonia and phosphorous compared to observed concentrations in CP1. This was once again observed following the 2023 update of the WBWQM. Section 3.2.2 and Appendix 5 provide a discussion on this discrepancy.

3.2.1.3 *MEL-14 Final Discharge Point Water Quality*

As per the Water License Part E Section 13, results from the WBWQM were compared to Maximum Authorized Monthly Mean Concentrations (MAMMCs) to identify forecasted Mean Annual Concentrations (MACs) that fell within 10% of their respective MAMMCs. Additionally, observed MACs from the current reporting year were compared to those reported in the previous year to identify parameters whose concentrations have increased by more than 20% year-over-year. The results are discussed below and can be found in Appendix 4, Table 3.

The initial portion of the assessment was conducted using MEL-14 monitoring station data and WBWQM results. MAC results produced by the WBWQM represent dissolved concentrations as TSS is not a modeled parameter. To correct for this, a conservative TSS assumption is applied. It is assumed that treated MEL-14 effluent (represented in the model by CP1 water quality during periods of discharge) contains the MAMMC of 15 mg/L TSS. As a majority of material disturbed by mining operations is comprised of waste rock, the particulate composition of TSS was assumed to have the average elemental concentration of waste rock produced by the project. Table 7 presents the particulate fraction concentration per 15 mg/L TSS that was applied to the MAC results from the WBWQM. These particulate fraction values are determined based on the composition of waste rock (ppm or mg of element per kg of waste rock).

Table 7: Suspended Solids Composition and Contribution to total concentrations at MEL-14.

Element	Particulate Composition (ppm or mg of element per kg of rock)	Particulate fraction concentration (mg/L) per 15 mg/L TSS
Al	62700	0.941
As	65.7	0.000985
Cu	70.4	0.00106
Ni	71.6	0.00107
Pb	7.19	0.000108
Zn	84.7	0.00127

Assessment of the TSS-adjusted forecasted MACs identified no parameters falling within 10% of their respective MAMMCs over the life of mine (LOM).

In accordance with the second part of the Licence requirement, year-over-year increases greater than 20% were identified for both Total Phosphorous (P) and Total Zinc (Zn).

For Total Phosphorous (P), concentrations decreased 4% from 2020 to 2021, followed by another decrease of 10% from 2021 to 2022. From 2022 to 2023, Total Phosphorous (P) concentrations increased by 25% (from 0.0283 mg/L to 0.0354 mg/L) which represents 1.8% of the MAMMC (2.0 mg/L). Based on the decreasing rates from the previous two years, and the magnitude of the Total Phosphorous (P) 2023 MAC in comparison to the MAMMC, the increase of 25% observed in 2023 is expected to be within a range of normal variability at the low concentrations observed.

For Total Zinc (Zn), concentrations decreased 2% from 2020 to 2021, followed by another decrease of 52% from 2021 to 2022. From 2022 to 2023, Total Zinc (Zn) concentrations increased by 74% (from 0.006 mg/L to 0.01 mg/L) which represents 2.5% of the MAMMC (0.4 mg/L). Based on the decreasing rates from the previous two years, and the magnitude of the Total Zinc (Zn) 2023 MAC in comparison to the MAMMC, the increase of 74% observed in 2023 is expected to be within a range of normal variability at the low concentrations observed.

No anomalous source of either Total Phosphorous (P) or Total Zinc (Zn) was observed in water quality monitoring in 2023. At this magnitude, the observed year-to-year increase does not represent a significant increase with respect to the MAMMC and are judged to be within normal operating variability.

3.2.1.4 *TIRI02 Water Volume*

Figure 14 shows the results of the modeled and observed volumes of saline water in TIRI02. Saline water pumped from Tiriganiaq underground will be stored in TIRI02 until 2025 after which the water will be discharged through the waterline to Itivia Harbour. Predicted groundwater inflow rates to the underground mine were updated in 2024 to reflect an updated mine plan scenario and included a limited calibration based on groundwater inflow monitoring over previous years. The updated results are discussed in the Groundwater Management Plan (GWMP).

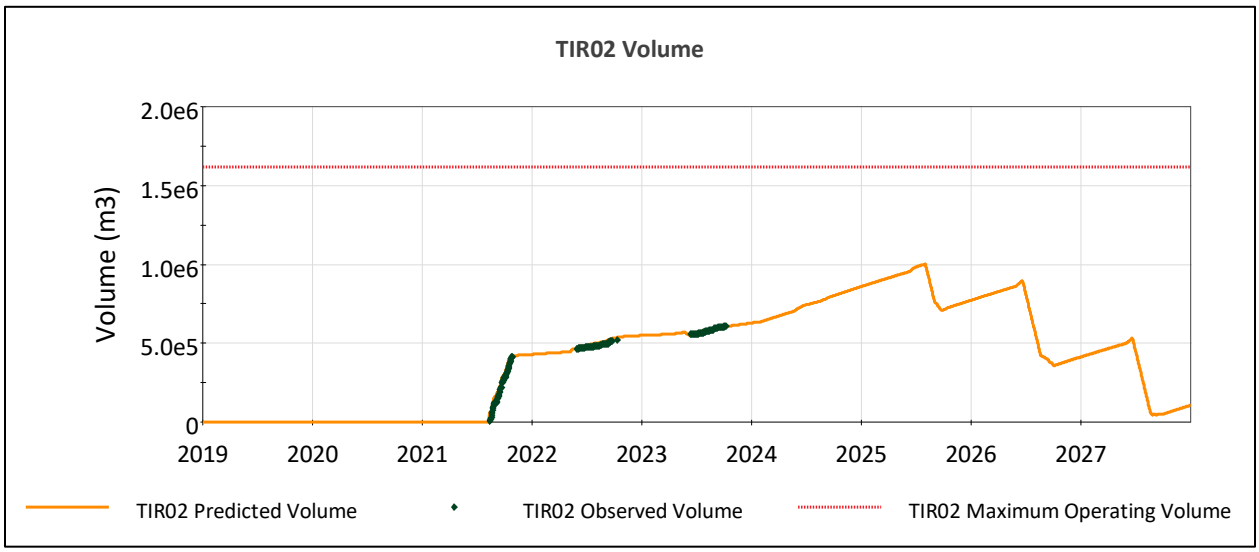

Figure 14: Forecasted saline water volume in TIRI02 against observed volumes.

3.2.1.5 *TIRI02 Water Quality*

Model results and observed concentrations of TDS, Ammonia and Radium-226 concentrations are shown in Figure 15, Figure 16, and Figure 17. The summary of TDS, Ammonia and Radium-226 forecasted concentrations for TIRI02 is also presented in Appendix 4, Table 4.

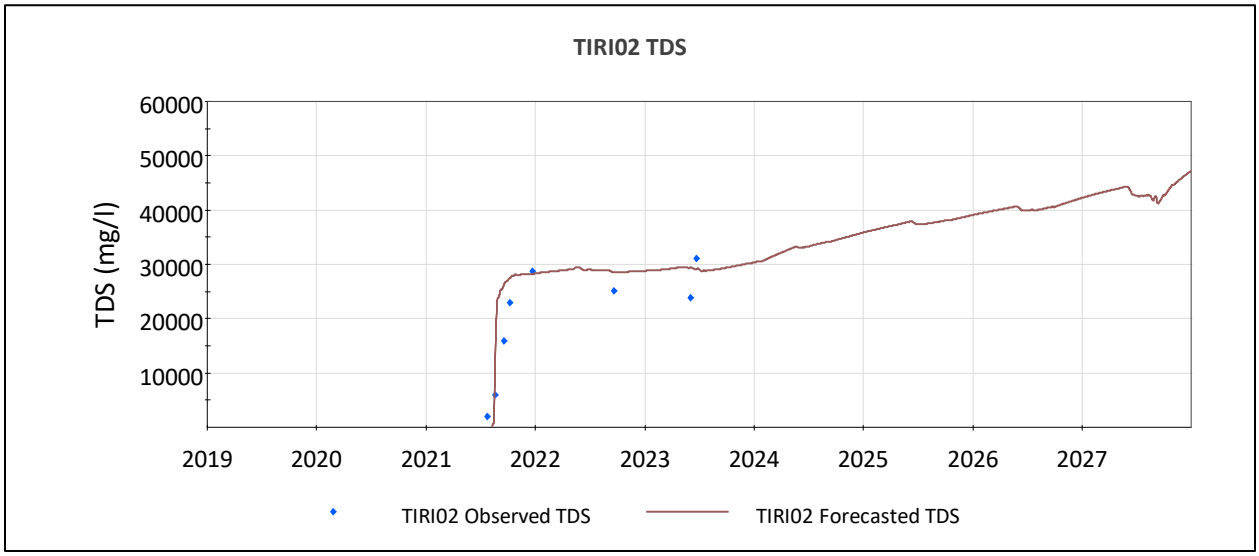

Figure 15. Forecasted versus observed TDS concentrations in TIRI02.

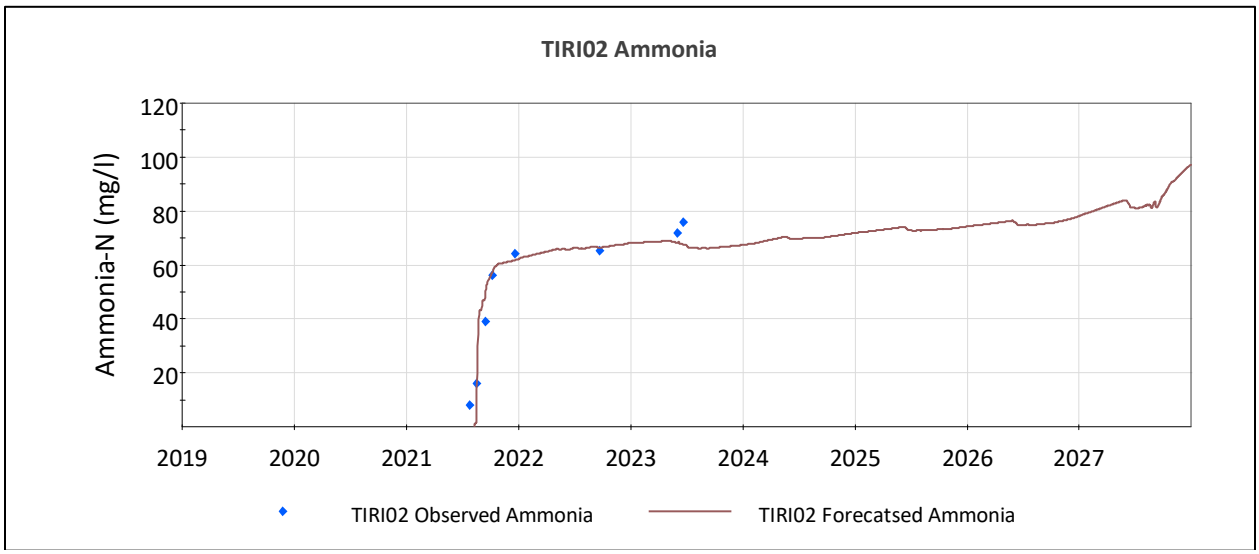

Figure 16 Forecasted versus observed ammonia concentrations in TIRI02

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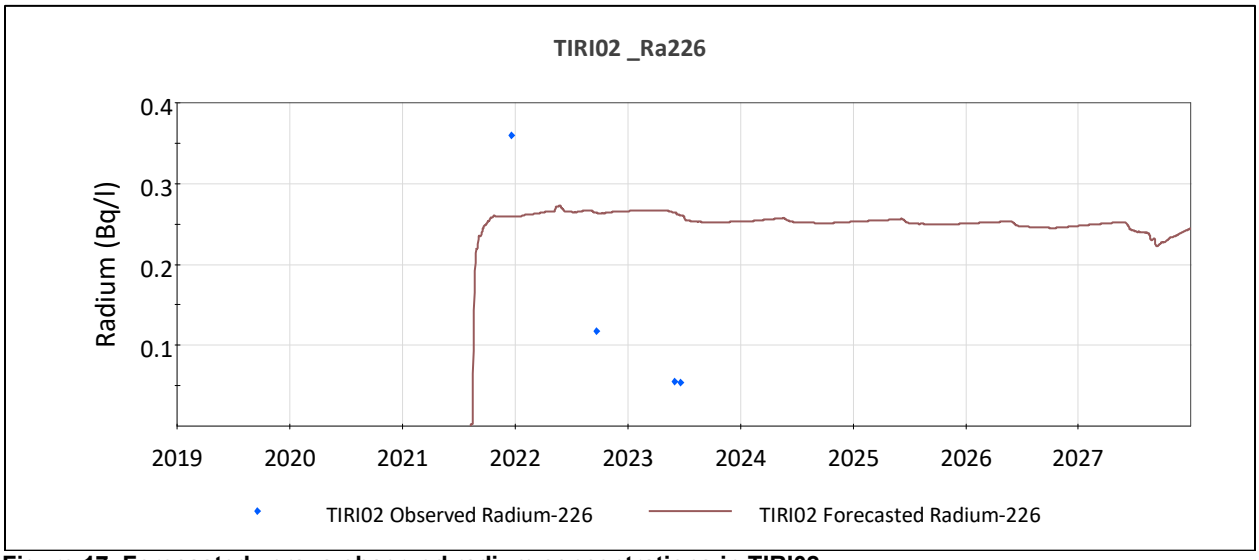

Figure 17. Forecasted versus observed radium concentrations in TIRI02.

Recently observed concentrations of TDS, ammonia and radium were collected from a water column profile conducted in early and end of June 2023. As stratification of the water column due to cryo-concentration (as discussed in section 3.1.8) occurs in TIRI02, a weighting was applied to concentrations measured at varying depth within the water column based on the respective volume associated with each sample depth.

Observed TDS and ammonia concentrations in TIRI02 generally trend well with predicted values. This is to be expected due to limited inputs and outputs from the facility. Historic water quality reporting to TIRI02 and flowmeter measured pumping data from underground and SP4 drive the water quality in storage, and thus any retrospective deviation in observed concentration would be due to inaccuracies in historic data or unknown runoff quantities reporting to TIRI02.

Source term water qualities were based solely on connate groundwater sampling programs, but with the added quantities of water input to the mine via paste flushing, paste backfilling, and potential runoff

infiltration, Agnico Eagle will continue to revisit this assumption and refine the model method for the assigned source term water quality pumped to TIRI02 from the underground mine.

Limited Radium-226 observations in TIRI02 do not indicate any obvious trends, however monitoring of underground mine water will continue as per the GWMP to identify potential risks associated with radium concentrations.

3.2.2 CP1 Nutrient Predictions

Following the 2021 and 2022 Annual Reports, ECCC and CIRNAC recommended that AEM identify the source of the WBWQM over-predicting ammonia and total phosphorous levels in CP1. Appendix 5 provides the results of a desktop study conducted in 2023 to investigate whether natural attenuation in CP1 can explain the discrepancy between modelled and actual concentrations of ammonia-nitrogen and phosphorous in CP1.

3.3 ADDITIONAL INFORMATION

As required by Water License 2AM-MEL1631 Schedule B, Item 26*: Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.*

And

As required by water license 2BB-MEL1424 Part B Item 6n*: Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported*

No additional information was requested in 2023.

SECTION 4. CRITICAL INFRASTRUCTURE MANAGEMENT ACTIVITIES

4.1 GEOTECHNICAL MONITORING

The safe and responsible management of critical infrastructure is a core activity for Agnico Eagle. A primary objective of Agnico Eagle's governance policy for critical infrastructure is to assure a high standard of care is applied to the entire lifecycle: design, construction, operation, closure and legacy (for elements of critical infrastructure that must function beyond closure).

The primary elements of the policy are:

- The development of specific roles with specific responsibilities;
- Regular and consistent reporting;
- Accountability at all levels, from operations to corporate;
- The use of Best Available Technology (BAT) and Best Applicable Practices (BAP); and
- The use of a risk-based approach to manage the risks associated with critical infrastructure.

As required by water license 2AM-MEL1631 Part I, Item 14: ***The Licensee shall submit to the Board as part of the Annual Report required by Part B, Item 2, a Geotechnical Engineer's Inspection Report. The Report shall include a cover letter from the Licensee outlining an implementation plan addressing each of the Geotechnical Engineer's recommendations.***

And as required by water license 2AM-MEL1631, Schedule B, Item 1*:*

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

The performance of the dikes (D-CP1 and D-CP5) is assessed according to the guidelines provided in the Operation, Maintenance and Surveillance (OMS) manual for the facilities. This program consists of both documented visual inspections and geotechnical instrumentation monitoring. In 2023, visual inspections were conducted according to the following schedule:

- Daily – Conducted by personnel working on or adjacent to the water management infrastructure as part of their daily activities, such as environmental technicians, survey staff and dewatering crews.
- Weekly - Conducted during open water season by a qualified engineer or technician;
- Monthly – Conducted during open water season by the Agnico Eagle Responsible Person; and
- Annual – Conducted by a third party consulting engineer (Tetra Tech) during open water season.

The visual inspections include observations of cracking, settlement, seepage and deformation in addition to photographs. Any areas of movement are marked both physically on the dikes themselves by spray painting the locations and on plan drawings of the facilities in order to track changes in conditions.

In addition to the monthly documented visual inspection (during open water), a review of the operational performance and assessment of the geotechnical monitoring instrumentation is conducted every month by the Responsible Person. The schedule of collecting monitoring data in 2023 generally followed the OMS guidelines and is summarized in Table 8.

Table 8: Summary of 2023 Permanent Dike Geotechnical Monitoring Program

Instrumentation	Frequency of Data Collection
Thermistors	Updated twice per day (data loggers)
Survey Monuments	Monthly
Upstream Water/Ice Elevations	Daily (Open water); Monthly (Ice)

The performance of all other water management and earthworks structures were assessed in 2023 during the Annual Geotechnical Inspection conducted by Tetra Tech. The results of this inspection are available in Appendix 6.

b. A comparison of measured versus predicted performance;

Based on the visual inspections and geotechnical monitoring data, the permanent water retention dikes (D-CP1 and D-CP5) are generally performing as expected, with no significant geotechnical concerns identified in 2023. Deformation, seepage and geothermal response will continue to be monitored as per the OMS guidelines throughout 2024.

No significant geotechnical concerns were noted with any other water management infrastructure during the annual inspection. The results of this inspection and detailed analysis are available in Appendices 6 to 8.

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

There were no unanticipated observations in 2023.

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

Mitigation works undertaken in 2023 included the following;

- Construction of the Operations Landfill (Stage 4) berm raise; as-built submitted to the NWB on March 18th, 2024;
- Construction of the Channel 2 Berm; as-built submitted to the NWB on August 2nd, 2023;
- Construction of Containment Pond 6 ramp; as-built submitted to the NWB on March 18th, 2024;
- Maintenance of Channel 5,
- Reconstruction of Channel 3
- Placement of thermal fill at CP2, CP3, CP4 and between the TSF and Channel 3

Submitted as-built reports and drawings can be found on the NWB Public Registry at the following link: ftp://ftp.nwb-oen.ca.

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

Run-of-mine rockfill was added between the Berm CP4 and CP4, Berm CP2 and CP2, Berm CP3 and CP3, and downstream of TSF west slope and Channel 3. The finished surface of the rockfill placed near

CP's were graded towards their respective pond. The fill placed downstream of TSF west slopes was graded towards the Channel 3. The fills were placed to limit water ponding and improve the performance of the structures. No meaningful changes are expected to the water quality of these structures and there are no expected changes to the water balance.

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

It should be noted that data presented in subsections 4.1.1 to 4.1.8 below was collected from instrumentation at the end of year (November and December 2023).

4.1.1 Instrumentation at D-CP1

Horizontal ground temperature cable (GTC) plots indicate a warming trend of approximately 0.5°C/year observed from 2019 to 2023, except the cooling trend (average -0.3°C) observed between 2021 and 2022.The average temperature increased by 0.58°C between May 25, 2022 and June 25, 2023 in the base of the key trench. The decrease in temperature between 2021 and 2022 is considered due to a combination of a cold 2021/2022 winter and reduced snow accumulation on the dike. The plots are shown in Appendix B of the 2023 Annual Geotechnical Inspection Report (Appendix 6). Temperatures in the key trench ranged from an average high of –3.5°C in early January 2023 to an average low of -7.0°C in early June 2023. Generally, the average horizontal ground temperature cable nodes at the base of the key trench have remained below -3.0°C throughout the year.

Vertical ground temperature cable plots shown in Appendix B of the 2023 Annual Geotechnical Inspection Report (Appendix 6) indicate that the dike remained below 0°C until June 2023 and after November/December 2023, while the foundation remained below 0°C throughout 2023.

D-CP1 survey monitoring points M-1 to M-6 indicate a range of total vertical displacement between 33 mm and 92 mm since they were installed on September 19, 2017. The dike operating water levels were based on a settlement of 120 mm; the measured settlement has been less than this to date.

4.1.2 Instrumentation at D-CP5

Horizontal ground temperature cable plots shown in Appendix F of the 2023 Annual Geotechnical Inspection Report (Appendix 6) indicate a slight warming on average of 0.2°C in the key trench from May 2022 to May 2023. The vertical ground temperature cables indicate a slight cooling trend on average of -0.5°C in the foundation of the dike from May 2022 to May 2023. The average temperatures in the key trench ranged from –8.2°C in May 2023 to an -2.4°C in December 2023.

Three settlement survey monuments were installed over the liner crest in the dike. CP5 survey monitoring points indicate a settlement between 24 and 61 mm since installation. The dike operating water levels were based on a settlement of 100 mm; the measured settlement has been less than this to date.

4.1.3 Thermistors in the P-Area

The P-Area (P1 and P2) was decommissioned in 2020-2021. The thermistors previously located on berm DP1B (DP1B-1 and DP1B-2) were removed in 2021. The thermistors on berm DP2A (DP2A-1) and berm

DP3A (DP3A-1, DP3A-2, and DP3A-3) are still in place and temperature measurements are red periodically.

4.1.4 Thermistors in Berm CP2

Three (3) GTCs (GTC-01, GTC-02, and GTC-03 Berm CP2) were installed in Berm CP2 to measure the active layer depth in the berm and subgrade ground temperatures. The GTC plots are shown in Appendix C of the 2023 Annual Geotechnical Inspection Report (Appendix 6). The maximum active layer depth in 2023 was 1.7 m in August 2023. The original ground surface temperatures ranged from –4.3°C to –4.6°C on December 25th, 2023.

4.1.5 Thermistors in Berm CP3

Three (3) GTCs (GTC-01, GTC-02, and GTC-03 Berm CP3) were installed in Berm CP3 to measure the active layer depth in the berm and subgrade ground temperatures. The GTC plots are shown in Appendix D of the 2023 Annual Geotechnical Inspection Report (Appendix 6). The maximum active layer depth in 2023 varied from 2.5 m to 3.5 m based on the collected ground temperatures in the past years. The original ground surface temperatures ranged from –2.4°C to –3.6°C on December 25, 2023.

4.1.6 Thermistors in Berm CP4

Two (2) GTCs (GTC-01, GTC-02 Berm CP4) were installed in Berm CP4 to measure the active layer depth in the berm and subgrade ground temperatures. The GTC plots are shown in Appendix D of the 2023 Annual Geotechnical Inspection Report (Appendix 6). The estimated active layer depth on August 25, 2023 ranged from 2.3 m to 2.8 m. The ground temperatures at the original ground surface was –3.9°C on December 25, 2023.

4.1.7 Thermistors in Berm CP6

Three (3) GTCs (GTC-01, GTC-02, GTC-03 Berm CP6) were installed in Berm CP6 to measure the active layer depth in the berm and subgrade ground temperatures. The GTC plots are shown in Appendix G of the 2023 Annual Geotechnical Inspection Report (Appendix 6). The estimated active layer depth on August 25, 2023 ranged from 2.4 m to 2.6 m. The ground temperatures at the original ground surface ranged from –3.6°C to –5.1°C on December 25, 2023.

GTC-02 has stopped reading since the last measurement was taken on May 25, 2022. Berm CP-6 is a thermal berm and its function is to maintain frozen conditions within the original ground beneath the center of the berm. Berm CP-6 is performing as intended. The two remaining thermistors are adequate to assess the berm’s performance.

4.1.8 Other Thermistors

In addition to recently installed thermistors to monitor temperatures in and below critical water management infrastructures, numerous other thermistor cables have been installed around the mine site to monitor natural ground temperatures as part of previous ground investigation campaigns. In 2023, a

total of seven (7) new thermistor cables were installed on site. Five (5) were installed in the TSF and two (2) were installed in WRSF1

Top priority (P1) is now given to reading thermistors installed in existing infrastructure, with these readings typically taken on a monthly basis for the first year then quarterly afterwards, with the exception of the dikes and the TSF. Shallow GTCs installed in areas of potential future expansion are given the next priority (P2) with a quarterly reading frequency, followed by deep thermistors in future deposition areas which are read bi-yearly (P3). Also read twice per year are any additional cables located around the site (P4). The updated location of these thermistors is provided in the 2023 Geotechnical Inspection Report (Appendix 6).

Seven (7) of the previously installed site thermistors were functional in 2023. Readings taken in 2023 in the remaining operational site-wide thermistors are generally consistent with previous trends.

WRSF3 is performing as intended. The two remaining thermistors are adequate to assess the WRSF's performance at this time. Additional thermistors will be installed as the facility is completed as per the design. Agnico Eagle and the Design Engineer (Tetra Tech) review the instrumentation design yearly. If it is identified that additional instrumentation is required before the facility is completed, it will be installed as per recommendations.

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

As discussed above in Sections *d* and *e*, run-of-mine rockfill was added between the Berm CP4 and CP4, Berm CP2 and CP2, Berm CP3 and CP3 and the TSF and Channel 3. The finished surface of the rockfill placed near CP's was graded towards their respective pond, while the fill placed downstream of the TSF was graded towards the Channel 3. The fills were placed to limit water ponding and improve the performance of the structures. No meaningful changes are expected to the water quality of these structures and there are no expected changes to the water balance.

4.1.9 Permafrost monitoring

In general, permafrost aggrades into the fills placed on the natural ground. Some localized permafrost degradation has been observed within/adjacent to some of the water management structures . These areas correspond to areas where ice rich materials are present within the natural ground and where the natural vegetation has been removed and/or where water is allowed to accumulate. Agnico Eagle monitors these areas and repairs them when required. Additionally, the lessons learned from the performance of older infrastructure is being implemented into new infrastructure to minimize future permafrost degradation.
Information on permafrost monitoring for each Mine infrastructure is presented in the 2023 Annual Geotechnical Inspection Report (Appendix 6).

In summary:

- Some localized permafrost degradation was observed at downstream collection channel of D-CP1.
- Some subsidence was observed in Channels 1, 2, 4, 5, and 7.

- Possible thaw settlement or erosion of the lake bed settlement was observed in a few locations along the east side of the CP6. The east slope of CP6 appears stable at this time.
- Small area of water ponding between CP6 access ramp and CP6 Thermal Berm was observed. No other permafrost degradation observed other than ponded water noticed.
- Some cracks and thaw subsidence were observed along the southern shoulder of Channel 9 were likely caused by construction disturbance and surface runoff flow over the area between WRSF3 and Channel 9. The infrastructure is overall performing well with no noticeable geotechnical concerns at the time of inspection.
- Minor areas of thaw subsidence were observed along the upstream slope of Channel 10. The infrastructure is overall performing well with no noticeable geotechnical concerns at the time of inspection.
- Some cracks observed since 2020 in the southwest corner of the SP 1 crest that may be due to thaw subsidence or movement of the overburden slope. No other permafrost degradation was observed and no significant changes noted in 2023.

Mitigation measures are applied as per the Design Engineer's recommendations (refer to Appendix 7 and Appendix 8).

No permafrost degradation was observed/noted at the time of the inspection for other infrastructures, including the TSF, WRSFs, Site Roads, AWAR, Bypass Road, Borrow sources, etc. (refer to Appendix 6 for complete information).

4.2 GEOCHEMICAL MONITORING

This section provides a summary of geochemical monitoring results conducted in 2023. Additional information, including summary statistics and complete Acid/Base Accounting (ABA) and elemental composition results, can be found in the 2023 Metal Leaching and Acid Rock Drainage Monitoring Report in Appendix 9 of the Annual Report.

In accordance with Water License 2AM-MEL1631 Schedule B, Item 9*: Geochemical monitoring results including:*

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

The ABA and paste pH test work used for waste rock designation is in the 2023 Metal Leaching and Acid Rock Drainage Monitoring Report located in Appendix 9 and summarized below.

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;

Waste rock from the mining activities in the open pits and underground was placed in WRSF1, WRSF3 or was used for construction purposes in 2023. As built volumes of waste rock used in construction and sent to the WRSFs are presented in the Mine Waste Management Plan (MWMP) (Appendix 28-4).

All monitoring data with respect to geochemical analysis carried out at the Meliadine Mine in 2023 can be found in the 2023 Metal Leaching and Acid Rock Drainage Monitoring Report located in Appendix 9.

c. All monitoring data with respect to geochemical analyses on site and related to roads and quarries;

All monitoring data with respect to geochemical analysis carried out at the Meliadine Mine in 2023 can be found in the 2023 Metal Leaching and Acid Rock Drainage Monitoring Report located in Appendix 9.

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

Leaching was not observed on the dike exposures (D-CP1 and D-CP5) or the pit slopes (TIRI01, TIRI02, SP1, SP4, CP2, CP3, CP4, and CP6).

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

No outcomes or observations implying to or leading to environmental impact occurred in 2023. The majority of the geochemical samples were observed as having low potential for Acid Rock Drainage (ARD) generation (i.e., non-PAG). Two samples of underground waste rock were classified as *uncertain*, meaning that there is an uncertain chance that the samples in question have the potential to produce ARD. One sample from open pit was classified as potentially acid generating (PAG), meaning there is the potential for the rock to produce ARD and four samples were classified as uncertain.

These 7 samples are considered a low risk given the excess neutralization in all other waste rock samples collected and represent a minor proportion of all waste rock samples collected in 2023 (i.e., 420 samples for open pit and underground waste rock, excluding duplicate samples). It also should be noted that a considerable quantity (430,518 tonnes) of underground waste rock was kept underground for backfilling purposes.

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

The geochemical monitoring data associated with the filtered tailings is included in Appendix 9 with a summary explained below in section 4.2.4.

g. Results related to the Borrow pits/ quarries and roads, including the All-Weather Access Road.

The geochemical monitoring data associated with the Borrow pits/quarries is included in Appendix 9.

4.2.1 ARD Assessment Methodology

Neutralization Potential

Based on Agnico Eagle's Geochemical Characterization Guide (2021), results of Modified Sobek Neutralization Potential (NP) should be compared with NP calculated from carbonate, and subsequently the more conservative method used to represent NP in NPR calculation and ARD assessment.

From 2022 onward, NP quantified from the Modified Sobek titration method (NP-mod) was consistently lower when compared with NP calculated from carbonate (NP-Ca) and therefore NP-mod was used for ARD assessment. It should be noted that prior to 2021, NP-Ca was used since it was the more conservative parameter at the time of interpretation. The change to NP-mod in 2021 compared with previous years is attributed to carbonate content which was biased low in laboratory analyses conducted prior to April 2021 with the pyrolysis method, as discussed in Section 3 of the 2021 Metal Leaching and Acid Rock Drainage Monitoring Report.

Acidic Potential

Acid Potential (AP) was calculated based on the amount of sulphide sulphur, calculated by difference of total sulphur and sulphate sulphur, as per Agnico Eagle's Geochemical Characterization Guide (2021). As stated in Agnico Eagle's 2020 Metal Leaching and Acid Rock Drainage Monitoring Report, project prediction studies indicated that the main sulphide minerals in the waste rock was pyrite, but also with arsenopyrite and lesser pyrrhotite, and chalcopyrite (Golder 2014). As a result, the main consideration for AP is the presence of sulphide minerals at Meliadine.

ARD Assessment

The potential for ARD was assessed using NP/AP ratios (or neutralization potential ratios, NPR). Ratios below 2 were used to indicate potential for ARD (PAG or Potentially Acid Generating), whereas ratios above 2 indicate low potential for ARD (non-PAG). Ratios between 1 and 2 are considered uncertain, meaning that there is an uncertain chance that the samples in question have the potential to produce ARD.

4.2.2 Underground waste rock

ARD Potential

ARD classification for 2023 samples is presented in Appendix 9. As predicted by Golder (2014), the majority of operational waste rock samples collected to date are non-PAG.

Two (2) 2023 samples fall within the "uncertain" classification. These samples represent a total of 3482 tonnes of waste, of which 2596 tonnes were brought to surface. Underground waste brought to surface was placed on the TSF for progressive reclamation covering.

These samples are considered a low risk given the excess neutralization in all other samples collected.

Metal Leaching

Metal leaching was predicted by Golder (2014) to be low enough that management of waste rock to inhibit leaching was not required. However, based on project screening studies, arsenic was determined to be the main element of interest and analysis of this element (and all regulated elements) were part of operational monitoring since mining began.

To ensure arsenic concentrations are within project predictions, results have been compiled and compared against average and maximum arsenic concentrations reported by Golder (2014). Solid phase

arsenic concentrations mainly fall within the average concentration, with only three samples in the past seven years exceeding the maximum concentration reported by Golder (2014). A statistical summary for arsenic with complete element composition are provided in Appendix 9.

4.2.3 Tiriganiaq Open Pit 1 Waste Rock

ARD Potential

One sample collected in 2023 had an NPR below 1, four samples with an NPR between 1 and 2 and all remaining samples in 2023 yielding NPRs greater than 2.

The sample with an NPR of 0.87 (indicating PAG), was collected near a narrow, localized band of weakly mineralized iron formation containing 2% pyrrhotite. As TIR01 waste rock is used as source rock for construction of infrastructure within the mine footprint, an investigation was initiated into the volume of material that the PAG sample would be associated with. Through the investigation, it was determined that the volume confined by the surrounding non-PAG holes was approximately 1706 tonnes out of a blast pattern totaling 68,748 tonnes. Of this, 12,381 tonnes has been crushed for construction projects and the rest was placed on the WRSFs. There is a low probability that some of the material classified as PAG was used for construction and Agnico Eagle will conduct follow-up sampling of constructed infrastructure to confirm PAG rock was not used in construction.

The 4 samples which returned as uncertain were scrutinized to determine the amount of material that was associated with each sample and the destination of the rock. One sample was sent to the mill as ore. Two samples were duplicates from the same drill hole and equate to 4400 tonnes and were constrained by other samples that returned as non-PAG. Due to the location of the hole sampled it is assumed that all 4400 tonnes were used for construction. The final sample that the results returned as uncertain equals approximately 4500 tonnes and was surrounded by non-PAG results. The approximate volume of the blast was 130,700 tonnes, and of this, 4354 tonnes was used for construction material and the rest was moved to the WRSFs. These samples are considered low risk given the excess neutralization potential in the other samples collected in 2023.

Metal Leaching

Metal leaching was predicted by Golder (2014) to be low enough that management of waste rock to inhibit leaching was not required. However, based on project screening studies, arsenic was determined to be the main element of interest and analysis of this element (and all regulated elements) were part of operational monitoring since mining began. A statistical summary for arsenic with complete element composition are provided in Appendix 9.

To ensure arsenic concentrations are within project predictions, results have been compiled and compared against average and maximum arsenic concentrations reported by Golder (2014). Solid phase arsenic concentrations mainly fall within or slightly above the average concentration, with only one sample exceeding the maximum concentration reported by Golder (2014).

4.2.4 Filtered Tailings

ARD Potential

Samples collected in 2023 had an average NPR of 2.39, while one (1) sample had an NPR below 1.

Despite the presence of tailings samples classified as PAG and uncertain from 2019 to 2023 sampling, Agnico Eagle does not consider the tailings to pose an ARD risk for the site because generation of acidic water requires exposure of potentially acid generating material to air and water, sufficient timescales for neutralization potential to be consumed, as well as sufficiently warm temperatures to facilitate sulfide oxidation at meaningful rates. By compacting the placed tailings, sloping the facility to shed water, and allowing permafrost to freeze-back within the facility, infiltration of water and diffusion of oxygen into the facility is inhibited. Following freeze-back, sulfide oxidation rates are expected to be negligible.

While the delay to ARD onset has not been specifically calculated for PAG tailings owing to the small portion of PAG samples identified over the LOM, the delay to ARD onset for similar materials is typically on the scale of decades. Based on the design analysis, the tailings temperatures are expected to fall below -1.8°C starting about 4 years after placement. So far, the measured temperatures seem to align well with the expectations and most of the tailings are already below -1.8°C. Based on the above, the potential for development of localized acidic weathering conditions within the TSF before freeze back is very low.

In the theoretical event that localized masses of the most reactive PAG tailings did develop acidic porewater prior to freeze-back, there is enough carbonate present within the non-PAG tailings to neutralize acidic porewaters along flow paths such that net acidic drainage would not likely occur.

Therefore, in practice, sulfide oxidation is not expected to occur at meaningful rates within the TSF due to several mitigating factors (e.g., limited air and water ingress, co-disposal with non-PAG materials, freezing conditions), and neutralization potential is expected to be sufficient to buffer acidity in the long term.

Metal Leaching

Given the presence of arsenic in the ore rock and background concentrations in the area, results for this element are summarized below and presented in Appendix 9.

Arsenic concentrations in filtered tailings samples ranged from a minimum of 5,200 mg/kg to a maximum of 154,000 mg/kg, with a median of 7,300 mg/kg in 2023. These values are higher when compared to waste rock since ore is associated with increased abundances of sulphides, including arsenopyrite.

Forecasted arsenic concentrations in surface contact water across life of mine are provided in the WBWQM as part of the Annual Report (section 3.2).

4.2.5 Construction Rock Sampling

Waste rock from TIRI01 is frequently used for construction of infrastructure at site. Though the material has been sampled in the pit before use for construction, for due diligence, a sampling program was

conducted in 2023 to confirm that historic rock used for construction is classified as non-PAG. Ten construction projects were sampled this year consisting of projects completed over 2022 and 2023.

The sampling protocol for the berms and channels was to walk a transect stopping every 25 to 30 m to grab a sample of approximately 500 g in size. For pads, a grid pattern was employed with the space between samples relative to the size of the pad; a sample approximately 500 g in size was taken at each location. The objective was to create a representative composite sample of the material used in building the infrastructure.

NPR results for all samples collected were greater than 2, with no samples classified as uncertain or PAG.

4.2.6 Filtered Tailings Supernatant

Sampling of the filtered tailings supernatant began in June of 2019 and continued in 2023 with sampling occurring on a regular basis. Since this water is recycled through the mill, it also contains cyanide leach residue and the bleed from the cyanide destruction circuit. Water is filtered off the tailings from the filter press and samples are collected from the effluent downstream of the filter press. Since this effluent is recycled through the mill and is not discharged, with the exception of the water contained in the filtered tailings, it is not surprising to see the metals and general parameters becoming concentrated as the mill uses little fresh water to make up the water that is entrained with the filtered tailings.

Appendix 10 presents the results of the tailings supernatant sampling in 2023. In 2023, the metals and other parameters concentrations were in general consistent throughout the year and similar to 2022. Dissolved metals are discussed below rather than total metals as there may be some interference from the solid tailings if the filter press is not functioning as per design.

The minimum value of dissolved arsenic was 9.27 mg/L with the maximum value at 23.7 mg/L. The dissolved arsenic mean value for 2023 was 15.14 mg/L, compared to 6.84 mg/L in 2022 and 11.8 mg/L in 2021. These numbers are not unexpected as the gold is associated with sulphides, such as arsenopyrite, and the water is recycled through the mill. Total cyanide values were variable during the year. The highest concentration for total cyanide was recorded on January 17th at 145 mg/L and the lowest concentration was measured for the sample collected on June 4th at 40.3 mg/L. The mean for 2023 was 88.65 mg/L.

It is important to state again that the water in the mill is recycled and only a small portion of the mill effluent is entrained in the filtered tailings. As discussed in section 7.3.1.18, Agnico Eagle is monitoring the water quality in CP3 as per the Water Licence requirements.

4.3 WASTE ROCK AND ORE STOCKPILED ON SITE

In accordance with Water License 2BB-MEL-1424 Part B Item 6c*: An estimate of the current volume of waste rock and ore stockpiled on site;*

See Table 4.1 of the MWMP for as-built and expected waste rock usage on site per major location. Plans and sections of WRSF1 and of WRSF3 at the end of 2023 are presented in Appendix 11. Waste rock was placed in accordance with MWMP.

See Table 4.3 of the Ore Storage Management Plan (OSMP) for as-built and expected ore stored on site at OP2.

An estimate of waste rock temporally stored in OP1 and OP2 and ore stockpiled on OP1 is provided in Table 9 below. The monthly cumulative stockpiles vary (and can go down) according to production and construction needs.

Table 9: Ore and waste rock stockpiles on site excluding major locations (Tonnes) [1]

Date	Underground Ore	Open Pit Ore	Cumulative Ore	Waste Underground	Waste Open Pit	Waste Cumulative
19-Jan			176,779			101,661
19-Feb			170,116			148,632
19-Mar			138,423			195,971
19-Apr			117,832			208,337
19-May			105,348			123,660
19-Jun			125,705			20,280
19-Jul			127,396			16,966
19-Aug			113,351			22,843
19-Sep			118,412			12,360
19-Oct			123,236			18,384
19-Nov			129,868			49,420
19-Dec			144,088			499,600
20-Jan	192,736	-	192,736			83,489
20-Feb	220,468	-	220,468			110,236
20-Mar	199,258	-	199,258			85,623
20-Apr	151,789	-	151,789			No Survey
20-May	101,101	546	101,647			74,544
20-Jun	79,320	9,852	89,172			No Survey
20-Jul	61,716	22,316	84,032			13,173
20-Aug	61,192	31,358	92,550			31,952
20-Sep	61,547	38,956	100,503			10,620
20-Oct	72,106	48,205	120,311			46,017
20-Nov	71,357	82,890	154,247			No Survey
20-Dec	59,886	120,719	180,605			22,539
21-Jan	107,237	57,802	165,039	1,188	-	1,188
21-Feb	103,517	74,224	177,741	-	-	-
21-Mar	99,629	51,213	150,842	1,055	2,100	3,155
21-Apr	112,868	56,981	169,849	1,164	11,261	12,425

[1] Major locations refer to WRSF1 and WRSF3 for the waste rock, and OP2 for the ore. As mentioned above, as-built and expected waste rock and ore stockpiled at major locations on site are provided in the MWMP and OSMP, respectively.

Date	Underground Ore	Open Pit Ore	Cumulative Ore	Waste Underground	Waste Open Pit	Waste Cumulative
21-May	135,807	70,344	206,151	1,164	5,149	6,313
21-Jun	155,799	7,163	162,962	-	5,149	5,149
21-Jul	135,738	11,654	147,392	880	-	880
21-Aug	148,165	33,289	181,454	880	-	880
21-Sep	185,426	50,689	236,115	880	11,825	12,705
21-Oct	178,361	113,103	291,464	-	-	-
21-Nov	202,190	187,688	389,878	-	-	-
21-Dec	204,988	217,296	422,284	-	-	-
22-Jan	2,169	-	2,169	1,571	1,364	2,935
22-Feb	1,273	-	1,273	-	-	-
22-Mar	289	-	289	10,880	-	10,880
22-Apr	658	-	658	84	-	84
22-May	720	-	720	13,819	-	13,819
22-Jun	2,292	-	2,292	18,885	4,445	23,330
22-Jul	1,068	-	1,068	5,620	-	5,620
22-Aug	1,013	-	1,013	8,653	-	8,653
22-Sep	777	-	777	1,180	-	1,180
22-Oct	3,009	-	3,009	10,275	1,469	11,744
22-Nov	1,312	-	1,312	2,746	-	2,746
22-Dec	1,820	-	1,820	54,176	-	54,176
23-Jan	4,966	-	4,966	2,746	-	2,747
23-Feb	468	-	468	67,538	-	67,538
23-Mar	3,526	-	3,526	57,731	1,628	59,359
23-Apr	1,908	-	1,908	84,125	9,984	94,108
23-May	1,095	-	1,095	58,254	111	58,365
23-Jun	2,965	-	2,965	5,686	-	5,686
23-Jul	936	-	936	9,347	-	9,347
23-Aug	781	-	781	13,294	-	13,294
23-Sep	3,891	-	3,891	13,274	-	13,274
23-Oct	1,123	-	1,123	13,686	-	13,686
23-Nov	7,185	-	7,185	4,701	-	4,701
23-Dec	1,860	-	1,860	12,308	-	12,308

As per answers to 2021 Annual report Comments provided to the NIRB (CIRNAC-4), Table 10 below presents year-over-year quantities of actual waste rock and ore tonnage compared to the Final Environmental Impact Statement (FEIS) predicted quantities.

Table 10: Actual waste rock and ore tonnage compared to FEIS predictions

Year	Actual Waste Rock tonnage[1]	FEIS Waste Rock predicted tonnage[2]	Actual Ore Tonnage[3]	FEIS Ore predicted tonnage[2]
2019	718,955	13,416,000	1,108,666	661,000
2020	4,003,532	38,017,000	1,402,899	2,370,000
2021	5,081,872	37,826,000	1,960,544	3,501,000
2022	3,625,178	9,428,000	1,778,834	1,658,000
2023	4,119,386	16,781,000	1,725,644	2,942,000

1 From MWMP, Table 4.1

2 From FEIS SD 2-8 Mine Waste Management Plan – Meliadine Gold Project, Nunavut, Table 1 (Agnico Eagle 2014), numbers for Tiriganiaq deposit only.

3 From OSMP, Table 3.2

4.4 TAILINGS STORAGE FACILITY

4.4.1 Tailings Storage Facility Capacity

As required by Water License 2AM-MEL1631 Schedule B, Item 10*: An update on the remaining capacity of the Tailings Storage Facility.*

Active tailings placement into the TSF continued throughout the year. A total of 951,209 m^3 (1,569,495 t) of tailings were placed in the facility in 2023 for a remaining design capacity of 2,895,635 m^3 (4,777,798 t) as shown in Table 11. Plans and cross sections of the TSF at the end of 2023 are presented in Appendix 12.

In addition to tailings, a total of 93,385 m^3 (175,564 t) of waste rock was placed as progressive cover material around the side-slopes of the facility in 2023. According to design specifications, an additional 753,840 m^3 (1,417,219 t) of rock remains to be placed. Tailings were placed in accordance with MWMP.

Table 11: 2023 Volumes of Material Placed in TSF

	Tailings Placed (m^3)	Waste Rock Placed (m^3)
January	**85,943**	**1,034**
February	**73,294**	**3,708**
March	**91,805**	**1,223**
April	**76,330**	**5,967**
May	**80,186**	**2,432**
June	**75,680**	**1,511**
July	**58,909**	**10,386**
August	**63,443**	**13,098**
September	**96,314**	**12,829**
October	**70,400**	**23,133**
November	**102,202**	**10,449**
December	**76,703**	**7,615**
Total 2023	**951,209**	**93,385**
Total at end of 2023	**3,722,624**	**521,285**
Remaining Capacity	**2,895,635**	**753,840**

4.4.2 Tailings Freeze-back and Capping Thickness

As required by Water License 2AM-MEL1631 Schedule B, Item 19: ***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.***

No field trials to determine effective capping thickness for the TSF were undertaken in 2023. Tailings freeze-back however, was monitored through the four (4) thermistors installed in 2019, four (4) thermistors installed in 2022 and an additional five (5) thermistors installed in 2023 to monitor the tailings at elevations above the original instruments. The data indicates that tailings material monitored by the thermistors were generally frozen throughout the year, except near the placement elevation and all tailings were frozen by December 2023.

Temperatures in the original ground below the TSF were continuously below 0°C throughout 2023. Figures displaying the GTC data from the various TSF thermistors are located in Appendix J of the 2023 Geotechnical Inspection Report (Appendix 6).

SECTION 5. WASTE MANAGEMENT ACTIVITIES

5.1 LANDFILL AND LANDFARM MONITORING

As required by Water License 2AM-MEL1631 Schedule B, Item 12: ***Summary report of all general Waste disposal activities including monthly and annual quantities in cubic metres of Waste generated and locations of disposal.***

The landfill and the landfarm were commissioned in November 2017. No seepage was observed from either facilities in 2024. Monitoring and inspection will continue on a regular frequency.

As per the approved Landfill (Stage 4) Berm Raise Design Report and Monitoring station MEL-24 description Modification, water accumulated inside the landfill is pumped towards Pond H13, which is the current location seepage from the landfill flows towards. Seepage is further discussed in Section 7.4.

.All waste, produced at Meliadine, falls into 4 major categories:

1) Hazardous waste;
2) General (dry, non-hazardous) waste;
3) Food waste; and
4) Contaminated soil.

Hazardous waste (including paint, environmentally hazardous substances, hydrocarbon contaminated soil non-treatable at the Landfarm, oily contaminated solids etc.) is segregated according to material type, stored in sea containers, and shipped south during the sealift season.

Residual and hazardous wastes were shipped from site by Nunavut Sealift and Supply Inc. to the Port of Bécancour and managed by Groupe Ungava, a company specialized in waste management.

At the Port, the residual materials were all sent to the *Bellemare Group*. The hazardous materials, for their part, were managed by *Environment Saint-Laurent* before being transported to *Ministère de l'Environnement et de la Lutte contre les Changements Climatiques* (MELCC) authorized disposal facilities.

In 2023, a total of 1,123,543 tonnes of hazardous waste was shipped from Meliadine. They were either recycled, eliminated and/or used for energy recovery. In addition, some residual wastes were shipped south, including 148.43 tonnes of rubber (used tires) and 1,165.88 tonnes of metal, which were sent for recycling.

General waste, such as glass, concrete, wood and ash is landfilled on-site and off-site. Type A landfill was commissioned in November 2017, and in September 2018, the landfill was expanded to contain an extra 11,000 m³ (landfill stage 2). In September and October 2020, the landfill stage 3 expansion works raised the perimeter berm by a nominal amount to increase the storage capacity by 2,696 m^3, to a total storage volume of 22,201 m^3. In December 2022, a Design report was submitted to the NWB for the landfill Stage 4 berm raise, to increase the total landfill capacity to 60,725 m^3. Construction of the landfill (Stage 4) expansion was carried out from September to December 2023 and a Construction summary (As-built) report was submitted to the NWB on March 18th, 2024.

Similar to previous years, measures were applied in 2023 to improve waste segregation at the source, allowing for increased volumes of wood and cardboard being burnt rather than landfilled. Waste segregation at the source, in addition to landfill material being compacted mitigates dust emissions from the landfill. Progressive capping of the landfill has started in 2023 and will continue in 2024 as material becomes available for capping.

The volume of landfilled waste is estimated through periodic surveys, and the waste placed into Type A landfill during 2023 is estimated at 2,461 m^3, while it was estimated at 2,532 m^3 in 2022.

In 2023, soil remediation activities took place in Landfarm A and Landfarm B. Windrows were aerated, and additional nutrients were added four times at Landfarm A and twice at Landfarm B.

On September 24th, 2023, samples were collected in Landfarm A's soil windrows and sent for analysis of petroleum hydrocarbons fractions 1 to 4 (F1-F4), benzene, toluene, ethylbenzene, and xylene (BTEX) at an accredited laboratory. Results were compared to the Government of Nunavut (GN)'s Environmental Guideline for Contaminated Soil Remediation (GN, 2009) criteria for the agricultural/wildlife and industrial land uses, as per the Landfarm Management Plan. Soils showing compliant results with the agricultural/wildlife and/or industrial land uses criteria were moved from Landfarm A to WRSF3. Approximately 270 m^3 of remediated material was moved. Following the removal of the compliant soil from Landfarm A, approximately 491 m^3 of contaminated soil (based on a survey from August 28th, 2023) was moved from the contaminated soil sorting area to the Landfarm A. This soil was built into windrows and additional nutrients were added to begin the soil remediation process. It should be noted surveys of the Landfarms are generally not conducted during the winter months, as the presence of snow would not allow a representative survey of the soil quantity.

On July 29th, 2023, samples were collected in Landfarm B's soil windrows and sent for analysis of petroleum hydrocarbons fractions 1 to 4 (F1-F4), benzene, toluene, ethylbenzene, and xylene (BTEX) at an accredited laboratory. Results were compared to the Government of Nunavut (GN)'s Environmental Guideline for Contaminated Soil Remediation (GN, 2009) criteria for the agricultural/wildlife and industrial land uses, as per the Landfarm Management Plan. Soil did not meet these guidelines, although a notable improvement was observed in the results when compared to the 2022 data. No soil was moved from Landfarm B in 2023. Further, no additional contaminated material was placed into Landfarm B in 2023 as Landfarm B will eventually be decommissioned with the extension of WRSF3. According to the latest survey conducted on May 9th, 2023, Landfarm B contained approximately 567 m^3 of material.

An estimate of 113.27 m^3 of contaminated soil was placed in Landfarm A in 2023 from spill clean up, monthly volumes are indicated in Table 12.

Table 12: 2023 Volume of waste transferred to the Landfarm

Month	Volume of contaminated soil placed in Landfarm A (m^3)
January	0.05
February	41.50
March	3.00
April	5.50
May	46.05
June	0.25
July	0.07

Month	Volume of contaminated soil placed in Landfarm A (m^3)
August	1.55
September	1.00
October	5.10
November	7.00
December	2.20
Total	**113.27**

5.2 INCINERATOR

As per Water License 2AM-MEL1631 Schedule B, Item 13: ***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.***

Food waste, including food packaging, was incinerated to avoid landfilling the material, and attracting wildlife.

Agnico Eagle hired Consulair to perform an atmospheric emission characterization program at the outlet (stack) on the primary incinerator. The objectives of this program, which took place from September 29th to October 1st, 2023, were as follows:

- Assess the concentrations and emission rate of the main parameters of interest;
- Compare the results to the applicable emission standards;
- Ensure that the sampling work meets quality control recognized criteria.

Results were compared to the Environmental Guideline for the Burning and Incineration of Solid Waste" published by the Department of Environment of the Government of Nunavut based on the Canadian Council of Ministers of the Environment (CCME) Canada - Wide Standards for Dioxins and Furans and Mercury Emissions. As shown in Table 13, all tests complied with the applicable guideline for mercury (Hg). The average dioxins and furans value exceeded the applicable guideline. The complete report can be found in Appendix 13.

The stack testing report was received at the beginning of 2024. An investigation is currently being conducted to determine the cause of the anomalous results. As described below, several mitigation measures related to waste management practices have been put in place in 2023. Additional actions may be taken, as applicable, following the results of the investigation.

Table 13: 2023 Stack Testing Mercury and Dioxins and Furans Results

Parameter	Unit	Test 1	Test 2	Test 3	Average	Applicable Standard	Compliance
Mercury	ug/m3 dry @ 11% O2	0.262	0.416	0.329	0.336	20	Yes
Dioxins and Furans (PCDD/F)	pg/m3 dry @ 11% O2	102	199	22.2	108	80	No

Agnico Eagle also proceeded with incinerator ash testing. Leachable metals annual averages since 2019 are presented in Table 14, while 2023 monthly results are presented in Table 15. Most of 2023 sampling results were compliant with the GN's Guideline for Industrial Waste Discharges into Municipal Solid Waste and Sewage Treatment Facilities (GN, 2011). Three (3) samples exceeded the Guideline in 2023, for leachable Arsenic (2) and Chromium (1).

As per the Incineration Management Plan, following observed Arsenic exceedance, ash sampling frequency was increased to monthly at the beginning of 2022 (instead of quarterly). Non-compliant ash is packed and shipped offsite to a certified waste management facility, in accordance with the Incineration Management Plan.

An investigation on the root cause of leachable metals exceedances in ash was initiated in 2022 and pointed towards issues in waste sorting practices. Several toolbox presentations were completed by the Environment department to stress the importance of the waste segregation with the various departments from the mine, after which improvements were observed.

In 2023, a full-time employee dedicated to waste management on site was hired which lead to improvements in waste sorting practices. In addition, enhanced coaching took place in 2023 with the incinerator operators. These measures likely contributed to the reduction in metal exceedances in 2023 compared to 2022.

The investigation will continue in 2024. To ensure the good functioning of the incinerator and appropriate ash management, monthly sampling will be continued throughout the year.

On August 17th, 2023, Agnico Eagle submitted a design report for a secondary incinerator at site, which was approved by the NWB on September 26th, 2023. The secondary incinerator will contribute to Meliadine's overall waste management strategy by maintaining continuity of the waste burns when there is maintenance work being conducted on the site's primary incinerator and also by providing additional capacity of waste material that can be burnt, reducing the likelihood of incinerable waste backlog.

As per the Water Licence, an as-built report will be submitted to the NWB once the construction is finalized. The Incineration Management Plan was updated to reflect the addition of the secondary incinerator at Meliadine and is presented in Appendix 28-3.

Table 14: 2019 – 2023 Annual Averages - Incinerator Ash Monitoring

Leachable Metals	Guideline for Industrial Waste Discharge (mg/L)*	Unit	2019	2020	2021	2022	2023
Arsenic	2.5	mg/L	0.25	0.375	1.88	4.53	1.14**
Barium	100	mg/L	0.57	0.25	0.25	0.28**	0.63
Cadmium	0.5	mg/L	0.095	0.05	<0.05	<0.3	<0.05
Chromium	5	mg/L	6.25	0.275	0.50	0.21**	1.77**
Lead	5	mg/L	0.10	0.1	<0.1	<0.1	<0.1
Mercury	0.1	mg/L	0.0010	0.001	<0.001	<0.001	<0.001
Selenium	1	mg/L	0.10	0.1	<0.1	<0.1	<0.1
Silver	5	mg/L	0.010	0.01	<0.01	<0.01	<0.01
Zinc	500	mg/L	0.10	0.1	4.83	3.54**	0.08**

*Government of Nunavut Environmental Guideline for Industrial Waste Discharges into Municipal Solid Waste and Sewage Treatment Facilities (2011).

** Detection limit values were divided in half in average calculation.

Table 15: 2023 Incinerator Ash Monitoring

Leachable Metals	Guideline for Industrial Waste Discharge (mg/L)*	Unit	1/3/2023	2/4/2023	3/4/2023	4/4/2023	5/2/2023	6/2/2023	7/2/2023	8/6/2023	9/2/2023	10/2/2023	11/2/2023	11/18/2023	11/19/2023	11/20/2023	12/2/2023
Arsenic	2.5	mg/L	2.2	< 0.2	1.7	< 0.2	0.6	< 0.2	2.4	0.8	0.4	3.1	1.4	2.8	< 0.2	< 0.2	< 0.2
Barium	100	mg/L	< 0.2	2.7	0.8	0.2	0.5	1.8	0.6	0.5	0.7	< 0.2	< 0.2	0.3	0.2	0.6	0.6
Cadmium	0.5	mg/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chromium	5	mg/L	< 0.1	1.3	4.3	< 0.1	4.1	< 0.1	1.6	8.7	< 0.1	< 0.1	< 0.1	< 0.1	3.5	1.3	0.6
Lead	5	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Mercury	0.1	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Selenium	1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Silver	5	mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Zinc	500	mg/L	< 0.1	0.4	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1

*Government of Nunavut Environmental Guideline for Industrial Waste Discharges into Municipal Solid Waste and Sewage Treatment Facilities (2011).

5.3 ADDITIONAL INFORMATION

As required by Water License 2AM-MEL1631 Schedule B, Item 26: ***Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.***

And

As required by water license 2BB-MEL1424 Part B Item 6n*: Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported*

The Board did not request any additional details on waste disposal in 2023.

SECTION 6. ENVIRONMENTAL INCIDENT MANAGEMENT

As per Water License 2AM-MEL1631 Schedule B, Item 14: ***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 water license 2BB-MEL1424 Part B Item 6f: ***A list of unauthorized discharges and a summary of follow-up actions taken***

In 2023, a total of 31 reportable incidents occurred at Meliadine compared to 56 reportable incidents in 2022. Amongst these incidents, 28 were reported under Water Licence 2AM-MEL1631 and 3 were reported under Water Licence 2BB-MEL1424. In addition to these reportable incidents, two events were reported as due diligence under Water Licence 2AM-MEL1631 and are included in Table 19 below in orange. The total reportable and non-reportable incidents for years 2019 to 2023 are provided in Figure 18 below.

Over the first two quarters of 2023, reportable spill occurrences have significantly decreased as a result of lessons learned from previous years and the corrective actions and proactive measures taken by Agnico Eagle. Toolboxes were completed with all departments to discuss the most common occurrences of spills, and to gain insights on how to mitigate them. Further details are provided below.

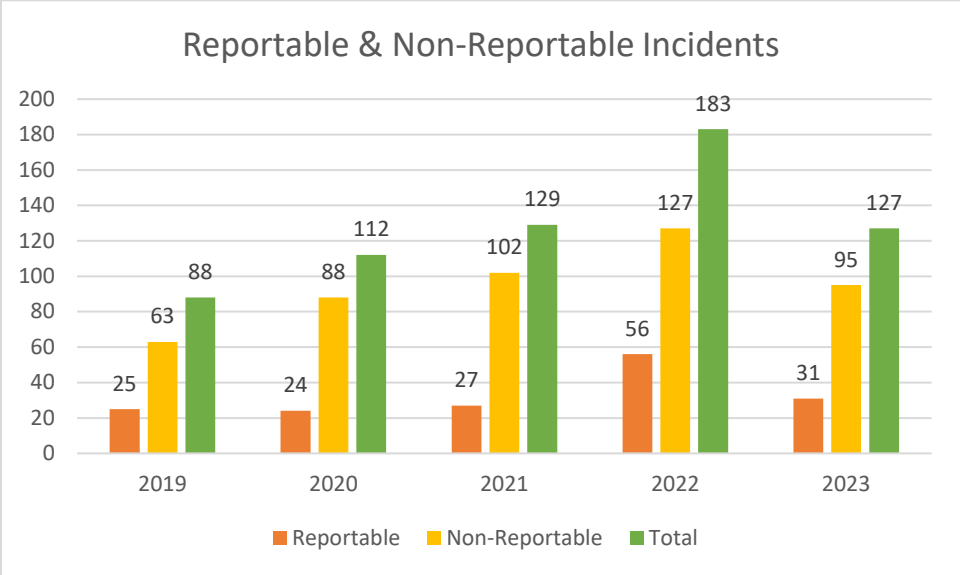

Figure 18: Total Reportable and Non-Reportable Incidents from 2018 to 2022

All reportable spills were reported to the 24-hour spill reporting line as required by the Government of Nunavut's Environmental Protection Act, paragraph 5.1 (a), the conditions under the NWB License 2AM-MEL1631 Water Licence, Part H, Item 8(b) or the conditions under the NWB License 2BB-MEL1424, Part H, Item 4(b). For all reportable spills, a follow up report was submitted 30 days or less following the event as required under the Nunavut Water Board License 2AM-MEL1631 Water Licence, part H, item 8(c).

All 2023 reportable spills/exceedances are summarized in Table 16, and complete spill reports and follow up reports can be found in Appendix 14. Non-reportable spills are summarized in Appendix 15.

Table 16: 2023 Reportable spills or limit exceedances

Date of spill/exceedance	Hazardous Material	Quantity for spills or analyses results for exceedance	Unit	Location	Cause of the spill
January 10, 2023	Sewage	5	L	(Multi-Service Building) MSB Lift Station	Human Error
January 11, 2023	Sewage	7	m^3	Main Camp Lift Station	Equipment Failure
February 3, 2023	Hydraulic Oil	600	L	TIRI 01	Equipment Failure
February 5, 2023	Sewage	5	L	MSB Lift Station	Gap in procedure
February 11, 2023	Sodium Hydroxide	450	L	Industrial Pad, STP	Equipment Failure
February 21, 2023	Sewage	25	L	Power Plant Lift Station	Equipment Failure
February 26, 2023	Drill Cuttings	50	L	Lake A19	Equipment Failure
March 1, 2023	Sewage	9	m^3	Main Camp Lift Station	Equipment Failure
March 17, 2023	Hydraulic Oil	1	L	Lake A8	Equipment Malfunction
March 29, 2023	Sewage	2	L	MSB Lift Station	Gap in procedure
April 3, 2023	Hydraulic Oil	100	L	Dome 3	Human Error
April 7, 2023	Sewage	20	L	Power Plant Wash Car	Human Error
April 17, 2023	Drill Cuttings	40	L	Unnamed waterbody, 7.5 KM east of Meliadine Mine	Gap in procedure
May 4, 2023	Sewage	10	L	Fusion Pad Wash Car	Equipment Failure
May 7, 2023	Suspended Solids	48	mg/L	MEL-SR1, Itivia	N/A. Refer to follow-up report in Appendix 14
May 22, 2023	Sewage	15	L	Power Plant Wash Car	Human Error
May 22, 2023	Sewage	200	L	MSB Lift Station	Equipment Failure
May 23. 2023	Grey Water	1	m^3	Main Camp Kitchen	Equipment Failure
June 6, 2023	Sewage	10	L	Assay Lab Lift Station	Equipment Failure
June 7, 2023	Suspended Solids	2,300	mg/L	Itivia Cuvert	Rainfall event, leading to culvert failure
August 4, 2023	Sewage	125	L	Wing 8 Lift Station	Equipment Failure

Date of spill/exceedance	Hazardous Material	Quantity for spills or analyses results for exceedance	Unit	Location	Cause of the spill
August 12, 2023	Tailings and Fresh Water	1.5	m^3	Paste Plant	Human Error
August 25, 2023	Contact Water	20	m^3	Water Treatment Complex	Equipment Failure
August 30, 2023	Sewage	25	L	Wing 4 Lift Station	Equipment Failure
September 20,2023	Sewage	40	L	Wing 13 Lift Station	Human Error
October 16, 2023	Sewage	10	L	Wing 14 Lift Station	Human Error
November 4, 2023	Suspended Solids	43.5	mg/L	MEL-SR-1	N/A. Refer to follow-up report in Appendix 14
November 6, 2023	Sewage	50	L	Orbit Lift Station	Human Error
November 11, 2023	Sewage	50	L	Orbit Lift Station	Equipment Failure
November 29, 2023	Sewage	4	m^3	Wing 10 Lift Station	Equipment Failure
December 11, 2023	Sewage	10	L	Wing 4 Lift Station	Equipment Failure
December 11, 2023	Sewage	10	L	West Exhaust Raise	Human Error
December 13, 2023	Sewage	5	L	Mill Lift Station	Equipment Failure

**Green indicates incidents reported under Water Licence 2BB-MEL1424 *Orange indicates incidents reported as due diligence *Blue indicates exceedances*

Following all environmental incidents, Agnico Eagle works towards understanding the causes and what remedial actions can be implemented to avoid re-occurrence.

Implemented in 2022 and pursued in 2023, the Internal Environmental Permit (IEP) aims to reduce the risk of environmental incident occurrence. This form requires the Environment Department review and sign-off on relevant workplans. As mentioned in the 2022 Annual Report, continuous interdepartmental communication and including Environment Department representatives in planning of the various projects as site also mitigate environmental incident occurrence.

As reported in the 2022 Annual Report, an Action Plan was put in place in 2022 following the environmental incidents that occurred during the 2022 drilling on ice season, in collaboration with CIRNAC, ECCC and KivIA. Improved procedures for drilling on ice were also developed and implemented and a “dry-run” of these procedures was held at a drill rig located on land on February 1st, 2023 with CIRNAC, KivIA, Agnico Eagle and Orbit Garant. In 2023, only three (3) spills occurred during the on-ice drilling season, compared to 14 in 2022. Further details on these 3 spills can be found in the follow-up reports in Appendix 14. This significant decrease in environmental incident occurrence shows that the mitigation measures put in place were successful.

In 2023, an interdepartmental working group was implemented and initiated efforts to mitigate the occurrence and severity of sewage spills at the mine site. The sewage spills working group’s primary

objective is to minimize both the frequency and volume of such incidents. Through systematic analysis and collaborative efforts, the working group is proactively working towards enhancing the resilience and reliability of the sewage management infrastructure, thereby safeguarding environmental integrity and operational continuity. The working group has already implemented mitigation measures. For example and as mentioned in follow-up reports (Appendix 14), several operational procedures were revised to address issues identified during spill root cause investigation.

Collectively, the actions taken work together to ensure that appropriate controls are in place to maintain compliance with regulatory requirements and commitments to best practice. Agnico Eagle is confident that the improvements made are key factors toward the goal of achieving zero non-compliance events.

In addition and as per previous years practice, to help prevent spills and also ensure all spills are reported internally, spill prevention training continued to be provided to employees in 2023. Employee's increased spill management awareness leads to more events being properly identified as spills and reported as such. The spill training program is improved on a continuous basis by the Environment Department.

Training activities include the following:

- All employees and contractors must participate in an induction session online prior to the arrival at the mine site, which includes a training section on spill management (prevention, reporting and cleaning);
- Every employee and contractor who operates a vehicle on site must participate in training on vehicle operation. Spill management is a component of this training session;
- Toolbox talks on spill management are regularly conducted by the environment department, with focus on high risk departments. In 2023, 31 spill-related toolboxes presentations focused on spill reporting and spill mitigation.
- All site personnel receive quarterly updates on environmental performance including total reportable and non-reportable spills;
- Intelex spill reporting software training is provided to department managers on a monthly basis where required.

An annual mock spill exercise was completed on September 25th, 2023, at Itivia as per applicable regulations. In 2023, A total of ten (10) individuals participated in the mock spill scenario, including eight (8) Agnico Eagle Emergency Response Team (ERT) members, two (2) Agnico Eagle employees from the Environment Department and 1 representative from Intertek. The Rankin Inlet Fire Department was also contacted but were unable to participate in the mock spill event. CIRNAC and the Government of Nunavut were also invited to join the mock spill exercise but did not attend. The exercise included the following: an in-class overview of the Itivia OHF and Oil Pollution Emergency Plan/Oil Pollution and Prevention Plan (OPEP/OPPP) contents, a review of emergency response equipment and a mock spill exercise. The mock scenario involved a leak from the flange that connects the ship transfer hoses to the shore-based pipeline that transfers fuel to the tank farm. The fuel leak overtops the secondary containment and begins to migrate towards Melvin Bay. The fictional spill is estimated to be approximately 2,000 liters of diesel. Agnico Eagle's ERT captain led the exercise, in which Intertek personnel participated. The exercise allowed participants to gain experience in spill intervention and awareness of spill management equipment. Overall, the

participants' actions and responses to the mock spill were satisfactory. It was determined that all participants had a sufficient understanding of the roles and responsibilities of all spill responders. Lessons learned from the event will ensure a more efficient response in the future, if needed. The detailed mock scenario report can be found in Appendix 16.

SECTION 7. MONITORING

Site Sampling Stations and Aquatic Ecosystem Monitoring Program (AEMP) Environment Sampling Locations are illustrated in Figure 19 and Figure 20, respectively.

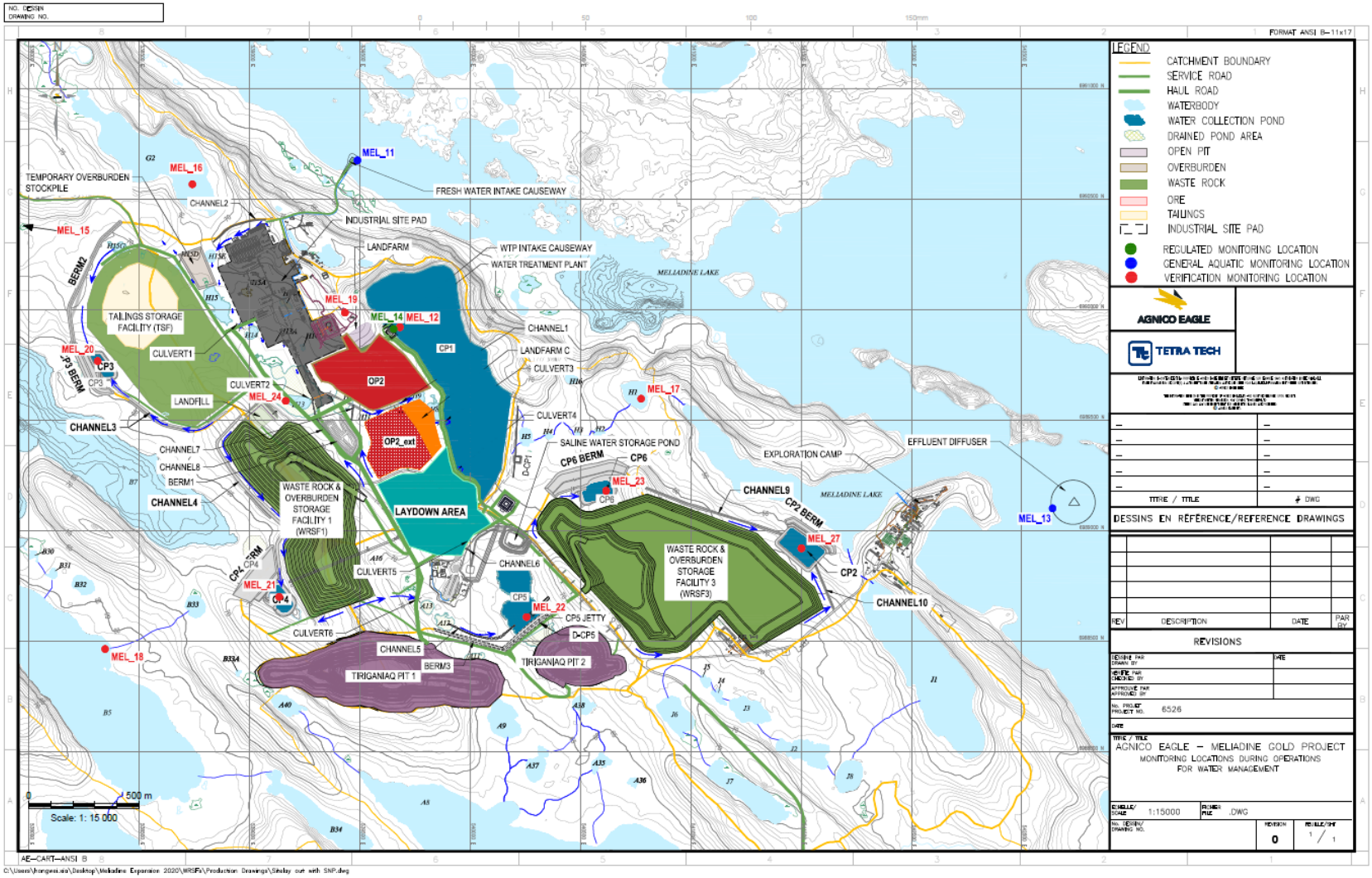

Figure 19: Meliadine Site Sampling Locations

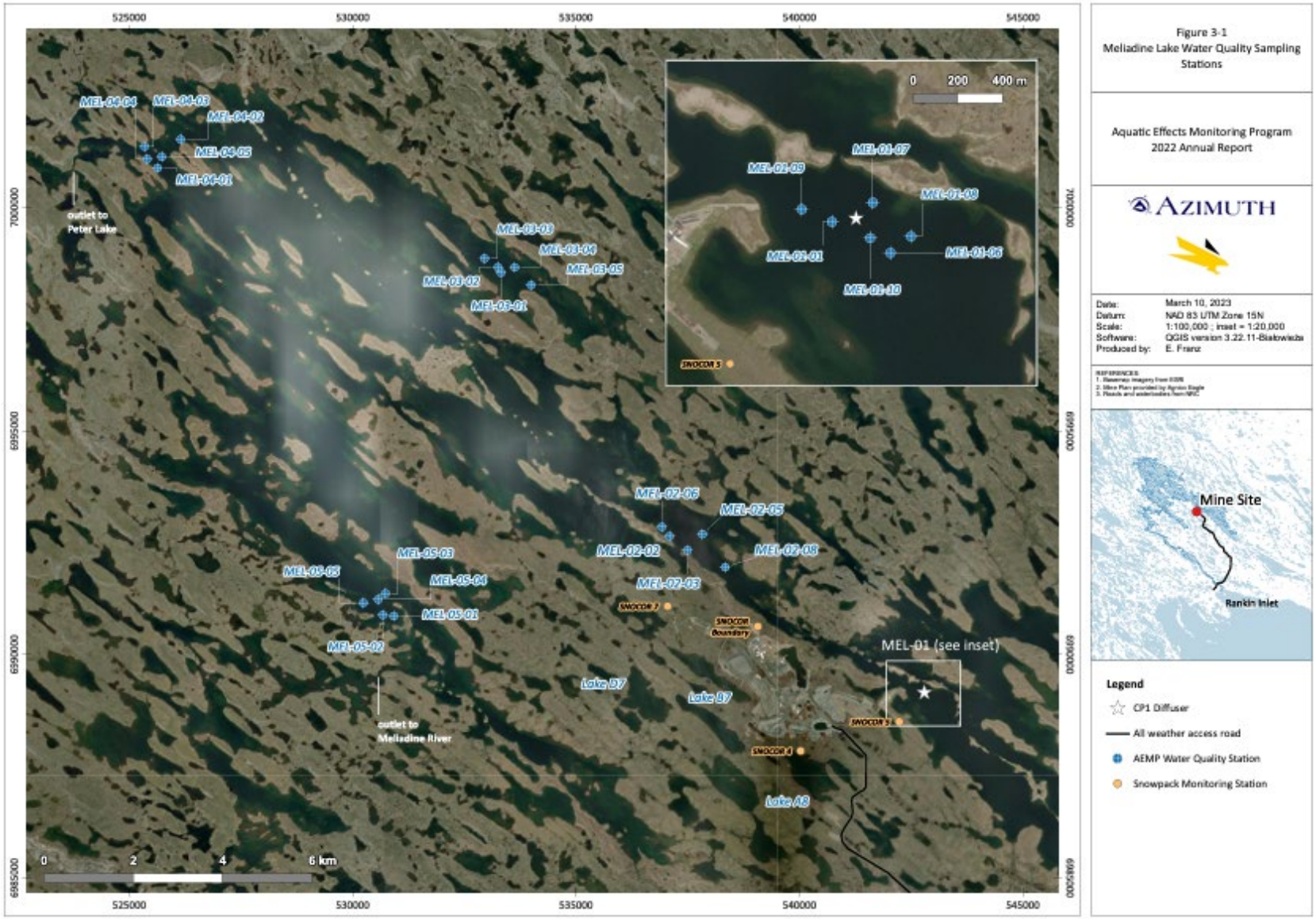

Figure 20. AEMP Sampling Locations

As required by Water License 2AM-MEL1631 Schedule B, Item 17: ***The results of monitoring related to the Environmental Management and Protection including:***

a. Aquatic Effects Monitoring Program;

Refer to section 7.1, all results can be found in Appendix 17.

b. Metal and Diamond Mining Effluent Regulation (MDMER) Monitoring;

Refer to section 7.2, all results can be found in Appendix 18.

c. Mine site Water quality monitoring, including groundwater monitoring; and

Refer to section 7.3, all results can be found in Appendix 18 and Appendix 19.

d. Visual AWAR Water quality monitoring

Refer to section 7.4.

and

As required by Water License 2BB-MEL1424 Part B Item 6d: ***Tabular summary of all data generated under the Monitoring Program,***

Sampling is no longer required from the Water Licence 2BB-MEL1424, explanation is provided in section 7.3.1.

7.1 AQUATIC ECOSYSTEM MONITORING PROGRAM (AEMP)

The AEMP is the monitoring program used to evaluate short-term and long-term effects of the mine on the aquatic environment and verify that the mine is operating as planned. Other objectives of the AEMP include evaluating the accuracy of predictions in the FEIS and providing information to inform management decisions.

The scope of the 2023 AEMP involved water quality monitoring and a phytoplankton community study in Meliadine Lake and water quality monitoring in three smaller lakes located near the mine: Lake B7, Lake D7, and Lake A8.

The complete AEMP report can be found in Appendix 17.

7.1.1 Meliadine Lake Study

Based on precipitation data collected on Site, 2023 and 2022 were the driest and second driest years since 1981. The relatively small snowpack in 2022/2023 meant less runoff was collected on Site during freshet. Freshet was also early in 2023 due to an unusually warm April and May and Agnico Eagle started discharging treated surface contact water to Meliadine Lake in early June. By mid-July, the lower operating level in CP1 was reached and discharge to Meliadine Lake was halted. Discharge resumed in mid-August and continued until the end of September. In total, approximately 530,000 m^3 of water was discharged into Meliadine Lake in 2023. For context, approximately twice the volume of water was discharged to Meliadine Lake in 2020 (1.03 Mm) after record rainfall in the summer of 2019.

Effluent Quality

Effluent samples were collected weekly for chemistry testing and monthly for acute toxicity testing while the Mine was discharging to Meliadine Lake. There were no exceedances of limits in the Water Licence in 2023 and there were no effects to Rainbow Trout or *Daphnia magna* in any of the acute toxicity tests. Two rounds of sublethal toxicity testing were completed with *Lemna minor* (duckweed), and there were no effects on frond growth or biomass in either test.

Meliadine Lake Water Quality

The water quality monitoring program in Meliadine Lake is designed to assess the effects of effluent discharge to Meliadine Lake. The monitoring program includes one winter sampling event (early April) and open water sampling in July, August, and September. The winter sampling event is primarily used to verify nothing unusual is occurring under the ice. Agnico Eagle discharges water during the open water season, so the focus of the Meliadine Lake water quality assessment is on water quality data collected in July, August, and September.

There were no mining-related exceedances of the AEMP Action Levels in 2023. A small number of samples exceeded the aquatic life water quality guideline for copper, but the exceedances occurred in the mid-field (MF) and reference areas. Copper is naturally elevated compared to the aquatic life guideline, but concentrations have been stable going back to the baseline period.

Water quality in Meliadine Lake has changed in recent years. In general, the magnitude of changes in water quality is more pronounced in the East Basin (MEL-01) compared to the MF (MEL-02) and far-field reference areas (MEL-03, MEL-04 and MEL-05). Parameters that have increased throughout Meliadine Lake include major ions (chloride, sodium, sulphate), organic carbon, and a few metals (arsenic, molybdenum, strontium, and uranium). For the parameters with effects-based thresholds, such as arsenic and uranium, current concentrations are well below guidelines meant to protect fish and other aquatic organisms and well below Health Canada's guidelines for safe drinking water.

Discharge of effluent was predicted to cause changes in water quality in the East Basin. The spatial extent of effluent-related effects on water quality outside of the East Basin is less certain. The long-term data from other areas in Meliadine Lake suggests that general warming patterns and more variable and extreme precipitation may also be contributing to incremental increases in the concentrations of some parameters (e.g., organic carbon and arsenic).

PhytoPlankton Community

Effluent contains nutrients and minerals that can stimulate algal growth and contribute to changes in primary productivity. As in previous years, one phytoplankton sampling event was completed in August to determine if effluent is causing nutrient enrichment and changes in productivity in the East Basin. Changes in productivity are evaluated using the following lines of evidence: phytoplankton biomass (a direct measure of primary productivity), chlorophyll-a (an indirect measure of productivity), the composition of the phytoplankton community, and nutrient productivity relationships.

Phytoplankton biomass was slightly higher in the East Basin in 2023 compared to 2022 but lower than in 2015 to 2018 and below peak biomass observed in 2019 and 2021. Nine years of monitoring continue to support the conclusion that the East Basin of Meliadine Lake is naturally more productive than other areas farther downstream. Unlike phytoplankton biomass, which hasn't shown any consistent upward or downward trend, chlorophyll-a has steadily increased in the East Basin and downstream at MEL-02. It's

unclear why chlorophyll-a follows a different trend than biomass, but neither phytoplankton biomass nor chlorophyll-a were strongly correlated with phosphorus or nitrogen concentrations.

Multivariate statistical analyses indicate the phytoplankton community in the East Basin was different in terms of the biomass of different taxonomic groups compared to the phytoplankton community downstream at the MF area and the reference areas. The FEIS (Agnico Eagle, 2014) predicted that effluent released to the East Basin could cause a shift in the structure of the phytoplankton community, but the magnitude of the change would be minor compared to baseline conditions. Importantly, no changes were predicted to primary productivity. These predictions accurately describe current conditions for the phytoplankton community in the East Basin.

7.1.2 Peninsula Lakes Study

Snowpack Chemistry

The snowpack sampling program was completed in early April 2023. The purpose of this sampling program is to qualitatively determine the extent and magnitude of off-site migration of metals and other parameters of interest during the winter. The snowpack chemistry results from 2023 indicate mining activities are not a source of metals or other parameters of interest to the snowpack north of the Mine or near Waste Rock Storage Facility 3 compared to the chemistry results at the background station. Off-site migration of dust is detected in the snowpack north of Lake A8. However, dust management practices that were implemented to control off-site migration of dust in 2021 have resulted in lower concentrations for all parameters of interest in snowpack samples collected from the Lake A8 monitoring station in 2021, 2022, and 2023.

Peninsula Lakes Water Quality

Water quality monitoring was completed at three replicate stations in each of the Peninsula Lakes in July and August. Lake A8 and Lake B7 are located next to major infrastructure; Lake A8 is located south of TIRI01 and TIRI02 and Lake B7 is located west of the TSF. Lake D7 is located west of Lake B7. Water quality data from Lake D7 provides information on the spatial extent of potential mining-related effects from dust, emissions, and alterations to the landscape and hydrology caused by construction of the Mine.

Water quality has changed in both Lake A8 and Lake B7 coinciding with construction and operations. The Changes in water quality are evident when comparing the concentrations of sulphate and arsenic in Lakes A8 and B7 with concentrations in Lake D7. No exceedances of AEMP Action Levels were reported for Lake A8 in 2023, but arsenic concentrations exceeded the AEMP Action Level (18.8 µg/L) in all three samples from Lake B7 in August. Follow-up monitoring was completed in October, and concentrations had decreased by roughly 50 %, from 20 µg/L to 10 µg/L. Arsenic concentrations likely decreased between August and October due to co-precipitation with iron. These data suggest that sediments are likely a sink for arsenic in the fall, but potentially a source of arsenic in the spring when ice comes off the lakes.

There is no evidence that mining activities have caused changes in water quality in Lake D7. Some parameters have increased compared to baseline, but the underlying cause is likely interannual climate variability.

7.1.3 Conclusions from the 2023 AEMP

- There were no exceedances of limits in the Water Licence in 2023. Concentrations have increased for some water quality parameters over time in the East Basin of Meliadine Lake. Changes can be seen dating back to early years (e.g., 2015) when there was no discharge of treated effluent by the mine and also in the MF and far-field area. Effluent is likely a contributing factor for some of the changes in water quality observed in the East Basin and the potential effect of effluent on water quality outside the East Basin is difficult to account for because of the confounding effects of natural variability among the basins. Results to date suggest that natural factors, such as increased runoff associated with permafrost thaw and unusually high precipitation in the past (2019-2020), are contributing to changes in water quality parameters throughout the lake.
- There is some evidence that the phytoplankton community at MEL-01 has changed in recent years based on the results of the Bray-Curtis dissimilarity index and the multivariate analyses. The shift in the phytoplankton community aligns with predictions in the FEIS. Phytoplankton biomass, the most direct measure of community productivity, has been variable across years but has not shown any consistent increasing or decreasing trends related to mining.
- Water quality has changed in all three Peninsula lakes compared to baseline conditions. Water quality data from Lake D7 suggest that most parameters have increased due to the combined effect of natural variability and climate-related factors (e.g., earlier freshet, higher summer temperatures, variable and extreme precipitation). Mining activities likely contributed to some of the observed increase in TDS, sulphate, arsenic, and barium at Lake B7 and Lake A8 since 2019. Off-site migration of dust is the most likely source of metals and other parameters to Lake B7 and Lake A8. Based on the results from the snow chemistry monitoring program, efforts to minimize off-site migration of dust resulted in lower concentrations of metals to the snow pack in recent years. Based on the annual mean, there were no exceedances of the AEMP Action Levels in any of the lakes in 2023.

7.2 MDMER AND EEM SAMPLING

This section relates to the monitoring programs conducted under the Metal and Diamond Mining Effluent Regulations (MDMER) and its Environmental Effects Monitoring (EEM) Studies. Reporting requirements for MDMER have been submitted directly to Environment and Climate Change Canada; the list of sampling location Global Positioning System (GPS) coordinates can be found in Table 17.

Table 17. MDMER and EEM GPS coordinates

Station ID	GPS coordinates
MEL-14 (Effluent characterization)	63˚2'15.5"N 92˚13'06.3"W
MEL-13 (Water Quality Monitoring Exposure Area)	63˚01'44.6"N 92˚09'14.6"W
MEL-03-01 (Water Quality Monitoring Reference Area)	63˚06'52.2"N 92˚20'23.6"W
MEL-26	62˚48'01.99"N 92˚06'00.05"W
MWE-1/WC (Water Quality Monitoring Exposure Area)	62°47'49,24"N 92°05'52,97"W
MWREFA-2	62°46'55,38"N 92°07'0,43"W

In 2023, discharge of treated effluent from CP1 to Meliadine Lake (MEL-14) occurred between June 10th to July 18th, August 21st to 25th, August 29th to September 6th, on September 11th, and September 16th to 30th, 2023. No discharge to Melvin Bay (MEL-26) occurred in 2023.

As requested in Schedule 6 of the Metal and Diamond Mining Effluent Regulations, monthly mean concentrations, pH range and volume of effluent (generated) were submitted directly to ECCC and can be shared upon request.

7.3 MINE SITE WATER QUALITY

As required by Water Licence 2AM-MEL1631 Schedule B-16: ***The results and interpretation of the Monitoring Program in accordance with Part D, Part I and Schedule I.***

7.3.1 *Licenced Water Sampling Stations*

Below is a short description of each of the monitoring stations from the Water Licences 2AM-MEL1631 and 2BB-MEL-1424. All water sampling results can be found in Appendix 18. Also, for stations regulated by MDMER or Water Licence limits, graphs with critical parameters are presented.

7.3.1.1 *MEL-1 Raw water supply intake at Meliadine Lake*

MEL-1 is the raw water supply intake at Meliadine Lake for the exploration camp. No sampling is required, only volume records as provided in section 3.1.1.

7.3.1.2 *MEL-2 Raw water supply intake at Pump, A8 or other Lakes*

MEL-2 is the raw water supply intake at A8 or other lakes. No sampling is required, only volume records as provided in section 3.1.1.

7.3.1.3 *MEL-5 Bermed Fuel Containment Facilities*

MEL-5 was the point of discharge for the bermed fuel containment facilities for the exploration camp. Since it was decommissioned, sampling is not required any longer.

7.3.1.4 *MEL-6 Landfarm Treatment Facility*

MEL-6 is the effluent from the Landfarm B Treatment Facility prior to release. The landfarm is not decommissioned yet but no water was released since 2016 as the water is transferred to the Landfarm A oil separator system and treated before being discharged in CP1.

7.3.1.5 *MEL-7 Effluent from Exploration camp STP*

MEL-7 is the final effluent discharge from the biodisk and the bionest at the exploration camp. Since November 2017, the treated water from the exploration STP is trucked to CP1 or to the Main Camp STP depending on recent water quality trends. Monitoring for this station still occurs when the exploration camp STP is in operation to ensure the efficiency of the treatment system, but discharge directly to Meliadine Lake no longer occurs. In 2023, no samples were collected from monitoring station MEL-7 since the exploration camp STP was not in operation.

7.3.1.6 *MEL-8 Point of discharge or runoff from the Non-Hazardous Waste Landfill*

MEL-8 was the point of discharge from the non-hazardous waste landfill for the exploration camp. Since it was decommissioned, sampling is not required anymore.

7.3.1.7 ***MEL-SR-TBD***

MEL-SR-TBD are surface runoff sampling points pertaining to runoff downstream of construction areas at Meliadine Site and Itivia Site, seeps in contact with roads, earthworks and any runoff and/or discharge from borrow pits and quarries. These are regulated monitoring stations in the Water Licence which includes water quality criteria that must be achieved to maintain compliance. Total suspended solids (TSS) results for all MEL-SR samples collected in 2023 are presented in Figure 21.

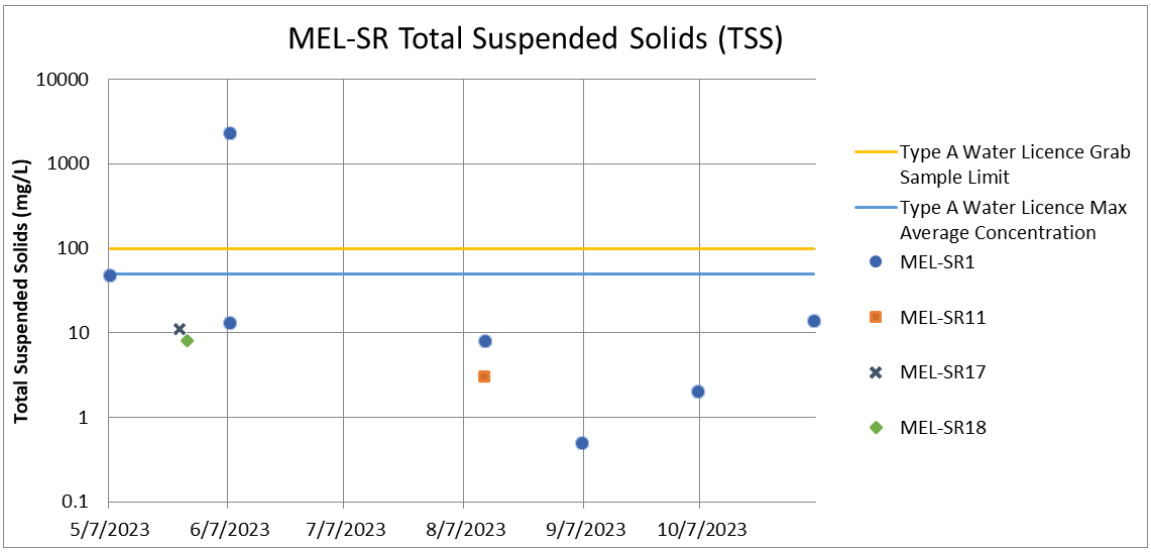

Figure 21. Total Suspended Solids (TSS) results for MEL-SR samples

One (1) TSS exceedance occurred in 2023, at the monitoring station MEL-SR1. Below is a brief description of the event and the mitigating actions taken to prevent further exceedances at this location. The complete follow-up report can be found in Appendix 14.

On June 7th, 2023, at approximately 4:00 am, the two culverts situated at Itivia sustained damage during a 1 in 50-year rainfall event. Due to substantial water accumulation within the catchment basin, the buoyancy force of air within the submerged culverts exceeded the weight of the culverts and cover resulting in uplift of the upstream portions of the culverts. Water could no longer be conveyed through the culverts and an unknown volume of water flowed over the roadway upstream of sample location MEL-SR-1. The MEL-SR-1 monitoring station is located at the southern end of Itivia and flows out to Melvin Bay approximately 75 meters to the south.

Field measurements of turbidity indicated a potential exceedance of the TSS effluent quality limits specified under Part D Item 18 of the 2AM-MEL1631 Water Licence.: Samples were collected at MEL-SR-1 and subsequently sent to an external laboratory for analysis.

Following the Sediment and Erosion Management Plan, the Energy and Infrastructure Department undertook measures to mitigate sediment mobilization and transport caused by overflowing water on the road. These measures included:

- Pumping water from the upstream to the downstream side of the culvert to prevent water from overflowing onto the roadway;

- Facilitate unimpeded water passage by pressing the culvert inlets down to their original position using heavy equipment;
- Installation of supplementary sediment control straw logs and wood logs.

As a result of these interventions, the water flow across the road was stopped within the first hour of implementation.

An assessment was conducted soon after the incident occurred to determine the root cause and contributing factors. The assessment concluded with the following:

- The culvert was not designed to manage the runoff amplitude of the June 7th rainfall event. The design of the culverts was based on a 1 in 25-year return period, while the environment received an actual rainfall of 50.7 mm per day, equivalent to a 1 in 50-year return period. It is also worth noting that the 50.7 mm of rainfall was received within only a few hours, contributing to an amplified instantaneous runoff rate. As the culvert was not designed for this rate of runoff, the upstream basin was flooded above the inlet of the culvert;
- The uncovered sections of the culverts were too long, and the buoyancy force of the air within the submerged culvert temporarily exceeded the weight of the culvert and cover material causing uplift of the upstream portions; and
- The inlets of the culverts may have been partially blocked by erosion and sediment control installations.

Following correctives and preventative actions were implemented are detailed in Appendix 14.

7.3.1.8 ***MEL-11 Water Intake***

MEL-11 is the water intake from Meliadine Lake. It is an aquatic monitoring location subject to compliance assessment to confirm that sampling is carried out using established protocols, including quality assurance/quality control provisions, and addresses identified issues. General monitoring is subject to change as directed by an Inspector, or by the Licencee, subject to approval by the NWB.

7.3.1.9 ***MEL-12 Water treatment plant (Pre-treatment)***

MEL-12 represents pre-treatment CP1 water located at the EWTP-WTC. The sample is collected from an inlet pipe within the plant and is not collected directly from CP1. It is a verification monitoring program, which is to be carried out for operational and management purposes by the Licencee.

7.3.1.10 ***MEL-03-01 Reference area in Meliadine Lake (MDMER reference station)***

MEL-03-01 is sampled in Meliadine Lake. It is also the MDMER reference station for final discharge. It is a general aquatic monitoring location subject to compliance assessment to confirm sampling is carried out using established protocols, including quality assurance/quality control provisions, and addresses identified issues. General monitoring is subject to change as directed by an Inspector, or by the Licencee, subject to approval by the NWB.

In 2023, all TSS sample results were below detection limit (1 mg/L), and all Total Dissolved Solids (TDS) (calculated) sample results were at or below 42 mg/L, with an average of approximately 40 mg/L. TSS and TDS results from sampling at this monitoring station in 2023 are presented in Figure 22 and Figure 23, respectively.

7.3.1.11 ***MEL-13 Mixing Zone in Meliadine Lake (MDMER exposure station)***

MEL-13 is sampled in the mixing zone in Meliadine Lake. It is also the MDMER exposure station for final discharge. It is a general aquatic monitoring location which is subject to compliance assessment to confirm sampling is carried out using established protocols, including quality assurance/quality control provisions, and addresses identified issues. General monitoring is subject to change as directed by an Inspector, or by the Licencee, subject to approval by the NWB.

In 2023, all TSS sample results were at or below the detection limit of 1 mg/L, and all TDS (calculated) sample results were at or below 60 mg/L, with an average of approximately 56.3 mg/L. TSS and TDS results from sampling at this monitoring station in 2023 are presented in Figure 22 and Figure 23, respectively.

7.3.1.12 ***MEL-14 Water treatment plant (Post-treatment)***

MEL-14 is the final discharge point (FDP) monitoring station and is sampled in the EWTP-WTC prior to the water being discharged to the environment. It is a regulated monitoring station in the Water Licence and in the MDMER regulation. It includes discharge water quality criteria that must be achieved to maintain compliance.

In 2023, TSS results for MEL-14 did not show any particular trend, with no significant increase or decrease of concentration. The yearly average concentration was 3.46 mg/L and the highest result was 5 mg/L. No exceedance occurred in 2023 for this parameter with all grab samples and monthly average concentrations within permitted limits (30 and 15 mg/L, respectively). TSS results from sampling at monitoring station MEL-14 in 2023 are presented in Figure 22.

With regards to TDS (calculated), all MEL-14 samples were compliant with the 3,500 mg/L maximum average calculated TDS concentration and 4,500 mg/L maximum grab calculated TDS concentration from the Amended Type A Water Licence. The average calculated TDS concentration at MEL-14 was 1,295 mg/L and the highest measured calculated TDS concentration was 2,100 mg/L. TDS results from sampling at monitoring station MEL-14 in 2023 are presented in Figure 23. A discussion pertaining to the TDS loading sources on site can be found in Section 3.1.8.

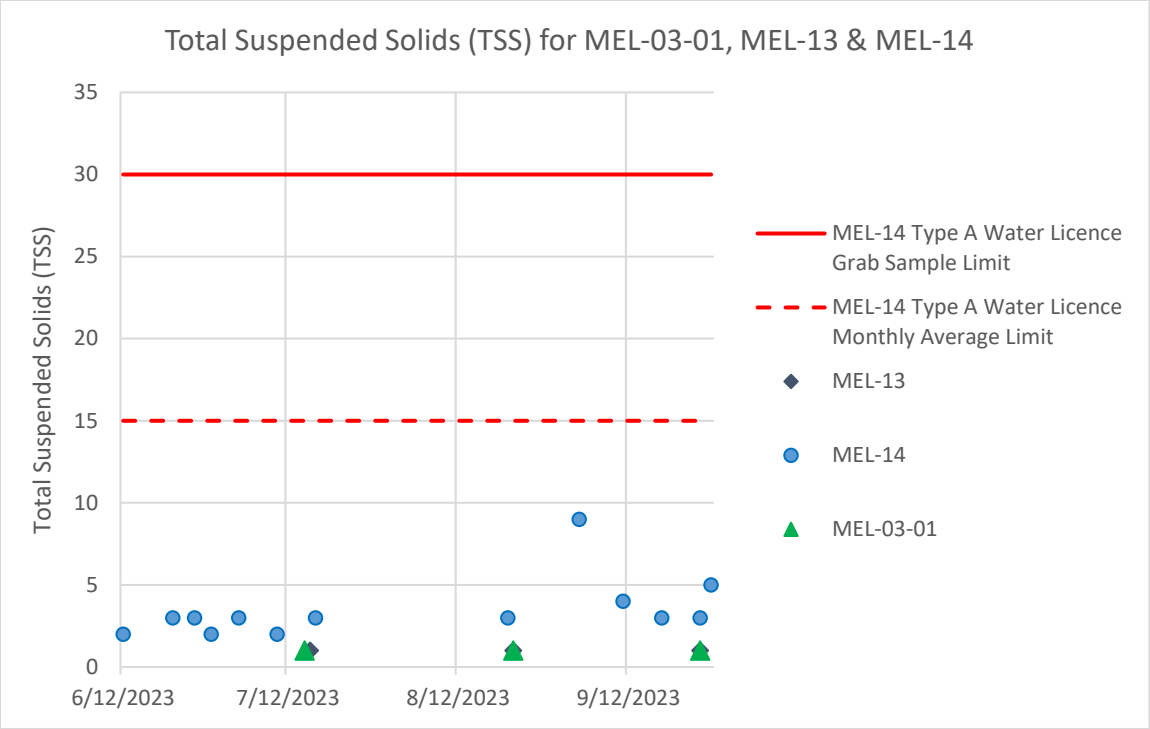

Figure 22. Total Suspended Solids (TSS) results for MEL-03-01, MEL-13, and MEL-14 monitoring stations.

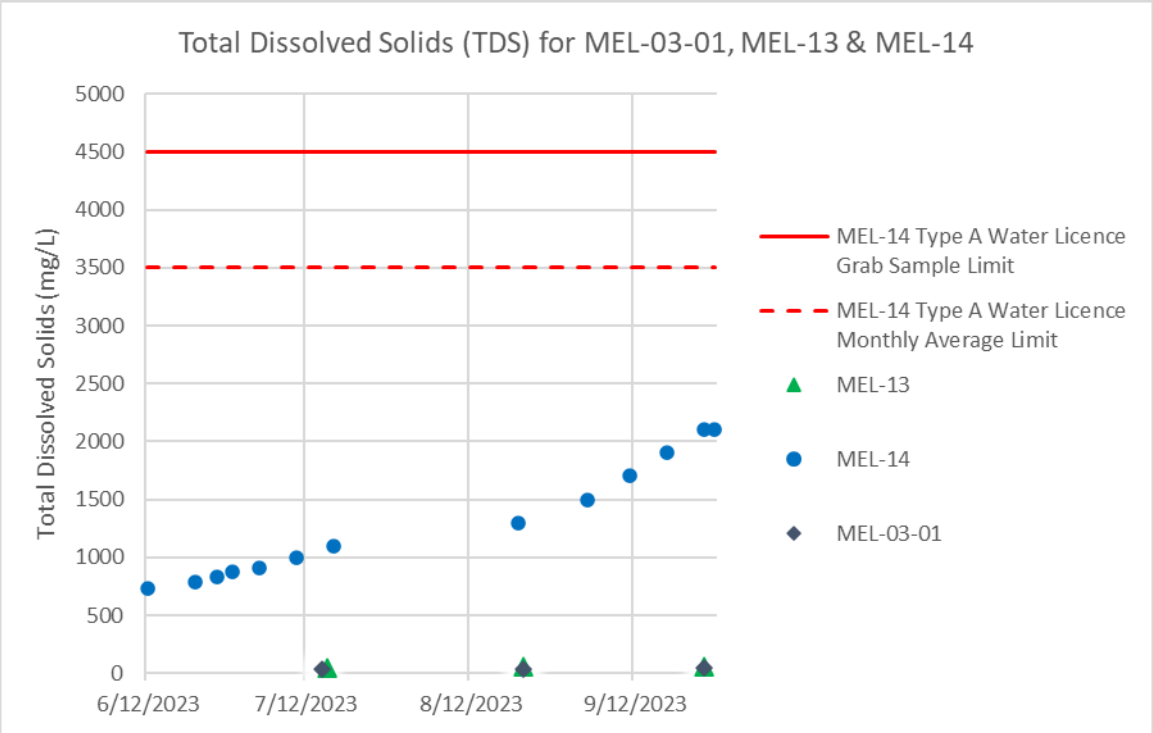

Figure 23. Total Dissolved Solids (TDS) results for MEL-03-01, MEL-13, and MEL-14 monitoring stations.

7.3.1.13 ***MEL-15 Local Lake E3***

MEL-15 is sampled in lake E3 located west of the mine site. It is a verification monitoring location which is sampled for operational and management purposes by the Licencee.

7.3.1.14 ***MEL-16 Local Lake G2***

MEL-16 is sampled in lake G2 located north west from the mine site. It is a verification monitoring location which is sampled for operational and management purposes by the Licencee.

7.3.1.15 ***MEL-17 Local Pond H1***

MEL-17 is sampled in lake H1 located east from the mine site. It is a verification monitoring location which is sampled for operational and management purposes by the Licencee.

7.3.1.16 ***MEL-18 Local Lake B5***

MEL-18 is sampled in lake B5 located south-west from the mine site. It is a verification monitoring location which is sampled for operational and management purposes by the Licencee.

7.3.1.17 ***MEL-19 CP2***

MEL-19 is sampled in CP2 (collection pond) which is the collection of drainage from WRSF3. It is a verification monitoring location which is sampled for operational and management purposes by the Licencee.

7.3.1.18 ***MEL-20 CP3***

MEL-20 is sampled in CP3 which is the collection of drainage from the TSF located west of the mine site. It is a verification monitoring location sampled for operational and management purposes by the Licencee.

7.3.1.19 ***MEL-21 CP4***

MEL-21 is sampled in CP4 which is the collection of the drainage from the WRSF1 located west of the mine site. It is a verification monitoring location sampled for operational and management purposes by the Licencee.

7.3.1.20 ***MEL-22 CP5***

MEL-22 is sampled in CP5 which collects the drainage from WRSF1 and the Portal 1 area. CP5 is located in the previous footprint of Lake A54 and is located south of the mine site. It is a verification monitoring location sampled for operational and management purposes by the Licencee.

7.3.1.21 ***MEL-23 CP6***

MEL-23 is sampled in CP6 which collects the drainage from WRSF3 located east of the mine site. It is a verification monitoring location sampled for operational and management purposes by the Licencee.

7.3.1.22 ***MEL-24 Seepage from the landfill***

MEL-24 is defined as seepage from the landfill between the landfill and Pond H13 or water pumped from the Landfill and directed to Pond H13 in the Modified Table 2 of the Type A Water Licence (NWB, 2023). It is a verification monitoring location which is sampled for operational and management purposes by the Licencee.

The Operation Landfill (Stage 4) utilizes a pumping system to facilitate the removal of water ponded against the perimeter berm if the rate of seepage is insufficient for water removal. Water pumped from the Landfill is directed to Pond H13, which is the current location seepage from the Landfill flows towards.

7.3.1.23 ***MEL-25 Secondary Containment at the Itivia Fuel Storage Facility***

MEL-25 is sampled from the secondary containment area at the Itivia Site Fuel Storage and Containment Facility. It is a regulated monitoring station in the Water Licence. It includes discharge water quality criteria that must be achieved to maintain compliance.

Two notices for discharge from MEL-25 were sent in 2023 to the appropriate regulatory bodies. As per the Licence, water quality was confirmed in compliance with the water quality criteria prior to discharge. The dates and volume for each 2023 discharge event are presented in Table 18.

Table 18: Dates of discharge and discharged volume from monitoring station MEL-25 to tundra.

Date of Discharge	Volume (m^3)
May 31st to June 4th	2060
July 23th to July 24th	510

7.3.1.24 ***MEL-26 Melvin Bay Final Discharge Point***

MEL-26 is sampled at the Melvin Bay final discharge point (FDP; end of pipe before offsite release) for treated saline effluent. It is a regulated monitoring station under MDMER. It includes discharge limits that must be achieved to maintain compliance.

In 2023, no water was discharged to Melvin Bay through MEL-26.

7.3.2 ***Underground sampling***

Underground contact water and non-contact groundwater monitoring is carried out as per the Groundwater Management Plan. The monitoring program is used to verify trends in the quantity and quality of water, and to conduct adaptive management when those trends diverge from those anticipated.

Water samples collected in the underground mine over 2023 include diamond drill hole (DDH) water intersects and underground saline contact water.

DDH water intersects are flushed prior to sample collection as a means to provide representation of “non-contact” groundwater within the fractured rock surrounding the underground mine. DDH water samples were collected quarterly at a minimum and as water was intersected (5 total samples over 2023). Samples were analyzed for relevant parameters to provide a representation of the background connate groundwater quality, which is the primary contributor of saline water received by the underground mine.

Water quality results for DDH samples collected in 2023 are provided in Appendix 19. In general, results for the 5 samples indicate stable and consistent concentrations for most parameters. Results showed an average TDS concentration of 45,120 mg/L, ranging from 36,100 mg/L to 54,400 mg/L. This represents a decrease of 11% compared to the average TDS from samples collected in 2022.

Metals listed under MDMER Schedule 4 (arsenic (As), copper (Cu), lead (Pb), nickel (Ni), and zinc (Zn) were below the MDMER limits for all DDH samples collected in 2023. In fact, most concentrations for these parameters (As, Cu, Pb, Ni, Zn) are below the laboratory detection limits. Few samples showed total metal concentrations equal to or slightly above the laboratory detection limits.

Underground contact water samples were collected monthly for water quality analysis from a port located on surface along the underground to surface pipe. The port is therefore located post clarification treatment and prior to redistribution of the water to surface contact saline water storage (TIRI02).This sampling point is a combination of sump (contact) water originating from the various levels of the mine, including groundwater, make-up water, drilling water, and paste line flushing water. Further information about the groundwater quality monitoring program is available in Section 3 of the Groundwater Management Plan.

7.3.3 ***Sludge***

As per the Water Management Plan, sludge produced as part of the TSS removal processes at the EWTP-WTC is currently discharged into saline water storage. The sludge is sampled monthly to determine potential impact on the receiving SPs. Additionally, internal analysis of the solids content of the sludge is conducted, and results are presented below as per Agnico Eagle's response to CIRNAC-4 comment on the 2022 Annual Report. Table 19 presents the results of these internal solids analysis, while Table 20 summarizes the results of the external water quality analysis.

Table 19: ***EWTP-WTC Internal Sludge Solids Analysis (2022-2023)***

Year 2022	% solid	Year 2023	% solid
2022-07-18	0.19	2023-07-31	3.47
2022-07-26	0.32	2023-08-21	0.61
2022-08-01	0.10	2023-09-18	0.72
2022-08-29	0.39	2023-09-25	1.15
2022-09-12	0.21		
2022-09-19	0.31		
Average	0.25	Average	1.49

Table 20*: EWTP-WTC External Sludge Water Quality Analysis (2021-2023)*

Parameters	Min	Max	Average
pH (Unit)	7.39	7.55	7.47
Conductivity (mS/cm)	2.12	2.78	2.45
Total Ammonia (mg N/L)	2.30	5.70	4.38
Total Phosphorus (mg P/L)	2.40	9.80	4.14
Orthophosphate (mg P/L)	0.01	0.02	0.02
Total Aluminum (mg/L)	7.22	60	25.22
Total Arsenic (mg/L)	0.02	1.56	0.75
Total Copper (mg/L)	0.00	0.14	0.05
Total Lead (mg/L)	0.00	0.07	0.02
Total Nickel (mg/L)	0.01	0.10	0.04
Total Zinc (mg/L)	0.01	0.31	0.11

Table 19 shows that the EWTP-WTC sludge is mostly composed of water. A notable change in sludge solids composition occurred in 2023 following an optimization at the EWTP-WTC, resulting in a thicker sludge being sent to TIRI02.

Based on the values presented in Table 20, it is unlikely that the EWTP-WTC sludge will negatively impact the pH, conductivity, total ammonia, total copper, total lead, total nickel and total zinc in saline contact water based on existing water quality data collected in TIRI02. Given the low concentrations of orthophosphate in the sludge, total phosphorus is likely in solid form due to the presence of organic material in the sludge. Conditions at the bottom of TIRI02 (sub-zero temperature and high salinity) will likely prevent remobilization of phosphorus in the water column.

Aluminum and arsenic in the sludge are likely found in solid forms due to the pH of the sludge and will settle at the bottom of TIRI02 without impacting quality of the water column.

A Scenario Analysis was completed in Q1 of 2024 on alternative sludge management strategies for the Water Treatment Complex, including the sludge generated from the EWTP and Saline Effluent Treatment Plan (SETP). The objective of this study was to evaluate options to stop liquid sludge discharge in TIRI02. Studied alternatives included mechanical dewatering (centrifuge, screw presses, filter press, etc.) and dewatering using Geobags. With these technologies, the liquid sludge (dryness of approximately 0.1 to 0.5 % w/w) can be dewatered to approximately 15-20% w/w dryness. The dewatered sludge can then be trucked to one of Meliadine WRSFs for disposal.

7.3.4 *QA/QC Sampling*

The objective of quality assurance and quality control (QA/QC) is to assure that the chemical data collected represent the material being sampled, are of known quality, are adequately documented, and are scientifically defensible. Data quality was assured throughout the collection and analysis of samples using specified standardized procedures, by employing external Canadian Association of Laboratory Accreditation (CALA) laboratories and by staffing the program with experienced technicians.

All analytical chemistry analyses are performed by external CALA-accredited laboratories. In most cases, these analyses are performed by Bureau Veritas (BV) Laboratories, an accredited facility located in Nepean, Ontario. Agnico Eagle may also require the services of other laboratories, such as BV

Laboratories in Edmonton (Alberta), ALS (BC), SGS in Lakefield (Ontario) and H2Lab in Val d'Or (Quebec). All data from these laboratories undergo a rigorous internal QA/QC process, including the use of duplicate samples.

Acute and sublethal toxicity tests were performed by AquaTox Testing & Consulting Inc. in Puslinch, Ontario Testing was conducted as stipulated in the corresponding Environment Canada Biological Test Methods. QA/QC measures were implemented by the laboratory, including the use of reference toxicants. All test validity criteria as specified in the test method were satisfied for all toxicity tests conducted in 2023.

Field blanks and duplicates were collected in 2023 as part of the internal quality control procedures. A field blank is a sample prepared in the field using laboratory-provided deionized water to fill a set of sample containers, which is then submitted to the laboratory for the same analysis as the field water samples. Field blanks are used to detect potential sample contamination during collection, shipping and analysis. Duplicate field water quality samples are collected simultaneously in the field at the same sampling location and using identical sampling procedures. They are used to assess sampling variability and sample homogeneity. In 2023:

- MDMER and EEM monitoring programs consisted of 3 duplicate samples and 3 field blanks which were collected from a total of 19 samples, representing 15.8% of samples taken.
- Surface water monitoring programs consisted of 14 duplicate samples, 12 field blanks which were collected from a total of 95 samples, representing 14.7% and 12.6% of samples taken, respectively.

Overall, collected and analyzed duplicate samples represent approximately 15% of the field samples collected throughout 2023, which is higher than the QA/QC duplicate program objective of 10%.

No samples were taken from the STP (MEL-07) in 2023 due to the station being non-operational for the entirety of the year. All sewage collected at the exploration camp was transferred to the main camp STP sewage tank for treatment and therefore no sewage passed through the STP sampling location.

Analytical precision is a measurement of the variability associated with duplicate analysis of the same sample in the laboratory. Duplicate results were interpreted using the relative percent difference (RPD) between measurements. The equation used to calculate the RPD is:

$$RPD\ (\%) = \frac{(A - B)}{(A + B)/2} \times 100$$

Where A is the field sample concentration, and B is the duplicate sample concentration.

Large variations in RPD values are often observed between duplicate samples when the concentrations of analytes are low and approaching the method detection limit. Consequently, a RPD equal to or higher than 20% for concentrations of field and duplicates samples that both exceed 10 times 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.

Results of the QA/QC data (RPD calculations) are presented in the tables included in Appendix 18 for the MDMER and EEM and Surface Water monitoring programs. The following is a summary of the QA/QC results, per sampling program:

- MDMER and EEM: All duplicate samples collected were considered as having high analytical precision. One of the duplicates collected at MEL-14 showed notable RPD values, for less than 10% of analyzed parameters.
- Surface Water: All duplicate samples collected were considered as having high analytical precision. Some duplicates collected at stations MEL-11 and MEL-20 showed notable RPD values, for less than 10% of analyzed parameters.

Results show that the QA/QC plan was followed, and samples were collected by qualified technicians. QA/QC methods are further discussed in the Quality Assurance/Quality Control Plan.

Temperature, pH, dissolved oxygen, turbidity and specific conductivity are measured in the field using hand held meters such as HACH test kit – 2100 Q Portal Turbidimeter (turbidity), YSI (pH, dissolved oxygen, temperature and conductivity) and Eureka Manta II (pH, dissolved oxygen and conductivity). The instruments are calibrated as required prior to conducting sampling to ensure optimal performance and record of the calibration are kept in a calibration log. The calibration data regarding these instruments is presented in Appendix 20.

QA/QC methods and results for specific field programs (i.e., AEMP, geochemical monitoring) are discussed separately in their respective reports and are provided in appendices.

7.4 SEEPAGE AND RUNOFF

As required by Water Licence 2AM-MEL1631 Schedule B, Item 11*:* Summary of quantities and analysis of Seepage and runoff monitoring from the Landfill, Landfarm, Waste Rock Storage Facilities, Borrow pits and Quarries.

In 2023, no seepage or discrete runoff was observed from the landfill, landfarm, or waste rock storage facilities.

A comprehensive runoff study was undertaken at OP2 to track Total Dissolved Solids (TDS) flow towards CP1, as outlined in section 3.1.8 of this report.

Pooling water and surface water runoff was observed at Borrow Pit B12, located at KM 15 along the AWAR during an environmental inspection which took place at the end of May. This occurrence was attributed to snow accumulation, resulting in snowmelt runoff beyond the borrow pit boundaries during freshet. To address this issue, a berm was promptly constructed to contain the water within the facility, and MEL-SR samples were taken on May 25th (MEL-SR17) and 27th (MEL-SR-18) Water quality analysis confirmed compliance with Water Licence criteria for MEL-SR stations. Water pooled inside the borrow put was transferred to CP1 on June 1st, 2023. No other seepage or runoff was observed in the other borrow pits located along the AWAR throughout the open water season.

7.5 VISUAL AWAR WATER QUALITY MONITORING

Inspections were regularly conducted at Itivia, along the AWAR and Bypass Road throughout the year, and in response to rainfall. Any visible turbidity plumes or erosion at these locations were documented by Environmental personnel.

Pre-freshet and freshet weekly inspections were conducted at Itivia, crossings along the AWAR, and Bypass Road to monitor various environmental risks, including blockages, ponding, erosion, and turbidity plumes. These inspections allowed to promptly address concerns such as deploying straw logs and informing the Energy & Infrastructure Department of maintenance needs. In 2023, six inspections were conducted at Itivia and eleven on the AWAR/Bypass Road during pre-freshet and freshet, from May 1st to June 10th. Although no major events occurred, water pumping was required twice at KM9 and KM20 to prevent snowmelt from overtopping the road and to mitigate sediment transport.

Waterline construction on the AWAR commenced on May 20th, 2023, with frequent environmental inspections conducted. It should be noted that the waterline construction was paused during the caribou migration according to the caribou work suspension protocol. On July 31st, 2023, Agnico Eagle received the Letter of Advice (LOA) from DFO for the waterline crossing of waterbodies between KM 30 to 15 along the AWAR and KM 6.5 to 0.5 along the Bypass Road. A total of 17 waterbodies were identified as fish habitat or showed potential fish habitat in these segments.

Qualified Environment Professionals (QEPs) from Kilgour & Associates (Kilgour) conducted daily environmental monitoring for the waterline construction work from July 10th to October 2nd, 2023. Kilgour's mandate included monitoring for (1) erosion and sediment controls (ESC), (2) water quality around the various project areas, and (3) providing fisheries regulations compliance monitoring and wildlife relocations. Monitoring from QEPs ensured compliance with the recommendations included in DFO's LOA for the project. Kilgour also recorded initial site conditions such as general topography, water quality, and historical erosion sites.

Before construction activities took place near waterbodies identified as fish habitat or which showed potential fish habitat, ESC were installed. Turbidity was measured before and at regular intervals after construction activities began at each site located in the high-water mark. It should be noted that Kilgour reported that sites identified along the AWAR and the Rankin Inlet Bypass Road (RIBR) as fish habitat or identified as having the potential to provide fish habitat were experiencing low water levels throughout their monitoring, therefore limiting connection to an adjacent waterbody and limiting the risk of transporting sediment.

During the week of July 17th, fish that were observed in an isolated pool near KM 16.1 were removed and relocated to a large body of water on the east side of the AWAR. On September 1st, a block net was set up near KM 15.5 to exclude the small bay prior to installation of the bedding material next to the AWAR. Electrofishing was conducted to remove any fish that could have been present; no fish were captured, and there was no visual evidence of any fish present within the small bay.

Overall, the construction site remained in good conditions, with minor signs of erosion in some areas which were monitored closely and mitigated with ESC.

Effective communication between the Environment Department, Kilgour, and the Construction Team ensured the successful completion of the waterline construction while mitigating risks to the environment.

7.6 BLAST MONITORING

In compliance with Term and Condition 11 of NIRB Project Certificate No. 006, Agnico Eagle has developed a Blast Monitoring Program. The objective of the Blast Monitoring Program is to minimize the effects of blasting on fish and fish habitat, water quality and terrestrial Valued Ecosystem Components (VECs).

Peak particle velocity (PPV) and overpressure monitoring data were recorded throughout 2023 during blasting activities at Meliadine. During 2023, one surface location was monitored: TIRI01. No blasting activities occurred at TIRI02 in 2023. The locations of the blast monitoring stations used in 2023 are shown in Table 21 and Figure 24 below.

Table 21. TIRI01 & TIRI02 Surface blast monitoring station coordinates

LOCATION	EASTING	NORTHING	DESCRIPTION
Explo Camp	541927.162	6989073.053	Permanent location used for TIR01 & TIR02 (installed 2020-08-20)
Comm Tower P1	539803.785	6988836.212	Permanent location used for TIR01 & TIR02 (installed 2020-08-20)

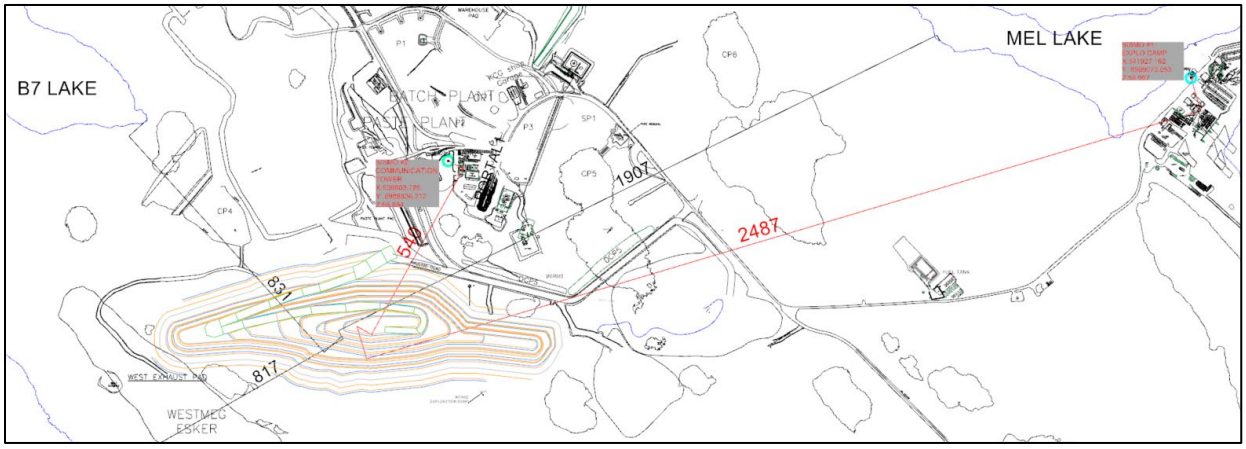

Figure 24. Surface Blast Monitoring Station Locations used for TIRI01 Blasts (Distance in Meters)

Blasts were monitored using an Instantel Minimate Blaster, which is fully compliant with the international Society of Explosives and Engineers performance specifications for blasting seismographs (Instantel, 2005). The transducer is installed as per the model specifications and measures transverse, vertical and longitudinal ground vibrations. Transverse ground vibrations agitate particles in a side-to-side motion. Vertical ground vibrations agitate particles in an up and down motion. Longitudinal ground vibrations agitate particles in a back-and-forth motion progressing outward from the event site (Instantel, 2005). The Minimate Blaster calculates the PPV for each geophone and calculates the vector sum of the three axes. The result is the Peak Vector Sum (PVS) and is the resultant particle velocity magnitude of the event:

$$PVS = \sqrt{(T^2 + V^2 + L^2)}$$

Where:
T = particle velocity along the transverse plane
V = particle velocity along the vertical plane
L = particle velocity along the longitudinal plane

Detailed blast monitoring data compilation and results are available in Appendix 21. In 2023, no PPV or pressure value exceeded the guidelines, of 13 mm/s and 50 kPa, respectively. The average PPV value for 2023 was 2.61 mm/s, with a minimum of 0.28 mm/s and a maximum of 8.83 mm/s. The average pressure value for 2022 was 3.52 kPa, with a minimum of 0.23 kPa and a maximum of 11.59 kPa.

The 2023 Blast Monitoring Report is presented in Appendix 21.

7.7 NOISE MONITORING

The objective of the noise monitoring program is to validate predictions of noise levels made in the FEIS, confirm the findings of the noise impact assessment (Vol. 5 – Atmospheric Environment and Impact Assessment; Golder, 2014), and inform the implementation of noise mitigation measures. Specifically, measurements of noise levels are made in at three or four previously determined monitoring locations over a period of at least two 24-hour periods. Results are compared to FEIS predictions for the 24-h L_{eq}, the $L_{eq\text{-}nighttime}$ design target, and the site's noise monitoring criteria (24-h L_{eq}).

Since high winds in the area tend to significantly reduce the amount of available data, technicians aim to conduct two or more monitoring events for each station, lasting two to four days each. In 2023, two or three monitoring events were successfully conducted for all required stations (NPOR006a, NPOR008, NPOR017a, and NPOR014a/b).

Noise monitoring stations are illustrated on following Figure 25.

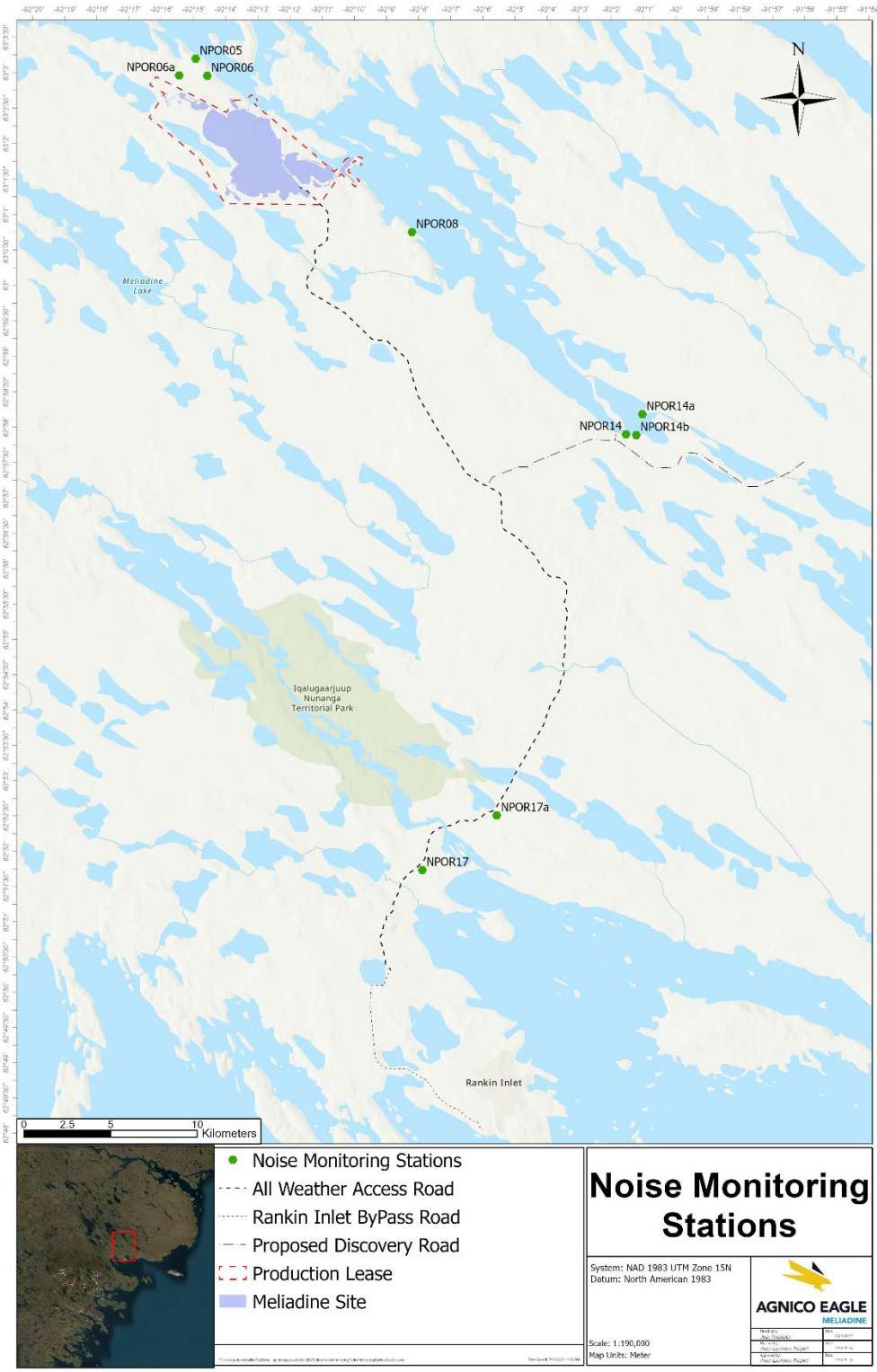

Figure 25. Meliadine Noise Monitoring Locations

Following processing of the data in accordance with standard methods (Alberta Energy Resource Conservation Board Directive 038), sufficient valid data was available for the calculation of at least two 24-h and/or night-time L_{eq} values for all noise monitoring stations. Final values are shown in Table 22

Table 22. Summary of noise monitoring results in 2023. Values exceeding FEIS predictions, criteria and/or design targets are in bold.

Location	Recording Start	Recording End	*Noise Monitoring Criterion $L_{eq(24\ h)}$ (dBA)*	*FEIS Prediction $L_{eq(24\ h)}$ (dBA)*	**Measured $L_{eq(24\ h)}$ (dBA)**	*Design Target $L_{eq\ (nighttime)}$ (dBA)*	**Measured L_{eq} (nighttime) (dBA)**
NPOR006a	7/29/23 14:25	8/01/23 20:48	*45*	*39.8*	37.9	-	-
	9/17/23 17:19	9/19/23 14:36			36.2		-
NPOR008*	7/22/23 14:49	7/26/23 13:06	*45*	*41.7*	ND	*40*	39.9
	7/31/23 14:35	8/03/23 22:59			39.8		34.9
	8/25/23 15:47	8/27/23 8:27			ND		39.4
NPOR014a	7/27/23 16:17	7/30/23 7:03	*45*	*44.7*	35.2	-	-
NPOR014b	9/20/23 12:35	9/23/23 16:25			31.3	-	
NPOR017a	7/21/23 16:36	7/24/23 10:59	*45*	*43.4*	39.5	-	-
	8/10/23 10:43	8/13/23 14:28			38.7		-
ND = Insufficient valid data; "-" = Not applicable							

*To ensure comprehensive data collection for calculating 24-hour Leq values, three events were organized at station NPOR008, each with monitoring periods of 96 hours, 70 hours, and 42 hours respectively. Despite encountering challenging weather condition, one of these sampling periods proved successful for obtaining the desired 24-hour Leq data.

For all stations and monitoring events, 24-h L_{eq} and night-time L_{eq} values were less than FEIS predictions, design targets, and the site's noise monitoring criteria.

To date, no noise-related complaints have been received for the Meliadine site. Based on these findings, no changes to existing noise monitoring plans and mitigation measures are proposed at this time.

The complete Noise report can be found in Appendix 22.

The NIRB and Health Canada (HC) provided recommendations/comments on the noise and vibration monitoring at accommodation sites, through the NIRB 2022-2023 Monitoring Report and 2022 Annual Report comments. Agnico Eagle completes noise monitoring sampling inside various work areas, including the Process Plant, throughout the Underground Mine, mechanical shops, cafeteria, office space, etc. as per its Meliadine Industrial Hygiene Sampling Plan. The program was created in accordance with the Nunavut Mine Health and Safety Regulations. Schedule 5 of the Regulations presents the noise monitoring requirements. When noise level exceeds the exposure limit shown in Table 23 and Table 24

employees must wear hearing protection while working in this area. In 2023, 24 noise level sampling were completed, using Larson Davis Dosimeters, and Quest handheld units.

Agnico Eagle also completes blast monitoring program. All blasts are monitored using an Instantel Minimate Blaster which is fully compliant with the International Society of Explosives and Engineers performance specifications for blasting seismographs (Instantel, 2005). Every blast is monitored to ensure that vibrations generated by blasting are less than 13 mm/sec and the overpressure is under 50 Kpa, according to the guideline. The peak particle velocity guideline limit is 13 mm/s. Since 2021, no exceedance of vibration was recorded.

Both programs have appropriate survey locations. They were selected according to noise and/or vibration levels that were expected to be the highest to assess potential impacts on the workers and the environment.

Table 23: Exposure Limits Equivalent to 85 dBA/Eight-Hour Shift

Length of Exposure	Average Noise Level
16 hours	82 dBA
12 hours	83 dBA
10 hours	84 dBA
8 hours	85 dBA
4 hours	88 dBA
2 hours	91 dBA
1 hour	94 dBA
½ hour	97 dBA
¼ hour	100 dBA

Table 24: Impact Noise Exposure Limits

Peak Pressure :Level (decibels	Maximum Permitted (impulse per 8-hou day)
120	10,000
130	1,000
140	100
>140	0

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7.8 AIR

7.8.1 Air Quality monitoring

Through its ambient air quality monitoring program, Agnico Eagle aims to measure airborne particulates, dustfall, and the gaseous compounds (NO_2 and SO_2) using a combination of active and passive sampling methods. In accordance with the Air Quality Monitoring Plan, monitoring in 2023 included year-round passive measurement of dustfall at four onsite sampling stations, as well as NO_2 and SO_2 at two locations, over one month averaging periods. Monitoring of suspended particulates (Total Suspended Particulates (TSP), $PM_{2.5}$, and PM_{10}) occurred year-round at two onsite monitoring stations. Agnico Eagle also conducted summertime dustfall transect sampling (25, 50, 100, 300 m distances from the road) at three locations along the AWAR and (60, 120, 300, 1000 m distances from the road) one location along the Rankin Inlet Bypass Road.

Dustfall Locations are identified in Figure 26.

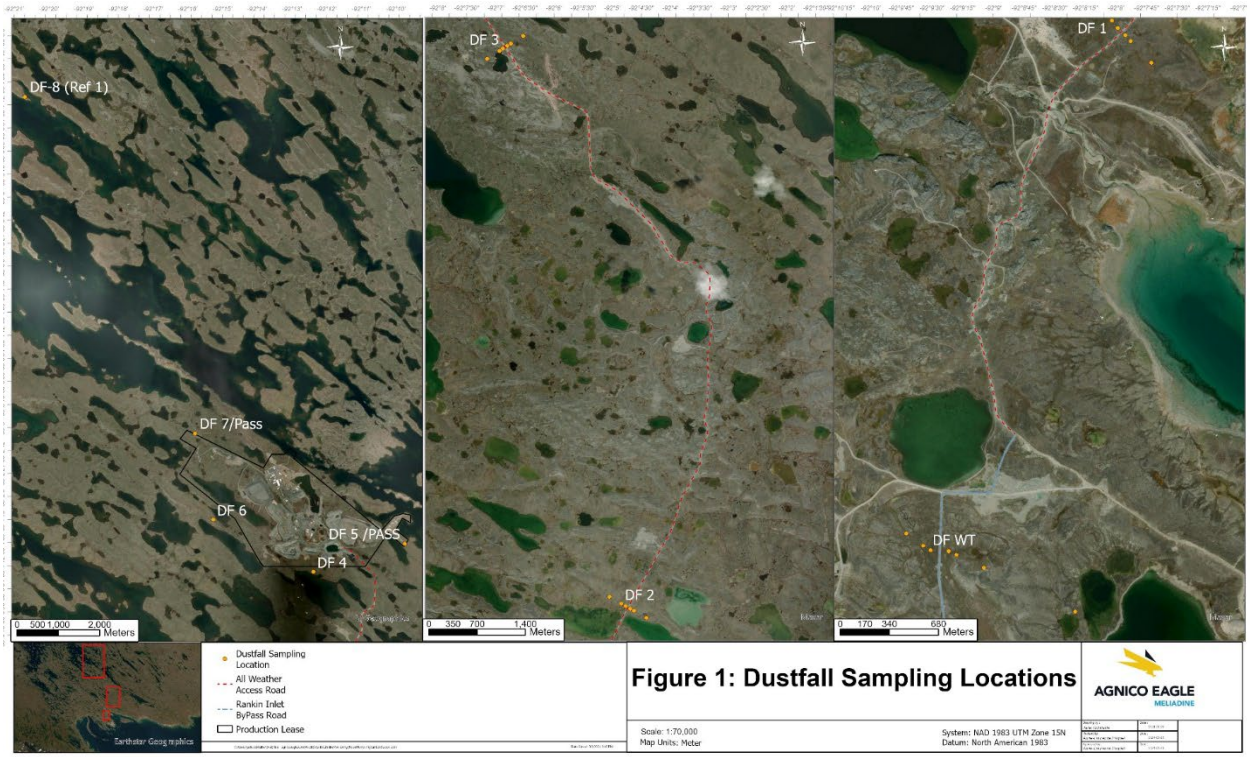

Figure 26. Dustfall Locations

Dustfall results are compared to Alberta's Ambient Air Quality Guidelines (Alberta Environment and Parks, 2019) for recreational and industrial areas (AB-Rec, AB-Ind), for context. These guidelines are based on nuisance concerns and are not in place for the protection of environmental or human health. It is anticipated that guidelines for recreational areas may regularly be exceeded in close proximity to the AWAR or mine site, and that guidelines for industrial areas may occasionally be exceeded. Across all onsite perimeter dustfall monitoring stations (DF-4, DF-5, DF-6, and DF-7), 42 of the 47 samples collected in 2023 were less than the AB-Rec guideline. One sample exceeded both AB-Rec and AB-Ind (DF-4; November 8), which is anticipated to occur occasionally. An additional four samples exceeded AB-Rec only. These instances occurred at DF-4 and DF-5, which are predominantly downwind of the mine site. Historically, exceedances of the AB-Rec guideline continue to be relatively uncommon (<12% of samples in any year).

For AWAR and By-Pass Road dustfall monitoring transects (DF-1, DF-2, DF-3, and DF-WT, summer-only sampling), average rates of dustfall were similar to or less than to those observed previously. Even in very close proximity to the road (25 m), average rates of dustfall over the summer season for AWAR stations were less than the AB-Rec guideline. Dust suppressant in the form of calcium chloride dry product was applied along the length of the AWAR portions in July, and along the full length in August and September.

Suspended particulates (TSP, $PM_{2.5}$, and PM_{10}) are scheduled to be assessed every 6 d in two locations (DF-5 and DF-7) using four Partisol air samplers. In 2023, some data loss occurred due to occasional instrument malfunction, but down time was minimal compared to previous years. In total, 325 of 360 possible samples were collected. With the exception of one TSP sample (DF-7; February 23) all results for suspended particulates were less than regulatory guidelines for the 24-h averaging time (relevant Government of Nunavut Ambient Air Quality Standards (GN guidelines; GN, 2011), Canadian Ambient Air

Quality Standards (CAAQS; CCME, 2012, 2020a & b), and/or BC Ambient Air Quality Objectives (BC objectives; BC, 2021)) and maximum concentrations predicted in the FEIS for the Meliadine Gold Project (Golder, 2014). From this data, no developing trends of air quality concern are evident. Annual averages for suspended particulates were less than relevant regulatory guidelines and 2014 FEIS predictions in all cases. Concentrations of metals of concern to the Project in TSP (cadmium and iron) were also less than 2014 FEIS-selected health-based screening values and FEIS maximum model predictions in all samples.

As in previous years, calculated annual average concentrations of NO_2 and SO_2 did not exceed regulatory guidelines (GN guidelines, CAAQS) and 2014 FEIS maximum predicted values.

Since monitoring results in 2023 were within applicable air quality standards and FEIS predictions, and/or did not indicate any air quality trends of concern, no additional adaptive management measures are planned for 2024.

The air monitoring full report can be found in Appendix 23.

7.8.2 Greenhouse Gas Emissions

Agnico Eagle is required by Environment Canada's Greenhouse Gas Emissions Reporting Program (GHGRP) to track greenhouse gas emissions. Calculated emissions for the Meliadine site (including Rankin Inlet operations) were reported on June 1st, 2023 for the 2022 year. Total emissions were 131,229 tonnes CO_2e, which is less than the FEIS-predicted maximum of 317,000 tonnes CO_2e.

Environment Canada's Greenhouse Gas Emissions Reporting Program for the 2023 year will be completed by June 1st, 2024.

7.8.3 Climate

A permanent weather station is installed at the Meliadine site, to the northeast of camp. The station records various data including daily and hourly data for wind speed, wind direction, temperature, solar radiation, precipitation and relative humidity. Table 25 summarizes 2023 annual temperature and precipitations records (from both the site weather station and Environment Canada at the Rankin Inlet Airport weather station, for comparison).

Table 25. 2023 Climate Conditions

Environmental Variable	Environment Canada (Rankin Inlet Airport)	Meliadine Site Weather Station
Temperature (°C)		
Mean Annual Temperature	-7.7	-7.8
Min. Annual Temperature	-44.5	-39.8
Max Annual Temperature	23.3	27.0
Precipitation		
Total Annual Snowfall (cm)	100.1	-
Total Annual Rain (mm)	31.7	-
Total Annual Precipitation (mm)	135.8	188.8

*Sensors on precipitation gauge Geonor T-200B use vibrating wire technology, which is very sensible to movement or wind. High winds may induce erroneous data.

The maximum annual temperature (from Meliadine weather station) of 27°C was recorded on August 5, 2023 and the minimum annual temperature of -39.8°C was recorded on 16 days in January (January 27, 28, 29 and 30) and February (February 1, 2, 3, 5, 6, 17, 18, 19, 20, 21, 22, and 23) of 2023. The mean annual temperature was -7.8 °C (Table 24). Total recorded annual precipitation at the Meliadine weather station was 188.8 mm and snowmelt began May 4, 2023 when the average daily air temperature began

to near 0°C. The precipitation data were available in real-time in 2023 and were used for year-round precipitation data. Environmental variables continued to be monitored on an ongoing basis.

7.9 WILDLIFE MONITORING

In addition to planned surveys conducted by the Environment department, all Meliadine employees and contractors are required to report wildlife sightings. In November 2021, a new way to report wildlife sightings on site via text message was introduced to all employees. The text messaging was replaced by a QR Code in April 2023. All observations, problematic interactions, wildlife surveys conducted weekly along the AWAR, caribou migration, operation shut downs related to caribou migration, aerial observations when helicopters are active, onsite audits (i.e. for wildlife attractants) conducted by third parties, and mitigation actions taken following problematic issues are reported in the monthly report to the Government of Nunavut, the Kangiqliniq Hunters and Trappers Organization and Kivalliq Inuit Association.

Department toolbox meetings were completed in 2023 for environmental subjects including wildlife and caribou migration. In 2023, 38 toolboxes were conducted on the topic of wildlife attractants and foxes, and 40 toolboxes were conducted on the topic of caribou migration. The toolbox presentations can be found in Appendix 24.

In April 2023, a Wildlife Audit was conducted at Meliadine by the consultant BEARWISE. The audit focused on five key areas:

- Greywater – non-sewage wastewater
- Garbage Management – including Incineration and garbage handling practices
- Waste segregation and diversion
- Kitchen Management Practices – including food handling and storage
- Camp Layout and Design – including structure spacing, skirting, lighting and windows

The general outcome of the audit was very positive, and key recommendations/comments are summarized below.

Greywater:

- Keep up the excellent work

Incinerator:

- Latch door on shipping container used for storing incinerator waste when the contained is not in immediate use

  Response action: Agnico Eagle reminded E&I personnel to latch the seacan door according to the recommendation.

- If sufficiently heavy-duty transparent bags can not be found for the collection of incinerator waste can not be found and black bags are to be used, appropriate steps must be taken to ensue incinerator operator safety.
  Response action: Agnico Eagle will ensure transparent bags are always used for the collection of incinerator waste.

Segregation and diversion of waste:

- Remove yellow bin outside of Dome 2
  Response action: The yellow bin was removed.

- Find an appropriately sized container for the collection of food wastes and locate it indoors.
  Response action: Work areas are inspected on the regular basis by the Environment department to ensure all food waste collection is located indoors.
- Underground and waste management team work cooperatively to develop and implement an effective pickup schedule for the food waste.
  Response action: The underground and waste management teams did develop and implement a pickup schedule for the food waste.
- Continue the excellent work improving the waste management system deployed at Meliadine.

Cooking grease

- The kitchen grease tote's are to go directly from inside the kitchen building to inside of the shipping container at the waste management area. They should never be stored outside.
- Regularly inspect the exhaust fan cover for grease accumulation and clean when needed.
- Keep up the good work.
  Response action: Camp department was reminded to apply the above noted recommendations.

Kitchen Garbage:

- Proceed with plans to upgrade the garbage storage room.
- When upgrading the garbage storage room undertake to ensure the kitchen garbage is stored "INSIDE" securely.
- Keep up the good work to date that has reduced wildlife attractants around the kitchen.
  Response action: The upgrade of the garbage storage at the kitchen will be completed as per the construction plan.

In summary, the results of the audit showed that the Meliadine Mine personnel had drawn on the recommendations of previous audit reports provided for other Agnico Eagle properties in the area and have developed effective and practical solutions to challenges as they arose over time. In all the areas visited, good waste management practices were observed. The recommendations listed above were addressed by Agnico Eagle in a timely manner. Training and reminders will continue to be provided to departments to ensure the recommendations from Bearwise continue to be applied.

7.9.1 TEMMP

The objectives of the Terrestrial Environment Management and Monitoring Plan Report (TEMMP Report) are to summarize annual data collected from wildlife and vegetation monitoring programs, and to describe natural variation and potential Project-related effects to wildlife populations within and adjacent to the Project. The data was collected according to procedures and sampling or monitoring intervals outlined in the Project's Standard Operating Procedures (SOPs) and the Terrestrial Environment Management and Monitoring Plan (TEMMP). The 2023 TEMMP Report describes monitoring objectives and methods, 2022 survey results, mitigation activities, and management recommendations (i.e., adaptive management). The complete 2023 TEMMP Report can be found in Appendix 25. Complementary studies (Caribou Behaviour, Caribou Trail Camera, Arctic Raptors, Hunter Harvest studies) were conducted in 2023 and are included in Appendices of the TEMMP Report. Wildlife observations that can be found in Appendix 26

Incorporation of Inuit Qaujimajatuqangit

In 2023, Inuit Qaujimajatuqangit (IQ) was collected during ten meetings, two site visits, and two cultural activities. Four local field assistants worked on site in 2023.

Direct Habitat Loss

Direct habitat loss is assessed every three years and was last assessed in 2021. The next assessment is scheduled for 2024.

Indirect Habitat Loss

Indirect habitat loss for caribou and wildlife habitat (soils and vegetation) is assessed every three years and was last assessed in 2022. The next full assessment is scheduled for 2025.

Soil and Vegetation Monitoring

Soil and vegetation health monitoring (dust and metals survey) is assessed every three years and was last assessed in 2022. The next full assessment is planned for 2025.

Non-native Plants

Non-native plant surveys were completed along the AWAR; no non-native plant species were detected.

Environmental Variables

The maximum annual temperature of 27.0°C was recorded on 5 August 2023 and the minimum annual temperature of -39.8°C was recorded for 4 days in January (27, 28, 29, and 30 January) and for 12 days in February (1, 2, 3, 5, 6, 17, 18, 19, 20, 21, 22, and 23 February) 2023. The mean annual temperature was -7.8°C. Total recorded annual precipitation was 188.8 mm and snowmelt began 8 May 2023 when the average daily air temperature exceeded 0°C. The green-up date for the RSA was estimated between 26 June and 12 July 2023, based on normalized difference vegetation (NDVI) values averaged across the RSA (obtained from MODIS VI satellite).

Birds

Shoreline Surveys

A total of 36 nests of 13 species were detected in 2023.

Point Counts

Point count surveys could not be completed in 2023 due to road closures during the post-calving caribou migration. Point count surveys will be conducted in 2024.

PRISM

Only one Program for Regional and International Shorebird Monitoring (PRISM) survey plot was completed in 2023 due to road closures during the post-calving caribou migration. PRISM surveys will be continued in 2024.

Raptors

Arctic Raptors conducted a formal survey and analysis for all known raptor nesting sites in the entire regional study area (RSA) in 2023. The study design included two surveys: one to assess the location of occupied territories during the pre-incubation and incubation periods, and one to assess site productivity during the late brood rearing period. Occupancy models were used to determine influence of disturbance on nest occupancy for peregrine falcons and rough-legged hawks. The analyses did not find an effect of distance to disturbance on nest occupancy for either species.

Pre-Clearance Surveys

Nests from seven different bird species were observed during pre-clearance surveys. When applicable, a setback perimeter was applied.

Wildlife Observations

Wildlife Sighting/Track Surveys

- Wildlife sighting/track surveys were completed by Agnico Eagle personnel along the AWAR and Mine infrastructure throughout the year.
- A total of 8,303 individuals from 16 identified wildlife species and 5 unidentified wildlife species groups (e.g., duck species [spp.], gull spp., loon spp., merganser spp., and ptarmigan spp.) were recorded during surveys along the AWAR in 2023.
- A total of 985 individuals from 12 identified wildlife species and 6 unidentified wildlife species groups (e.g., bird spp., duck spp., gull spp., loon spp., ptarmigan spp., and scaup spp.) were recorded during surveys at Mine infrastructure other than the AWAR in 2023.

Wildlife Incidentals

There were 142 incidental observations recorded, representing 242 individuals of 14 species and one species group (i.e., duck spp.), around the Mine site (including the camp area) and the AWAR in 2023.

Den Sites

- Surveys were completed for the Project between May and August 2023 to locate dens of Arctic fox, grey wolf, polar bear, grizzly bear, and wolverine.
- Seven historical fox dens were revisited; no sign of activity was observed. A total of four new fox den locations were found in 2023. Of these dens, three were active with Arctic fox and one was active with Arctic ground squirrel (sik sik).

Bird Nests

- Six incidental bird nests were observed on the Mine site or along the AWAR in 2023.

Incidents and Mortalities

- A total of eight mortalities across six different species were reported at the Project from 9 June to 19 September 2023; all of these mortalities were suspected or confirmed to be caused as a direct result of Project activities. No caribou mortalities were reported in 2023.

Wildlife Deterrents

Wildlife deterrents (i.e., propane cannons and deterrent balloons) were implemented at five locations to deter birds from nesting on site. Active deterrence, including hazing of incidental observations of wildlife, were also completed by environmental technicians; all activities were successful.

Barren-ground Caribou

Caribou Behaviour Monitoring

- Statistical analyses of 2020 to 2023 data found that caribou farther from infrastructure (i.e., greater than 300 m) displayed lower proportions of response behaviours.

- The proportion of response behaviours in caribou groups increased following disturbances, but behaviours usually returned to baseline levels within two sampling periods (i.e., within six minutes).
- Caribou displayed a greater likelihood of walking, alert, or running behaviours in surveys where there were disturbances such as vehicle traffic.

Caribou Remote Camera Study

- Between 2020 and 2023, a study was conducted using motion-triggered cameras to study caribou interactions with the Project infrastructure during their annual migration, focusing on the AWAR.
- The cameras were successful at capturing many caribou crossing the AWAR, with peak caribou passage occurring three weeks earlier in 2023 versus 2022, which was consistent with patterns of inter-annual variability observed in caribou GPS collar data. Caribou crossing timing and locations in 2023 were consistent with locations identified from 2020 to 2022, and with locations identified by IQ from Inuit Elders and community members.
- Physical attributes of the road did not appear to influence crossing locations. More caribou were observed on cameras on the northern half of the road. Esker material is more common as a substrate on the northern half of the road, which might suggest caribou prefer crossing on esker material. However, it is more likely that this is due to broad scale caribou movement patterns.
- Caribou were detected in the Mine and Discovery areas throughout the study period, with small groups around the mine and larger migratory groups along the proposed Discovery Road.

Collared Caribou Inventory

- Individuals from the Qamanirjuaq herd have been present in the RSA for 16 of the 31 years where collar data are available. Since 2011, collared Qamanirjuaq caribou have typically entered the RSA in late June to mid-July and have remained in the RSA for 1 to 5 days.
- Individuals from the Qamanirjuaq herd have been present in the Local Study Area (LSA) for 15 of the 31 years where collar data are available. Collared caribou typically enter the LSA in early to mid-July and leave the LSA on the same day; some individuals enter the LSA several times over the course of one summer but remain in the LSA for a day or less during each interaction. The length of time Qamanirjuaq caribou are spending in the LSA has not varied since collared caribou began interacting with the LSA in 2006.
- Fewer than 30% of Qamanirjuaq caribou come within 5 km of the Project and 99% of caribou that came within 5 km of the AWAR or Mine for a specific year remained for less than 24 hours. In consideration of these results, impacts to the Qamanirjuaq herd due to the Project have the potential for limited transboundary effects.

Caribou Advisory

- Surveys to monitor migration of the Qamanirjuaq herd through the Project were performed from 16 January through 23 January and 30 May through 25 July. Closure of the Mine site and/or AWAR was triggered between 20 January and 21 January and between 11 June to 11 July.
- Shutdowns affecting different components of the Mine were implemented to facilitate the safe migration of caribou through the Project. The AWAR was closed for 386 hours across 26 days. Vehicle traffic on site and open pit operations were restricted for 281 hours across 20 days. Activities

at the Exploration Camp were restricted for 81 hours across 5 days. Activities at the Main Camp were restricted shutdown for 264 hours across 18 days. Waterline work was cancelled for 296 hours across 28 days.

- Eleven flights were cancelled to mitigate disturbance to caribou on 19, 20, 21, 26, and 27 June as well as 6 and 7 July.

Hunter Harvest

- The 2023 Hunter Harvest Study included 56 participants amongst which 37 reported harvesting caribou. A total of 483 caribou were reported as harvested in 2023.
- A total of 14 muskox, 3 wolverine, and 4 wolves were harvested in 2023. Other reported harvested terrestrial mammals included 1 Arctic hare and 4 polar bears. In the marine environment, beluga (45 individuals) was the most common species harvested followed by ringed seal (29 individuals), bearded seal (5 individuals), narwal (2 individuals), and walrus (2 individuals).
- More birds were harvested by Rankin Inlet participants in 2023 (202 birds) than in 2022 (136 birds), but fewer than in 2021 (394 birds). In 2023, Canada goose and snow goose were harvested at the highest levels and made up 45% of all harvest bird species. Common eider, gull spp., ptarmigan, sandhill crane, northern pintail, and tundra swan were also harvested.
- Arctic char (2,525 fish), lake trout (122 fish), and Arctic cod (54 fish) were the most common species caught by fisherman. Relatively small numbers of Arctic grayling (3 fish), lake whitefish (6 fish), and burbot (1 fish) were caught in 2023.

7.9.2 Marine Environment

A Marine Mammal and Seabirds Observation (MMSO) report was completed for all observations done during the 2023 sealift season by the shipping companies Groupe Desgagnés and Woodward Group of Companies (Woodward). The purpose of the MMSO program is to mitigate interactions between marine mammals and seabirds and Project vessels and to collect information on marine wildlife presence.

To address Term and Condition 68 from the NIRB Project Certificate 006, a technical analysis was carried out on vessel vessel traffic in Hudson Strait and Hudson Bay to review the Meliadine Mine's contribution to vessel activity in the area, and the results of a literature review conducted on vessel activity and marine bird mitigation in the study area. The technical analysis was presented in Appendix 29 of the 2022 Annual Report.

Since 2020, the MMSO Report is coordinated for the shipping between the Meliadine Mine and the Meadowbank Complex (Meadowbank and Whale Tail Mines), contributing to cumulative effects monitoring.

In 2020 through 2023, ERM provided updated training materials for vessel crew that were delivered by Agnico Eagle to shipping companies supplying Meadowbank and Meliadine. These training materials were provided to Groupe Desgagnés and Woodward and included updated instructions for vessel crew on:

- setbacks from sensitive marine wildlife habitats such as marine mammal haul-outs and seabird colonies,

- mitigation procedures should marine mammals or seabirds be observed in or near the vessel path, and

- training materials for dedicated MMSO crew observers including detailed methods for marine mammal and seabird surveys, data sheets, and training videos.

The 2023 MMSO program continues to see greater survey effort compared to pre-2020. A total of 23 Groupe Desgagnés and Woodward vessels serviced the Projects between July and October during the 2023 shipping season: nine for Meadowbank, six for Meliadine, and eight serviced both Meadowbank and Meliadine. Datasheets were obtained from 18 of the 23 vessels in 2023, which is similar to the last three years (21 of the 27 vessels in 2022, 23 of the 29 vessels in 2021, and 19 of the 25 vessels in 2020), , all of which are greater than previous years (six vessels providing datasheets in 2019, and only two participating vessels in 2018).The complete 2023 MMSO report can be found in Appendix 27.

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 (SMP) (Agnico Eagle 2022b).

Vessel tracks were mapped along with identified sensitive areas for wildlife; where detailed data was 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 two occasions. However, when examining the data, it appears that a vessel only entered the 2 km Marble Island buffer on two occasions. Track data is based on satellite AIS (Automatic Identification System); therefore, ship track intersections likely occurred due to lack of ship track resolution and the intersection of existing points to create a continuous shipping track. Agnico Eagle will continue to investigate alternative commercial AIS suppliers in 2024; however, Vesseltracker remains the most reliable at this time. In addition, 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.

Vessel Mitigation

Vessels are required to transit south of Coats Island whenever the weather is safe to do so. The majority (78%) of vessels servicing the Meadowbank and Meliadine projects in 2023 travelled south of Coats Island, apart from five occasions, four of which occurred in June (one occasion) and July (three occasions) due to shipping route conditions, and the other one occurred in October due to inclement weather.

Marine Mammal Monitoring

In 2023, 64 transects were surveyed for marine mammals, and 62 stationary surveys were completed. There was a total of 20 sightings (five during dedicated surveys and 15 incidentally) of marine mammals during the 2023 shipping season, compared to 32 (surveys and incidentally) in 2022, 35 (surveys and incidentally) in 2021, 12 (surveys and incidentally) in 2020, seven (all during surveys) in 2019, none in 2018, and six (all incidental) in 2017. The majority of all marine mammal sightings between 2017 and

2023 were recorded in the Hudson Strait or near Marble Island and Chesterfield Inlet. There is an insufficient number of marine mammal sightings recorded to conduct a density analysis. No marine mammal-vessel interactions (e.g., strikes) were recorded by Groupe Desgagnés or Woodward in 2023, or in previous years (2017 through 2022).

Seabird Monitoring

No interactions between vessels and seabirds were recorded during the MMSO in 2023, or in previous years. Seabird survey effort on moving vessels in 2023 was lower than 2022 and 2021 but higher than early years, with 116 surveys completed with spatial effort. The decrease in moving vessel survey spatial effort is likely attributed to a more consistent adoption of new survey methods (reinforced in 2022 and 2023), an increase in errors on survey data sheets associated with incorrect coordinates or missing coordinates, and on fewer vessels travelling to site in 2023 (23) compared to previous years (e.g., 27 vessels in 2022 and 29 vessels in 2021). Over six years of moving vessel surveys for seabirds between 2018 and 2023, 48 species and 10,608 individual birds were recorded. The surf scoter was observed for the first time during moving surveys in 2023. The most common species recorded in 2023 were northern fulmar, razorbill, herring gull, and Wilson's storm-petrol. In 2023 northern fulmar continued to be one of the most reported species. Herring gulls were reported in a higher abundance than previous years, however, unknown gulls were under reported compared to previous years suggesting surveyors may have been more likely to identify previously unknown individuals as herring gulls. Previous to 2023 both common and thick-billed murre were recorded in relatively high abundance, however, in 2023 during moving surveys there were only two observations for both species combined. This suggests that common and thick-billed murre may have occurred at lower abundances in 2023 or they were more likely to be misidentified.

Seabird detectability and density were estimated using models which 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 2019 and 2021. The detectability estimate in 2023 was the second lowest since modelling started in 2018, however, 2023 had the second highest predicted seabird density in the same time span. Both the spatial effort of surveys in 2023 and the number of seabirds detected during moving surveys were lower than previous years. The differences in estimated density reflect variability in the effort and number of birds detected between years.

Stationary vessel survey effort was approximately 82% higher than in 2022 and this is due to more consistent reporting of survey effort. A total of 134 stationary surveys were completed in 2023 which was the most out of all years, however, survey effort was only the third highest. This could be attributed to fewer vessels overall travelling to site in 2023 and to a change in survey methods in 2022 for shorter consecutive surveys which was more successfully implemented in 2023. A total of 3,602 individuals from 39 species were recorded during stationary vessel surveys from 2019 to 2023. The detection rate for stationary vessel surveys more than half of that for moving vessel surveys. This result is generally consistent with the data, which indicates that both detections and number of birds recorded per survey were lower for stationary surveys compared to moving surveys.

7.10 VEGETATION

Initial measurements of vegetation and metals in soils were made in and surrounding the mine site in 2008 and 2009. Following NIRB Term & Condition 38 a repeated sampling program was added to the TEMMP and sampling of vegetation and soils were conducted in 2017, 2019 and 2022.

In their 2022-2023 Monitoring Report for the Meliadine Mine (December 2023), the NIRB recommended more discussion to be provided on the following within the next TEMMP Report or 2023 Annual Report:

- Whether high arsenic values are considered an effect of project activities;
- What mitigation measures would be considered should high levels of arsenic be determined to be from Project activities; and
- What the risk of any exceedances may be on caribou or other terrestrial wildlife.

Further, Health Canada recommended, through comments on the 2022 Annual Report, to compare arsenic results for each sampling location over time in order to determine whether additional mitigation or adaptive management is needed.

This section provides background data on arsenic levels in the area of the Meliadine Mine and aims to address the above noted recommendations.

7.10.1 Baseline Data Review

Baseline studies for vegetation and soils were conducted in 2008 and 2009 and were summarized in the Final Environmental Impact Statement (FEIS; Golder 2014 Volume 6.0, Terrestrial Environment and Impact Assessment, Section 6.4.1.2.4). These baseline studies indicated a pre-existing geological basis for high concentrations of arsenic in the Mine area. Soil arsenic concentration exceeded the Canadian Council of Ministers of the Environment (CCME) guideline of 12 mg/kg in 10 plots, reaching a maximum of 59.9 mg/kg (Golder 2012; Table 26 and Table 27–below,). Most of these plots with exceedances were situated within or in the immediate vicinity of the proposed Mine site or along the proposed road near the Mine site.

	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Silver (Ag)	Thallium (Tl)	Tin (Sn)	Uranium (U)	Vanadium (V)	Zinc (Zn)
Detection Limits	0.2	0.2	5	1	0.5	0.5	1	2	5	0.05	1	2	0.2	1	1	5	2	1	10
2007 CCME Guideline (agricultural)	20	12	750	4	1.4	64	40	63	70	6.6	5	50	1	20	1	5	23	130	200
2008 Soil Sample Plots																			
08-001	<0.2	**51.8**[a]	36	<1	<0.5	32.7	14	31	10	<0.05	<1	38	<0.2	<1	<1	<5	<2	22	50
08-002	<0.2	**59.9**	53	<1	0.5	11.1	9	**66**	8	0.05	<1	48	**1.2**	<1	<1	<5	<2	9	60
08-003	<0.2	**47.3**	93	<1	<0.5	16	19	30	<5	<0.05	2	20	0.4	<1	<1	<5	<2	15	20
08-004	<0.2	**13**	118	<1	<0.5	12.3	6	8	<5	0.16	<1	10	0.2	<1	<1	<5	<2	8	70
08-005	<0.2	**51.1**	117	<1	<0.5	10.7	**45**	**72**	<5	<0.05	7	39	0.8	<1	<1	<5	<2	9	40
08-006	<0.2	**26.9**	22	<1	<0.5	25.6	5	18	7	0.08	<1	20	0.2	<1	<1	<5	<2	15	50
08-007	<0.2	**13.9**	24	<1	<0.5	31.6	5	8	<5	0.09	<1	12	0.2	<1	<1	<5	<2	18	30
08-008	<0.2	**23.3**	31	<1	<0.5	22	6	9	<5	<0.05	<1	13	0.2	<1	<1	<5	<2	15	40
08-009	<0.2	1.2	51	<1	<0.5	5.2	1	5	<5	0.11	<1	4	0.4	<1	<1	<5	<2	4	20
08-010	<0.2	**11.8**	81	<1	0.8	23.1	9	18	<5	0.19	<1	19	0.4	<1	<1	<5	<2	15	60
08-011	<0.2	7	73	<1	<0.5	29.4	10	15	<5	<0.05	<1	24	0.2	<1	<1	<5	<2	39	40
08-012	<0.2	**49.7**	35	<1	<0.5	26.9	15	30	10	<0.05	1	31	<0.2	<1	<1	<5	<2	18	40
08-013	<0.2	5.9	40	<1	<0.5	27.4	7	18	<5	<0.05	1	15	<0.2	<1	<1	<5	<2	29	30
08-014	<0.2	8.4	64	<1	<0.5	29.1	8	29	<5	<0.05	1	24	0.4	<1	<1	<5	<2	25	30
08-015	<0.2	**19.5**	72	<1	<0.5	51.3	11	13	6	<0.05	<1	22	<0.2	<1	<1	<5	<2	38	50
08-016	<0.2	1.3	113	<1	<0.5	32.2	5	8	<5	0.16	<1	13	0.4	<1	<1	<5	<2	30	40
08-017	<0.2	2.7	74	<1	<0.5	31.8	7	7	<5	<0.05	<1	16	<0.2	<1	<1	<5	<2	27	30
08-018	<0.2	1.4	18	<1	<0.5	8.5	2	5	<5	<0.05	<1	5	<0.2	<1	<1	<5	<2	9	20
08-019	<0.2	1.1	22	<1	<0.5	12.7	3	2	<5	<0.05	<1	7	<0.2	<1	<1	<5	<2	14	20
08-020	<0.2	8.3	50	<1	<0.5	23	15	29	<5	<0.05	<1	26	<0.2	<1	<1	<5	<2	23	40

[a] Values in bold and shaded refer to soil metal concentrations that exceed CCME guidelines. Note: mg/kg= milligram per kilogram.

Table 26: Total Soil Metal Concentration (mg/kg) Associated with each 2008 Sample Plot (Table 6.4-5 in FEIS document)

Metal		Detection Limits	2007 CCME Guideline (agricultural)	2009 Soil Sample Plots							
				09-D01	09-D02	09-D03	09-D04	09-D05	09-D06	09-D08	09-D09
Aluminum	(Al)	10	n/a	9,670	9,530	1,240	9,580	6,370	3,550	5,820	8,460
Antimony	(Sb)	0.05	20	<0.050	<0.050	0.113	0.056	<0.050	0.067	<0.050	<0.050
Arsenic	(As)	0.05	12	6.66	**12.6** [a]	4.52	8.91	1.85	1.80	**20.3**	4.03
Barium	(Ba)	0.1	750	71.3	72.7	61.9	73.6	119	99.9	51.7	64.0
Beryllium	(Be)	0.2	4	3.11	3.71	0.24	2.74	1.73	0.92	2.11	2.73
Bismuth	(Bi)	0.3	n/a	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Cadmium	(Cd)	0.5	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Calcium	(Ca)	10	n/a	5,530	6,760	26,700	1,950	3,270	4,100	7,680	5,810
Chromium	(Cr)	0.5	64	39.3	39.5	2.98	37.0	33.0	10.5	23.2	36.2
Cobalt	(Co)	0.5	40	11.1	18.4	3.75	6.80	4.89	3.68	10.9	8.95
Copper	(Cu)	0.5	63	53.4	42.6	31.1	22.7	13.5	12.9	32.5	19.4
Iron	(Fe)	5	n/a	17,900	21,300	1,700	16,100	10,300	5,170	11,600	15,300
Lead	(Pb)	0.1	70	5.31	4.35	5.29	3.98	2.92	2.87	4.06	3.67
Lithium	(Li)	0.5	n/a	12.0	13.1	0.83	9.40	3.24	1.45	7.16	12.6
Magnesium	(Mg)	5	n/a	6,740	6,550	1,060	5,200	3,850	1,770	4,520	7,080
Manganese	(Mn)	0.2	n/a	238	425	271	90.6	138	50.9	237	251
Mercury	(Hg)	0.01	6.6	0.113	0.023	0.202	0.169	0.180	0.161	0.015	0.025
Molybdenum	(Mo)	0.05	5	0.679	0.688	1.34	0.648	0.484	0.322	0.297	0.244
Nickel	(Ni)	0.5	50	26.8	33.0	20.6	16.3	10.5	6.97	17.2	16.9
Phosphorus	(P)	20	n/a	658	672	939	885	1070	872	619	596
Potassium	(K)	100	n/a	2,670	1,970	1,090	1,330	2,300	680	1,110	2,530
Selenium	(Se)	1	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sodium	(Na)	100	n/a	320	310	130	<100	120	100	210	230
Strontium	(Sr)	0.3	n/a	31.5	41.2	195	19.4	17.8	29.8	32.2	28.6
Thallium	(Tl)	0.03	1	0.174	0.214	0.066	0.106	0.137	0.043	0.090	0.124
Tin	(Sn)	0.2	5	0.47	0.42	0.28	0.25	0.30	0.25	0.31	0.37
Titanium	(Ti)	0.5	n/a	824	945	67.6	446	666	300	574	878
Uranium	(U)	0.01	23	1.97	1.37	0.634	0.647	0.592	0.353	0.527	0.688
Vanadium	(V)	0.5	130	27.7	26.1	3.67	16.3	19.2	6.91	17.7	26.6
Zinc	(Zn)	0.5	200	46.7	48.9	53.5	39.7	44.7	32.5	32.3	36.3

[a] Values in bold and shaded refer to soil metal concentrations that exceed CCME guidelines. Note: mg/kg= milligram per kilogram; <= less than.

Table 27: Total Soil Metal Concentration (mg/kg) Associated with each 2009 Sample Plot (Table 6.4-6 in FEIS document)

7.10.2 Monitoring results 2017-2022

Arsenic results for soil samples collected in in the TSF and WRSFs areas in 2017, 2019 and 2022 are presented in Figure 27and Figure 28 below.

Soil sampling locations are showed in Figure 29 below.

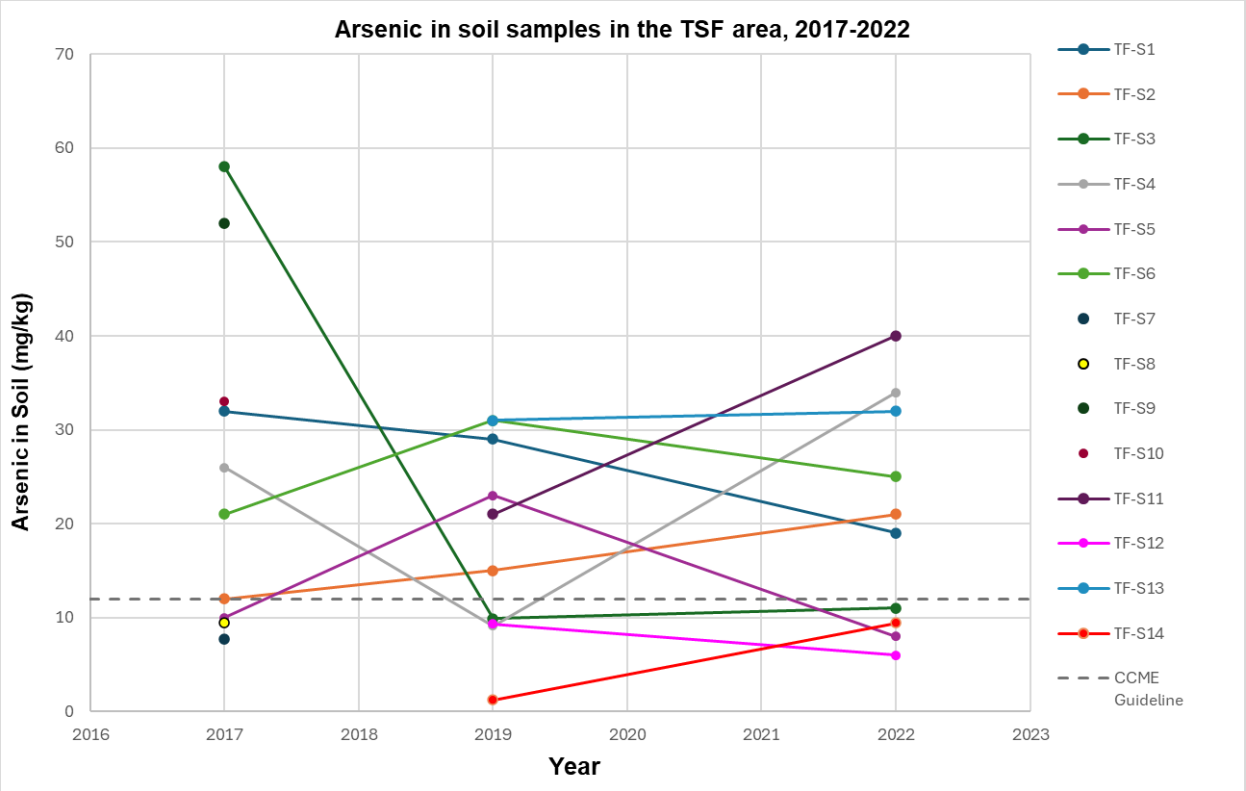

Figure 27 : Arsenic in soil samples in the TSF area, 2017-2022
Notes: Stations TF-S7 to TF-S10, sampled in 2017, were not revisited in 2019 and 2022 due to site disturbance. Stations TF-S11 to TF-S14 were created in 2019 to replace disturbed sites and were sampled again at the approximate same location in 2022.

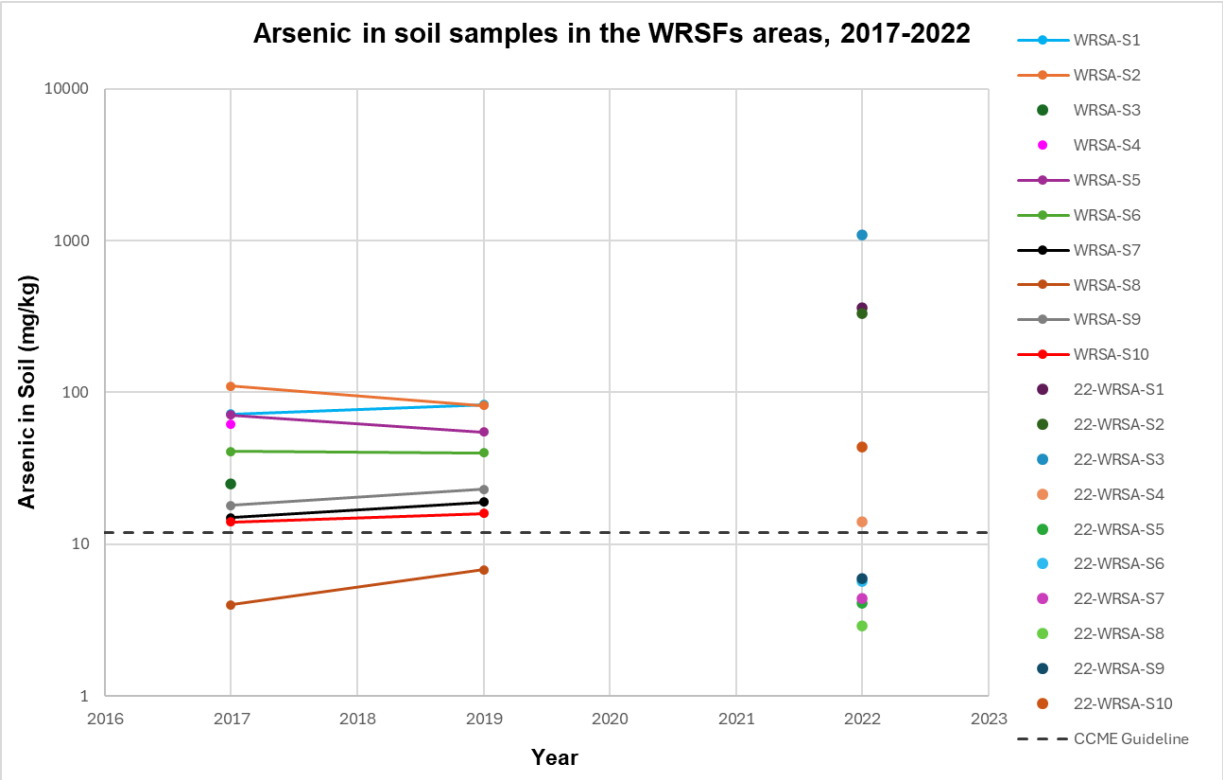

Figure 28: : Arsenic in soil samples in the WRSFs area, 2017-2022

Notes: Stations WRSA-S3 and WRSA-S4, sampled in 2017, were not revisited in 2019 and 2022 due to site disturbance. All WRSA stations in 2022 were relocated compared to previous sampling events to replace disturbed sites – they are therefore not linked to previous sampling on the Figure and are labelled 22-WRSA-XX. Arsenic results are presented on a logarithmic scale.

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Figure 29 : 2017-2022 Soil Sampling Locations

Metal monitoring programs conducted in 2017, 2019, and 2022 reported a variety of arsenic levels in soil – some below the CCME Guideline (of 12 mg/kg) and some exceeding the Guideline, particularly in samples collected immediately adjacent to the Mine (Golder 2018, 2020, and 2023).

As shown in the above Figure 27 no clear trend can be observed between 2017, 2019 and 2022 sampling events for arsenic levels in stations located in the TSF area.

In 2022, arsenic concentrations exceeding 100 mg/kg and 1,000 mg/kg were reported in only 3 samples collected immediately adjacent to the Waste Rock Storage Facility 1 (WRSF1), as shown in Figure 28. These stations (WRSA-1 to WRSA-3) are located approximately 50 m (WRSA-2) and 130 m (WRSA-1 and WRSA-3) from the WRSF1 current footprint.

It should be noted that all sampling sites near the WRSFs were relocated in the field in 2022 to replace WRSA sites that had been covered by the Project footprint since the 2019 survey. Other samples collected at WRSA sites in 2022 (located east of WRSF3) reported arsenic concentrations between 2.9 and 44 mg/kg, similar to or below concentrations measured in 2017 and 2019 sampling.

Soil samples collected in 2017, i.e. before construction of the mine infrastructure including the TSF and WRSFs, were reported to contain arsenic concentrations ranging from 4 to 75 mg/kg, with approximately 75% of samples exceeding the CCME guidelines. Therefore, it should be expected that elevated arsenic levels would be found in soils during operations. There are several potential causes of the reported higher arsenic concentrations in some (3) samples during 2022, including:

- There may be small-scale variation in naturally-occurring arsenic. Small-scale changes in where soils are sampled year-to-year may lead to variation in the amount of arsenic being measured.

- Project activities may be influencing arsenic to the soils immediately adjacent to infrastructure.

Note that the current sampling sites are very close to the mine site, most within 50 to 200 m of the edge of the development, within the Mine Production Lease. Dust monitoring at site in 2020 indicated that dust deposition fell to background levels within approximately 250 to 500 m of the mine (ERM 2020).

More years of sampling and sampling over a larger area would be required to determine if arsenic in soils is increasing, and the spatial extent of naturally elevated arsenic and any project-related effects, respectively.

Additional analyses of geological maps, dustfall sampling, and wider metal sampling are being discussed internally to evaluate the hypotheses for the causes of these exceedances, appropriate sampling to test these hypotheses, followed by appropriate mitigation measures if required. Agnico Eagle plans to conduct additional soil sampling in 2024.

7.10.2.1 ***Monitoring***

Several environmental programs in place at Meliadine allow to monitor changes in arsenic levels in the Meliadine Mine area, in addition to soil and vegetation monitoring.

Water quality is monitored in Collection ponds on site as per the Water Licence requirements. Monitoring results for all Collection Ponds in 2023, as well as previous years average concentrations, are presented

in Appendix 18. Observed and forecasted arsenic concentrations in surface contact water are provided in the WBWQM in Appendix 4.

Water quality monitoring is also completed at three replicate stations in each of the Peninsula Lakes (A8. B7 and D7) as part of the AEMP (refer to Appendix 17 for 2023 results). Lake A8 and Lake B7 are located next to major infrastructure; Lake A8 is located south of TIRI01 and TIRI02 and Lake B7 is located west of the TSF (at a distance less than 200 m). Lake D7 is located west of Lake B7. Water quality data from Lake D7 provides information on the spatial extent of potential mining-related effects from dust, emissions, and alterations to the landscape and hydrology during construction and operations. There is no evidence that mining activities have caused changes in water quality in Lake D7. Changes in water quality can be seen when comparing the concentrations of sulphate and arsenic in Lakes A8 and B7 with Lake D7. Water quality changes in Lake A8 and Lake B7 coincide with construction and operations.

In addition, snowpack sampling is completed on a yearly basis and reported on in Appendix 17. The purpose of this sampling program is to qualitatively determine the extent and magnitude of off-site migration of metals and other parameters of interest during the winter. The snowpack chemistry results from 2023 indicate mining activities are not a source of metals or other parameters of interest to the snowpack north of the Mine or near Waste Rock Storage Facility 3 compared to the chemistry results at the background station. Off-site migration of dust is detected in the snowpack north of Lake A8. However, additional dust management practices that were implemented to control off-site migration of dust starting in 2021 have resulted in lower concentrations for all parameters of interest in snowpack samples collected from the Lake A8 monitoring station in 2021, 2022, and 2023.

Dust is also monitored on site as per the Air Quality Monitoring Plan (refer to Appendix 23 for 2023 monitoring results). Dustfall rates in monitoring stations sampled year-round around the site (DF-4, DF-5, DF-6, and DF-7) appeared generally less in the 2021-2023 period compared to those recorded earlier in the early operations (2019-2020). While one or two monthly measurements at DF-4 and DF-5 (located generally downwind from the site) were elevated at the end of 2023 compared to the rest of the year, similar results have been observed historically.

In addition to water and dust monitoring, arsenic is monitored in tailings solid samples; 2023 results are presented in Appendix 9.

7.10.3 Mitigation

Several mitigation measures are implemented at Meliadine to limit the transport of arsenic, including water and dust management.

Seepage and runoff (contact water) from the waste management facilities (TSF and WRSFs) are managed with water diversion channels, water retention dikes/berms, and water collection ponds. Contact water is collected and treated prior to discharge to the receiving environment. Additional details regarding the water management systems and infrastructures are provided in the Water Management Plan.

Dust mitigation measures for roads and waste management facilities are described in the relevant Management Plans (e.g., Dust Management Plan, MWMP, Roads Management Plan, TEMMP). Mitigation measures for dust include (but are not limited to) the application of water or other approved dust suppressants, speed limits on Roads, the use of snow to cover inactive surface of the TSF to limit

the exposed tailings surface area, placement of waste rock cover over the final perimeter tailings slope surface as soon as possible, etc.

Further, dust inspections are carried out on site on a daily basis on the TSF, and on a weekly basis throughout the site to allow a prompt response should any concern be noted. o

A Dust Management Working Group was put in place in 2021 involving several departments from the Meliadine Mine to develop and support initiatives for dust management. Various dust abatement and monitoring technologies continue to be evaluated through site trials to determine their suitability for application at the mine site. Results from the Snowpack sampling and Air Quality Monitoring summarized above indicate that the additional dust mitigation measures applied since 2021 have contributed to lower levels of off-site dust migration. Agnico Eagle is committed to continuously improve the environmental performance of the TSF and will continue to explore potential additional improvements through the Dust Management Working Group.

7.10.4 Potential Impacts to caribou or other terrestrial wildlife

It is important to note that arsenic levels at the mine were elevated above CCME guidelines prior to construction. Therefore, the pertinent question is whether any increase in arsenic above already elevated levels poses any health risk to wildlife.

The Meliadine FEIS (Agnico Eagle 2014) and the Meliadine Extension (Agnico Eagle 2022) conducted a detailed Human Health and Ecological Risk Assessment (HHERA) within a LSA extending 500 m from the mine footprint. These HHERAs did not predict an increase in metal concentrations in soils above the current distributions plus 10% (Agnico Eagle 2022, Section 10). Therefore, no potential health effects were predicted for wildlife via this pathway.

When discussing whether changes in environmental media (such as soils) may be a risk to wildlife, there are three conditions that must occur for there to be a potential risk: chemicals in the environment, a receptor (wildlife species) and an exposure pathway. When considering chemicals in the environment, the question is whether they have increased from pre-construction conditions, which has not yet been established.

When considering the receptor, the question is whether that wildlife species is present.

When considering an exposure pathway, the key is how much of the environmental media do the wildlife consume. Typically, this is evaluated by considering the species home range size and when the information is available, the residency time (how many hours or days per year does the animal spend in the affected area).

The Qamanirjuaq caribou herd has a large home range size of approximately 600,000 km^2 (BQCMB 2014). Using a distance at which dust travels of approximately 250 m (ERM 2020), then the area that may be affected by dust would be approximately 4 km^2 surrounding the Meliadine Mine. Therefore, the proportion of the herd range that could be affected is 4/600,000 km2, which is .006% of the herd range.

The proportion of area can be examined on a seasonal basis using recent Brownian Bridge Movement Models (BBMM; heat maps) of caribou occurrence generated utilizing collar data at Meliadine Mine, have indicated that the percentage of caribou distribution within the LSA during the construction and operation

periods (2018-2022) has been consistently less than 1% (Post-Calving Season: 0.43%, Summer Season: 0.44%) (ERM 2023a).

Using individual collar data, the Government of Nunavut produced animations of caribou moving through the Meliadine area (GN 2023) which indicate that a relatively small proportion of the Qamanirjuaq herd passes within 250 m of the Mine and those that do transit the area in less than a day. Note that behaviour surveys indicate that very few animals approach to within 300 m of infrastructure (ERM 2023b).

Given that the area that may have elevated dust surrounding the mine represents is a fraction of less than 0.1% of the annual herd range and seasonal herd ranges, that few caribou enter within 250 m of the site and that they transit the area quickly, the chance that caribou are uptaking any significant amount of additional arsenic is extremely small and therefore the risk to caribou health would be negligible. Other large wildlife species, such as grizzly bears and wolves, also have large home range sizes and would be similarly unlikely to be affected.

SECTION 8. PROGRESSIVE RECLAMATION

8.1 MINE SITE

As required by Water License 2AM-MEL1631 Schedule B, Item 18: ***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 Water License 2BB-MEL1424 Part B, Item 6k: ***A description of all progressive and/or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations;***

In 2023, progressive reclamation of the TSF took place. As per the MWMP and Interim Closure and Reclamation Plan (ICRP), the closure plan for the TSF is to progressively place an engineered cover over the tailings surface. As-built (2019-2023) and expected quantities of material (waste rock and overburden) for progressive cover material at the TSF over LOM are presented in the MWMP.

A starter waste rock berm was initially placed along the outside perimeter to contain the initial lifts of the tailings; the berm will become a part of the closure cover. Additional lifts of compacted waste rock (with a maximum lift thickness of 1 m) are placed as the tailings surface is brought up as erosion and thermal protection. Safety berms are placed on each lift of the waste rock that also help to reduce dust generation from the tailings surface. In 2023, 175,564 tonnes of waste rock were used for the progressive closure cover of the TSF.

No other reclamation occurred at the mine site.

8.2 AWAR

In 2023, no reclamation occurred along the AWAR.

8.3 QUARRIES

In 2023, no reclamation occurred at quarries.

8.4 RECLAMATION COSTS

As required by Water License 2AM-MEL1631 Schedule B, Item 20: ***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 Water License 2BB-MEL1424 Part B Item 6h: ***An updated estimate of the current Meliadine West Gold Project restoration and liability, as required under Part B, Item 3, based upon the results of the restoration research, project development monitoring, and any modifications to the site plan*****;**

A permanent closure and reclamation financial security cost estimate was prepared in March 2014 using the RECLAIM model, version 7.0. According to that estimate, the closure and reclamation of all Project facilities amounted to $47,449,337. This estimate was included in the Preliminary Closure and Reclamation Plan (April 2015) prepared as part of the Type A Water License application. In negotiations between CIRNAC, Agnico Eagle and KivIA the quantum of security was increased to $49,555,000.

On July 1, 2017, the Production Lease KVPL11D01 between KivIA and Agnico Eagle came into effect; the security was confirmed at $49,555,000. Agnico Eagle posted a Reclamation Security Deposit, equal to 50% of this estimate ($24,777,500) with Kivalliq Inuit Associated (KIA).

In 2019, an Interim Closure and Reclamation Plan (ICRP) was prepared. CIRNAC's RECLAIM Reclamation Cost Estimating Model Version 7.0 workbook has been used for this estimate, as per the Guidelines for Closure and Reclamation Cost Estimates for Mines, issued by CIRNAC, Mackenzie Valley Land and Water Board and the Government of the Northwest Territories (CIRNAC, MVLWB & GNWT, 2017). The 2019 estimated closure and reclamation costs for the Meliadine Mine represented a total of $ 59,514,717. This total includes $ 34,462,041 of direct costs and $ 25,052,677 of indirect costs.

In 2020, a second version of the ICRP was prepared (SNC Lavalin Inc., April 2021). The general purpose of this ICRP was to update the interim closure and reclamation plan produced for the development phase of the Project, including the activities part of the Meliadine Water Licence Amendment, which are approved in the Meliadine FEIS and in the NIRB Project Certificate 006 (NIRB, 2019). The detailed financial security cost estimate for the Meliadine ICRP 2020 was updated using the RECLAIM Version 7.0 workbook. The updated 2020 estimated closure and reclamation costs for the Meliadine Mine represents a total of $69,687,246. This total includes $40,887,775 of direct costs and $28,799,471 of indirect costs.

The 2020 ICRP was updated again in December 2022, to comply with the below requirements:

- Part J, Item 2 of the Nunavut Water Board (NWB) Amended Water Licence 2AM-MEL1631:

  The Licensee shall, within eighteen (18) months of approval of this Licence by the Minister, submit to the Board for approval an updated Interim 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 (MVLWB/AANDC, 2013) and consistent with the Mine Site Reclamation Policy for Nunavut (INAC, 2002). In addition to the information required in the Guidelines and Policy, the updated ICRP shall also include the following information: Additional details on the Closure and post-Closure soil and Water quality Monitoring Programs, as information becomes available from operational data and from future versions of all applicable management plans.

- Commitment 37 (recommendation reference: CIRNAC-TRC-10) for the Waterline FEIS Addendum, Saline Effluent Discharge to Marine Environment (Nunavut Impact Review Board (NIRB) Project Certificate No. 006, Amendment No, 002):

> Agnico Eagle committed to incorporating the details about the potential effects of the burial of waterlines, on reclamation and closure strategy, into the next iteration of the Interim Closure and Reclamation Plan.

It should be noted that the latest version of the ICRP submitted to the NIRB and NWB on December 23rd, 2022 did not include any modification to the estimated closure and reclamation costs.

Further, as part of the International Cyanide Management Code certification process, a Cyanide Management Decommissioning Overview (CDMO) document was prepared in 2022 by Agnico Eagle, which includes a detailed estimation of the cost related with decommissioning of the Mine's cyanide facilities. The CDMO is presented in Appendix P of the updated ICRP.

No updates were made to the ICRP in 2023.

SECTION 9. STUDIES/REVISIONS/MODIFICATIONS

9.1 SUMMARY OF STUDIES

As required by Water License 2AM-MEL1631 Schedule B, Item 21: ***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.***

And

As required by Water License 2BB-MEL1424 Part B, Item 6l: ***summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed;***

No studies were requested by the NWB in 2023.

9.2 SUMMARY OF REVISIONS

As required by Water License 2AM-MEL1631:
Schedule B, Item 22: ***Where applicable, revisions will be completed as Addendums, with an indication of where changes have been made, for Plans, Reports, and Manuals.***

And

Part B, Item 16:
The Licensee shall review the Plans or Manuals referred to in this Licence 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 should incorporate design changes and adaptive engineering required and implemented during construction and on the basis of actual site conditions and monitoring results over the life of the Project.

And

As required by Water License 2BB-MEL1424 Part B Item 6g: ***Any revisions to the Spill Contingency Plan, Site Water Management Plan, Used Water Management Plan, Waste Management Plan, Waste Rock and Ore Storage Plan, Landfill and Landfarm Management Plans, Abandonment and Restoration Plan, as required by Part B, Item 12, submitted in the form of an Addendum;***

The following Table 28 provides a summary the management plans and identifies the ones updated and the main revisions brought to them. They are available in Appendix 28.

Table 28. Management Plan Revisions

Management Plan	Version	Revision
2023 Annual Report Update		
Blast Monitoring Program	6	General Update Revised Table 3 (Meliadine Mine Blast Monitoring Hardware), Section 3.1 on Underground Instrument Installation, Table 5 (Production Drilling Design Parameters), Section 6 on underground blasting

Explosives Management Plan	10	General Update, updated location of underground explosives and detonators magazines in Section 2.2, updated Appendix A (Factory Licence)
Groundwater Management Plan (Appendix A of the Water Management Plan)	11	Removed background section and added referral to Water Management Plan, added definitions for 3 water sources in Section 2, added January 2024 groundwater model updated results in section 2.1, added reference for linearly reduced conductivity at depth statement in section 2.1.1, revised wording describing saline ponds in section 2.2, removed mitigation measures from each section in section 2.3 (added to standalone section 2.3.4), added thermal monitoring discussion, added borehole instrumentation monitoring in section 3.3, removed outdated P&ID figure and added simplified schematic of dewatering system.
Incineration Management Plan	8	General update, several sections updated to reflect addition of the secondary incinerator at site (sections 1.4, 4.1, 5, 6.4.1, 6.5)
Mine Waste Management Plan	11	Update to reflect Meliadine operational status Update quantities according to latest mine plan Added section 5.7 on Temporary Storage Pad for Tailings during Caribou migratiom
Oil Pollution Emergency Plan / Oil Pollution Prevention Plan (OPEP/OPPP)[2]	9	Updated Schedule 2 OHF Declaration, Table 2 update in Section 7.3, Minor updates to contact information in Section 8.3, Minor updates to responsibilities of the first responder in Section 9.1, Added reference to Section 11(3) of the Environmental Response Regulations in Section 11.
Ore Storage Management Plan	6	Update quantities according to the latest mine plan
Roads Management Plan	10	General update, simplified Executive Summary and Section 1.2 to avoid repetition, Moved some of the information from Section 4 (Consultation) in Appendix A, removed previous sections 4.1 and 4.2, updated section 6.3 on access control procedures to reflect current operational procedures, removed reference to discharge to sea via trucking in section 6.4, added requirement to conduct fish passage assessment in section 7, added the use of snow fences for snow management in section 7.3, minor updates in section 8 (Road safety) to reflect current operational status, addition of non-reflective delineators for identification of the waterline in road signage in section 8.1, removed repetitive information that can be found in the TEMMP in section 10 and in the ICRP for section 11, removed Appendix C
Sediment and Erosion Management Plan (Appendix C of the Water Management Plan)	4	Minor updates to Section 1 (Introduction), Updated section 2.2.2 to remove typical turbidity: Total Suspended Solid (TSS) ratio
Spill Contingency Plan	15	Updated Table 3-1 (Hazardous materials stored and used on site), Table 5-2 (Internal Contacts) and 5-3 (External Contacts)
Water Management Plan	14	Updated permafrost information from existing conditions report in section 2.1.5, Added statement regarding no water in saline ponds discharging to Meliadine Lake in Section 3.6, Revised wording on EWTP flow rates and added current operating configuration in section 3.9.4.1, Updated RO permeate TDS average and added limit on permeate TDS in section 3.9.6, Removed statement on punctual saline water hauling operations in section 3.11, updated major activities in Table 10 years 2023+, Added dewatering of lakes in 2022 in section 4.1.1, Updated groundwater inflow predictions in section 4.1.2, added landfill water management changes following Licence modification in section 4.1.4, revised wording on EWTP flow rates and added current operating configuration in section 4.3, Inserted WBWQM setup and methods from annual report in section 5.2.
Current Management Plans Not Updated as Part of the 2023 Annual Report		
Adaptive Management Plan for Water Management	2	NA
Air Quality Monitoring Plan	3	NA
Ammonia Management Plan	4	NA

[2] The OPEP/OPPP will be updated again prior to the 2024 fuel transfer as per usual practice.

Analysis of the Risk of Temporary Mine Closure	1	NA
Aquatic Effects Monitoring Program (AEMP) Design Plan	2	NA
Borrow Pits and Quarries Management Plan	6	NA
Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan (Meliadine facilities)	1	NA
Cyanide Management Plan	2	NA
Dust Management Plan	6	NA
Environmental Management and Protection Plan (EMPP)	9	NA
Freshet Action Plan (Appendix B of the Water Management Plan)	8	NA
Greenhouse Gas Reduction Plan	1	NA
Hazardous Materials Management Plan	5	NA
Itivia Bulk Fuel Storage Facility Environmental Performance Monitoring Plan	1	NA
Landfarm Management Plan	4	NA
Landfill and Waste Management Plan	8	NA
Meliadine Interim Closure and Reclamation Plan	4	NA
Noise Abatement and Monitoring Plan	3	NA
Ocean Discharge Monitoring Plan	4	NA
Phase 1 AWAR Monitoring Plan between Rankin Inlet and the Meliadine Site	3	NA
Quality Assurance and Quailty Control (QA/QC) Plan	4	NA
Risk Management and Emergency Response Plan	4	NA
Shipping Management Plan	9	NA
Terrestrial Environment Management and Monitoring Plan (TEMMP)[3]	4	NA
Water Quality and Flow Monitoring Plan	3	NA
Water Quality Management and Optimization Plan	4	NA
Wildlife Protection and Response Plan	8	NA

[3] As presented in the TAG Annual Report in Appendix 31 the TEMMP is currently being revised in collaboration with the TAG. The final version of the TEMMP V5 will be submitted to the NIRB in 2024.

9.3 MODIFICATIONS

As required by Water License 2AM-MEL1631 Schedule B, Item 15: ***A summary of modifications and/or major maintenance work carried out on all water and waste related structures and facilities.***

And

As required by Water License 2BB-MEL1424 Part B Item 6e***: A summary of modification and/or major maintenance work carried out on the Water Supply Facilities, Bulk Fuel Storage Facility, Bermed Fuel Containment Facilities, and Wastewater Treatment Facility, including all associated structures, and an outline of any work anticipated for the next year***

In 2023, landfarm remediation work took place, as mentioned in section 5.

Maintenance and mitigation works carried out in 2023, and as presented in Table 1 and in Section 4.1, included the following:

- Construction of the Operations Landfill (Stage 4) berm raise;
- Construction of the Channel 2 Berm, as-built submitted to the NWB on August 2nd, 2023;
- Construction of Containment Pond 6 ramp;
- Maintenance of Channel 5,
- Reconstruction of Channel 3
- Placement of thermal fill at CP2, CP3, CP4 and between the TSF and Channel 3

As presented in Section 2.2 and in Appendix 7 and Appendix 8, some rehabilitation work on different infrastructures on site is planned for 2024, including:

- Continued maintenance work at Channel 5;
- Placement of rockfill as thermal cover in Area between CP2, Channel 9, Channel 10 and WRSF3;
- Filling of a small ponding area between CP6 access ramp and CP6 thermal berm;
- Improving the berms at the bottom of the access ramp into SP1;
- Maintenance of the collection channel downstream of D-CP1.

SECTION 10. OTHERS

10.1 ACTIVE PERMITS

Below is the list of active permits and authorizations for Meliadine.

Table 29. List of active permits and authorizations for Meliadine

Issued By	ID	Description	Issue	Expiry
KIA	KVPL11D01	Production lease	2017/06/30	2027/06/29
KIA	KVCA07Q08	Tiriganiaq/Westmeg/Meliadine quarry permit	2021/09/22	2024/09/12
KIA	KVCA11Q01	AWAR quarries permit	2021/08/18	2024/04/19
KIA	KVRW11F02	AWAR and Discovery Road Lease	2022/07/31	2032/07/31
KIA	n/a	Water Compensation Agreement	2016/02/11	2031/03/31
KIA	IIBA	Inuit Impact & Benefit Agreement	2017/03/01	-
NWB	2BB-MEL1424	Bulk Sampling and exploration drilling water license	2009/07/31	2024/07/21
NWB	2AM-MEL1631	Mining undertaking water license	2021/06/23	2031/03/31
NIRB	006 Amendment 02	Project certificate (Meliadine Phase 1)	3/2/2022	N/A
NIRB	16QN071	Screening decision (Itivia Quarry)	-	-
GN-ED&T	102631 or LE-03-320-0036	Land lease, laydown Itivia	2021/07/01	2031/06/30
GN-ED&T	102893 or LE-03-320-0046	Right-of-way lease Bypass Road km 1-2	2017/07/01	2027/07/01
GN-CGS	L-51871BL (replaced L-51809T)	Right-of-Way permit AWAR on Municipal land	2023/06/28	2027/05/31
GN-CGS	L-51870BL (replaced L-51808T)	Right-of-Way Lease Bypass Road km 2-7	2023/06/28	2027/05/31
GN-CGS	N/A	Waterline Routing around Apache Pass, Ground License	2022/06/01	2032/06/01
CIRNAC	55K/16-42-3	Saline Effluent Discharge and Diffuser Lease (amended)	2023/01/23	2034/07/17

In 2023, no research activities were undertaken that would trigger the requirement for a scientific research licence under the Nunavut Scientists Act.

10.2 INSPECTIONS

As required by Water License 2AM-MEL1631 Schedule B, Item 24: ***A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.***

In 2023, Agnico Eagle worked with regulators throughout the year to develop in-person site visits and site inspections. During these site visits, public health guidelines were followed as applicable. Table 30 summarizes inspections and site visits that took place in 2023. Follow-up information to the site visits and inspections was provided to regulators by Agnico Eagle as applicable.

Table 30: Inspections and site visits by regulators in 2023

Date	Authority	Topic	Feedback/Outcome
March 23, 2023	CIRNAC	Site Inspection	CIRNAC Resource Management Officer (Inspector) conducted a Water Licence inspection focusing on snow management on site, as well as equipment on site or infrastructure that was no longer being used, particularly around the exploration camp. The following locations were visited: Exploration camp, H8 Snow Pad, CP1 Snow Dump, Construction Pad Snow Pad, Emulsion Pad Snow Pad, TSF West Snow Pad, CP4 Snow Pad, Freshwater Intake seacan (MEL-11 sampling station). No instances of non-compliance were noted in CIRNAC's inspection report. CIRNAC requested Agnico Eagle to provide an inventory of items and equipment at the exploration camp and laydown, and clarifications on freshwater usage numbers and current usage of exploration camp. Agnico Eagle provided the requested information in follow-up letters to CIRNAC dated May 4th, July 1st and August 8th. Further, an update on the exploration camp clean-up efforts is provided in the text below this Table.
April 21, 2023	GN	Observation	GN Wildlife Officers came to site to observe the removal of a vacant raven nest, located at on the silo ladder of the batch plant. After confirming there were no eggs present in the nest, the latter was removed and disposed of, as authorized by the GN.
May 31, 2023	CIRNAC	Site Inspection	CIRNAC Resource Management Officer (Inspector) conducted a Water Licence inspection focusing on water management during freshet. The following locations were visited: KM15 (B12 borrow pit), waterline construction areas along the AWAR, water management infrastructures at site (all containment ponds, water intake, the EWTP and RO), and TIRI01 lookout. No items of non-compliance were noted, and no actions were required in CIRNAC's inspection report.
June 21, 2023	CIRNAC	Site Inspection	CIRNAC Resource Management Officer (Inspector) conducted road monitoring in assistance of GN Wildlife Officer for the caribou migration through the Rankin Inlet area, to ensure compliance with NIRB Project Certificate No. 006. The road monitoring occurred from 9:35 AM to 13:00 PM. During this time, a herd of approximately 300 caribous was observed within 100m of the AWAR. The caribous were observed crossing the road with their calves. The AWAR remained closed during this time and no traffic proceeded. No items of non-compliance were noted, and no actions were required in CIRNAC's inspection report.
July 24, 2023	ECCC	Itivia, AWAR, & Site Inspection	ECCC representatives conducted an inspection focusing on the following locations: MEL-SR1, Itivia Fuel farm, bridges and culverts along the AWAR and a general site tour including the a visit of the EWTP and STP. Following the inspection, ECCC requested information via email (including the Itivia

Date	Authority	Topic	Feedback/Outcome
			Fuel Farm as-built report, an update on E2 substances, and confirmation that the 2022 NPRI was submitted by the deadline of June 1st, 2023). Agnico Eagle provided the requested information.
July 26 & 27, 2023	NIRB	Annual Site Visit	NIRB conducted an annual site visit to assess compliance with Project Certificate No. 006. A general site tour was completed and the following locations were visited: Itivia laydown and fuel farm, Bypass Road, AWAR, Exploration Camp and Mine site infrastructures (water collection ponds and treatment plants, water intake, weather station, Tirganiaq Pit 1 and 2, WRSFs, TSF, Fuel farms, Ore Pads, Paste Plant, Camp facilities, Emulsion plant pad, Landfill, Landfarm, Snow Cell, Incinerator and hazmat laydown, Process plant visit). The NIRB site visit report is available on the NIRB portal.
September 21, 2023	DFO	AWAR Inspection	DFO representatives conducted an inspection focusing on crossing locations with salmonids along the Bypass Road and AWAR (Culvert 11 at Bypass Road KM 3.5, Culvert 10 at AWAR KM 16.5 and Culvert 7 at AWAR KM 27.5), along with other areas identified as fish habitat in the assessment conducted for the RfR application for the construction of the waterline. DFO also visited the construction of the waterline area. Kilgour was also present for the inspection. During the inspection, DFO representatives and Agnico Eagle discussed culvert replacement required for crossing locations with salmonids. As mentioned in section 2.2.1, Agnico Eagle plans to conduct these culvert replacements in 2024. DFO also noted potential missing fish passage along the AWAR near KM15. As mentioned in section 2.2.1, Agnico Eagle aims to begin fish habitat assessment in 2024 at this location and will continue to keep DFO apprised of work progress at this location. DFO inspected best management practices implemented for erosion and sediment control for waterline construction areas. DFO appeared to be satisfied with the measures in place and did not recommend any modifications.
September 27 & 28, 2023	CIRNAC	Site Visit	CIRNAC Resource Management Officer (Inspector) conducted a Water Licence inspection focusing on spills, follow-up items from previous inspections and dust management on site. The following locations were visited: • September 27th – EWTP-WTC and sampling of MEL-14 effluent discharge, Channel 3 area, Cell 2 of TSF, and Dustfall 5/PASS/Partisol monitoring station south of the exploration laydown; • September 28th – site tour for spill inspection and closeout. Many reportable spills were inspected and considered “Closed-Remediated” during the inspection. No items of non-compliance were noted, and no actions were required

Date	Authority	Topic	Feedback/Outcome
			in CIRNAC's inspection report.
November 11, 2023	Transport Canada (TC)	Inspection	TC conducted an inspection to verify compliance with the Transportation of Dangerous Goods Regulations. The inspection report included 11 actions items to address, related to modifications apply to shipping documentation, labeling of hazmat, packaging of batteries not meeting the requirements, and Quatrex containers that were no longer standardized since they were perforated. All action items were addressed by Agnico Eagle except one, which is still ongoing, related to the packaging of batteries. Agnico Eagle will liaise directly with TC to provide the requested information on corrective measures.

As mentioned in the above Table, CIRNAC performed a site inspection on March 23rd, 2023. CIRNAC requested Agnico Eagle to submit details on the Exploration Camp infrastructure condition and current usage.

In a follow-up letter dated May 4th, Agnico Eagle provided more clarification on the use of the Exploration Camp area. Meliadine's Exploration Camp is still being used and maintained by Agnico Eagle and workers were lodged at the exploration camp seasonally throughout 2022. The Exploration Camp is required as contingency accommodations to support crisis management such as flights being unable to depart Rankin Inlet and the requirement to lodge passengers at site. Meliadine's Exploration Camp is an asset for flexibility and contingency management which Agnico Eagle intends to maintain and no changes relative to the dismantling dispositions presented in Meliadine's Interim Closure and Reclamation Plan (ICRP) have occurred thus far.

During the inspection, the inspector identified some material that may have appeared not to be in immediate or recent use. Some material and equipment are kept on site for their potential reuse and/or recycling potential since the Meliadine Mine site is in a remote location and procurement of materials and equipment can be a challenge. Agnico Eagle does, however, conduct regular site clean ups.

In 2023, two major clean-ups occurred in the Exploration Camp aera. Following the first clean-up, an inventory of infrastructure and materials was completed and shared with CIRNAC. One dome was dismantled and reinstalled as extension for the coreshack, at the Mine site. All unused or waste materials were disposed of in the proper location. The helipad and 3 plywood shacks were dismantled. During the first clean-up, the condition of the fuel tanks that were sitting at the Construction pad was assessed. Those that were still functional were reused onsite. Four of them are currently used at the West Vent Raise. The non-compliant tanks were shipped south as scrap metal. In total, eight (8) tanks were disposed of.

Furthermore, as part of its strategic optimization process, Agnico Eagle has also implemented a yearly "Million Dollar Cleanup" which is intended to ensure that all seacans stored on site are utilized and all unused seacans are shipped south. This involves a detailed inventory and condensing of material in order to optimize the use of seacans which are to stay on site. This process allows the site to ensure that a sufficient supply of seacans exists to execute our sealift operations each year, and at the same time maximizes the use of our laydown and storage areas. In total, 384 empty seacans were recuperated across the site.

In October, the second clean-up was completed. Unused seacans were removed and will ship south in 2024. A plywood floor was dismantled. Some core racks are still stored at Exploration camp, but when

possible, they were disposed of. The Devico shack will be dismantled in 2024. The core shack and garage are still in-use as well as drilling equipment listed in the inventory. The generator fuel tank of 50,000L will be reused following an inspection and certification. The generator buildings will be dismantled or reused. The freshwater intake and water truck shelter will be maintained for emergency purposes. The functional incinerators will be stored for future use, but the incinerator structures will be dismantled and shipped south for disposal.
The Exploration camp area is now well organized and sorted. All structures have been evaluated and further steps will be taken as required.

10.3 AWAR

Table 31 shows the 2023 traffic observed on the AWAR in comparison to the FEIS predictions. The 2023 AWAR traffic data is presented in the TEMMP Report in Appendix 25. AWAR Traffic data is collected by the gatehouse personnel. Due to the important turnover in gatehouse personnel for a part of 2023, traffic data, which is normally recorded daily, was not recorded on a few isolated days. As a result, when a traffic data was not available for a few days in a month, an average of the available traffic data was used and extrapolated to the days with missing data. This could result in a minor deviation within the data, but it is still considered representative.

In order to monitor rates of dust deposition along the AWAR, Agnico Eagle has established 3 transects at kilometers 4, 10, and 23 (DF-1, DF-2, and DF-3, respectively). Each transect includes samples at 25 m, 100 m, and 300 m on the east (downwind) and west (upwind) side of the road. The use of transects rather than single samplers is in line with common practice and allows Agnico Eagle to verify if dustfall rates decline from the AWAR as predicted in the FEIS.

As discussed above in section 7.8 for AWAR and Bypass Road dustfall transects monitoring stations, average rates of dustfall were similar to or less than to those observed previously. Even in very close proximity to the road (25 m), average rates of dustfall over the summer season for AWAR stations were less than the AB-Rec guideline. Monitoring results are discussed in the Air Quality Monitoring Report in Appendix 23.

Table 31. 2023 AWAR monthly traffic summary

Month	Total traffic	**Predicted traffic (FEIS)**
January	1474	1178
February	1158	1064
March	1398	1178
April	1639	1140
May	2313	1178
June	1439	1062
July	3303	1087
August	3062	1099
September	2940	1056
October	2802	1178
November	1576	1140
December	1162	1178
Total	24266	13538

10.4 MARITIME TRANSPORTATION

During the 2023 shipping season, a total of 23 vessels, (two of which were tugs, 13 cargo, and eight fuel) travelled to Meadowbank (nine vessels), Meliadine (six vessels), or to both Meadowbank and Meliadine (eight vessels) between July 1 and October 31, 2023.

Post-oil transfer reports can be found in Appendix 29.

A summary of Groupe Desgagnés and Woodward Vessels during the shipping season is presented in Table 32. No incident (vessel strikes with marine mammals or marine birds) was reported during the 2023 maritime transportation. Agnico Eagle continued to implement in 2023, in accordance with the TEMMP, a protocol to ensure that all equipment and bulk supplies must arrive to Mine site free of soil or plant debris to minimize the risk of invasive plant introduction. Invasive plant inspection surveys was completed on cargo in Becancour, prior to being loaded onto shipping vessel. Carrier had closely followed the procedure and have confirmed that each equipment/sea can was free of invasive plant. Inspection forms can be found in Appendix A of the 2023 TEMMP Report, in Appendix 25.

Table 32. Summary of Groupe Desgagnés and Woodward Vessels during the shipping season (July to October 2023)

Vessel Name	Fuel or Cargo	Project and Number of Trips			Total Trips
		Meadowbank	Meliadine	Meadowbank and Meliadine	
Kivalliq W	Fuel	1	-	1	**2**
Kitikmeot W	Fuel	-	1	-	**1**
Tuvaq W	Fuel	2	-	-	**2**
Marlin Hestia	Fuel	1	-	1	**2**
Marlin Amber	Fuel	-	-	1	**1**
Nordika Desgagnés	Cargo	1	2	1	**4**
Atlantic Elm Tug	Cargo	1	-	-	**1**
Atlantic Beech Tug	Cargo	1	-	-	**1**
Marcellin A. Desgagnés	Cargo	1	1	2	**4**
Andesborg	Cargo	-	1	-	**1**
Miena Desgagnés	Cargo	1	1	2	**4**
Total		**9**	**6**	**8**	**23**

10.5 INTERNATIONAL CYANIDE MANAGEMENT CODE CERTIFICATION

In 2022, the Meliadine Mine was audited for the first time for the International Cyanide Management Code (ICMC) Certification, for both Transport and Mine Operations protocols. Agnico Eagle received confirmation of certification from the International Cyanide Management Institute (ICMI) for both Transport and Mine Operations aspects of the ICMC early 2023.

As per previous years, a cyanide information brochure was made available to employees and the public. Copies are available at the Agnico Eagle office in Rankin Inlet and are also online www.aemnunavut.ca/documents/.

SECTION 11. PUBLIC CONSULTATION

As required by Water License 2AM-MEL1631 Schedule B, Item 25: ***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.***

And

As required by Water License 2BB-MEL1424 Part B, Item 6m: ***A summary of public consultation/participation, describing consultation with local organizations and residents of the nearby communities, if any were conducted*****;**

And

As required by NIRB Project Certificate No.006 Condition 103: ***The Proponent is encouraged to consult with the Kangiqliniq Hunters and Trappers Organization and the Kivalliq Socio-Economic Monitoring Committee and to make all reasonable efforts to engage Elders and community members of the Kivalliq communities in order to have community level input into updates to its monitoring plans, programs and mitigative measures. This type of engagement will ensure that these programs and measures have been informed by traditional activities, cultural resources, and land use as such may be implicated or impacted by ongoing Project activities. All plans are to include a feedback mechanism for consulting with residents of the Kivalliq, including the provision of results from the Proponent's wildlife monitoring programs to each community. The Proponent shall submit updated plans to the NIRB within 30 days' of their revision and/or finalization.***

11.1 COMMUNITY MEETINGS IN CHESTERFIELD INLET

Throughout 2023, Agnico Eagle ensured Chesterfield Inlet community members and key stakeholders were continuously informed and consulted on various topics.
Below are the highlights of the 2023 community engagement activities that took place in Chesterfield Inlet:

- Two (2) Employment Information Session in Chesterfield Inlet to meet and engage with potential candidates to talk to them about Career opportunities and answered their questions.
- One (1) meeting with Chesterfield Inlet Mayor and Senior Administrative Official (SAO) to discuss Community Liaison Officer (CLO) position in Chesterfield Inlet.
- One (1) meeting in Chesterfield Inlet to present results from the 2022 MMSO program (part of the 2022 Annual Report);
- One (1) meeting in Chesterfield Inlet to present and discuss Cyanide transportation.

In 2023, Agnico Eagle ensured Chesterfield Inlet community members and key stakeholders were continuously informed and consulted on various topics. Agnico Eagle intended to visit every community before the barge season in May 2023 by organising flights and meeting logistics to go to Chesterfield Inlet, Coral Harbour, Naujaat, Rankin Inlet and Baker Lake. Unfortunately, the tour had to be cancelled owing to unfavourable weather, even though there were multiple attempts to land in the various communities. However, Whale Cove presentation was delivered.

Some topics of these engagements were to cover the following:

- Vessel routing from Quebec to Nunavut and routing to Rankin Inlet
- Monitoring of marine mammals and seabirds
- All Weather Access Road (AWAR) rules of the road
- Caribou Monitoring
- Process to find live information about the vessel routing
- Process to ask questions and raise concerns via Tusaajugut 'We are Listening'

Despite repeated attempts by Agnico Eagle to reach Chesterfield Inlet since the summer of 2023, accommodations were not available in the community until mid-December because of ongoing construction. Agnico Eagle reached out to local representative's multiple times and coordinated various scenarios to make it possible.

After the trip was deemed feasible, the local HTO went into an election, hence the meeting was put on hold.

In December 2023, during a virtual meeting with Chesterfield Inlet Community members, Agnico Eagle disclosed the findings of their marine mammal and seabird observation program in Chesterfield Inlet. The objectives and results of these engagements initiatives are succinctly outlined in the Engagement Table appended in Appendix 30.

Moving forward to 2024, Agnico Eagle representatives are proactively strategizing a visit to the community earlier in the year, prior to the recommencement of construction activities and while accommodations are accessible.

More details on the purpose and outcomes of the above engagement initiatives are summarized in Appendix 30.

11.2 COMMUNITY MEETINGS IN RANKIN INLET

Agnico Eagle ensured Rankin Inlet community members and key stakeholders were continuously informed and consulted. In 2023, the following highlights some of the community engagement and initiatives which took place in Rankin Inlet (with the full list provided in Appendix 30.)

- One 1 Coffee and Chat with Rankin Inlet to allow community members to learn, engage, ask questions and interact with Agnico Eagle.
- Four (4) Employment information sessions to provide information about employment and job opportunities for potential candidates, including one (1) Career Day.
- Four (4) events with Rankin Inlet Hamlet to provide updates on Agnico Eagle's operation activities.
- Agnico Eagle hosted one (1) Family Day in Rankin Inlet
- SAO meetings were hosted four (4) times in Rankin Inlet to provide general updates on Operations and Community Investment Funds.
- Two (2) pre-employment training program sessions in Rankin Inlet to provide training for potential candidates from the communities to prepare them for work at the mines.
- One (1) IIBA info-session at Rankin Inlet.

In 2023, as part of the International Cyanide Management Code (ICMC), Agnico Eagle informed the community and first responders of Rankin Inlet on the cyanide transportation along the AWAR.

The engagement included the following:

- In-person meeting with the community first responders to share cyanide transportation procedure, safety measures and collect feedback and comments on the current process;

- Agnico Eagle visited the Rankin Inlet Fire Department and RCMP to provide information on the upcoming Cyanide transportation and share information pamphlet. This in-person visit allowed Agnico Eagle to receive comments and feedback as well as answer any concerns regarding the process.

Appendix 30 provides a comprehensive list of all the engagements, consultations and initiatives that took place with key stakeholders in Rankin Inlet.

11.3 MEETINGS WITH RANKIN KHTO

In 2023, five (5) meetings were held with the Rankin Inlet Kangiqtiniq Hunters and Trappers Organizations (KHTO). Agnico Eagle continued to have regular engagements on project activities throughout 2023, including regular communication between the Meliadine Environment team and Rankin Inlet KHTO.

Meeting topics included:

- Meliadine Mine and Operation activities
- Regional Exploration Update
- NIRB decision regarding Meliadine Extension, cabin location and Meliadine training instructor

In 2023, the Meliadine Environment department and KHTO Wildlife Coordinator kept communication regularly throughout the year through monthly meetings, email and phone and punctual in person meetings. General topics included wildlife monitoring and the caribou migration.

Appendix 30 provides a comprehensive list of all the engagements, and consultations that took place with Rankin Inlet HTO in 2023.

11.4 COMMUNITY LIAISON COMMITTEE MEETINGS – RANKIN INLET

In 2023, Agnico Eagle planned to implement a new initiative to encourage a dialogue exchange between Agnico Eagle and the local sub-groups (youth, women, Elders, etc.) of Rankin Inlet. In 2022, this new initiative was launched in a form of newsletter to share updates on Agnico Eagle's Nunavut operations to Baker Lake Community Liaison Committee members.

For 2023, the same communication strategy was adopted with Rankin Inlet Community Liaison Committee members.

This new procedure promotes communication between Agnico Eagle and the local subgroup through an informational newsletter. This newsletter details operational activities and successes and includes a section on how to reach out to the company for questions, concerns, or suggestions.

In November 2023, a newsletter was sent to all Community Liaison Committee members. The newsletter for 2023 is available in Appendix 31

11.5 ELDERS AND IQ VALIDATION

In 2021, Agnico Eagle developed a Kivalliq Elders' Advisory Committee (KEAC) comprised of 21 Elders from Baker Lake, Chesterfield Inlet, Rankin Inlet, Whale Cove and Arviat to integrate Inuit Qaujimajatuqangit (IQ), Inuit Societal Values (ISV) and community knowledge into Agnico Eagle's exploration, planning, workforce, wellness and operational plans. The selection of the committee members was led by Agnico Eagle's IQ Coordinator through extensive consultations with wildlife organizations and local leaders.

In 2023, Agnico Eagle continued to engage with Elders. A total of 11 meetings, 2 site visits and 2 cultural activities took place with members of the KEAC.

Meetings and site visits:

- March 2023 Agnico Eagle hosted the Annual Executive Members Meeting
  Purpose: To provide general update for members
  Outcome: The Elder's Committee developed a better understanding of employment and recruitment initiatives done through the Sanajiksanut program. Discussion on the importance of green energies, elders mentioned interest to join the Raglan Mine Windfarm site visit.

- May 2023 - Meliadine Water Management Site Visit
  Purpose: To provide an overview of Water Management at the Meliadine Mine site, site visit of water management infrastructure and tea tasting
  Outcome: The KEAC recommended that Agnico Eagle investigate why the tea color changes from time to time.

- June 2023 - Kivalliq Elders Advisory Committee Annual General Meeting
  Purpose: Annual General Meeting
  Outcome: Validated that snow bridges could be installed. Presentation of Cyanide transportation and shipping. Review of IQ collection.

- June 2023 – Raglan Mine Windfarm Visit
  Purpose: Visiting a windfarm in similar conditions to Meliadine mine provides valuable knowledge for all parties involved in the Meliadine Extension regulatory process (application now withdrawn).
  Outcome: Participants were guided, asked questions, and received details at an operational level for the Raglan windfarm.

- August 2023 – Tea Color Activity
  Purpose: Following the May recommendation from the Committee, Agnico Eagle hosted a water and tea colour activity to discuss water chemistry through interaction with tea leaves
  Outcome: An experiment was designed along with a botanical expert to better understand the chemical interaction between different water sources (tap water, bottled water, and lake water)

and tea leaves. Participants enjoyed the activity and reported a better understanding of how tea infusion colour may differ from time to time.

- August 2023 – Pistol Bay Falls Fish Studies
  Purpose: Presentation of 2023 fish studies at Pistol Bay Falls.
  Outcome: Elders had no issues with the fish studies happening at Pistol Bay falls and the proposed offsetting measure. They noted that the seasons have been drier, which results in lower water levels affecting the fish's movements. If an offsetting measure was to go ahead in the future at this location, they would like to visit the location in person.

- October 2023 - Winter Travel Routes (3 meetings)
  Purpose: The Elders have identified that important winter travel routes were in the vicinity of the Meadowbank Complex. They suggested that the routes should be marked between Baker Lake, Garry Lake, Back River and Gjoa Haven and mark historic camp sites and graves around camping locations
  Outcome: The Baker Lake Kivalliq Advisory Group members started discussing the routes and concluded that a subsequent meeting should be organized with a blank map to mark traditional winter travel information.

- November 2023 – Agnico Eagle's Reconciliation Action Plan
  Purpose: Discuss the action plan
  Outcome: Focus on encouraging the younger generation to work with Agnico Eagle.

- November 2023 – Winter Trail Mapping from Baker Lake to Gjoa Haven (3 meetings)
  Purpose: Elders have identified that the winter travel routes between Baker Lake, Garry Lake, Back River and Gjoa Haven are of high cultural value and wanted to mark historic camp sites and graves around camping locations on a blank map.
  Outcome: Elders marked on a map culturally important area related to winter travel routes.

<u>Cultural activities:</u>

- In February 2023, Agnico Eagle hosted elders from Baker Lake and Rankin Inlet and organized a Mental health and cultural counselling at Meadowbank Complex and Meliadine Mine sites – these were 2 engagements. During these meetings with the Commitee, Agnico Eagle came to recognize the need for more mental health and cultural counselling tailored to Inuit employees. Elders provided mental health and cultural counselling to employees through appointment and walk-in sessions.

- March 2023 – International Women's Day Conference. In March, to celebrate International Women's Day, Agnico Eagle hosted a conference featuring Mrs. Rosie Oolooyuk, an Elder from Rankin Inlet, who shared some of her knowledge and life experience with Meliadine mine employees.

Appendix 30 also report on the Kivalliq Elders Advisory Committee (KEAC) activities, engagements and initiatives for 2023.

11.6 SITE TOURS FOR RANKIN INLET RESIDENTS

Each year, Agnico Eagle offers a variety of ways for the residents of Rankin Inlet, as well as various other groups or individuals from the Kivalliq, to visit the Meliadine site.

The following are examples of Meliadine site visits organized in 2023:

- In March 2023, a visit for Minister Vandal and four (4) of the members of his Cabinet took place at the Meliadine site. They had the opportunity to have an outdoor and indoor tour of the facilities, as well as an underground visit.

- In September 2023, a visit for the Government of Nunavut's Prime Minister and his cabinet was organized. They had the opportunity to have an outdoor as well as an indoor tour of the facilities.

- In May 2023, the Community Liaison Officers of all communities and under the employment of Agnico Eagle had a site tour visit organized. They had the opportunity to have an outdoor as well as an indoor tour of the facilities.

- In October 2023, a visit of the Meliadine AWAR was organized for the Executive Elders Advisory Committee (5 members). A stop to Itivia was done so they could have the opportunity to visit the proposed waterline routing location for discharge to sea.

11.7 COMMUNITY ENGAGEMENT INITIATIVES

Community engagement initiatives that Agnico Eagle participated in during 2023 are summarized in Appendix 30.

Agnico Eagle and KHTO continue collaborating with regards to wildlife monitoring as supported by the Collaboration Agreement signed by both parties in December 2021. The KHTO participated to the 2023 Hunter Harvest Study (HHS), as well as other community hunters and outfitting and guiding businesses.

The 2023 HHS Report is in Appendix I of the TEMMP Report (Appendix 25) and summarizes results of the 2023 HHS, accuracy of impact predictions and management recommendations. Additional recruitment efforts were made in 2023 during community visits in Rankin Inlet and with the use of social media, which resulted in increased participants compared to previous years. In addition, several guide outfitters were added as participants in 2023 and are now reporting harvest data.

As per Agnico Eagle’s answers to the NIRB 2022-2023 Annual Monitoring Report and Board’s recommendations for the Meliadine Mine, and to support compliance with T&C8 from the Project Certificate, Agnico Eagle will report on comments received or IQ related to climate change from community engagement activities in future Annual reports, as applicable. In 2023, Agnico Eagle conducted engagement activities involving general discussions on environmental changes and their impact on the region. As Agnico Eagle did not specifically track this matter, there is no specific update for 2023. However, Agnico Eagle has stated its intention to consider reporting on this recommendation as applicable.

11.8 COMMUNITY COORDINATORS PROGRAM

The Community Coordinators program consists of full or part-time CLO in all Hamlets in the Kivalliq Region, including Agnico Eagle's offices in the communities of Rankin Inlet and Baker Lake.

The objective of the CLO is to provide a point of contact in each community to facilitate communications, provide services, and coordinate activities in the following areas:

- Support Human Resources (HR) department and the recruitment team.
- Assist HR and other Agnico Eagle departments to locate employees or potential employees as required.
- Provide advice and assistance to Agnico Eagle to organize and hold information sessions in the community on Agnico Eagle projects, initiatives, and engagement activities, including Inuit employment and business opportunities initiatives outlined in the Meadowbank Complex and Meliadine IIBA's.
- Provide updates to the Hamlet Council and to other community stakeholders on Agnico Eagle activities.
- Distribute Agnico Eagle information and promotional materials.
- Participate in Agnico Eagle's Nunavut donation initiatives and processes.
- Participate in organizing community events and education initiatives.

The increased community involvement through the CLOs will allow Agnico Eagle to achieve recruitment goals and the obligations for the NIRB and IIBA; therefore, rendering this position essential to Agnico Eagle's Nunavut operations.

In 2023, Agnico Eagle had five (5) CLOs present in the following communities—Rankin Inlet, Baker Lake, Arviat, Chesterfield Inlet and Coral Harbour.

11.9 SHIPPING TOUR

As mentioned in Section 11.1, throughout 2023, Agnico Eagle ensured community members and key stakeholders were continuously informed and consulted on various topics. In May 2023, Agnico Eagle had planned flights and all meeting logistics to go to Chesterfield Inlet, Coral Harbor, Naujaat, Rankin Inlet and Baker Lake to visit all communities prior to the barge season. However, due to poor weather conditions and despite several attempts to land in the different communities the tour had to be cancelled. Whale Cove presentation was however delivered.

The main objectives of the tour were to present the upcoming shipping season and hear feedback and concerns from the communities that may assist in adaptive management practices. The agenda of each meeting was generally the same, where certain topics were either expanded or limited depending on the audience and their interests.
These topics included:

- Sealift Operations
- Proposed scenario – Baker Lake
- Routing from Quebec to Nunavut
- Routing to go to Baker Lake

- Proposed scenario – Rankin Inlet
- Routing to go to Rankin Inlet
- All-weather Access Road Management
- Caribou Migration
- Process to find live information about the vessel routing
- Process to ask questions and raise concerns via Tusaajugut ‘We are Listening’

In June 2023, during the Kivalliq Elders Advisory Committee Annual General Meeting, Agnico Eagle presented the shipping season information to Elders from across all Kivalliq communities.

In December 2023, Agnico Eagle presented via teleconference the results of the marine mammal and seabird observation program in Chesterfield Inlet.
The 2023 presentation on sealift operations included the following topics:

- Sealift operation and routing
- Sealift season in Baker Lake and Rankin Inlet
- Marine Mammal & Seabird Observer program results for 2022

11.10 COMMUNICATION

In 2018, Agnico Eagle launched a Facebook page for Meliadine which acts as another method with which it can inform the Kivalliq communities of important information, including road closures, recruitment information, and public meetings. This additional medium of communication was suggested by multiple stakeholder groups, including the Kivalliq Socio-Economic Monitoring Committee.

Agnico Eagle continues to use the Meliadine Facebook page as a key medium of communication with employees and Kivalliq communities. In 2023, the social media platform was used to keep communities of impact informed and build awareness on the following topics:

- Baker Lake and Rankin Inlet community office hours of operation
- Employment information Session dates in Kivalliq communities
- Business Opportunities Posts
- Job posting - Sanajiksanut Program Launch
- Sealift Season & Cyanide transportation
- AWAR - Awareness and Road Rules
- Caribou Migration and related road closures
- General Community Development initiatives and collaborations

The above social media posts are outcomes of active management plans for example, the 'Sealift Season’ posts are directly related to the SMP and the ‘Caribou Migration’ posts are product of the Wildlife Protection and Response Plan. Social media posts were used to encourage engagement from community members. In 2023, Agnico Eagle Meliadine Facebook page made a total of 172 posts.

In 2023, the Nunavut Agnico Eagle website had blog posts on the following topics:

- Agnico Eagle Perseverance Kajussissimainarniq Scholarship
- Inunnguiniq project announcement and partnerships
- Celebrating the International Day of Women in Mining – Agnico Eagle’s Nunavut Operations
- Partnership with local school for Trades Awareness, Skills and Knowledge week
- Regional Cabin donations in partnership with local contractor

- Agnico Eagle's Dr Leanne Baker Scholarship

All the blog posts were re-shared on the Nunavut Facebook pages to reach wider community audience and to encourage engagement from the community of impact.

11.11 TERRESTRIAL ADVISORY GROUP

The 2023 Terrestrial Advisory Group (TAG) Annual Report documents the work conducted throughout 2023 toward the establishment of the TAG. The Term of References (TORs) were finalized early 2023. This document ensures compliance with Terms and Conditions 132 of the NIRB Project Certificate No.006-002 (PC No.006-002) which stipulates:

‘’***The Proponent shall, in consultation with the groups listed as Responsible Parties above, and any other parties considered by the Group to be necessary, establish a Terrestrial Advisory Group (TAG). The TAG shall hold its first meeting prior to any construction/installation of the waterlines. The central mandate of the TAG will be to continually review and refine impact management, mitigation, and monitoring details within the Terrestrial Environment Management and Monitoring Plan (TEMMP). The TAG Members will collaborate to share and consider methods, results, and analysis from caribou and terrestrial environment studies and monitoring Inuit Qaujimaningit, Inuit Qaujimajatuqangit, Traditional and Community Knowledge shared by knowledge holders, and other terrestrial environment monitoring data as it becomes available. The Proponent will consider the information shared by the TAG Members for incorporation into the Project's impact management, mitigation, and monitoring measures related to the protection of terrestrial wildlife and wildlife habitat as appropriate. Agnico Eagle shall be responsible for demonstrating how the information shared and considered by the TAG has been incorporated into the Project's impact management, mitigation, and monitoring measures related to the protection of terrestrial wildlife and wildlife habitat as appropriate***.’’

A total of four TAG meetings took place in 2023 in April, May, June, and October. Three meetings were held in person. Two meetings (April and October) took place in Winnipeg, Manitoba and the meeting in June was held in Rankin Inlet, Nunavut, during the caribou migration. All meetings were virtually accessible through videoconference using Microsoft Teams. Multiples subjects were discussed. The 2023 TAG Report can be found in Appendix 32.

SECTION 12. SOCIO ECONOMIC

12.1 SOCIO-ECONOMIC MONITORING PROGRAM (SEMP, SEMC, SEMWG, SEMR)

As required by NIRB Project Certificate No.006 Condition 87: ***The Proponent is strongly encouraged 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.***

And

As required by NIRB Project Certificate No.006, Condition 88: ***The Proponent is encouraged to work in collaboration with other socio-economic stakeholders including for example, the KIA, GN, AANDC, and communities of the Kivalliq region, to establish a socio-economic working group for the Project to develop and oversee the Meliadine Socio-economic Monitoring Program. The working group should 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 Project. The Terms of Reference are to be provided to the NIRB upon completion, and within one year of issuance of the Project Certificate.***

And

As required by NIRB Project Certificate No 006, Condition 89: ***The Proponent shall develop the Meliadine Socio-economic Monitoring Program to monitor the predicted impacts outlined in the FEIS as well as regional concerns identified by the Kivalliq Socio-economic Monitoring Committee (SEMC). Where possible, the Proponent is encouraged to work in collaboration with all other socio-economic stakeholders such as the KIA, GN, AANDC 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. Details of the Meliadine Socio-economic Monitoring Program are to be provided to the NIRB upon finalization, and within one year of issuance of the Project Certificate.***

And

As required by NIRB Project Certificate No 006, Condition 91: ***To capture and provide analysis of Project-specific and regional data during Project closure(s), and to clarify mitigation measures related to closure. Within 3 months of the NIRB's acceptance of the Proponent's analysis of the risk of temporary mine closure referenced above, the proponent is expected to update its Socio-Economic Management Plan or to include within a newly developed plan or framework, a description of its plan to collect and analyze Project-specific and regional data at closure and post-closure phases, as well as its defined measures to help mitigate impacts which may result from Project closure(s), both temporary and final.***

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 2023, no changes were brought to the program.

The SEMP is designed and implemented with the support from the established Kivalliq Projects Socio-Economic Monitoring Working Group (SEMWG). As per the SEMWG Terms of Reference, the SEMP will be updated 2 years prior to closure to include data collection, analysis, and mitigation measures for potential socio-economic impacts in the closure and post-closure phases.

The SEMP can be found in Appendix 33 of the 2023 Annual Report.

The SEMWG traditionally included GN and CIRNAC. However, in 2020, KivIA has 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 February 2023, Agnico Eagle organized 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 GN (including specific departmental representation), Government of Canada, KivIA HTO, Community representatives, community organizations and Project owners. The GN chairs the KvSEMC. Feedback provided in the KvSEMC informs the final Socio-Economic Monitoring Report (SEMR). Additionally, the KvSEMC can recommend additional monitoring priorities.

Due to unexpected developments on the part of the Government of Nunavut Department of Economic Development & Transportation, the KvSEMC scheduled for November was cancelled in 2023. At the time of this report, the KvSEMC is to be planned for Spring 2024.

The 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 is reviewed by the SEMWG prior to its submission, to allow for those groups to provide insight.

Agnico Eagle is appending the 2023 Agnico Eagle Kivalliq Projects Socio-Economic Monitoring Report, in Appendix 34.

12.1.1 Socio-Economic Monitoring Report (SEMR)

As required by NIRB Project Certificate No.006, Condition 111: ***In its annual reporting to the NIRB, the Proponent is strongly encouraged to provide detailed descriptions of all employee programs and training including: a. Descriptions of the goals of each program offered; b. Language of instruction; c. Schedules and location(s) of when each program was offered; a. Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit participation rates; and, b. Completion rates for enrolled participants, noting Inuit and non-Inuit rates.***

And

As required by NIRB Project Certificate No.006, Condition 97*: The Proponent's project-specific socio-economic monitoring program should be updated to address the potential impacts to education and training which may arise from temporary, final and/or post-closure phases.*

And

As required by NIRB Project Certificate No.006, Condition 98: *The Proponent is encouraged to work with the members identified as potential stakeholders in the socio-economic monitoring working group and with the Kivalliq Socio-Economic Monitoring Committee to review and monitor education utilization rate trends on an on-going basis to understand if the Project can be determined to be having an impact on the education system of the Kivalliq region and/or on any communities in particular.*

And

As required by NIRB Project Certificate No.006 Condition 108*: The Proponent is encouraged to consider providing access to counseling and treatment programs for substance and gambling addictions, and programs which address domestic, parenting, and marital issues that could affect employees and/or their families.*

And

As required by NIRB Project Certificate No.006, Condition 101: *The Proponent shall include with its annual reporting to the NIRB a summary of employee origin information as follows: a. The number of Inuit and non-Inuit employees hired from each of the Kivalliq communities, specifying the number from each; b. The number of Inuit and non-Inuit employees hired from each of the Kitikmeot and Qikiqtani regions, specifying the number from each; c. The number of Inuit and non-Inuit employees hired from a southern location or other province/territory outside of Nunavut, specifying the locations and the number from each; and d. The number of non-Canadian foreign employees hired, specifying the locations and number from each foreign point of hire.*

And

As required by NIRB Project Certificate No.006, Commitment 99*: The Kivalliq Socio-Economic Monitoring Committee and its membership are encouraged to engage in the monitoring of demographic changes including the movement of people into and out of the Kivalliq communities and the territory as a whole. This information may be used in conjunction with monitoring data obtained by the Proponent from recent hires and/or out-going employees in order to assess the potential effects of the Project on migration.*

And

As required by NIRB Project Certificate No.006, Commitment 109*: The Proponent is encouraged to work with the Kivalliq Socio-Economic Monitoring Committee to monitor potential indirect effects of the Project, including indicators such as the prevalence of substance abuse, gambling issues, family violence, marital problems, rates of sexually transmitted infections and other communicable diseases and others as deemed appropriate.*

And

As required by NIRB Project Certificate No.006, Condition 110: ***The Proponent shall provide the NIRB with a description of wellness and cultural diversity/acceptance programming made available to employees and family or community members and shall report the following information with respect to each program to the NIRB annually: a. Language of instruction; b. Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit participation rates; c. Completion rates for enrolled participants, noting Inuit and non-Inuit rates; and d. Issues as may relate to program content which may have been noted or present either on site or in the community and which affect Project employment or employee wellness.***

And

As required by NIRB Project Certificate No.006, Condition 115: ***The Proponent is encouraged to work collaboratively with the Government of Nunavut Department of Health to monitor the impacts of the Meliadine Gold Project on health services within the LSA communities and specifically, Rankin Inlet.***

And

As required by NIRB Project Certificate No.006, Condition 93: ***The Proponent is encouraged to register all trades occupations, journey persons and apprentices working with the Project and to register any trades occupations listed in its forecast, as well as to provide the Government of Nunavut with information regarding the number of registered apprentices and journeypersons from other jurisdictions employed at the Project during each year of the Project's life.***

The section below summarizes Agnico Eagle's key socio-economic reporting, related primarily to employment and training. For the full report on the Project's socio-economic monitoring, please refer to Appendix 34.

Reports can also be viewed on the SEMC website www.nunavutsemc.com or on Agnico Eagle's website http://aemnunavut.ca/media/documents/.

12.2 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 (headcount) working at Meliadine on December 31, 2023, was 872, of which 114 employees were Inuit employees.

- The number of contractors employed at the project is only calculated using FTEs due to the cyclical nature of contractor work. Therefore, during 2023 there were approximately 727 FTE contractor positions, of which approximately 99 are filled by Inuit.

Taken together, there were 1,599 active employees (Agnico Eagle permanent, temporary, on-call, students and contractors), working full- and part-time jobs, at the end of 2023.

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 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.

The Table 33 below indicates the employment demographics for community of hire by headcount.

Table 33. Home communities of Agnico Eagle Inuit employees (by headcount)

Community of Hire	2022 Agnico Eagle headcount	2023 Agnico Eagle headcount
Arviat	11	10
Baker Lake	5	6
Naujaat	1	1
Rankin Inlet	40	38
Chesterfield Inlet	4	5
Whale Cove	3	6
Coral Harbour	18	12
Kitikmeot	0	0
Qikiqtani	1	0
Outside of Kivalliq	31	36
Total	**114**	**114**

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, Baker Lake, Chesterfield Inlet, and/or Whale Cove, Agnico Eagle has a service contract with Calm Air to transport employees by charter plane to Rankin Inlet. For employees coming from Coral Harbour and/or Naujaat, a commercial ticket is bought from their home communities to the Rankin Inlet airport. All employees are then driven by bus to site, including those from Rankin Inlet. 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.

12.2.1 Employee retention

Figure 30 provides a breakdown of Inuit turnover (employees who leave Agnico Eagle's employment each year) by reason for leaving for Meadowbank/Whale Thail and Meliadine

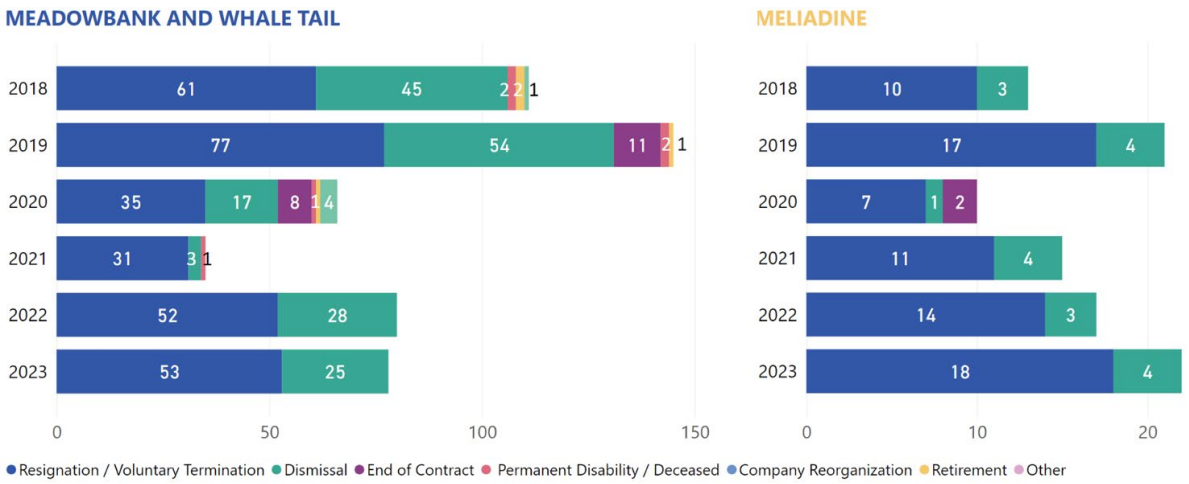

Figure 30: Breakdown of Inuit turnover by reason for leaving Meadowbank/Whale Tail and Meliadine.

In 2023, 100 Inuit employees departed, out of which 78 were from Meadowbank/Whale Tail and 22 from Meliadine. In 2023, total resignations / voluntary departure accounted for 71 out of 100 terminations of Inuit employees, with the remaining turnover (29 Inuit employees) attributed to dismissal. There was an increase in both resignations/voluntary departure and dismissals when compared 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 71 departures at Meadowbank / Whale Tail and Meliadine included:

- Moving to another job (14),
- Family situation (14),
- Not liking camp life and / or missing family (9),
- Not liking the job (9),
- Conflict with an employee / supervisor (4),
- Lack of access to child support (2), and
- Other (19)

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 35% in 2023 compared to 13% for non-Inuit, and at Meliadine, Inuit employee turnover was 18% in 2023 compared to 9% for non-Inuit. Overall, Inuit employee turnover increased in 2023 at both sites, while the turnover rate for non-Inuit decreased.

The 2023 Inuit and Nunavummiut Employment Survey further revealed that both Inuit employees and their spouses find employment at the mine challenging, which likely contributes to the higher turnover rates for Inuit employees. Worrying about family was mentioned by 59% of respondents when asked about the most difficult thing when being at work (mine site). Management of household (e.g., getting

groceries, running errands, and household maintenance), taking care of children, or loneliness were mentioned by multiple respondents as being most difficult for their spouse when they are away for work.

12.2.2 Summer Student Employment Program

Agnico Eagle offers two (2) summer employment programs that are accessible to students. One of them is from Agnico Eagle's company-wide policy that offers a summer employment program to the children of all Agnico Eagle employees (both Inuit and non-Inuit) that are undertaking post-secondary education. The other is the Inuit Summer Employment Program, initiated in 2019, targeting Inuit students in high school or post-secondary education. This program tries to match students to positions in their areas of interest.

In 2023, Agnico Eagle employed two (2) Inuit Summer Students based in Rankin Inlet & Baker Lake with the Community Relations department, three (3) in Meliadine working with the Environment department and one (1) working with Human Resources department in Meliadine. Finally, two (2) were employed in Meadowbank with the Environment department. A total of 8 Summer Students were employed by Agnico Eagle in 2023.

As per Agnico Eagle policies, students must be 18 years or over to work at the operation, and over 16 years old to work in the offices in Baker Lake or Rankin Inlet.

12.2.3 Counselling and Treatment Programs

Agnico Eagle provides a variety of wellness programs for on-site employees:

- Mental Health & First Aid Training sessions at both sites, given by external trainers, staff, and key health community stakeholders (nurses, RCMP, KivIA);
- Preventative health outreach, including sexual health and mental health information and resources;
- Overnight site visits for spouses of employees over Christmas and New Year;
- The services from BCH with the communication of monthly topics related to Mental Health

As part of the wellness program, Agnico Eagle continues to support cross-cultural understanding and celebration at both sites that include arts and crafts events, Nunavut Days celebration, local Elder and family showcasing Inuit traditional hunting gear, games, and clothing on-site, and local artists presenting and selling articles to mine site employees.

Again in 2023, Agnico Eagle continued to provide the individual and family wellness programs. The Employee Assistance Program (EAP) was used 110 times in 2023, representing an increase in use from 75 in 2022.

Over the past few years, Agnico Eagle has engaged in consultation and actively listened to community members and local partners to understand the needs of communities in terms of mental health support and plan how to move forward with providing support in the most effective way possible. After conducting several discussions and consultation activities, it became evident that to create a sustainable legacy and positively influence the future of Nunavut, Agnico Eagle's focus should be on enhancing the well-being and development of the current and future generation of Inuit.

Following these consultations, Agnico Eagle created the Inunnguiniq project which consists of a $5M investment, dedicated to mental health support and wellbeing in the region.

With Inunnguiniq, Agnico Eagle is committed to investing in three specific axes to reach this mission:

- The first axis is active lifestyle through activities, including on the land; partnership with Ilitaqsiniq
- The second axis is food security; partnership with Breakfast Club of Canada
- The third is to act as a facilitator in sponsoring Inuit-led non-profits to have an important and long-lasting positive impact; partnership with The Arctic Rose Foundation.

In 2023, a trainer was outsourced to come on site and provide training to all supervisors on how to deal with mental health discussions to better support the work force. The Mental Health trainer also visited all the workers in toolbox meetings to host a short mental health workshop.

Agnico Eagle can also report that mental health has also been the subject of several toolbox talks and communications that were shared across site as posters to provide resource to help people in need.

12.3 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 35.

Agnico Eagle considers that most of the trainings provided would be transferable to other employment opportunities. Agnico Eagle ensures that all training records are contained in everyone's employee file in the Nunavut TMS. If requested by an employee, the Training Department can export and provide the list of completed training.

Additionally, Agnico Eagle has been exploring different options of giving employees a "skills passport" to promote skills transferability under Inuit Growth. Agnico Eagle contacted Mining Industry Human Resources Council (MiHR) to find ways to collaborate in providing training to Agnico Eagle employees and or trainers. However, after careful deliberation and research, an agreement was reached to shelf and reconsider this program later, when the program gains more industry-wide acceptance. Agnico Eagle continues to explore other options to promote skills transferability.

12.3.1 Sanajiksanut Program

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 2022, the Sanajiksanut Program was redesigned and officially launched. The vision for the Sanajiksanut is to have a recruitment process and approach that is inclusive and accessible for Inuit candidates. The new recruitment process is forward looking to ensure that a new and qualified generation of Inuit employees excels in various positions at Agnico Eagle's mine sites. The Sanajiksanut Program is based on four (4) key principles:

1. **Partnership with Ilitaqsiniq (Nunavut Literacy Council)** – Agnico Eagle partnered with Ilitaqsiniq (Nunavut Literacy Council) to implement a community-based approach to the training

and adapt the recruitment process to the Nunavummiut clientele. The revised pre-employment training is designed by Inuit for Inuit and delivered by an Inuit instructor from Ilitaqsiniq.

2. **Inuit workforce planning** – To facilitate access to employment and increase career opportunities and growth for the Inuit workforce, the Inuit recruitment planning is conducted with the operational team.
3. **Recruitment process changes** – To meet the needs of the community members who are looking for employment at Agnico Eagle, revised communication channels have been implemented to reach candidates when an opportunity arises.
4. **Mining Awareness** – Appeal younger generation who are the future of the Nunavut workforce by the implementation of career awareness programs in the Kivalliq schools and colleges.

In 2023, the Sanajiksanut program continued to implement activities and initiatives following the official launch in 2022.

- Recruitment process is more inclusive and accessible for Inuit potential candidates. The process is now done on a job specific approach instead of regrouping all potential candidates in the same pool. More than 20 different job opportunities were advertised for the Inuit workforce. Also, application channels were added (not only application via the website): email, in-person, application forms.
- Engage with youth: activities with high school and college students were done via Career Days organized by Agnico Eagle.
- Support Contractors: Sanajiksanut program also supported contractors in the recruitment process, career advertisement and implementing training initiatives (community-based and on-site) in order to support their Inuit workforce growth.

The Sanajiksanut Program consists of four (4) steps:

Step 1: Employment Information Sessions

In 2023, Employment Information Sessions were conducted in all 7 Kivalliq communities. It is not all scheduled sessions that were done because of different challenges (no CLO presences, harsh weather conditions, no lodging). A total of 19 Employment Information Sessions were completed. Distinct types of employment information sessions were done and organized to reach out to a maximum of community members (combined with community activities).

In Rankin Inlet, Agnico Eagle hosted a Career Day for the first time where potential candidates could meet with the Sanajiksanut team to get information about employment and career opportunities. Contractors were also present (Kivalliq Contractor Groups, Sakku, Tangmaarvik) and Government of Nunavut representative from Career Development to promote the Apprenticeship Program. Approximately 130 community members were present to participate to the event.

Step 2: Online Application Process Facilitated by Employment Information Sessions

In 2023, CLO were present in 5 communities: Rankin Inlet, Baker Lake, Arviat, Coral Harbour and Chesterfield Inlet. The Sanajiksanut Coordinator and the Chesterfield Inlet CLOs travelled to Naujaat and Whale Cove to conduct Employment Information Sessions and provide support to potential candidates who would like to apply. Sanajiksanut Team members were also available by phone, email and social media communication tool was also created.

Application is also possible with additional channels: website, in-person, application form and emails in order to facilitate access to employment for Inuit potential candidates.

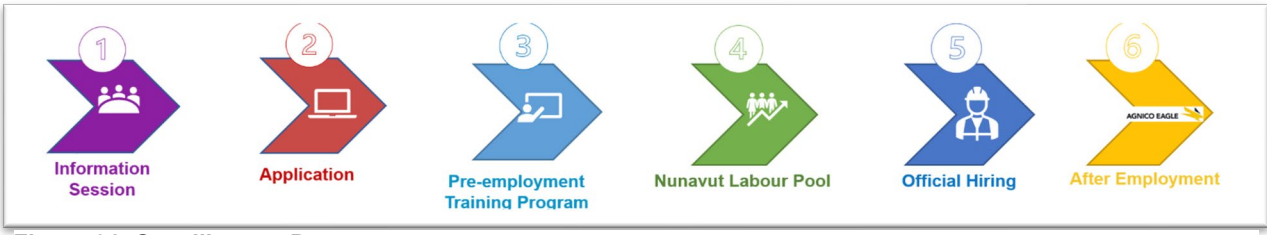

Figure 31: Sanajiksanut Program

Step 3: Pre-Employment Training Program

In 2023, five (5) Pre-Employment Training programs were delivered, with a total of 45 participants who completed the programs. All training programs are fully facilitated by Ilitaqsiniq (Nunavut Literacy Council). The Pre-Employment Training Programs align with the value of pilimmaksarniq, focusing on skill development and knowledge acquisition to empower individuals through learning experiences ISV. Two (2) training sessions were held in Arviat with 21 Inuit participants, two (2) in Rankin Inlet with nine (9) Inuit participants, and one (1) in Baker Lake with 15 Inuit participants. A training program scheduled in Chesterfield Inlet was cancelled due to a lack of accommodation in the community.

The participation in the training programs was lower than anticipated despite the advertisements through various channels. Some registered participants did not attend the program. In future years, Agnico Eagle will promote the training programs in advance and increase communications with participants to ensure a higher level of participation of community members.

Step 4: Labour Pool List Coordinated by the Labour Pool Coordinator

The Labour Pool List is a list of candidates who have successfully completed the steps of the Sanajiksanut Program. These candidates are eligible for opportunities with Agnico Eagle or Agnico Eagle's contractors. The list is managed by the Labour Pool Coordinator. In 2022, the Labour Pool List was updated, with candidates tracked against each step of the recruitment process.

The Labour Pool List is a list of candidates who have successfully completed the steps of the Sanajiksanut Program. These candidates are eligible for opportunities with Agnico Eagle or Agnico Eagle's contractors. The list is managed by the Labour Pool Coordinator. In 2023, the Labour Pool List was updated, with candidates tracked against each step of the recruitment process. Since the changes in the recruitment process, Agnico Eagle was able to hire 325 Inuit employees of which 165 Inuit employees were hired in 2023 (71 specific to Meliadine).

12.3.2 Training Hours

In 2023, Agnico Eagle made the following categories of training programs available for employees:

- 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.
- Emergency Response Training.
- Education: Focused on developing individuals' competencies for Inuit employees.

The following Table 34 provides the training hours provided to Agnico Eagle employees at Meliadine (excluding contractors) in 2023:

Table 34. Training hours provided to Agnico Eagle employees at Meliadine

Type of Training	Inuit	Non-Inuit	Total
Mandatory	877	6,334	7,211
General	447	5,288	5,735
Specific	11,350	15,537	26,887
Specific Practical Evaluation	803	782	1,585
Specific Primary Evaluation	0	0	0
ERT	130	4,162	4,292
Total	**13,607**	32,103	45,710

12.4 TRAINING PROGRAMS

12.4.1 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 2023, three online courses have been developed during the year: one (1) for Meliadine, one (1) for Meadowbank Complex and one (1) for both divisions. Only one of them has been launched in the Learning Management System (LMS). The others are planned to be launched later on.

A new version of the TMS has been internally developed since 2019. In 2023, a few administrative tools have been developed in the TMS in order to improve the user experience and the tracking of the training compliance. Also, some modifications to the structure of the system have been completed to ensure its sustainability and to allow communication of with other internal systems.

12.4.2 Cross-Cultural

In 2022, the training content and delivery were reviewed, and the decision was made to put the training on hold until it could be revamped. The training did not enhance cultural awareness and was too Agnico

Eagle-centric. Aqqiumavvik was selected as the partner to develop new content for the training to include IQ and ISV values and to be more interactive by adding to-do-activities.

Significant progress was made in 2023 with the Cross-Cultural training program. Agnico Eagle provided a workshop on different cultures and backgrounds to understand cultural differences and improve communication in the workplace. The final workshop content was delivered by Aqqiumavvik in summer 2023. Three (3) pilots were launched at Meliadine in the fall of 2023, with the support of the Meliadine HR Agent – who is Inuk. Trainers were trained to lead the workshops in January 2024 and Inuit site representatives will continue to support by leading the IQ portion of the content.

Building upon the insights gained from the previous year's evaluation, the program underwent a comprehensive overhaul to better align with Agnico Eagle's core values and to foster a deeper understanding of cultural dynamics.

This update reflects Agnico Eagle’s ongoing dedication to promoting cultural awareness and fostering an inclusive environment where every individual feels valued and empowered to contribute to a shared success. Participants provided overwhelmingly positive feedback, indicating a marked improvement in addressing key themes such as colonization, decolonization, IQ principles, and reconciliation.

One notable enhancement to the program was the inclusion of Inuit perspectives and voices. Recognizing the importance of authentic representation and cultural sensitivity, efforts were made to have Inuit facilitators lead the workshops.

In total, 115.5 hours of cross-cultural training was delivered at Meliadine in 2023.

The training has been rebranded as Cultural Awareness.

12.4.3 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.

In 2023, Agnico Eagle introduced the revised E&I Career Path. Presentations were conducted to inform and update all E&I employees and to also implement the new format. Additionally, a new trainee program for positions in the Assay Lab Career was established.

12.4.4 Apprenticeship Program

The Apprenticeship Program combines hands-on learning and technical instruction, allowing trainees gain valuable skills in their chosen trade. The variety of trades available includes baker, cook, carpenter, millwright, electrician, heavy-duty technician, welder, housing maintainer and plumber. Upon completion of the program, the apprentice is able to challenge their Certificate of Qualification (COQ) to become a Journeyperson and will have the opportunity to challenge their Red Seal Exam.

Currently, Agnico Eagle offers (9) trades: baker, cook, carpenter, millwright, electrician, heavy duty equipment technician, welder, housing maintainer and plumber. With Heavy Duty Equipment Technician (HDET), Millwright, Electrician and Welder being the preferred trades to offer onsite.

In 2022, the program was reviewed in order to substantially increase Agnico Eagle's support to apprentices while they are at school for their technical instruction. Logistical, material, educational and financial support is provided to our Apprentices.

In 2023, at Meliadine, one (1) employee completed its apprenticeship hours and technical training and is currently awaiting certification. Three (3) apprentices went to technical training in Alberta.

Additionally, at Meliadine, one (1) Apprentice is level 1 HDET, one (1) Apprentice is level 2 HDET, one (1) Apprentice is level 4 HDET, one (1) Apprentice is level 3 Carpenter.

12.4.5 Trainee Programs

Agnico Eagle continues to support training efforts across projects.

The following comprised the 2023 training initiatives and training efforts:

- E&I Trainee Program: In March, the newly designed E&I trainee program was launched. Two (2) individuals made up the initial cohort, and both finished the program satisfactorily.
- Assay Lab Trainee Program: In March, the brand-new program was officially introduced. There were two (2) individuals who were trained, and both finished the course with success.
- UG Trainee Program: Two (2) candidates successfully finished the program after the first cohort had started with four (4) trainees.
- In order to be in line with operational requirements and available equipment, Agnico Eagle limited the number of candidates to two (2) while evaluating goals for the second cohort. Each trainee received specialized training, which was the intended outcome, and both trainees successfully finished the course. Agnico Eagle had four (4) of its six (6) graduated trainees during the full year.
- Process Plant Trainee Program: Three (3) trainees were enrolled in the first cohort when it was launched, and one applicant finished the program successfully. As objectives were assessed for the second cohort, a limited number of candidates was established. One candidate was selected because the goal was to provide each learner with customized training. Regretfully, this person did not finish the course. Agnico Eagle had one (1) graduated trainee for the full year out of four (4) trainees.

12.4.6 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.

For apprentices, the Adult Educator works closely with them to improve their math skills, specifically focusing on the types of questions they will encounter in their technical training. Additionally, the Adult Educator assists with test-taking skills, reading comprehension, and understanding scientific concepts. The ultimate aim is to ensure that the apprentices are well-prepared for their technical training. In addition, the Adult Educator offers personalized one-on-one support to relief supervisors and leaders, helping them develop essential leadership skills such as effective communication, resilience, managerial courage, organization, leading peers and professionalism.

In 2023, it was decided that one (1) full-time Adult Educator was going to support all Nunavut Operations. This includes the Meadowbank Complex and Meliadine working on a 21/21 schedule with time shared equally between the sites. The Adult Educator worked with five (5) Inuit employees in the apprenticeship program, as well as six (6) Inuit at Meadowbank and 4 (four) Inuit at Meliadine who were in relief supervisor or leader roles.

12.4.7 Emergency Response Team (ERT) Training

At Agnico Eagle, the most important priority is to keep employees safe. At Meliadine, the ERT consists of internal employees that volunteer to respond to emergencies such as fire outbreaks.

In 2023, the Meliadine ERT consisted of 60 active Emergency Response and Mine Rescue members, including three (3) Inuit team members and 15 inactive members.

In June 2023, the ERT team at Meliadine participated in the Northern Mining Health and Safety Forum (NMHSF) mine rescue competition that took place in Yellowknife. This was a great opportunity for the ERT members to learn best practice from other mines and organizations.

12.5 GENERAL SOCIO-ECONOMIC PROVISIONS

12.5.1 Housing and Home Ownership

As required by NIRB Project Certificate No.006 Condition 112: ***The Proponent is encouraged to investigate measures and programs designed to assist Project employees with pursuing home ownership or accessing affordable housing options.***

And

As required by NIRB Project Certificate No.006 Condition 114: ***The Proponent is encouraged to collaborate with the Government of Nunavut – Nunavut Housing Corporation prior to the development and inception of its programs relating to financial literacy and planning to ensure that relevant and accurate information about housing and home ownership is available and considered for inclusion.***

In 2023, Agnico Eagle and its stakeholder collaborators undertook a closer examination to the housing challenges. these emerging housing issues will be addressed through several strategies which are listed below:

- Two applications, led by local partners, to the Green & Inclusive Community Building will act as pilot projects for energy efficient building material and training;
- Possible partnership opportunities will be developed, with the aim of helping Nunavummiut with the initial capital required for home ownership;
- Open dialogue with Nunavut Housing Corporation in support of the Housing 3000 initiative;
- Evaluating potential employee benefits geared toward home ownership as recruitment and retention strategies for Nunavummiut employees.

This work will be defining the strategy by which Agnico Eagle will be supporting the path forward to addressing the systemic gaps in achieving more housing units in Nunavut.

12.5.2 Labour Force

Agnico Eagle submitted the latest staff schedule on May 27, 2019. The 2021 Kivalliq Labour Market Analysis Report was presented in Appendix 39 of the 2021 Annual Report and Appendix 39 of the 2022 Annual Report.

Kivalliq Labour Market Analysis (KLMA)

In 2023, the Employment and Culture Committee (ECC) which includes representatives from KivIA and Agnico Eagle signed an MoU on the KLMA updates on IIBA obligations. ECC recommended to the Implementation Committee (IC) to change KLMA timeline to include time to conduct the analysis and to work on recommendations. KLMA should now be performed every three (3) years and be aligned with other studies that are following the IIBA three (3) years review process.

The ECC recommended aligning the KLMA timeline with the three-year review process of the IIBAs. Following the approval from the IC on this change early 2023, the next KLMA update will be performed in 2024.

In the meantime, Agnico Eagle was involved in an initiative from Sakku - KIA business branch to support the development of local labour market analysis: Kivalliq Employment and Training Action Plan (KETAP).

12.5.3 Training and Development

Agnico Eagle works with training organizations and government departments regularly through the Kivalliq Socio-Economic Monitoring Committee, through the IIBA with the Kivalliq Inuit Association, through the Memorandum of Understanding with the Government of Nunavut, and through one-on-one partnerships and collaboration with organizations such as the Hamlet of Arviat, the Illitaqsiniq (Nunavut Literacy Council), Nunavut Arctic College, Aglu Consulting, and more.

The listing of formal certificates and licenses was sent to NIRB on November 7, 2018. There have not been any updates since the last submission.

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