

FINAL

2024 Waste Rock and Ore Monitoring Report, Boston Camp

Hope Bay Project, Nunavut, Canada
Agnico Eagle Mines Ltd.



SRK Consulting (Canada) Inc. ■ CAPR003064 ■ March 2025



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Hope Bay Project, Nunavut, Canada

Prepared for:

Agnico Eagle Mines Ltd.
145 King Street East, Suite 400
Toronto, ON, M5C 2Y7
Canada



AGNICO EAGLE

Prepared by:

SRK Consulting (Canada) Inc.
320 Granville Street, Suite 2600
Vancouver, BC, V6C 1S9
Canada



+1 604 681 4196

www.srk.com

Lead Author: Allison Cole, MSc **Initials:** AC

Reviewer: Lisa Barazzuol, PGeo (NT/NU) **Initials:** LB

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Appendix B	2024 Boston Seepage and Ephemeral Streams Field Observations and Water Quality Results

Useful Definitions

This list contains definitions of symbols, units, abbreviations, and terminology that may be unfamiliar to the reader.

ALS	ALS Environmental Labs
ARD	Acid rock drainage
EC	Electrical conductivity
ICP-MS	Inductively coupled plasma mass spectrometry
ML	Metal leaching
ORP	Oxidation reduction potential
QA/QC	Quality assurance and quality control
RPD	Relative percent difference
TDS	Total dissolved solids
TSS	Total suspended solids

Executive Summary

This report presents results from the 2024 seepage and ephemeral streams monitoring programs at the Boston site, as outlined in the Water and Ore/Waste Rock Management Plan for the Boston Site (SRK 2017) and Water License 2BB-BOS1727 (NWB 2017).

Ore and waste rock were generated as part of a 1996/1997 BHP Billiton underground exploration program at the Boston deposit. The waste rock was used to construct a camp pad, roads, and an airstrip at the Boston site. Ore was placed in stockpiles on the camp pad. Agnico Eagle Mines Limited (Agnico Eagle) acquired the Hope Bay project including the Boston site in 2021 and has maintained the Boston site in care and maintenance. As a condition of Water Licence 2BB-BOS1727, Agnico Eagle conducts annual seepage and ephemeral streams sampling programs as per the Boston Waste Rock and Ore Management Plan (SRK 2017).

In 2024, Agnico Eagle completed the required geochemical monitoring programs, including a freshet seepage survey along the northern and eastern camp pad boundaries and the full extent of the airstrip for opportunistic seepage sampling, and opportunistic sampling of ephemeral streams within the Boston camp pad catchment. Water quality samples were taken at two ephemeral streams (A2 and C2) and one seepage stream located at the eastern side of the camp pad (SEEP1) in 2024. The remaining areas were monitored, but no visible flow was observed.

All 2024 seepage and ephemeral stream samples had field and lab pH values ranging from 7.1 to 7.5, indicating that the drainage from the waste rock on the camp pad is not acidic. Monitoring of the seepage from the camp pad and the ore stockpiles indicates that concentrations for parameters of concern (sulphate, nitrate, chloride, arsenic, copper, iron, nickel and selenium) are within the range of historical data with no indication of increasing trends. The analysis of water quality data for ephemeral streams indicates that concentrations for the parameters of concern were oscillating and/or stable with no indications of increasing trends. Compared to model predictions (SRK 2009), 2024 monitoring data for ephemeral streams are within the acceptable range of predicted values for all parameters in Table 4-6.

1 Introduction

At the Boston site, ore and waste rock were generated as part of a 1996 to 1997 BHP Billiton underground exploration program. The ore was placed in several stockpiles on the camp pad and the waste rock was used to construct a camp pad, roads, and an airstrip at Boston. Since then, the site has been primarily in care and maintenance, with periodic use of the camp and airstrip in support of exploration activities. Agnico Eagle acquired the Hope Bay project, including the Boston site, in 2021 and has continued to maintain the Boston site in care and maintenance.

The seepage and ephemeral streams sampling programs are conducted annually to validate the approved Boston Waste Rock and Ore Management Plan. A survey of rinse pH and conductivity of the ore is carried out every ten years as part of this plan and was last completed in 2018 (SRK 2019). This report presents results from the 2024 seepage and ephemeral streams monitoring programs at the Boston site, as outlined in the Water and Ore/Waste Rock Management Plan for the Boston Site (SRK 2017) and Water License 2BB-BOS1727 (NWB 2017).

The report is organized as follows:

- Section 2 contains a summary of the monitoring requirements.
- Section 3 summarizes analytical and quality assurance/quality control methods.
- Section 4 summarizes the results of the seepage and ephemeral monitoring at the Boston site.
- Section 5 summarizes the main conclusions of this report.

2 Monitoring Requirements

The assessment of metal leaching and acid rock drainage (ARD) and metal leaching (ML) potential from waste rock and ore at Boston camp includes monitoring the oxidation of ore (Section 2.1), water quality of seepage from ore and waste rock (Section 2.2) and water quality downstream of the camp pad and upstream of the receiving environmental (Section 2.3).

2.1 Waste Rock and Ore

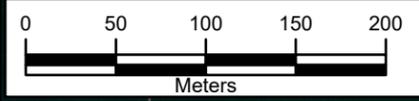
Geochemical characterization of waste rock and ore materials has indicated that all waste rock and most of the ore is non-acid generating with some of the ore classified as having an uncertain potential for ARD (SRK 2009). Based on the uncertain classifications, the Water and Ore/Waste Rock Management Plan (SRK 2017) includes a commitment to monitor the oxidation of the ore by carrying out a survey of rinse pH and conductivity every ten years. This monitoring has been conducted in 2008 and 2018 and was not a requirement in 2024.

2.2 Seepage Monitoring

The objective of the seepage monitoring is to quantify contact water quality from the waste rock (camp pad) and ore stockpiles. As stipulated in Water Licence 2BB-BOS1727 (NWB 2017) and referenced in the Water and Ore/Waste Rock Management Plan for the Boston Site (SRK 2017), Agnico Eagle monitors the seepage station BOS-8A, BOS-8B, BOS-8C, and BOS-8D (collectively referred to as BOS-8). Water License 2BB-BOS1727 (NWB 2017) requires the sampling of water quality station BOS-8 and any opportunistic seeps initially during spring thaw and at a minimum frequency of monthly whenever flow is observed. In 2024, no seepage was present at BOS-8 and one seepage stream, located at the eastern side of the camp pad (SEEP1), was opportunistically sampled.

Samples collected are analyzed for pH, electrical conductivity (EC), total suspended solids (TSS), major anions (sulphate, chloride, ammonia), and total trace metals. Locations of the seepage samples, monitoring station BOS-8 and SEEP1, are shown in Figure 2-1.

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LEGEND		
	2024 Seepage	
	2023 Seepage	
	2022 Seepage	
	2019 Seepage	
	2021 Seepage	
	2020 Seepage	
	2017 Seepage	
	2018 Seepage	

NOTES
 1. Coordinate System: NAD 1983 UTM Zone 13N

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SRK JOB NO.: CAPR003064
 LAYOUT: L-2024 Seepage Samples

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2024 Seepage Monitoring

Hope Bay Gold Project

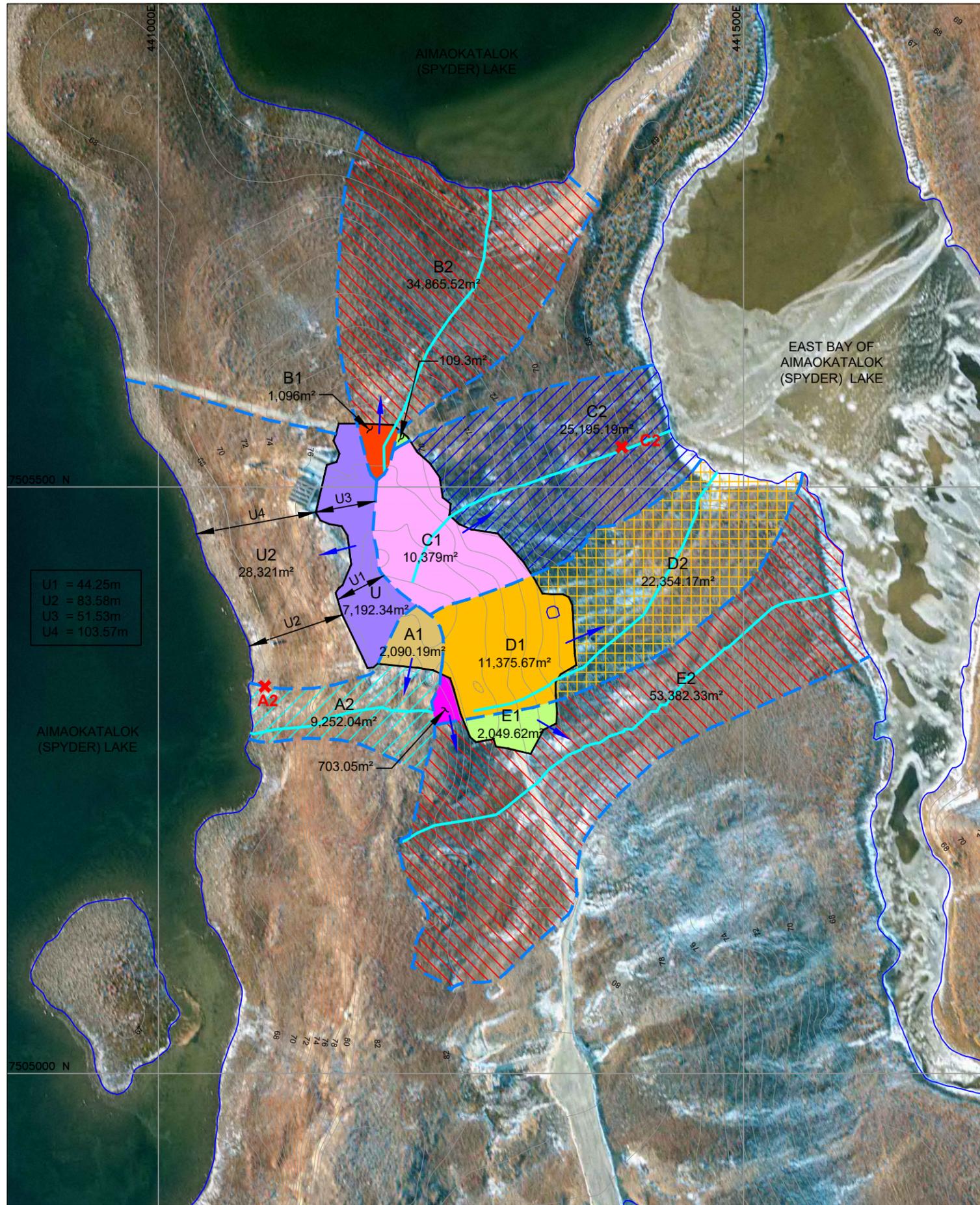
**Seep Survey Locations
Boston Area**

DATE: Feb 2025	APPROVED: LNB	FIGURE: 2.1
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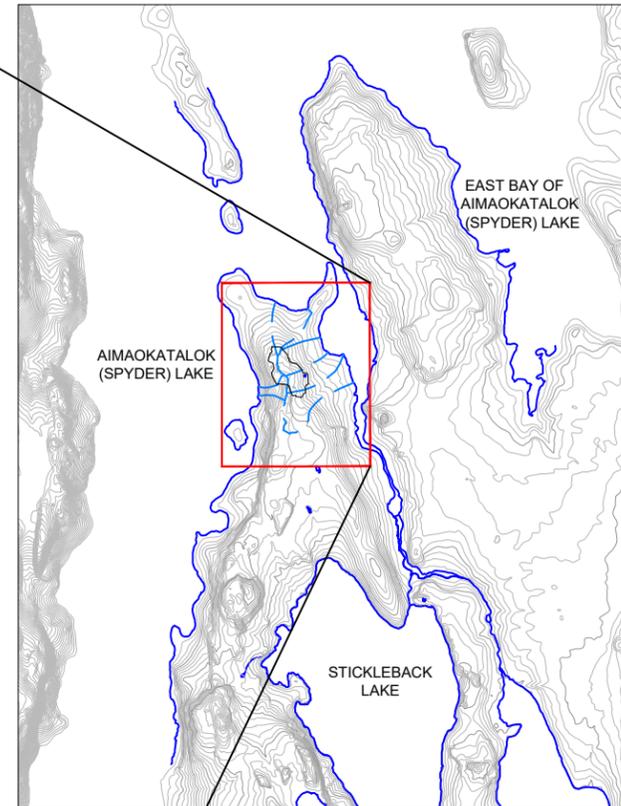
2.3 Ephemeral Streams

The purpose of the ephemeral streams monitoring is to monitor drainage downgradient of seepage from the Boston camp pad and provide an indication of whether contaminants of potential concern from ore and waste rock piles are reaching the shoreline of Aimaokatalok Lake. The results of the ephemeral streams survey are compared to the calculated average and maximum estimated concentrations of sulphate, chloride, nitrate, arsenic, copper, iron, nickel, and selenium in ephemeral streams, as determined by the water and load balance for Boston Camp (*Supporting Document B* of the 2009 *Boston Water and Ore/Waste Rock Management Plan*, SRK 2009).

Five ephemeral streams (A to E) downgradient of the waste rock pile have been sampled during spring freshet since 2009 (Figure 2-2). Samples are analyzed for pH, electrical conductivity (EC), total suspended solids (TSS), total alkalinity, major anions (sulphate, chloride, ammonia, nitrate), and dissolved trace metals.



U1 = 44.25m
 U2 = 83.58m
 U3 = 51.53m
 U4 = 103.57m



Legend

- Contours (1m)
- Ephemeral streams
- Camp pad perimeter
- Dilution Zone (Hatch)
- Catchment Boundary
- Flow direction
- Ephemeral Stream Sampling Station



		2024 Ephemeral Streams Monitoring		
		Ephemeral Stream Monitoring Locations Boston Area		
SRK JOB NO.: CAPR003064 FILE NAME: CAPR003064_Boston_Ephemeral_Streams_Mon_20250228.dwg	Hope Bay Gold Project	DATE: Feb 2025	APPROVED: LB	FIGURE: 2-2

https://srkshurepoint.com/sites/F5E08/Internal/ACAD/2025/20250228/Drawings/Boston/CAPR003064_Boston_Ephemeral_Streams_Mon_20250228.dwg

3 Methods

3.1 Field Program

3.1.1 Seepage Monitoring

On June 4, 2024, Agnico Eagle conducted a visual seepage surveys to identify and sample opportunistic flow along the toe of the north and east sides of the camp pad, as well as the southern extent of the airstrip, as per the Water and Ore/Waste Rock Management Plan for the Boston Site (SRK 2017). One sample (SEEP1) was collected from a seepage location on the eastern side of the camp pad (Figure 2-1). No additional flowing seeps were observed; therefore, no other water quality samples were collected. When seepage was present, field parameters (EC, pH, ORP, temperature, and salinity) were measured, though flow rates were too low to be recorded.

3.1.2 Ephemeral Streams Monitoring

On June 4, 2024, Agnico Eagle surveyed ephemeral streams A to E and observed flow at A2 and C2, from which samples were collected. Field parameters, as outlined in Section 3.1.1 were recorded at both locations, but flow rates were too low to measure. Two field duplicate samples and one lab duplicate were submitted to ALS for analysis, as outlined in Section 4.1.

3.2 Analytical Methods

Water quality samples were submitted by Agnico Eagle to ALS Environmental (ALS) in Burnaby, British Columbia. Analytes for all 2024 samples included:

- Physical parameters: pH, conductivity, hardness, total suspended solids (TSS), acidity, alkalinity
- Anions: ammonia, sulphate, chloride, nitrite, nitrate
- Metals by ICP-MS: Total metals are required as for permit Water License 2BB-BOS1727 (NWB 2017) and dissolved metals are analyzed to assess ML/ARD. Seepage and ephemeral stream samples were analyzed for total and dissolved metals.

3.3 Data Quality Assurance and Quality Control

SRK applied the following quality assurance and quality control (QA/QC) procedures for water samples to evaluate data quality:

- Difference between field and lab pH – corresponding values should be within one pH unit.
- Difference between field and lab conductivity – samples should have a relative percent difference (RPD) $\pm 30\%$.
- Method blank samples should report < 2 times detection limit.
- For duplicate samples, RPD should be $\pm 30\%$ (when samples > 10 times detection limit).

- Ion balances – for conductivity greater than 100 $\mu\text{S}/\text{cm}$, RPD should be $\pm 10\%$.

4 Results and Discussion

4.1 Data QA/QC

Quality control checks and results are presented in Appendix A. All seepage and ephemeral stream data passed the QA/QC checks and SRK accepted all data as reported.

4.2 Seepage Monitoring

4.2.1 Field Observations

Field parameters are presented in Table 4-1. Field pH was 7.5 and field EC value was 485 µS/cm.

Table 4-1: Field observations for seepage samples

Sample ID	Field pH	Field EC	ORP ¹	Temperature	Flow ²
	s.u	µS/cm	mV	°C	L/s
SEEP1	7.5	490	180	10	-

Sources: [https://srk.sharepoint.com/sites/FS208/Internal/Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx](https://srk.sharepoint.com/sites/FS208/Internal/Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx)CAPR003064_2024

Notes:

- ¹ Field calibrated ORP values
- ² Flow rates were not measured in 2024

4.2.2 Laboratory Results

Table 4-2 and Table 4-3 present selected parameters for the one seepage sample and a comparison to a statistical summary of historical Boston seepage samples (2008 to 2023). The 2024 data is presented in Appendix B. Figure 4-1 to Figure 4-9 present sulphate, chloride, nitrate, ammonia, arsenic, copper, iron, nickel, and selenium concentrations observed since 2008. Values below the detection limit are plotted as equal to the detection limit. A summary of the water quality results is presented as follows:

- Laboratory pH and EC values were 7.5 and 460 µS/cm, respectively. Laboratory values were roughly equivalent to field pH and EC. Both pH and EC values were within the range of historical results.
- Major cations were characterized by calcium (57 mg/L) and magnesium (16 mg/L) whereas dominant anions were sulphate (140 mg/L), alkalinity (47 mg CaCO₃/L) and chloride (26 mg/L). All major ion concentrations were within the range of historical results (Figure 4-1 and Figure 4-2).
- Ammonia (0.048 mg/L), nitrate (0.87 mg/L as N), and nitrite (0.0074 mg/L as N) were within the range of historical results (Figure 4-3 and Figure 4-4).

- Dissolved arsenic, copper, iron, nickel, and selenium concentrations were within the range of historical results (Figure 4-5 to Figure 4-9).
- There were no indications of increasing trends for the measured parameters as indicated by relatively stable or decreasing concentrations trends (Figure 4-1 to Figure 4-9).

Table 4-2: Summary of general parameters, major ions, and nutrients for 2024 and historic seepage samples

Sample ID	Sample Date	Physical Tests					Major Ions and Nutrients							
		pH	Conductivity	TSS	Sulphate	Total Alkalinity	Calcium ¹	Magnesium ¹	Potassium ¹	Sodium ¹	Chloride	Ammonia	Nitrate	Nitrite
		s.u.	µS/cm	mg/L	mg/L	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L as N	mg/L as N	mg/L as N
2024 Samples														
SEEP1	04-Jun-2024	7.5	460	27.2	140	47	57	16	3.4	6.5	26	0.048	0.87	0.0074
Historic Seepage Data (2008 to 2023)														
P05		7	350	3	69	27	37	9.2	1.7	4.1	13	0.0069	0.08	0.0021
P50		7.8	1200	6.7	327	90	114	40	6.3	16	130	0.05	3.2	0.05
P95		8	2500	52.3	660	180	278	97	18	86	770	5.5	44	0.20
n		66	66	55	66	34	21	21	21	19	36	64	33	33

Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx)CAPR003064_2024

Notes:

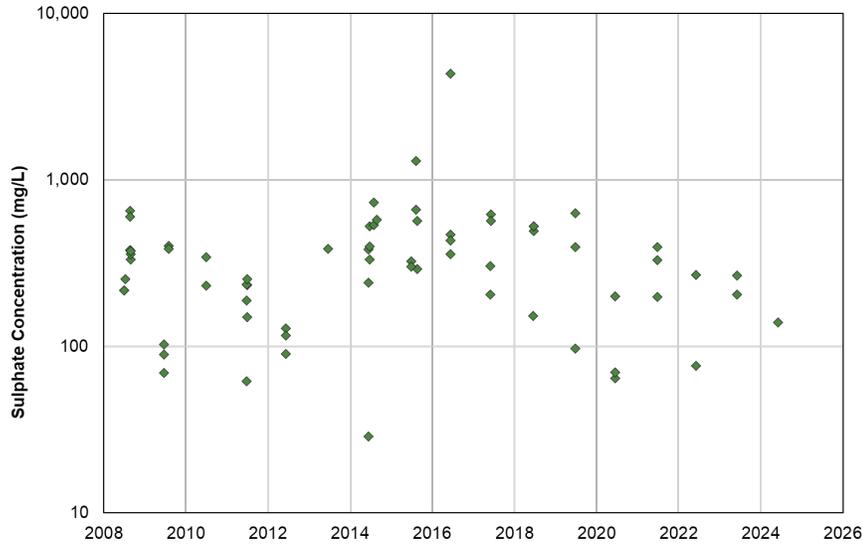
¹ Dissolved concentrations presented for calcium, magnesium, potassium, and sodium.

Table 4-3: Summary of dissolved metals for 2024 and historic dissolved and total metals statistics

Sample ID	Sample Date	Dissolved Metals										
		Aluminum	Arsenic	Cadmium	Cobalt	Copper	Iron	Lead	Manganese	Nickel	Selenium	Zinc
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024 Samples												
SEEP1	04-Jun-2024	0.0020	0.059	0.000012	0.060	0.0013	<0.010	<0.000050	<0.0000050	0.087	0.00044	0.0024
Historic Seepage Data (2008 to 2023) - Dissolved Metals												
P05		0.0025	0.0089	0.0000063	0.0032	0.0015	0.01	0.00005	0.02271	0.029	0.00023	0.001
P50		0.0047	0.076	0.000014	0.14	0.004	0.01	0.00005	0.112	0.32	0.0014	0.0024
P95		0.023	0.99	0.00025	1.1	0.0076	0.12	0.00025	0.4806	1.6	0.014	0.029
n		21	21	21	21	21	21	21	19	21	21	21
Historic Seepage Data (2008 to 2023) - Total Metals												
P05		0.014	0.0055	0.000013	0.0023	0.001	0.041	0.0000088	9.7	0.012	0.00034	0.0033
P50		0.10	0.11	0.000039	0.046	0.0044	0.31	0.0005	44	0.13	0.0013	0.0055
P95		1.0	0.96	0.001	0.67	0.010	3.5	0.005	88	1.4	0.0076	0.081
n		54	52	56	54	56	56	56	54	56	52	54

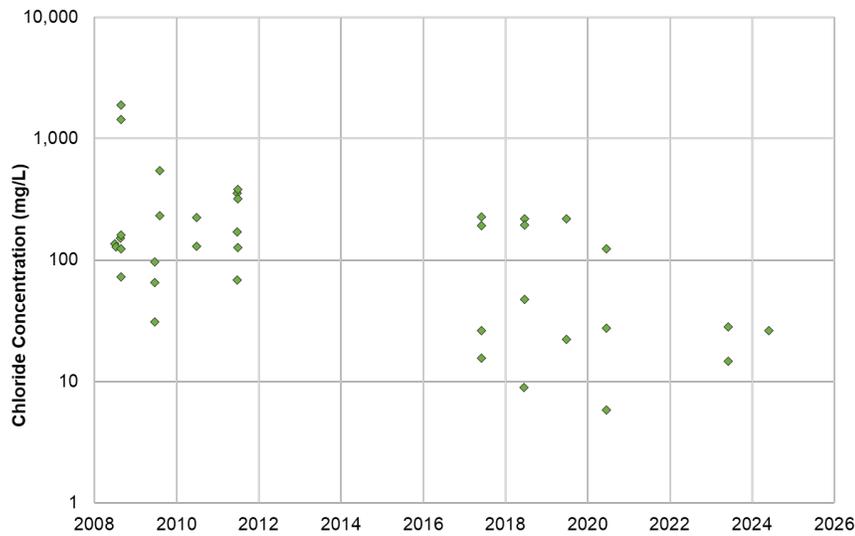
Sources: [https://srk.sharepoint.com/sites/FS208/Internal/Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx](https://srk.sharepoint.com/sites/FS208/Internal/Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx)CAPR003064_2024

Figure 4-1 Seepage sulphate concentrations (SEEP1)



Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024])

Figure 4-2 Seepage chloride concentrations (SEEP1)

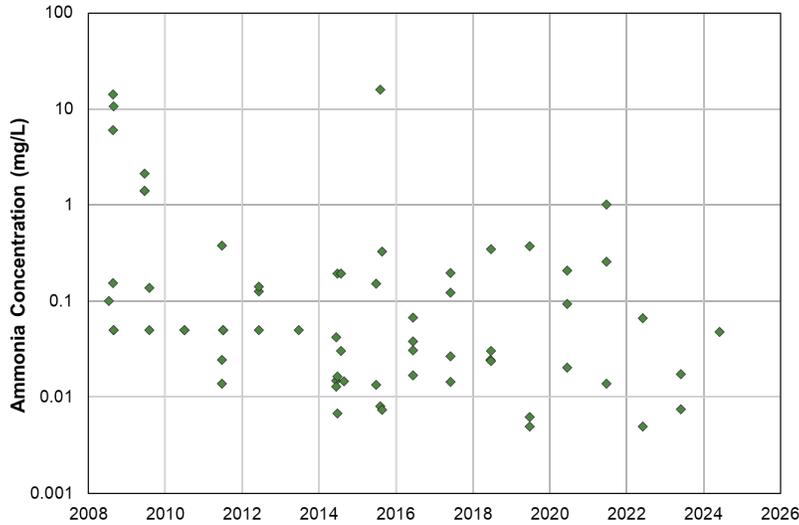


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Notes: Chloride was not analyzed in 2012 to 2017 and 2022.

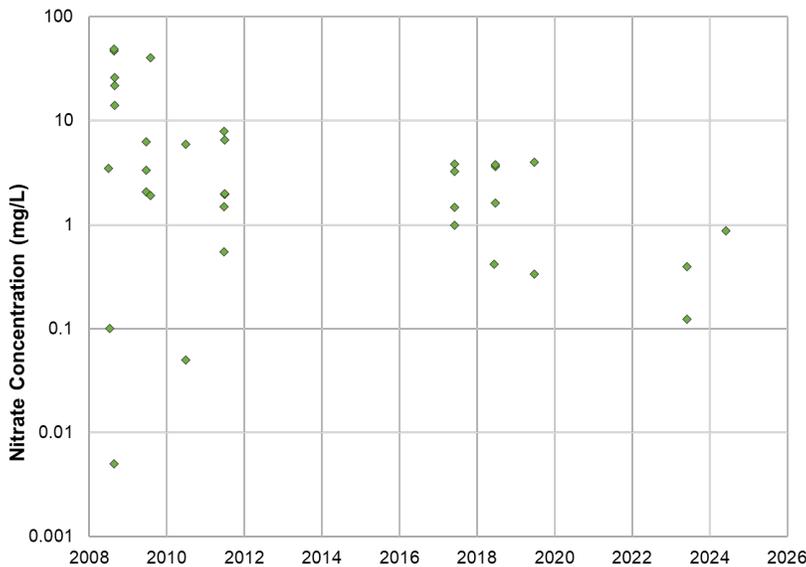
Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024x\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024x])

Figure 4-3 Seepage ammonia concentrations (SEEP1)



Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024])

Figure 4-4 Seepage nitrate concentrations (SEEP1)



[https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual)

Notes: Nitrate was not analyzed in 2012 to 2017 and 2022.

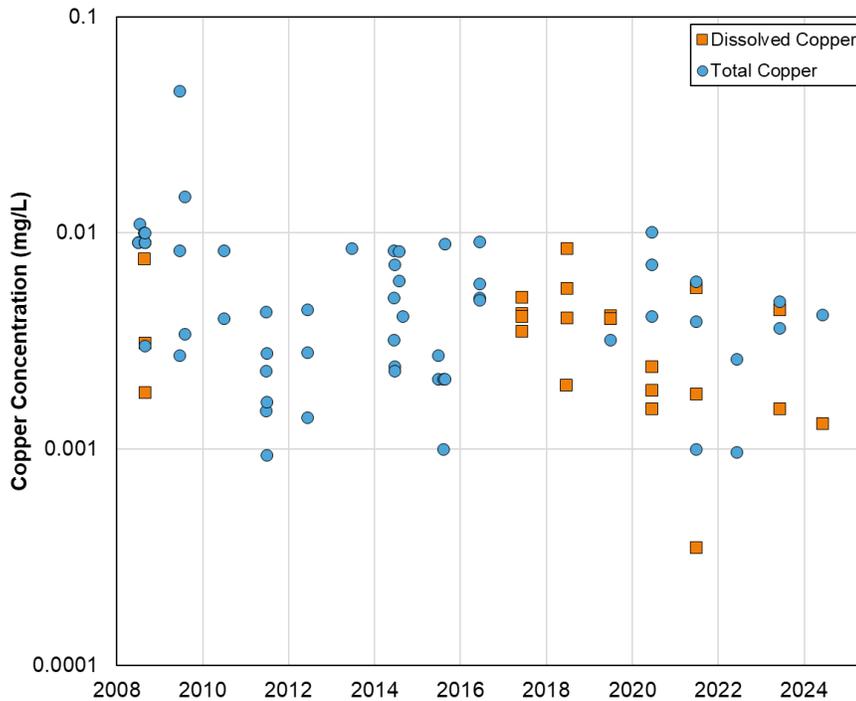
Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024])

Figure 4-5 Seepage arsenic concentrations (SEEP1)



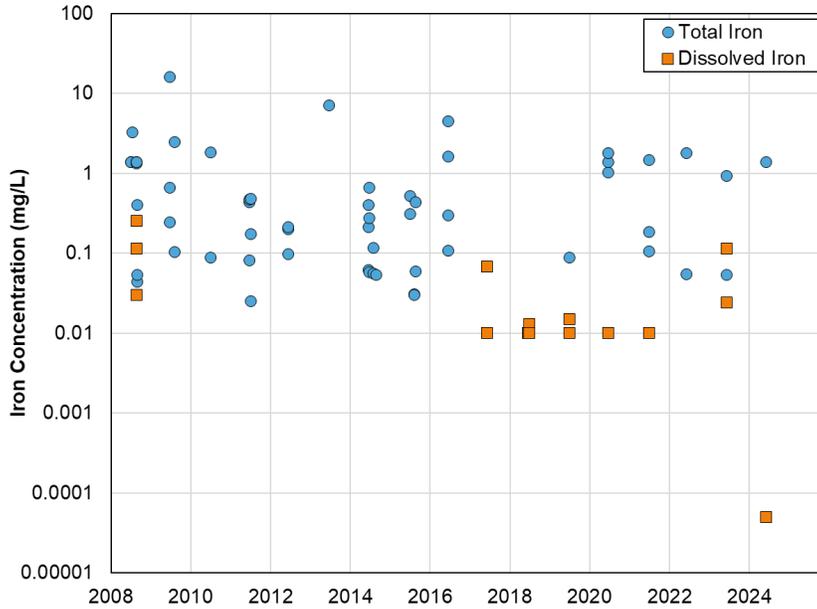
Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024])

Figure 4-6 Seepage copper concentrations (SEEP1)



Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024])

Figure 4-7 Seepage iron concentrations (SEEP1)



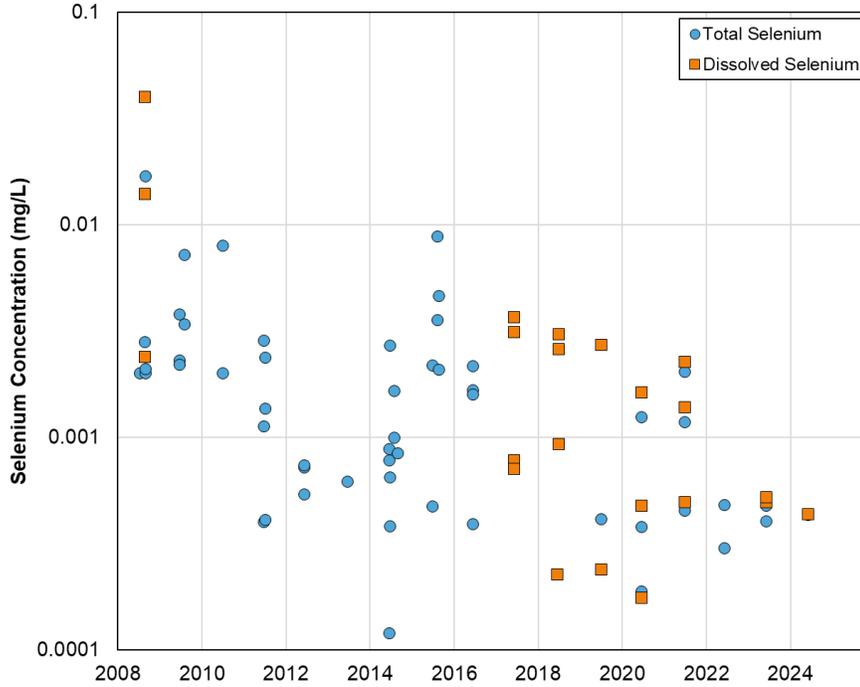
Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024])

Figure 4-8 Seepage nickel concentrations(SEEP1)



Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024])

Figure 4-9 Seepage selenium concentrations (SEEP1)



Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonSeepageStreams_WQGraphing_CAPR003064_2024_rev0.xlsxCAPR003064_2024])

4.3 Ephemeral Streams

4.3.1 Field Observations

Table 4-4 presents a comparison of 2024 field parameters and the historic field data set. Field pH values ranged from 7.1 to 7.5. Field EC for A2 and C2 were 240 and 480 $\mu\text{S}/\text{cm}$, respectively) and were the same order of magnitude as their respective historical median results.

Table 4-4: Field observations for ephemeral streams samples

Area	Date	pH	EC	ORP	Temperature	Flow ¹
		<i>s.u.</i>	<i>µS/cm</i>	<i>mV</i>	<i>°C</i>	<i>L/s</i>
2024 Samples						
A2	04-Jun-2024	7.1	240	170	7.1	-
C2	04-Jun-2024	7.5	480	180	10.6	-
Historic Ephemeral Streams Data						
A2 (2010, 2012 to 2023)	P5	7	54	13	3.5	0.053
	P50	7.8	250	130	10	0.074
	P95	8.1	560	320	18	0.39
	n	11	11	12	11	4
C2 (2009 to 2018, 2020 to 2023)	P5	6.6	97	70	3	0.11
	P50	7.2	660	140	13	1.5
	P95	7.4	1100	360	20	5.3
	n	15	15	15	15	6.0

Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx])

Notes:

¹ Flow was not measured in 2024.
 A2C2

4.3.2 Laboratory Results

A summary of water quality results for 2024 is provided in Table 4-5 and complete results are presented in Appendix A. Parameters that were identified as potential parameters of concern (SRK 2009) are presented in Figure 4-10 to Figure 4-17. Values below the detection limit are graphed as equal to the detection limit. Lines are included in the figure for ease of trend identification; however, ephemeral stream flow paths and therefore sample locations can vary from year to year. Oscillating trends are possibly linked to varying seepage flow rates.

A summary of the 2024 water quality data is as follows:

- Sulphate concentrations for A2 and C2 were 67 and 150 mg/L, respectively. Since 2009, sulphate concentrations have at these locations have oscillated (Figure 4-10).
- Chloride concentrations for A2 and C2 were 8.9 and 16 mg/L, respectively. Since 2009, concentrations of chloride have exhibited a decreasing trend and have been relatively stable since 2021 (Figure 4-11).

- Nitrate concentrations for A2 and C2 were 0.015 and 0.0088 mg/L, respectively. Nitrate concentrations have oscillated at A2 (A2) and have generally decreased at C2 (C2) (Figure 4-12).
- The arsenic concentration for A2 and C2 were 0.0014 and 0.0025 mg/L, respectively. Overall, arsenic concentrations have generally remained stable at all stations since 2009 with no indications of increasing trends (Figure 4-13).
- Copper concentrations for A2 and C2 were 0.0017 and 0.0016 mg/L, respectively. Concentrations have been relatively stable for all stations. (Figure 4-14).
- Iron concentrations for A2 and C2 were 0.034 and 0.016 mg/L, respectively. Iron concentrations have typically been within ten times the detection limit (0.01 mg/L) and have been generally stable since 2009 (Figure 4-15).
- Nickel concentrations for A2 and C2 were 0.0021 and 0.0066 mg/L, respectively. Nickel concentrations at both these locations, have oscillated since 2009, with no indication of increasing trends (Figure 4-16).
- Selenium concentrations for A2 and C2 were 0.0040 and 0.00012 mg/L, respectively, with no indications of increasing trends (Figure 4-17).

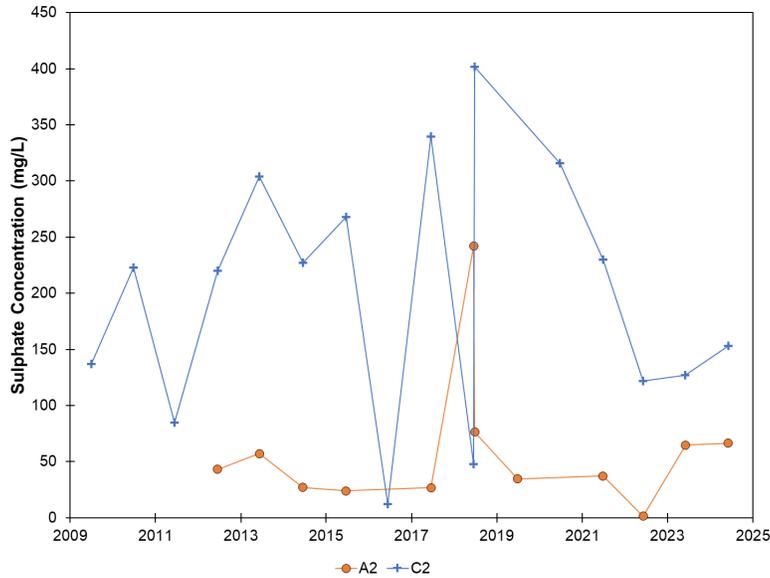
Table 4-5: Summary of selected water quality results for 2024 and historic ephemeral streams samples

Sample ID	General Parameters				Anions and Nutrients							Dissolved Metals						
	pH	EC	Total Suspended Solids	Alkalinity, Total	Ammonia	Nitrate	Sulphate	Chloride	Aluminum	Arsenic	Cadmium	Copper	Iron	Lead	Nickel	Selenium	Zinc	
	s.u.	µS/cm	mg/L	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
2024 Samples																		
A2¹	7.0	230	<3.0	30	<0.0050	0.015	67	8.9	0.040	0.0014	0.000011	0.0017	0.034	<0.000050	0.0021	0.00040	<0.0010	
C2¹	7.4	460	4.2	55	0.0096	0.0088	150	16	0.012	0.0025	0.0000070	0.0016	0.016	<0.000050	0.0066	0.00012	<0.0010	
Historical Ephemeral Streams Data (2008 to 2023)																		
A2	P05	7.2	120	3	19	0.005	0.005	13	6.8	0.0036	0.0021	0.000005	0.00095	0.01	0.00005	0.0022	0.00005	0.001
	P50	7.9	310	3	51	0.0077	0.017	37	26	0.01	0.021	0.0000062	0.0014	0.012	0.00005	0.0088	0.000093	0.0016
	P95	8	700	7.3	70	0.014	0.39	160	160	0.028	0.058	0.000011	0.0022	0.048	0.00016	0.018	0.00028	0.0026
	Max	8	740	8.2	73	0.014	0.47	240	180	0.035	0.075	0.000013	0.0023	0.052	0.00022	0.018	0.00046	0.0029
C2	n	11	11	9	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	P05	7.4	190	3	32	0.005	0.005	37	15	0.011	0.00095	0.000005	0.0013	0.015	0.00005	0.0038	0.00006	0.0013
	P50	7.7	770	3	44	0.011	0.1	220	61	0.014	0.0023	0.000011	0.0018	0.033	0.00005	0.0079	0.00015	0.0023
	P95	7.9	1100	82	73	0.06	2.4	360	200	0.023	0.021	0.000054	0.0032	0.11	0.00011	0.01	0.0012	0.006
	Max	8	1100	150	78	0.083	3	400	210	0.026	0.055	0.000063	0.0037	0.12	0.0002	0.01	0.0018	0.0071
n	14	12	10	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15

Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx])

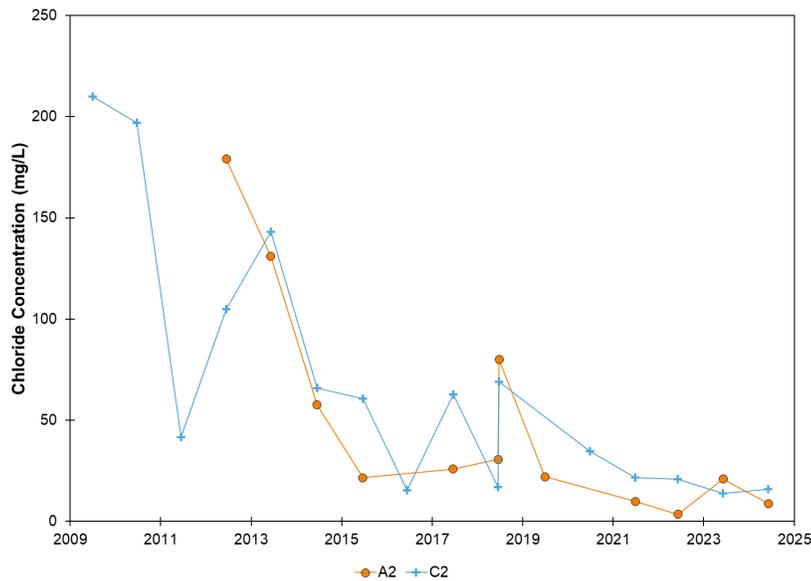
¹ A2 and C2 samples were collected from A2 and C2, respectively.

Figure 4-10 Ephemeral streams sulphate concentrations



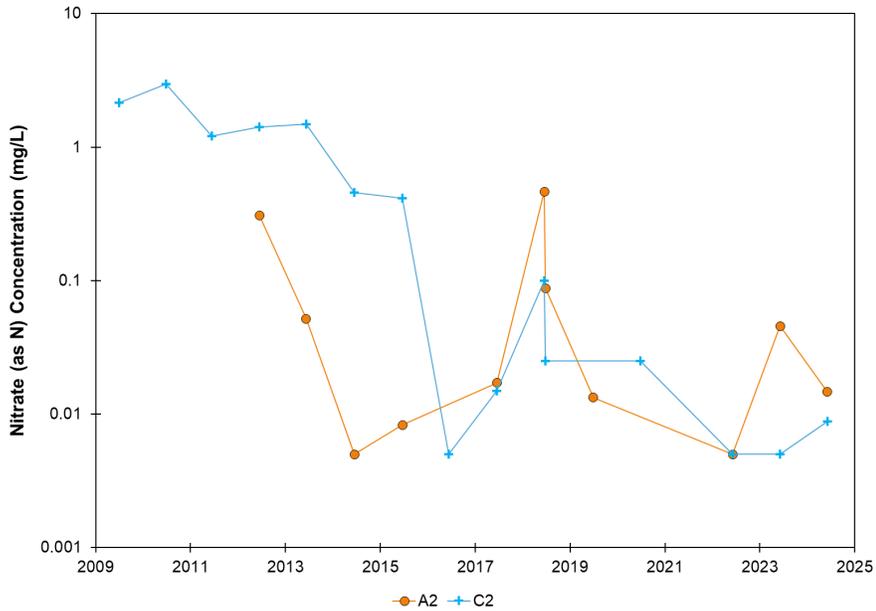
Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx])

Figure 4-11 Ephemeral streams chloride concentrations



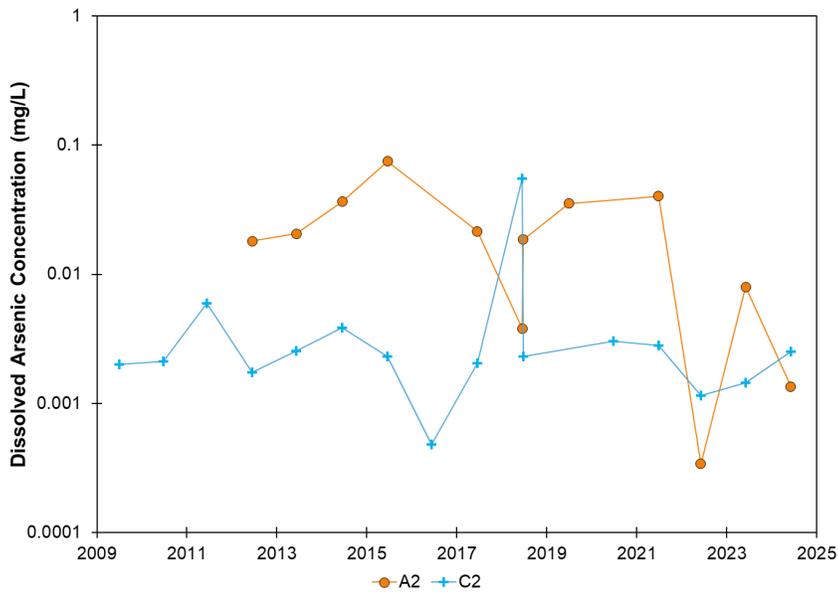
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Figure 4-12 Ephemeral streams nitrate concentrations



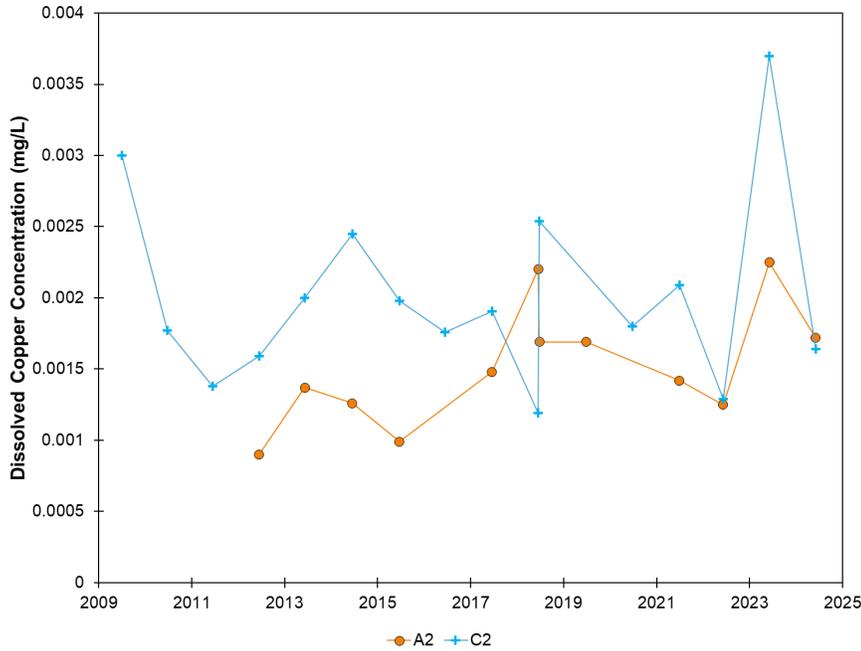
Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx])

Figure 4-13 Ephemeral streams arsenic concentrations



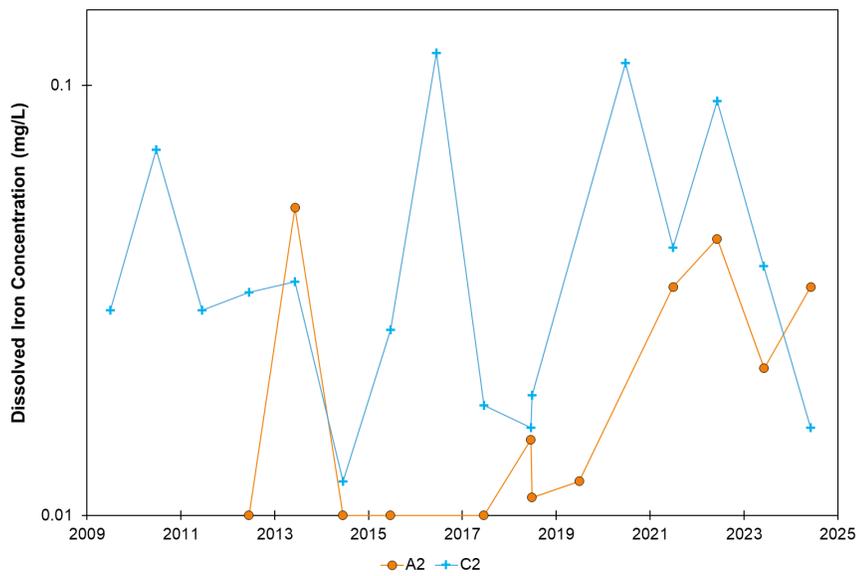
Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx])

Figure 4-14 Ephemeral streams copper concentrations



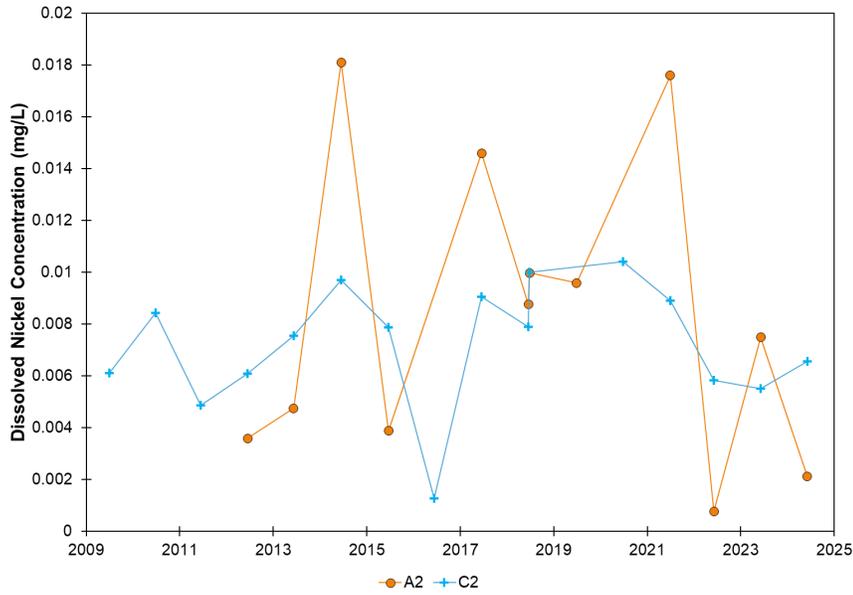
Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx])

Figure 4-15 Ephemeral streams iron concentrations



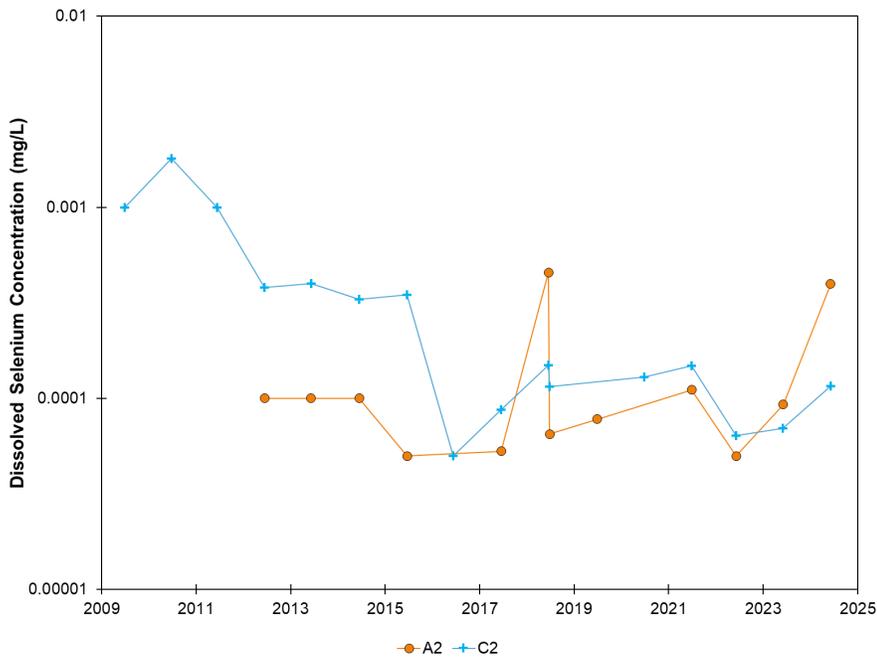
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Figure 4-16 Ephemeral streams nickel concentrations



Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx])

Figure 4-17 Ephemeral streams selenium concentrations



Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonEphemeralStreams_WQGraphing_CAPR003064_2024_rev0.xlsx])

4.3.3 Comparison to Water and Load Balance Predictions

Table 4-6 compares the 2024 ephemeral stream samples to the average and maximum model predictions for chloride, nitrate, sulphate arsenic, copper, iron, nickel, and selenium (Section 2.3). Concentrations for all parameters and locations were within the range of predicted values.

Table 4-6: Comparison of 2024 Water Quality Results to Model Predictions (SRK 2009)

Parameters	Units	Predicted Value		Max Predicted Value ¹		2024 Measured Values	
		A2A2	C2C2	A2A1	C2C2	A2A2	C2C2
Chloride	mg/L	95	140	360	560	8.9	16
Nitrate (as N)	mg/L	3.4	5.4	9.2	15	0.015	0.0088
Sulphate	mg/L	70	110	120	190	67	150
Arsenic	mg/L	0.03	0.048	0.063	0.1	0.0014	0.0025
Copper	mg/L	0.0026	0.0026	0.0033	0.004	0.0017	0.0016
Iron	mg/L	0.41	0.43	0.89	1.2	0.034	0.016
Nickel	mg/L	0.095	0.15	0.32	0.51	0.0021	0.0066
Selenium	mg/L	0.0015	0.0021	0.0035	0.0053	0.00040	0.00012

Sources: [https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data \(Not Job Specific\)/19_Geochem/Working Files/Boston Annual Report/\[BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx\]](https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Boston%20Annual%20Report/[BostonEphemeralStreams_WQData_CAPR003064_2024_rev0.xlsx])

Notes:

¹ Calculated values from Supporting Document B from SRK (2009)

5 Conclusions

The seepage program monitors contact water from the camp pad and ore stockpiles while the ephemeral stream program monitors drainage from the Boston ore stockpiles and camp pad before entering Aimaokatalok Lake.

In 2024, Agnico Eagle completed the required geochemical monitoring programs including i) a freshet seepage survey along the northern and eastern edges of the camp pad and the full extent of the airstrip for water quality analysis of opportunistic seepage samples and ii) opportunistic sampling of five ephemeral streams (A to E) within the catchment of the Boston camp pad. In total, Agnico Eagle collected one seepage sample from the eastern side of the camp pad and two ephemeral stream samples from streams A2 and C2. Samples were not collected from BOS-8 and streams B2, D1 or E2 because flow was not observed.

All 2024 seepage and ephemeral stream samples had field and lab pH values ranging from 7.1 to 7.5, indicating that the drainage from the waste rock on the camp pad is not acidic. The analysis of water quality data for one seepage stream and two ephemeral streams indicated that concentrations for the parameters of concern were oscillating and/or stable with no indications of increasing trends. When compared to the model predictions (SRK 2009), the 2024 monitoring data for ephemeral streams were within the acceptable range for all parameters listed in Table 4-6.

Closure

This report, 2024 Waste Rock and Ore Monitoring Report, Boston Camp, was prepared by

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Allison Cole, MSc
Staff Consultant (Water Management)

and reviewed by



Lisa Barazzuol, PGeo (NT/NU)
Principal Consultant (Geochemistry)

EGBC Permit to Practice Reg. No.: EGBC 1003655

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

References

[NWB] Nunavut Water Board, 2017. Water License No: 2BB-BOS1727. July 2017.

[SRK] SRK Consulting (Canada) Inc., 2009. Water and Ore/Waste Rock Management Plan for the Boston Site Hope Bay Project, Nunavut. Report 1CH008.022 for Hope Bay Mining Ltd. July 2009.

[SRK] SRK Consulting (Canada) Inc., 2017. Water and Ore/Waste Rock Management Plan for the Boston Site, Hope Bay Project, Nunavut. Report 1CT022.009 for Hope Bay Mining Ltd. January 2017.

[SRK] SRK Consulting (Canada) Inc., 2019. 2018 Waste Rock and Ore Monitoring Report, Boston Camp, Hope Bay Project, Nunavut. Report 1CT022.027 for TMAC Resources Inc. March 2019.

Appendix A

**QA/QC Summary for 2024 Boston Seepage
and Ephemeral Stream Samples**

QC Test	SRK QC Criteria	Results
Physical Test¹		
Field Blank	Minimum criteria is <2X DL, will accept <5X DL	#N/A
Trip Blank	Minimum criteria is <2X DL, will accept <2X DL	#N/A
Method Blank	<2X DL	All passed. Total Suspended Solids, Acidity (as CaCO ₃), Conductivity, and Total Alkalinity (n=1)
Field Duplicate	For samples >10X DL should be within +/- 30% RPD	#N/A
Lab Duplicate	For samples >10X DL should be within +/- 20% RPD	All passed. Total Suspended Solids, Acidity (as CaCO ₃), Conductivity, Total Alkalinity, and pH (n=1)
Field pH vs. Lab pH	Difference should not be greater than 1 pH unit	All Passed (n=4)
Field EC vs Lab EC	For samples > 10X the detection limit (DL), % RPD should be within +/-30%	All Passed (n=4)
Laboratory Control Sample and Certified Reference Material	Within specified tolerance ranges.	All passed. Total Suspended Solids, Acidity (as CaCO ₃), Conductivity, Total Alkalinity, and pH (n=1)
Anions and Nutrients²		
Field Blank	Minimum criteria is <2X DL, will accept <5X DL	#N/A
Trip Blank	Minimum criteria is <2X DL, will accept <2X DL	#N/A
Method Blank	<2X DL	All passed. Ammonia, total (as N), Chloride, Nitrate (as N), Nitrite (as N) and Sulfate (as SO ₄) (n=1)
Field Duplicate	For samples >10X DL should be within +/- 30% RPD	#N/A
Lab Duplicate	For samples >10X DL should be within +/- 20% RPD	All passed. Ammonia, total (as N), Chloride, Nitrate (as N), Nitrite (as N) and Sulfate (as SO ₄) (n=1)
Ion Balance	EC>100 uS/cm, % difference should be within +/-10%	All Passed (n=4)
Laboratory Control Sample and Certified Reference Material	Within specified tolerance ranges.	All passed. Ammonia, total (as N), Chloride, Nitrate (as N), Nitrite (as N) and Sulfate (as SO ₄) (n=1)
Trace Metals by ICP-MS		
Field Blank	Minimum criteria is <2X DL, will accept <5X DL	#N/A
Trip Blank	Minimum criteria is <2X DL, will accept <2X DL	#N/A
Method Blank	<2X DL	All passed. Total and Dissolved (n=1)
Field Duplicate	For samples >10X DL should be within +/- 30% RPD	#N/A
Lab Duplicate	For samples >10X DL should be within +/- 20% RPD	All passed. Total and Dissolved (n=1)
Total vs Dissolved Metals	Total Metals>Dissolved metals. Total Metals should be greater than Dissolved Metals, if not the % difference should be within +/-30%. ALS would use 10X DL, Maxxam would use 5X DL	All Passed (n=4)
Laboratory Control Sample and Certified Reference Material	Within specified tolerance ranges.	All passed. Total and Dissolved (n=1)
Hg-CVAAS		
Field Blank	Minimum criteria is <2X DL, will accept <5X DL	#N/A
Trip Blank	Minimum criteria is <2X DL, will accept <2X DL	#N/A
Method Blank	<2X DL	All passed. Total and Dissolved (n=1)
Field Duplicate	For samples >10X DL should be within +/- 30% RPD	#N/A
Lab Duplicate	For samples >10X DL should be within +/- 20% RPD	All passed. Total and Dissolved (n=1)
Laboratory Control Sample and Certified Reference Material	Within specified tolerance ranges.	All passed. Total and Dissolved (n=1)

1) Conductivity, pH, Hardness (as CaCO₃), Alkalinity, Total (as CaCO₃), Total Suspended Solids2) Total Ammonia, Unionized Ammonia, Cl, NO₃, NO₂, Total N, SO₄, Cyanate

Appendix B

**2024 Boston Seepage and Ephemeral
Streams Field Observations and Water
Quality Results**

New ID			A2	C2	SEEP1
Date			04-Jun-2024	04-Jun-2024	04-Jun-2024
Time Sampled			12:40	13:25	14:10
ALS Sample ID			EO2404369-001	EO2404369-002	EO2404369-004
Sample Type			Ephemeral	Ephemeral	Seepage
Description of Location					
Parameter	Detection Limit	Unit			
Field Measurements					
pH	-	s.u.	7.11	7.51	7.54
Temperature	-	°C	7.1	10.6	10.2
Conductivity	-	µS/cm	242	476	485
ORP	-	mV	174	178	177
Salinity	-	ppt	0.1	0	0
Laboratory Measurements					
Conductivity	2.0	µS/cm	229	455	455
Acidity (as CaCO3)	2.0	mg/L	2.7	5.3	2.2
Alkalinity, bicarbonate (as CaCO3)	1.0	mg/L	29.9	54.7	46.7
Alkalinity, carbonate (as CaCO3)	1.0	mg/L	<1.0	<1.0	<1.0
Alkalinity, hydroxide (as CaCO3)	1.0	mg/L	<1.0	<1.0	<1.0

Alkalinity, phenolphthalein (as CaCO3)	1.0	mg/L	<1.0	<1.0	<1.0
Alkalinity, total (as CaCO3)	1.0	mg/L	29.9	54.7	46.7
Solids, total suspended [TSS]	3.0	mg/L	<3.0	4.2	27.2
pH	0.10	pH units	6.98	7.43	7.45
Ammonia, total (as N)	0.0050	mg/L	<0.0050	0.0096	0.0478
Chloride	0.50	mg/L	8.91	16.1	26.1
Nitrate (as N)	0.0050	mg/L	0.0147	0.0088	0.873
Nitrite (as N)	0.0010	mg/L	<0.0010	<0.0010	0.0074
Sulfate (as SO4)	0.30	mg/L	66.5	153	139
Aluminum, total	0.0030	mg/L	0.0586	0.0161	0.911
Antimony, total	0.00010	mg/L	0.00113	0.00137	0.00494
Arsenic, total	0.00010	mg/L	0.00142	0.00279	0.0804
Barium, total	0.00010	mg/L	0.0241	0.0135	0.0127
Beryllium, total	0.000100	mg/L	<0.000020	<0.000020	<0.000020
Bismuth, total	0.000050	mg/L	<0.000050	<0.000050	<0.000050
Boron, total	0.010	mg/L	0.036	0.050	0.077
Cadmium, total	0.0000050	mg/L	0.0000128	0.0000056	0.0000154
Calcium, total	0.050	mg/L	27.2	47.9	58.5
Cesium, total	0.000010	mg/L	<0.000010	<0.000010	0.000205
Chromium, total	0.00050	mg/L	0.00050	<0.00050	0.0188
Cobalt, total	0.00010	mg/L	0.00094	0.00022	0.0652
Copper, total	0.00050	mg/L	0.00244	0.00200	0.00418

Iron, total	0.010	mg/L	0.069	0.023	1.38
Lead, total	0.000050	mg/L	0.000074	<0.000050	0.000852
Lithium, total	0.0010	mg/L	<0.0010	0.0012	0.0107
Magnesium, total	0.0050	mg/L	7.16	23.5	16.6
Manganese, total	0.00010	mg/L	0.00147	0.00374	0.0911
Mercury, total	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	0.000050	mg/L	0.000449	0.000290	0.00139
Nickel, total	0.00050	mg/L	0.00373	0.00676	0.105
Phosphorus, total	0.050	mg/L	<0.050	<0.050	<0.050
Potassium, total	0.050	mg/L	1.99	3.27	3.28
Rubidium, total	0.00020	mg/L	0.00225	0.00125	0.00251
Selenium, total	0.000050	mg/L	0.000309	0.000176	0.000431
Silicon, total	0.10	mg/L	1.29	1.14	1.84
Silver, total	0.000010	mg/L	0.000014	0.000025	0.000078
Sodium, total	0.050	mg/L	4.97	12.7	7.09
Strontium, total	0.00020	mg/L	0.113	0.170	0.348
Sulfur, total	0.50	mg/L	21.6	56.5	47.6
Tellurium, total	0.00020	mg/L	<0.00020	<0.00020	<0.00020
Thallium, total	0.000010	mg/L	<0.000010	<0.000010	<0.000010
Thorium, total	0.00010	mg/L	0.00014	<0.00010	<0.00010
Tin, total	0.00010	mg/L	<0.00010	<0.00010	<0.00010
Titanium, total	0.00030	mg/L	0.00080	<0.00030	0.00702
Tungsten, total	0.00010	mg/L	<0.00010	0.00034	0.00056

Uranium, total	0.000010	mg/L	0.000029	0.000029	0.000044
Vanadium, total	0.00050	mg/L	<0.00050	<0.00050	0.00460
Zinc, total	0.0030	mg/L	0.0041	0.0030	0.0084
Zirconium, total	0.00020	mg/L	<0.00020	<0.00020	0.00032
Aluminum, dissolved	0.0010	mg/L	0.0397	0.0124	0.0020
Antimony, dissolved	0.00010	mg/L	0.00113	0.00128	0.00491
Arsenic, dissolved	0.00010	mg/L	0.00135	0.00252	0.0594
Barium, dissolved	0.00010	mg/L	0.0226	0.0136	0.0112
Beryllium, dissolved	0.000100	mg/L	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	0.000050	mg/L	<0.000050	<0.000050	<0.000050
Boron, dissolved	0.010	mg/L	0.046	0.052	0.081
Cadmium, dissolved	0.0000050	mg/L	0.0000114	0.0000070	0.0000116
Calcium, dissolved	0.050	mg/L	27.1	45.4	57.4
Cesium, dissolved	0.000010	mg/L	<0.000010	<0.000010	0.000113
Chromium, dissolved	0.00050	mg/L	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	0.00010	mg/L	0.00093	0.00021	0.0595
Copper, dissolved	0.00020	mg/L	0.00172	0.00164	0.00131
Iron, dissolved	0.010	mg/L	0.034	0.016	<0.010
Lead, dissolved	0.000050	mg/L	<0.000050	<0.000050	<0.000050
Lithium, dissolved	0.0010	mg/L	<0.0010	0.0011	0.0093
Magnesium, dissolved	0.0050	mg/L	6.85	22.0	16.4
Manganese, dissolved	0.00010	mg/L	0.00080	0.00377	0.0736
Mercury, dissolved	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050

Molybdenum, dissolved	0.000050	mg/L	0.000425	0.000254	0.00130
Nickel, dissolved	0.00050	mg/L	0.00211	0.00655	0.0872
Phosphorus, dissolved	0.050	mg/L	<0.050	<0.050	<0.050
Potassium, dissolved	0.050	mg/L	2.00	3.29	3.35
Rubidium, dissolved	0.00020	mg/L	0.00205	0.00118	0.00228
Selenium, dissolved	0.000050	mg/L	0.000397	0.000116	0.000435
Silicon, dissolved	0.050	mg/L	1.26	1.10	0.870
Silver, dissolved	0.000010	mg/L	<0.000010	0.000010	0.000014
Sodium, dissolved	0.050	mg/L	4.69	11.4	6.51
Strontium, dissolved	0.00020	mg/L	0.115	0.170	0.353
Sulfur, dissolved	0.50	mg/L	21.6	51.7	47.8
Tellurium, dissolved	0.00020	mg/L	<0.00020	<0.00020	<0.00020
Thallium, dissolved	0.000010	mg/L	<0.000010	<0.000010	<0.000010
Thorium, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00010
Tin, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00010
Titanium, dissolved	0.00030	mg/L	0.00079	<0.00030	<0.00030
Tungsten, dissolved	0.00010	mg/L	<0.00010	0.00031	0.00041
Uranium, dissolved	0.000010	mg/L	0.000021	0.000025	0.000044
Vanadium, dissolved	0.00050	mg/L	<0.00050	<0.00050	<0.00050
Zinc, dissolved	0.0010	mg/L	<0.0010	<0.0010	0.0024
Zirconium, dissolved	0.00020	mg/L	<0.00030	<0.00030	<0.00030