FINAL

2024 Annual Geochemistry Monitoring Report

Hope Bay Mine, NU

Agnico Eagle Mines Ltd.

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

srk consulting

FINAL

2024 Annual Geochemistry Monitoring Report

Hope Bay Mine, NU

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Madrid Waste Rock Storage Area Contact Water Pond, Hope Bay 2023

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The opinions expressed in this document have been based on the information available to SRK at the time of preparation. SRK has exercised all due care in reviewing information supplied by others for use on this project. While SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information, except to the extent that SRK was hired to verify the data.

Contents

Tables

Figures

Appendices

Useful Definitions

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

ABA	Acid Base Accounting
ARD	Acid Rock Drainage
BV	Bureau Veritas Laboratories
CPR	Crown Pillar Recovery
CPRT	Crown Pillar Recovery Trench
CRM	Certified Reference Materials
CWP	Contact Water Pond
DQO	Data Quality Objective
DTMF	Dissolved concentration exceeds Total for Field-filtered Metals sample
EC	Electrical Conductivity
HCT	Humidity Cell Test
LOD	Limit of Detection
LOR	Limit of Reporting
ML	Metal Leaching
NP	Neutralization Potential
NNP	Net Neutralization Potential
NPR	Neutralization Potential Ratio
ORP	Oxidation Reduction Potential
PAG	Potentially Acid Generating
QA/QC	Quality Assurance/Quality Control
ROQ	Run of Quarry
SFE	Shake Flask Extraction
SGS	SGS Canada Inc.
TIA	Tailings Impoundment Area
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
WRP	Waste Rock Pad
WRSA	Waste Rock Storage Area

Executive Summary

Agnico Eagle Mines Ltd. (Agnico Eagle) retained SRK Consulting (Canada) Inc. (SRK) to prepare a report documenting the metal leaching and acid rock drainage (ML/ARD) monitoring programs carried out in 2024 at the Doris and Madrid North mines at the Hope Bay project. These activities are required as part of Agnico Eagle's Water Licence 2AM-DOH1335 Amendment No. 2 (the Water Licence; NWB 2018) and materials management plans, including the *Waste Rock, Ore and Mine Backfill Management Plan, Hope Bay Project, Nunavut* [WROMP] (Agnico Eagle 2022a) and *Quarry Management Plan* [QMP] (Agnico Eagle 2022b).

In 2024, the following activities occurred:

- Quarrying activities included 10 blasts at Quarry 2, 35 blasts at Quarry D, and two blasts at Quarry E.
- Construction activities used 145,468 t of blasted rock from Quarry D and 12,648 t of crushed material from blasted rock sourced from Quarry 2 for the following:
  - Quarry D Ramp using blasted rock from Quarry D.
  - Windy Road (km 4) using blasted rock from Quarry D and crushed rock from Quarry 2.
  - Exploration Road using blasted rock from Quarry D and crushed rock from Quarry 2.
  - Fresh Water Intake Road using blasted rock from Quarry D.
  - Naartok Pad using blasted rock from Quarry D and crushed rock from Quarry 2.
  - Pad U using blasted rock from Quarry D.
  - Roberts Bay using blasted rock from Quarry D.
  - Windmill Access Road using blasted rock from Quarry D.
  - Blind Hill 4 Road using crushed rock from Quarry 2.
- Approximately 6,000 t of blasted rock from Quarry E was moved to the Naartok Pad.
- There was no mining at Doris Mine.
- There was no ore mined at Madrid North. 10,100 t of material blasted for exploration in the Madrid North (Naartok East) underground was used to construct an access ramp to the Naartok East portal. An additional 32,000 t of waste rock from the Madrid WRSF was also used to construct the same access ramp.
- There were no tailings produced in 2024.

This interpretive report fulfills the regulatory requirements for the geochemical monitoring programs executed by Agnico for waste rock, tailings, quarry rock and construction rock.

1 Introduction

Agnico Eagle Mines Ltd. (Agnico Eagle) retained SRK Consulting (Canada) Inc. (SRK) to prepare a report that documents the metal leaching and acid rock drainage (ML/ARD) monitoring conducted in 2024 at Doris and Madrid, Hope Bay Project. The geochemical monitoring programs are documented in Water Licence 2AM-DOH1335 Amendment No. 2 (the Water Licence; NWB 2018) and materials management plans, including the *Waste Rock, Ore and Mine Backfill Management Plan, Hope Bay Project, Nunavut* [WROMP] (Agnico Eagle 2022a) and *Quarry Management Plan* [QMP] (Agnico Eagle 2022b). The geochemical monitoring requirements outlined in the Water Licence and management plans are summarized in Table 2-1 to Table 2-4 in Section 2.

This document was prepared by SRK as a stand-alone report to be appended to Agnico Eagle's 2024 NWB Annual Report. It was prepared using information and data obtained by Agnico Eagle and SRK.

The report is organized as follows:

- **Section 2 – Monitoring Requirements and Conformity Assessment:** An overview of commitments in the Water Licence and management plans is presented along with an assessment of compliance in 2024.
- **Section 3 - Summary of Material Management:** An overview of materials movement and management in 2024.
- **Section 4 – Methods and QA/QC**: An overview of sample collection, analytical test work and data interpretation methods used to assess ML/ARD and quality assurance and quality control (QA/QC) measures employed during sample collection, lab testing and data analysis.
- **Section 5 – Doris Waste Rock Monitoring**: A summary of the monitoring program and assessment of ML/ARD potential of waste rock from Doris mine.
- **Section 6 – Madrid North Waste Rock Monitoring:** A summary of the monitoring program and assessment of ML/ARD potential of waste rock from Madrid North mine.
- **Section 7 – Quarry and Construction Rock Monitoring:** A summary of the monitoring program and assessment of ML/ARD potential of blasted quarry rock from Quarry D and Quarry 2 and as-built construction rock.
- **Section 8 – Tailings Monitoring:** A summary of geochemical monitoring of flotation tailings detoxified tailings supernatant and solids and seepage from dewatered detoxified tailings placed as backfill in stopes of the Doris mine.
- **Section 9 – Seepage Monitoring:** A summary of monitoring and results from the seepage survey of Doris and Madrid waste rock and selected as-built construction rock.

2 Monitoring Requirements and Conformity Assessment

2.1 Waste Rock

2.1.1 Doris Mine

Monitoring plans for Doris waste rock are provided in the WROMP (Agnico Eagle 2022a), which is a part of the Water Licence 2AM-DOH1335 (NWB 2018). The program includes geological inspection and geochemical monitoring of the waste rock from the underground mine and crown pillar recovery (CPR), routine monitoring of the Doris Contact Water Pond 1 (CWP1) and annual seepage survey of waste rock temporarily stored on surface.

A summary of the requirements of Agnico Eagle (2022a) is summarized in Table 2-1.

Table 2-1:Doris Waste Rock Monitoring Requirements and 2024 Monitoring Summary

Monitoring Reference	Monitoring Item	Monitoring Reference Section	2024 Monitoring Summary
Agnico Eagle (2022a)	Conduct waste rock geological inspections: i) underground at the blast face by Agnico Eagle qualified geologists, with internal record keeping and ii) surface waste rock stockpile (Pad T);	Section 3.1 - Mine Backfill Monitoring; Table 3-1 – Overview of Mine Backfill Monitoring Programs and Objectives for Doris, Madrid North, Madrid South and Boston	Not applicable. The Doris Mine was inactive in 2024.
Agnico Eagle (2022a)	Geochemical sampling program for CPR waste rock to confirm that it is suitable for use as construction rock: sampling frequency of one sample for every 20,000 tonnes;	Section 3.2 - Use of Waste Rock for Construction	Not applicable. CPR reclaimed with placement backfill and cover.
Agnico Eagle (2022a), NWB (2018)	Monitoring and recording the volumes of waste rock mined, waste rock management designations (mineralized and non-mineralized) and placement locations, including any waste rock that is approved and used for construction (pending confirmatory test work and approval from NWB); to be reported monthly;	Section 3.1 - Mine Backfill Monitoring; Table 3-1 – Overview of Mine Backfill Monitoring Programs and Objectives for Doris, Madrid North, Madrid South and Boston	Completed. Refer to Section 3.

Monitoring Reference	Monitoring Item	Monitoring Reference Section	2024 Monitoring Summary
NWB (2018)	Annual water quality monitoring will be carried out at a surveillance monitoring station ST-2 located in the Doris Contact Water Pond 1; parameters include pH, TSS, total ammonia, nitrate, nitrite, total sulphate, total cyanide, total oil and grease, alkalinity, chloride, and total metals by ICP-MS;	Schedule I – Conditions Applying to General and Aquatic Effects Monitoring; Table 3 – Monitoring Program	Completed. Refer to Appendix D of the Hope Bay Project 2024 Nunavut Water Board Annual Report.
Agnico Eagle (2022a)	Annual inspections by a qualified geochemist of the designated nonmineralized and mineralized areas of the WRP Based on the inspection, geochemical characterization of representative sample set of waste rock placed in the stockpile in the previous year. samples;	Section 3.1.3 – Annual Inspections and Geochemical Characterization of Waste Rock; Table 3-1 – Overview of Mine Backfill Monitoring Programs and Objectives for Doris, Madrid North, Madrid South and Boston	No applicable. No new material was placed on the WRP in 2024.
Agnico Eagle (2022a)	Seep surveys along the down-gradient toe of the WRP and below the Doris Contact Water Pond 1 and access road throughout operations. The seep survey will be completed at the same time and will follow the same procedures as used for the seep survey around other infrastructure areas. However, given the increased importance of obtaining samples from this area, all distinct seeps in the immediate vicinity of the WRP (i.e., any seeps spaced more than 50 meters apart) will be tested for a full suite of laboratory parameters; and	Section 3.1.4 – Seep Survey	Completed. Refer to Section 9.

Monitoring Reference	Monitoring Item	Monitoring Reference Section	2024 Monitoring Summary
Agnico Eagle (2022a), NWB (2018)	An annual waste rock monitoring report, including the results and an interpretation of the geochemical data and a summary of all mitigation activities undertaken as a result of monitoring will be prepared and submitted to the NWB by March 31 of the year following sample collection (i.e., within 6 months of collecting the final quarry samples).	Agnico Eagle (2022a): Section 3.3 - Documentation and Reporting NWB (2018): Part F - Conditions Applying to Waste Deposit and Management	Completed. Refer to Section 9.

Sources: This document.

2.1.2 Madrid North Mine

Except for waste rock from the Naartok East CPR, waste rock monitoring at Madrid North is outlined in the WROMP (Agnico Eagle 2022a), which is a part of the Water Licence (NWB 2018). Geochemical monitoring of waste rock from NE CPR is documented in *Classification of Waste Rock in Support of Segregating Construction Rock from Naartok East Crown Pillar Recovery, Madrid North, Hope Bay* (SRK 2019). SRK (2019) documents a site-based geochemical classification method to identify waste rock from NE CPR with a low risk of ML/ARD (non-PAG and with low potential for neutral pH arsenic leaching) and recommendations for operational implementation of a program to classify and segregate waste rock as suitable for use as construction rock.

A summary of the requirements for Madrid North waste rock monitoring as outlined in SRK (2019) and Agnico Eagle (2022a) is summarized in Table 2-2.

Table 2-2:Madrid North Waste Rock Monitoring Requirements and 2024 Monitoring Summary

Monitoring Reference	Monitoring Item	Monitoring Reference Section	2024 Monitoring Summary
Agnico Eagle (2022a)	Conduct waste rock geological inspection at underground blast face by Agnico Eagle geologists, with internal record keeping.	Section 3.1 - Mine Backfill Monitoring; Table 3-1 – Overview of Mine Backfill Monitoring Programs and Objectives for Doris, Madrid North, Madrid South and Boston	Not applicable. Underground waste rock placed within the mine. Refer to Section 6.
SRK (2019)	Geological inspection and pXRF analysis of Naartok East Crown Pillar Recovery (NE CPR) drill cuttings for geochemical classification of waste rock to determine suitability of waste rock as construction rock.	Section 5 – Field Classification of Construction Rock	Not applicable.
Program documented in SRK (2020)	Operational application of field based geochemical classification program of NE CPR waste rock (SRK 2019) to identify and segregate run-of-mine waste rock geochemically suitable as construction rock.	Section 3.1.1 – Field-Based Classification of Waste Rock as Construction Rock	Not applicable in 2024.
Agnico Eagle (2022a), NWB (2018)	Monitoring and recording the volumes of waste rock mined and placement locations, including waste rock that is approved for use in construction (pending confirmatory test work and approval from NWB); to be reported monthly.	Section 3.1 - Mine Backfill Monitoring; Table 3-1 – Overview of Mine Backfill Monitoring Programs and Objectives for Doris, Madrid North, Madrid South and Boston	Completed. Refer to Section 3.

Monitoring Reference	Monitoring Item	Monitoring Reference Section	2024 Monitoring Summary
Agnico Eagle (2022a)	Annual inspections by a qualified geochemist of Madrid North WRSA to confirm that there are no areas with elevated amounts of sulphide mineralization, and inspections of the designated mineralized areas of the pile to look for signs of weathering and oxidation of the sulphides; representative sample set of waste rock to be collected.	Section 3.1.3 - Annual Inspections and Geochemical Characterization of Waste Rock; Table 3-1 – Overview of Mine Backfill Monitoring Programs and Objectives for Doris, Madrid North, Madrid South and Boston	Not applicable. Refer to Section 6.
Refer to footnotes[1]	Geochemical verification sampling program of underground waste rock with samples collected from underground mine. Sample frequency of one sample for every 20,000 t as per underground sampling program for underground mines.	--	Not applicable. Underground waste rock placed within the mine. Refer to Section 6.
Agnico Eagle (2022a)	Seep surveys along the down-gradient toe of the Madrid North WRSA and below the CWP and access road throughout operations and for at least 2 years following mining and backfilling activities. The seep survey will be completed at the same time and will follow the same procedures as used for the seep survey around other infrastructure areas. However, given the increased importance of obtaining samples from this area, all distinct seeps in the immediate vicinity of the WRP (i.e., any seeps spaced more than 50 meters apart) will be tested for a full suite of laboratory parameters.	Section 3.1.4 – Seep Survey	Completed. Refer to Section 9.
NWB (2018)	Routine water quality monitoring (sampled twice annually, weekly water levels) will be carried out at a surveillance monitoring station MMS-1, located at the Madrid North CWP.	Schedule I - Conditions Applying to General and Aquatic Effects Monitoring; Table 3 –Monitoring Program	Completed. Refer to Appendix D of the Hope Bay Project 2024 Nunavut Water Board Annual Report.
Agnico Eagle (2022a), NWB (2018)	An annual waste rock monitoring report, including the results and an interpretation of the geochemical data will be prepared and submitted to the NWB by March 31 of the year following sample collection (i.e., within 6 months of collecting the final quarry samples).	Agnico Eagle (2022a): Section 3.3 - Documentation and Reporting NWB (2018): Part F - Conditions Applying to Waste Deposit and Management	Completed. Refer to Section 9.

Sources: This document.

Notes:

[1] Not in Agnico Eagle (2022a). Monitoring based on advice of SRK.

2.2 Quarry and Construction Rock

Details on the monitoring program for quarries and as-built construction rock for Doris and Madrid infrastructure are provided in the QMP (Agnico Eagle 2022b) and for waste rock used as construction rock, the WROMP (Agnico Eagle 2022a). A summary of the requirements is provided in Table 2-3.

Table 2-3: Quarry and Construction Rock Monitoring Requirements and 2024 Monitoring Summary

Monitoring Item	Monitoring Reference Section[1]	2024 Monitoring Summary
Visual inspections and sampling at the quarry face by site geologist or geochemist at least once per week when the quarries are in active use.	Section 3.1.1- Quarry Visual Inspection	Completed for Quarry D. Visual inspections were not completed for Quarry 2 and Quarry E in 2024. These quarry produced low volumes of rock in 2024 (12,648 t and ~6,000 t, respectively). Rock used for construction will be monitored in 2025 as per the QMP.
Collection and testing of two samples per year from each active quarry for total sulphur analysis, and, if the sulphur content exceeds 0.1%, the samples would be subjected to full ABA tests. A subset of samples will be subjected to shake flask extraction tests. The ABA tests would be done on the whole sample and on the -2 mm size fraction to determine whether there is any concentration of sulphides in the fine component of the rock.	Section 3.1.3 – Quarry Rock Sampling	Completed for Quarry D. One set of samples was collected from Quarry 2 in 2024 and is considered sufficient given the volume of rock blasted in 2024 (12,648 t). Samples were not collected from the small volume of blasted rock from Quarry E (~6,000 t). Rock used for construction will be monitored in summer 2025 as per the QMP.
Quarry sumps will be monitored as described under the routine site water quality monitoring program.	Section 3.1.4 – Quarry Sump Monitoring	Completed for Quarry D. Refer to Appendix D of the Hope Bay Project 2024 Nunavut Water Board Annual Report.
Visual inspection of each mined-out quarry will be completed at least once per year in order to ensure that the site remains safe, and no environmental or public health and safety concerns have developed. If potentially acid generating (PAG) waste rock has been placed in the quarries, the area will be inspected to ensure that the 2 m cover remains intact, and no seeps are evident.	Section 3.3.1	Completed. PAG rock has not been placed in the quarries.

Monitoring Item	Monitoring Reference Section[1]	2024 Monitoring Summary
A seep survey will be conducted around all infrastructure components that have been constructed or modified within the previous year. Field pH, electrical conductivity (EC), Eh, and temperature readings will be collected. A water sample will be collected from a minimum of 10% of the identified ephemeral seeps and will be submitted for laboratory analyses, as detailed in Quarry Management Plan (Agnico Eagle 2022b). Established reference stations will also be monitored to provide basis for comparing this to waters that are not influenced by the development activities.	Section 3.3.2	To be completed in 2025.
An annual quarry monitoring report, including the results and an interpretation of the geochemical data will be prepared and submitted to the NWB by March 31 of the year following sample collection (i.e. within 6 months of collecting the final quarry samples).	Section 4 – Documentation and Reporting	Completed. Refer to Sections 7 and 9.

Sources: This document.

Notes:

[1] Monitoring Reference is the QMP unless waste rock is used as construction rock (Monitoring Reference is the WROMP).

2.3 Tailings

The geochemical monitoring program for flotation tailings slurry and detoxified tailings are specified in Schedule I, Tables 1 to 3 of the Water Licence (NWB 2018) and includes the following monitoring stations: process plant tailings water discharge (TL-5), flotation tailings solids (TL-6), detoxified tailings solids[1] (TL-7A), detoxified tailings supernatant (TL-7B) and seepage from underground backfilled stopes (TL-11). Station TL-7B was added to the Water Licence (NWB 2018) and monitoring commenced in 2019. A summary of the monitoring requirements is presented in Table 2-4.

[1]Detoxified tailings are referred to as cyanide leach residue in the Water Licence. Station TL-7A supercedes station TL-7.

Table 2-4:Tailings Monitoring Requirements and 2024 Monitoring Summary

Monitoring Item	Monitoring Reference Section (Water Licence)	2024 Monitoring Summary
Sampling of the supernatant from flotation tailings slurry discharge (TL-5) once per month for the analysis of pH, TSS, ammonia, nitrate, nitrite, sulphate, cyanide (WAD, free and total), and total metals by ICP-MS. Cyanate and thiocyanate should be analyzed quarterly.	Schedule I – Conditions Applying to General and Aquatic Effects Monitoring; Table 3 – Monitoring Program	Not applicable, processing plant not operational in 2024.
Maintain monthly records of tonnages and locations of disposal for flotation tailings (TL-6) discharged into the TIA and detoxified tailings (TL-7A) placed in the underground mine in stopes as backfill.	Schedule I – Conditions Applying to General and Aquatic Effects Monitoring; Table 3 – Monitoring Program	Not applicable, processing plant not operational in 2024.
Analysis of a homogenized monthly composite sample of flotation tailings solids (TL-6), from equal amounts of weekly samples, for total sulphur, sulphate sulphur, TIC, and trace element content.	Schedule I – Conditions Applying to General and Aquatic Effects Monitoring; Table 3 – Monitoring Program	Not applicable, processing plant not operational in 2024.
Monthly sampling and analysis of detoxified tailings solids (TL-7A) for moisture content.	Schedule I – Conditions Applying to General and Aquatic Effects Monitoring; Table 3 – Monitoring Program	Not applicable, processing plant not operational in 2024.
Monthly sampling and analysis of detoxified tailings filtrate (TL-7B) for total metals by ICP-MS (including sulphur), TIC, WAD cyanide, cyanate and thiocyanate.	Schedule I – Conditions Applying to General and Aquatic Effects Monitoring; Table 3 – Monitoring Program	Not applicable, processing plant not operational in 2024.
Bi-annual seepage surveys of underground backfilled stopes with opportunistic sampling of seepage (TL-11) for the analysis of pH, electrical conductivity (EC), trace metals by ICP-MS, alkalinity, acidity, sulphate, cyanide (WAD, free, and total), total ammonia, nitrate and nitrite.	Schedule I – Conditions Applying to General and Aquatic Effects Monitoring; Table 3 – Monitoring Program	Completed. Refer to Section 8.
Preparation of an annual tailings monitoring report to be submitted to the NWB by March 31 of the year following sample collection and including the results and interpretation of the geochemical data for tailings solids (TL-6, TL-7A, TL-7B), and results and interpretation of seepage data from the bi-annual underground seepage survey of backfilled stopes (TL-11).	Schedule B – General Conditions	Completed. Refer to Section 8.

Sources: This document.

3 Summary of Material Production and Management

3.1 Waste Rock

3.1.1 Doris

In April 2015, underground mining was re-initiated at Doris after a period of care and maintenance, with placement of waste rock on surface commencing in October 2015. In 2023, production was suspended at the Doris mine, and underground exploration took place between January and April 2023. In 2024, no mining activities occurred at the Doris mine.

3.1.2 Madrid North

In 2019, mining was initiated at Madrid North with the development of the Naartok East Crown Pillar Recovery (NE CPR) in July and then the decline for the underground mine in December. Mining at Madrid North was halted at the end of March 2020 due to the Covid-19 global pandemic. Mining activities at Madrid North briefly restarted between January and February 2021, with the development of the underground decline.

In 2024, development of the Naartok East portal, located in the NE CPR, was initiated. Between September and December 2024, 10,100 t of waste rock was produced from the Naartok East decline and used to construct an underground exploration ramp in the Madrid North (Naartok East) underground. Additionally, 32,000 t of waste rock was transported from the Madrid WRSF to construct the same underground exploration ramp. Section 3.3 outlines locations where quarry rock was used for construction rock in 2024.

3.2 Quarry Development

In 2024, there were 10 blasts at Quarry 2, two blasts at Quarry E, and 35 blasts at Quarry D (Figure 3-1). Section 3.3 outlines locations where quarry rock was used for construction rock in 2024.

3.3 Construction Rock

A summary of waste rock and quarry rock used for construction is presented in Table 3-1 and 2024 construction projects are depicted on a map in Figure 3-2. In summary, a total of 42,100 t of waste rock sourced from the NE CPR decline and Madrid WRSA (all placed within the NE CPR to support exploration activities) and a total of 164,116 t of quarry rock from Quarry 2, D and E was used for construction.

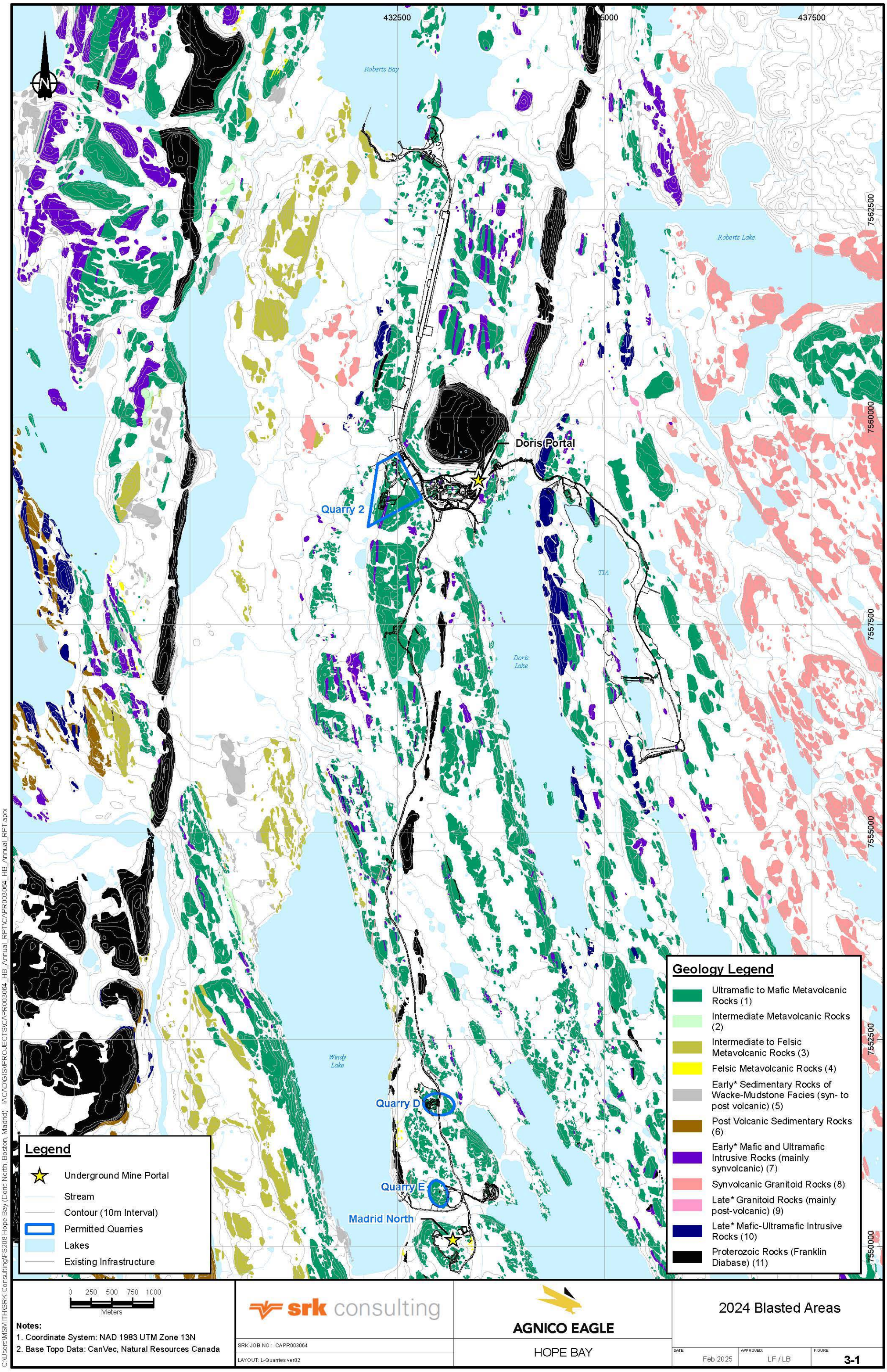
Table 3-1: Summary of 2024 Construction Projects

Placement location	Waste Rock		Quarry Rock[1,2]			
	Madrid WRSF	NE CPR Decline	Quarry D	Quarry E	Quarry 2	Size Fraction[3]
Units	t	t	t	t	t	mm
Within NE CPR	32,000	10,100	-	-	-	-
Naartok Pad	-	-	30,518	~6,000	8,846	0-75
Naartok Pad	-	-	-	-	306	0-50
Quarry D Ramp	-	-	2,346	-	-	-
Windy road km 4	-	-	442	-	68	0-50
Exploration Road	-	-	64,630	-	3,394	0-200
Fresh Water Intake Road	-	-	21,896	-	-	-
Pad U	-	-	11,322	-	-	-
Robert's Bay Road Widening	-	-	2,380	-	-	-
Windmill Access Road	-	-	11,934	-	-	-
Blind Hill 4 Road	-	-	-		34	0-35
Total	**32,000**	**10,100**	**145,468**	**~6,000**	**12,648**	-

Notes:
[1]Rock from Quarry 2 was used as surface crush.
[2]Quarry rock volumes were converted from m^3 to t using a conversion factor of 2 t per m^3.
[3]Denotes crush size of Quarry 2 rock.

3.4 Tailings

The process plant has been in care and maintenance since mid-October 2021 and did not operate in 2024. No tailings were produced in 2024.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Roberts Bay
Roberts Lake
7562500
7560000
Doris Portal
Quarry 2
TIA
Doris Lake
7557500
7555000
Windy Lake
7552500
Quarry D
Quarry E
Madrid North
7550000
Legend
Underground Mine Portal
Stream
Contour (10m Interval)
Permitted Quarries
Lakes
Existing Infrastructure
Geology Legend
Ultramafic to Mafic Metavolcanic Rocks (1)
Intermediate Metavolcanic Rocks (2)
Intermediate to Felsic Metavolcanic Rocks (3)
Felsic Metavolcanic Rocks (4)
Early* Sedimentary Rocks of Wacke-Mudstone Facies (syn- to post volcanic) (5)
Post Volcanic Sedimentary Rocks (6)
Early* Mafic and Ultramafic Intrusive Rocks (mainly synvolcanic) (7)
Synvolcanic Granitoid Rocks (8)
Late* Granitoid Rocks (mainly post-volcanic) (9)
Late* Mafic-Ultramafic Intrusive Rocks (10)
Proterozoic Rocks (Franklin Diabase) (11)
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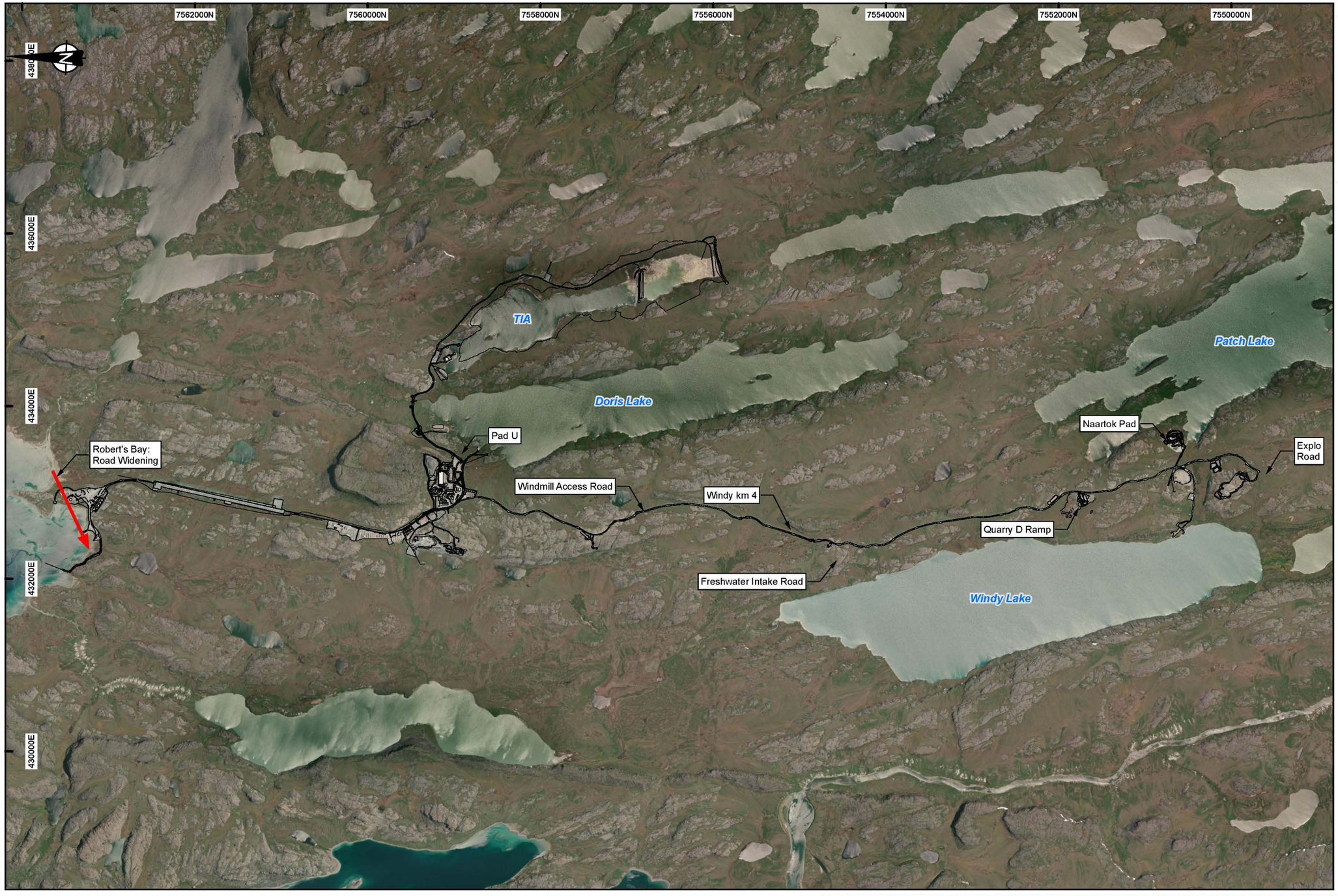
Notes:
1. Coordinate System: NAD 1983 UTM Zone 13N
2. Base Topo Data: CanVec, Natural Resources Canada
srk consulting
SRK JOB NO.: CAPR003064
LAYOUT: L-Quarries ver02
AGNICO EAGLE
HOPE BAY
2024 Blasted Areas
DATE: Feb 2025
APPROVED: LF / LB
FIGURE: 3-1
C:\Users\MSMITH\SRK Consulting\FS208 Hope Bay (Doris North, Boston, Madrid) - IA\CAD\GIS\PROJECTS\CAPR003064_HB_Annual_RPT\CAPR003064_HB_Annual_RPT.aprx



LEGEND

—— Existing Infrastructure

NOTES

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

REFERENCES

1. Aerial image collected September 2024.

0 500 1000 1500 2000
Meters

srk consulting

SRK JOB NO: CAPR003046

LAYOUT: CAPR003064_HB_Annual_RPT

AGNICO EAGLE

HOPE BAY

2024 Annual Report

2024 Construction Project Locations

Date:	Approved:	Figure:
Feb 2025	LF / LB	3-2

PROJECT PATH: C:\Users\MSMITH\SRK Consulting\F5208 Hope Bay (Doris North, Boston, Madrid) - IACA\DIGS\PROJECTS\CAPR003064_HB_Annual_RPT\CAPR003064_HB_Annual_RPT.aprx - L-Construction

4 Methods and QA/QC

Geochemical monitoring programs include geological inspections and laboratory analysis. Analytical field tests (Section 4.1.1) are completed by either SRK or Agnico Eagle. Laboratory analysis is carried out by external commercial labs (Section 4.1.2). QA/QC (Section 4.2) and data interpretation (Section 4.3) are completed by SRK. In this report, all laboratory results have been rounded to two significant figures to account for analytical uncertainty.

4.1 Analytical Methods

4.1.1 Field Test Work

Test work conducted in the field is executed by field staff.

4.1.1.1 Solids Samples

Rinse tests completed on sieved fine fractions (-2 mm) of samples and involved mixing a 1 to 1 ratio of distilled water and solids and measuring the resulting pH and electrical conductivity (EC).

4.1.1.2 Seepage Samples

Field measurements of pH, conductivity, temperature, and oxidation reduction potential are determined using handheld meters that are calibrated daily. Seepage flow rates were measured in the field by using a flow meter (MF OTT Pro Flow Meter) or using visual estimates.

4.1.2 Laboratory Test Work

4.1.2.1 Solids Samples

Solids testing was completed at Bureau Veritas (BV) in Burnaby, BC using the following analytical methods:

- Acid Base Accounting (ABA):
  - Paste pH (Sobek et al. 1978).
  - Total sulphur by Leco.
  - Sulphate sulphur by hydrochloric (HCl) acid leach based on a modified version of ASTM Method D 2492-02.
  - Total inorganic carbon (TIC) where the sample is reacted with HCl and the evolved CO_2 is measured by Leco or using a coulometer.
  - Fizz test and modified neutralization potential (MEND 1991).

- Metals analysis by aqua regia digest followed by Inductively Coupled Plasma Mass Spectrometry (ICP-MS) multi-element scan of 8 major elements (e.g., aluminum, calcium, magnesium, sodium, potassium, iron, sulphur) and 29 trace elements (e.g., arsenic, zinc, copper, cadmium, lead).
- Shake flask extraction (SFE) tests on the sieved -2 mm fraction using deionized water with a 3:1 liquid to solid ratio and a 24-hour shaking period (MEND 2009). Leachates from the SFE tests are analyzed for pH, conductivity, total alkalinity, sulphate, nitrate, ammonia, acidity and dissolved metals (including mercury and selenium).

4.1.2.2 Water Samples

Routine water quality monitoring samples from the sumps and outside the berm of the contact water pond downstream of the Madrid North WRSA (Section 9.2.5), freshet seepage samples (Sections 9.2.3, 9.2.4, and 9.2.6) and underground seepage samples (Section 8.2.1) were submitted to ALS Laboratory, in Yellowknife, NT for the analysis of the following parameters:

- Physical parameters: pH, EC, total suspended solids (TSS),
- Major anions: alkalinity, chloride, sulphate.
- Nutrients: ammonia, nitrite and nitrate
- Dissolved metals by ICP-MS. Samples were filtered and preserved at the time of sampling in the field.

Selected sample sets were also analyzed for the following parameters:

- Total dissolved solids (TDS, freshet seepage and underground seepage only).
- Acidity (freshet seepage and underground seepage only),
- Phosphorus (freshet seepage and underground seepage only).
- Total metals by ICP-MS (Madrid North WRSA routine samples only).
- Free, total and WAD cyanide (underground seepage only).
- Total cyanide (freshet seepage and Madrid North WRSA routine samples other than CWP Berm – Outside only).

4.2 QA/QC

A number of QA/QC programs were executed as part of the geochemical monitoring programs at Hope Bay and are summarized as follows:

- Agnico Eagle executed the Quality Assurance and Quality Control Plan documented in Agnico Eagle (2022c) during collection of quarry rock and seepage water quality samples (Sections 7 to 9). SRK has not reviewed Agnico Eagle (2022c) or the outcomes.

SRK (2024b: SRK's QAQC program includes an assessment of field sampling procedures, evaluation of laboratory inhouse QAQC methods and overall data review:

  - Field and travel blanks are analyzed to identify any potential contamination within samples.

- A comparison of field and laboratory measurements is undertaken to assess potential changes in composition during storage and transit or identify any issues attributed to field equipment or the recording of field results.
- Field duplicate samples are submitted blindly for analysis and results are assessed to determine the reproducibility of the data.
- SRK reviews in-house laboratory QAQC data including results of method blank samples, laboratory split duplicates and standard/certified reference materials.
- An ion balance is calculated on all water samples to determine the balance between positively charged cations and negatively charged anions.
- Where total and dissolved metals are reported, SRK reviews the data to ensure that total metals are consistently reported higher than dissolved metals.
- For acid base accounting data, SRK compares total sulphur with sulphate sulphur results and sulphur determined by ICP to sulphur determined by Leco furnace. Neutralization potential data is compared with paste pH and fizz test results to ensure a reasonable correlation.

SRK conducts QC checks for all data received that are documented in the QA/QC section for each monitoring program, e.g., Sections 7.2.1 and 8.3.1.

4.3 Data Interpretation

4.3.1 ARD Classification

Sulphide sulphur is calculated as the difference between total sulphur and sulphate. Acid potential (AP) was calculated using sulphide sulphur.

The ratio of TIC to AP provides a measure of the ARD potential of the sample with ARD classification summarized as follows:

- Non-potentially ARD generating (non-PAG): TIC/AP > 3 or total sulphur ≤ 0.1%.
- Uncertain: 1 ≤ TIC/AP < 3 and total sulphur > 0.1%.
- PAG: TIC/AP < 1 and total sulphur > 0.1%.

Interpretations of values of NP/AP were the same as TIC to AP. The criteria for TIC/AP and NP/AP values follows guidance from MEND (2009) and the sulphur criterion is based on Day and Kennedy (2015), which takes into consideration ability of acid-consuming silicate minerals to neutralize weak acidity. Samples with a total sulphur content <0.10% are classified as non-PAG regardless of the TIC/AP ratio.

4.3.2 ML Potential

Trace element data for solid samples were compared to ten times average crustal abundance (CA) for basalt (Price 1997) as an indicator of enrichment. Selenium could not be assessed because concentrations were below the detection limit or within the range of analytical error.

5 Waste Rock from Doris Mine

The purpose of the monitoring program is to geochemically characterize waste rock stored on surface and compare the geochemical characteristics with the baseline geochemical characterization program (SRK 2015a).

In 2024, the Doris Mine was in care and maintenance. There was no production of waste rock or ore.

6 Waste Rock from Madrid North Mine

In 2024, there was no ore production at the Madrid North Mine. Underground exploration activities between September and December 2024 resulted in the production of 10,100 t of waste rock that was used to construct an underground exploration ramp in the Madrid North (Naartok East) underground. Section 3.1.2 and Table 3-1 present waste rock production volumes and placement location as construction rock.

7 Quarry Rock and As-Built Construction Materials

Monitoring requirements for quarries and quarry rock associated with Hope Bay are specified in Water Licence (NWB 2018), Water Licence 2BE-HOP1232 (NWB 2022), the Framework Agreement signed between TMAC and the Kitikmeot Inuit Association (KIA) for belt wide land tenure and the QMP (Agnico Eagle 2022b).

7.1 Methods

7.1.1 Quarry Monitoring

Quarry activities in 2024 included 10 blasts at Quarry 2, 35 blasts at Quarry D, and two blasts at Quarry E. As per the QMP (Agnico Eagle 2022b), Agnico Eagle geologists conducted visual geological inspections of the active quarry face at least once per week during periods of active blasting to verify geological characteristics, including lithology according to the Hope Bay geological logging codes, sulphide content (type, quantity, and habit), carbonate content (type, quantity, and fizz test with 10% HCl), evidence of oxidation and the presence or absence of fibrous actinolite. Sample collection of ROQ rock for geochemical characterization of Quarry D was conducted twice per year as per the methods in Section 3.1.3 of the QMP (Agnico Eagle 2022b). One set of samples was collected from Quarry 2 in 2024 and is considered sufficient given the relatively low volume of rock blasted (12,648 t). The samples collected from Quarry D for geochemical characterization were also geologically described. Geological descriptions and geochemical characterization of Quarry 2 and Quarry E were not completed in 2024 (see Section 7.2.2.1). As-built construction monitoring will be conducted in summer 2025 (Section 7.1.2), as per the QMP.

Table 7-1: Summary of Quarry Inspections and Samples Collected

Location	Inspection Date[1]	Samples Collected[2]
Quarry D	4-Sep-24	3
	21-Oct-24	2
Quarry 2	8-Jun-24	2

Sources: This document.

Notes:

1 Inspection report for Quarry 2 not available at time of report writing.

2 Complete ABA data not available for September 2024 Quarry D samples

Table 7-1 presents a summary of geological inspections and sample collection for geochemical characterization according to the methods outlined in the QMP.

Appendix A1 includes the quarry inspection records, sample descriptions and photos except for Quarry 2. Appendix A includes all available lab data for Quarry 2 and Quarry D (Appendix A2 presents ABA data from Quarry 2 and Quarry D; Appendix A3 presents aqua regia metals data from Quarry 2; Appendix A4 presents SFE test data from Quarry 2). Both fractions sampled were analyzed for total sulphur.

For the Quarry D rock samples collected in September, only total sulphur has been received for reporting, with analysis of complete ABA, trace element, and SFE analyses currently in progress. Results of these analyses will be provided as an addendum to this report. For the Quarry D rock samples collected in October, total sulphur values did not exceed 0.10% and therefore did not require further testing, as summarized in Section 4.1. Complete ABA, trace element, and SFE test data from Quarry 2 samples are presented in Section 7.2.2. No samples were collected by Agnico Eagle from Quarry E and therefore geochemical characterization could not be performed.

7.1.2 As-Built Construction Monitoring

Due to local climate conditions (heavy snow cover in the winter), as-built construction monitoring for the Hope Bay Project occurs during the summer months. Many of the 2024 construction projects took place after September 2024 (Section 3.3). Geological inspection and geochemical sampling of the 2024 as-built construction rock will take place during summer of 2025.

7.2 Results and Discussion

7.2.1 QA/QC

The QA/QC program executed by the analytical laboratories and SRK is described in Section 4.2.

All data passed the QC checks except for the following:

- Quarry 2: RPD% between the CAHBC100613B split duplicate exceeded SRK's criteria for total sulphur and SFE total ammonia concentrations.
- For aqua regia metals analysis, the standard reference material was outside SRK's acceptable tolerance ranges/percent recovery for antimony (n=2), tungsten (n=3), and selenium (n=1).

SRK accepted all values as received.

7.2.2 Quarry Monitoring

7.2.2.1 Quarry Face Inspections

In 2024, SRK, with assistance from Agnico Eagle, conducted a quarry blast face inspection at Quarry D in September 2024 and Agnico Eagle conducted another quarry blast face inspection in October 2024. Inspection forms are included in Appendix A1. The geological inspection in September indicated the presence of mafic volcanics (strongly to weakly foliated basalt) with evidence of weakly to strongly hematitized alteration and moderate to strongly chloritized alteration. These samples exhibited none to 0.1% sulphides as disseminated fine grained cubic pyrite. The geological inspection in October indicated the presence of (0.25%) sulphides as disseminated pyrite. The absence of fibrous actinolite was noted for all samples collected from Quarry D. The quarry blast face inspection reports from Quarry 2 and Quarry E were not completed due to the relatively small volumes of rock blasted in 2024 (12,648 t and ~6,000 t, respectively). Quarry face inspections will be completed for Quarry 2 and Quarry E in summer 2025.

7.2.2.2 Acid Base Accounting (ABA)

Table 7-2 presents the available ABA data for Quarry 2 and Quarry D. Complete results are presented in Appendix A2.

The <2 mm rock fraction had higher measured total sulphur contents than the <1 cm fraction for all quarry rock sample sets. For Quarry D, total sulphur contents ranged from 0.05 to 0.15 and 0.06 to 0.20% for the <1 cm and <2 mm fraction, respectively. For the two samples collected from Quarry 2 in June 2024, the <1 cm rock fraction both had total sulphur contents of 0.16% and the <1 mm rock fraction both had total sulphur contents of 0.22%. Sulphate content ranged from 0.02 to 0.06% resulting in sulphide sulphur content ranged from 0.10 to 0.19%, in a similar range as total sulphur.

Values of paste pH for Quarry 2 rock ranged from 8.8 to 9.0. Modified NP ranged from 110 to 210 kg $CaCO_3$/t and TIC was near parity, ranging from 110 to 200 kg $CaCO_3$/t (Figure 7-1). This suggests that the neutralization potential in Quarry 2 is present as carbonate minerals.

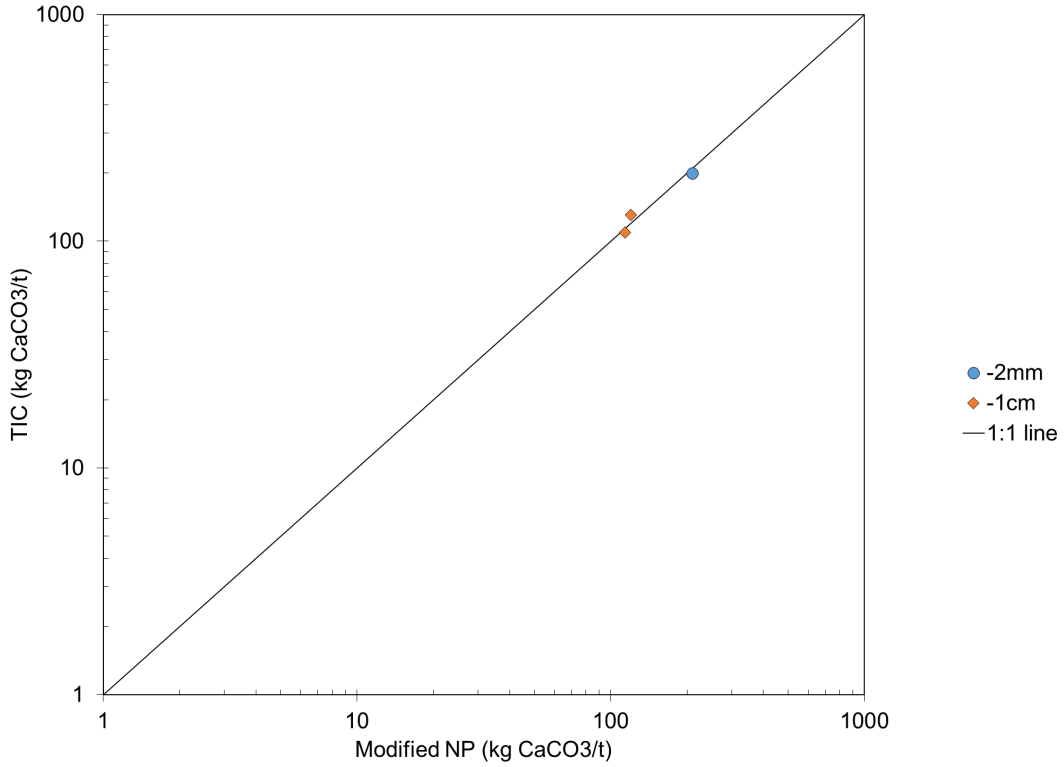
All samples were classified as non-PAG on the basis of TIC/AP and NP/AP (Figure 7-2 and Figure 7-3).

Table 7-2: Summary of ABA Analyses for Quarry Monitoring Samples

Rock Source	Sample Date	Sample ID	Sieve Size	Paste pH	Total S	SO_4	Sulphide	AP[1]	TIC	Modified NP	TIC/AP	NP/AP
				s.u.	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t	kg $CaCO_3$/t	-	-
Quarry 2	8-Jun-24	CAHBC100612	<1 cm	9.0	0.16	0.02	0.14	4.4	110	110	25	26
		CAHBC100612	<2 mm	8.8	0.22	0.03	0.19	5.9	200	210	42	39
		CAHBC100613	<1 cm	8.9	0.16	0.06	0.10	3.1	130	120	34	36
		CAHBC100613	<2 mm	-	0.22	-	-	-	-	-	-	-
Quarry D	4-Sep-24[2]	SRK-QD-01-24	<1 cm	-	0.13	-	-	-	-	-	-	-
		SRK-QD-01-24	<2 mm	-	0.16	-	-	-	-	-	-	-
		SRK-QD-02-24	<1 cm	-	0.15	-	-	-	-	-	-	-
		SRK-QD-02-24	<2 mm	-	0.20	-	-	-	-	-	-	-
		SRK-QD-04-24	<1 cm	-	0.05	-	-	-	-	-	-	-
		SRK-QD-04-24	<2 mm	-	0.06	-	-	-	-	-	-	-
	21-Oct-24[3]	B011501	<1 cm	-	0.08	-	-	-	-	-	-	-
		B011501	<2 mm	-	0.09	-	-	-	-	-	-	-
		B011502	<1 cm	-	0.07	-	-	-	-	-	-	-
		B011502	<2 mm	-	0.10	-	-	-	-	-	-	-

Source: https://srk.sharepoint.com/sites/NACAPR003064/Internal/!070_Project_Data/030_Subcontractor/BV/ C443858V2R-R2025-01-29_10-15-24_R006_Att_4_ARD_Report-C443858_final_(29-Jan-25)_QAQC_mlt

Notes: [1]AP calculated from sulphide sulphur.
[2]Complete ABA, trace metals, and SFE testing is underway and will be provided as an addendum to this report.
[3]Further analysis is not required because total sulphur values do not exceed 0.10%.
"-" denotes data not available.



https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023 Annual Reporting/Doris Madrid/020_Tables/[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ_LF.xlsx]

Figure 7-1: Modified NP vs. TIC, Quarry 2 Material

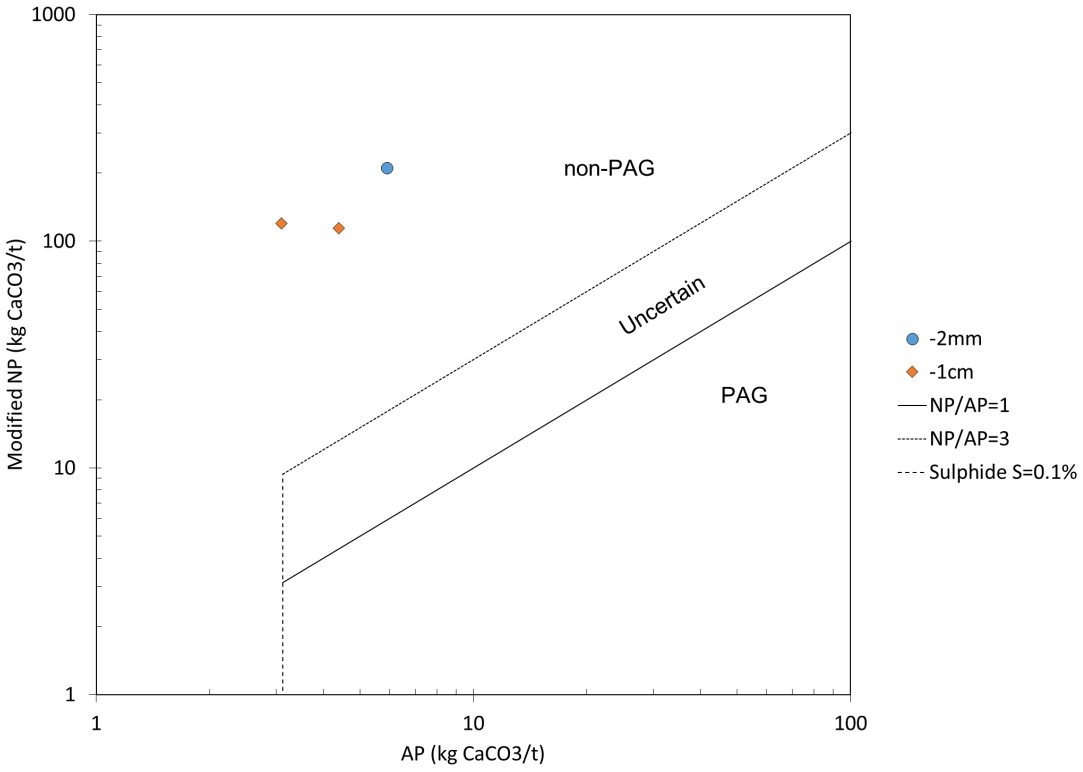


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Figure 7-2: ARD Classifications by Modified NP/AP, Quarry 2 Material

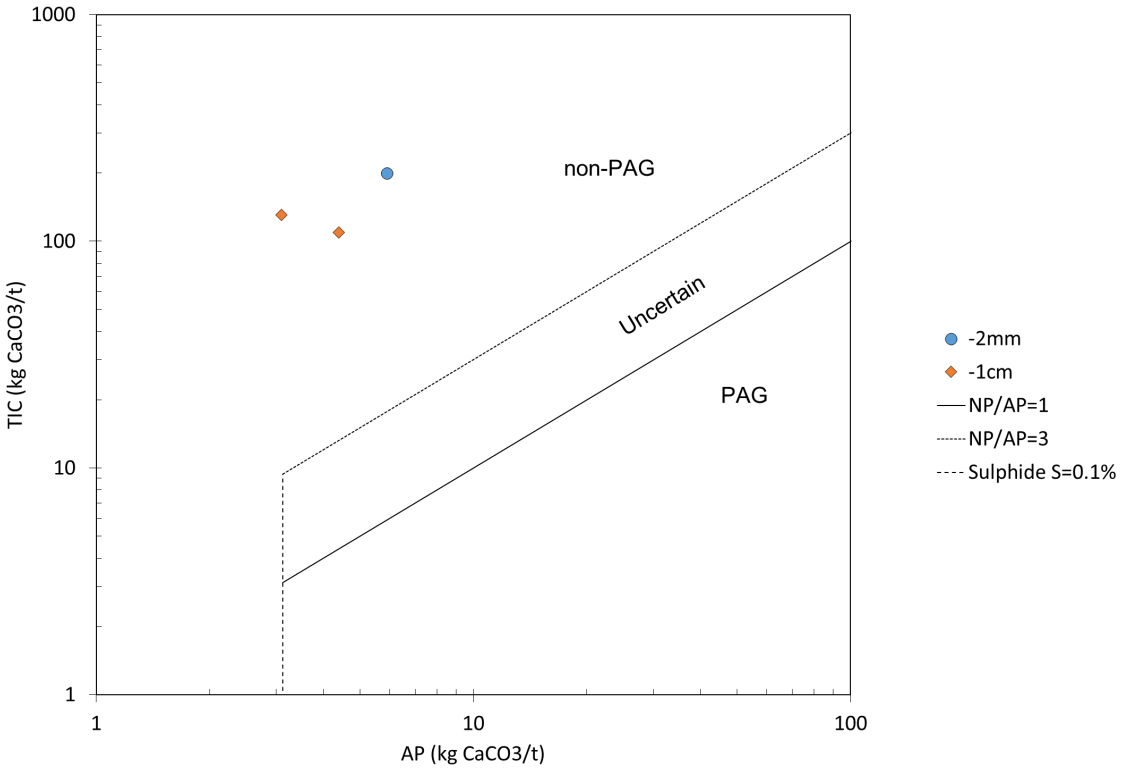

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Figure 7-3: ARD Classifications by TIC/AP, Quarry 2 Material

7.2.2.3 Elemental Analyses

The trace element content for Quarry 2 samples is presented in Table 7-3 with complete laboratory results presented in Appendix A3. All parameters were less than ten times the average crustal abundance for basalt indicating no appreciable enrichment.

Table 7-3: Summary of Elemental Analyses for Quarry Rock Monitoring

Parameter	Unit	Detection Limit	Quarry 2				10x Average Crustal Abundance* for Basalt
			CAHBC100612A (<1cm)	CAHBC100613A (<1cm)	CAHBC100612B (<2mm)	CAHBC100613B (<2mm)	
Ag	ppb	2	57	37	62	52	1100
As	ppm	0.1	2.3	1.9	2.6	1.6	20
Ba	ppm	0.5	5.3	2.9	6.2	6.5	3300
Ca	%	0.01	5.1	5.5	7.8	7.5	76
Cd	ppm	0.01	0.26	0.16	0.46	0.28	2.2
Co	ppm	0.1	38	37	38	38	480
Cr	ppm	0.5	170	170	160	170	1700
Cu	ppm	0.01	140	120	140	130	870
Fe	%	0.01	5.8	5.8	5.9	6.0	87
Hg	ppb	5	<5	<5	15	10	90
Mg	%	0.01	2.5	2.5	2.5	2.6	46
Mn	ppm	1	1300	1200	1400	1400	15000
Mo	ppm	0.01	0.40	0.23	1.7	0.53	15
Ni	ppm	0.1	63	60	63	62	1300
P	%	0.001	0.037	0.038	0.028	0.036	1
Pb	ppm	0.01	1.9	1.6	4.4	4.4	60
S	%	0.02	0.16	0.15	0.21	0.19	0.3
Sb	ppm	0.02	0.05	0.03	0.06	0.05	2
Sr	ppm	0.5	26	25	29	30	4650
U	ppm	0.05	<0.10	<0.1	<0.1	<0.1	10
V	ppm	2	140	140	140	140	2500
W	ppm	0.05	<0.10	<0.10	<0.10	<0.10	7
Zn	ppm	0.157	89	81	95	89	1050

Source: https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023 Annual Reporting/Doris_Madrid/020_Tables/[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ_LF.xlsx]

Note: Average crustal abundance for basaltic rocks are from Price (1997)

7.2.2.4 SFE Tests

SFE parameters for Quarry 2 samples are presented in Appendix A4.

SFE pH was 9.5 and 9.6. Values of EC were from 68 and 72 µS/cm. Major cation chemistry was dominated by sodium (6.3 and 6.8 mg/L) with lesser calcium (4.9 and 5.0 mg/L), while major anions were dominated by total alkalinity (25 and 23 mg/L). Concentrations of nitrate were 0.26 mgN/L and 0.22 mgN/L and ammonia was 0.088 and 0.11 mgN/L. Overall, trace element concentrations were low.

7.2.3 As-Built Construction Monitoring

Due to local climate conditions (heavy snow cover in the winter), as-built construction monitoring for the Hope Bay Project occurs during the summer months. Many of the 2024 construction projects took place after September 2024 (Section 3.3). Geological inspection and geochemical sampling of the 2024 as-built construction rock will take place during summer of 2025.

8 Tailings

8.1 Background

In the processing plant, there are two sections: the concentrate lines (CL1 and CL2) and the Concentrate Treatment Plant (CTP). Cyanide is a reagent used exclusively in the CTP to dissolve gold from the solid concentrate which is then captured by resin. The concentrate lines (CL) react poorly to the presence of cyanide and so this side must be kept free of cyanide for the process to perform well. The final stage of the CTP is cyanide destruction. Cyanide is destroyed using the INCO SO_2 process. When in operation, the detoxified slurry was filtered, and the solids (TL-7A) were combined with waste rock and placed underground as permanent backfill. Since there was no tailings production in 2024, the above did not occur. Seepage surveys of the backfilled detoxified tailings (TL-11) are conducted bi-annually. The detoxified tailings filtrate (TL-7B) is pumped to the tailings thickener where it is combined with the flotation tailings slurry. Tailings slurry supernatant (TL-5) and solids (TL-6) are discharged to the TIA. The detoxification circuit is run to produce a total cyanide level of less than one part per million (1 ppm).

When the process plant is operational, the solution from the detoxification circuit and final detoxified tailings are routinely analyzed for weak acid dissociable (WAD) and total cyanide species by mill personnel to monitor the performance of the cyanide detoxification circuit.

Hope Bay initiated ore processing at the Doris mill and commenced deposition of flotation tailings in the Doris tailings impoundment area (TIA) in January 2017 and placement of detoxified tailings as backfill in stopes of the Doris Mine in February 2017. The geochemical monitoring of tailings commenced in February 2017. In October 2019, ore processing started from Madrid North (Naartok East Crown Pillar Recovery, NE CPR) at the Doris mill. Ore from the NE CPR is blended with Doris ore for processing at a target ratio of a maximum 25% Naartok East ore to 75% Doris ore. The Doris mill did not operate in 2024.

8.2 Methods

As discussed in Section 3.4, the process plant was in care and maintenance throughout 2024 and accordingly the scope of tailings monitoring was limited to the underground seepage monitoring program in accordance to the Waste Rock, Ore, and Mine Backfill Management Plan (Agnico Eagle 2022a).

8.2.1 Sample Collection and Analysis

8.2.1.1 Seepage Survey of Underground Backfilled Stopes (TL-11)

Schedule I (Table 3) of the Water License specifies bi-annual seepage surveys of underground backfilled stopes with opportunistic sampling of seepage for the analysis according to Section 4.1.2.2.

Agnico Eagle completed underground seepage inspections of backfilled stopes in September and November 2024. Visual surveys were limited to all backfilled stopes that could be accessed safely at the time of the survey. Four seepage locations were sampled in September and three locations were sampled in November.

During the September sampling survey, Agnico Eagle collected four seepage samples from areas where active flow was observed. At each of the locations, a visual estimate of medium/high flow was recorded but no numerical measurements were recorded. The water in each of the seepage samples collected was reported to be clear. The locations are summarized as follows:

- Level 110-Right - Two medium flow seeps were observed 5 m from the sump, one of which was up to 2 cm deep and the other of which was 3 cm deep.
- Level 120-West Limb - a medium flow seep was observed entering a pond. The maximum pool/channel depth was 3 cm.
- Level 134-Doris-CPR- a large, high flow seep with a maximum depth of 5 cm was observed on the left side of the stope.

In November, Agnico Eagle collected three samples from the following locations. At each of the locations, a visual estimate of moderate flow was recorded but no numerical measurements were recorded. The water in each of the samples were reported to be clear. The locations are summarized as follows:

- Level 110 EXT 2 - Water was observed to the base of the backfill with evidence of ponded areas and a water stain 65 m away. Flow was evident from the ponded areas but was not measurable. The maximum water depth was 20/25 cm.
- Level 114 - Moderate flow was observed coming from the backfill to a maximum depth of approximately 15 cm. A sample was collected from this seep. At the base of the backfill, water was also draining from the ceiling, but a sample was not collected in this location.
- Level 120 – Approximately 100 m from the backfill, a pool with moderate flow and a maximum depth of approximately 15 cm was observed.

At each seepage station, Agnico Eagle recorded field measurements and collected samples for the test work program outlined in Section 4.1.2.2.

8.3 Results and Discussion

8.3.1 QA/QC

The data from the underground stope seepage samples (TL-11) all passed SRK's QC checks except for the following:

- The field vs. lab pH exhibited greater than 1 pH unit difference for TL11-120 West Limb (EO2407635-001) and TL11-110-Right (EO2407635-004). Field and lab pH were checked and verified.
- The field vs. lab EC for TL11-110-Right (EO2407635-004) and 120 Level (EO2410127-002) failed QC. Field and lab EC were checked and verified.
- There was no field duplicate for dissolved metals analysis.

SRK does not consider the above failures to have a material impact on the overall conclusions made on the laboratory data. All data were accepted as received.

8.3.2 Seepage Monitoring of Backfilled Stopes (TL-11)

Selected water quality analyses of the seepage monitoring samples collected in the vicinity of the underground stopes are provided in Table 8-1 and full results are included in Appendix B1. The results are compared to median and 5th and 95th percentile concentrations reported in the previous TL-11 monitoring surveys (2017 to 2023).

pH ranged between 8.1 and 8.7 and all values were typically within the historical range of TL-11 seepage data. All 2024 samples exhibited pH values above the 50th percentile from the historical sample set (2017 to 2023) and two of the samples were above the 95th percentile from the historical sample set.

EC results ranged from 9,100 to 17,000 µS/cm with the lowest values at Level 110 EXT, Level 114, and Level 134 Doris (9,100 to 11,000 µS/cm). Since 2020, EC values have been approximately five times lower than seepage samples collected from 2017 to 2019 (Figure 8-1).

Figure 8-1: EC timeseries plot for underground seepage (TL-11)

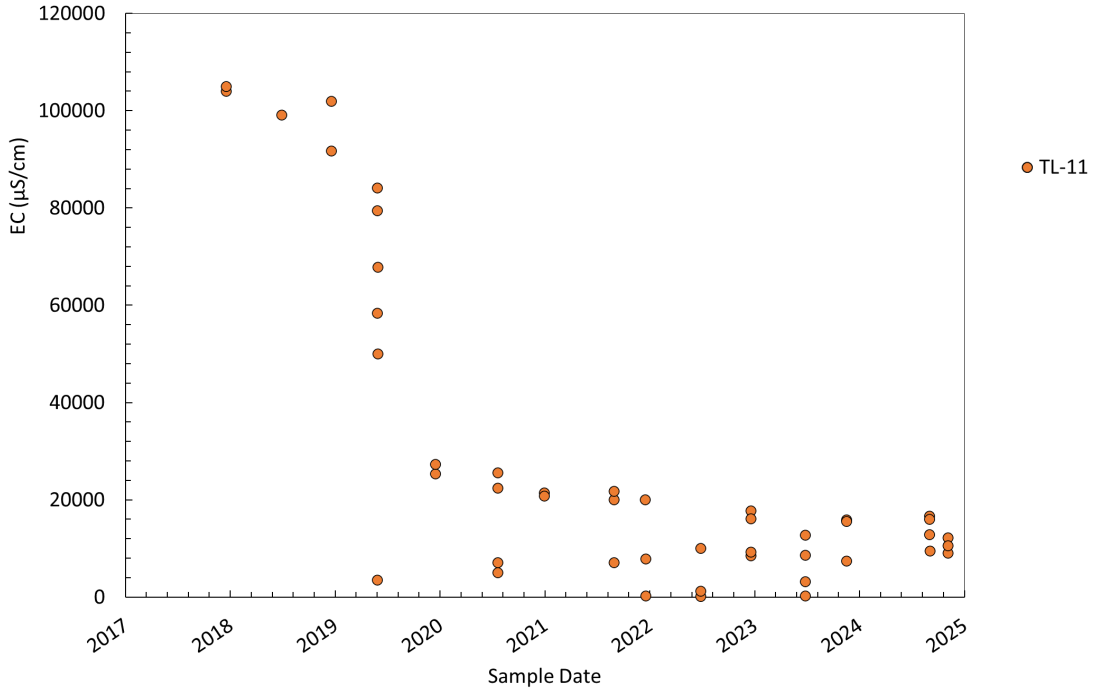

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Table 8-1: Summary of Underground Stope Seepage and Ponded Water Samples (TL-11)

		September				November			Historical Statistics (2017-2023)		
Sample ID		**TL11-120 West Limb**	**TL11-110-Left**	**TL11-110-Right**	**TL11-134 Doris CPR**	**TL11-114**	**TL11-120**	**TL11-110 EXT**			
Date Sampled		**9/1/2024 9:10**	**9/1/2024 9:55**	**9/1/2024 9:50**	**9/1/2024 10:40**	**11/3/2024 14:00**	**11/3/2024 13:30**	**11/3/2024 14:20**	**P05**	**P50**	**P95**
Parameter	**Units**	**Water**	**Water**	**Water**	**Water**	**Water**	**Water**	**Water**	**n=40**	**n=40**	**n=40**
Flow Rate	L/s	**Medium Flow, No Measurement Recorded**	**Medium Flow, No Measurement Recorded**	**Medium Flow, No Measurement Recorded**	**High Flow, No Measurement Recorded**	**Moderate Flow, No Measurement Recorded**	**Moderate Flow, No Measurement**	**Moderate Flow, No Measurement**			
pH	pH	8.2	8.1	8.2	8.2	8.4	8.7	8.1	6.7	7.8	8.4
Conductivity	uS/cm	13000	17000	16000	9500	9100	12000	10600	290	18000	100000
Total Suspended Solids	mg/L	68	150	240	*3.0*	36.0	44.0	44.0	3.0	49	690
Total Dissolved Solids	mg/L	8100	11000	11000	11000	5100	7200	6200	290	11000	80000
Sulphate (SO4)	mg/L	510	870	860	530	380	550	370	16	860	1300
Alkalinity, Total (as CaCO3)	mg/L	200	250	250	250	210	210	210	45	210	260
Chloride (Cl)	mg/L	4200	5500	5400	2900	2900	4100	3600	130	7200	47000
Calcium (Ca)-Dissolved	mg/L	170	310	320	200	130	170	160	40	330	15000
Magnesium (Mg)-Dissolved	mg/L	240	390	370	190	190	260	230	12	410	1600
Potassium (K)-Dissolved	mg/L	70	87	86	50	55	72	67	2.4	110	550
Sodium (Na)-Dissolved	mg/L	2200	2600	2600	1500	1600	2200	1900	30	3400	11000
Cyanide, Total	mg/L	0.014	0.0097	0.0076	*0.0050*	0.013	0.0056	0.0052	0.0050	0.024	0.33
Cyanide, Weak Acid Diss	mg/L	*0.0050*	*0.0050*	*0.0050*	*0.0050*	*0.020*	*0.0050*	*0.0050*	0.0050	0.0050	0.024
Cyanide, Free	mg/L	*0.0050*	*0.0050*	*0.0050*	*0.0050*	*0.020*	*0.0050*	*0.0050*	0.0050	0.0050	0.022
Ammonia, Total (as N)	mg/L	0.028	0.31	0.23	0.19	0.36	0.043	0.087	0.031	5.7	350
Nitrate (as N)	mg/L	3.6	9.8	8.8	3.5	0.79	3.5	2.1	0.26	14	520
Nitrite (as N)	mg/L	*0.010*	0.68	0.65	0.043	0.023	0.023	0.028	0.0013	0.53	16
Aluminum (Al)-Dissolved	mg/L	*0.010*	*0.010*	*0.010*	*0.010*	*0.0050*	*0.010*	*0.010*	0.0050	0.020	0.10
Antimony (Sb)-Dissolved	mg/L	*0.0010*	*0.0010*	*0.0010*	*0.0010*	*0.00050*	*0.0010*	*0.0010*	0.00022	0.0020	0.010
Arsenic (As)-Dissolved	mg/L	0.0021	0.0010	0.0011	*0.0010*	0.0042	0.00205	0.0011	0.00068	0.0036	0.010

Sample ID		September				November			Historical Statistics (2017-2023)		
		TL11-120 West Limb	TL11-110-Left	TL11-110-Right	TL11-134 Doris CPR	TL11-114	TL11-120	TL11-110 EXT			
Barium (Ba)-Dissolved	mg/L	0.025	0.027	0.027	0.022	0.033	0.026	0.044	0.0052	0.032	0.56
Beryllium (Be) Dissolved	mg/L	*0.00020*	0.052	*0.00020*	*0.00020*	*0.00010*	*0.00020*	*0.00020*	0.00004	0.0005	0.01
Boron (B)-Dissolved	mg/L	1.4	1.8	1.7	1.1	1.3	1.5	1.2	0.039	2.02	3.5
Cadmium (Cd)-Dissolved	mg/L	0.000062	0.00017	0.00020	0.00021	*0.000025*	0.000054	*0.000050*	0.000015	0.00023	0.032
Chromium (Cr)-Dissolved	mg/L	*0.0050*	*0.0050*	*0.0050*	*0.0050*	*0.0025*	*0.0050*	*0.0050*	0.00050	0.0035	0.010
Cobalt (Co)-Dissolved	mg/L	0.0069	0.011	0.011	0.010	0.0037	0.0078	0.0023	0.00015	0.026	0.21
Copper (Cu)-Dissolved	mg/L	0.0083	0.010	0.011	0.011	0.0057	0.0079	*0.0020*	0.0043	0.021	0.57
Iron (Fe)-Dissolved	mg/L	*0.10*	*0.10*	*0.10*	*0.10*	*0.050*	*0.10*	*0.10*	0.020	0.20	1.0
Lead (Pb)-Dissolved	mg/L	0.0042	*0.00050*	*0.00050*	*0.00050*	*0.00025*	0.00060	*0.00050*	0.000095	0.0010	0.14
Manganese (Mn)-Dissolved	mg/L	0.48	0.55	0.45	0.51	0.22	0.45	0.14	0.013	1.1	9.8
Molybdenum (Mo)-Dissolved	mg/L	0.0042	0.0036	0.0036	0.0023	0.0046	0.0042	0.0027	0.00037	0.0044	0.033
Nickel (Ni)-Dissolved	mg/L	0.014	0.023	0.024	0.023	0.0037	0.014	*0.0050*	0.00097	0.043	0.40
Selenium (Se)-Dissolved	mg/L	0.00057	0.0022	0.0018	0.0010	*0.00025*	0.00054	*0.00050*	0.00022	0.0022	0.014
Silver (Ag)-Dissolved	mg/L	*0.00010*	0.00023	0.00020	*0.00010*	*0.000050*	*0.00010*	*0.00010*	0.000010	0.00020	0.041
Strontium (Sr)-Dissolved	mg/L	2.1	3.5	3.4	1.6	1.8	2.1	2.2	0.083	3.8	32
Sulfur (S)-Dissolved	mg/L	200	340	350	200	140	190	120	5.8	350	590
Zinc (Zn)-Dissolved	mg/L	0.030	*0.010*	0.015	0.027	0.020	0.013	*0.010*	0.0082	0.036	1.8

Source: https://srk.sharepoint.com/sites/NACAPR003064/Deliverables/2024 Annual Reports/Doris Madrid/020_Tables/[NA CAPR003064_HopeBay_TailingsMonitoringData_2024_TL7B & TL11_Charts_lf_rev00.xlsx]

Notes:*Blue italics* = Value less than laboratory detection limit. Detection limit shown.

Metal(loid) concentrations are reported as dissolved.

Hardness not analyzed in 2024.

Potential sources of the major ions include i) process reagents (sodium), ii) sulphide oxidation with resulting carbonate dissolution from waste rock and detoxified tailings (sulphate, calcium and magnesium), iii) drilling brine (calcium and chloride) and iv) saline groundwater (seawater composition).

All 2024 seepage samples have a major cation chemistry dominated by sodium (1,500 to 2,900 mg/L). Chloride is the dominant anion (2,900 to 5,900 mg/L). Concentrations of other major ions were low (<400 mg/L) other than sulphate, which ranged from 370 to 870 mg/L.

This major ion signature is characteristic of seawater, although seepage concentrations are more dilute than seawater; these samples are probably indicative of saline groundwater.

The 2022 annual report (SRK, 2023) noted a data trend where the majority of underground seepage samples collected since 2020 were influenced by saline groundwater whereas the majority of samples collected between 2017 to 2019 were not. The seepage samples collected in 2024 follows this trend.

Figure 8-2 to Figure 8-11 presents the TL-11 monitoring sample collected since 2017 for key parameters. The results of the September and November 2024 seepage surveys are summarized as follows:

- The decrease in EC from 2020 onwards coincides with a decrease in concentrations of a number of key parameters including dissolved chromium, cadmium (Figure 8-2), cobalt (Figure 8-3), copper (Figure 8-4), nickel (Figure 8-5), selenium (Figure 8-6), zinc (Figure 8-7), and silver (Figure 8-11). These trends continued through 2024.
- One or more samples reported some parameter concentrations greater than the 50th percentile from the historical sample set including TSS, TDS, total alkalinity, nitrite (as N), sulphate, and dissolved concentrations of arsenic, barium, beryllium, lead, molybdenum, silicon, silver, uranium, and zinc. All seepage sample results were below the 95th percentile from the historical sample set except for dissolved beryllium for the Level 110 sample collected from the left side of the waste pile in September (TL11-110-Left).
- Samples collected from the waste pile at the base of Level 110 reported the highest sulphate concentrations, ranging between 860 and 870 mg/L (Figure 8-8). These results were greater than the 50th percentile from the historical sample set and it is possible that contact with the waste rock is contributing to the sulphate load in these seepage samples. Sulphate concentrations in all other seepage samples ranged between 370 and 550 mg/L.
- Total alkalinity timeseries data is plotted in Figure 8-9. Concentrations were between the 50th and 95th percentile from the historical sample set in all samples (210 to 250 mg/L as $CaCO_3$) except the sample from Level 120 (West Limb) in September (200 mg/L as $CaCO_3$).
- Dissolved arsenic was above the 50th percentile from the historical sample set in one seepage sample from Level 114 (0.0042 mg/L) but lower in all other samples ranging from below the limit of detection (<0.0010mg/L) to 0.0025 mg/L. (Figure 8-10). The higher dissolved arsenic result reported at Level 114 is consistent with the 2022 and 2023 seepage sampling in this area (SRK 2023 and 2024).

- Levels of ammonia and nitrate were below the 50th percentile from the historical sample set in all of the seepage samples. Consistent with results from 2023, nitrite concentrations were below the 50th percentile from the historical sample set in all samples except for the two seeps collected from the Level 110 waste pile which reported concentrations below the 95th percentile (0.65 and 0.68 mg/L as N).
- Chromium concentrations were below analytical limits of detection in all seepage samples, but the detection limit varied between <0.0025 and <0.0050 mg/L.
- Zinc was below the 50th percentile from the historical sample set in all samples (below the limit of detection [0.01 mg/L] to 0.027 mg/L) except for sample 110 EXT which reported a concentration of 0.044 mg/L between the 50th and 95th percentile from the historical sample set.
- Samples collected from 2024 all reported total cyanide below the 50th percentile from the historical sample set. WAD and free cyanide were below the analytical limit of detection in all seepage samples.
- The results suggest that seepage samples collected between 2017 and 2019 represent contact water of detoxified tailings whereas concentrations in samples collected between 2020 and 2022 are more dilute and likely represent contact water mixed with saline groundwater. Concentrations in 2023 seepage samples were similarly dilute, however without chloride data, a saline source could not be assessed. 2024 seepage samples are consistent with post-2019 trends, suggesting continued contact water mixed with saline groundwater.

Figure 8-2: Dissolved cadmium timeseries plot for underground seepage (TL-11)

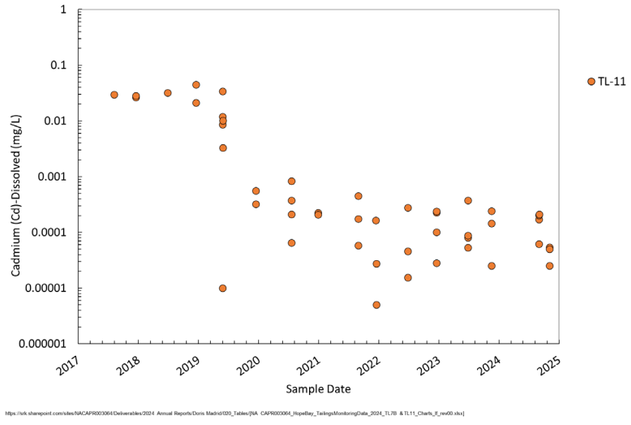


Figure 8-3: Dissolved cobalt timeseries plot for underground seepage (TL-11)

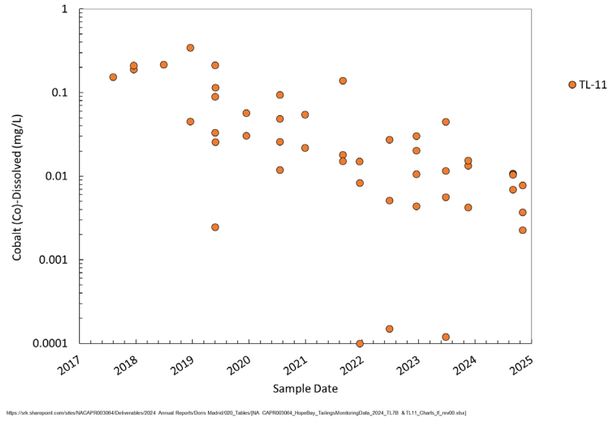


Figure 8-4: Dissolved copper timeseries plot for underground seepage (TL-11)

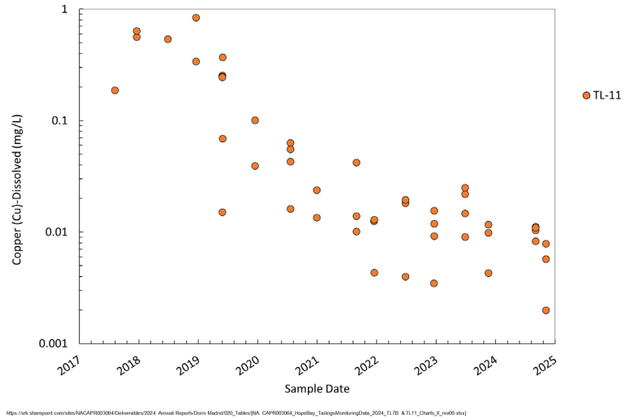


Figure 8-5: Dissolved nickel timeseries plot for underground seepage (TL-11)

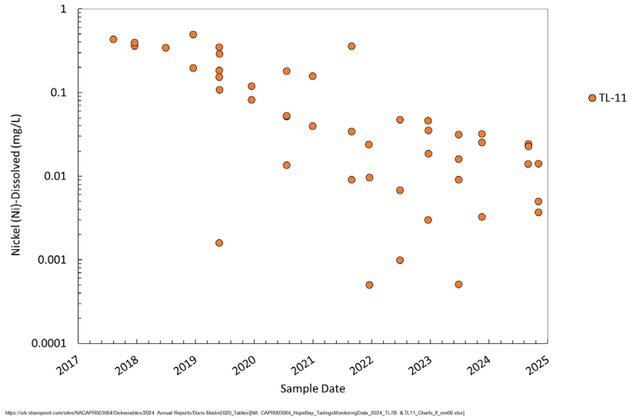


Figure 8-6: Dissolved selenium timeseries plot for underground seepage (TL-11)

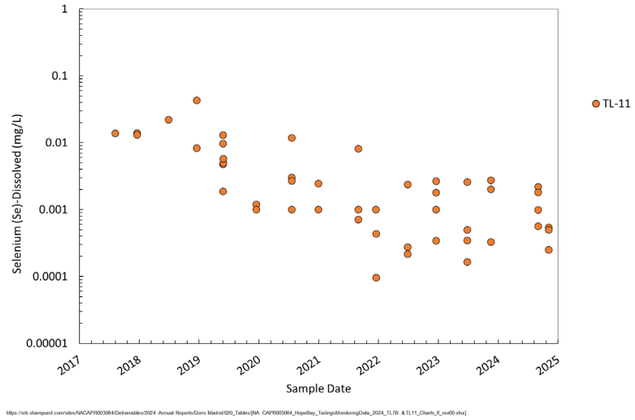


Figure 8-7: Dissolved zinc timeseries plot for underground seepage (TL-11)

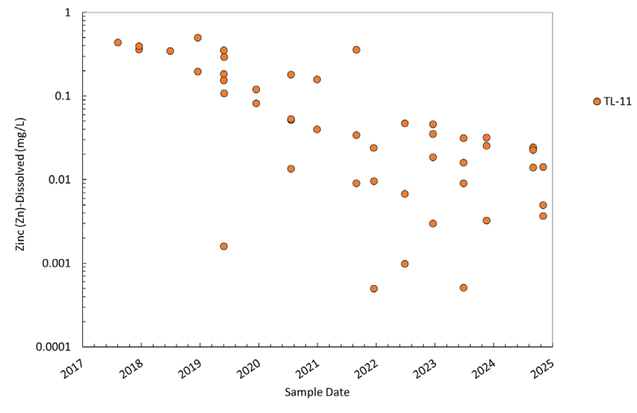


Figure 8-8: Sulphate timeseries plot for underground seepage (TL-11)

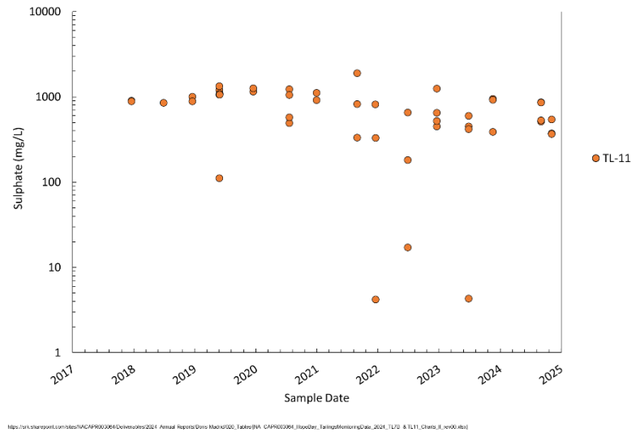


Figure 8-9: Total alkalinity timeseries plot for underground seepage (TL-11)

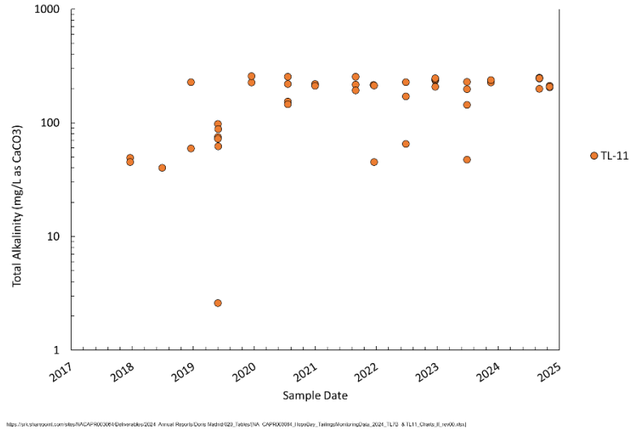


Figure 8-10: Dissolved arsenic timeseries plot for underground seepage (TL-11)

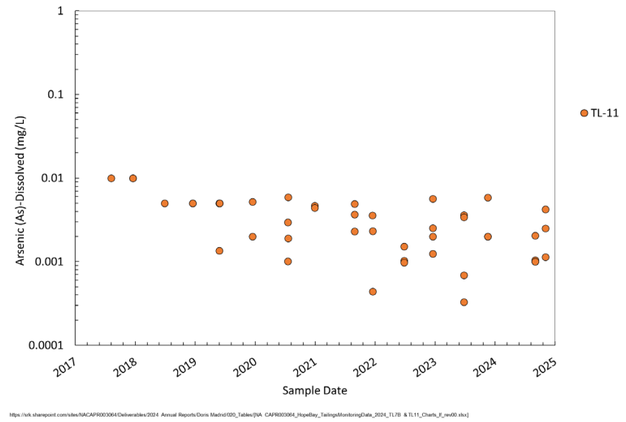
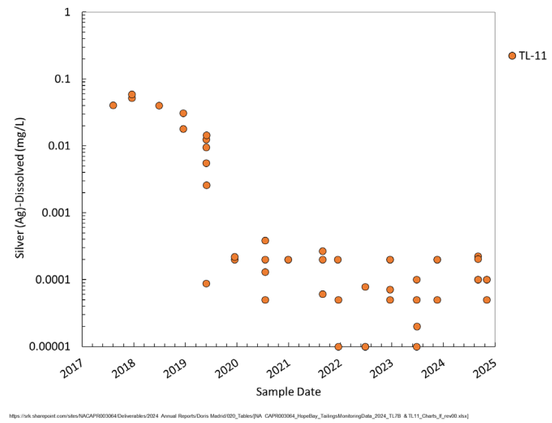


Figure 8-11: Dissolved silver timeseries plot for underground seepage (TL-11)



9 Seepage Survey

9.1 Methods

9.1.1 Sample Collection and Analysis

The freshet seepage survey monitors contact water from waste rock and construction rock (infrastructure). The freshet seepage surveys were conducted in accordance with the Hope Bay Project Quarry Management Plan (QMP; Agnico Eagle 2022b) and WROMP (Agnico Eagle 2022a). Three reference sites were sampled as part of the program.

Agnico Eagle conducted the 2024 waste rock freshet seepage survey from May 27th to June 7th, 2024 and monthly sampling of water in the Madrid North Waste Rock Storage Area (WRSA) Contact Water Pond (CWP) and Sumps on May 20th, June 12th, July 10th, August 18th, and September 16th, 2024 (Table 9-1, Figure 9-1 to Figure 9-7).

The Madrid portal pad and overburden stockpile were monitored for saline seepage that was indicated in 2020. Additionally, the South Dam buttress was sampled in 2024.

For waste rock, the freshet seepage survey involves walking the toe of all waste rock stockpiles and the downstream toe of a section of the Doris camp pad where waste rock contact water bypasses collection ponds but is intercepted by downstream sumps. Water samples from the Madrid CWP and Sumps are waste rock drainage from the Madrid North WRSA.

At each seepage station, field measurements are documented and a water sample collected for analysis as per Sections 4.1.1.2 and 4.1.2.2, respectively. As per the QMP, the construction seepage survey is conducted once following construction. Agnico Eagle collected a total of 34 samples as detailed in Table 9-1. Two duplicate samples, two field blanks, and one travel blank were also collected and submitted to ALS Environmental Labs in Burnaby, BC for laboratory analysis as part of SRK's recommended quality assurance/quality control (QA/QC) program. At each station, Agnico Eagle collected field measurements and collected a sample for laboratory analysis (outlined in Section 4.1.2.2).

All samples were analyzed for pH, EC, alkalinity, ammonia, bromide, chloride, fluoride, nitrate, nitrite, phosphorus, sulphate, dissolved metals, and total suspended solids (TSS). For Doris, Portal Pad, and Madrid WRSA freshet seepage samples (CWP-01), total dissolved solids (TDS) and acidity were also analyzed. For the Madrid CWP and Sump samples, total metals were analyzed as per the Water Licence. Total cyanide was analyzed for Doris, Madrid North Sump samples and CWP samples (MMS1-N, MMS1-S). All samples were filtered and preserved in the field, as required.

Table 9-1: Summary of 2024 seepage survey locations

Mine Area	Material Source	Sample Area	No. of Samples[5]
Reference	Background	Reference (Doris-Windy Road)	3
Doris	Waste Rock Stockpiles (Pad T)[1]	Toe of the waste rock stockpiles on Pad T	3
		Embankment immediately downstream of the waste rock and ore stockpile on Pad I and upstream of the Doris Contact Water Pond 1	2
		Toe of the access roads located down-gradient of the Doris waste rock stockpiles	1
	Infrastructure	South Dam buttress	1
Madrid North	Overburden from NE CPR[2,6]	Overburden Stockpile	0
	Waste Rock from NE CPR[6]	Portal Pad	2
	Waste Rock Stockpiles (at WRSA)	WRSA Pad Seepage	0
		Outside CWP Berm	1
		Sump 1, 2 3, and 4[3]	14
		Contact Water Pond (CWP)[3,4]	10

Sources: Compiled in text

Notes:

[1] Referred to as Waste Rock Influenced Area (WRIA) in text.

[2] Stockpile also contains minor amounts of rock from Quarry D & NE CPR that was used for construction.

[3] Routine water quality samples.

[4] Collected from stations MMS1-N and MMS1-S (Figure 9-7).

[5] Areas with no samples collected were surveyed but no seepage was observed.

[6] Scope of seepage monitoring is saline seepage and associated water quality.

7560000N
7557500N
7555000N
7552500N
7550000N
435000E
432500E
TIA
Doris Lake
Patch Lake
Windy Lake
Figure 9-2
Figure 9-3
Figure 9-4
Figure 9-5
Figure 9-6
Figure 9-7
Figure 9-8
0 500 1000 1500
Meters

Legend

- 2024 Seepage
- 2023 Seepage
- 2022 Seepage
- Routine Monitoring Station (2020-2023)
- 2021 Seepage
- 2020 Seepage
- 2019 Seepage
- 2018 Seepage
- 2017 Seepage
- 2016 Seepage
- 2015 Seepage
- 2014 Seepage
- 2013 Seepage
- 2012 Seepage
- 2011 Seepage
- 2010 Seepage
- Camp Layout Infrastructure

	pH < 7	7 < pH < 8	pH > 8
EC ≤ 500 uS/cm			
500 uS/cm < EC < 2000 uS/cm			
EC > 2000 uS/cm			

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SRK JOB NO.: CAPR003064

FILE NAME: CAPR003064_HB_Annual_RPT

AGNICO EAGLE

Hope Bay Gold Project

2024 Doris/Madrid Seepage Monitoring

Seep Survey Locations

DATE:	APPROVED:	FIGURE:
Mar 2025	LF / LB	**9-1**

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7559500N 7559400N 7559300N 7559200N 7559100N 7559000N 7558900N 7558800N 7558700N 7558600N 7558500N 7558400N

433400E 433300E 433200E 433100E 433000E 432900E

Pad T

Pad I

24-DC-05

24-DC-03

24-DC-04

24-DC-08

24-PCP-02

Doris Contact Water Pond 1

24-PCP-01

SCP

Vent Raise

0 50 100 150
Meters

Legend

- 2024 Seepage
- 2023 Seepage
- 2022 Seepage
- Routine Monitoring Station (2020-2023)
- 2021 Seepage
- 2020 Seepage
- 2019 Seepage
- 2018 Seepage
- 2017 Seepage
- 2016 Seepage
- 2015 Seepage
- 2014 Seepage
- 2013 Seepage
- 2012 Seepage
- 2011 Seepage
- 2010 Seepage
- Camp Layout Infrastructure

	pH < 7	7 < pH < 8	pH > 8
EC ≤ 500 uS/cm			
500 uS/cm < EC < 2000 uS/cm			
EC > 2000 uS/cm			

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SRK JOB NO.: CAPR003064

FILE NAME: CAPR003064_HB_Annual_RPT

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Hope Bay Gold Project

2024 Doris/Madrid Seepage Monitoring

Doris Seep Survey Locations

DATE:	APPROVED:	FIGURE:
Feb 2025	LF / LB	9-2

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7558000N

7557750N

7557500N

7557250N

432250E

432000E

REFSEEP03

0 50 100 150

Meters

Legend

- 2024 Seepage
- 2023 Seepage
- 2022 Seepage
- Routine Monitoring Station (2020-2023)
- 2021 Seepage
- 2020 Seepage
- 2019 Seepage
- 2018 Seepage
- 2017 Seepage
- 2016 Seepage
- 2015 Seepage
- 2014 Seepage
- 2013 Seepage
- 2012 Seepage
- 2011 Seepage
- 2010 Seepage
- Camp Layout Infrastructure

	pH < 7	7 < pH < 8	pH > 8
EC ≤ 500 uS/cm			
500 uS/cm < EC < 2000 uS/cm			
EC > 2000 uS/cm			

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SRK JOB NO.: CAPR003064

FILE NAME: CAPR003064_HB_Annual_RPT

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2024 Doris/Madrid Seepage Monitoring

Reference Seep 3 Survey Location

DATE:	APPROVED:	FIGURE:
Feb 2025	LF / LB	9-3

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7556500N

7556250N

7556000N

7555750N

432250E

432000E

REFSEEP02

Legend

- 2024 Seepage
- 2023 Seepage
- 2022 Seepage
- Routine Monitoring Station (2020-2023)
- 2021 Seepage
- 2020 Seepage
- 2019 Seepage
- 2018 Seepage
- 2017 Seepage
- 2016 Seepage
- 2015 Seepage
- 2014 Seepage
- 2013 Seepage
- 2012 Seepage
- 2011 Seepage
- 2010 Seepage
- Camp Layout Infrastructure

	pH < 7	7 < pH < 8	pH > 8
EC ≤ 500 uS/cm			
500 uS/cm < EC < 2000 uS/cm			
EC > 2000 uS/cm			

0 50 100 150

Meters

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SRK JOB NO.: CAPR003064

FILE NAME: CAPR003064_HB_Annual_RPT

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Hope Bay Gold Project

2024 Doris/Madrid Seepage Monitoring

Reference Seep 2 Survey Location

DATE:	APPROVED:	FIGURE:
Feb 2025	LF / LB	9-4

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7556300N 7556200N 7556100N 7556000N 7555900N 7555800N 7555700N 7555600N

436800E 435700E 435600E 435500E 435400E

24-DC-06

Legend

- 2024 Seepage
- 2023 Seepage
- 2022 Seepage
- Routine Monitoring Station (2020-2023)
- 2021 Seepage
- 2020 Seepage
- 2019 Seepage
- 2018 Seepage
- 2017 Seepage
- 2016 Seepage
- 2015 Seepage
- 2014 Seepage
- 2013 Seepage
- 2012 Seepage
- 2011 Seepage
- 2010 Seepage
- Camp Layout Infrastructure

	pH < 7	7 < pH < 8	pH > 8
EC ≤ 500 uS/cm			
500 uS/cm < EC < 2000 uS/cm			
EC > 2000 uS/cm			

0 25 50 75 100
Meters

srk consulting

SRK JOB NO.: CAPR003064

FILE NAME: CAPR003064_HB_Annual_RPT

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Hope Bay Gold Project

2024 Doris/Madrid Seepage Monitoring

South Dam Buttress Location

DATE:	APPROVED:	FIGURE:
Feb 2025	LF / LB	9-5

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7550300N 7550200N 7550100N 7550000N 7549900N 7549800N 7549700N 7549600N

433300E 433200E 433100E 433000E

MMS1-S4
2-CWP-01
MMS1-S
MMS1-N
MMS1-S3
MMS1-S2
MMS1-S1

0 25 50 75
Meters

Legend

- 2024 Seepage
- 2023 Seepage
- 2022 Seepage
- Routine Monitoring Station (2020-2023)
- 2021 Seepage
- 2020 Seepage
- 2019 Seepage
- 2018 Seepage
- 2017 Seepage
- 2016 Seepage
- 2015 Seepage
- 2014 Seepage
- 2013 Seepage
- 2012 Seepage
- 2011 Seepage
- 2010 Seepage
- Camp Layout Infrastructure

	pH < 7	7 < pH < 8	pH > 8
EC ≤ 500 uS/cm			
500 uS/cm < EC < 2000 uS/cm			
EC > 2000 uS/cm			

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SRK JOB NO.: CAPR003064

FILE NAME: CAPR003064_HB_Annual_RPT

AGNICO EAGLE

Hope Bay Gold Project

2024 Doris/Madrid Seepage Monitoring

Madrid North WRSA
Seep Survey Locations

DATE:	APPROVED:	FIGURE:
Feb 2025	LF / LB	9-6

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7550400N 7550300N 7550200N 7550100N 7550000N 7549900N 7549800N 7549700N

433500E

433400E

433300E

433200E

24MAD02

24MAD01

MMS1-S4

24-CWP-01

MMS1-S

MMS1-N

0 25 50 75 100

Meters

Legend

- 2024 Seepage
- 2023 Seepage
- 2022 Seepage
- Routine Monitoring Station (2020-2023)
- 2021 Seepage
- 2020 Seepage
- 2019 Seepage
- 2018 Seepage
- 2017 Seepage
- 2016 Seepage
- 2015 Seepage
- 2014 Seepage
- 2013 Seepage
- 2012 Seepage
- 2011 Seepage
- 2010 Seepage
- Camp Layout Infrastructure

	pH < 7	7 < pH < 8	pH > 8
EC ≤ 500 uS/cm			
500 uS/cm < EC < 2000 uS/cm			
EC > 2000 uS/cm			

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SRK JOB NO.: CAPR003064

FILE NAME: CAPR003064_HB_Annual_RPT

AGNICO EAGLE

Hope Bay Gold Project

2024 Doris/Madrid Seepage Monitoring

Madrid North Portal Pad
Seep Survey Locations

DATE:	APPROVED:	FIGURE:
Feb 2025	LF / LB	9-7

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7548500N 7548400N 7548300N 7548200N 7548100N 7548000N 7547900N 7547800N 7547700N 7547600N

433100E 433000E 432900E 432800E 432700E 432600E

REFSEEP01

Legend

- 2024 Seepage
- 2023 Seepage
- 2022 Seepage
- Routine Monitoring Station (2020-2023)
- 2021 Seepage
- 2020 Seepage
- 2019 Seepage
- 2018 Seepage
- 2017 Seepage
- 2016 Seepage
- 2015 Seepage
- 2014 Seepage
- 2013 Seepage
- 2012 Seepage
- 2011 Seepage
- 2010 Seepage
- Camp Layout Infrastructure

	pH < 7	7 < pH < 8	pH > 8
EC ≤ 500 uS/cm			
500 uS/cm < EC < 2000 uS/cm			
EC > 2000 uS/cm			

0 25 50 75 100
Meters

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SRK JOB NO.: CAPR003064

FILE NAME: CAPR003064_HB_Annual_RPT

AGNICO EAGLE

Hope Bay Gold Project

2024 Doris/Madrid Seepage Monitoring

Reference Seep 1 Survey Location

DATE:	APPROVED:	FIGURE:
Feb 2025	LF / LB	9-8

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9.2 Results and Discussion

Figure 9-1 to Figure 9-8 present location maps of the seepage samples, surveyed areas, and of the as-built alignment of the Doris and Madrid mine areas. A complete set of field observations and measurements is provided in Appendix C1. Appendix C2 contains the laboratory water chemistry results.

9.2.1 Quality Assurance and Quality Control

Section 4.2 outlines QA/QC program criteria for water samples. A summary of QA/QC results for seepage samples is provided in Table 9-2

Results are summarized as follows:

- Two samples (MMS1-S1 and 24-PCP-01) failed on field EC vs. lab EC with a 103% and >30% relative percent difference, respectively.

Overall, data were accepted as received because the failures were not material to data interpretation.

9.2.2 Reference Stations

As with previous years, three reference samples were taken from established stations in undisturbed tundra along the Doris-Windy Road area located that are not subject to mine influence. Reference seep locations are shown in Figure 9-3, Figure 9-4, and Figure 9-8.

Field Data

Table 9-2 presents field results for the reference seepage samples.

Field pH ranged from 7.4 to 7.7 pH units. Field EC values ranged from 67 µS/cm to 420 µS/cm.

Table 9-2: Summary of field results for 2024 reference seepage samples

Sample ID	Date	pH	EC	ORP	Temperature	Flow
		s.u.	*µS/cm*	*RmV*[1]	*°C*	*m/s*
REFSEEP01	11-Jul-24	7.7	67	160	6.0	Not measured
REFSEEP02	11-Jul-24	7.4	420	170	9.0	Not measured
REFSEEP03	11-Jul-24	7.6	180	150	11	Not measured

Sources: https://srk.sharepoint.com/sites/NACAPR003064/Deliverables/2024 Annual Reports/Doris Madrid/020_Tables/[Seepage_Field_Data_2024.xlsx]

Notes:

[1] Field calibrated ORP measurements

Laboratory Data

Table 9-3 and Table 9-4 present the analytical data for the reference seepage samples.

The laboratory pH values ranged from 7.3 to 7.9 and laboratory EC values were between 66 and 410 µS/cm.

Major cation chemistry was dominated by calcium (4.4 to 27 mg/L) and sodium (5.4 to 39 mg/L), while major anion chemistry was dominated by alkalinity (22 to 63 mg/L as $CaCO_3$) and chloride (5.6 to 82 mg/L). Ammonia concentrations were between 3.9 and 8.4 times the detection limit (0.0050 mg/L as N). Nitrate and nitrite concentrations were each below the detection limit (<0.0050 and <0.0010 mg/L as N, respectively). Concentrations of the majority of dissolved metals were low and were generally below or within ten times the detection limit with the exception of aluminum (which ranged from 21 to 86 times the detection limit), barium (which ranged from 27 to 60 times the detection limit), copper (which ranged from 6 to 16 times the detection limit), iron (which ranged from 12 to 17 times the detection limit), manganese (which ranged from 10 to 117 times the detection limit), and strontium (which ranged from 74 to 410 times the detection limit).

Table 9-3: Summary of physical parameters and major ions for 2024 reference seepage samples

Sample ID	Date	pH	EC	TDS	Total Alkalinity	Total Ammonia	Total Cyanide	Cl	NO_3	NO_2	SO_4	Ca	Mg	K	Na
		s.u.	*µS/cm*	*mg/L*	*mg/L as $CaCO_3$*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
REFSEEP01	11-Jul-24	7.3	66	64	22	0.020	<0.0050	5.6	<0.0050	<0.0010	0.51	4.4	3.0	0.099	5.4
REFSEEP02	11-Jul-24	7.8	410	290	54	0.042	<0.0050	82	<0.0050	<0.0010	14	24	8.6	0.47	39
REFSEEP03	11-Jul-24	7.9	190	110	49	0.023	<0.0050	19	<0.0050	<0.0010	14	17	3.8	0.48	13

Sources: https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Table 9-4: Summary of dissolved metals for 2024 reference seepage samples

Sample ID	Date	Al	Ba	As	Cd	Co	Cu	Fe	Mn	Mo	Ni	Se	Sr	Zn
		mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
REFSEEP01	11-Jul-24	0.086	0.0027	0.00024	<0.000010	<0.00010	0.0032	0.17	0.0010	0.000090	0.0030	0.000069	0.015	0.0025
REFSEEP02	11-Jul-24	0.023	0.0060	0.00028	<0.000010	0.00013	0.0016	0.12	0.0048	0.000087	0.0019	0.000066	0.082	0.0017
REFSEEP03	11-Jul-24	0.021	0.0048	0.00013	<0.000010	<0.00010	0.0012	0.13	0.012	<0.00010	0.00060	<0.00005	0.035	<0.001

Sources: https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

9.2.3 Doris Waste Rock Influenced Area

Locations of seepage samples collected from the Doris Camp Pad are shown in Figure 9-2.

Field Data

Table 9-5 presents field results for the Doris seepage samples.

Field pH ranged from 7.5 to 8.2 pH units for all seepage locations. Field EC ranged from 290 to 10,000 µS/cm. Based on the results of surveys from previous years, samples collected from the Doris camp pad area were categorized into the following three groups:

- Group 1: samples collected immediately downstream of waste rock on Pad T (24-DC-03, 24-DC-04, and 24-DC-05) and waste rock and ore on Pad I at the upstream embankment of the Doris Contact Water Pond 1 (24-PCP-01 and 24-PCP-02). Some of these samples showed waste rock and ore influenced chemistry with elevated EC while others exhibited chemistries that were not indicative of waste rock seepage.
- Group 2: samples collected at the toe of the access roads showing chemistry impacted by waste rock/ore and detoxified tailings (24-DC-08).
- Group 3: samples collected at the toe of the access roads showing diluted source loading from detoxified tailings and little to no waste rock and ore influence. No Group 3 samples were collected in 2024.

Table 9-5: Summary of field results for 2024 Doris WRIA seepage samples

Group[1]	Sample ID	Date	pH	EC	ORP	Temperature	Flow
			s.u.	*µS/cm*	*mV*[2]	*°C*	*m/s*
1	24-PCP-01	23-May-24	8.1	740	180	8.4	0.019
	24-PCP-02	7-Jun-24	8.0	3,300	250	9.2	-[4]
	24-DC-03	3-Jun-24	8.2	2,000	210	10	-[3]
	24-DC-04	2-Jun-24	8.4	290	200	3.2	0.166
	24-DC-05	2-Jun-24	8.2	590	220	7.7	-[4]
2	24-DC-08	7-Jun-24	7.5	10,000	240	4.8	0.032
3	None	-	-	-	-	-	-

Source: https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024

Notes:

- Denotes data was not collected

[1] Groups are defined as follows:

1 – Direct waste rock contact water

2 –Waste rock and detoxified tailings influence

3 –Detoxified tailings influence with little to no waste rock influence

[2] Field calibrated ORP measurements

[3] No flow recorded

[4] Unable to measure due to low flow

Laboratory Data

Table 9-6 and Table 9-7 present the analytical data for the Doris WRIA seepage samples.

The laboratory pH values ranged from 7.8 to 8.3 and laboratory EC values ranged from 260 to 10,000 µS/cm.

Group 1 samples analyzed in 2024 include samples 24-PCP-01 and 24-PCP-02 (downstream of Pad I and upstream of the Doris Contact Water Pond 1) and 24-DC-03, 24-DC-04, and 24-DC-05 (collected from the toe of Pad T). For the Group 1 samples, cation chemistry of samples collected downstream from Pad I rock was dominated by sodium (32 to 350 mg/L) and calcium (50 to 220 mg/L) while anions were dominated by sulphate (99 to 210 mg/L), alkalinity (83 to 200 mg/L) and/or chloride (36 to 750 mg/L). For samples collected downstream from Pad T waste rock, cations were characterized by calcium (36 to 93 mg/L) and/or sodium (47 to 220 mg/L) while major anion chemistry was dominated by chloride (14 to 210 mg/L), sulphate (33 to 440 mg/L), and/or alkalinity (75 to 180 mg/L). The Group 2 sample (24-DC-08) had higher concentrations of major ions than Group 1 samples. Cations were dominated by calcium (960 mg/L) and sodium (780 mg/L) and anion chemistry was dominated by chloride (2700 mg/L) and sulphate (580 mg/L). No Group 3 samples were collected in 2024.

Since 2020, the downstream access road samples (i.e. Group 2) have had higher concentrations of chloride, ammonia, and nitrate than samples collected at the toe of Pad I (i.e. Group 1) which suggested an additional loading source other than waste rock (SRK 2021). The loading source is hypothesized to be detoxified tailings that was unintentionally placed on the Doris pad in 2020 with the source of chloride, ammonia and nitrate from the mill. In the 2024 seepage samples, the access road sample (24-DC-08) continued to have higher concentrations of ammonia, nitrate, and chloride than were observed for Group 1 samples. Ammonia as N was 47 mg/L at the access road in 2024 compared to 0.078 and 2.0 mg/L at the toe of Pad I and 0.098 to 18 mg/L at the toe of Pad T, nitrate as N was 170 mg/L at the access road in 2024 compared to 1.5 and 11 mg/L as N at the toe of Pad I and 1.4 to 21 mg/L at the toe of Pad T, and chloride was 2,700 mg/L at the access road in 2024 compared to 36 and 750 mg/L at the toe of Pad I and 14 to 210 mg/L at the toe of Pad T. However, concentrations of ammonia, nitrate, and chloride in Group 2 samples generally decreased from previous years and confirm continued flushing of a finite volume of spilled detoxified tailings. The total cyanide concentration was highest in a sample downstream from Pad I (24-PCP-01; 0.12 mg/L) and was also detected in both samples from the toe of Pad T (0.012 and 0.0068 mg/L in 24-DC-03 and 24-DC-05, respectively) and the downstream access road sample 24-DC-08 (0.033 mg/L).

The sample from the downstream access road (24-DC-08; Group 2) had the highest concentrations of cadmium (0.00096 mg/L), cobalt (0.0035 mg/L), manganese (1.2 mg/L), nickel (0.010 mg/L), selenium (0.0071 mg/L), and zinc (0.012 mg/L). The Group 1 samples had dissolved metals concentrations that were lower than the downstream access road but generally elevated compared to the reference seep samples. Exceptions to this were samples 24-DC-04 and 24-DC-05 from the toe of waste rock on Pad T (and to a lesser extent sample PCP-01 from the toe of the rock stockpile on Pad I) which were directly downstream of waste rock piles but exhibited universally low dissolved metal(loid) concentrations and displayed little to no evidence of waste rock influenced chemistries. The results suggest that these data are indicative of quarry rock (e.g., the pad itself) rather than waste rock.

All contact water from waste rock and at toe of the road is intercepted by water management collection systems and pumped to the Doris Tailings Impoundment Area.

Table 9-6: Summary of physical parameters and major ions for 2024 Doris WRIA seepage samples

Group[1]	Sample ID	Date	pH	EC	TDS	Total Alkalinity	Total Ammonia	Total Cyanide	Cl	NO_3	NO_2	SO_4	Ca	Mg	K	Na
			s.u.	*µS/cm*	*mg/L*	*mg/L as $CaCO_3$*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
1	24-PCP-01	23-May-24	8.1	450	290	83	0.078	0.12	36	1.5	0.010	99	50	11	3.7	32
	24-PCP-02	7-Jun-24	8.3	3,200	2000	200	2.0	<0.0050	750	11	0.14	210	220	45	18	350
	24-DC-03	3-Jun-24	8.3	1,900	1200	180	18	0.012	210	21	0.095	440	93	44	12	220
	24-DC-04	2-Jun-24	8.1	260	140	75	0.098	<0.0050	14	1.4	0.0054	33	83	44	12	220
	24-DC-05	2-Jun-24	8.2	550	300	89	2.6	0.0068	61	5.6	0.028	77	36	11	3.6	47
2	24-DC-08	7-Jun-24	7.8	10,000	6200	78	47	0.033	2700	170	0.56	580	960	180	44	780
3	None	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sources: https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024

Notes:

- Denotes data was not collected.

[1] Groups are defined as follows:

1 – Direct waste rock contact water

2 – Waste rock and detoxified tailings influence

3 –Detoxified tailings influence with little to no waste rock influence

Table 9-7: Summary of dissolved metals for 2024 Doris WRIA seepage samples

Group[1]	Sample ID	Date	Al	As	Cd	Co	Cu	Fe	Mn	Mo	Ni	Se	Zn
			mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
1	24-PCP-01	23-May-24	0.025	0.0011	0.0000057	0.00061	0.0028	0.055	0.080	0.0020	<0.00050	0.00087	<0.0010
	24-PCP-02	7-Jun-24	0.0098	0.0017	0.000058	0.0018	0.013	0.031	0.066	0.10	0.0022	0.0015	<0.0010
	24-DC-03	3-Jun-24	0.011	0.0015	<0.000010	0.00063	0.0031	<0.020	0.12	0.013	<0.0010	0.0040	<0.0020
	24-DC-04	2-Jun-24	0.015	0.047	<0.0000050	0.00028	0.0012	<0.010	0.011	0.0013	0.0055	0.00057	<0.0010
	24-DC-05	2-Jun-24	0.017	0.00038	<0.0000050	0.00018	0.00050	<0.010	0.057	0.0020	<0.00050	0.00047	<0.0010
2	24-DC-08	7-Jun-24	<0.010	0.0013	0.00096	0.0035	0.0065	<0.10	1.2	0.0054	0.010	0.0071	0.012
3	None	-	-	-	-	-	-	-	-	-	-	-	-

Sources: https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024

Notes:

- Denotes data was not collected.

[1] Groups are defined as follows:

1 – Direct waste rock contact water

2 –Waste rock and detoxified tailings influence

[2] 3 –Detoxified tailings influence with little to no waste rock influence

Table 9-8: Comparison of analytical results between 2024 survey data and 5th, 50th, and 90th percentile of 2011 to 2023 survey data

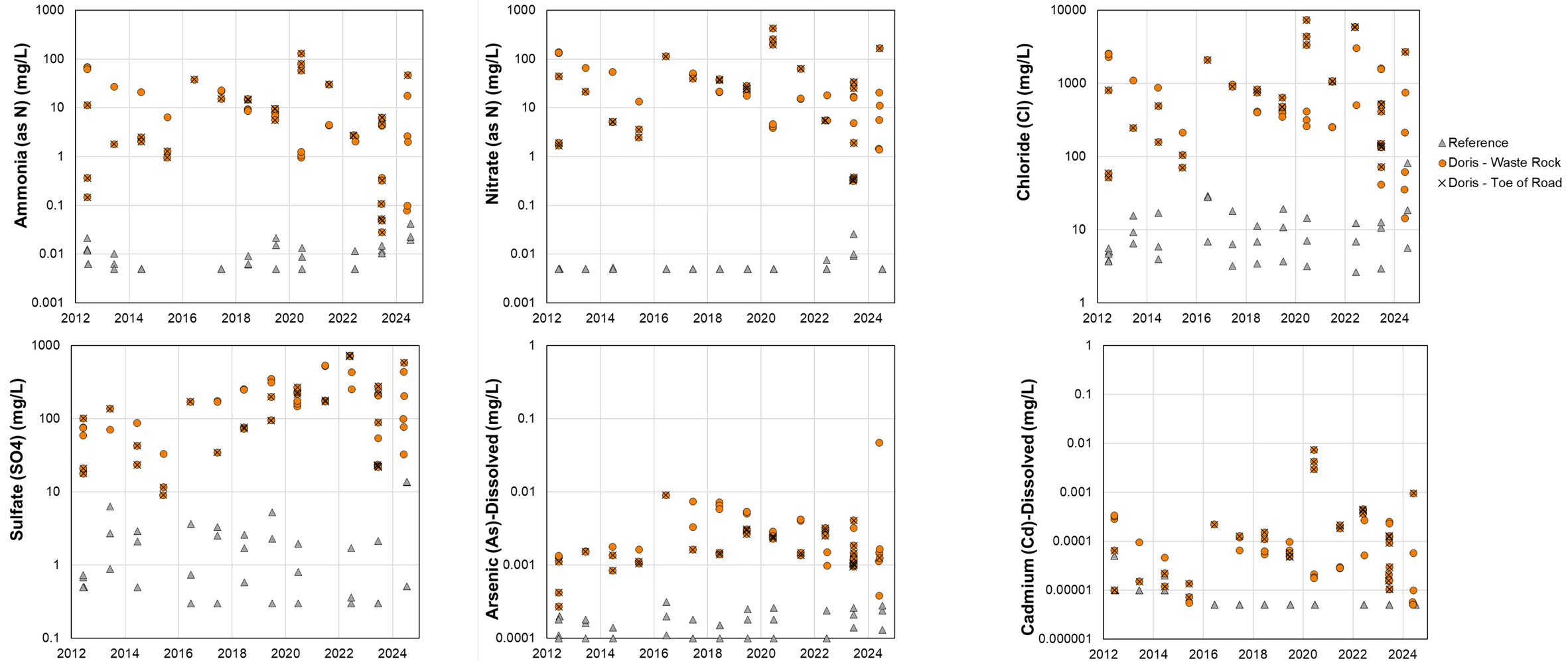
Doris Waste Rock Influenced Area	Group	Sample ID	Field pH	Lab pH	Field EC	Lab EC	Total Alkalinity	TDS	Total Ammonia	Cl	NO_3	SO_4	Al	As	Cd	Co	Cu	Fe	Mn	Ni	Se	Zn
			s.u.	*s.u.*	*µS/cm*	*µS/cm*	*mg $CaCO_3$/L*	*mg/L*	*mg N/L*	*mg/L*	*mg N/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
	1	24-PCP-01	8.1	8.1	740	450	83	290	0.078	36	1.5	9	0.025	0.0011	0.0000057	0.00061	0.0028	0.055	0.080	<0.00050	0.00087	<0.0010
		24-PCP-02	8.0	8.3	3,300	3,200	200	2000	2.0	750	11	210	0.0098	0.0017	0.000058	0.0018	0.013	0.031	0.066	0.0022	0.0015	<0.0010
		24-DC-03	8.2	8.3	2,000	1,900	180	1200	18	210	21	440	0.011	0.0015	<0.000010	0.00063	0.0031	<0.020	0.12	<0.0010	0.0040	<0.0020
		24-DC-04	8.4	8.1	290	260	75	140	0.098	14	1.4	33	0.015	0.047	<0.0000050	0.00028	0.0012	<0.010	0.011	0.0055	0.00057	<0.0010
		24-DC-05	8.2	8.2	590	550	89	300	2.6	61	5.6	77	0.017	0.00038	<0.0000050	0.00018	0.00050	<0.010	0.057	<0.00050	0.00047	<0.0010
	2	24-DC-08	7.5	7.8	10,000	10,000	78	6200	47	2700	170	580	<0.010	0.0013	0.00096	0.0035	0.0065	<0.10	1.2	0.010	0.0071	0.012
		Historic Sample Set (2011-2023)																				
		P5	7.2	7.5	620	435	130	310	0.094	68	0.37	20	0.0055	0.00092	0.000010	0.00020	0.0038	0.010	0.0083	0.00062	0.00018	0.0010
		P50	7.9	7.9	2200	2300	600	1600	6.0	490	21	170	0.0097	0.0017	0.000063	0.0019	0.012	0.045	0.11	0.0037	0.0015	0.0020
		P95	8.3	8.1	19000	18000	2900	13000	67	5900	150	580	0.033	0.0067	0.0011	0.039	3.2	4.8	1.4	0.075	0.0049	0.012
		n	*51*	*56*	*51*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*	*56*
Reference		REFSEEP01	7.7	7.3	67	66	22	64	0.020	5.6	<0.0050	0.51	0.086	0.00024	<0.0000050	<0.00010	0.0032	0.17	0.0010	0.0030	0.000069	0.0025
		REFSEEP02	7.4	7.8	420	410	54	290	0.042	82	<0.0050	14	0.023	0.00028	<0.0000050	0.00013	0.0016	0.12	0.0048	0.0019	0.000066	0.0017
		REFSEEP03	7.6	7.9	180	190	49	110	0.023	19	<0.0050	14	0.021	0.00013	<0.0000050	<0.00010	0.0012	0.13	0.012	0.00060	<0.000050	<0.0010
		Historic Sample Set (2011-2023)																				
		P5	6.6	6.9	32	45	17	34	0.0050	3.1	0.0050	0.30	0.0062	0.00010	0.0000050	0.00010	0.00087	0.030	0.00023	0.00050	0.000050	0.0010
		P50	7.3	7.5	87	82	27	60	0.0063	6.7	0.0050	0.74	0.021	0.00015	0.0000050	0.00010	0.0013	0.064	0.0013	0.0019	0.000057	0.0025
		P95	7.8	8	240	180	70	120	0.018	22	0.0095	4.2	0.069	0.00026	0.000050	0.00010	0.0027	0.18	0.014	0.0030	0.0010	0.0050
		n	*24*	*34*	*24*	*34*	*34*	*34*	*31*	*34*	*34*	*34*	*34*	*34*	*34*	*34*	*34*	*34*	*34*	*34*	*34*	*34*

Sources : https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Notes: Concentrations below the detection limit for historical data are assumed to be equal to the detection limit.

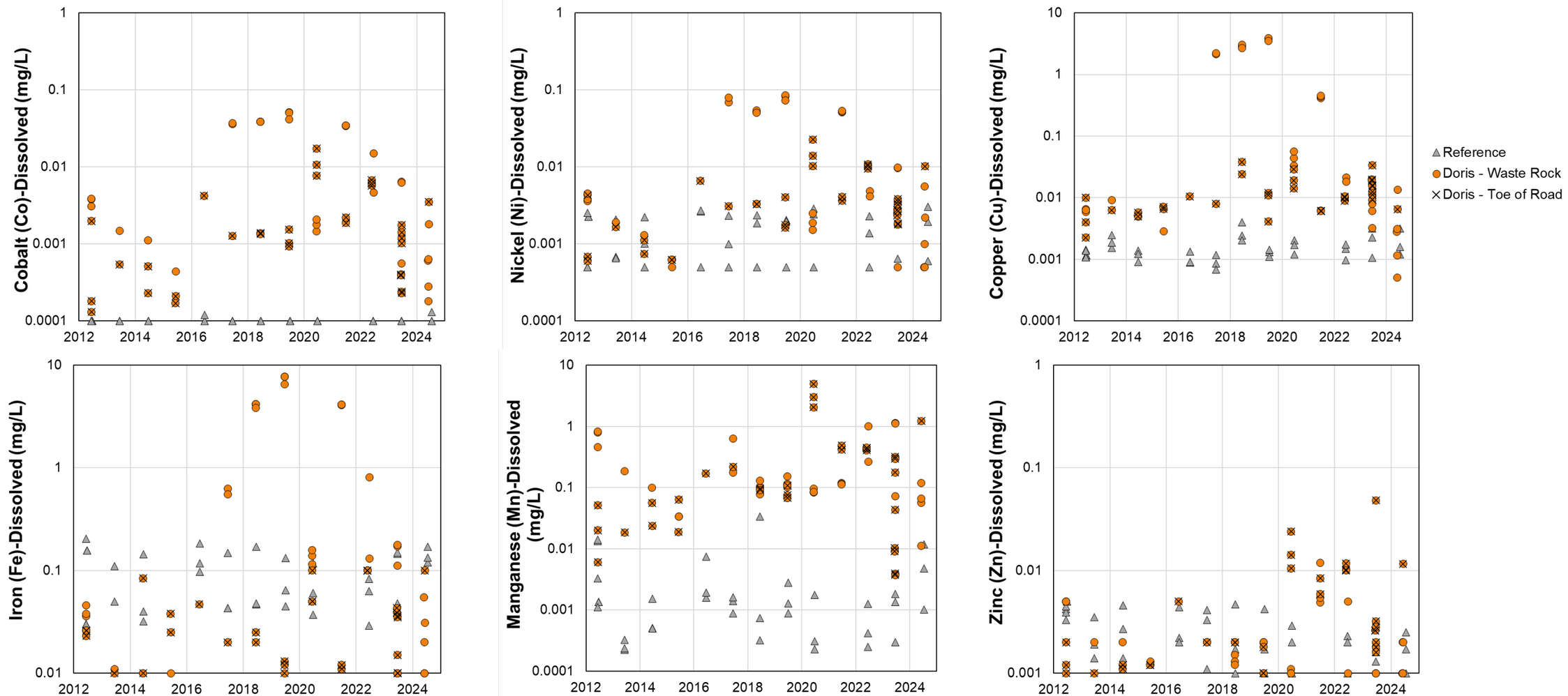
Concentrations are dissolved.

Figure 9-9: Times series plots of ammonia, nitrate, chloride, sulphate, arsenic, and cadmium for Doris WRIA and reference seeps



Sources : https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Figure 9-10: Time series plots of cobalt, nickel, copper, iron, manganese, and zinc for Doris WRIA and reference seeps



Sources : https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

9.2.4 Doris Infrastructure

One seepage sample was collected from the Doris South Dam buttress (Figure 9-5) in 2024.

Field Data

Table 9-9 presents a summary of the field results for the South Dam buttress seepage sample for construction monitoring.

Field pH was 7.6 and Field EC was 280 µS/cm.

Table 9-9: Summary of field results for 2024 seepage from the South Dam buttress

Sample ID	Date	pH	EC	ORP	Temperature	Flow
		s.u.	*µS/cm*	*mV*[1]	*°C*	*m/s*
24-DC-06	4-Jun-24	7.6	280	220	6.8	0.022

Source:https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Notes:

[1] Field calibrated ORP measurements

Laboratory Data

Table 9-10 and Table 9-11 present the analytical data for the 2024 sample of seepage from the South Dam buttress.

Table 9-10: Summary of physical parameters and major ions for 2024 seepage from the South Dam buttress

Sample ID	Date	pH	EC	TDS	Total Alkalinity	Total Ammonia	Total Cyanide	Cl	NO_3	NO_2	SO_4	Ca	Mg	K	Na
		s.u.	*µS/cm*	*mg/L*	*mg/L as $CaCO_3$*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
24-DC-06	4-Jun-24	7.9	260	150	81	0.084	0.0059	20	0.13	0.0043	25	18	9.2	2.6	18

Source: https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Table 9-11: Summary of dissolved metals for 2024 seepage from the South Dam buttress

Sample ID	Date	Al	As	Cd	Co	Cu	Fe	Mn	Mo	Ni	Se	Zn
		mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
24-DC-06	4-Jun-24	0.036	0.0017	<0.0000050	0.00024	0.0030	0.049	0.039	0.00094	0.0020	0.000090	0.0011

Source: https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

9.2.5 Madrid Waste Rock Storage Area

Approximately 32,000 t of waste rock was removed from the WRSA for use as construction rock in the NE CPR (Section 3.1.2). Routine monitoring stations and freshet seepage survey locations are shown in Figure 9-6.

The freshet seepage survey included one sample collected from the downstream toe of the CWP berm (24-CWP-01). No seepage at the toe of the waste rock stockpiles or Madrid WRSA pad was observed. Monthly monitoring stations included the two stations within the CWP and Sumps 1 to 4, all of which are referred to as routine stations. Four monthly samples (June, July, August and September) were collected from all routine stations except Sump 3, for which samples were collected in June and July only. One additional sample was collected in May at each of the CWP stations. There was no new waste rock placed on the Madrid WRSA in 2024.

Water Management

Water management at the Madrid North WRSA includes four water collection sumps and the Madrid North contact water pond (CWP). Sump 1 to Sump 3 collect drainage from the WRSA that does not report directly to the CWP. Sump 4 was installed in 2022 and is located downstream of the CWP to collect seepage that has been bypassing the liner at the downstream berm of the CWP since 2020 and could not be remediated with the placement of overburden in 2021. Runoff/seepage water from the WRSA or CWP that reports to the sumps is transferred to the CWP, therefore water chemistry at the CWP is influenced by waste rock seepage draining to CWP and the collection sumps. Discharge of effluent onto the tundra from the CWP is in accordance with the effluent quality limits provided in the Water License. Water that does not meet these criteria is transferred to the TIA via water truck.

Field Data

Table 9-12 presents a summary of the field results for seepage samples and monthly routine monitoring data at the Madrid North WRSA.

Field results are summarized as follows:

- Seepage at the downstream toe of the CWP berm: Field pH for CWP-01 was 7.8 pH units. Field EC at CWP-01 was 1200 µS/cm.
- Madrid CWP: Field pH was generally highest in the CWP, ranging from 7.4 to 8.6. Field EC values were higher at MMS1-N (170 to 5,500 µS/cm) compared to MMS1-S (150 to 1,700 µS/cm) and values peaked in August and September at both locations.
- Sump 1 to 4: Field pH ranged from 6.4 to 8.2. Field EC values ranged from 250 to 48,000 µS/cm peaking in August to September for all stations except Sump 3, which was dry in August and September.

Table 9-12: Summary of field results for 2024 Madrid North WRSA seepage and routine monitoring samples

Monitoring Program	Area	Sample ID	Date	pH	EC	ORP	Temperature	Flow
				s.u.	*µS/cm*	*RmV*[1]	*°C*	*L/s*
Freshet Seepage	**D/S Toe of CWP Berm**	24-CWP-01	24-Jun-24	7.8	1200	200	4.3	Very low flow; visual estimate
Routine Monitoring	**Madrid CWP**	MMS1-N	20-May-24	8.4	170	190	-	-
		MMS1-N	12-Jun-24	8.6	860	190	-	-
		MMS1-N	10-Jul-24	8.5	1500	170	-	-
		MMS1-N	18-Aug-24	8.3	5500	180	-	-
		MMS1-N	16-Sep-24	7.4	3700	260	-	-
		MMS1-S	20-May-24	8.1	150	190	-	-
		MMS1-S	12-Jun-24	7.9	780	220	-	-
		MMS1-S	10-Jul-24	8.3	520	160	-	-
		MMS1-S	18-Aug-24	8.1	1700	160	-	-
		MMS1-S	16-Sep-24	8.1	1500	250	-	-
	Sump 1	MMS1-S1	12-Jun-24	7.8	500	230	-	-
		MMS1-S1	10-Jul-24	8.1	600	160	-	-
		MMS1-S1	18-Aug-24	7.3	7900	180	-	-
		MMS1-S1	16-Sep-24	7.5	3000	360	-	-
	Sump 2	MMS1-S2	12-Jun-24	6.7	1800	200	-	-
		MMS1-S2	10-Jul-24	6.5	28000	210	-	-
		MMS1-S2	18-Aug-24	6.4	48000	200	-	-
		MMS1-S2	16-Sep-24	6.7	35000	360	-	-
	Sump 3	MMS1-S3	12-Jun-24	7.4	1000	210	-	-
		MMS1-S3	10-Jul-24	7.9	720	170	-	-
	Sump 4	MMS1-S4	12-Jun-24	7.3	250	190	-	-
		MMS1-S4	10-Jul-24	7.9	560	180	-	-
		MMS1-S4	18-Aug-24	8.2	550	190	-	-
		MMS1-S4	16-Sep-24	7.3	720	-1.9	-	-

Sources:https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Notes: "-" denotes data not available

[1] Field calibrated ORP measurements

Laboratory Data

Table 9-13 and Table 9-14 present the analytical data for the Madrid WRSA samples.

Laboratory pH for all Madrid WRSA samples ranged from 6.9 to 8.4. Laboratory EC values for WRSA samples ranged from 140 to 5,800 µS/cm except for Sump 2 (17,000 to 41,000 µS/cm).

Seepage chemistry for the Madrid North WRSA samples and is summarized as follows:

- Seepage downstream of the berm of the CWP: Major cation chemistry was dominated by sodium (140 mg/L) and calcium (54 mg/L) and major anion chemistry was dominated primarily by chloride (170 mg/L), sulphate (180 mg/L), and/or alkalinity (170 mg/L as $CaCO_3$).
- Madrid CWP: Concentrations of major ions were generally higher at MMS1-N than MMS1-S. At both stations, major cations were dominated primarily by sodium (11 to 750 mg/L and 11 to 170 mg/L at MMS1-N and MMS1-S, respectively) and calcium (14 to 280 mg/L and 12 to 120 mg/L at MMS1-N and MMS1-S, respectively). At both stations, anions consisted of alkalinity (46 to 340 mg/L as $CaCO_3$ and 35 to 200 mg/L as $CaCO_3$ at MMS1-N and MMS1-S, respectively), chloride (14 to 1,400 mg/L and 14 to 320 mg/L at MMS1-N and MMS1-S, respectively), and sulphate (14 to 950 mg/L and 130 to 320 mg/L at MMS1-N and MMS1-S, respectively).
- The sump samples are summarized as follows:
  - Sump 1: Major cations were dominated by sodium (48 to 430 mg/L) and calcium (34 to 1,100 mg/L), while major anions were dominated by chloride (58 to 620 mg/L), total alkalinity (110 to 170 mg/L as $CaCO_3$), and sulphate (42 to 240 mg/L).
  - Sump 2: Sump 2 samples exhibited the highest laboratory EC values (17,000 to 41,000 µS/cm) of all Madrid North WRSA seepage samples by nearly an order of magnitude (next highest value was 5,800 µS/cm). Major ions and EC peaked in the August and September samples. Cations were dominated by calcium (1,900 to 4,700 mg/L) and sodium (1,000 and 3,000 mg/L) with lesser magnesium (490 to 1,200 mg/L), while major anions were dominated by chloride (6,100 to 17,000 mg/L) with lesser sulphate (100 to 360 mg/L). The highest chloride concentrations were observed at Sump 2 (17,000 mg/L in August, 14,000 in September, and 10,000 mg/L in July).
  - Sump 3: Major cations were dominated by sodium (120 and 140 mg/L) with lesser calcium (18 and 31 mg/L), while major anions were dominated by were dominated by total alkalinity (160 and 210 mg/L as $CaCO_3$) with lesser chloride (51 and 140 mg/L) and sulphate (68 to 110 mg/L).
  - Sump 4: Major cations were dominated by calcium (26 to 61 mg/L) with lesser sodium (16 to 25 mg/L), and major anions were dominated by total alkalinity (56 to 160 mg/L as $CaCO_3$) with lesser chloride (35 to 86 mg/L).

Nitrogen concentrations can be an indicator of residual explosives on the surfaces of underground waste rock (SRK 2021). Results for ammonia and nitrate at the Sumps are summarized as follows:

- Ammonia concentrations were highest at Sump 2 in the August and September samples (27 mg/L and 23 mg/L). All other sumps were within the range of 0.011 mg/L to 0.49 mg/L.

- Nitrate concentrations were highest at Sump 2 in the August and September samples (75 mg/L and 56 mg/L). The other two samples at Sump 2 had nitrate concentrations (8.9 mg/L and 13 mg/L) that were elevated as compared with samples from the other sumps, which ranged from 0.011 mg/L to 4.2 mg/L).
- Elevated chloride, ammonia, and nitrate concentrations suggest contact water from underground waste rock is draining to Sump 2 and to a lesser degree Sump 1.
- CWP routine samples: Ammonia concentrations at MMS1-N and MMS1-S ranged from 0.010 to 1.5 mg/L as N and nitrate concentrations ranged from 0.16 to 12 mg/L as N. Concentrations of nitrate were generally lower at MMS1-N compared to MMS1-S. Whereas concentrations of chloride were generally lower at MMS1-N compared to MMS1-S.
- Freshet seepage at the downstream toe of CWP berm (measured in June): the concentration of ammonia (0.016 mg/L as N) was slightly lower than routine June CWP measurements (0.037 mg/L as N and 0.047 mg/L as N for MMS1-N and MMS1-S, respectively). The concentration of nitrate at CWP-01 (0.91 mg/L as N) was in line with routine June CWP measurements (0.24 mg/L as N and 2.5 mg/L as N for MMS1-N and MMS1-S, respectively).
- Sulphate is an indicator of overall sulphide oxidation. Concentrations are summarized as follows:
  - Sulphate concentrations showed a seasonal increase from May to August at all locations except a slight decrease from June to July at Sump 3. September concentrations were roughly equivalent to slightly lower than August concentrations at all locations.
  - Sulphate concentrations were lowest at Sump 4 (<20 mg/L).
  - MMS1-N (after May), MMS1-S (after May), Sump 1 (after July), Sump 2, Sump 3 (except July), and the seepage sample downstream of the CWP berm: Sulphate concentrations were >100 mg/L and were highest for MMS1-N samples (950 and 580 mg/L in August and September, respectively). Concentrations at MMS1-S and Sump 2 in August and September were the next highest (ranging from 310 to 360 mg/L).
  - The higher sulphate concentrations suggest contact water from NE CPR waste rock with higher sulphide content are draining to each location with the exception of Sump 4. NE CPR waste rock overall has higher sulphide content than the waste rock from the underground decline (SRK 2017).
- Arsenic concentrations are summarized as follows (in decreasing order):
  - Sump 3 and MMS1-N: Sump 3 had the highest arsenic concentration (0.18 and 0.23 mg/L). Arsenic was also elevated at MMS1-N compared to other stations, ranging from 0.031 to 0.15 mg/L.
  - CWP berm seepage, MMS1-S, and Sump 1: Arsenic concentrations and ranged from 0.0074 to 0.073 mg/L.
  - Sumps 2 and 4: Concentrations were relatively low, ranging from 0.00054 to 0.0048 mg/L.

- Cobalt concentrations are summarized as follows (in decreasing order):
  - Except for Sump 3, cobalt concentrations exhibited a generally increasing trend from May/June to September. Sump 2 concentrations in August and September were 0.013 and 0.028 mg/L.
  - For MMS1-N (August, September), MMS1-S (August, September), Sump 1 (August, September), Sump 2 (June, July), Sump 3 (June), and Sump 4 (July through September): concentrations ranged from 0.0022 to 0.0084 mg/L.
  - MMS1-N (May through July), MMS1-S (May through July), Sump 1 (June, July), Sump 3 (July), Sump 4 (June), and seepage downstream of CWP berm: concentrations tended to be towards the lower range of observed values, ranging from 0.00015 to 0.00093 mg/L.
- Nickel concentrations are summarized as follows (in decreasing order):
  - MMS1-N, MMS1-S (August, September), CWP berm seepage, Sump 1 (August, September), Sump 2, and Sump 3: nickel concentrations ranged from 0.0065 to 0.056 mg/L
  - MMS1-S (May through July), Sump 1 (June, July), and Sump 4: nickel concentrations were on the lower range of observed values, ranging from 0.0013 to 0.0056 mg/L.
- Manganese concentrations are summarized as follows (in decreasing order):
  - Except for Sump 3, manganese concentrations exhibited a generally increasing trend from May/June to September. Sump 2: August and September concentrations were 4.6 and 6.3 mg/L, respectively.
  - MMS1-N (September), Sump 1 (August, September), and Sump 2 (June, July): Concentrations ranged between 0.86 and 1.8 mg/L.
  - MMS1-N (May through August), MMS1-S, Sump 1 (June, July), CWP berm seepage, Sump 3, and Sump 4: Concentrations were lower, ranging from 0.0021 to 0.37 mg/L.
- Selenium concentrations are summarized as follows (in decreasing order):
  - Sump 2 and MMS1-N (August): selenium concentrations ranged from 0.0077 to 0.026 mg/L.
  - MMS1-N (July, September), MMS1-S (June through September), CWP berm, Sump 1 (June through August), and Sump 3 (July): concentrations ranged from 0.00093 to 0.0050 mg/L.
  - MMS1-N (May and June), MMS1-S (May), Sump 1 (September), Sump 3 (June), and Sump 4: concentrations were lower with values ranging from 0.000085 to 0.00089 mg/L.
- Zinc concentrations are summarized as follows:
  - Zinc concentrations were variable with the highest concentrations generally observed during fall. Sump 1 (July through September), Sump 2 (July through August), Sump 3, and Sump 4 (July through August): concentrations ranged between 1.4 and 19 mg/L.
  - June zinc concentrations in Sumps 1, 2, and 4 ranged from 0.61 to 0.88 mg/L.
  - MMS1-N, MMS1-S, and CWP berm seepage: Zinc concentrations were less than ten times the detection limit, and ranged from <0.0010 mg/L to 0.0078 mg/L.

Table 9-13: Summary of physical parameters and major ions for 2024 Madrid North WRSA seepage and routine monitoring samples

Monitoring Program	Area	Sample ID	Date	pH	EC	TDS	Total Alkalinity	Total Ammonia	Cl	NO_3	NO_2	SO_4	Ca	Mg	K	Na
				s.u.	*µS/cm*	*mg/L*	*mg/L as $CaCO_3$*	*mg/L as N*	*mg/L*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
Freshet Seepage	**CWP Berm (Downstream)**	24-CWP-01	24-Jun-24	8.2	1200	700	170	0.016	170	0.91	0.0013	180	54	23	11	140
Routine Monitoring	**Madrid CWP**	MMS1-N	20-May-24	7.8	160	-	46	0.027	14	0.16	0.0019	14	14	3.7	1.8	11
		MMS1-N	12-Jun-24	8.3	750	-	110	0.037	120	0.24	0.0058	120	36	19	8.8	120
		MMS1-N	10-Jul-24	8.4	1500	-	160	0.054	240	0.60	0.0058	180	61	33	12	190
		MMS1-N	18-Aug-24	7.9	5800	-	190	1.5	1400	12	0.14	950	280	130	46	750
		MMS1-N	16-Sep-24	8.1	3600	-	340	1.3	730	1.1	0.024	580	190	110	22	390
		MMS1-S	20-May-24	7.7	140	-	35	0.026	14	0.26	0.0020	13	12	2.6	1.3	11
		MMS1-S	12-Jun-24	8.1	800	-	110	0.047	82	2.5	0.011	130	53	16	7.0	85
		MMS1-S	10-Jul-24	8.2	530	-	89	0.010	51	1.3	0.0027	82	36	9.9	4.1	53
		MMS1-S	18-Aug-24	7.9	1500	-	190	0.11	170	5.8	0.021	320	100	33	12	170
		MMS1-S	16-Sep-24	8.4	1500	-	200	0.030	320	3.0	0.0087	320	120	38	10	160
	Sump 1	MMS1-S1	12-Jun-24	8.0	500	-	110	0.014	58	1.2	0.0011	42	34	11	3.9	48
		MMS1-S1	10-Jul-24	8.3	580	-	120	0.011	61	1.4	0.0034	64	41	13	4.7	58
		MMS1-S1	18-Aug-24	7.7	2500	-	150	0.24	590	4.2	0.021	230	1100	120	47	430
		MMS1-S1	16-Sep-24	8.0	2600	-	170	0.043	620	0.80	0.0065	240	170	58	16	240
	Sump 2	MMS1-S2	12-Jun-24	7.1	17000	-	30	17	6100	13	0.28	100	1900	490	90	1000
		MMS1-S2	10-Jul-24	7.2	27000	-	26	22	10000	8.9	<0.10	200	2900	830	130	1800
		MMS1-S2	18-Aug-24	6.9	41000	-	35	27	17000	75	0.28	360	4700	1200	180	3000
		MMS1-S2	16-Sep-24	7.4	35000	-	86	23	14000	56	0.19	310	3800	1100	120	2500
	Sump 3	MMS1-S3	12-Jun-24	7.8	1000	-	160	0.22	140	0.62	0.0091	110	31	21	11	140
		MMS1-S3	10-Jul-24	8.3	720	-	210	0.027	51	1.6	<0.0050	68	18	12	8.4	120
	Sump 4	MMS1-S4	12-Jun-24	7.7	250	-	56	0.042	35	0.013	<0.0010	9.2	26	3.4	1.1	16
		MMS1-S4	10-Jul-24	8.1	510	-	150	0.42	65	0.011	0.0015	13	52	14	2.5	22
		MMS1-S4	18-Aug-24	7.9	540	-	140	0.44	77	0.016	0.0013	16	54	14	2.7	23
		MMS1-S4	16-Sep-24	8.0	250	-	160	0.49	86	0.081	0.0012	16	61	15	3.0	25

Source:https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Notes: "-" denotes data not available

Table 9-14: Summary of dissolved metals for 2024 Madrid North WRSA seepage and routine monitoring samples

Monitoring Program	Area	Sample ID	Date	Al	As	Cd	Co	Cu	Fe	Mn	Mo	Ni	Se	Zn
				mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
Freshet Seepage	**CWP Berm (Downstream)**	24-CWP-01	24-Jun-24	0.010	0.039	0.0000099	0.00025	0.0078	<0.010	0.0021	0.0044	0.0074	0.0015	<0.0010
Routine Monitoring	**Madrid CWP**	MMS1-N	20-May-24	0.0099	0.13	<0.0000050	0.00081	0.00084	<0.010	0.020	0.00086	0.015	0.00035	<0.0010
		MMS1-N	12-Jun-24	0.026	0.070	0.0000061	0.00054	0.0044	<0.010	0.047	0.0037	0.0091	0.00089	<0.0010
		MMS1-N	10-Jul-24	0.011	0.040	<0.000010	0.00070	0.0062	0.017	0.068	0.0041	0.013	0.0014	<0.0010
		MMS1-N	18-Aug-24	0.0099	0.15	0.000080	0.0048	0.0073	<0.050	0.33	0.016	0.056	0.016	<0.0050
		MMS1-N	16-Sep-24	0.0088	0.031	0.000050	0.0061	0.011	0.88	1.1	0.0057	0.039	0.0046	0.0020
		MMS1-S	20-May-24	0.0072	0.021	<0.0000050	0.00015	0.0010	<0.010	0.023	0.00055	0.0016	0.00020	<0.0010
		MMS1-S	12-Jun-24	0.013	0.015	0.000020	0.00074	0.0095	<0.010	0.035	0.0023	0.0044	0.0015	0.0030
		MMS1-S	10-Jul-24	0.015	0.013	0.000012	0.00033	0.0064	<0.010	0.012	0.0014	0.0030	0.00093	<0.0010
		MMS1-S	18-Aug-24	0.012	0.016	0.000067	0.0022	0.015	0.020	0.084	0.0033	0.011	0.0038	0.0056
		MMS1-S	16-Sep-24	0.0094	0.073	0.000086	0.0084	0.014	0.17	0.24	0.0026	0.012	0.0027	0.0078
	Sump 1	MMS1-S1	12-Jun-24	0.0056	0.014	0.0000061	0.00032	0.0030	0.016	0.021	0.0026	0.0013	0.0010	0.80
		MMS1-S1	10-Jul-24	0.0054	0.050	<0.000010	0.00029	0.0038	0.010	0.0034	0.0032	0.0024	0.0014	1.4
		MMS1-S1	18-Aug-24	0.0097	0.029	0.00047	0.0059	0.0095	0.074	1.1	0.0057	0.020	0.0050	2.7
		MMS1-S1	16-Sep-24	0.014	0.0074	0.00010	0.0037	0.0064	0.027	1.2	0.0018	0.0065	0.00028	11
	Sump 2	MMS1-S2	12-Jun-24	<0.0050	0.00062	0.00099	0.0055	0.0046	0.36	0.86	<0.00025	0.015	0.0077	0.61
		MMS1-S2	10-Jul-24	0.010	<0.0010	0.0027	0.0065	0.0048	<0.10	1.8	<0.00050	0.027	0.014	3.4
		MMS1-S2	18-Aug-24	0.014	<0.0010	0.0044	0.013	0.0087	<0.10	4.6	<0.00050	0.041	0.026	19
		MMS1-S2	16-Sep-24	<0.050	<0.0050	0.0036	0.028	0.016	<0.50	6.3	<0.0025	0.051	0.020	3.2
	Sump 3	MMS1-S3	12-Jun-24	0.024	0.18	0.000017	0.0022	0.015	0.13	0.36	0.0035	0.017	0.00059	6.6
		MMS1-S3	10-Jul-24	0.040	0.23	<0.000015	0.00054	0.014	0.083	0.031	0.0071	0.016	0.0012	3.5
	Sump 4	MMS1-S4	12-Jun-24	0.035	0.00054	0.000012	0.00093	0.011	0.11	0.055	0.000072	0.0038	0.000085	0.88
		MMS1-S4	10-Jul-24	0.0097	0.0022	0.000016	0.0054	0.0086	0.24	0.28	0.00096	0.0049	<0.00010	8.8
		MMS1-S4	18-Aug-24	0.0077	0.0022	0.000013	0.0046	0.0084	0.30	0.22	0.0011	0.0048	0.00015	13
		MMS1-S4	16-Sep-24	0.0096	0.0048	0.000012	0.0073	0.011	0.11	0.37	0.0015	0.0056	0.00018	17

Source:https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

9.2.6 Madrid Infrastructure

Two seepage samples were collected in the area of the reclaimed Madrid North Portal Pad (Figure 9-7)

Field Data

Table 9-15 presents field results for samples collected from Madrid Infrastructure.

Portal Pad field pH ranged from 7.6 to 7.9 and EC ranged between 150 to 400 µS/cm.

Table 9-15: Summary of field results for 2024 Madrid Infrastructure

Area	Sample ID	Date	pH	EC	ORP	Temperature	Flow
			s.u.	*µS/cm*	*RmV*[1]	*°C*	*m/s*
Madrid N. Portal Pad	24-MAD-01	27-May-24	7.9	150	190	6.1	0.121
	24-MAD-02	27-May-24	7.6	400	190	6.0	0.034

Sources :
https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Notes:

[2] Field calibrated ORP measurements

Laboratory Data

Table 9-16 and Table 9-17 present the analytical data for the Portal Pad seepage samples.

Portal Pad seepage chemistry is summarized as follows:

- Laboratory pH ranged from 7.8 to 7.9 and EC ranged from 170 to 570 µS/cm.
- The major cation chemistry was dominated by sodium (9.1 to 39 mg/L) and calcium (24 to 38 mg/L) while major anions were dominated by total alkalinity (62 to 83 mg/L), sulphate (12 to 43 mg/L) and chloride (11 to 43 mg/L).
- Ammonia concentrations ranged from 0.040 to 0.043 mg/L as N. Nitrate concentrations ranged from 0.10 to 0.19 mg/L as N and nitrite concentrations ranged from 0.0051 to 0.0092 mg/L as N.

Table 9-16: Summary of physical parameters and major ions for 2024 Madrid Infrastructure

Area	Sample ID	Date	pH	EC	TDS	Total Alkalinity	Total Ammonia	Cl	NO_3	NO_2	SO_4	Ca	Mg	K	Na
			s.u.	*µS/cm*	*mg/L*	*mg/L as $CaCO_3$*	*mg/L as N*	*mg/L*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
Madrid N. Portal Pad	24-MAD-01	27-May-24	7.9	170	110	62	0.040	11	0.19	0.0092	12	24	3.7	1.3	9.1
	24-MAD-02	27-May-24	7.8	370	230	83	0.043	43	0.10	0.0051	43	31	8.4	2.6	39

Sources : https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Table 9-17: Summary of dissolved metals for 2024 Madrid Infrastructure

Area	Sample ID	Date	Al	As	Cd	Co	Cu	Fe	Mn	Mo	Ni	Se	Zn
			mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
Madrid N. Portal Pad	24-MAD-01	27-May-24	0.012	0.0018	<0.0000050	0.00018	0.0026	0.040	0.024	0.00071	0.0014	0.00013	<0.0010
	24-MAD-02	27-May-24	0.012	0.0010	<0.0000050	0.00023	0.0023	0.058	0.026	0.00046	0.0021	0.00015	<0.0010

Sources : https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Comparison to Previous Surveys

Figure 9-11 and Figure 9-12 provide a comparison of selected parameters for Madrid Infrastructure seepage samples from 2020 to 2024.

Portal Pad

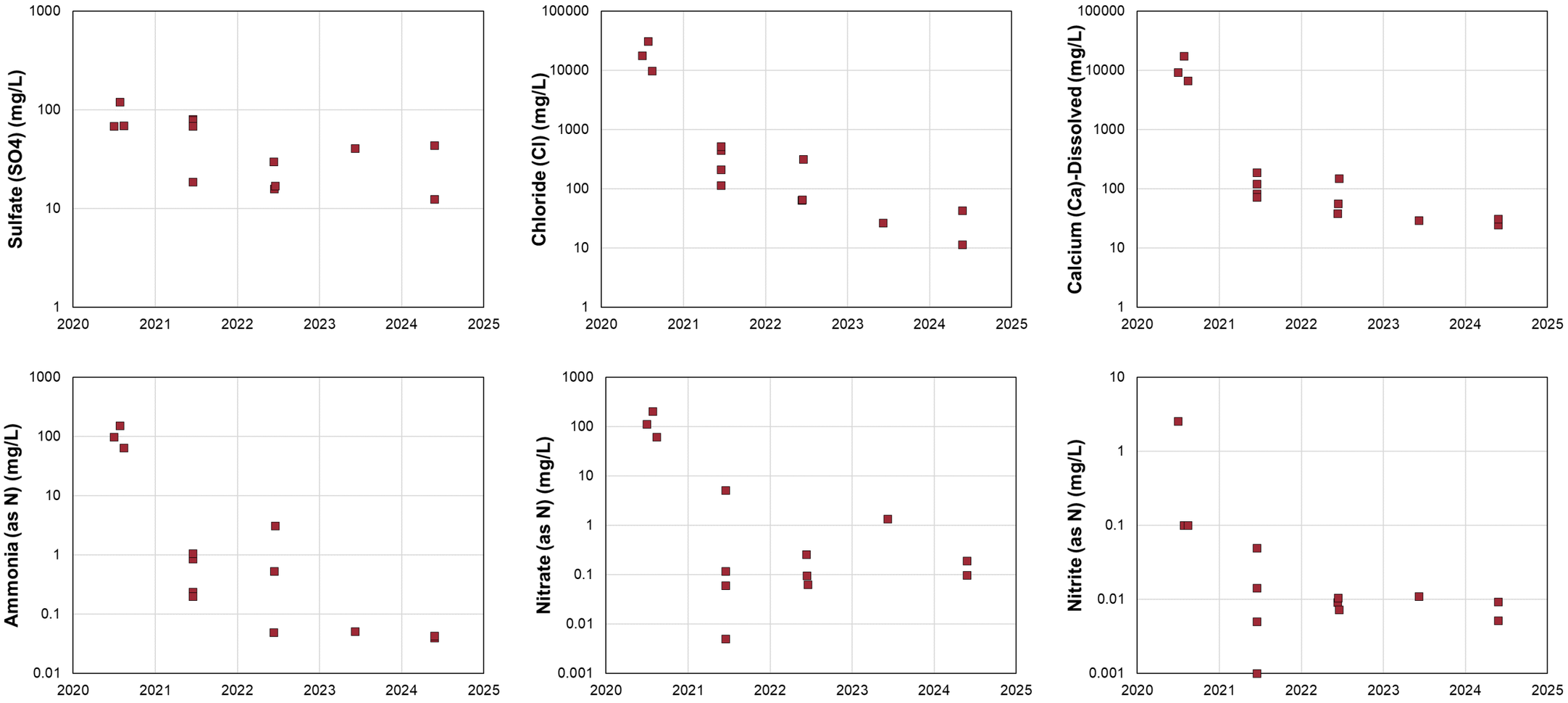
The 2020 seepage survey of the Portal Pad indicated saline seepage (EC >35,000 µS/cm) dominated by calcium and chloride (Figure 9-17), elevated concentrations of cadmium (0.0025 to 0.0032 mg/L), cobalt (0.14 to 0.53 mg/L), manganese (210 to 460 mg/L), nickel (0.058 to 0.24 mg/L), and zinc (0.25 and 0.33 mg/L) and for one sample, a pH of 4.9 (SRK 2021). Notably zinc was never identified as a metal leaching concern in geochemical baseline studies of waste rock. An investigation of the portal pad concluded that conceptually the source loads were not due to weathering of waste rock but accelerated rates of metal leaching in the presence of high ionic strength drilling brine (SRK 2021). Furthermore, the acidic pH was attributed to organic acids in the active layer and/or release of acidity from ion exchange between seepage and tundra.

Between the 2020 and 2021 seepage surveys, Agnico Eagle remediated the Portal Pad by removing areas of the Pad that were saline with disposal within the NE CPR. Accordingly, the results of the 2021 to 2024 seepage survey are an indicator of the reclamation activities. The 2024 Portal Pad seepage chemistry in the context of reclamation activities are presented in a Piper Plot (Figure 9-17) and are summarized as follows:

- All seepage measured in 2024 was non-acidic and has been since 2021.
- Concentrations of calcium (24 and 31 mg/L) and chloride (11 to 43 mg/L) were lower by one order of magnitude compared to 2020. Sulphate concentrations (12 to 43 mg/L), which are an indicator of sulphide oxidation, have been relatively stable since 2022.
- Nitrogen-containing constituent concentrations, which are present in or residuals of explosives, have been considerably lower since 2021 compared to 2020 concentrations, including ammonia (two to three orders of magnitude lower), nitrate (one to four orders of magnitude lower) and nitrite (up to two orders of magnitude lower). Ammonia concentrations have shown a decreasing trend since 2020, whereas nitrate and nitrate have been stable within the same range of values from 2021 to 2023.
- Trace element concentrations have been generally stable or decreasing since 2020 including dissolved arsenic (up to one order of magnitude decrease), cobalt (two to three orders of magnitude), cadmium (one to two orders of magnitude), cobalt (two to three orders of magnitude), manganese (one to three orders of magnitude), nickel (one order of magnitude), and zinc (one to two orders of magnitude).

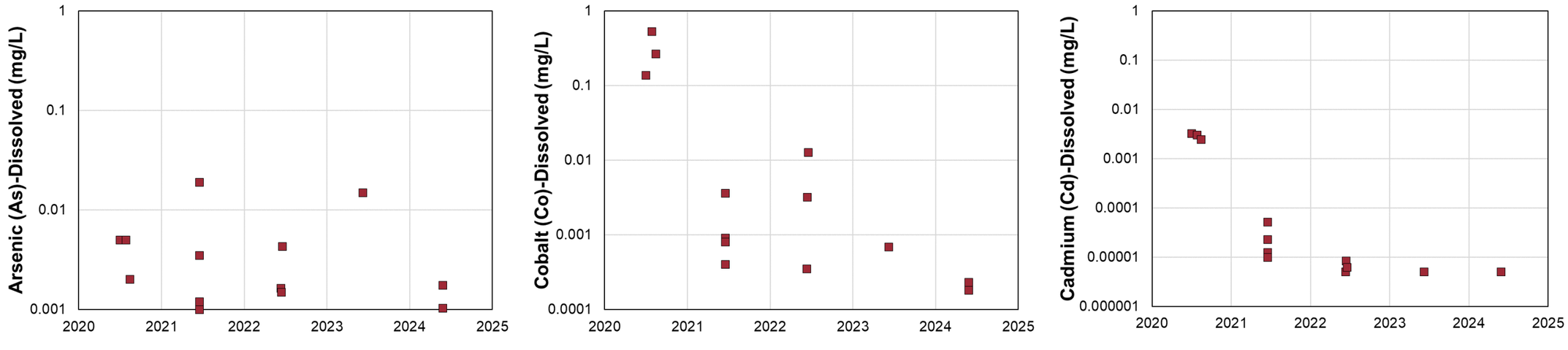
The results of the 2024 Portal Pad seepage survey indicates that reclamation activities have improved seepage chemistry and that metal concentrations have decreased. Seepage monitoring downstream of the Portal Pad can be discontinued.

Figure 9-11: Time series plots for dissolved sulphate, chloride, calcium, ammonia, nitrate, and nitrite for Portal Pad samples



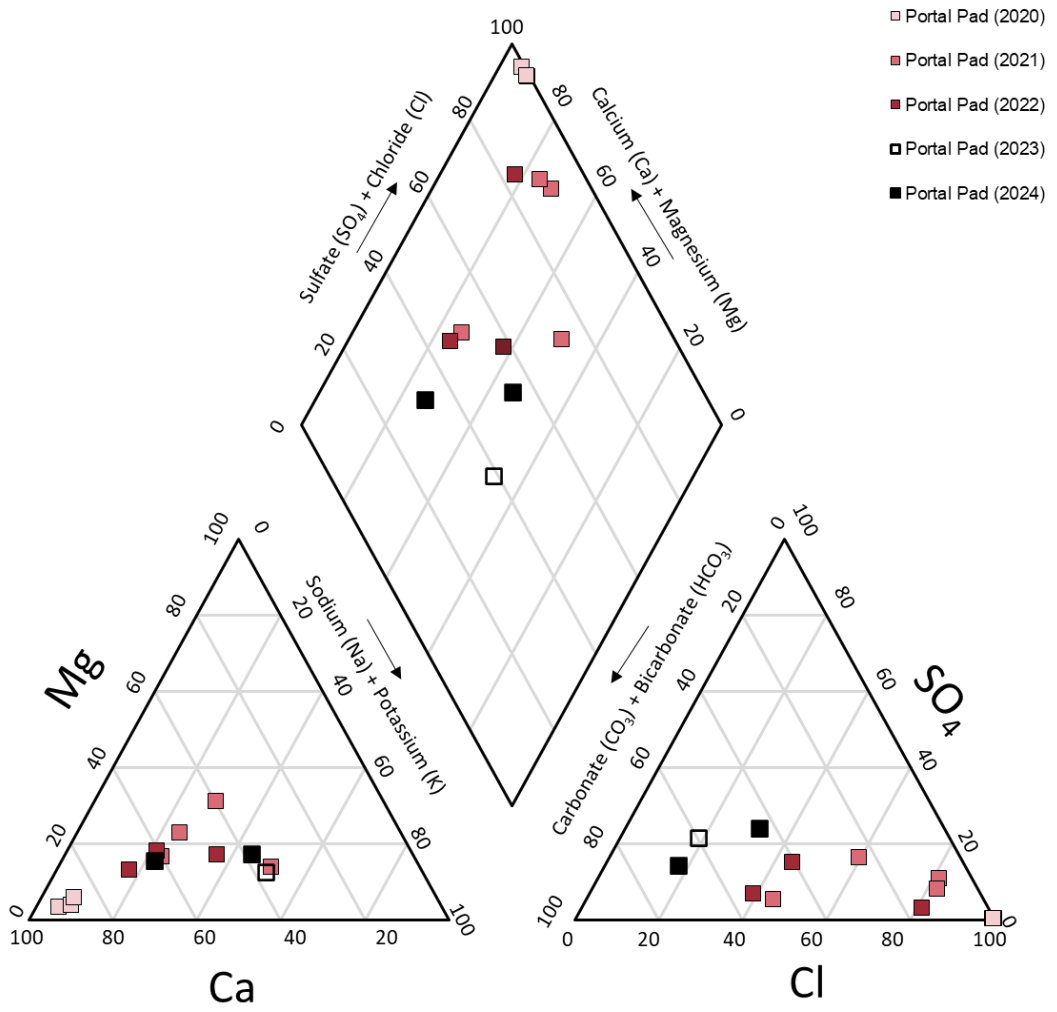
Sources : https://srk.sharepoint.com/sites/FS208/Internal/ !Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx]

Figure 9-12: Times series plots of arsenic, cobalt, cadmium, nickel, manganese, and zinc for Portal Pad samples



Sources : https://srk.sharepoint.com/sites/FS208/Internal/ !Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

Figure 9-13: Piper plot of Madrid North Portal Pad water quality samples (2020 to 2024)



Source:
https://srk.sharepoint.com/sites/FS208/Internal/!Project_Data%20(Not%20Job%20Specific)/19_Geochem/Working%20Files/Seepage/Doris-Madrid%20seepage%20compilation/DorisMadridSeep_WQData_REV04_2024.xlsx

10 Summary and Conclusions

Material production, management and geochemical monitoring conducted in 2024 for waste rock, quarry rock, construction rock and tailings are summarized in the sections below.

10.1 Waste Rock

10.1.1 Doris

In 2024, the Doris mine was in care and maintenance. As a result, no waste rock was placed on the stockpile at the Madrid North WRSA and no waste rock solids monitoring was conducted.

10.1.2 Madrid North

In 2024, the Madrid North Mine was in care and maintenance. Underground exploration activities between September and December 2024 resulted in the production of 10,100 t of waste rock that was used to construct an underground exploration ramp in the Madrid North (Naartok East) underground. An additional 32,000 t of waste rock from the Madrid WRSF was also used to construct the same underground exploration ramp. These materials were placed within the mine and therefore monitoring is not required.

10.2 Quarry Rock

In 2024, there were 10 blasts at Quarry 2, 35 blasts at Quarry D, and two blasts at Quarry E. The results of the quarry monitoring program in 2024 are summarized as follows:

- Geological inspections of the active quarry face in Quarry D in September indicated that the rock was mafic metavolcanics (1a). Fibrous actinolite was not present. Total sulphur values for Quarry D samples collected in September ranged from 0.05 to 0.15% for the coarse fraction and 0.06 to 0.20% for the fine fraction. Further analyses (ABA, trace elements, and SFE) are currently in progress and results will be submitted as an addendum to this report. Quarry D samples collected in October had total sulphur content that did not exceed 0.10% and therefore did not require further testing.
- Quarry 2 ROQ rock samples had total sulphur content of 0.16% for the coarse fraction and 0.22% for the fine fraction. Further analysis by ABA indicated that all samples were classified as non-PAG by NP/AP and TIC/AP. Paste pH ranged from 8.8 to 9.0. Elemental analysis indicated that all parameters were less than 10 times the average crustal abundance for basalt, indicating no appreciable enrichment. Overall, trace element concentrations from the SFE analysis were low.
- Geological inspections and geochemical characterizations were not completed for Quarry E due to the relatively low volume of rock blasted in 2024 (~6,000 t). Inspection and characterization of this small volume of rock will be completed in summer 2025.

10.3 Construction Rock

Between April and June 2024, 32,000 t of waste rock from the Madrid WRSF was moved to the Madrid North underground to construct an underground exploration ramp to access the Naartok East portal. Additionally, a total of 10,100 t of waste rock was produced from exploration activities in the Madrid North Mine between September and December 2024, all of which was placed within the Madrid North Underground (specifically Naartok East Pit) to construct the same underground exploration ramp. In June/July 2024, approximately 3,000 m^3 of blasted rock from Quarry E was moved to the Naartok Pad. Between September 2024 and December 2024, quarry and waste rock were used to construct the following:

- Quarry D Ramp using 2,346 t of blasted rock from Quarry D.
- Windy road km 4 using 441 t of blasted rock from Quarry D and 34 m^3 of crushed rock for surfacing material from Quarry 2.
- Exploration Road using 64,630 t of blasted rock from Quarry D and 1,697 m^3 of crushed rock for surfacing material from Quarry 2.
- Fresh Water Intake Road using 21,896 t of blasted rock from Quarry D.
- Naartok Pad using 30,518 t of blasted rock from Quarry D, approximately 6,000 t of blasted material from Quarry E and 9,152 t of crushed rock for surfacing material from Quarry 2.
- Pad U using 11,322 t of blasted rock from Quarry D.
- Roberts Bay road widening using 2,380 t of blasted rock from Quarry D.
- Windmill Access Road using 11,934 t of blasted rock from Quarry D.
- Blind Hill 4 road using 34 t of crushed rock from Quarry 2

Due to local climate conditions (heavy snow cover in the winter), as-built construction monitoring for the Hope Bay Project occurs during the summer months. Many of the 2024 construction projects took place after September 2024. Therefore, geological inspection and geochemical sampling of the 2024 as-built construction rock will take place during summer of 2025.

10.4 Tailings

The process plant has been in care and maintenance and has not produced tailings since mid-October 2021. Accordingly, geochemical monitoring of tailings was limited to the opportunistic seepage sampling from underground backfilled stopes (TL-11). Results are summarized as follows:

- In all samples, pH ranged between 8.1 and 8.7 and all values were within the historical range of TL-11 seepage data except one sample from November 2024. All 2024 samples exhibited pH values above the 50th percentile from the historical sample set (2017 to 2023) and two of the samples were above the 95th percentile from the historical sample set.
- EC results were >5,000 µS/cm (9,000 to 17,000 µS/cm) for all 2024 samples. The highest EC values were reported in both sides of the waste pile at Level 110 (September 24); these results

ranged from 16,000 to 17,000 µS/cm. Since 2020, EC values have been approximately five times lower than seepage samples collected from 2017 to 2019 (Figure 8-1).

- All 2024 seepage samples have a major cation chemistry dominated by sodium (1,500 to 2,900 mg/L). Chloride is the dominant anion (2,900 to 5,900 mg/L) in the 2024 samples. This major ion signature is characteristic of seawater, although concentrations are more dilute than seawater.
- The decrease in EC from 2020 onwards coincides with a decrease in concentrations of a number of key parameters including dissolved chromium, cadmium, cobalt, copper, nickel, selenium, zinc, and silver. These trends continued through 2024.
- Samples collected from the left and right side of the waste pile at Level 110 reported the highest sulphate concentrations, ranging between 860 and 870 mg/L. These results were greater than the 50th percentile from the historical sample set. Sulphate concentrations in all other seepage samples ranged between 370 and 550 mg/L.
- The results suggest that seepage samples collected between 2017 and 2019 represent contact water of detoxified tailings whereas concentrations in samples collected between 2020 and 2022 are more dilute and likely represent contact water mixed with saline groundwater. Concentrations in 2023 seepage samples were similarly dilute, however without chloride data, a saline source could not be assessed. 2024 seepage samples are consistent with post-2019 trends, suggesting continued contact water mixed with saline groundwater.

10.5 Seepage

The scope of the 2024 seepage survey included monitoring of the Doris TIA South Dam buttress, the road at Madrid North (near Windy Lake), waste rock at Doris and Madrid, and three reference sites, located in the undisturbed tundra and not subject to mine influences. Saline seepage from the Madrid portal pad (SRK 2022) was also included in the 2024 seepage survey.

Doris Waste Rock Influenced Area

Seepage at the waste rock influenced area was characterized according to three groups:

- Group 1 –Five samples collected immediately downstream of waste rock on Pad T or downstream of waste rock and ore on Pad I at the upstream embankment of the Doris Contact Water Pond 1. Two out of five of these samples show waste rock and ore influenced chemistry with elevated EC and chloride while the other three samples had lower EC values.
- Group 2 – Samples collected at the toe of the access roads showing waste rock and ore impacted chemistry with loading from detoxified tailings. The Group 2 sample exhibited high EC and high concentrations of ammonia, chloride, nitrate, sulphate, cadmium, cobalt, copper, manganese, nickel, selenium, and zinc.

A summary of seepage chemistry for these groups is as follows:

- pH for all seepage samples was non-acidic (7.5 to 8.4).

- The major ion chemistry is summarized as follows:
  - Group 1: cation chemistry was dominated by calcium (36 to 220 mg/L) and sodium (32 to 350 mg/L) while major anion chemistry was dominated by chloride (14 to 750 mg/L), sulphate (33 to 440 mg/L), and alkalinity (75 to 200 mg/L).
  - Group 2: cation chemistry were dominated by calcium (960 mg/L) and sodium (780 mg/L) and anion chemistry was dominated by chloride (2700 mg/L) and sulphate (580 mg/L).

Since 2020, the downstream access road samples (i.e. Group 2) had higher concentrations of chloride, ammonia, and nitrate than samples collected at the toe of Pad I (i.e. Group 1) which suggested an additional loading source other than waste rock (SRK 2021). The loading source is hypothesized to be detoxified tailings that was unintentionally placed on the Doris pad in 2020 with the source of chloride, ammonia and nitrate from the mill. In the 2024 seepage samples, the access road sample (in Group 2) continued to have higher concentrations of ammonia, nitrate, and chloride than were observed for Group 1 samples. However, concentrations of ammonia, nitrate, and chloride in Group 1 and Group 2 samples generally decreased from previous years and confirm continued flushing of a finite volume of spilled detoxified tailings. All drainage from the Doris camp pad, including seepage captured in the collection sumps downstream of the toe of the access road, is pumped to the sediment control pond (SCP) prior to transfer to the TIA. In 2024, water from the SCP accounted for approximately 10% of total inflow volumes entering the main TIA and 4% of the total volume stored in the main TIA.

Doris Infrastructure

One seepage sample was collected from the Doris South Dam buttress (Figure 9-5.) in 2024.

The laboratory pH was 7.9 and the laboratory EC was 260 µS/cm. Dissolved arsenic and dissolved manganese (0.0017 mg/L and 0.039 mg/L, respectively) were each slightly elevated when compared with concentrations measured in the reference samples, but all other dissolved metals concentrations were low.

Madrid North Waste Rock Storage Area

The water quality sample set in 2024 included i) one freshet seepage sample collected from the downstream toe of the CWP berm, and ii) monthly water quality samples from the contact water pond (CWP), Sump 1, Sump 2, Sump 3, and Sump 4. Sump 4 was installed in 2022 to collect seepage that has been bypassing the liner at the downstream berm of the CWP since 2020 and could not be remediated with the placement of overburden in 2021. All drainage from the Waste Rock Storage Area is captured by downstream sumps and pumped back to the CWP.

A summary of the results are as follows:

- All samples were non-acidic (pH 6.9 to 8.4) and laboratory EC values ranged from 140 to 41,000 µS/cm. Sump 2 samples exhibited the highest laboratory EC values (17,000 to 41,000 µS/cm) of all Madrid North WRSA seepage samples by nearly an order of magnitude (next highest value was 5,800 µS/cm). Major ions and EC peaked in the August and September samples.
- For the freshet seepage sample collected from the downstream toe of the CWP berm, major cation chemistry was dominated by sodium (140 mg/L) and calcium (54 mg/L) and major anion chemistry was dominated primarily by chloride (170 mg/L), sulphate (180 mg/L), and/or alkalinity (170 mg/L as $CaCO_3$). In the Madrid CWP concentrations of major ions were generally higher at MMS1-N than MMS1-S. At both stations, major cations were dominated primarily by sodium (11 to 750 mg/L and 11 to 170 mg/L at MMS1-N and MMS1-S, respectively) and calcium (14 to 280 mg/L and 12 to 120 mg/L at MMS1-N and MMS1-S, respectively). At both stations, anions consisted of alkalinity (46 to 340 mg/L as $CaCO_3$ and 35 to 200 mg/L as $CaCO_3$ at MMS1-N and MMS1-S, respectively), chloride (14 to 1,400 mg/L and 14 to 320 mg/L at MMS1-N and MMS1-S, respectively), and sulphate (14 to 950 mg/L and 130 to 320 mg/L at MMS1-N and MMS1-S, respectively).
- The major cation chemistry for all Madrid WRSA samples was dominated by sodium (16 to 3,000 mg/L) and calcium (11 to 4,700 mg/L). Anion chemistry for all samples was dominated by chloride (35 to 620 mg/L except for Sump 2, which ranged from 6,100 to 17,000 mg/L) and alkalinity (Sumps 1 and 4 ranged from 56 to 160 mg/L as CaCO3) or sulphate (Sumps 1, 2, and 3 ranged from 42 to 360 mg/L). Concentrations of all major ions were variable with time, notably calcium and sodium concentrations have been decreasing with the exception of a few outliers (mostly from Sump 2).
- Higher chloride concentrations at Sump 2 compared to other areas within the Madrid North WRSA are likely the result of rock saturated with drilling brine placed in areas that drain to Sump 2. Elevated chloride, ammonia, and nitrate concentrations suggest contact water from underground waste rock is draining to Sump 2 and to a lesser degree Sump 1.
- Nitrogen concentrations are indicative of residual explosives present on the surfaces of underground waste rock. Ammonia (0.010 to 1.5 mg/L with outliers at Sump 2 of 17 to 27 mg/L) and nitrate (0.011 to 4.2 mg/L with outliers at in August at MMS1-N and all samples from Sump 2 ranging from 8.9 to 75 mg/L) concentrations have generally decreased over time and in 2024 were highest at Sump 1, Sump 2 and fall measurements at MMS1-N, suggesting evapoconcentration in the CWP and that contact water from underground waste rock is draining to these sumps.
- Zinc and manganese concentrations (indicative of accelerated leaching from raw brine) have shown a slightly decreasing trend since 2020 except in Sump 2, and zinc concentrations continue to suggest there is drainage of contact water from the NE CPR to the sumps.

Madrid Infrastructure

The Madrid Portal Pad seepage chemistry is summarized as follows:

- Laboratory pH ranged from 7.8 to 7.9 and EC ranged from 170 to 570 µS/cm.
- The major cation chemistry was dominated by sodium (9.1 to 39 mg/L) and calcium (24 to 38 mg/L) while major anions were dominated by total alkalinity (62 to 83 mg/L), sulphate (12 to 43 mg/L) and chloride (11 to 43 mg/L).
- Ammonia concentrations ranged from 0.040 to 0.043 mg/L as N. Nitrate concentrations ranged from 0.10 to 0.19 mg/L as N and nitrite concentrations ranged from 0.0051 to 0.0092 mg/L as N.
- Trace element concentrations have been generally stable or decreasing since 2020 including dissolved arsenic (up to one order of magnitude decrease), cobalt (two to three orders of magnitude), cadmium (one to two orders of magnitude), cobalt (two to three orders of magnitude), manganese (one to three orders of magnitude), nickel (one order of magnitude), and zinc (one to two orders of magnitude).

The results of the 2024 Portal Pad seepage survey indicates that reclamation activities have improved seepage chemistry and that seepage monitoring at this location can be discontinued.

Closure

This report, 2024 Annual Geochemistry Monitoring Report, was prepared by

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and reviewed by

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March 21, 2025

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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.

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Appendix A Quarry Rock Monitoring

Appendix A1 Geological Inspection Records

AGNICO EAGLE
HOPE BAY

Quarry Inspection

Inspection Date: Wed, Sept 4th, 2024 Blast Date: _____
Geologist: Richard Mann, Matthew Melchiorre, Serena MacDonald, Christian Beros
Quarry Location: Quarry B

General Visual Inspection

Rock Type	1a	Mafic volanics (basalt)
Vein	(Y)/N	If yes, describe (min, %, size): 1-5mm qtz-cb veins.
Sulphides	(Y)/N	If yes: Disseminated/Vein/Stringer/Other Cpy - disseminated - trace. Percentage: 0.01%
Fibrous Actinolite	Y/(N)	If yes, describe (min, %, size):
If anomalous rock types/significant sulphides:	TAGGED: (Y)/N	North corner anomalously hematite altered w/ red muck on quarry floor. Strongly sheared outcrop/ blast faces. Sampled for ML/ARD (ABA and Metals)
UTM (only needed if anomalous): E 432855, N: 7551745		

Inspection at 100m intervals

Rock Characteristics	
Interval:	Description
0-100 m (S-N) SE-side of quarry	3-4 m hematite alteration zone, mainly foliated basalt.
0-100 m N-side of quarry	Red-brown basalt, hematite altered; ~10 cm quartz-cb veining -in NW corner, oxidized/sheared basalt.
	4 boulder w malachite observed.
0-100 m W to E after Last	Less oxidized basalt than last description, minor qtz-cb veining, trace pyrite.
	4 foliated.

Quarry Rock Sampling (to be done at two different stages of quarry development per year)

Whole Rock Sample (-1cm): Minimum 1 kg	
Sample ID: Both sampled Sept 4, 2024	
SRK-QD-01B-24 mafic vol. (fol. basalts) E: 0432893 N: 7551667 No sulfides visible, fizz strong on groundmass, fizz strong on carb, Q+Z veining, white color of carbonates, present as qtz-carb veining and pervasive in groundmass	SRK-QD-02B-24 mafic vol., fg. and weakly fol. basalts E: 0432879 N: 7551749 Trace py. in veining/fracture surf., Fizz: moderate for groundmass, strong fizz on carb/Q+Z veining. white color carbonates (calcite) and present as qtz-carb veining and pervasive in ground mass
Screen sample (-2mm): Same Material as Whole Rock Sample (Between 1-2 kg)	
Sample ID:	
SRK-QD-01A-24 Same as above (same parent sample location)	SRK-QD-02A-24 Same as above (same parent sample location)

Contingency - Identification of Inappropriate Quarry Rock

In the unlikely event that the visual inspection identifies PAG rock, the geologist will 'tag' the material for avoidance or removal. If the material is excavated, it will be transported to a waste rock storage area for disposal underground. If this is not possible at the time, the PAG rock will be buried in an active or previously mined out quarry. If the PAG material is buried, it will be covered with a min of 2m of rock material that is approved for construction and will be clearly marked as inappropriate for use as construction material.
In the unlikely event that the visual inspection identifies fibrous actinolite, the geologist will 'tag' the material for avoidance or removal. If the material is excavated, it will be transported to a waste storage area for disposal underground. If this is not possible at the time, the material will be buried in one of the previously mined-out quarries and covered with a 1m layer of benign rock and a record of the location maintained.

AGNICO EAGLE
HOPE BAY

Quarry Inspection

Inspection Date: 2024-10-21 Blast Date: _____

Geologist: Nick Wray, Christian Beous

Quarry Location: Quarry D (km 7)

General Visual Inspection

Rock Type		2 Samples taken - B011501 - B011502
Vein	Y/N	If yes, describe (min, %, size): B011501 - 2% Qtz-chl, 1-2 mm veinlets B011502 - none
Sulphides	Y/N	If yes: Disseminated/Vein/Stringer/Other B011501 - 0.25% pyrite disseminated B011502 - none Percentage:
Fibrous Actinolite	Y(N)	If yes, describe (min, %, size):
If anomalous rock types/significant sulphides:	TAGGED: Y/N	B011501 - 432907 7551617 B011502 - 432950 7551680 NAD83 Zone 13N
UTM (only needed if anomalous):		

Inspection at 100m intervals

Rock Characteristics	
Interval:	**Description**
	Snow Covered - could not inspect walls

Sample ID	Sample Location	Sample Date	Rock Type	Easting	Northing	Color of 2mm fraction	Lith-texture/Fabric	Rock Type	Geological Description	Alteration	Alteration Texture	Fizz Test (groundmass)	Fizz Test (on Carb/Qtz-Carb veining)
SRK-QD-01A-24 (2mm fraction); SRK-QD-01B-24 (1cm fraction)	Quarry D	9/4/2024	1a (Mafic Volcanics; moderate to weakly foliated basalt)	432893	7551667	Grey; <1cm fraction also grey	Weakly foliated	Mafic volcanics (1a); fine grained and foliated basalt	Locally hematite altered foliated basalt; fresh and not heavily weathered materials; competent rock; no geolocial structure besides regional foliation observed at this sample location or on the adjacent blast walls; some qtz-carb veining observed in walls (<5cm->5mm)	Weakly hematitized; moderate chlorite	Hematite along fractures; veinlets; chlorite in ground mass; following foliation	Moderate to strong	Strong
SRK-QD-02A-24 (2mm fraction); SRK-QD-02B-24 (1cm fraction)	Quarry D	9/4/2024	1a (Mafic Volcanics; moderate to weakly foliated basalt)	432879	7551749	Grey; <1cm fraction also grey	Weakly foliated	Mafic volcanics (1a); fine grained and foliated basalt	On the north side of the quarry; weakly foliated mafic volcanics observed in the blast wall from afar; minor qta-carb veining; trace sulphides (py) observed in blast talus; minor hematite staining/along fracture planes and joints in blast talus fines and observed in the blast faces	Weakly hematitized; moderate chlorite	Local hematite along fracture planes; chlorite pervasive in matrix	Moderate	Strong
SRK-QD-03-24	Quarry D	9/5/2024	1a (Mafic Volcanics; moderate to weakly foliated basalt)	432856	7551775	Whole rock sample	Moderately foliated	Mafic volcanics (1a); fine grained and moderately foliated basalt	Sampled from boulder in front of north corner blast wall; malachite coating on boulder; higher sulfide content than other areas (0.1%).	Weakly hematitized; moderate to strongly chloritized	Hematite along fracture planes and as veinlets; chlorite in matrix	Moderate	Strong
SRK-QD-04A-24 (2mm fraction); SRK-QD-04B-24 (1cm fraction)	Quarry D	9/5/2024	1a (Mafic Volcanics; moderate to weakly foliated basalt)	432848	7551772	Red-grey	Strongly foliated	Mafic volcanics (1a); strongly foliated basalt	Sampled in heavily iron stained talus/mud material on north corner blast wall/ramp that the dozer had pushed material up. Sampled to test the source of the red mud.	Strongly hematized material; moderate to strongly chloritized; iron carbonate alteration on chips; iron carbonate vein materials nearby	Hematite pervasive and along fractures; iron carb on grains and in vein material; moderate to strong chlorite in matrix	Moderate to strong	Slight to moderate

Sample ID	Sample Location	Carbonate Color	Carbonate Occurence	Weathering Intensity	Sulphide Type	Sulphide %	Sulphide Texture
SRK-QD-01A-24 (2mm fraction); SRK-QD-01B-24 (1cm fraction)	Quarry D	White	In matrix and calcite in veinlets (<2mm)	Fresh	None observed	-	-
SRK-QD-02A-24 (2mm fraction); SRK-QD-02B-24 (1cm fraction)	Quarry D	White	In matrix and qtz-carb veining	Fresh	Pyrite	Trace (<0.1%)	Disseminated fine grained/cubic pyrite in calcite veining
SRK-QD-03-24	Quarry D	White	Calcite veining; calcite present in groundmass	Weakly weathered	Pyrite; malachite (assumed chalcopyrite near or in sample)	0.10%	Fine grained cubic disseminated pyrite in groundmass and in veinlets
SRK-QD-04A-24 (2mm fraction); SRK-QD-04B-24 (1cm fraction)	Quarry D	Red-white	Iron carbonate vein material; qtz-carb.vein materials	Weak to moderately weathered (difficult to discern since bucket scraped materials in corner)	None observed	-	p

Figure 1: Mafic volcanics (1a) with quartz-carbonate veins from Quarry D (SRK-QD-01-24)

Source: https://srk.sharepoint.com/sites/NACAPR003181/Internal/1100 Quarry/!Task 1112 Quarry D Construction Support Drilling, and Blast Inspections/Quarry Monitor Sampling (QMP)/Photos

Figure 2: Weakly foliated mafic volcanics (1a) with minor quartz-carbonate veining, trace sulphides (pyrite), and minor hematite staining from Quarry D (SRK-QD-02-24)

Source: https://srk.sharepoint.com/sites/NACAPR003181/Internal/1100 Quarry/!Task 1112 Quarry D Construction Support Drilling, and Blast Inspections/Quarry Monitor Sampling (QMP)/Photos

Figure 3: Mafic volcanics (1a) ; fine grained and moderately foliated basalt from Quarry D (SRK-QD-03-24)

Source: https://srk.sharepoint.com/sites/NACAPR003181/Internal/1100 Quarry/!Task 1112 Quarry D Construction Support Drilling, and Blast Inspections/Quarry Monitor Sampling (QMP)/Photos

Figure 4: Mafic volcanics (1a); strongly foliated basalt sampled in heavily iron stained talus/mud material from Quarry D (SRK-QD-04-24)

Source: https://srk.sharepoint.com/sites/NACAPR003181/Internal/1100 Quarry/!Task 1112 Quarry D Construction Support Drilling, and Blast Inspections/Quarry Monitor Sampling (QMP)/Photos

Figure 5: Sample B011501 with quartz-chlorite veinlets and 0.25% disseminated pyrite from Quarry D

Source: https://srk.sharepoint.com/sites/ https://srk.sharepoint.com/sites/NACAPR003064/Internal/!070_Project_Data/020_Client/Quarry%20Field%20Notes/2024-10-21/

Figure 6: Sample B011502 from Quarry D

Source: https://srk.sharepoint.com/sites/ https://srk.sharepoint.com/sites/NACAPR003064/Internal/!070_Project_Data/020_Client/Quarry%20Field%20Notes/2024-10-21/

Appendix A2 ABA Data

Sample ID	Sieve Size	Total S (%)
B011501	1 cm	0.08
B011501	2 mm	0.09
B011502	1 cm	0.07
B011502	2 mm	0.10
SRK-QD-01-24	1 cm	0.13
SRK-QD-01-24	2 mm	0.16
SRK-QD-02-24	1 cm	0.15
SRK-QD-02-24	2 mm	0.20
SRK-QD-04-24	1 cm	0.05
SRK-QD-04-24	2 mm	0.06

Sample ID	Sieve Size	Paste pH	CO2	CaCO3 Equiv.	Total S	HCl Extractable Sulphate Sulphur	Sulphide Sulphur (by diff.)	Acid Generation Potential	Mod. ABA Neutralization Potential	Fizz Rating	Net Neutralization Potential	Neutralization Potential Ratio
Units		**pH Units**	**wt%**	**Kg CaCO3/T**	**wt%**	**wt%**	**wt%**	**Kg CaCO3/T**	**Kg CaCO3/T**	**N/A**	**Kg CaCO3/T**	**N/A**
CAHBC100612	1 cm	8.95	4.81	109.3	0.16	0.02	0.14	4.4	114	STRONG	109	26
CAHBC100613	1 cm	8.91	5.76	130.9	0.16	0.06	0.10	3.1	120	MODERATE	116	39
CAHBC100612	2 mm	8.79	8.74	198.6	0.22	0.03	0.19	5.9	210	STRONG	205	36
CAHBC100613	2 mm	N/A	N/A	N/A	0.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix A3 Aqua Regia Metals Data

Sample Name	Units	*Detection Limit*	CAHBC100612	CAHBC100613	CAHBC100612	CAHBC100613
Sieve Size			1 cm	1 cm	2 mm	2 mm
Mo	**ppm**	*0.01*	0.40	0.23	1.67	0.53
Cu	**ppm**	*0.01*	137	120	138	133
Pb	**ppm**	*0.01*	1.9	1.6	4.4	4.4
Zn	**ppm**	*0.10*	89	81	95	89
Ag	**ppb**	*2.0*	57	37	62	52
Ni	**ppm**	*0.10*	63	60	63	62
Co	**ppm**	*0.10*	38	37	38	38
Mn	**ppm**	*1.0*	1250	1220	1350	1380
Fe	**%**	*0.01*	5.8	5.8	5.9	6.0
As	**ppm**	*0.10*	2.3	1.9	2.6	1.6
U	**ppm**	*0.10*	<0.10	<0.10	<0.10	<0.10
Au	**ppb**	*0.20*	1.3	1.8	3.6	2.0
Th	**ppm**	*0.10*	0.3	0.3	0.2	0.3
Sr	**ppm**	*0.50*	26	25	29	30
Cd	**ppm**	*0.01*	0.26	0.16	0.46	0.28
Sb	**ppm**	*0.02*	0.05	0.03	0.06	0.05
Bi	**ppm**	*0.0020*	0.03	0.03	0.02	0.03
V	**ppm**	*2.0*	139.0	139.0	137.0	143.0
Ca	**%**	*0.010*	5.07	5.45	7.82	7.53
P	**%**	*0.0010*	0.037	0.038	0.028	0.036
La	**ppm**	*0.50*	2.9	3.1	2.2	3.2
Cr	**ppm**	*0.50*	170.0	169.0	157.0	165.0
Mg	**%**	*0.010*	2.49	2.45	2.45	2.64
Ba	**ppm**	*0.50*	5.3	2.9	6.2	6.5
Ti	**%**	*0.0010*	0.389	0.334	0.344	0.334
B	**ppm**	*20*	51.0	<20	51.0	34.0
Al	**%**	*0.010*	3.21	2.99	3.12	3.26
Na	**%**	*0.0010*	0.028	0.015	0.021	0.023
K	**%**	*0.010*	0.02	0.02	0.02	0.02
W	**ppm**	*0.10*	<0.10	<0.10	<0.10	<0.10
Sc	**ppm**	*0.10*	8.2	8.4	8.1	8.5
Tl	**ppm**	*0.020*	0.020	<0.020	0.03	0.02
Hg	**ppb**	*5.0*	<5	<5	15	10
Se	**ppm**	*0.10*	0.5	0.5	0.7	0.6
Te	**ppm**	*0.02*	<0.02	<0.02	0.02	0.02
Ga	**ppm**	*0.10*	7.3	7.4	6.9	7.4
S	**%**	*0.02*	0.16	0.15	0.21	0.19

Appendix A4 SFE Test Data

Parameter	Units	Detection Limit	Quarry 2 - Sample ID	
			CAHBC100612	CAHBC100613
Sieve Size	mm	-	2	2
Sample Weight	g	-	251	251
Volume Used	ml	-	750	750
pH	pH Units	-	9.54	9.58
EC	uS/cm	*1*	68	72
SO4	mg/L	*0.5*	4.0	5.3
Acidity to pH4.5	mg/L	*0.5*	<0.5	<0.5
Acidity to pH8.3	mg/L	*0.5*	1.4	1.1
Total Alkalinity	mg/L	*0.5*	25	23
Bicarbonate	mg/L	*0.5*	30	28
Carbonate	mg/L	*0.5*	<0.5	<0.5
Hydroxide	mg/L	*0.5*	<0.5	<0.5
Nitrate-N	mg/L	*0.02*	0.26	0.22
Nitrite-N	mg/L	*0.005*	0.02	0.02
Total Ammonia	mg/L	*0.005*	0.09	0.11
Hardness CaCO3	mg/L	*0.5*	14.0	14.7
Dissolved Aluminum (Al)	mg/L	*0.0005*	0.31	0.31
Dissolved Antimony (Sb)	mg/L	*0.00002*	0.000083	0.000046
Dissolved Arsenic (As)	mg/L	*0.00002*	0.00040	0.00034
Dissolved Barium (Ba)	mg/L	*0.00002*	0.00063	0.0025
Dissolved Beryllium (Be)	mg/L	*0.00001*	<0.00001	<0.00001
Dissolved Bismuth (Bi)	mg/L	*0.000005*	<0.000005	<0.000005
Dissolved Boron (B)	mg/L	*0.05*	<0.05	<0.05
Dissolved Cesium (Cs)	mg/L	*0.00005*	<0.00005	<0.00005
Dissolved Cadmium (Cd)	mg/L	*0.000005*	0.0000090	<0.000005
Dissolved Calcium (Ca)	mg/L	*0.05*	4.88	4.99
Dissolved Chromium (Cr)	mg/L	*0.0001*	0.00017	<0.0001
Dissolved Cobalt (Co)	mg/L	*0.000005*	0.00002	0.00001
Dissolved Copper (Cu)	mg/L	*0.00005*	0.00079	0.00020
Dissolved Lanthanum (La)	mg/L	*0.00005*	<0.00005	<0.00005
Dissolved Iron (Fe)	mg/L	*0.001*	0.012	0.002
Dissolved Lead (Pb)	mg/L	*0.000005*	0.000020	0.000016
Dissolved Lithium (Li)	mg/L	*0.0005*	<0.0005	<0.0005
Dissolved Magnesium (Mg)	mg/L	*0.05*	0.45	0.55
Dissolved Manganese (Mn)	mg/L	*0.00005*	0.0006	0.0003
Dissolved Phosphorus (P)	mg/L	*0.002*	0.0102	0.0048
Dissolved Molybdenum (Mo)	mg/L	*0.00005*	0.0006	0.0012
Dissolved Nickel (Ni)	mg/L	*0.00002*	0.0002	0.0001
Dissolved Potassium (K)	mg/L	*0.05*	0.67	0.78
Dissolved Rubidium (Rb)	mg/L	*0.00005*	0.00065	0.00080
Dissolved Selenium (Se)	mg/L	*0.00004*	0.00046	0.00043
Dissolved Silicon (Si)	mg/L	*0.1*	0.90	0.89
Dissolved Silver (Ag)	mg/L	*0.000005*	<0.000005	<0.000005
Dissolved Sodium (Na)	mg/L	*0.05*	6.3	6.8
Dissolved Strontium (Sr)	mg/L	*0.00005*	0.01	0.01
Dissolved Sulphur (S)	mg/L	*10*	<10	<10
Dissolved Tellurium (Te)	mg/L	*0.00002*	<0.00002	<0.00002
Dissolved Thallium (Tl)	mg/L	*0.000002*	0.0000060	0.0000050
Dissolved Thorium (Th)	mg/L	*0.00005*	<0.00005	<0.00005
Dissolved Tin (Sn)	mg/L	*0.0002*	<0.0002	<0.0002
Dissolved Titanium (Ti)	mg/L	*0.0005*	<0.0005	<0.0005
Dissolved Tungsten (W)	mg/L	*0.00001*	0.000015	0.000010
Dissolved Uranium (U)	mg/L	*0.000002*	0.0000090	0.000019
Dissolved Vanadium (V)	mg/L	*0.0002*	0.0040	0.0034
Dissolved Zinc (Zn)	mg/L	*0.0001*	0.00011	<0.0001
Dissolved Zirconium (Zr)	mg/L	*0.0001*	<0.0001	<0.0001
Dissolved Mercury (Hg)	mg/L	*0.00005*	<0.00005	<0.00005

***SFE tests do not represent natural waters**

Appendix B Tailings Monitoring

Appendix B1 Seepage Monitoring Data (TL-11)

Seepage Monitoring of Backfilled Stopes

		1-Sep-24				3-Nov-24		
		TL11-120 West Limb	TL11-110-Left	TL11-110-Right	TL11-134 Doris CPR	TL11-114	TL11-120 Level	TL11-110 EXT
Date Sampled		9/1/2024 9:10	9/1/2024 9:55	9/1/2024 9:50	9/1/2024 10:40	11/3/2024 14:00	11/3/2024 13:30	11/3/2024 14:20
Parameter	Units	EO2407635-001	EO2407635-003	EO2407635-004	EO2407635-007	EO2410127-001	EO2410127-002	EO2410127-003
Flow Rate	N/A	Medium flow; visual estimate	Medium flow; visual estimate	Medium flow; visual estimate	High flow; visual estimate	Moderate flow; visual estimate	Moderate flow; visual estimate	Not measurable
Conductivity	uS/cm	12900	16700	16100	9540	9130	12200	10600
pH	pH	8.19	8.12	8.17	8.17	8.38	8.71	8.06
Total Suspended Solids	mg/L	68.2	152	241	3	35.8	44.2	43.8
Total Dissolved Solids	mg/L	8120	10800	10600	11300	5120	7220	6160
Acidity (as CaCO3)	mg/L	10.8	16.4	15	13.8	5.5	5.7	6.3
Alkalinity, Total (as CaCO3)	mg/L	200	246	251	247	212	206	208
Ammonia, Total (as N)	mg/L	0.0284	0.306	0.231	0.187	0.361	0.0431	0.0873
Chloride (Cl)	mg/L	4190	5520	5350	2880	2890	4100	3620
Nitrate (as N)	mg/L	3.6	9.75	8.79	3.5	0.792	3.49	2.11
Nitrite (as N)	mg/L	0.01	0.68	0.652	0.0432	0.0233	0.0227	0.0275
Sulfate (SO4)	mg/L	514	867	861	534	376	547	369
Cyanide, Total	mg/L	0.0144	0.0097	0.0076	0.005	0.0131	0.0056	0.0052
Cyanide, Weak Acid Diss	mg/L	0.005	0.005	0.005	0.005	0.02	0.005	0.005
Cyanide, Free	mg/L	0.005	0.005	0.005	0.005	0.02	0.005	0.005
Aluminum (Al)-Dissolved	mg/L	0.01	0.01	0.01	0.01	0.005	0.01	0.01
Antimony (Sb)-Dissolved	mg/L	0.001	0.001	0.001	0.001	0.0005	0.001	0.001
Arsenic (As)-Dissolved	mg/L	0.00205	0.001	0.00105	0.001	0.00422	0.00251	0.00114
Barium (Ba)-Dissolved	mg/L	0.0254	0.0271	0.0274	0.0224	0.0328	0.0255	0.0439
Beryllium (Be)-Dissolved	mg/L	0.0002	0.0518	0.0002	0.0002	0.0001	0.0002	0.0002
Bismuth (Bi)-Dissolved	mg/L	0.0005	0.0005	0.0005	0.0005	0.00025	0.0005	0.0005
Boron (B)-Dissolved	mg/L	1.39	1.77	1.72	1.11	1.28	1.45	1.24
Cadmium (Cd)-Dissolved	mg/L	0.0000616	0.000171	0.000203	0.00021	0.000025	0.0000539	0.00005
Calcium (Ca)-Dissolved	mg/L	166	312	316	196	131	165	164
Cesium (Cs)-Dissolved	mg/L	0.000426	0.000177	0.000197	0.0001	0.000206	0.000409	0.000401
Chromium (Cr)-Dissolved	mg/L	0.005	0.005	0.005	0.005	0.0025	0.005	0.005
Cobalt (Co)-Dissolved	mg/L	0.0069	0.0108	0.0107	0.0104	0.00369	0.00777	0.00226
Copper (Cu)-Dissolved	mg/L	0.00827	0.0104	0.0112	0.011	0.00573	0.00787	0.002
Iron (Fe)-Dissolved	mg/L	0.1	0.1	0.1	0.1	0.05	0.1	0.1
Lead (Pb)-Dissolved	mg/L	0.00422	0.0005	0.0005	0.0005	0.00025	0.000602	0.0005
Lithium (Li)-Dissolved	mg/L	0.042	0.0584	0.0615	0.0334	0.0339	0.0421	0.041
Magnesium (Mg)-Dissolved	mg/L	241	392	373	194	190	260	228
Manganese (Mn)-Dissolved	mg/L	0.482	0.55	0.454	0.512	0.224	0.446	0.135
Molybdenum (Mo)-Dissolved	mg/L	0.00419	0.00356	0.00363	0.0023	0.00456	0.00417	0.00267
Nickel (Ni)-Dissolved	mg/L	0.014	0.0234	0.0244	0.0227	0.0037	0.0142	0.005
Phosphorus (P)-Dissolved	mg/L	0.5	0.5	0.5	0.5	0.25	0.5	0.5
Potassium (K)-Dissolved	mg/L	70.2	86.9	85.6	50	54.7	72.3	66.5
Rubidium (Rb)-Dissolved	mg/L	0.038	0.0347	0.0346	0.0185	0.0218	0.0386	0.031
Selenium (Se)-Dissolved	mg/L	0.000565	0.00219	0.00181	0.000998	0.00025	0.000543	0.0005
Silicon (Si)-Dissolved	mg/L	3.34	3.03	3.08	2.41	3.63	3.55	3.57
Silver (Ag)-Dissolved	mg/L	0.0001	0.000225	0.000204	0.0001	0.00005	0.0001	0.0001
Sodium (Na)-Dissolved	mg/L	2200	2620	2610	1450	1570	2230	1870
Strontium (Sr)-Dissolved	mg/L	2.11	3.5	3.39	1.64	1.77	2.09	2.21
Sulfur (S)-Dissolved	mg/L	202	337	346	201	136	193	124
Tellurium (Te)-Dissolved	mg/L	0.002	0.002	0.002	0.002	0.001	0.002	0.002
Thallium (Tl)-Dissolved	mg/L	0.0001	0.0001	0.0001	0.0001	0.00005	0.0001	0.0001
Thorium (Th)-Dissolved	mg/L	0.001	0.001	0.001	0.001	0.0005	0.001	0.001
Tin (Sn)-Dissolved	mg/L	0.001	0.001	0.001	0.001	0.0005	0.001	0.001
Titanium (Ti)-Dissolved	mg/L	0.003	0.003	0.003	0.003	0.0015	0.003	0.003
Tungsten (W)-Dissolved	mg/L	0.001	0.001	0.001	0.001	0.0005	0.001	0.00228
Uranium (U)-Dissolved	mg/L	0.000137	0.0004	0.000326	0.000295	0.000632	0.000164	0.00029
Vanadium (V)-Dissolved	mg/L	0.005	0.005	0.005	0.005	0.0025	0.005	0.005
Zinc (Zn)-Dissolved	mg/L	0.01	0.0149	0.027	0.0196	0.0133	0.01	0.0442
Zirconium (Zr)-Dissolved	mg/L	0.003	0.003	0.003	0.003	0.0015	0.003	0.003

Appendix C Construction and Waste Rock Water Quality Monitoring

Appendix C1 Field Observations, Freshet Seepage Monitoring

Appendix C1: Seepage Field Data

Sampling Point	Sampled Date	Start Time	Field pH	Field Conductivity (uS/cm)	ORP (RmV)	Water Temperature (°C)	Salt (ppt)	Flow Measurement Calculations	Flow (m/s)
24-CWP-01	24-Jun-24	10:00	7.83	1238	202	4.3	0.6	Very low flow; visual estimate	-
24-DC-03	3-Jun-24	8:15	8.19	1980	213	10.3	1	Not measured	-
24-DC-04	2-Jun-24	13:40	8.42	291	204	3.2	0.1	Flow meter	0.166
24-DC-05	2-Jun-24	13:50	8.18	586	224	7.7	0.3	Not enough flow	-
24-DC-06	4-Jun-24	8:30	7.56	276	224	6.8	0.1	Flow meter	0.022
24-DC-08	7-Jun-24	10:15	7.48	10370	236	4.8	5.7	Flow meter	0.032
24-MAD-01	27-May-24	14:50	7.89	194.2	194	6.1	0	Not stated	0.121
24-MAD-02	27-May-24	15:50	7.6	399	192	6	0.2	Flow meter	0.034
REFSEEP01	11-Jul-24	10:55	7.7	66.5	164	6	0	Not measured	-
REFSEEP02	11-Jul-24	11:35	7.36	421	172	9	0.2	Not measured	-
REFSEEP03	11-Jul-24	11:55	7.57	184.1	148	10.9	0	Not measured	-
MMS1-N	20-May-24	16:00	8.35	174.5	193	-	0	-	-
MMS1-N	12-Jun-24	15:15	8.64	862	186	-	0.4	-	-
MMS1-N	10-Jul-24	11:00	8.46	1467	170	-	0.7	-	-
MMS1-N	18-Aug-24	16:25	8.25	5470	175	-	2.97	-	-
MMS1-N	16-Sep-24	11:00	7.44	3684.9	262	-	1.91	-	-
MMS1-S	20-May-24	15:40	8.12	152.1	191	-	0	-	-
MMS1-S	12-Jun-24	15:00	7.91	784	217	-	0.4	-	-
MMS1-S	10-Jul-24	10:50	8.32	524	161	-	0.2	-	-
MMS1-S	18-Aug-24	16:15	8.08	1740	158.4	-	0.88	-	-
MMS1-S	16-Sep-24	10:40	8.08	1532.8	249.2	-	0.76	-	-
MMS1-S1	12-Jun-24	15:30	7.8	504	225	-	0.2	-	-
MMS1-S1	10-Jul-24	10:30	8.06	599	157	-	0.3	-	-
MMS1-S1	18-Aug-24	15:55	7.33	7870	183.2	-	4.47	-	-
MMS1-S1	16-Sep-24	15:23	7.54	2958.2	364.6	-	1.51	-	-
MMS1-S2	12-Jun-24	16:20	6.65	1783	202	-	OR	-	-
MMS1-S2	10-Jul-24	10:10	6.49	28240	211	-	6.49	-	-
MMS1-S2	18-Aug-24	15:35	6.44	47700	203.8	-	30.97	-	-
MMS1-S2	16-Sep-24	15:40	6.7	35330	364.5	-	21.7	-	-
MMS1-S3	12-Jun-24	15:55	7.44	1005	213	-	0.5	-	-
MMS1-S3	10-Jul-24	09:45	7.85	716	166	-	0.3	-	-
MMS1-S4	12-Jun-24	14:35	7.26	252	187	-	0.2	-	-
MMS1-S4	10-Jul-24	11:15	7.91	564	183	-	0.2	-	-
MMS1-S4	18-Aug-24	16:40	8.24	550	193.6	-	0.27	-	-
MMS1-S4	16-Sep-24	09:40	7.25	722.24	-1.9	-	0.36	-	-
24-PCP-01	23-May-24	16:35	8.1	740	183	8.4	0.3	Flow meter	0.019
24-PCP-02	7-Jun-24	9:40	8	3300	250	9.2	1.7	Not enough flow	-

Appendix C2 Lab Data, Freshet Seepage Monitoring

Sample ID	Date Sampled	Time Sampled	pH	Conductivity	ORP	Salt	Hardness (as CaCO3), dissolved	Total Suspended Solids	Total Dissolved Solids	Acidity (as CaCO3)	Alkalinity, Total (as CaCO3)	Ammonia (as N)	Bromide (Br)	Chloride (Cl)	Fluoride (F)	Nitrate (as N)	Nitrite (as N)	Phosphorus (P)-Total	Sulfate (SO4)	Cyanide, Total	Aluminum (Al)-Dissolved	Antimony (Sb)-Dissolved	Arsenic (As)-Dissolved	Barium (Ba)-Dissolved	Beryllium (Be)-Dissolved	Bismuth (Bi)-Dissolved	Boron (B)-Dissolved
			s.u.	*uS/cm*	*RmV*	*ppt*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
24-CWP-01	6/24/2024	10:00	8.17	1200	202	0.6	228	17.6	700	3.9	168	0.0156	0.768	169	0.167	0.913	0.0013	0.0333	176	#N/A	0.010	0.00164	0.039	0.0142	0.0001	0.00005	0.16
24-DC-03	6/3/2024	8:15	8.26	1860	213	1	390	205	1210	2	176	17.7	0.849	212	0.136	20.5	0.0952	0.0265	440	0.0123	0.011	0.0112	0.00137	0.00147	0.0002	0.00010	0.498
24-DC-04	6/2/2024	13:40	8.11	257	204	0.1	77.7	31.4	144	2	74.7	0.0983	0.074	14.4	0.049	1.39	0.0054	0.0073	32.6	0.005	0.015	0.0147	0.00043	0.047	0.0001	0.00005	0.074
24-DC-05	6/2/2024	13:50	8.16	553	224	0.3	133	52.6	296	2	88.5	2.64	0.23	61.4	0.059	5.6	0.0282	0.0136	77.1	0.0068	0.01680	0.00037	0.00038	0.00150	0.00010	0.00005	0.12100
24-DC-06	6/4/2024	10:20	7.92	258	224	0.1	83.2	144	150	2	80.9	0.0842	0.05	20.4	0.091	0.132	0.0043	0.079	25.4	0.0059	0.03550	0.00010	0.00167	0.00519	0.00010	0.00005	0.05300
24-DC-08	6/7/2024	10:15	7.76	10300	236	5.7	3130	108	6230	14.7	78.2	46.5	3.66	2700	0.20	167	0.561	0.0107	584	0.0333	0.01	0.00232	0.00125	0.148	0.001	0.0005	0.281
24-PCP-01	5/23/2024	16:35	8.1	451	183	0.3	170	28	290	2	83.2	0.0777	0.192	35.7	0.112	1.44	0.0103	0.0721	99	0.121	0.02480	0.00044	0.00113	0.00486	0.00010	0.00005	0.07400
24-PCP-02	6/7/2024	9:40	8.29	3160	250	1.7	733	16.6	1970	2	204	2.00	1.27	746	0.10	11	0.144	0.0334	205	0.005	0.0098	0.00055	0.00165	0.0357	0.0002	0.0001	0.379
24MAD01	5/27/2024	15:10	7.86	174	194	0	76.1	6.6	111	2	62.3	0.0396	0.05	11.3	0.037	0.187	0.0092	0.0397	12.4	-	0.01220	0.00012	0.00175	0.00413	0.00010	0.00005	0.02200
24MAD02	5/27/2024	14:05	7.83	365	192	0.2	111	13.2	233	2	82.6	0.043	0.13	42.7	0.07	0.0962	0.0051	0.0292	43.3	-	0.01150	0.00018	0.00103	0.00877	0.00010	0.00005	0.01900
MMS1-N	5/20/2024	16:00	7.81	159	193	0	50.1	8.8	-	-	45.7	0.0272	0.093	14.4	0.041	0.163	0.0019	-	13.8	0.005	0.0099	0.00086	0.13	0.00554	0.0001	0.0001	0.028
MMS1-N	6/12/2024	15:15	8.28	745	186	0.4	167	53.1	-	-	114	0.0365	0.493	124	0.111	0.244	0.0058	-	118	0.005	0.026	0.00127	0.070	0.01150	0.00010	0.00005	0.14400
MMS1-N	7/10/2024	11:00	8.38	1490	170	0.7	286	15.9	-	-	161	0.0536	0.988	244	0.115	0.603	0.0058	-	180	0.005	0.011	0.00097	0.040	0.0189	0.0001	0.000050	0.181
MMS1-N	8/18/2024	16:25	7.88	5750	175	2.97	1220	6.1	-	-	193	1.54	5.46	1370	1.00	12.2	0.135	-	950	0.005	0.0099	0.00438	0.15	0.0905	0.0001	0.000250	0.652
MMS1-N	9/16/2024	11:00	8.06	3610	262	1.91	937	13.2	-	-	338	1.31	3.63	731	0.121	1.07	0.0244	-	581	0.005	0.0088	0.0015	0.031	0.048	0.0002	0.000100	0.312
MMS1-S	5/20/2024	15:40	7.67	136	191	0	39.3	8.8	-	-	35.2	0.0261	0.069	13.8	0.021	0.26	0.002	-	12.6	0.005	0.0072	0.00018	0.021	0.00314	0.0001	0.000050	0.024
MMS1-S	6/12/2024	15:00	8.13	803	217	0.4	198	3.3	-	-	113	0.0469	0.444	82.2	0.10	2.5	0.0109	-	134	0.005	0.013	0.00047	0.015	0.01070	0.00010	0.000050	0.15700
MMS1-S	7/10/2024	10:50	8.17	530	161	0.2	130	20.5	-	-	88.4	0.01	0.244	50.8	0.052	1.3	0.0027	-	81.8	0.005	0.015	0.00034	0.013	0.0074	0.0001	0.000050	0.106
MMS1-S	8/18/2024	16:15	7.86	1520	158.4	0.88	389	19.7	-	-	194	0.108	0.497	167	0.10	5.78	0.0211	-	316	0.005	0.012	0.00063	0.016	0.0222	0.0001	0.000050	0.29
MMS1-S	9/16/2024	10:40	8.36	1540	249.2	0.76	461	3.00	-	-	197	0.0295	1.77	322	0.10	3.02	0.0087	-	316	0.005	0.0094	0.00051	0.073	0.0241	0.0001	0.000050	0.24
MMS1-S1	6/12/2024	15:30	8.02	499	225	0.2	128	3.00	-	-	107	0.014	0.45	57.7	0.071	1.22	0.0011	-	42	0.005	0.0056	0.00069	0.014	0.00588	0.00010	0.000050	0.11900
MMS1-S1	7/10/2024	10:30	8.25	575	157	0.3	156	5.1	-	-	124	0.011	0.327	61.3	0.073	1.4	0.0034	-	64	0.005	0.0054	0.00111	0.050	0.0074	0.0001	0.000050	0.154
MMS1-S1	8/18/2024	15:55	7.72	2530	183.2	4.47	3200	4.1	-	-	145	0.237	3.76	589	0.40	4.18	0.021	-	231	0.005	0.0097	0.00227	0.029	0.189	0.0001	0.000250	0.326
MMS1-S1	9/16/2024	15:23	7.96	2580	364.6	1.51	674	6.2	-	-	168	0.0433	3.46	624	0.10	0.795	0.0065	-	240	0.005	0.014	0.00066	0.0074	0.0456	0.0002	0.000100	0.25
MMS1-S2	6/12/2024	16:20	7.06	17100	202	OR	6710	3.00	-	-	30.1	17.2	37.3	6090	2.00	13.1	0.283	-	102	0.005	0.0050	0.00050	0.00062	0.70900	0.00010	0.000250	0.05000
MMS1-S2	7/10/2024	10:10	7.15	27200	211	6.49	10700	6.9	-	-	25.7	21.8	63.8	9970	2.00	8.94	<0.100	-	198	0.005	0.010	0.001	0.001	1.080	0.000	0.001	0.100
MMS1-S2	8/18/2024	15:35	6.91	41300	203.8	31	16700	6.5	-	-	35.2	26.7	113	16700	2.00	74.5	0.282	-	364	0.005	0.014	0.001	0.001	1.490	0.000	0.001	0.100
MMS1-S2	9/16/2024	15:40	7.41	34500	364.5	21.7	14000	156	-	-	86.4	22.5	102	13900	0.20	56.2	0.189	-	306	0.005	0.05	0.01	0.005	1.27	0.005	0.002500	0.5
MMS1-S3	6/12/2024	15:55	7.84	1030	213	0.5	164	3.00	-	-	160	0.224	0.395	142	0.122	0.621	0.0091	-	114	0.005	0.024	0.00094	0.18	0.01370	0.00010	0.000100	0.30800
MMS1-S3	7/10/2024	09:45	8.26	717	166	0.3	92.1	11.9	-	-	212	0.0272	<0.250	50.8	0.245	1.62	<0.0050	-	67.9	0.005	0.040	0.00229	0.23	0.00756	0.0001	0.000050	0.431
MMS1-S4	6/12/2024	14:35	7.73	251	187	0.2	78.8	3.00	-	-	55.8	0.0424	0.05	34.6	0.031	0.0125	0.001	-	9.19	0.005	0.035	0.00010	0.00054	0.00500	0.00010	0.000050	0.01000
MMS1-S4	7/10/2024	11:15	8.1	511	183	0.2	187	4.3	-	-	147	0.415	0.118	64.6	0.073	0.0114	0.0015	-	13.4	0.005	0.0097	0.00020	0.0022	0.0112	0.0001	0.000100	0.028
MMS1-S4	8/18/2024	16:40	7.88	544	193.6	0.27	192	3.1	-	-	141	0.441	0.12	77.4	0.064	0.0161	0.0013	-	16.3	0.005	0.0077	0.00020	0.0022	0.012	0.0001	0.000100	0.032
MMS1-S4	9/6/2024	09:40	7.95	563	-1.9	0.36	213	7.2	-	-	157	0.492	0.151	85.5	0.094	0.0814	0.0012	-	16.4	0.005	0.0096	0.0001	0.0048	0.0163	0.0001	0.000050	0.038
REFSEEP01	7/11/2024	11:00	7.34	65.8	164	0	23.2	3.00	64	2.1	22.3	0.0195	0.05	5.64	0.06	0.005	0.001	0.0078	0.51	0.005	0.086	0.0001	0.00024	0.00266	0.0001	0.000050	0.012
REFSEEP02	7/11/2024	11:35	7.83	413	172	0.2	95.3	7.7	289	2	53.9	0.0418	0.203	81.9	0.053	0.005	0.001	0.0069	13.6	0.005	0.023	0.0001	0.00028	0.006	0.0001	0.000050	0.01
REFSEEP03	7/11/2024	12:00	7.86	187	148	0	58.9	3.00	108	2	48.6	0.023	0.05	18.6	0.02	0.005	0.001	0.0027	13.8	0.005	0.0207	0.0001	0.00013	0.00482	0.0001	0.000050	0.01

Note: blue text indicates result below detection limit

Sample ID	Date Sampled	Cadmium (Cd)-Dissolved	Calcium (Ca)-Dissolved	Cesium (Cs)-Dissolved	Chromium (Cr)-Dissolved	Cobalt (Co)-Dissolved	Copper (Cu)-Dissolved	Iron (Fe)-Dissolved	Lead (Pb)-Dissolved	Lithium (Li)-Dissolved	Magnesium (Mg)-Dissolved	Manganese (Mn)-Dissolved	Mercury (Hg)-Dissolved	Molybdenum (Mo)-Dissolved	Nickel (Ni)-Dissolved	Phosphorus (P)-Dissolved	Potassium (K)-Dissolved	Rubidium (Rb)-Dissolved	Selenium (Se)-Dissolved	Silicon (Si)-Dissolved	Silver (Ag)-Dissolved	Sodium (Na)-Dissolved	Strontium (Sr)-Dissolved	Sulfur (S)-Dissolved
		mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
24-CWP-01	6/24/2024	0.0000099	53.6	0.000012	0.0005	0.00025	0.0078	0.010	0.00005	0.0081	22.8	0.0021	0.000005	0.0044	0.0074	0.05	10.5	0.00263	0.0015	2.6	0.00001	144	0.213	61.2
24-DC-03	6/3/2024	0.000010	83.00000	0.00035	0.00100	0.00063	0.00309	0.02000	0.00010	0.01060	44.40000	0.11900	0.00001	0.01310	0.00100	0.100	11.60000	0.01510	0.00391	1.73000	0.00002	224.0	0.425	154
24-DC-04	6/2/2024	0.0000050	22.20000	0.00001	0.00050	0.00028	0.00116	0.01000	0.00005	0.00740	5.41000	0.01120	0.00001	0.00129	0.00554	0.050	2.81000	0.00134	0.00057	1.17000	0.00001	19.3	0.100	154
24-DC-05	6/2/2024	0.0000050	36.10000	0.00019	0.00050	0.00018	0.00050	0.01000	0.00005	0.00260	10.50000	0.05660	0.00001	0.00201	0.00050	0.050	3.58000	0.00457	0.00047	0.84500	0.00001	47.3	0.125	154
24-DC-06	6/4/2024	0.0000050	18.10000	0.00001	0.00050	0.00024	0.00298	0.04900	0.00005	0.00280	9.24000	0.03910	0.00001	0.00094	0.00197	0.050	2.57000	0.00061	0.00009	2.80000	0.00001	18.3	0.039	8.260
24-DC-08	6/7/2024	0.00096	963	0.000309	0.005	0.00352	0.00648	0.10	0.0005	0.016	177	1.23	0.000005	0.0054	0.0102	0.50	43.8	0.0345	0.00714	2.15	0.0001	782	2.66	213
24-PCP-01	5/23/2024	0.0000057	50.00000	0.00001	0.00050	0.00061	0.00281	0.05500	0.00005	0.0086	10.9	0.0804	0.00001	0.00203	0.00050	0.050	3.69	0.00020	0.00087	1.19	0.00001	31.8	0.193	34.5
24-PCP-02	6/7/2024	0.00005750	220	0.000027	0.001	0.00179	0.0134	0.031	0.0001	0.0205	44.7	0.0663	0.000005	0.104	0.00219	0.10	17.6	0.00928	0.00149	0.852	0.000045	353	0.857	77.2
24MAD01	5/27/2024	0.00001	24	0.00001	0.00050	0.00018	0.00264	0.04000	0.00005	0.00120	3.68000	0.02350	0.00001	0.00071	0.00139	0.050	1.31000	0.00054	0.00013	1.05000	0.00001	9.1	0.02740	4.19
24MAD02	5/27/2024	0.00001	31	0.00001	0.00050	0.00023	0.00229	0.05800	0.00005	0.00260	8.36000	0.02610	0.00001	0.00046	0.00205	0.050	2.58000	0.00074	0.00015	2.07000	0.00001	39.4	0.046	15.3
MMS1-N	5/20/2024	0.0000050	14	0.00001	0.0005	0.00081	0.00084	0.010	0.00005	0.0024	3.68	0.020	0.000005	0.00086	0.015	0.050	1.84	0.00059	0.00035	0.515	0.00001	10.5	0.0429	4.67
MMS1-N	6/12/2024	0.0000061	36.10000	0.00001	0.00050	0.00054	0.0044	0.010	0.00005	0.00440	18.60000	0.047	0.00001	0.0037	0.0091	0.050	8.84000	0.00161	0.00089	0.44800	0.00001	116	0.104	40.1
MMS1-N	7/10/2024	0.000010	60.9	0.00001	0.0005	0.00070	0.0062	0.017	0.00005	0.006	32.5	0.068	0.000005	0.0041	0.013	0.050	12.3	0.00187	0.0014	0.794	0.00001	194	0.184	66.7
MMS1-N	8/18/2024	0.000080	278	0.0001	0.0025	0.0048	0.0073	0.050	0.00025	0.0163	128	0.33	0.000005	0.016	0.056	0.25	46.2	0.0105	0.016	3.01	0.00005	750	1.2	338
MMS1-N	9/16/2024	0.000050	194	0.000024	0.001	0.0061	0.011	0.88	0.000108	0.0137	110	1.1	0.000005	0.0057	0.039	0.10	22.4	0.00456	0.0046	2.2	0.000026	393	0.664	190
MMS1-S	5/20/2024	0.0000050	11.5	0.00001	0.0005	0.00015	0.0010	0.010	0.00005	0.00	2.57	0.023	0.000005	0.00055	0.0016	0.05	1.31	0.00041	0.00020	0.308	0.00001	11	0.022	4.25
MMS1-S	6/12/2024	0.000020	53.40000	0.00001	0.00050	0.00074	0.0095	0.010	0.00005	0.00240	15.60000	0.035	0.00001	0.0023	0.0044	0.050	6.96000	0.00305	0.0015	1.67000	0.00001	84.5	0.09520	45.8
MMS1-S	7/10/2024	0.000012	35.6	0.00001	0.0005	0.00033	0.0064	0.010	0.00005	0.0016	9.89	0.012	0.000005	0.0014	0.0030	0.05	4.07	0.00107	0.00093	1.21	0.00001	53	0.0592	30
MMS1-S	8/18/2024	0.000067	102	0.00004	0.0005	0.0022	0.015	0.020	0.00005	0.0043	32.6	0.084	0.000005	0.0033	0.011	0.05	11.5	0.00292	0.0038	3.08	0.000012	168	0.19	116
MMS1-S	9/16/2024	0.000086	122	0.000021	0.0005	0.0084	0.014	0.17	0.00005	0.0051	38	0.24	0.000005	0.0026	0.012	0.05	10.3	0.00304	0.0027	1.85	0.000018	156	0.196	107
MMS1-S1	6/12/2024	0.0000061	33.70000	0.00001	0.00050	0.00032	0.0030	0.016	0.00005	0.00430	10.70000	0.021	0.00001	0.0026	0.0013	0.050	3.94000	0.00081	0.0010	1.51000	0.00001	48	0.11100	13.9
MMS1-S1	7/10/2024	0.000010	40.6	0.00001	0.0005	0.00029	0.0038	0.010	0.00005	0.0034	13.2	0.0034	0.000005	0.0032	0.0024	0.05	4.73	0.00104	0.0014	1.05	0.00001	57.7	0.124	23
MMS1-S1	8/18/2024	0.00047	1080	0.000134	0.0025	0.0059	0.0095	0.074	0.00025	0.337	122	1.1	0.000005	0.0057	0.020	0.25	46.6	0.013	0.0050	3.42	0.00005	429	13.5	91.3
MMS1-S1	9/16/2024	0.00010	174	0.000028	0.001	0.0037	0.0064	0.027	0.000203	0.0157	58.1	1.2	0.000005	0.0018	0.0065	0.10	16.1	0.00245	0.00028	3.74	0.00002	237	0.711	81.2
MMS1-S2	6/12/2024	0.00099	1880.00000	0.00006	0.00250	0.0055	0.0046	0.36	0.00025	0.54600	490.00000	0.86	0.00001	0.00025	0.015	0.25	90.00000	0.00856	0.0077	4.62000	0.00005	1040	19.6	48.2
MMS1-S2	7/10/2024	0.0027	2920	0.0001	0.005	0.0065	0.0048	0.10	0.0005	0.759	834	1.8	0.000005	0.00050	0.027	0.50	126	0.0112	0.014	5.03	0.0001	1810	32.7	88
MMS1-S2	8/18/2024	0.0044	4680	0.0001	0.005	0.013	0.0087	0.10	0.0005	0.952	1220	4.6	0.000005	0.00050	0.041	0.50	175	0.016	0.026	5.16	0.000112	2970	52.7	146
MMS1-S2	9/16/2024	0.0036	3820	0.0005	0.025	0.028	0.016	0.50	0.0025	0.654	1080	6.3	0.000005	0.0025	0.051	2.50	121	0.0115	0.020	4.79	0.0005	2490	31.6	110
MMS1-S3	6/12/2024	0.000017	30.70000	0.00002	0.00100	0.0022	0.015	0.13	0.00010	0.00690	21.30000	0.36	0.00001	0.0035	0.017	0.10	10.90000	0.00170	0.00059	3.19000	0.00002	144	0.11400	38.6
MMS1-S3	7/10/2024	0.000015	17.6	0.000011	0.00074	0.00054	0.014	0.083	0.00005	0.0055	11.7	0.031	0.000005	0.0071	0.016	0.15	8.36	0.00134	0.0012	3.23	0.00001	118	0.0664	24.9
MMS1-S4	6/12/2024	0.000012	25.90000	0.00001	0.00053	0.00093	0.011	0.11	0.00005	0.00120	3.44000	0.055	0.00001	0.000072	0.0038	0.050	1.14000	0.00081	0.000085	2.45000	0.00001	16	0.02070	2.93
MMS1-S4	7/10/2024	0.000016	52.1	0.00002	0.001	0.0054	0.0086	0.24	0.0001	0.0036	13.8	0.28	0.000005	0.00096	0.0049	0.10	2.47	0.00164	0.0001	2.76	0.00002	21.7	0.0672	5
MMS1-S4	8/18/2024	0.000013	53.5	0.00002	0.001	0.0046	0.0084	0.30	0.0001	0.0038	14.2	0.22	0.000005	0.0011	0.0048	0.10	2.65	0.00159	0.00015	3.22	0.00002	23.4	0.0686	5.8
MMS1-S4	9/6/2024	0.000014	61.3	0.00001	0.00054	0.0073	0.0087	1.3	0.000082	0.004	14.6	0.37	0.000005	0.0015	0.0056	0.05	2.95	0.00192	0.00018	3.95	0.00001	24.7	0.0753	5.81
REFSEEP01	7/11/2024	0.0000050	4.4	0.00001	0.00085	0.0001	0.00316	0.171	0.00005	0.0036	2.96	0.00102	0.0000056	0.000090	0.0030	0.05	0.099	0.0002	0.000069	3.17	0.00001	5.35	0.0148	0.50
REFSEEP02	7/11/2024	0.0000050	24	0.00001	0.0005	0.00013	0.0016	0.12	0.00005	0.0027	8.58	0.00475	0.000005	0.000087	0.00192	0.05	0.473	0.00036	0.000066	3.56	0.00001	39.4	0.0816	4.39
REFSEEP03	7/11/2024	0.0000050	17.3	0.00001	0.0005	0.0001	0.00119	0.134	0.00005	0.001	3.82	0.0117	0.000005	0.00005	0.0006	0.05	0.48	0.00053	0.00005	2.17	0.00001	12.6	0.0351	4.37

Note: blue text indicates result below detection limit

Sample ID	Date Sampled	Tellurium (Te)-Dissolved	Thallium (Tl)-Dissolved	Thorium (Th)-Dissolved	Tin (Sn)-Dissolved	Titanium (Ti)-Dissolved	Tungsten (W)-Dissolved	Uranium (U)-Dissolved	Vanadium (V)-Dissolved	Zinc (Zn)-Dissolved	Zirconium (Zr)-Dissolved	Aluminum (Al)-Total	Antimony (Sb)-Total	Arsenic (As)-Total	Barium (Ba)-Total	Beryllium (Be)-Total	Bismuth (Bi)-Total	Boron (B)-Total	Cadmium (Cd)-Total	Calcium (Ca)-Total	Cesium (Cs)-Total	Chromium (Cr)-Total	Cobalt (Co)-Total	Copper (Cu)-Total	Iron (Fe)-Total	Lead (Pb)-Total	Lithium (Li)-Total	Magnesium (Mg)-Total	Manganese (Mn)-Total	Mercury (Hg)-Total
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
24-CWP-01	6/24/2024	0.0002	0.00	0.0001	0.00010	0.0003	0.00012	0.00132	0.00064	0.001	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-03	6/3/2024	0.00040	0.00002	0.00020	0.00020	0.00060	0.00759	0.00071	0.00100	0.00200	0.00040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-04	6/2/2024	0.00020	0.00001	0.00010	0.00010	0.00030	0.00160	0.00026	0.00058	0.00100	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-05	6/2/2024	0.00020	0.00001	0.00010	0.00010	0.00030	0.00052	0.00001	0.00050	0.00100	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-06	6/4/2024	0.00020	0.00001	0.00014	0.00010	0.00051	0.00010	0.00008	0.00050	0.00110	0.00044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-08	6/7/2024	0.002	0.00018	0.001	0.0010	0.003	0.0010	0.00202	0.01	0.0116	0.0020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-PCP-01	5/23/2024	0.00020	0.00001	0.00010	0.00010	0.00030	0.00072	0.00029	0.00088	0.00100	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-PCP-02	6/7/2024	0.0004	0.000033	0.0002	0.0002	0.0006	0.0002	0.00215	0.00	0.002	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24MAD01	5/27/2024	0.00020	0.00001	0.00010	0.00010	0.00034	0.00010	0.00019	0.00050	0.00100	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24MAD02	5/27/2024	0.00020	0.00001	0.00010	0.00010	0.00030	0.00010	0.00007	0.00052	0.00100	0.00040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMS1-N	5/20/2024	0.0002	0.00001	0.0001	0.00010	0.0003	0.00178	0.000199	0.00	0.001	0.00020	1.03	0.00083	0.139	0.0118	0.0001	0.000050	0.036	0.0000084	14.6	4.4E-05	0.00481	0.00214	0.00368	1.27	0.000393	0.0034	4.4	0.0397	0.000005
MMS1-N	6/12/2024	0.00020	0.00001	0.00010	0.00010	0.00030	0.00129	0.00109	0.00085	0.0010	0.00020	2.5700	0.0014	0.1300	0.0259	0.0001	0.000050	0.1650	0.0000	42.4000	0.0001	0.0154	0.0057	0.0147	5.3100	0.0019	0.0072	20.1000	0.3780	0.0000
MMS1-N	7/10/2024	0.0002	0.00001	0.0001	0.00010	0.00051	0.00064	0.00189	0.00071	0.001	0.00029	0.385	0.00098	0.042	0.0196	0.0001	0.000050	0.163	0.0000104	55.7	2.2E-05	0.00127	0.00098	0.00753	0.405	0.00025	0.0055	32.4	0.0765	0.000005
MMS1-N	8/18/2024	0.001	0.00005	0.0005	0.00050	0.0015	0.00055	0.0037	0.003	0.005	0.0010	0.174	0.00412	0.153	0.0912	0.0001	0.000250	0.59	0.000116	281	0.00	0.0025	0.00513	0.0082	0.284	0.00025	0.0158	124	0.348	5.8E-06
MMS1-N	9/16/2024	0.0004	0.00002	0.0002	0.00020	0.00103	0.00032	0.00934	0.00138	0.0020	0.0011	0.0606	0.00175	0.0633	0.0601	0.0002	0.000100	0.372	0.0000717	231	2.2E-05	0.00105	0.0074	0.0135	2.28	0.000178	0.0161	122	1.28	0.000005
MMS1-S	5/20/2024	0.0002	0.00001	0.0001	0.00010	0.0003	0.00071	0.000128	0.00050	0.001	0.00	0.759	0.00017	0.0243	0.0081	0.0001	0.000050	0.028	0.0000082	11.7	4.2E-05	0.00303	0.0009	0.00497	1.09	0.000266	0.0018	3.02	0.037	0.000005
MMS1-S	6/12/2024	0.00020	0.00001	0.00010	0.00010	0.00030	0.00045	0.00095	0.00050	0.0030	0.00020	0.4730	0.0005	0.0175	0.0126	0.0001	0.000050	0.1730	0.0000	54.5000	0.0000	0.0024	0.0014	0.0117	0.7960	0.0001	0.0030	15.8000	0.0549	0.0000
MMS1-S	7/10/2024	0.0002	0.00001	0.0001	0.00010	0.0003	0.00021	0.000516	0.001	0.001	0.0002	1.18	0.0004	0.0167	0.0118	0.0001	0.000050	0.097	0.0000279	33.8	5.3E-05	0.00429	0.00172	0.0112	2.04	0.00036	0.0022	11.2	0.0484	0.000005
MMS1-S	8/18/2024	0.0002	0.000017	0.0001	0.00010	0.00034	0.00010	0.0017	0.00067	0.0056	0.00027	3.85	0.00061	0.0341	0.0355	0.000102	0.000050	0.297	0.000142	108	0.00023	0.0183	0.0105	0.0302	6.17	0.00128	0.0078	33	0.338	0.000005
MMS1-S	9/16/2024	0.0002	0.000018	0.0001	0.00010	0.00035	0.00024	0.00213	0.0008	0.0078	0.00032	0.066	0.0005	0.0955	0.0244	0.0001	0.000050	0.222	0.0000974	113	2.1E-05	0.00052	0.00868	0.0146	0.506	0.000054	0.0048	34.9	0.227	0.000005
MMS1-S1	6/12/2024	0.00020	0.00001	0.00010	0.00010	0.00030	0.00023	0.00019	0.00050	0.80	0.00020	0.5050	0.0008	0.0152	0.0096	0.0001	0.000050	0.1280	0.0000	34.8000	0.0000	0.0012	0.0006	0.0041	0.5340	0.0002	0.0051	10.8000	0.0228	0.0000
MMS1-S1	7/10/2024	0.0002	0.00001	0.0001	0.00010	0.0003	0.00021	0.000296	0.00050	1.4	0.0002	0.452	0.00112	0.052	0.0103	0.0001	0.000050	0.144	0.0000064	37.4	2.7E-05	0.0011	0.00061	0.00525	0.49	0.00022	0.0035	13.4	0.00822	0.000005
MMS1-S1	8/18/2024	0.001	0.00005	0.0005	0.00051	0.0015	0.00050	0.00227	0.003	2.7	0.0010	0.172	0.00219	0.034	0.196	0.0001	0.000250	0.307	0.000553	1040	0.00014	0.0175	0.00635	0.0108	0.494	0.00025	0.345	117	1.21	0.000005
MMS1-S1	9/16/2024	0.0004	0.00002	0.0002	0.0013	0.0006	0.00020	0.00053	0.00	11	0.0004	0.0781	0.00079	0.0148	0.0542	0.0002	0.000100	0.29	0.000134	198	2.6E-05	0.001	0.00437	0.00854	0.235	0.00123	0.0174	62.7	1.35	0.000005
MMS1-S2	6/12/2024	0.00104	0.00005	0.00050	0.00050	0.00150	0.00050	0.00009	0.00250	0.61	0.00100	0.0388	0.0005	0.0013	0.7300	0.0001	0.000250	0.0500	0.0010	1980.0000	0.0001	0.0025	0.0046	0.0062	0.2780	0.0003	0.6080	463.0000	0.8450	0.0000
MMS1-S2	7/10/2024	0.00218	0.0001	0.001	0.0010	0.003	0.0010	0.0001	0.01	3.4	0.002	0.03	0.00	0.001	1.15	0.001	0.000500	0.1	0.00301	2910	0.00	0.005	0.00792	0.00639	0.10	0.0005	0.745	851	2	5.2E-06
MMS1-S2	8/18/2024	0.00295	0.0001	0.001	0.0010	0.003	0.0010	0.000147	0.005	19	0.0020	0.0743	0.00	0.002	1.63	0.0004	0.001000	0.2	0.00531	5220	0.00	0.01	0.0152	0.01	0.545	0.001	1.11	1350	4.86	0.000005
MMS1-S2	9/16/2024	0.01	0.0005	0.005	0.0050	0.015	0.0050	0.00366	0.03	3.2	0.01	0.3	0.01	0.01	1.25	0.01	0.005000	1	0.00377	3690	0.00	0.05	0.0292	0.05	1.00	0.005	0.618	990	6.01	0.000005
MMS1-S3	6/12/2024	0.00040	0.00002	0.00020	0.00020	0.00078	0.00020	0.00051	0.00182	6.6	0.00080	0.4210	0.0010	0.1950	0.0168	0.0001	0.000100	0.3370	0.0000	31.1000	0.0000	0.0016	0.0025	0.0168	0.7330	0.0002	0.0077	21.6000	0.3860	0.0000
MMS1-S3	7/10/2024	0.0002	0.00001	0.00021	0.00010	0.00122	0.00029	0.000638	0.00397	3.5	0.00099	4.14	0.00244	0.264	0.0211	0.0001	0.000050	0.37	0.0000236	18.4	0.00023	0.0132	0.00481	0.0284	5.76	0.00224	0.01	16.6	0.0965	8.3E-06
MMS1-S4	6/12/2024	0.00020	0.00001	0.00020	0.00010	0.00069	0.00010	0.00010	0.00050	0.88	0.00060	0.1520	0.0001	0.0007	0.0059	0.0001	0.000050	0.0100	0.0000	28.1000	0.0000	0.0008	0.0011	0.0124	0.2600	0.0001	0.0014	3.5300	0.0597	0.0000
MMS1-S4	7/10/2024	0.0004	0.00002	0.0002	0.00020	0.0009	0.00020	0.000414	0.001	8.8	0.00049	0.0654	0.00	0.00258	0.0156	0.0002	0.000100	0.027	0.0000209	53.5	0.00	0.001	0.00583	0.0103	0.556	0.0001	0.0034	13.4	0.295	0.000005
MMS1-S4	8/18/2024	0.0004	0.00002	0.0002	0.00020	0.0006	0.00020	0.000376	0.001	13	0.00044	0.14	0.00	0.00307	0.0123	0.0001	0.000250	0.05	0.00	56	0.00	0.0025	0.00507	0.00995	0.831	0.00025	0.01	13.8	0.245	0.000005
MMS1-S4	9/6/2024	0.0002	0.000016	0.00011	0.00010	0.0009	0.00010	0.00046	0.00117	17	0.00056	0.0305	0.00	0.00541	0.0151	0.0001	0.000050	0.041	0.0000166	62.2	0.00	0.0006	0.00754	0.0101	1.42	0.000093	0.0042	15.2	0.368	0.000005
REFSEEP01	7/11/2024	0.0002	0.00001	0.0002	0.0001	0.00087	0.0001	0.000017	0.0005	0.0025	0.0006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REFSEEP02	7/11/2024	0.0002	0.00001	0.0001	0.0001	0.0005	0.0001	0.000021	0.0005	0.0017	0.0004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REFSEEP03	7/11/2024	0.0002	0.00001	0.0001	0.0001	0.0003	0.0001	0.000016	0.0005	0.001	0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: blue text indicates result below detection limit

Sample ID	Date Sampled	Molybdenum (Mo)-Total	Nickel (Ni)-Total	Phosphorus (P)-Total2	Potassium (K)-Total	Rubidium (Rb)-Total	Selenium (Se)-Total	Silicon (Si)-Total	Silver (Ag)-Total	Sodium (Na)-Total	Strontium (Sr)-Total	Sulfur (S)-Total	Tellurium (Te)-Total	Thallium (Tl)-Total	Thorium (Th)-Total	Tin (Sn)-Total	Titanium (Ti)-Total	Tungsten (W)-Total	Uranium (U)-Total	Vanadium (V)-Total	Zinc (Zn)-Total	Zirconium (Zr)-Total	Oil and Grease	Oil And Grease (Visible Sheen)	Phenols (4AAP)
		mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	-	-
24-CWP-01	6/24/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-03	6/3/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-04	6/2/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-05	6/2/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-06	6/4/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DC-08	6/7/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-PCP-01	5/23/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-PCP-02	6/7/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24MAD01	5/27/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24MAD02	5/27/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMS1-N	5/20/2024	0.00092	0.0212	0.05	2.04	0.00167	0.00036	2.38	0.000051	10.6	0.0472	4.99	0.0002	0.00	0.00018	0.00	0.0351	0.0023	0.00027	0.00339	0.0037	0.00036	5	Absent	0.001
MMS1-N	6/12/2024	0.0038	0.0317	0.1540	8.9600	0.0032	0.0011	4.0200	0.0002	106.0000	0.1150	44.0000	0.0002	0.0000	0.0005	0.0001	0.0624	0.0029	0.0013	0.0116	0.0154	0.0004	5	Absent	0.0013
MMS1-N	7/10/2024	0.00433	0.0147	0.05	11.9	0.00233	0.00138	1.64	0.000027	182	0.185	70.7	0.0002	0.00	0.0002	0.00	0.0108	0.0008	0.00202	0.00156	0.003	0.00064	-	-	-
MMS1-N	8/18/2024	0.0153	0.0605	0.25	46.5	0.0106	0.0157	3.23	0.00005	777	1.12	346	0.001	0.00	0.0005	0.00	0.00723	0.00068	0.0037	0.00	0.015	0.00	-	-	-
MMS1-N	9/16/2024	0.00704	0.048	0.15	27.1	0.00544	0.00525	2.85	0.00004	462	0.787	232	0.0004	0.00	0.0002	0.00038	0.00345	0.00042	0.0111	0.00319	0.006	0.00137	-	-	-
MMS1-S	5/20/2024	0.000593	0.00447	0.05	1.45	0.00141	0.000221	1.68	0.000025	10.7	0.0237	4.32	0.0002	0.00	0.00016	0.00	0.0315	0.00093	0.000153	0.00286	0.0035	0.00024	5	Absent	0.001
MMS1-S	6/12/2024	0.0024	0.0060	0.0500	6.9000	0.0031	0.0016	2.4700	0.0000	79.0000	0.0962	50.7000	0.0002	0.0000	0.0001	0.0001	0.0154	0.0007	0.0010	0.0027	0.0042	0.0004	5	Absent	0.0022
MMS1-S	7/10/2024	0.00148	0.00675	0.05	4.23	0.00201	0.000965	3.18	0.00006	53	0.0609	31.4	0.0002	0.00	0.00015	0.00	0.0383	0.00056	0.00055	0.00541	0.0092	0.00036	-	-	-
MMS1-S	8/18/2024	0.00312	0.0265	0.127	11.3	0.00602	0.00341	9.28	0.000056	169	0.178	114	0.0002	0.000048	0.00066	0.00	0.149	0.0002	0.00178	0.0165	0.027	0.00062	-	-	-
MMS1-S	9/16/2024	0.00249	0.0117	0.05	9.88	0.00307	0.00264	2.06	0.000027	156	0.194	113	0.0002	0.000016	0.0001	0.00021	0.00251	0.00023	0.00198	0.00188	0.0088	0.0003	-	-	-
MMS1-S1	6/12/2024	0.0028	0.0022	0.0500	3.8800	0.0015	0.0010	2.7100	0.0000	44.0000	0.1210	15.4000	0.0002	0.0000	0.0002	0.0001	0.0137	0.0003	0.0002	0.0015	0.8350	0.0004	5	Absent	0.001
MMS1-S1	7/10/2024	0.00324	0.00328	0.05	4.56	0.00171	0.00158	2.17	0.00001	55.2	0.122	25	0.0002	0.00	0.0001	0.00	0.0123	0.00024	0.00032	0.00148	1.26	0.00036	-	-	-
MMS1-S1	8/18/2024	0.00578	0.0218	0.25	46.2	0.0127	0.00483	3.62	0.00005	468	12.7	96	0.00191	0.00	0.0005	0.00052	0.00381	0.00	0.0023	0.00	2.77	0.0010	-	-	-
MMS1-S1	9/16/2024	0.00205	0.00782	0.10	18.4	0.00303	0.000388	4.55	0.00002	274	0.837	96.3	0.0004	0.00	0.0002	0.00198	0.00127	0.00	0.000625	0.00146	12.9	0.0004	-	-	-
MMS1-S2	6/12/2024	0.0003	0.0144	0.2500	92.4000	0.0092	0.0072	4.8600	0.0001	973.0000	21.0000	53.7000	0.0026	0.0001	0.0005	0.0005	0.0015	0.0005	0.0001	0.0025	0.6000	0.0010	5	Absent	0.0010
MMS1-S2	7/10/2024	0.00050	0.0266	0.50	127	0.0119	0.0163	5.31	0.0001	1760	34.8	89	0.00215	0.00	0.001	0.00	0.003	0.00	0.0001	0.01	4.69	0.0020	-	-	-
MMS1-S2	8/18/2024	0.00100	0.048	1.00	190	0.0171	0.0298	5.86	0.0002	3420	53.6	167	0.00508	0.00	0.002	0.00	0.006	0.00	0.0002	0.01	24.7	0.0040	-	-	-
MMS1-S2	9/16/2024	0.01	0.0535	5.00	115	0.02	0.02	10.00	0.001	2320	31.9	96.9	0.02	0.00	0.01	0.01	0.03	0.01	0.00382	0.05	3.13	0.0200	-	-	-
MMS1-S3	6/12/2024	0.0037	0.0188	0.1510	10.9000	0.0022	0.0005	4.2300	0.0000	138.0000	0.1220	42.4000	0.0004	0.0000	0.0002	0.0002	0.0090	0.0002	0.0006	0.0033	6.9500	0.0006	5	Absent	0.001
MMS1-S3	7/10/2024	0.00712	0.0301	0.183	8.64	0.00435	0.00155	12	0.000025	113	0.069	25.5	0.0002	0.000013	0.00062	0.00	0.0646	0.00033	0.000699	0.0178	3.72	0.00118	-	-	-
MMS1-S4	6/12/2024	0.0001	0.0041	0.0500	1.1900	0.0010	0.0001	2.8200	0.0000	15.3000	0.0226	3.4300	0.0002	0.0000	0.0002	0.0001	0.0045	0.0001	0.0001	0.0009	0.9380	0.0006	5	Absent	0.001
MMS1-S4	7/10/2024	0.00102	0.00519	0.10	2.51	0.00178	0.000157	2.89	0.00002	21	0.0711	5.07	0.0004	0.00	0.0002	0.00	0.00192	0.00	0.00045	0.00	9.04	0.00063	-	-	-
MMS1-S4	8/18/2024	0.0011	0.00529	0.25	2.86	0.00185	0.00025	3.62	0.00005	25	0.0662	5.9	0.001	0.00	0.0005	0.00	0.004	0.00	0.000403	0.00	14.4	0.00	-	-	-
MMS1-S4	9/6/2024	0.00155	0.00553	0.05	2.93	0.0019	0.000227	4.18	0.000012	23.1	0.0765	6.38	0.0002	0.00	0.0001	0.00	0.0014	0.00	0.000506	0.00178	16.7	0.00059	5	Absent	0.0089
REFSEEP01	7/11/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REFSEEP02	7/11/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REFSEEP03	7/11/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: blue text indicates result below detection limit