NEW GOLD RAINY RIVER MINE
APPENDIX B
PAG AND EMRS COVER DATA REPORT

Rainy River Mine – Potentially Acid Generating Mine Rock Cover Trial 2024 Annual Monitoring Report

February 10, 2025

newgold™ okane

Integrated Mine Closure and Relinquishment Solutions

Rainy River Mine – Potentially Acid Generating Mine Rock Cover Trial 2024 Annual Monitoring Report

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EXECUTIVE SUMMARY

New Gold Inc. (New Gold) has developed cover system designs for the closure of potentially acid generating (PAG) mine rock stockpiles (MRSs) at Rainy River Mine. New Gold has implemented cover system field trials to evaluate the cover system design's effectiveness to limit acid rock drainage (ARD). Okane Consultants (Okane) was retained to design, instrument, and interpret monitoring data collected from performance monitoring systems installed at the cover system field trials. The objective of this report is to summarize and interpret findings from data collected during the monitoring period of November 1, 2023 to October 31, 2024.

The primary objectives of the cover system field trials are to evaluate the ability of overburden clay to manage oxygen ingress and net percolation (NP) through altering the surface water and gas balances. Two cover system field trials were constructed in fall of 2017. Trial #1 consists of 0.50 m compacted Brenna clay (CBC), 0.75 m non-compacted clay overburden, and 0.25 m topsoil. Propagules present in the topsoil layer aided re-vegetation on Trial #1. Trial #2 consists of 0.50 m CBC and 1.0 m non-compacted clay overburden. Re-vegetation was completed by both hand-seeding an appropriate seed-mix on Trial #2 in July 2019 as well as hydroseeding in late 2019.

The ability of the cover system to manage oxygen ingress is evaluated by monitoring the degree of saturation of the CBC layer. A cover system containing a layer maintained at a degree of saturation of approximately 85% is generally expected to efficiently limit oxygen ingress (McMullen et al., 1997, MEND, 2004). During the 2023-24 monitoring period, the annual average saturation levels measured for both Trial #1 and Trial #2 was greater than 90% in the CBC layer. Maintaining a 90% degree of saturation in the cover system demonstrated that the compacted clay layer is retaining sufficient pore-water to prevent advective oxygen transport, and limit oxygen ingress through diffusion. The 2023-24 monitoring period observed a minimum degree of saturation within the CBC of 92% and 82% at Trial #1 and Trial #2, respectively. Decreases in degree of saturation were minimal, and a result of as-expected water cycling coupled with peak temperatures during a drier than average summer.

Oxygen diffusion into the mine rock was estimated using the collected field performance data within a numerical gas flow model. Using cover system material properties and the degree of saturation measured over the monitoring period, oxygen diffusion was estimated to be approximately 1.7 mol/m^2/year for Trial #1 and 3.2 mol/m^2/year for Trial #2. Both are considered very low oxygen flux, as outlined by the International Network for Acid Prevention (INAP) Guidance Document (INAP, 2017). Oxygen diffusion rates gradually increased in June 2024 at Trial #2 as the water content and associated degree of saturation of the cover system's compacted layer was reduced during the summer months as a result of less rainfall and increased drying.

Water balances were developed for each cover system configuration to estimate NP of meteoric waters into the underlying mine rock. The total estimated NP over the monitoring year was 4% and 7% for Trial #1 and Trial #2, respectively, which is within or below the conceptual model predictions (5-15%). Runoff

was observed to be higher than predicted by the conceptual model (10 - 20%) at 26% and 27% for Trial #1 and Trial #2, respectively. The primary events driving runoff were winter rainfall, as well as a series of rainfall events on July 1 and 2 (71 mm of rainfall).

Performance monitoring of cover systems provides insight into cover system response to climatic variation in terms of temperature and water storage dynamics. The monitoring systems installed at Rainy River are providing data required to assess the performance trajectories for the site. Continued monitoring and reporting offers insight to field-derived material properties and the opportunity to optimize future closure activities at site.

TABLE OF CONTENTS

INTRODUCTION 1
1.1 Project Objectives and Scope 1
1.2 Report Organization 1
2 BACKGROUND 2
2.1 Description of Cover System Field Trials 2
2.2 Conceptual Model of Cover System Performance 2
2.3 2023 – 2024 Monitoring Activities 4
3 COVER SYSTEM PERFORMANCE MONITORING RESULTS 6
3.1 Meteorology 6
3.1.1 Air Temperature 6
3.1.2 Rainfall 7
3.1.3 Snowfall 9
3.1.4 Reference Evapotranspiration 11
3.2 Cover System Temperature Profiles 13
3.3 Cover System Water Dynamics 16
3.3.1 Degree of Saturation 16
3.3.2 Summary of Matric Suction Data 18
3.3.3 Total Water Storage 20
3.4 Water Balance 22
3.4.1 Discussion of Water Balance Inputs 22
3.4.2 Water Balance Results 23
3.5 Estimated Oxygen Ingress 26
4 RECOMMENDATIONS 29
4.1 Opportunities 29
5 CLOSURE 30
6 REFERENCES 31

Appendix A Photo Log
Appendix B In Situ Instrumentation Measurements

LIST OF TABLES

Table 2.1: 2023-2024 monitoring period activities....4
Table 3.1: Historical ambient winter air temperature (December to March period) 7
Table 3.2: April to October 2024 monthly rainfall. 8
Table 3.3: Five-year monitoring period snow survey results....11
Table 3.4: Summary of monthly rainfall and reference evapotranspiration since 2020. 13
Table 3.5: Summary of freezing depths and dates. 15
Table 3.6: Average degree of saturation of cover system layers....17
Table 3.7: Water balance components. 24
Table 3.8: Water balance components over the five-year monitoring period. 26
Table 3.9: Historical estimated oxygen ingress 28

LIST OF FIGURES

Figure 2.1: Broken tipping bucket rain gauge at Trial #2. 5
Figure 2.2: Temporarily repaired tipping bucket rain gauge at Trial #2. 5
Figure 3.1: Maximum and minimum daily air temperatures recorded at Barron weather station compared to 30-year averages. 6
Figure 3.2: Daily and cumulative rainfall recorded at cover system field trials. 8
Figure 3.3: Daily and cumulative rainfall recorded at the cover trials since the onset of monitoring. 9
Figure 3.4: Plateau of Trial #2 on February 20, 2024. 10
Figure 3.5: PAG Cover Trial North Slope on February 20, 2024. 10
Figure 3.6: Reference evapotranspiration and total rainfall measured at Trial #2 from April to October 2024. 12
Figure 3.7: Soil temperature profile measured at the Trial #1 Primary nest during the monitoring period. 14
Figure 3.8: Soil temperature profile measured at the Trial #2 Primary nest during the monitoring period. 14
Figure 3.9: Trial #1 PAG mine rock temperatures since the onset of monitoring. 15
Figure 3.10: Trial #2 PAG mine rock temperatures since the onset of monitoring. 16
Figure 3.11: Change in degree of saturation at the Trial #1 Primary nest (white areas indicate periods of erroneous data). 17
Figure 3.12: Change in degree of saturation at the Trial #2 Primary nest. 18
Figure 3.13: Matric suction measured at the Trial #1 Primary nest. 19
Figure 3.14: Matric suction measured at the Trial #2 Primary nest. 20
Figure 3.15: Measured storage versus cover system field capacity 22
Figure 3.16 : Cumulative water balance flux at Trial #1 for the monitoring period. 24
Figure 3.17: Cumulative water balances flux at Trial #2 for the monitoring period. 25
Figure 3.18: Oxygen diffusion simulation through cover materials on Trial #1 over the monitoring period. 27
Figure 3.19: Oxygen diffusion simulation through cover materials on Trial #2 over the monitoring period. 28

INTRODUCTION

New Gold Inc. (New Gold) has developed cover system designs for the closure of potentially acid generating (PAG) mine rock stockpiles (MRSs) at Rainy River Mine. New Gold has implemented cover system field trials to evaluate the cover system design's effectiveness to limit acid rock drainage. Okane Consultants (Okane) was retained to design, instrument, and interpret monitoring data collected from performance monitoring systems installed at the PAG mine rock cover system field trials. This report summarizes and provides interpretation of both the monitoring data obtained between November 1, 2023, and October 31, 2024 (referred to herein as 'the monitoring period').

1.1 Project Objectives and Scope

The objectives of the PAG mine rock cover system field trials are to:

1) Evaluate overburden clay as a potential cover material for mitigation of oxygen ingress during stockpile construction (operations) due to advective airflow;

2) Evaluate the effectiveness of compacted overburden clay as a low hydraulic conductivity barrier layer and overlying protective growth medium cover borrow material for mitigation of NP and oxygen ingress (closure); and

3) Update and refine conceptual models of performance for the cover system field trial area through examining water balance components (e.g., precipitation, runoff, evapotranspiration, water storage, etc.).

1.2 Report Organization

For convenient reference, this report has been subdivided into the following section:

- Section 2 – provides pertinent background information of the cover system field trials and a summary of activities completed during the monitoring period;
- Section 3 – presents and discusses field data collected during the monitoring period, as well as discusses the performance of the cover system compared to previous monitoring periods
- Section 4 – provides recommendations for the following monitoring period.

2 BACKGROUND

2.1 Description of Cover System Field Trials

Construction of the cover system field trials commenced October 2017 and was completed early November 2017. The constructed field trials span an approximate area of 65 m × 100 m with a 1 to 2% sloping plateau of ~3,000 m^2. A 3H:1V slope was constructed on the north, east and west slopes. Two enhanced store-and-release, low permeability layer cover systems were constructed to meet the objectives stated in Section 1.1. Trial #1 consists of 0.50 m compacted Brenna clay (CBC), 0.75 m non-compacted clay overburden, and 0.25 m topsoil. Propagules present in the topsoil layer provided re-vegetation on Trial #1. Trial #2 consists of 0.50 m CBC and 1.0 m non-compacted clay overburden. Re-vegetation was initiated by hand-seeding an appropriate seed-mix on Trial #2 in July 2019, and later hydroseeded in autumn 2019. Complete as-built details can be found in Okane Report No. 1003/08-001 (2018).

Okane installed and commissioned meteorological and in-situ instrumentation throughout the trial area to monitor cover system performance over time under site specific conditions. Two instrumentation nests (Primary and Secondary) were installed in both Trial #1 and Trial #2 areas. Primary nests consist of a full arrangement of sensors throughout the cover system profile. Secondary nests consist of a reduced number of sensors and was implemented to ensure data redundancy in the profile. The following in-situ instrumentation was installed in each trial area:

- Eleven matric suction sensors (Campbell Science International [CSI] 229) to measure suction (i.e., negative pore-water pressure) and soil temperature;
- Fourteen water content sensors (CSI 616) to measure in situ volumetric water content; and,
- Six oxygen sensors (Apogee SO-110) to measure differential oxygen concentrations above and below the CBC.

Two meteorological instruments were installed on Trial #2. A Texas Electronics model 525M tipping bucket rain gauge (TBRG) to capture trial area specific rainfall events and a Kipp & Zonen NR-LITE2 net radiometer to monitor hourly averages and daily totals of net radiation (i.e., the sum of incoming and outgoing all-wave radiation). The tipping bucket and net radiometer are used to determine theoretical maximum potential rates of evaporation from the cover system surface. Additional site-specific meteorological data will be collected from New Gold's on-site weather station.

2.2 Conceptual Model of Cover System Performance

A conceptual model of cover system performance was developed by Okane (2017a). The conceptual model was used to identify key processes and mechanisms and then evaluate the cover system design's control on those mechanisms under a range of potential scenarios. It was identified that weathering (oxidation) and leaching (net percolation) in the MRSs will cause acid rock drainage and have negative effects on the receiving environment. The cover system designs aim to provide controls on oxygen ingress and NP to limit acid rock drainage.

Diffusion and advection represent the primary mechanisms for oxygen transport through a cover system. Oxygen diffusion can be restricted by decreasing the bulk diffusion coefficient of the cover system, generally by increasing the degree of saturation. A cover system containing a layer maintained at a degree of saturation at approximately 85% is expected to efficiently limit oxygen ingress (McMullen et al., 1997, MEND, 2004). The compacted clay layer incorporated in both cover system configurations is designed to provide higher water retention characteristics of the cover system profile. It is expected that the compacted layer will maintain a degree of saturation greater than, or close to 85% for the majority of the climate cycle. Limiting advective transport of oxygen requires the cover to restrict air flow by reducing pressure and thermal gradients or the permeability of the material. The compacted clay layer aims to reduce permeability of the material to limit advective air movement.

NP is limited by taking advantage of the store-and-release properties of the 1 m non-compacted layer. Infiltrating water is stored within the cover system so it can be subsequently released via transpiration and evaporation. A store-and-release system uses the variability in timing, volume, and intensity of precipitation events to take advantage of available evaporative energy during summer. Additionally, the compacted layers form a barrier-type cover system which limits NP by reducing the hydraulic conductivity within the layer.

The conceptual model was based on Rainy River Mine's site-specific climate, hydrogeological setting, and materials. Given the site-specific climate of the Rainy River Mine, the conceptual ranges of performance are classified as low NP (5 to 15% of average annual precipitation) and low oxygen flux (1 to 10 mol/m^2/year) according to the INAP Guidance Document (INAP, 2017).

2.3 2023 – 2024 Monitoring Activities

The cover system field trials were monitored by Okane personnel throughout the monitoring period. Major activities that were completed on the field trials include automated data collection and data QA/QC, field inspections and instrumentation maintenance, and cover system performance updates. On-site New Gold personnel supported Okane with data collection when Okane was not on site (Table 2.1).

Table 2.1: 2023-2024 monitoring period activities.

Activity	Date
Automated data download and QA/QC	February 19, April 25, June 1, July 10, October 1, and November 28, 2024
Site visit and instrumentation maintenance	July 10 and November 28, 2024
Semi-annual performance update	July 2024

Okane personnel did not complete a snow survey during the 2023/2024 winter months due to the lack of snow cover present on site. Summer (July 10) and fall (November 28) site visits were completed wherein monitoring station repairs, maintenance and manual data downloads were completed. During the fall site visit, the tipping bucket rain gauge at the Trial #2 station was observed to have been knocked off its stand and was temporarily re-affixed until a new mounting bracket can be installed (Figure 2.1 and Figure 2.2).

Figure 2.1: Broken tipping bucket rain gauge at Trial #2.

Figure 2.2: Temporarily repaired tipping bucket rain gauge at Trial #2.

3 COVER SYSTEM PERFORMANCE MONITORING RESULTS

3.1 Meteorology

Meteorological parameters were measured at Rainy River Mine to monitor site-specific climate conditions. Rainfall, snowfall, and net radiation were measured directly on the field trial plateau while air temperature, relative humidity, and wind speed and direction were monitored at Rainy River Mine's Barron weather station. Minor data gaps exist in the Barron station meteorological monitoring.

3.1.1 Air Temperature

Annual average air temperature recorded at the Barron weather station during the monitoring period was 5.5 °C, 2.2 °C warmer than the 30-year historical average of 3.3°C (Figure 3.1). The average winter temperature is of interest with respect to performance monitoring for the purpose of evaluating frost penetration into the cover system. Between December 2023 and March 2024, ambient air temperature ranged from -32.9 °C to 16.7 °C with an average temperature of -6.0 °C. This monitoring period was the warmest recorded year since the onset of monitoring. Historic winter air temperatures since 2019-2020 range from a low of -43.0 °C and a high of 17.2 °C, both occurring during 2020-2021 monitoring period (Table 3.1).

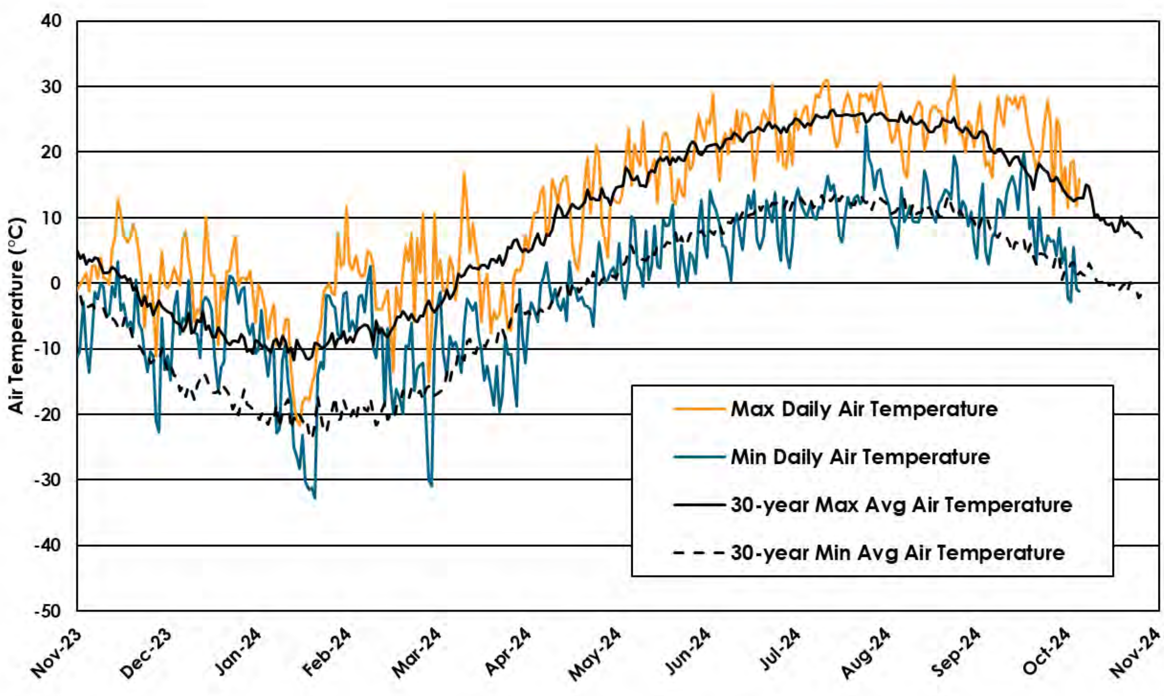

Figure 3.1: Maximum and minimum daily air temperatures recorded at Barron weather station compared to 30-year averages.

Table 3.1: Historical ambient winter air temperature (December to March period)

Monitoring Period	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Lowest Winter Temperature (°C)	-39.9	-43.0	-39.9	-39.8	-32.9
Highest Winter Temperature (°C)	12.4	17.2	14.6	7.5	16.7
Average Winter Temperature (°C)	-10.5	-8.9	-13.8	-10.6	-6.0
Average Annual Temperature (°C)	2.6	4.8	2.3	4.0	5.5

3.1.2 Rainfall

Rainfall is collected directly on the cover system field trials with a Texas Electronics 525M Tipping Bucket Rain Gauge (TBRG). The TBRG installed on Trial #2 and has been collecting rainfall data since June 2018. A total of 643 mm of rainfall was recorded during the monitoring period which includes recorded winter rainfall. Rainfall from April to October is 562 mm (10 mm higher than the 30-year average of 552 mm). Monthly rainfall from March to October 2024 was compared to the 30-year historic average (Figure 3.2, Table 3.2).

It was observed that April, June, August, September and October were drier than the 30-year averages of the respective months. The largest rainfall event (45.9 mm) occurred August 29, 2024. In previous monitoring periods, winter precipitation typically occurs as snowfall and is measured during the annual snow survey. During the 2024 monitoring period, winter rainfall was measured as a result of above freezing temperatures, and was included in the water balance. Rainfall activity was also considered since 2019 (Figure 3.3) for comparison. Rainfall in 2024 was greater than 2023 rainfall, but is less than 2022 rainfall which is the highest recorded rainfall (862 mm) since the onset of monitoring.

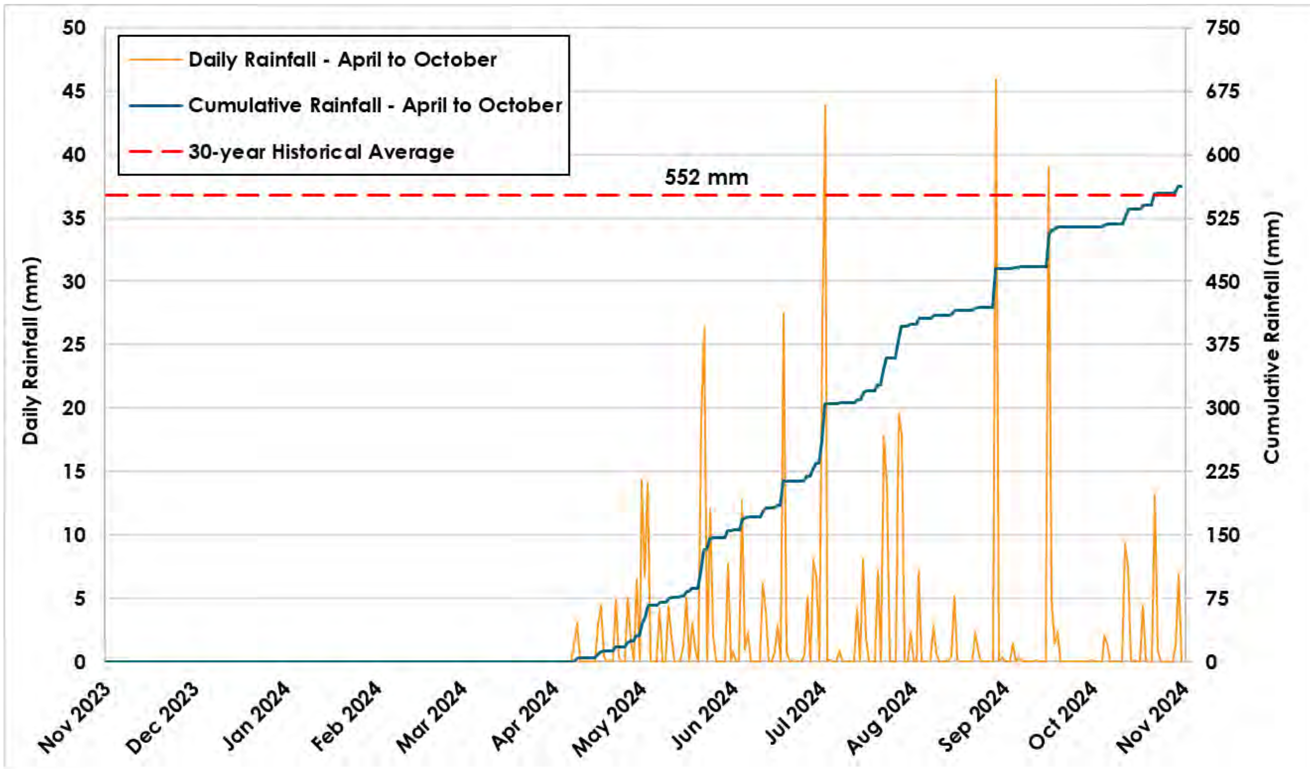

Figure 3.2: Daily and cumulative rainfall recorded at cover system field trials.

Table 3.2: April to October 2024 monthly rainfall.

Month	2024		30-year Average	
	Rain Days	Rainfall (mm)	Rain Days	Rainfall (mm)
April	12	30.9	8	48.4
May	16	124	13	87.2
June	16	79.5	13	107.9
July	15	164.7	11	123.6
August	13	66.2	10	78.6
September	8	49.7	11	77.5
October	11	47.3	11	63.6

Note: Winter rainfall is not included.

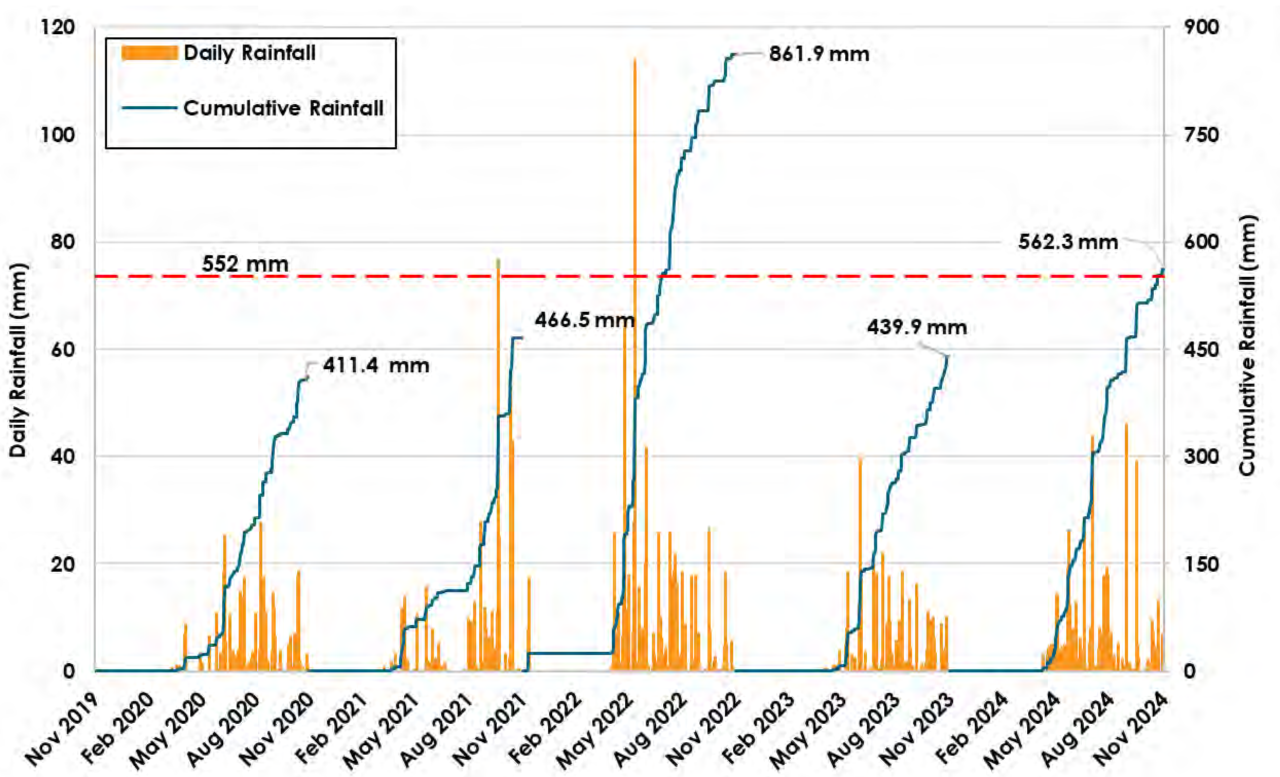

Figure 3.3: Daily and cumulative rainfall recorded at the cover trials since the onset of monitoring.

3.1.3 Snowfall

The TBRG on the trial plateau does not measure snow accumulation. Okane personnel did not conduct a snow survey during the monitoring period as snow cover thickness was considered negligible. Photos of the cover trials were collected and provided by New Gold (Figure 3.4 and Figure 3.5).

Figure 3.4: Plateau of Trial #2 on February 20, 2024.

Figure 3.5: PAG Cover Trial North Slope on February 20, 2024.

Lack of snow accumulation may be attributed to fluctuating temperatures that contribute to freeze-thaw events. The average snow water equivalent (SWE) is typically used in the annual water balance; however the 2023-2024 SWE is assumed to be negligible.

Previous snow surveys were conducted on March 3, 2020, March 7, 2021, February 22, 2022, and March 8, 2023 (Table 3.3). The 2021 and 2024 snow surveys had no snow present.

Table 3.3: Five-year monitoring period snow survey results

Measured Parameter	2020		2021		2022		2023		2024	
	Trial #1	Trial #2	Trial #1	Trial #2	Trial #1	Trial #2	Trial #1	Trial #2	Trial #1	Trial #2
Snow Density (kg/m^3)	150	150	N/A	N/A	189	175	282	291	N/A	N/A
Snow-water Equivalent (SWE)	60 mm	60 mm	N/A	N/A	88 mm	78 mm	65 mm	75 mm	N/A	N/A

3.1.4 Reference Evapotranspiration

Reference evapotranspiration (ET_0) was calculated using the Penman-Monteith method. The Penman-Monteith method is the sum of transpiration of water within vegetation and evaporation of free water from the surface. A hypothetical grass crop having a height of 0.12 m, 70 s m^{-1} surface resistance, and albedo of 0.23 was used (Allen *et al.* 1998). Reference evapotranspiration was calculated based on air temperature, relative humidity, and wind speed data collected at the Barron weather station. Net radiation was measured on the Trial #2 cover system surface. Between March and October 2024, a total of 559.1 mm of ET_0 calculated at Trial #2.

Monthly ET_0 was compared to monthly rainfall for April to October (Figure 3.6). A decrease in the water stored within the upper layers of the cover system is observed in months where ET_0 is greater than rainfall (e.g. May, June, August, and September). During these months there is higher potential for drying of the compacted layer resulting in a reduction in degree of saturation. Similarly, periods where ET_0 is less than rainfall observe an increase in water storage and increased potential for NP into the underlying mine rock (e.g., July and October). For the month of April, calculated ET_0 is greater than the recorded rainfall, but the water stored in cover system increased, which is attributed to freshet and cover system pore water thawing. Provided weather data from site was only to October 8, 2024, thus ET_0 thereafter was estimated based on historical monitoring data (relative humidity, net radiation, and wind speed) and climate data (air temperature) from Environment and Climate Change Canada weather station located in Barwick, Ontario.

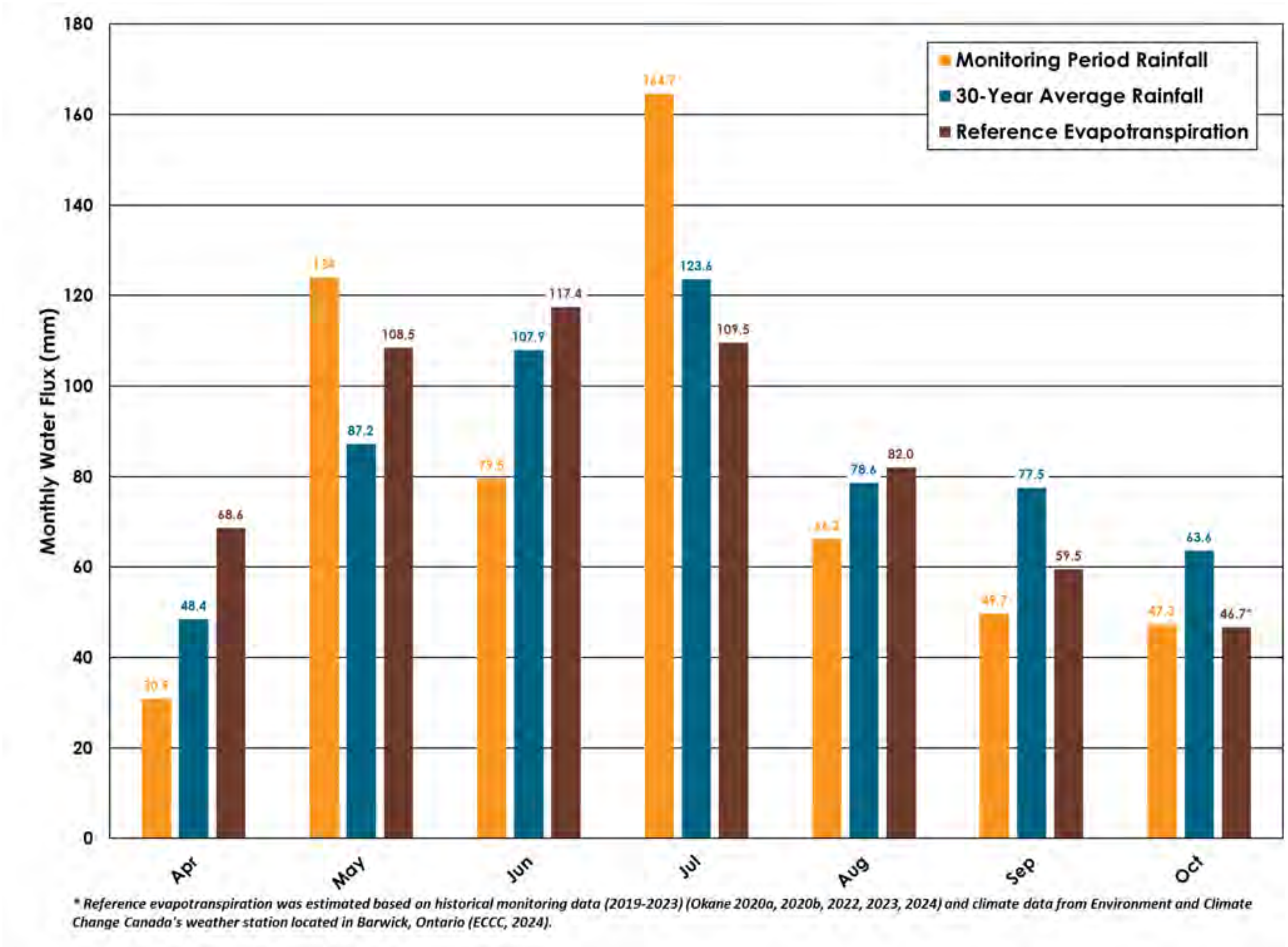

Figure 3.6: Reference evapotranspiration and total rainfall measured at Trial #2 from April to October 2024.

Table 3.4: Summary of monthly rainfall and reference evapotranspiration since 2020.

Month	2020		2021		2022*		2023		2024	
	Rainfall (mm)	ET_0 (mm)	Rainfall (mm)	ET_0 (mm)	Rainfall (mm)	ET_0 (mm)	Rainfall (mm)	ET_0 (mm)	Rainfall (mm)	ET_0 (mm)
March	18.8	12.1	5.8	40.2	-	18.5	-	0.0	13.5	11.7
April	4.9	42.9	56.1	53.3	196.6	26.8	7.2	45.1	30.9	68.6
May	89.1	97.8	37.9	100.8	262.9	107.7	65.5	138.7	124	108.5
June	64.6	115.6	12.9	136.7	71.9	118.4	122.5	118.8	79.5	117.4
July	68.9	117.7	10.3	124.6	161.4	110.5	68.4	100.7	164.7	109.5
August	82.3	107.2	85.2	108.9	65.0	80.5	63.3	76.3	66.2	82.0
September	26.5	64.7	147.9	69.8	41.8	55.4	48.2	53.4	49.7	59.5
October	56.4	24.2	110.3	33.3	37.4	32.8	64.8	24.9	47.3	46.7***
Total	**411.5**	**582.2**	**466.4**	**667.7**	**837.0**	**550.7**	**439.9**	**558.0**	**620.4****	**557.3**

November rainfall not included in total
*****Winter rainfall not included in total***
******October ET_0 estimated and not included in 2024 total***

3.2 Cover System Temperature Profiles

Soil temperature was monitored throughout the cover system profile of Trial #1 and Trial #2 to observe freeze-thaw cycling and the depth of frost penetration. The largest implication of freeze-thaw cycles on cover system performance is potential changes to physical properties of the compacted clay material, such as altering the hydraulic conductivity. Freezing temperatures were observed in both cover system configurations during the monitoring period. In the Trial #1 soil profile, freezing temperatures at the 10 cm sensor was first recorded on January 8, 2024. Intermittent freezing of material was detected at the 90 cm sensor which is also the maximum freezing depth. The cover system profile fully thawed on April 26, 2024 (Figure 3.7). Trial #2 observed freezing temperatures between January 5 and April 6, 2024, throughout the soil profile at the maximum depth of 140 cm (Figure 3.8). Despite the freezing front extending to the compacted clay layer, freezing at this depth was intermittent and reached a minimum of -0.4 °C. The 2023-2024 monitoring period measured the most severe freezing (in terms of freezing depth extents) since the onset of monitoring; likely due to the lack of snow cover to insulate the soil profile.

Trial #2 observed cooler temperatures during the winter, and warmer temperatures in the summer, compared to Trial #1. Historically, Trial #2 has been more sensitive to atmospheric temperature changes, likely a result of increased early vegetation success as compared to Trial #1. A summary of freezing depths and dates is also provided for data since 2020 (Table 3.5)

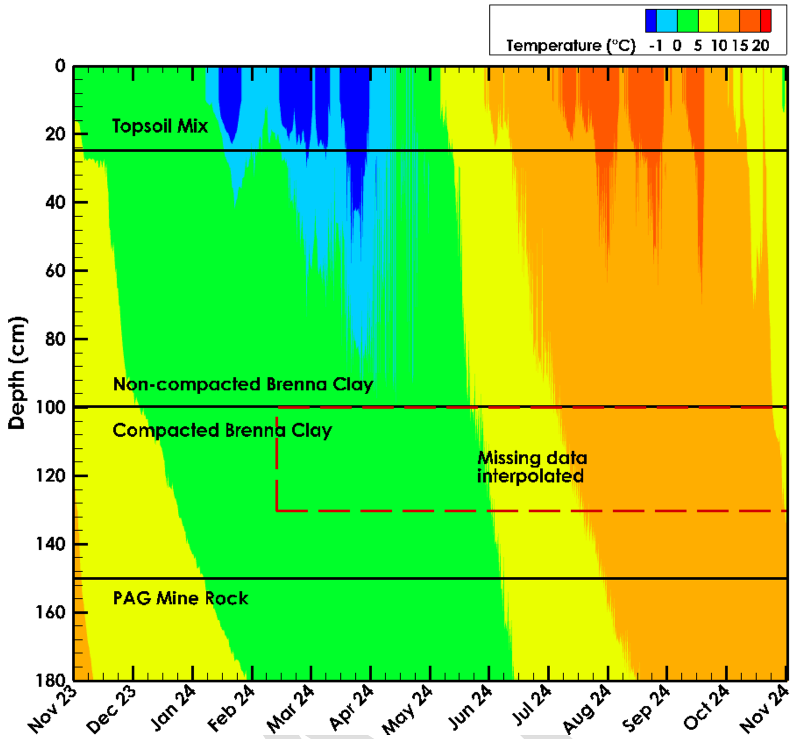

Figure 3.7: Soil temperature profile measured at the Trial #1 Primary nest during the monitoring period.

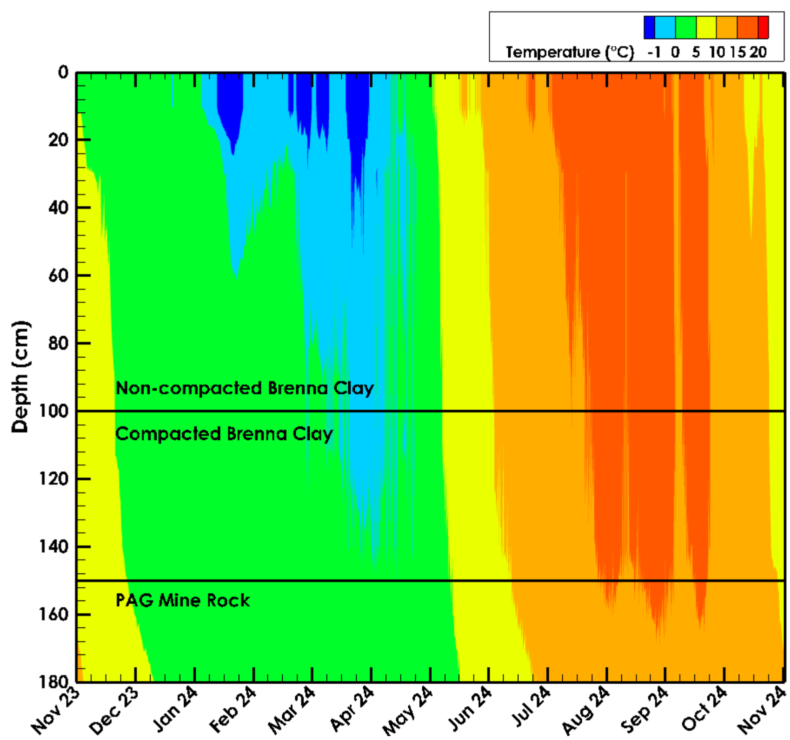

Figure 3.8: Soil temperature profile measured at the Trial #2 Primary nest during the monitoring period.

Table 3.5: Summary of freezing depths and dates.

Measured Parameter	2019-2020		2020-2021		2021-2022		2022-2023		2023-2024	
	Trial #1	Trial #2	Trial #1	Trial #2	Trial #1	Trial #2	Trial #1	Trial #2	Trial #1	Trial #2
Date of freezing	Dec 9, 2019	Dec 17, 2019	Dec 15, 2020	Feb 6, 2021	Feb 18, 2022	Dec 26, 2021	Apr 7, 2023	Apr 7, 2023	Jan 8, 2024	Jan 5, 2024
Depth of freezing (cm)	30	10	30	20	30	110	10	10	90	140

Since the onset of monitoring, temperatures within the mine rock vary between 2 °C and 12 °C for Trial #1 (Figure 3.9) and 1 °C and 16 °C for Trial #2 (Figure 3.10). Mine rock temperatures follow similar atmospheric heating and cooling patterns as the cover system. There is no clear additional source of heating within the mine rock mass.

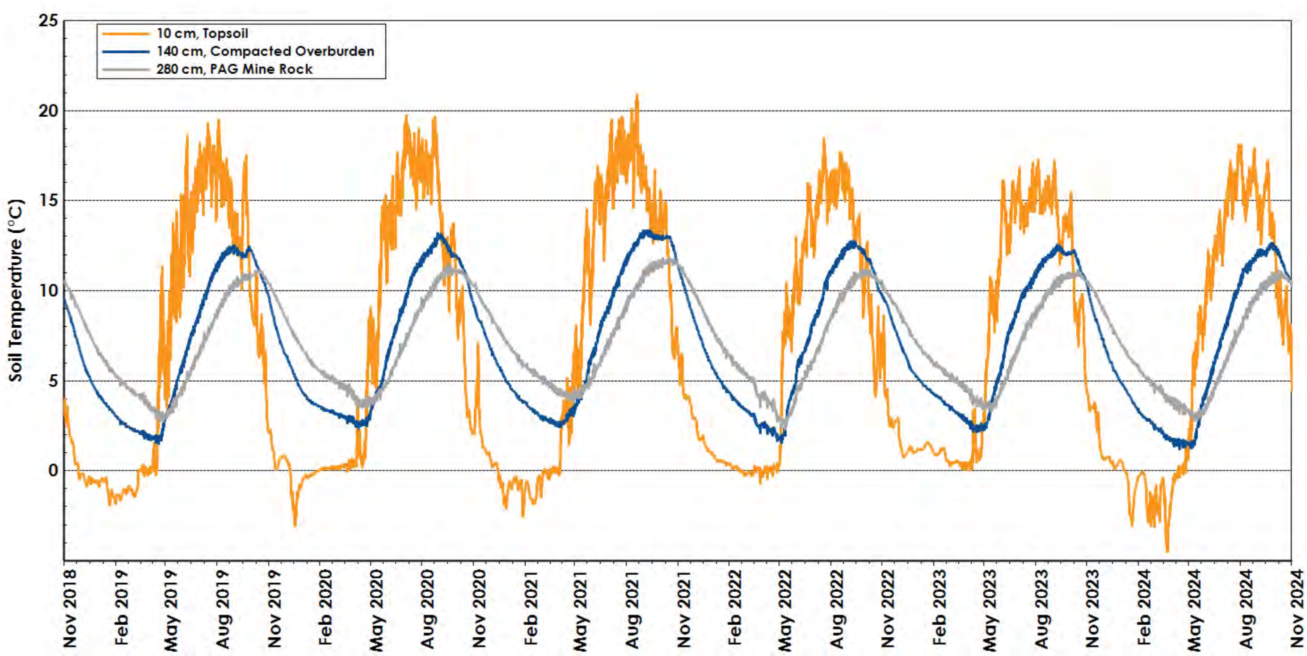

Figure 3.9: Trial #1 PAG mine rock temperatures since the onset of monitoring.

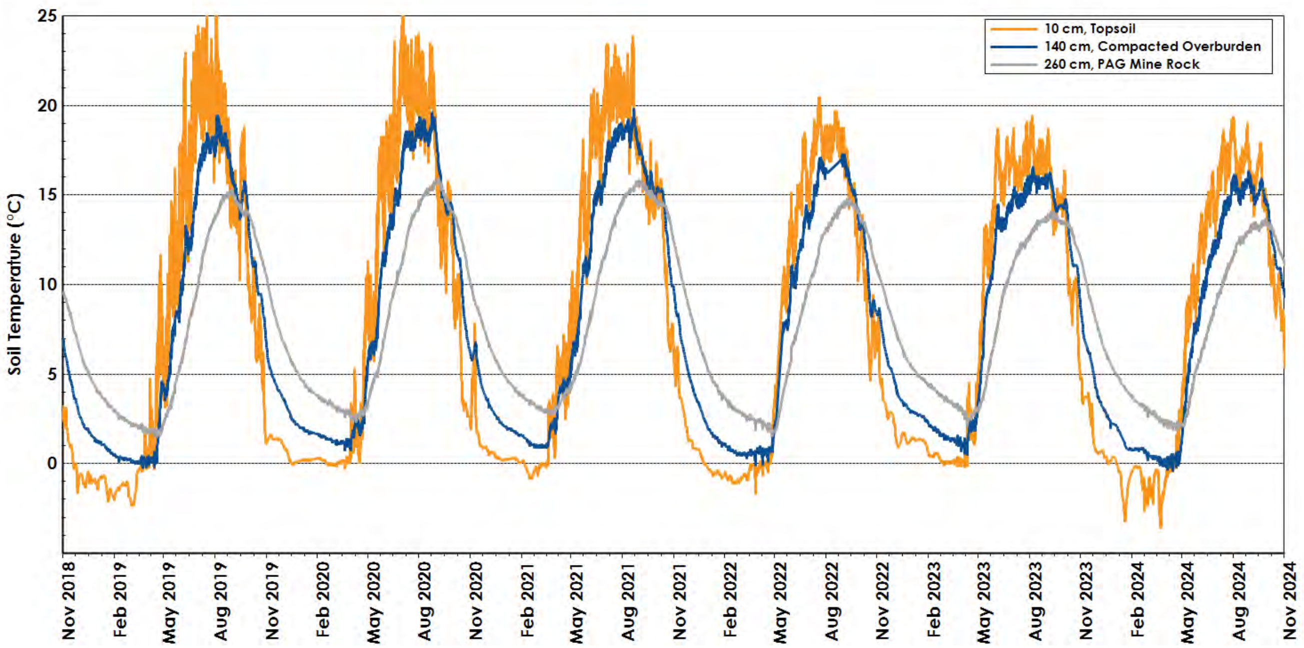

Figure 3.10: Trial #2 PAG mine rock temperatures since the onset of monitoring.

3.3 Cover System Water Dynamics

Volumetric water content and matric suction were measured throughout each cover system profile. Volumetric water content and matric suction measurements can be further analyzed to investigate performance and water dynamics of the cover system. This section presents the results of the data analysis, while direct in situ measurements are presented in Appendix B. The top of each cover system was selected as origin datum for all instrumentation depths.

3.3.1 Degree of Saturation

Volumetric water content was measured throughout each cover system profile to observe changes in the degree of saturation of the cover system material. To limit the ingress of oxygen into the underlying mine rock, a material must remain at or near saturated levels. As the degree of saturation exceeds 80%, the diffusion coefficient typically decreases by several orders of magnitude. A general guideline suggests that maintaining a consistent degree of saturation of 85% or greater within a layer will effectively limit the amount of oxygen movement by diffusion (Aachib *et al.* 2004).

Water content data shows that the compacted clay layer in both cover system profiles maintained a high degree of saturation throughout the monitoring period, having an annual average degree of saturation of 95%, and 93%, for Trial #1 and Trial #2, respectively (Table 3.6). The degree of saturation maintained in the cover systems demonstrates that the compacted clay layer is retaining sufficient pore-water to attenuate oxygen transport. Data from the 2023-2024 monitoring period reflected previous monitoring periods, in which the observed the degree of saturation of the compacted layer drop below 90% throughout the dry, warm summer. Water content of the compacted layer recovered during the wetter 2024 spring/early summer months and remained primarily above 90% for the duration of the monitoring period In Trial #1 (Figure 3.11). Water content in Trial #2 drops below 90% in August and onwards which coincides with the dry late summer and fall months (Figure 3.12). It can be determined from monitoring results that the objective of mitigating oxygen ingress is effectively achieved through the maintenance of an adequate degree of saturation in both the compacted and noncompacted layers throughout the monitoring period. Degree of saturation fell to a minimum of 82% in the compacted layer at Trial #2 in November, resulting in increased estimated oxygen ingress into the underlying waste rock. Estimated oxygen diffusion modelling is further quantified and discussed in Section 3.5.

Table 3.6: Average degree of saturation of cover system layers.

	Non-compacted Clay		Compacted Clay		
	0 – 50 cm	**50 – 100 cm**	**Maximum**	**Minimum**	**Average**
Trial #1 Primary Nest	81%	95%	100%	92%	95%
Trial #2 Primary Nest	88%	90%	98%	82%	93%

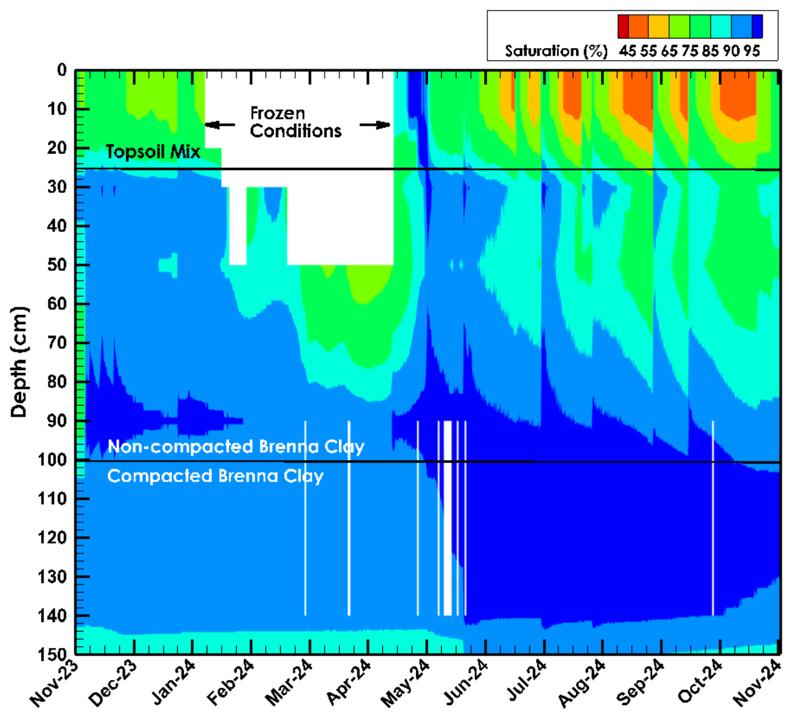

Figure 3.11: Change in degree of saturation at the Trial #1 Primary nest (white areas indicate periods of erroneous data).

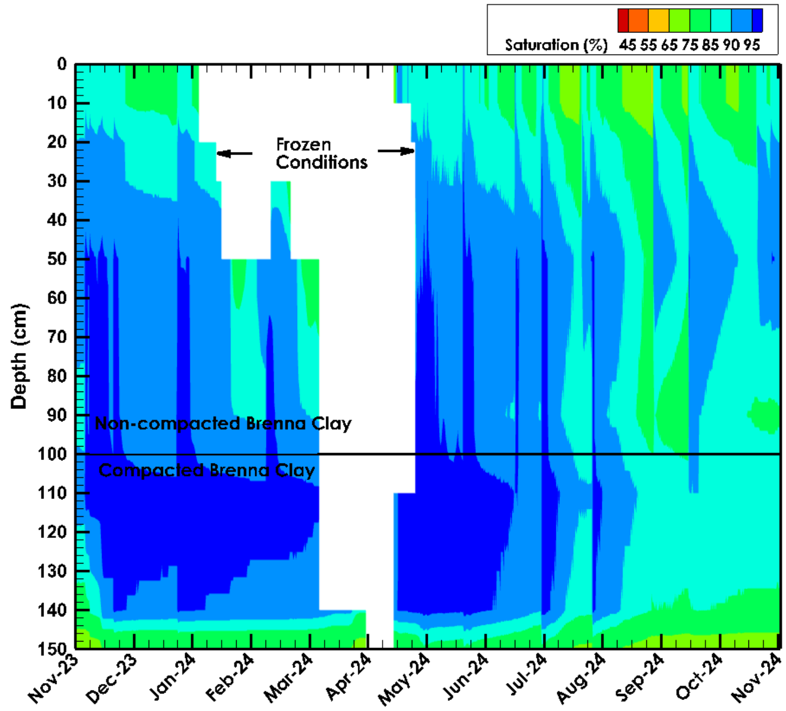

Figure 3.12: Change in degree of saturation at the Trial #2 Primary nest.

Historically, degree of saturation has remained above 85% in the compacted layer for majority of the monitoring period. Short periods near the middle to end of summer where the degree of saturation drops below 85% have historically been restored as a result of late season rainfall and cooler temperatures prior to the winter months.

3.3.2 *Summary of Matric Suction Data*

Matric suction sensors were installed in each cover system profile to measure negative pore-water pressure (suction). In unsaturated soils, suction provides an indication of the affinity of a soil for water, expressed as an energy potential. Measurements of less than 10 kPa are outside the installed sensor measurement range as the resolution of measurements in this range cannot be specifically measured and can be considered as any value between 0 to 10 kPa. Suction values greater than about 400 kPa are calculated from laboratory calibrations completed with salt brines generating osmotic suction. Calibration of individual sensors in this suction range can be challenging and therefore values greater than 400 kPa can be considered as high suctions but the trend in estimated suction value is likely more valuable than the absolute value.

Overall, Trial #2 (Figure 3.14) observed higher suction values deeper within the cover system than Trial #1 (Figure 3.13) (suction values measured >500 kPa within the compacted layer). Trends in suction were comparable throughout the monitoring period between Trial #1 and Trial #2, with Trial #1 experiencing higher suctions in the compacted layer during the winter months, prior to freshet. Higher suction values in the non-compacted layer can indicate the established vegetations ability to translocate water out of the soil matrix during warmer and drier months. Both Trial #1 and Trial #2 showed wetting trends at the end of the monitoring period, which is common for this time of year due to late season rainfall and temperate weather.

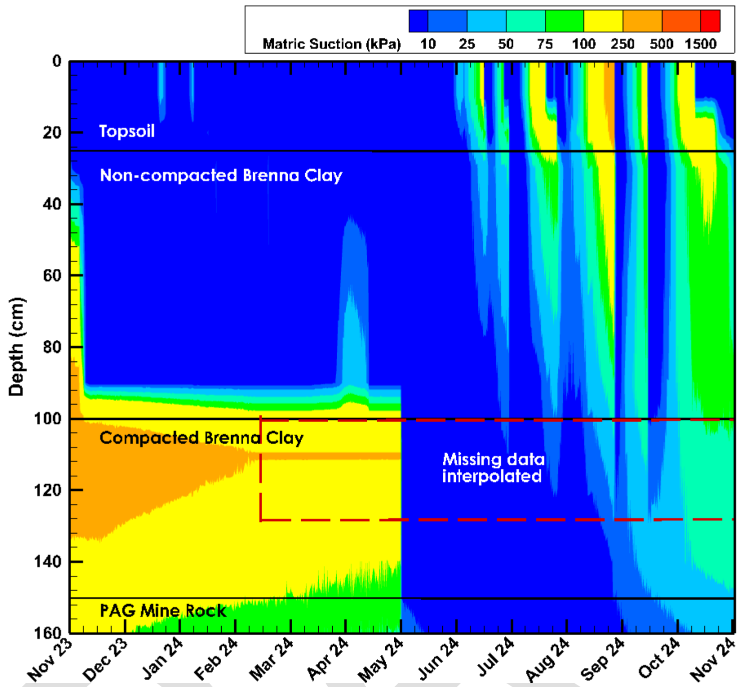

Figure 3.13: Matric suction measured at the Trial #1 Primary nest.

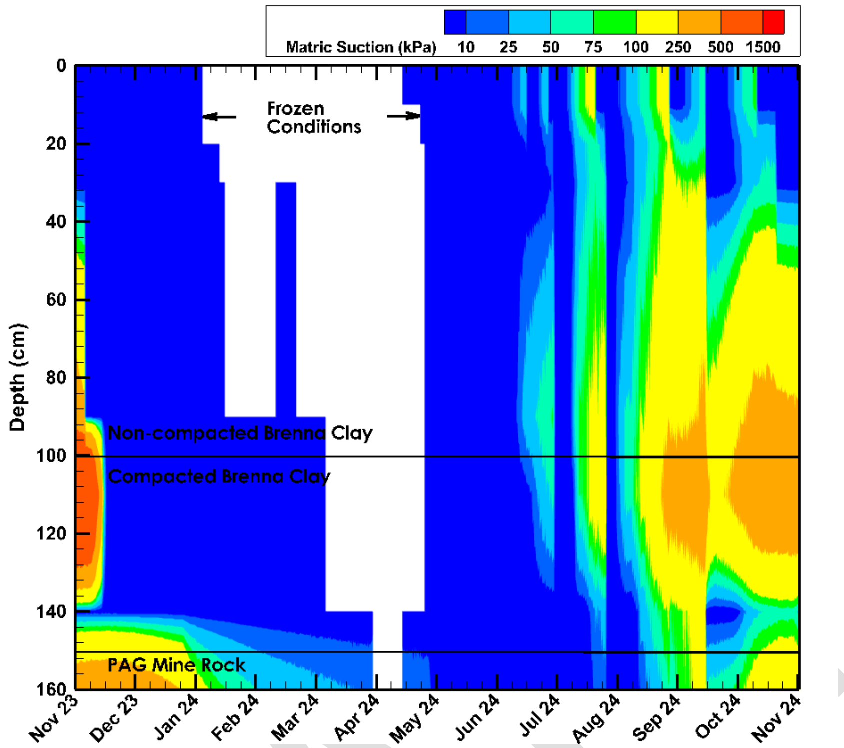

Figure 3.14: Matric suction measured at the Trial #2 Primary nest.

Trends in matric suction have remained generally consistent since the onset of monitoring. Higher suctions penetrating deeper in the cover system profile are typically observed in June through October. Typically, water levels recover in October/November and are at a seasonal high following freshet in April, resulting in reduced suctions throughout the cover profile between these months. Although the compacted layer observed higher suctions during the 2023-2024 monitoring period, the compacted layer was able to maintain a high degree of saturation, as discussed in Section 3.3.1.

3.3.3 *Total Water Storage*

The total water storage within the cover system profiles was determined by using field data to produce water retention curves (WRCs) from combined volumetric water content and suction data during the monitoring period. From the WRCs, the water content at which field capacity (FC) is reached can be determined. The FC is the volume of water stored in a soil matrix after the soil is allowed to drain from saturation freely under gravity (with no evaporative loss) and typically corresponds to the water content at suction values of 33 kPa for fine grained soils. Inputs of water above FC fill the largest pores, which then quickly drain under gravity due to an inability of large macropores to exert sufficient tension to retain the water. The total storage of water below field capacity within the cover system was calculated to determine the capacity to store new precipitation within the soil matrix. The total available storage in the cover system was approximately 550 mm.

Volumetric water content data was used to calculate the total measured water storage within each primary nest profile. A total water storage profile was created from sectioning the cover system into representative layers, with each layer having a sensor at its centre. For sensors placed at 10 cm, 20 cm, and 30 cm the representative layers are 0 to 15 cm and 15 to 25 cm. During periods where the measured storage is less than the total available storage, the soil has room to hold more water within the profile. Conversely, periods where the measured storage volume is greater than the total available storage the profile is not able to store new precipitation and infiltrated water will produce larger NP events.

Examination of measured water storage within the cover system profiles demonstrate the effect vegetation has on the capacity of the cover system to store and release water within the upper meter. Trial #1 and Trial #2 stored water capacity showed similar trends for the duration of the monitoring period (Figure 3.15). The decrease in storage during warmer and drier months (August through September), allows for new precipitation in October to be stored within the soil profile and not infiltrate to the underlying mine rock. Peaks and drops throughout the monitoring period correlate to high precipitation events – similar to trends observed in matric suction and degree of saturation. If vegetation diminishes on the clay overburden, the cover system will not be as effective as a store-and-release system. Historically, as well as during the 2024 monitoring period, both Trial #1 and Trial #2 are following trends consistent with the field capacity (above field capacity in the spring during freshet, below in the summer during drier months), demonstrating effective store and release capabilities, while maintaining a high degree of saturation.

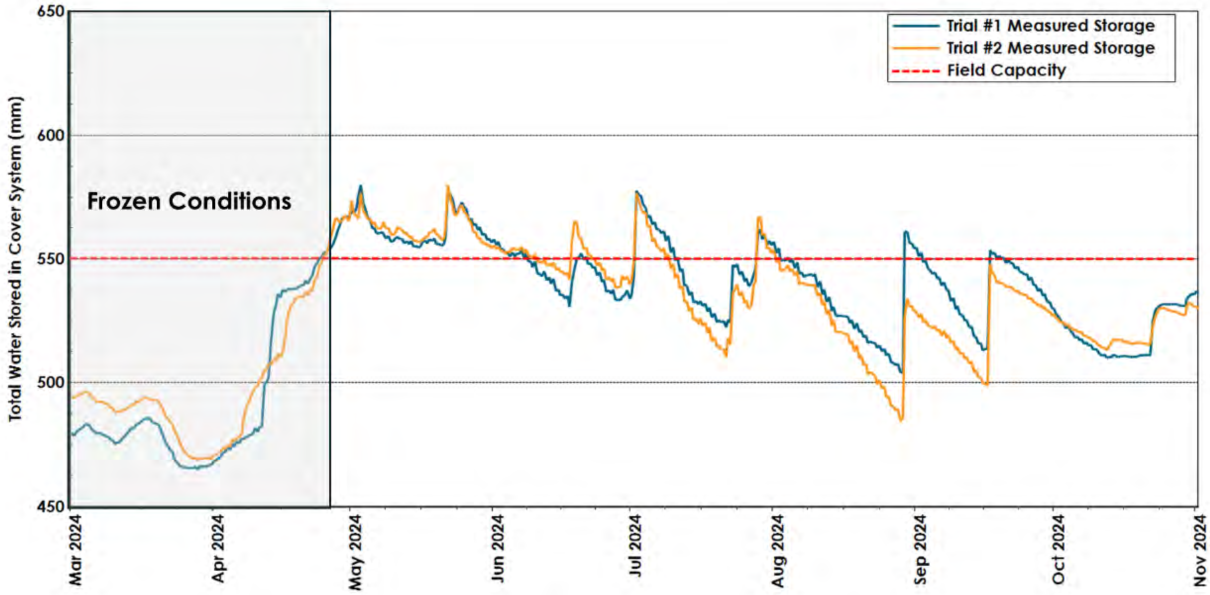

Figure 3.15: Measured storage versus cover system field capacity.

3.4 Water Balance

3.4.1 Discussion of Water Balance Inputs

A numerical model was utilized for water balance estimation that uses inputs of both meteorological data and soil monitoring data (suction gradients, VWC, measured storage) and estimates the remaining water balance components to balance the equation daily (Equation 1). The use of this software increases accuracy and consistency of water balances. Water balances were developed for each primary station to estimate the NP to the underlying mine rock.

$$PPT = SB + RO + ET_0 + \ NP + \Delta S + ITF \qquad [1]$$

where:

PPT = precipitation (rainfall plus snow water equivalent)

SB = sublimation (assumed to be zero)

RO = runoff;

ET_0 = evapotranspiration;

NP = net percolation;

ΔS = change in water storage within the cover system profile; and

ITF = interflow (assumed to be zero)

Precipitation was measured at site with a TBRG to measure rainfall. Spring melt was estimated to be negligible due to the lack of snow on site during the monitoring period.

The primary purpose of the water balance is to estimate NP rates based on changes in water storage in the compacted clay layer, suction gradients, and conservative flow limitations of a barrier layer (hydraulic conductivity equal to or lesser than 10^{-7} cm/s).

The water balance is an indirect method of calculating NP. Therefore, the uncertainty associated with the individual components of the water balance are compounded when estimating NP. Water balance uncertainties are constrained to the extent possible using engineering judgement. The estimated NP rates and patterns determined using the water balance method generally support the conceptual model, and as such support the suitability of the water balance method for this site. Numerical modelling methods were used in development of the water balance.

The numerical model uses soil parameters such as hydraulic conductivity and porosity to improve accuracy in estimating runoff and NP. Manual adjustments are also completed based on site specific conditions that the simulation may not account for, such as hard panning of the topsoil or site topography, which help further improve the accuracy of the water balance results. Snowmelt is generally considered to be runoff when ground conditions are still frozen, however snowmelt was assumed to be negligible during the monitoring period. The numerical simulation software utilizes the Soil Conservation Science (SCS) curve number (CN) to increase the accuracy of runoff estimation. The CN is determined through defining the Hydrologic Soil Group (HSG), cover description, and hydrologic condition. HSG Group C was chosen based on the results of the permeability testing completed on the compacted clay at the East Mine Rock Stockpile. An HSG Group C classification means that the soil has a slow infiltration rate. The other parameter used in the simulation is the vegetation cover type, which was chosen to be brush in good condition (>75% of the surface is covered), based on observations during the site visits. The vegetation cover at both Trial #1 and Trial #2 resulted in a curve number for the hydrologic soil group of 70 (USACE et.al., 2022).

3.4.2 Water Balance Results

Calculated change in storage matched measured change in storage for the Trial #1 (Figure 3.16) and Trial #2 (Figure 3.17) water balances. Estimated NP for Trial #1 was 26 mm (4% of annual precipitation); below the anticipated performance outlined in the conceptual model and produced very low NP rates given the climate region (INAP, 2017). Calculated NP in Trial #2 was 45 mm (7% of the annual precipitation) (Table 3.7), resulting in low NP rates. Runoff for Trial #1 and Trial #2 was 26% and 27%, respectively; higher than the conceptual model predictions of 10-20%. The primary events driving runoff were winter rainfall events, and series of rainfall events on July 1 and 2 (71 mm of rainfall).

Table 3.7: Water balance components.

	Precipitation(mm)	ET_0 mm (% PPT)	Runoff mm (% PPT)	Net Percolation mm (% PPT)	Change in Storage mm (% PPT)
Conceptual Model	-	50 – 70%	10 – 20%	5 – 15%	N/A
Trial #1	643	442 (69%)	167 (26%)	26 (4%)	8 (1%)
Trial #2	643	432 (67%)	172 (27%)	45 (7%)	-5 (-1%)

PPT = Annual Precipitation

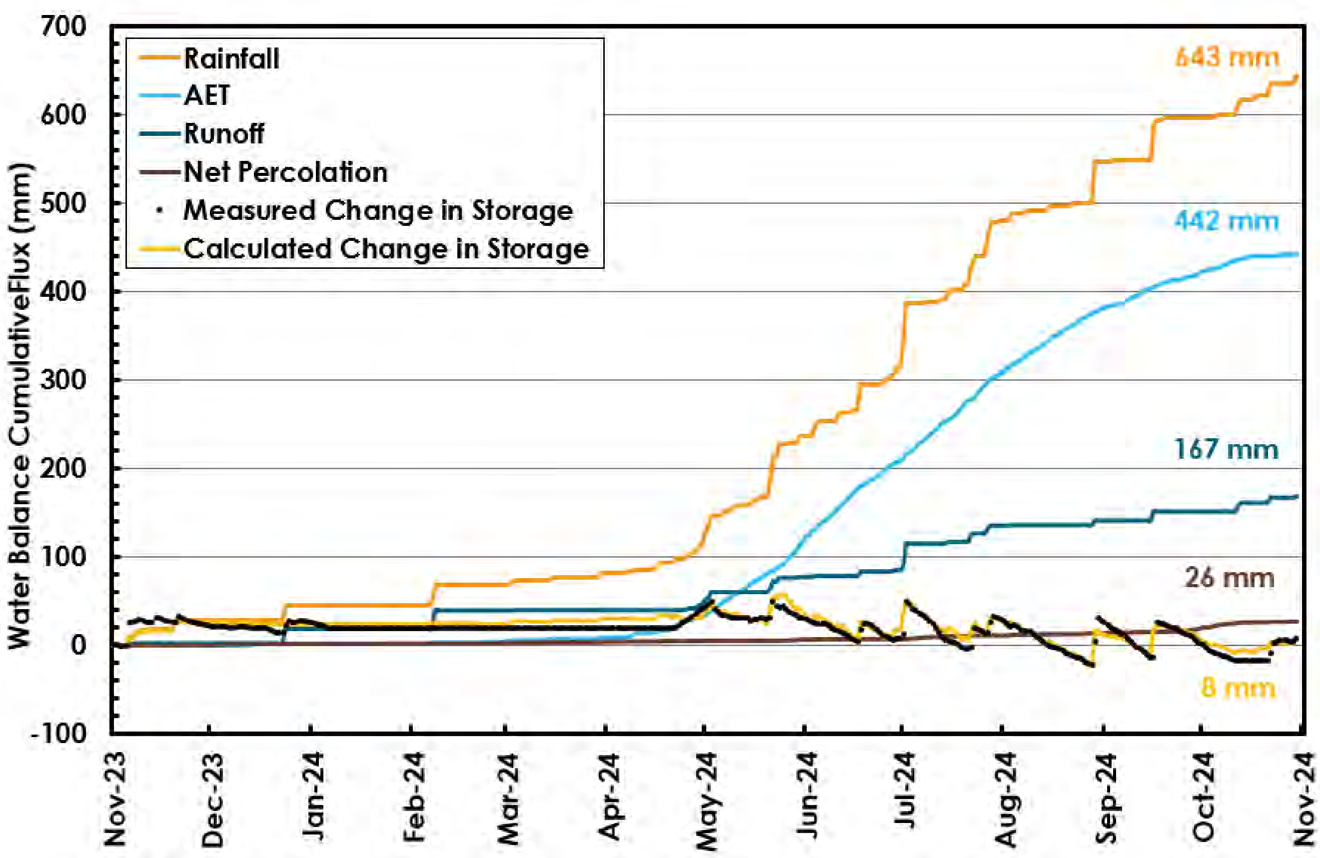

Figure 3.16 : Cumulative water balance flux at Trial #1 for the monitoring period.

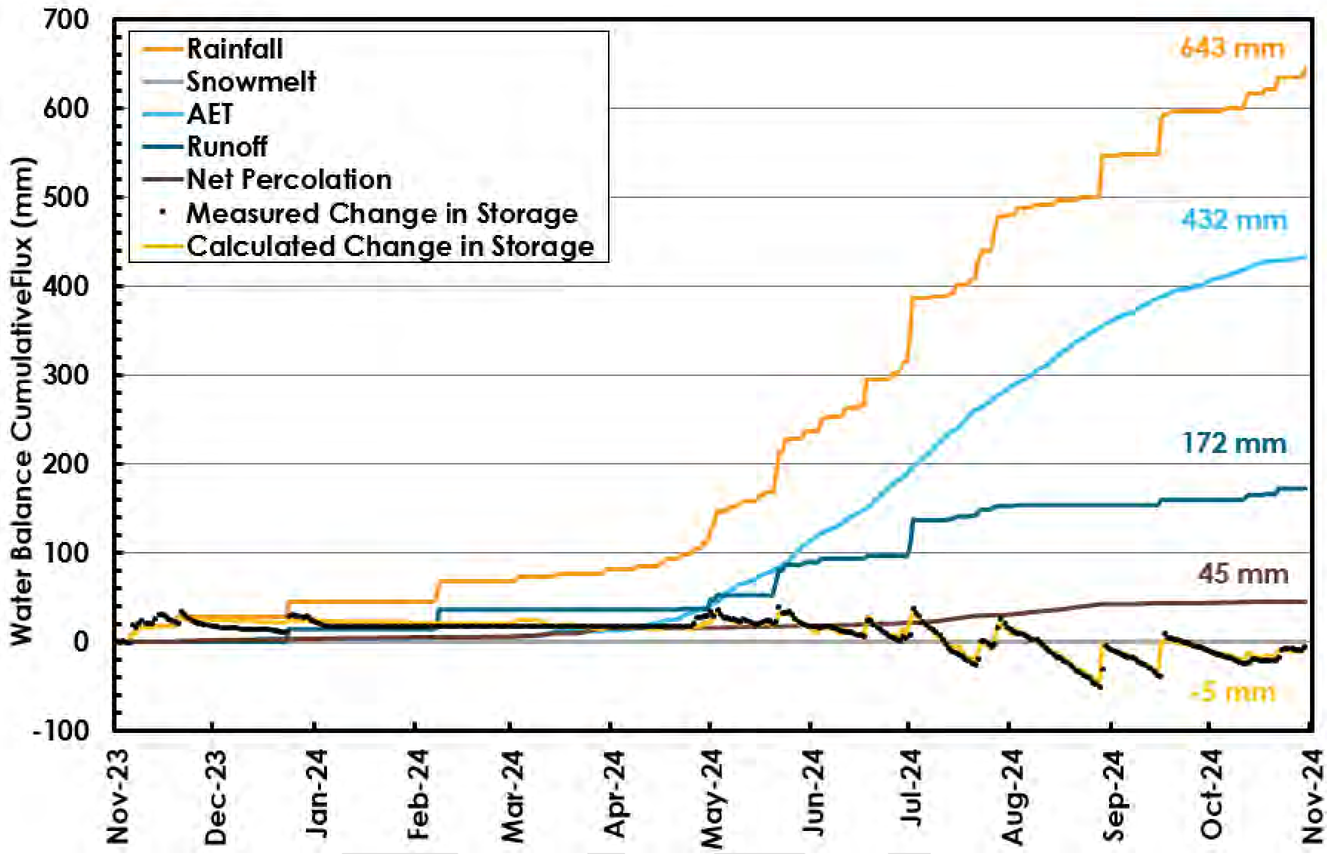

Figure 3.17: Cumulative water balances flux at Trial #2 for the monitoring period.

The results of the previous water balances are provided for comparison (Table 3.8). Water balance modelling was refined for the 2021-2022 water year with the use of a numerical modelling software. Notable values include the increase in runoff as a percentage of precipitation during the 2021-2022 monitoring period. The runoff value was inflated due to the excess rainfall measured during the monitoring period. The 2023-2024 water balance more similarly reflects the 2019-2020 and 2022-2023 water balance, with the exception that evapotranspiration values are more similar between Trial #1 and Trial #2 during the current monitoring period. As vegetation has developed over the previous five years, evapotranspiration rates have generally increased, and vegetation growth and retention between both cover trials has become more alike.

Runoff percentage was similar to that of previous monitoring periods, despite there being negligible snow measured during the winter months. The runoff measured during the 2023-2024 monitoring period is primarily a result of winter rainfall events, and higher than average annual rainfall, increasing the overall runoff estimate.

Storage trends were similar for both trials, in which increases were observed following larger rainfall events, followed by continuous decreases in soil water storage until the subsequent rainfall event. Storage rates were increasing towards pre-freshet values at the end of the monitoring period for both

Trials, as evapotranspiration decreases, vegetation degrades, and temperatures cool. NP continues to be near or within the 5 – 15% range as defined by the conceptual model for both cover system configurations.

Table 3.8: Water balance components over the five-year monitoring period.

Monitoring period		ET_0 mm (% PPT)	Runoff mm (% PPT)	Net Percolation mm (% PPT)	Change in Storage mm (% PPT)
	Conceptual Model	50 – 70%	10 – 20%	5 – 15%	N/A
2019-2020	Trial #1	378 (80%)	114 (24%)	43 (9%)	-
	Trial #2	287 (60%)	113 (23%)	75 (16%)	-
2020-2021	Trial #1	239 (49%)	122 (25%)	75 (15%)	60 (13%)
	Trial #2	240 (48%)	139 (28%)	120 (24%)	-2 (-0.4%)
2021-2022	Trial #1	468 (49%)	388 (41%)	119 (12.5%)	-25 (-2.5%)
	Trial #2	441 (47%)	372 (39.5%)	130 (14%)	-4 (-0.5%)
2022-2023	Trial #1	372 (74%)	115 (23%)	26 (5%)	-8 (-2%)
	Trial #2	377 (73%)	127 (25%)	50 (10%)	-39 (-9%)
2023-2024	Trial #1	442 (69%)	167 (26%)	26 (4%)	8 (1%)
	Trial #2	432 (67%)	172 (27%)	45 (7%)	-5 (-1%)

3.5 Estimated Oxygen Ingress

Automated oxygen sensors located in the underlying mine rock were monitored to observe the ingress and consumption of oxygen. Fluctuation in oxygen concentrations have been observed since the construction of the cover trials. These fluctuations have been attributed to insufficient thickness of the clay key surrounding the field trials allowing oxygen to bypass the cover system through advection. Due to this ingress pathway, monitoring oxygen concentrations is not a definitive approach to measure the ability of the cover system to mitigate oxygen ingress.

To quantitatively estimate oxygen diffusion into the mine rock through the cover materials, a Monte Carlo simulation has been completed separately for both trials. The simulation used the degree of saturation as provided in Section 3.3.1, and varied the following material properties as a sensitivity analysis to estimate both best- and worst-case scenarios:

- Dry density of CBC between 1,600 kg/m^3 and 1,700 kg/m^3;
- Dry density of non-compacted clay overburden between 1,450 kg/m^3 and 1,550 kg/m^3;
- Dry density of topsoil between 1,400 kg/m^3 and 1,500 kg/m^3 (Trial #1 only); and

- Initial oxidization rate (IOR) of the mine rock between 1×10^{-11} kg/tonne/s and 1×10^{-7} kg/tonne/s.

The simulation was repeated 1,000 times, with the above parameters varied for each simulation. The results of the simulation for Trial #1 show that the median results predict approximately 1.9 mol of oxygen had diffused into the mine rock over the monitoring period (Figure 3.18). The 99th percentile oxygen ingress estimation was approximately 3.5 mol over the monitoring period. The median results for Trial #2 indicate approximately 3.2 mol of oxygen had diffused into the mine rock over the monitoring period (Figure 3.19).

The results of the previous four years of modelling indicate a very low to low oxygen flux through the cover system (Table 3.9) according to the INAP Guidance Document (INAP, 2017). The oxygen flux through the cover system was able to stay within conceptual performance expectations, even during drier periods.

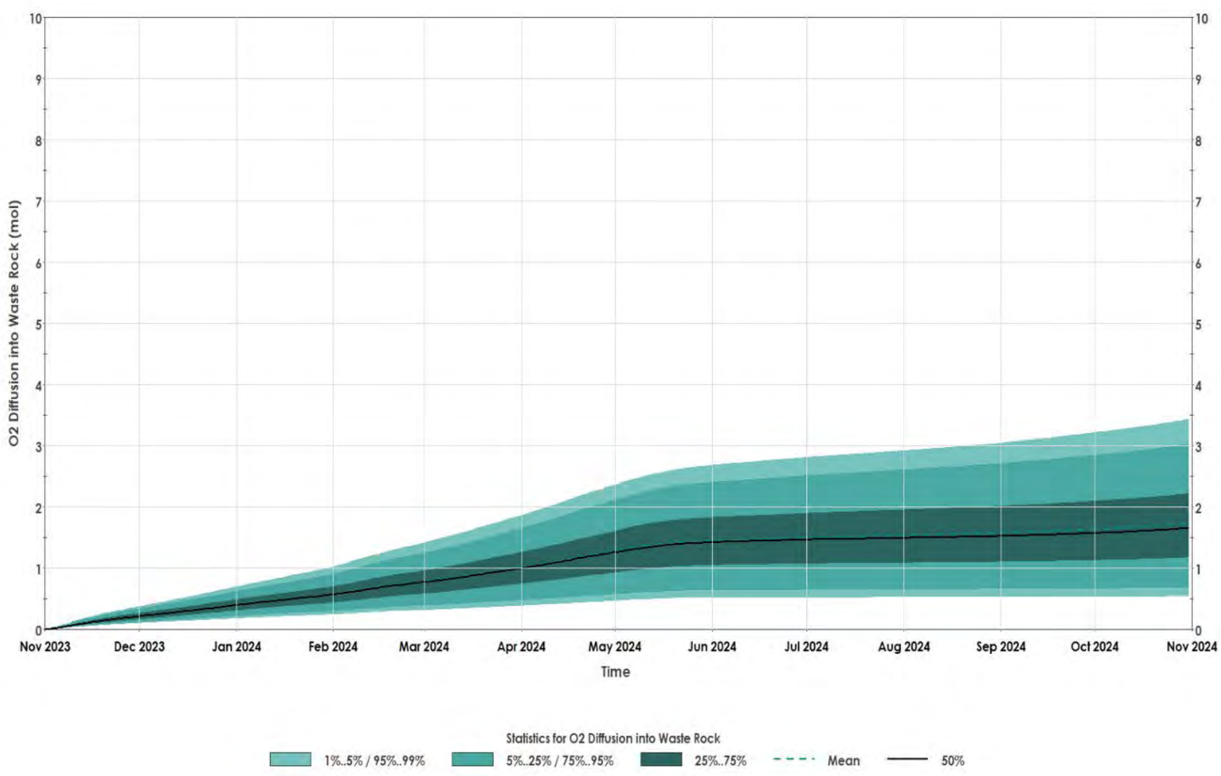

Figure 3.18: Oxygen diffusion simulation through cover materials on Trial #1 over the monitoring period.

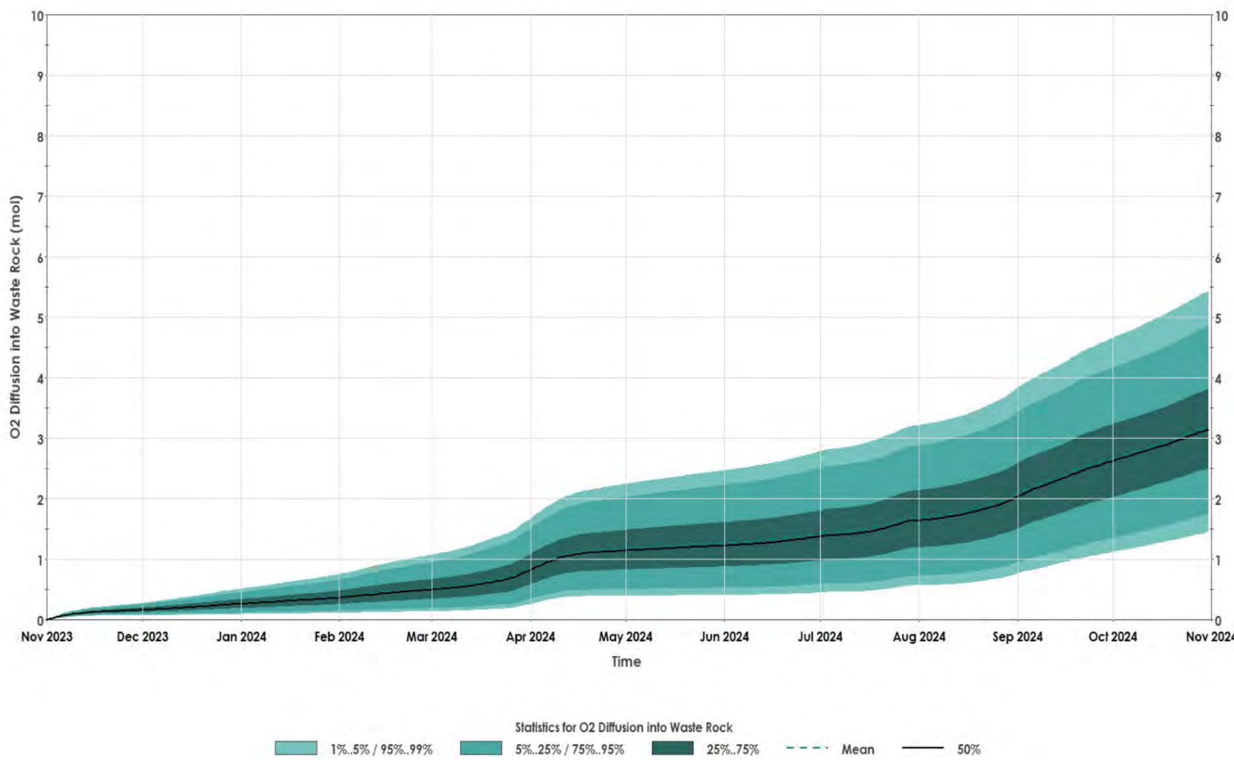

Figure 3.19: Oxygen diffusion simulation through cover materials on Trial #2 over the monitoring period.

Table 3.9: Historical estimated oxygen ingress

Monitoring Period	2020-2021		2021-2022		2022-2023		2023-2024	
	Trial #1	Trial #2	Trial #1	Trial #2	Trial #1	Trial #2	Trial #1	Trial #2
Median estimated oxygen ingress (mol/yr)	1	2	1	1.4	1.8	5.7	1.7	3.2
INAP oxygen flux classification	Very Low	Very Low	Very Low	Very Low	Very Low	Low	Very Low	Very Low

(INAP, 2017)

4 RECOMMENDATIONS

To further understand cover system performance, the following is recommended to be completed during the upcoming monitoring period:

- Continued performance monitoring as the cover trials is easily accessible, not infringing on mine operations, and require little maintenance and further investments. The learnings from the performance of the cover trials in response to varying climate conditions allow for better understanding of cover system performance at the Rainy River site.
- Continued generation of annual water balances to better understand climatic cycles and the influence of further established vegetation to modify the water fluxes.
- Completion of an annual snow survey prior to observing above 0°C temperatures, to limit the amount of snow water equivalent that may be lost prior to the snow survey.

4.1 Opportunities

Automated performance monitoring data has been collected at the field trials for approximately 5.5 years, which represents a substantial database of material properties and soil response to wet/dry and freeze/thaw cycling. The PAG cover trial database provides New Gold with a better understanding of cover system performance under varying climatic and vegetative conditions. The database will foster additional confidence in the results from the EMRS progressive reclamation cover construction, which started in late 2020.

5 CLOSURE

We trust information provided is satisfactory for your requirements. Please do not hesitate to contact the undersigned at (306) 241-3111 for further information or questions.

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6 REFERENCES

Aachib, M., Mbonimpa, M., and M. Aubertin. (2004). Measurement and Prediction of the Oxygen Diffusion Coefficient in Unsaturated Media, with Applications to Soil Covers. Water, Air, and Soil Pollution 156: 163–193, 2004.

Allen, R. G., Pereira, L.S., Raes, D. and Smith, M. (1998). Crop evapotranspiration – Guidelines for computing crop water requirements. FAO Irrigation and Drainage Paper 56. Food and Agriculture Organization (FAO) of the United Nations, Rome, Italy.

Environment and Climate Change Data (ECCC). (2024). 2024 historical climate data from Barwick Station extracted from the Environment and Climate Change Canada Historical Climate Data web site (https://climate.weather.gc.ca/index_e.html) on December 11, 2024.

International Network for Acid Prevention (INAP). (2017). Global Cover System Design – Technical Guidance Document.

McMullen, J., Firlotte, R., Knapp, R., Aubertin, M. (1997). Les Terrains Auriferes property site closure and rehabilitation – conceptual to construction. In Proceedings of the 29th Annual meeting of the Canadian mineral processors, Ottawa, Ont. 274-292.

Mine Environment Neutral Drainage (MEND). (2004). Design, construction, and performance monitoring of cover systems for waste rock and tailings. Canadian MEND Program, Project 2.21.4, July.

Okane Consultants (Okane). (2017a). Rainy River Project: Preliminary Evaluation of Cover System Design for Mine Rock Stockpiles. Okane report no. 1003/06-02 submitted to New Gold October 17, 2017

Okane Consultants (Okane). (2017b). Rainy River Project Failure Modes and Effects Analysis for Mine Rock Stockpiles. Okane report no. 1003/03-001 prepared for New Gold Inc. November 2017.

Okane Consultants (Okane). (2018). PAG Cover System Field Trials 2017 Field Trial Report. Okane report no. 1003/08-001 prepared for New Gold Inc. August.

Okane Consultants (Okane). (2020a). Rainy River PAG Cover Trial – (2019) Annual Monitoring Report. Submitted to New Gold January 21, 2020.

Okane Consultants (Okane). (2020b). Rainy River PAG Cover Trial – 2020 Annual Monitoring Report. Submitted to New Gold December 16, 2020.

Okane Consultants (Okane). (2022). Rainy River PAG Cover Trial – 2021 Annual Monitoring Report. Submitted to New Gold January 5, 2022.

Okane Consultants (Okane). (2023). Rainy River Mine – Potentially Acid Generating Mine Rock Cover Trial 2022 Annual Monitoring Report. Revision 1. Submitted to New Gold January 9, 2023.

Okane Consultants (Okane). (2024). Rainy River Mine – Potentially Acid Generating Mine Rock Cover Trial 2023 Annual Monitoring Report. Submitted to New Gold January 26, 2024.

USACE Hydrologic Engineering Center. (2022). HEC-HMS Technical Reference Manual SCS TR-55 Table 2-2c "Runoff curve numbers for other agricultural lands". Accessed at: https://www.hec.usace.army.mil/confluence/hmsdocs/hmstrm/cn-tables

Appendix A

Photo Log

Photo A.1: PAG Trial plateau. February 20, 2024.

Photo A.2 PAG Trial slope. February 20, 2024.

Photo A.3: PAG Trial slope. February 20, 2024.

Photo A.4: PAG Trial slope. February 20, 2024.

Photo A.5: PAG Trial#1 plateau and station. Looking northeast. July 10, 2024.

Photo A.6: PAG Trial#2 plateau and station. Looking northeast. November 28, 2024.

Photo A.7: PAG Trial#2 enclosure. November 28, 2024.

Photo A.8: PAG Trial#2 broken tipping bucket. November 28, 2024.

Photo A.9: PAG Trial#2 repaired tipping bucket. November 28, 2024.

Appendix B

In Situ Instrumentation Measurements

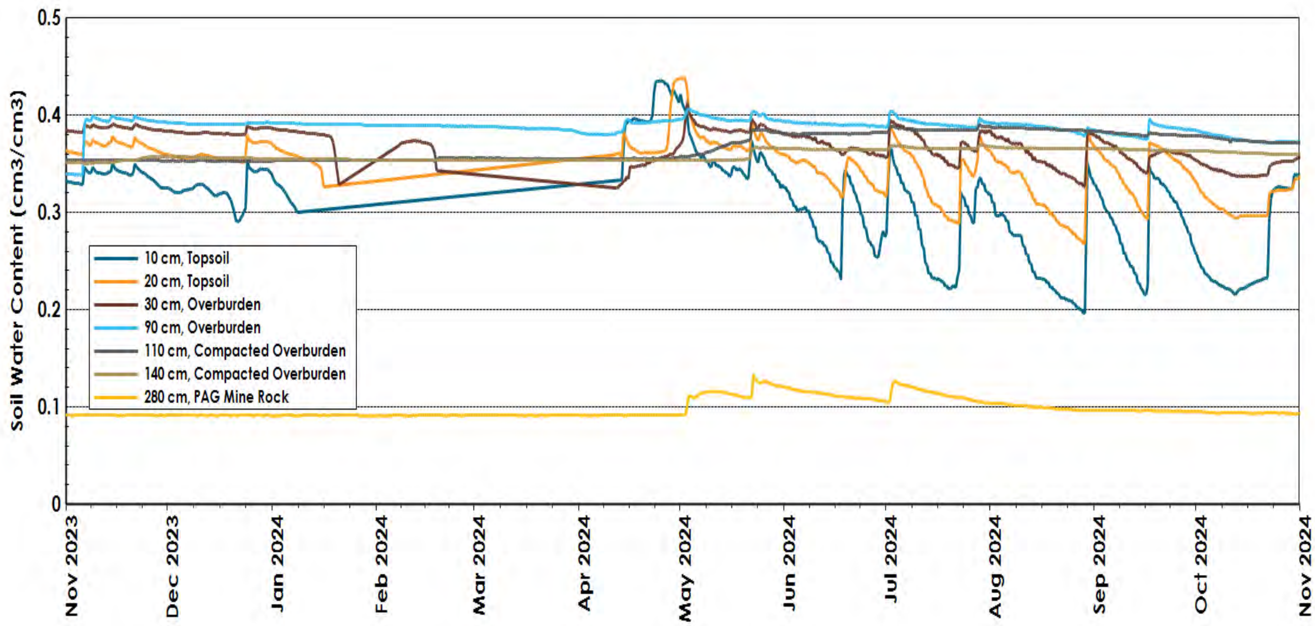

Figure B.1: VWC profile at Trial #1 primary station during the monitoring period.

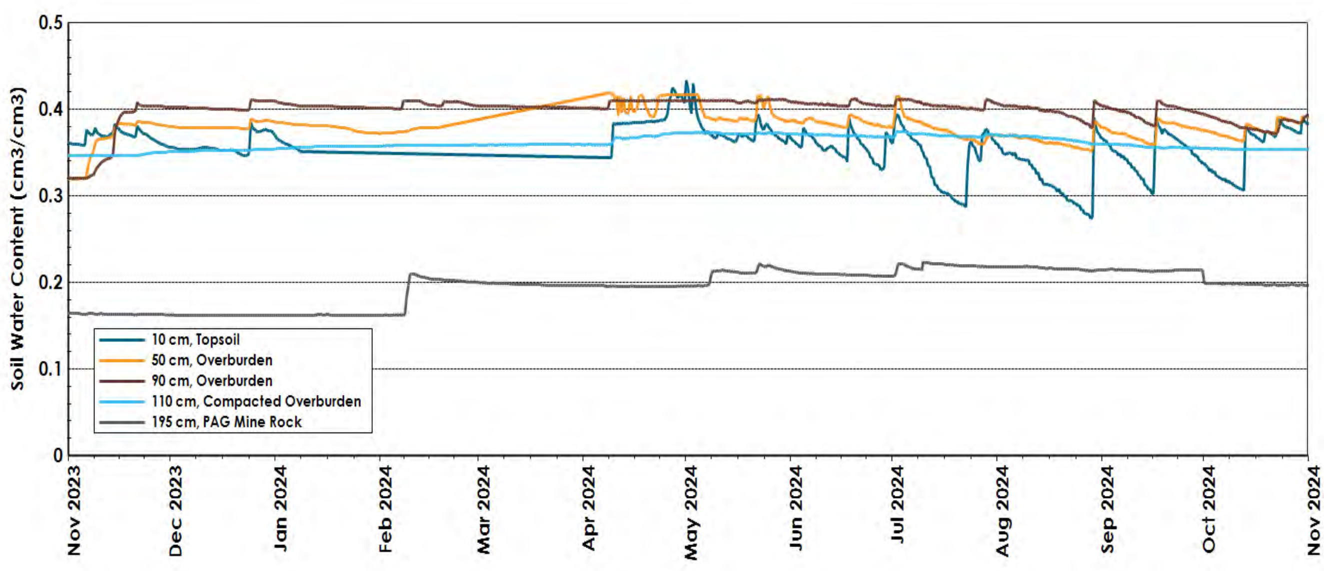

Figure B.2: VWC profile at Trial #1 secondary station during the monitoring period.

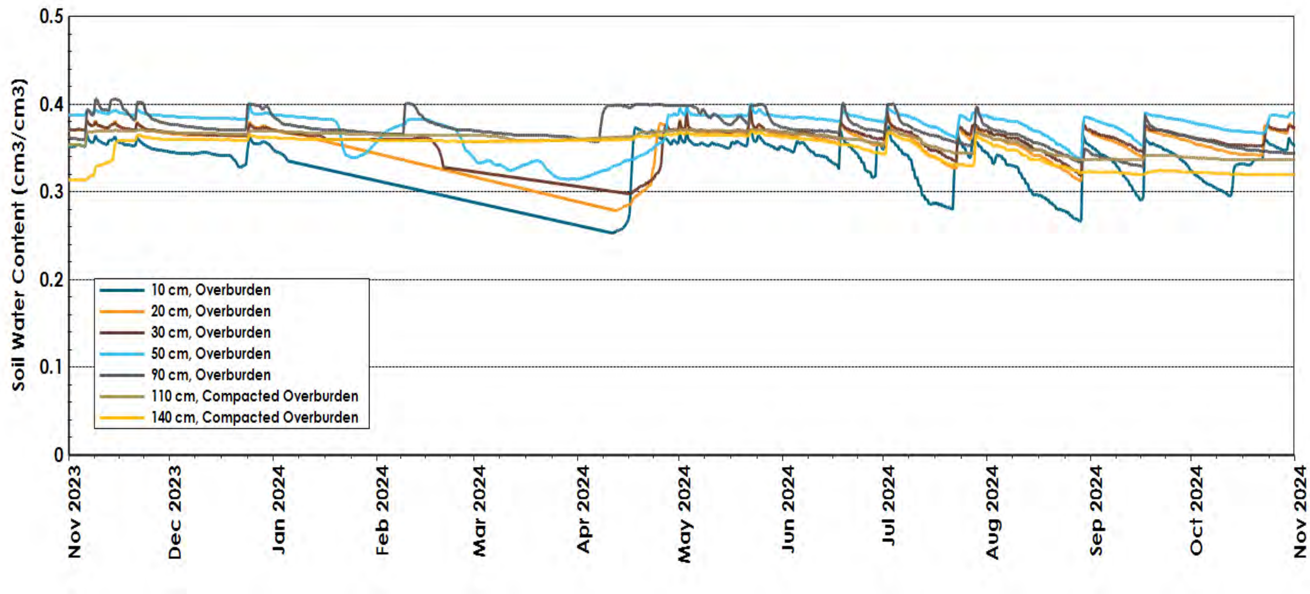

Figure B.3: VWC profile at Trial #2 primary station during the monitoring period.

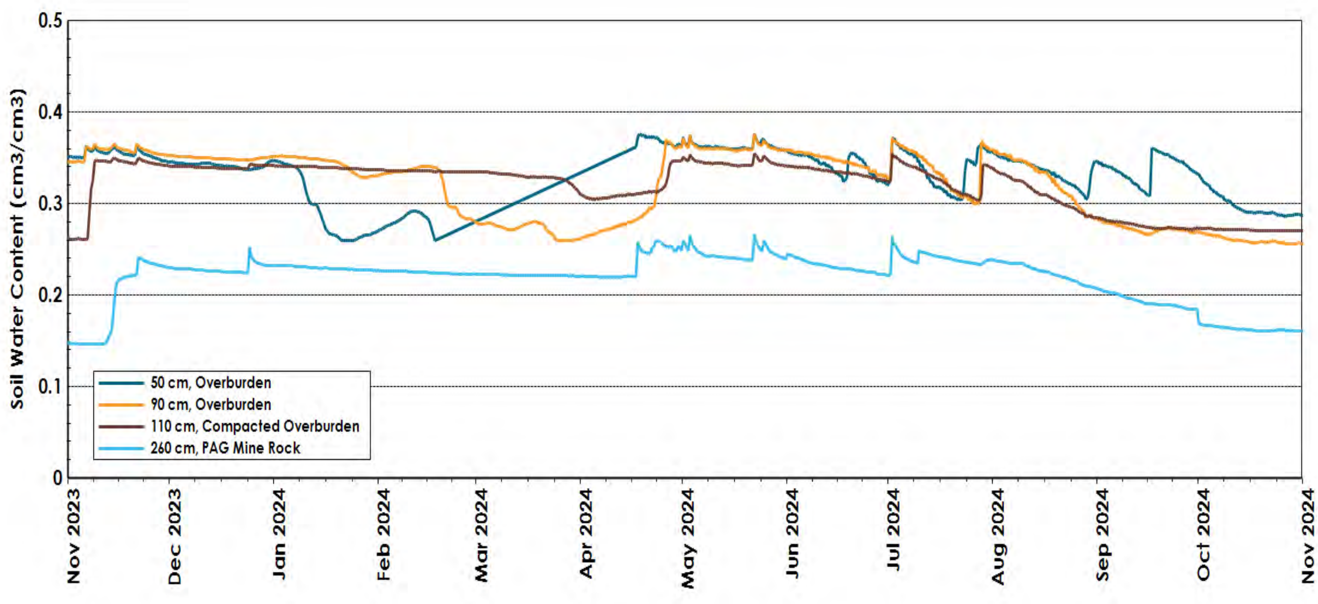

Figure B.4: VWC profile at Trial #2 secondary station during the monitoring period.

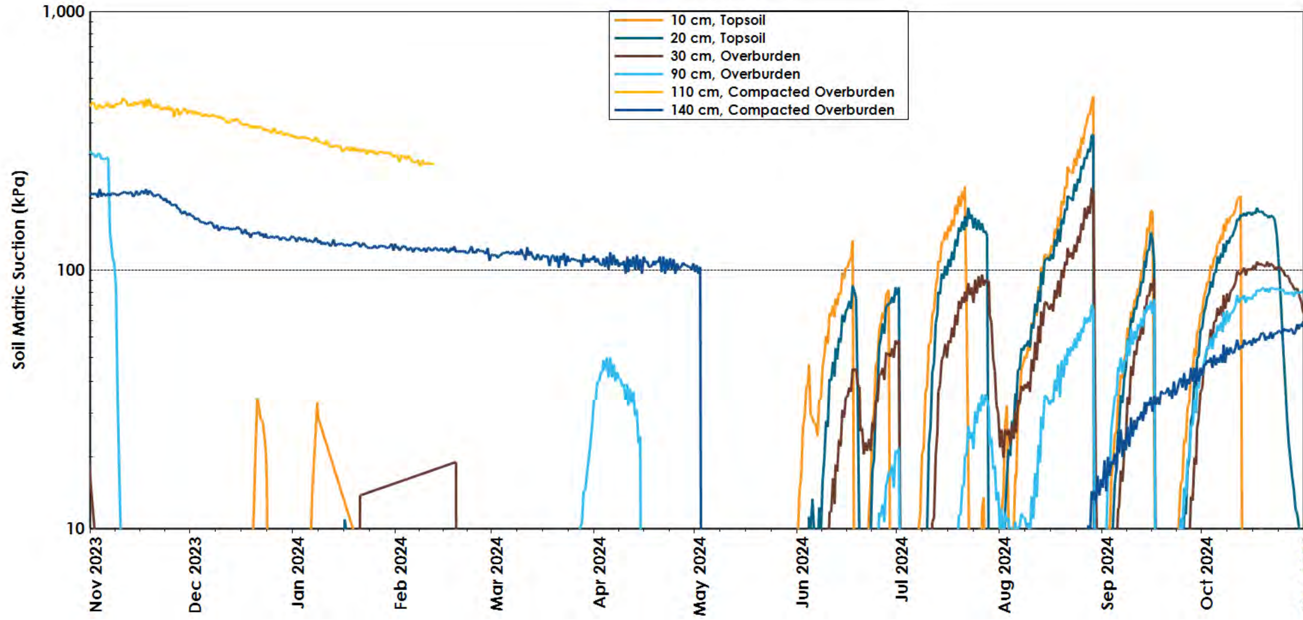

Figure B.5: Suction profile at the Trial #1 primary station during the monitoring period.

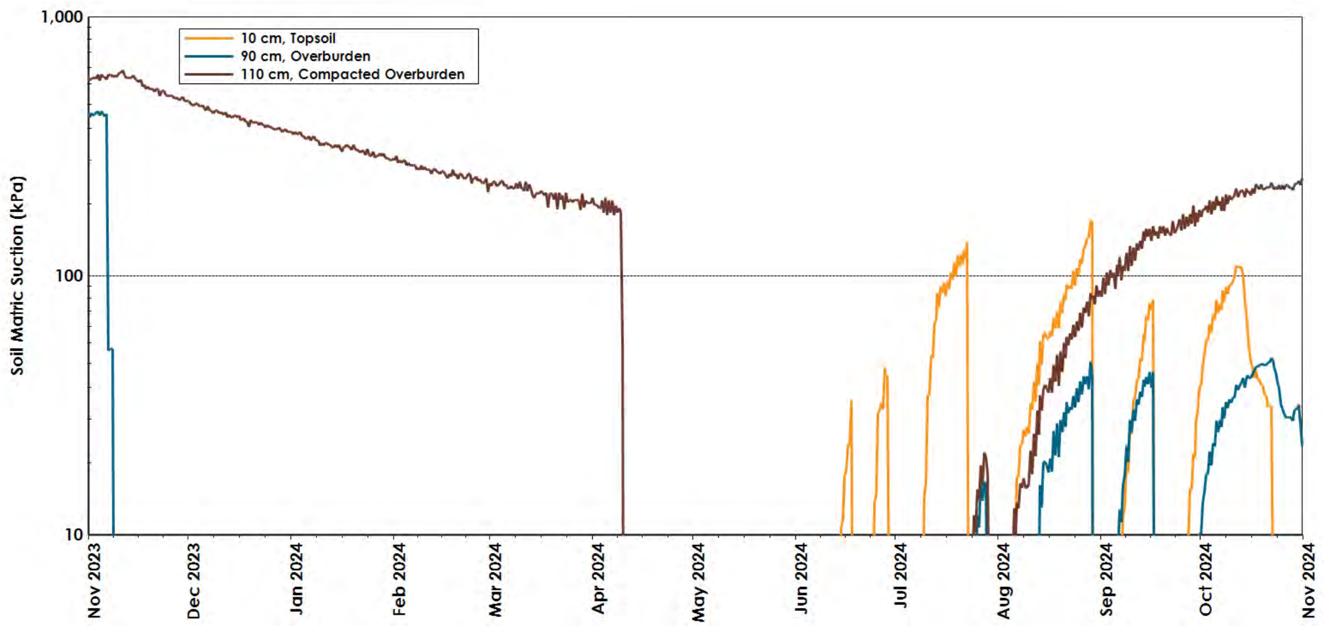

Figure B.6: Suction profile at the Trial #1 secondary station during the monitoring period.

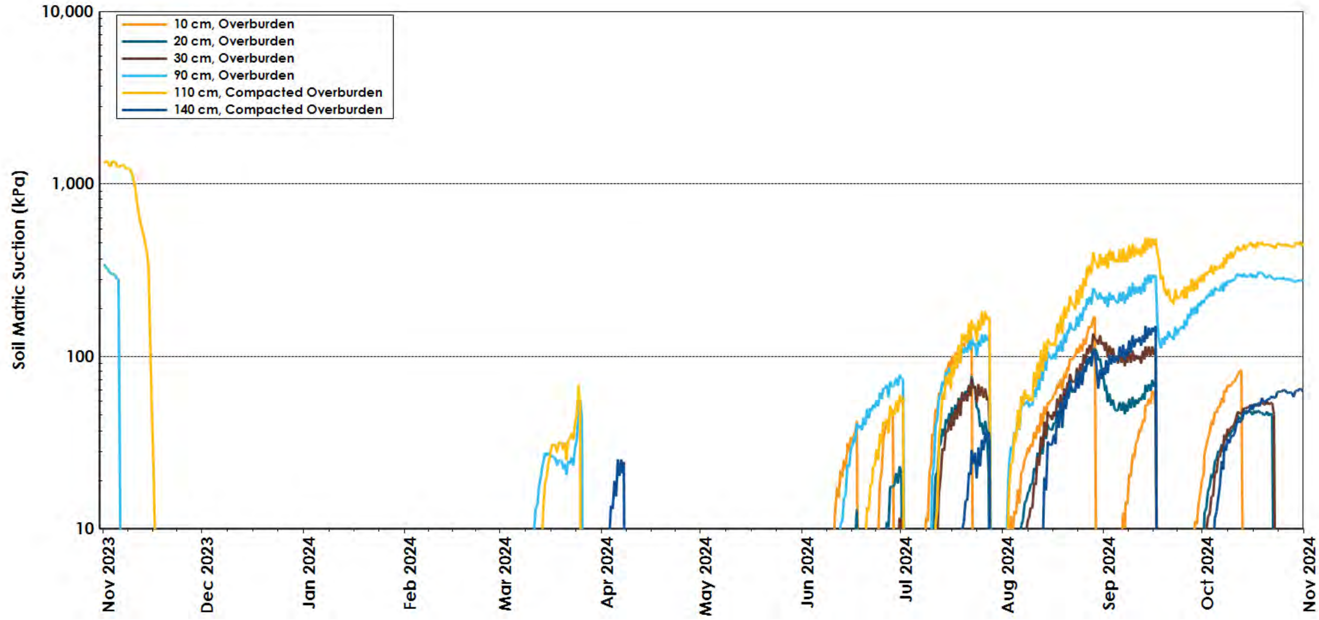

Figure B.7: Suction profile at the Trial #2 primary station during the monitoring period.

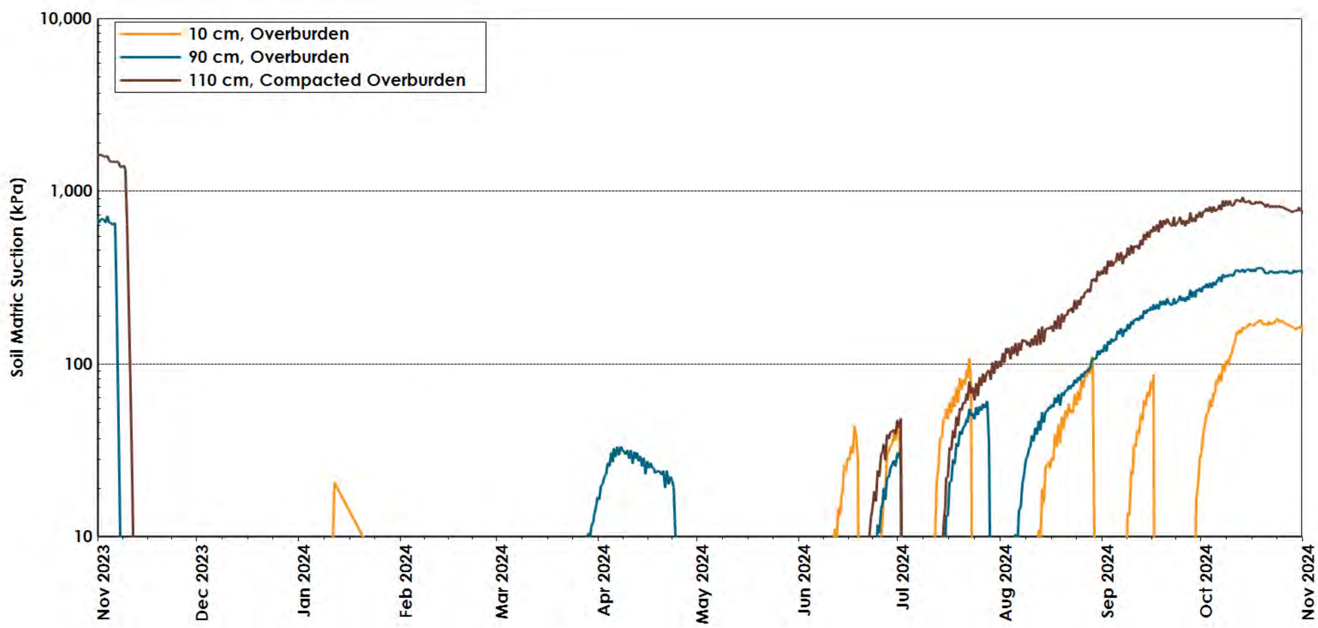

Figure B.8: Suction profile at the Trial #2 secondary station during the monitoring period.

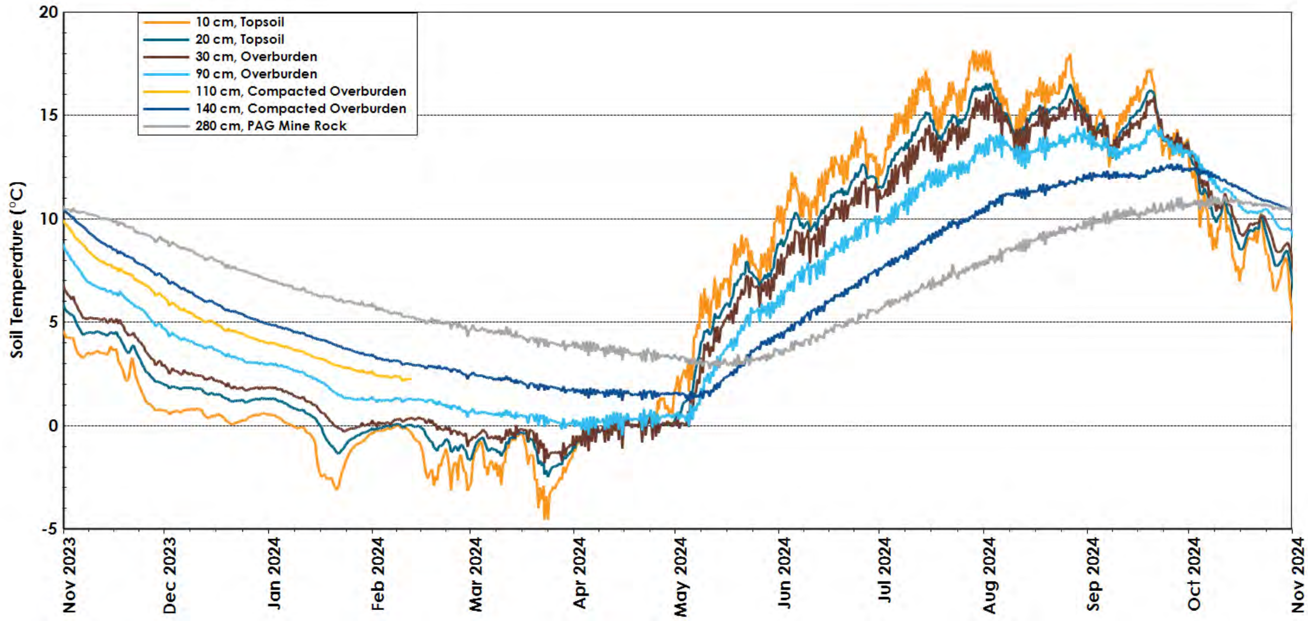

Figure B.9: Temperature profile at the Trial #1 primary station during the monitoring period.

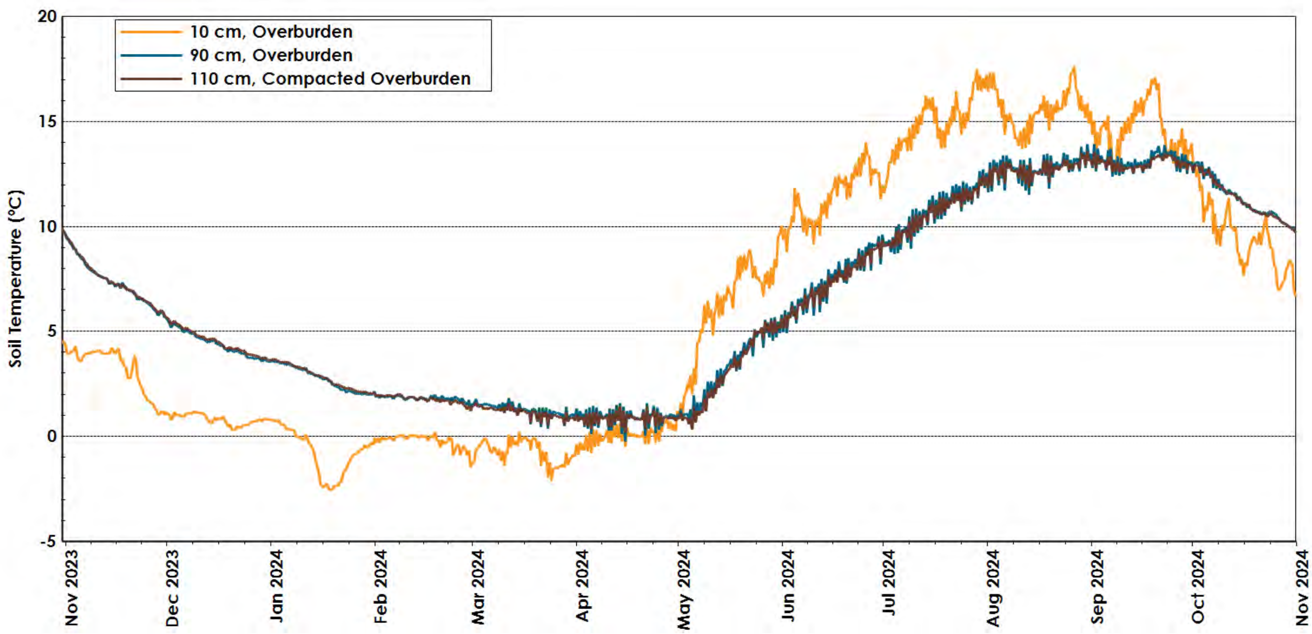

Figure B.10: Temperature profile at the Trial #1 secondary station during the monitoring period.

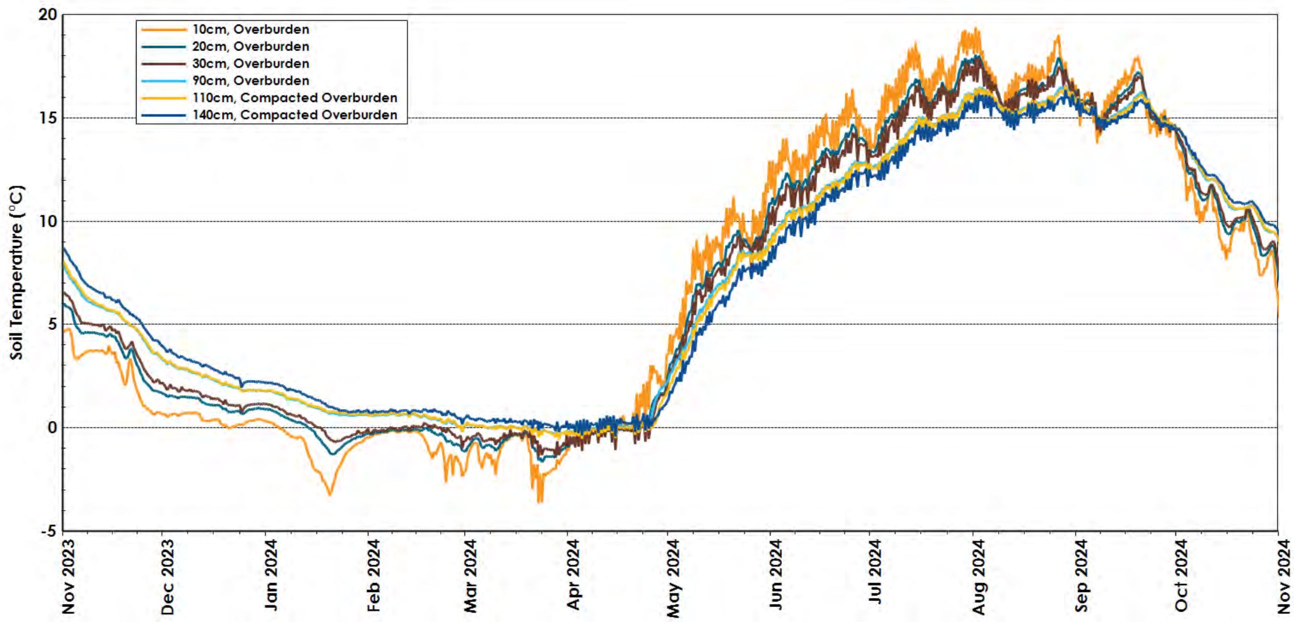

Figure B.11: Temperature profile at the Trial #2 primary station during the monitoring period.

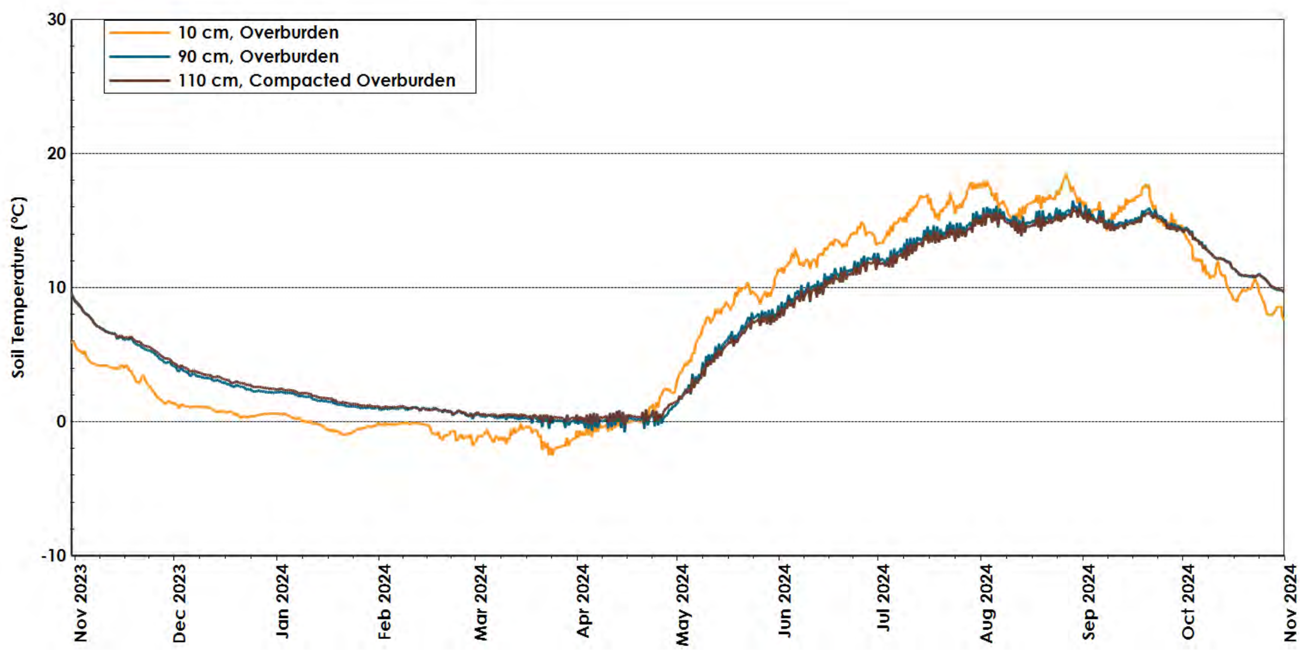

Figure B.12: Temperature profile at the Trial #2 secondary station during the monitoring period.

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Rainy River Mine – EMRS Mine Rock 2024 Annual Monitoring Report

February 3, 2025

newgold™

okane

Integrated Mine Closure and Relinquishment Solutions

Rainy River Mine – EMRS Mine Rock 2024 Annual Monitoring Report

B-1003-233-006

February 2025

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EXECUTIVE SUMMARY

New Gold Inc. (New Gold) is constructing the East Mine Rock Stockpile (EMRS) at the Rainy River Mine with mine rock from open pit operations. To ensure geotechnical stability, mine rock is placed in approximately 3 m lift heights. In addition to geotechnical stability, the constructed lift heights are thought to provide additional opportunity to decrease pore gas influx compared to standard mine rock placement techniques. Decreased pore gas influx can potentially reduce the development of oxidation products and stored acidity during operations and minimize acid rock drainage (ARD). Okane Consultants (Okane) commissioned a monitoring program to study the internal conditions of the EMRS throughout construction to understand the internal mechanisms controlling potential ARD during operations. The objective of this report is to summarize and interpret findings from physical and geochemical data collected for the monitoring period of November 1, 2023 to October 31, 2024.

Monitoring data from sensors located within the bottom-most (first) lift of mine rock show temperature fluctuations between -7 °C and 6 °C. Temperature trends followed seasonal climatic cycles, with no discernable indication of significant internal heating factors. Sensors installed up subsequent upper lifts more directly follow climate cycling and at this stage of stockpile construction are unable to provide insights on internal heating. Oxygen concentrations within the first lift of mine rock varied between 16.3% and 19 % during the monitoring period at all stations. Individual sensors remained relatively steady throughout the monitoring period, implying no cyclical trends of any advective oxygen flux throughout the mine rock stockpile. Volumetric water content remained between 0% and 6.7% (cm^3/cm^3) for all sensors located in the first lift of the EMRS throughout the monitoring period. With water content remaining low within the mine rock pores, there was no indication gas reductions in the mine rock pore space. Since the onset of monitoring in 2020, internal EMRS monitoring trends have shown little variance.

Geochemical characterization was performed on nineteen grab samples collected in 2024, and an addition of four samples were included in the 2023 grab samples, to understand the acid and metal leaching potential from the EMRS mine rock. Lower concentrations of sulfate-S relative to sulfide-S suggest limited oxidation of the samples had occurred prior, during or after sample collection. For 2023 samples, 21 of the 24 samples were classified as PAG. For 2024 samples, 14 samples were classified as PAG while five samples were classified as non-potentially acid generating (NPAG). Concentrations of zinc and cadmium in sampled EMRS mine rock have not increased from 2020 to 2021 but did increase over 2022 to 2024. Like the 2022 geochemical characterization results, elemental and metal composition results showed geochemical heterogeneity which could reflect changes in lithology or mineral composition between samples.

Performance monitoring of the mine rock lifts in the EMRS provides insight into how construction methods and climatic variation influence EMRS performance during operations and into closure. Continued monitoring and interpretation of physical and geochemical properties of placed mine rock is necessary for determining an accurate representation of mine rock properties, as built conditions, and long-term performance.

TABLE OF CONTENTS

1 INTRODUCTION ... 1
1.1 Project Objectives and Scope ... 1
2 BACKGROUND ... 2
2.1 EMRS Mine Rock Characterization Program ... 2
2.2 Instrumentation Monitoring System Design ... 3
3 IN-SITU INSTRUMENTATION AND MONITORING RESULTS ... 5
3.1 Temperature ... 5
3.2 Oxygen ... 6
3.3 Volumetric Water Content ... 8
4 MINE ROCK CHARACTERIZATION PROGRAM ... 10
4.1 Digital Particle Size Distributions ... 10
4.2 Geochemical Characterization ... 14
4.2.1 Sulfur Speciation and Abundance ... 15
4.2.2 Carbon Speciation and Abundance ... 17
4.2.3 Acid Rock Drainage Potential ... 18
4.2.4 Whole Rock and Trace Metal Composition ... 20
4.2.5 Shake Flask Extraction ... 24
5 SUMMARY ... 28
6 RECOMMENDATIONS ... 30
7 REFERENCES ... 31
8 CLOSURE ... 32

Appendix A Drawings
Appendix B Geochemistry Data
Appendix C Particle Size Distribution Photos

LIST OF TABLES

Table 2.1: Monitoring station locations 3
Table 2.2: Installed automated sensor description..........4
Table 4.1: Digital PSD analysis over a three-year monitoring period 10
Table 4.2: Digital PSD results. 11
Table 4.3: Summary of acid-base accounting results for 2023 and 2024 samples 15
Table 4.4: Statistical summary of the four-acid results for the 2023 and 2024 samples.......... 20
Table 4.5: Statistics summary of the shake flask extraction results for 2023 and 2024 samples 25

LIST OF FIGURES

Figure 2.1: EMRS (outlined in orange) located east of open pit....2
Figure 3.1: PAG mine rock temperatures measured at Transect #1 during the monitoring period....5
Figure 3.2: PAG mine rock temperatures measured at Transect #3 during the monitoring period....6
Figure 3.3: Oxygen concentrations measured at Transect #1 during the monitoring period....7
Figure 3.4: Oxygen concentrations measured at Transect #3 during the monitoring period....7
Figure 3.5: Transect #1 volumetric water content measured during the monitoring period....8
Figure 3.6: Transect #3 volumetric water content measured during the monitoring period....9
Figure 4.1: Block model of digital PSD photo P5100101.... 12
Figure 4.2: Block model of digital PSD photo PA120211.... 12
Figure 4.3: Location of PSD sample photos throughout the EMRS.... 13
Figure 4.4: Digital PSD results.... 14
Figure 4.5: Total sulfur (wt.% S) of sampled EMRS mine rock over time.... 16
Figure 4.6: Acid potential (kg $CaCO_3$/tonne) of sampled EMRS mine rock over time.... 16
Figure 4.7: Modified Sobek NP (kg $CaCO_3$/tonne) of sampled EMRS mine rock over time.... 17
Figure 4.8: Total carbon (wt.% C) of sampled EMRS mine rock over time.... 18
Figure 4.9: Sobek acid potential (AP) versus modified Sobek neutralization potential (NP) for 2022 to 2024 samples.... 19
Figure 4.10: pH of sampled EMRS mine rock over time.... 19
Figure 4.11: Solid phase cadmium concentrations (mg/L) of sampled EMRS mine rock over time.... 23
Figure 4.12: Solid phase zinc concentrations (mg/L) of sampled EMRS mine rock over time.... 23
Figure 4.13: Shake flask extraction cadmium concentrations (µg/L) over time.... 27
Figure 4.14: Shake flask extraction zinc concentrations (µg/L) over time.... 27

1 INTRODUCTION

New Gold Inc. (New Gold) is constructing the East Mine Rock Stockpile (EMRS) at the Rainy River Mine utilizing mine rock from the open pit operation. To ensure geotechnical stability, mine rock is placed in approximately 3 m lift heights. In addition to geotechnical stability, the constructed lift heights are thought to provide additional opportunity to decrease pore gas influx compared to standard mine rock placement techniques. Decreased pore gas influx can potentially reduce the development of oxidation products and stored acidity during operations and minimize acid rock drainage (ARD). Okane Consultants Inc. (Okane) commissioned a monitoring program to provide insights into the internal mechanisms controlling potential acid generation during construction of the EMRS. This report summarizes physical and geochemical properties measured between November 1, 2023 to October 31, 2024 (referred to herein as 'the monitoring period').

1.1 Project Objectives and Scope

The strategic objective of the monitoring program is to monitor the internal mechanisms (e.g., mine rock geochemistry, mine rock segregation, temperature fluctuation, oxygen concentrations) controlling acid generation during EMRS construction. The monitoring program includes collection of physical and geochemical mine rock properties, seepage water quality, and monitoring of internal instrumentation installed within EMRS throughout construction. Additional tactical objectives of the monitoring program include:

- Characterization of the mine rock's particle size distribution (PSD) and geochemistry;
- Monitoring in-situ temperature, water, and oxygen concentrations;
- Installing monitoring instrumentation to measure long-term EMRS performance; and
- Evaluating seepage water quality.

2 BACKGROUND

The EMRS is located east of the open pit (Figure 2.1) and stores potentially acid generating (PAG) mine rock. The stockpile will be initially developed close to the open pit and then progress eastward and northward. The EMRS will cover approximately 295 ha and reach a maximum height of 45 m; constructed in approximately 3 m lifts.

Figure 2.1: EMRS (outlined in orange) located east of open pit.

Google Earth, 2024a

2.1 EMRS Mine Rock Characterization Program

The physical and geochemical properties of the stockpile is expected to affect the long-term performance of the EMRS. A mine rock characterization program was conducted to study the internal physical and geochemical conditions of the EMRS as it is constructed. The characterization program consists of collecting mine rock samples for geochemical analysis and particle size distributions (PSDs). Mine rock samples were recommended to be taken once every 500,000 m^3 (i.e., bi-monthly) to collect PSDs, obtained by digital photographic analysis, and mine rock geochemistry. Samples were sent to Activation Laboratories for geochemical characterization for whole rock and trace metal analysis by Li-borate and four-acid digestions, acid base accounting (modified Sobek method), total carbon and sulfur (Infrared Furnace) and shake flask extractions. Okane received digital PSD photos approximately bi-weekly and analyzed the most representative photo from each day.

2.2 Instrumentation Monitoring System Design

In-situ instrumentation is in the process of being installed along three transects in the southwest portion of the EMRS, each with three monitoring stations (nine total stations) (Table 2.1). Automated instrumentation and manual gas sampling ports are installed in two transects and only manual gas sampling stations in the third. Automated transects consist of monitoring volumetric water content (VWC), temperature, and oxygen concentrations throughout the EMRS profile. Temperature and VWC are monitored with the Campbell Scientific (CS) 650 water content reflectometers. Volumetric water content is important to monitor as it informs on the percentage of pore space within the mine rock is comprised by water or gas. While temperature is used to calculate temperature gradients between ambient air temperatures and the internal stockpile. Temperature gradients create pressure gradients that drives advective oxygen fluxes. Oxygen concentrations within the EMRS are monitored with Apogee SO-110 oxygen sensors and manual gas sampling ports. Measurements of internal oxygen concentrations provides an indication of how well pore gas flux is being minimized by the EMRS construction. As-built drawings of automated and manual monitoring transects are shown in Appendix A.

To date, automated instrumentation has been installed in Lift #1, Lift #5 and Lift #10 of the EMRS (Table 2.2). Lift #1 and Lift #5 instrumentation were installed on November 10, 2020, and June 22, 2021, respectively. Instrumentation was installed at Transect 3, Lift #10 on August 16, 2022, and at Transect 1, Lift #10 on June 6, 2023. In the event that the EMRS does not reach the originally planned lift heights, a final set of sensors will be placed near the surface of the mine rock, prior to cover system construction. Okane and New Gold will continue to engage in discussions on mine rock placement in the EMRS to facilitate the coordination of instrumentation installs.

Table 2.1: Monitoring station locations

Transect	Station ID	Profile	Northing	Easting
T1 (Automated)	RR_T1_SS1	1	5409341	427657
	RR_T1_SS2	2	5409273	427641
	RR_T1_SS3	3	5409186	427628
T2 (Manual)	RR_T2_SS1	1	5409231	427958
	RR_T2_SS2	2	5409188	427903
	RR_T2_SS3	3	5409132	427832
T3 (Automated)	RR_T3_SS1	1	5408944	428044
	RR_T3_SS2	2	5408932	427975
	RR_T3_SS3	3	5408928	427881

Table 2.2: Installed automated sensor description

Station ID	Instrumented Lift	Sensor ID	Installed Elevation (masl)
RR_T1_SS1	Final lift	Not installed yet	
	Lift 10	Sensor 2	~ 376
	Lift 5	Sensor 3	372.93
	Lift 1	Sensor 4	362.76
RR_T1_SS2	Final lift	Not installed yet	
	Lift 5	Sensor 2	372.18
	Lift 1	Sensor 3	362.29
RR_T1_SS3	Lift 5	Sensor 1	370.30
	Lift 1	Sensor 3	359.81
RR_T3_SS1	Lift 14	Not installed yet	
	Lift 10	Sensor 2	383.62
	Lift 5	Sensor 3	376.33
	Lift 1	Sensor 4	367.58
RR_T3_SS2	Lift 10	Sensor 1	381.84
	Lift 5	Sensor 2	374.89
	Lift 1	Sensor 3	366.15
RR_T3_SS3	Lift 5	Sensor 1	373.89
	Lift 1	Sensor 3	364.81

3 IN-SITU INSTRUMENTATION AND MONITORING RESULTS

3.1 Temperature

In-situ mine rock temperatures recorded in Lift #1 ranged from -8.0 °C to 6.5 °C, following atmospheric heating and cooling patterns with a lagged response (Figure 3.1 and Figure 3.2). Sensors installed nearer the surface and are influenced more by diurnal temperature fluctuations. The temperature effects of internal heating through oxygen consumption and acid generation will likely be more prevalent and measured once the temperature sensors are insulated by sufficient mine rock to prevent the influence of ambient air temperature. The temperature sensors within Lift #1 at Transect 1 remain relatively steady (between approximately 2.6 °C to 6.1 °C) throughout the monitoring period.

Data from the Transect 3 SS1 station are limited throughout the monitoring period as the station only operated partially throughout the year. The monitoring data from this monitoring station was not included in Transect 3 figures (Figure 3.2, Figure 3.4 and Figure 3.6).

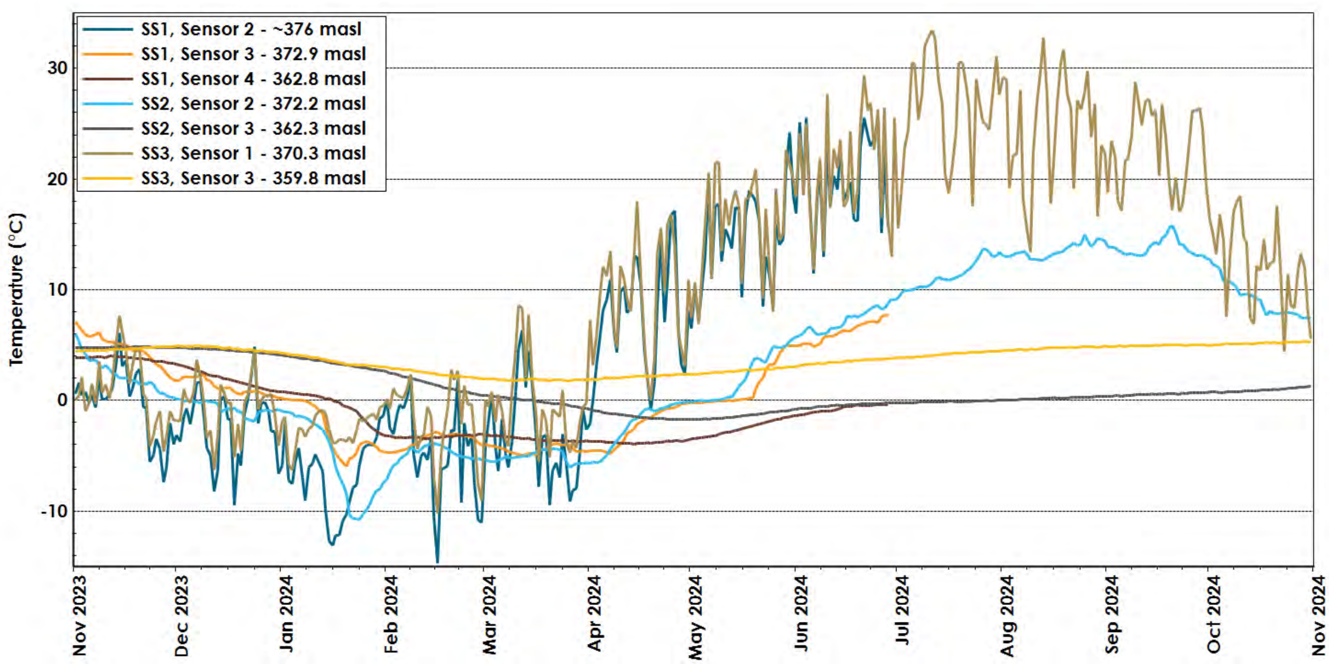

Figure 3.1: PAG mine rock temperatures measured at Transect #1 during the monitoring period.

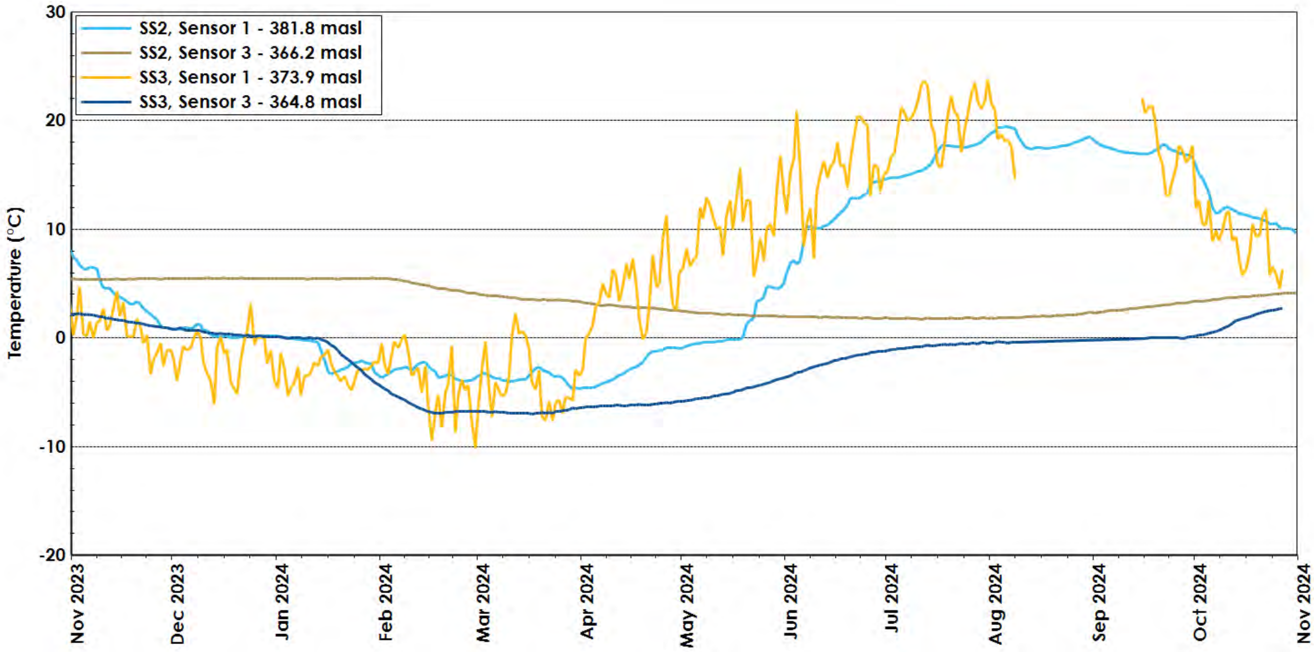

Figure 3.2: PAG mine rock temperatures measured at Transect #3 during the monitoring period.

3.2 Oxygen

Oxygen concentrations within the EMRS are monitored using Apogee SO-110 sensors. The SO-110 sensors also measure temperature, which is used in correcting the oxygen measurements, in instances where the thermistor of the SO-110 was damaged, the temperature from the CS 650 was used in its place.

Oxygen concentrations decreased below atmospheric conditions (20.9%) for the duration of the monitoring period for both Transect 1 and Transect 3 with the exception of Transect 3 SS2 station which exceeded atmospheric conditions three times in August with a maximum value of 20.9%. A minimum oxygen concentration of 16.0% was observed on February 26, 2024, at the Transect 1 SS3 station (Figure 3.3). Oxygen concentrations measured at the Transect 3 SS3 station reached a minimum of 16.7% on February 12, 2024 (Figure 3.4). Oxygen concentrations were observed to range between 16.0% and 20.9%, and remained relatively steady throughout the monitoring period. Observed oxygen concentrations for the monitoring period were comparable to that of the 2022-2023 monitoring period, in which a minimum concentration of 15.3% was observed at the Transect 1 SS3 station. Transect 3 SS1 station data was not available and not shown in Figure 3.4. Overall, the sensors installed deepest within the EMRS are measuring the lowest oxygen percentage and are not returning to atmospheric conditions. It is expected that as the EMRS is progressively constructed, and eventually capped with a soil cover, oxygen concentrations will continue to deplete.

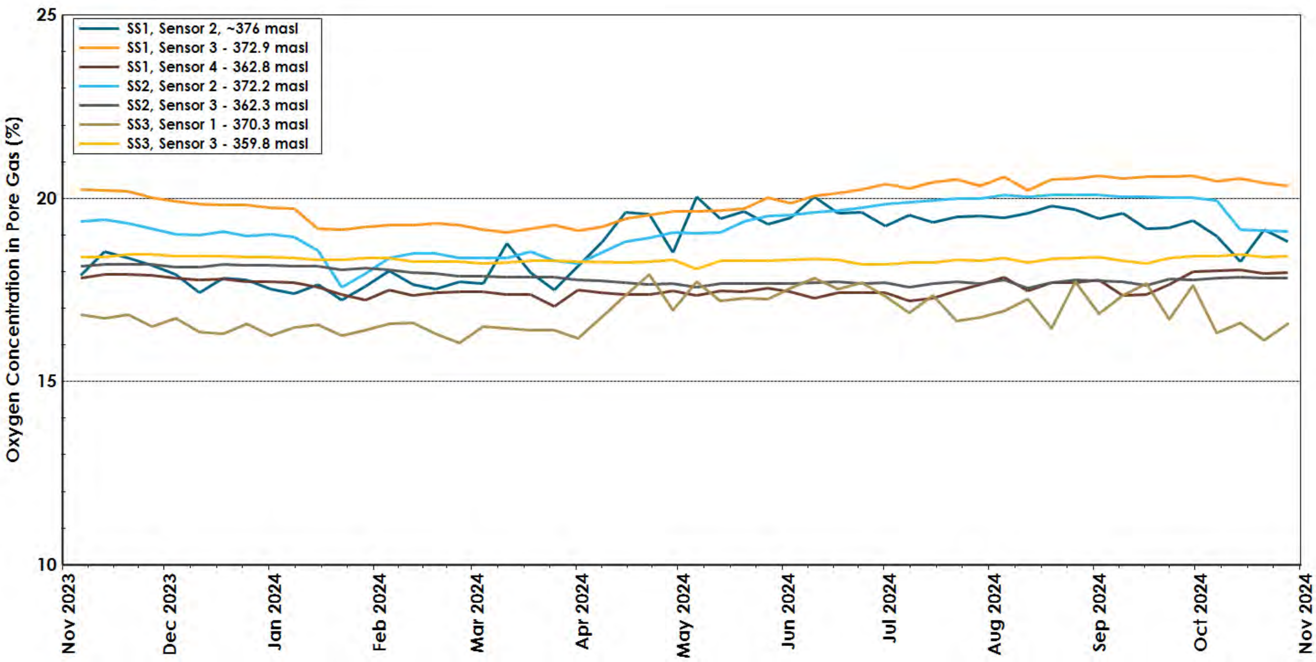

Figure 3.3: Oxygen concentrations measured at Transect #1 during the monitoring period.

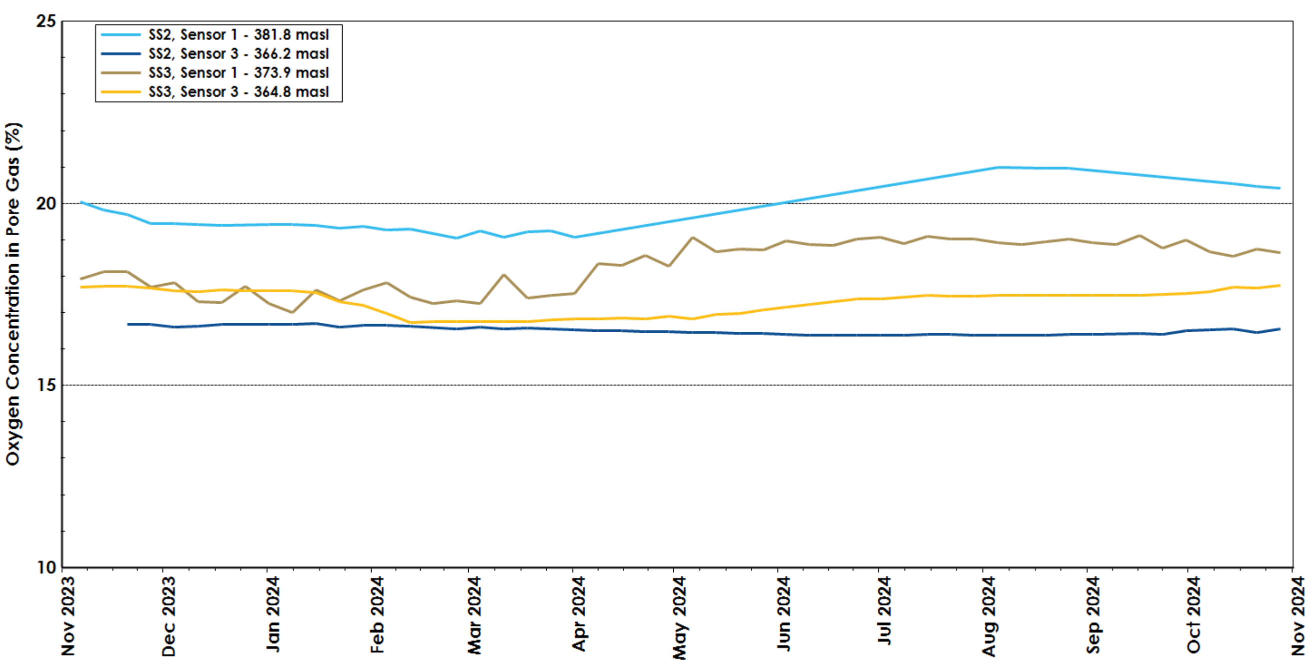

Figure 3.4: Oxygen concentrations measured at Transect #3 during the monitoring period.

3.3 Volumetric Water Content

Volumetric water content is measured with the same CS 650 sensors that also measure temperature. Shallower sensors installed in Lift #5 (Transect 1, SS3 – Sensor 1), Lift #5 (Transect 1, SS2, Sensor 2), Lift #10 (Transect 3, SS2, Sensor 1) measured spikes in VWC that directly reflected rainfall events (Figure 3.5 and Figure 3.6). VWC recorded in Lift #1 did not exceed 7% and 4% for Transect 1 and Transect 3, respectively. The low VWC measured in Lift #1 indicate that most of the pore space is composed of air rather than meteoric water. Various VWC sensors at the stations remained at 0% for the duration of the monitoring period.

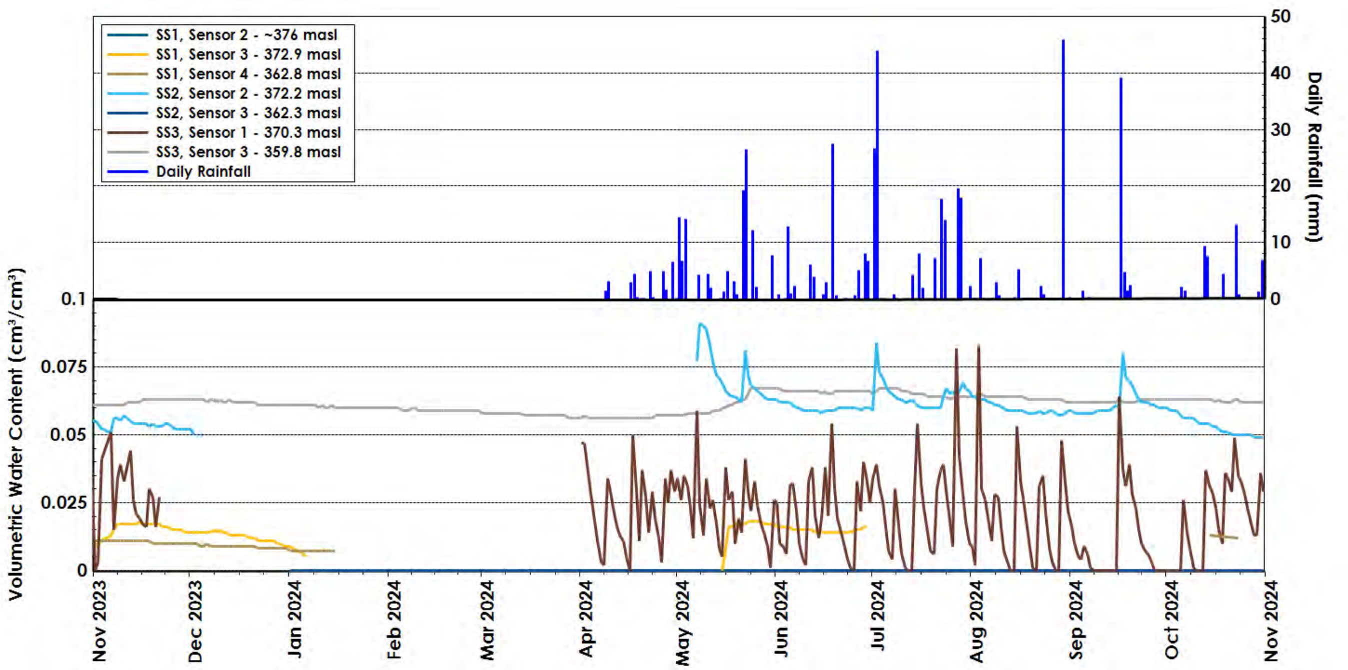

Figure 3.5: Transect #1 volumetric water content measured during the monitoring period.

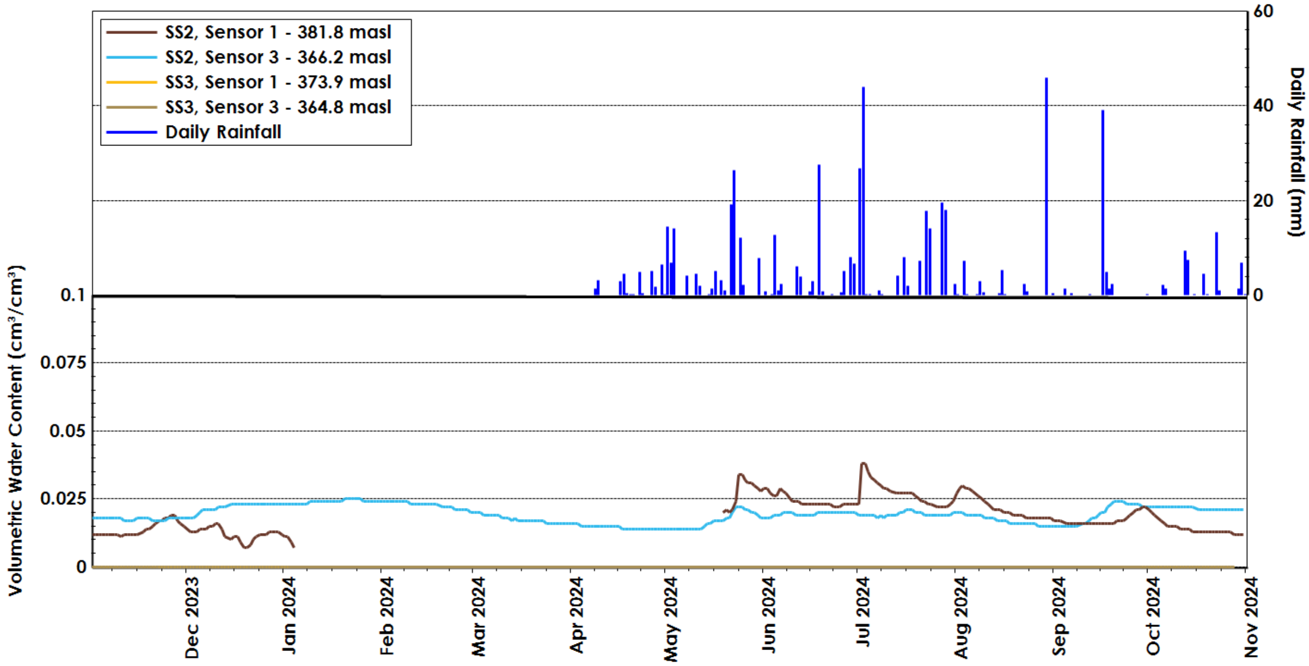

Figure 3.6: Transect #3 volumetric water content measured during the monitoring period.

4 MINE ROCK CHARACTERIZATION PROGRAM

4.1 Digital Particle Size Distributions

Photos were taken by New Gold personnel for digital PSD analysis on a bi-weekly basis (approximately every 500,000 m^3). Photos used for PSD analysis have been included in Appendix C . Eight of the eighteen analyzed samples have been georeferenced (Figure 4.3). Samples P2026473, P3150441 and P4121270 are defined as well-graded gravel, while the other 15 samples are defined as poorly graded gravel (Table 4.2, Figure 4.4). Well graded samples can be described as having a mathematically fair representation of all particle sizes, and poorly graded samples are consisting of approximately similarly sized particles. The average D50 (diameter at which 50 percent of the sample passes) is 335 mm and maximum particle size was approximately 1,300 mm in diameter (Table 4.1). Additionally, visual inspection of sample photos shows no indication of particle segregation suggesting that no differential pathways exist for oxygen ingress under the current 3 m high end dumping method (Appendix C). Examples of the block model digital PSD analysis are included below (Figure 4.1 and Figure 4.2).

The average D50 and the maximum particle size of the PSD's measured since the 2020-2021 monitoring period is provided for comparison (Table 4.1). The difference in median particle size could be the result of the nature of rock blasting, as well as PSD photo quality, timing, analysis, and other minor discrepancies. Average median particle sizing varied between 147 mm and 661 mm month to month.

Table 4.1: Digital PSD analysis over a three-year monitoring period

Parameter	2020-2021	2021-2022	2022-2023	2023-2024
Maximum particle size (mm)	830	1,400	900	1,300
Average D50 (mm)	312	399	277	335

Table 4.2: Digital PSD results.

Sample ID	Date of Photo	USCS Classification	D50 (mm)
P1051483	January 5, 2024	Poorly graded gravel	316
P1191684	January 19, 2024	Poorly graded gravel	303
P2026473	February 2, 2024	Well graded gravel	525
P2026474	February 2, 2024	Poorly graded gravel	231
P3150443	March 15, 2024	Poorly graded gravel	305
P3150441	March 15, 2024	Well graded gravel	147
P421270	April 12, 2024	Well graded gravel	171
P4271679	April 29, 2024	Poorly graded gravel	186
P5100101	May 10, 2024	Poorly graded gravel	222
P5242488	May 24, 2024	Poorly graded gravel	533
P6072880	June 7, 2024	Poorly graded gravel	302
P6072883	June 7, 2024	Poorly graded gravel	449
P7720358	July 22, 2024	Poorly graded gravel	661
P770361	July 22, 2024	Poorly graded gravel	387
P8160418	August 16, 2024	Poorly graded gravel	516
P9014158	August 30, 2024	Poorly graded gravel	187
PA120211	October 12, 2024	Poorly graded gravel	306
PA120212	October 12, 2024	Poorly graded gravel	290

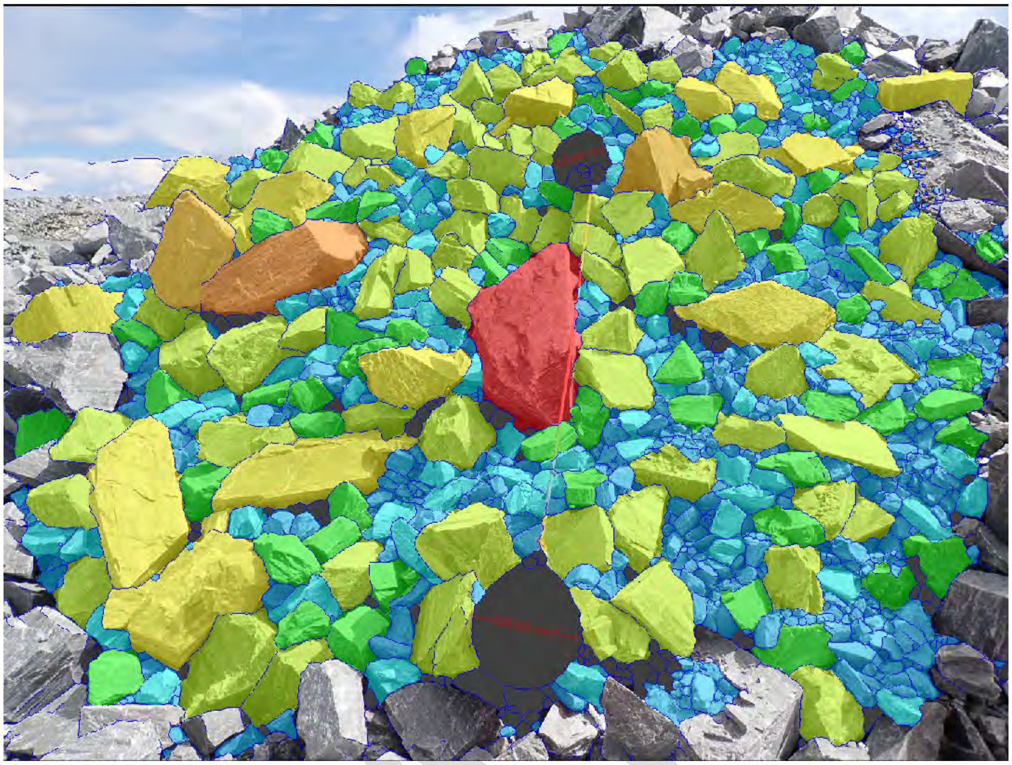

Figure 4.1: Block model of digital PSD photo P5100101.

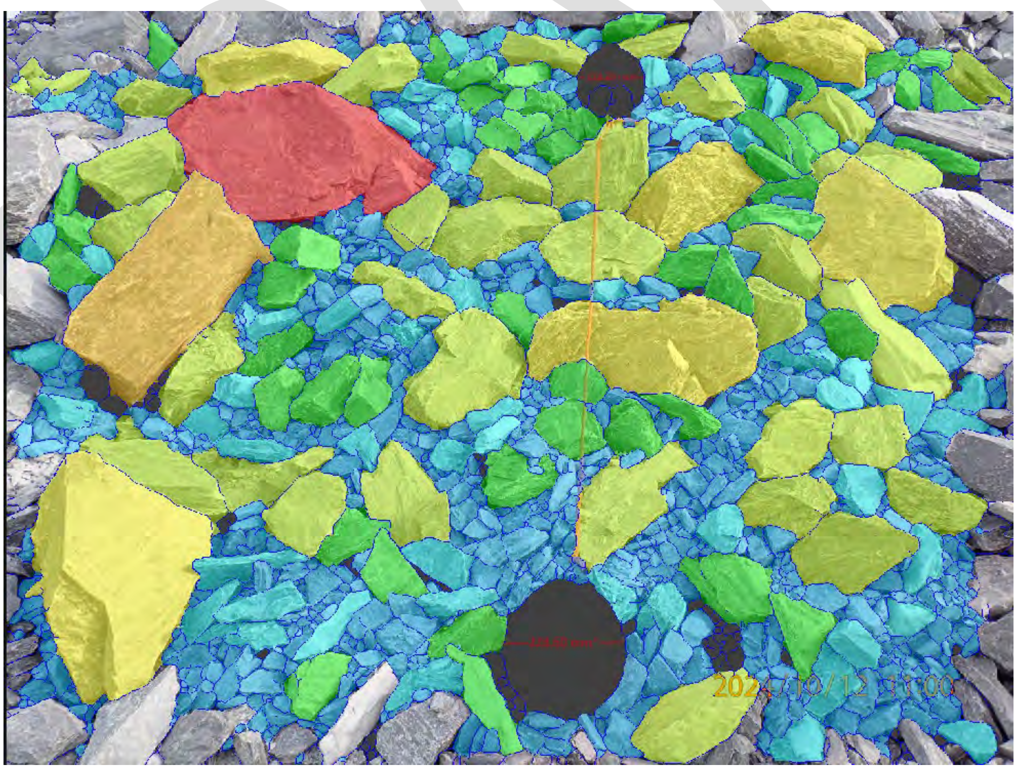

Figure 4.2: Block model of digital PSD photo PA120211.

Figure 4.3: Location of PSD sample photos throughout the EMRS.

Google Earth, 2024b

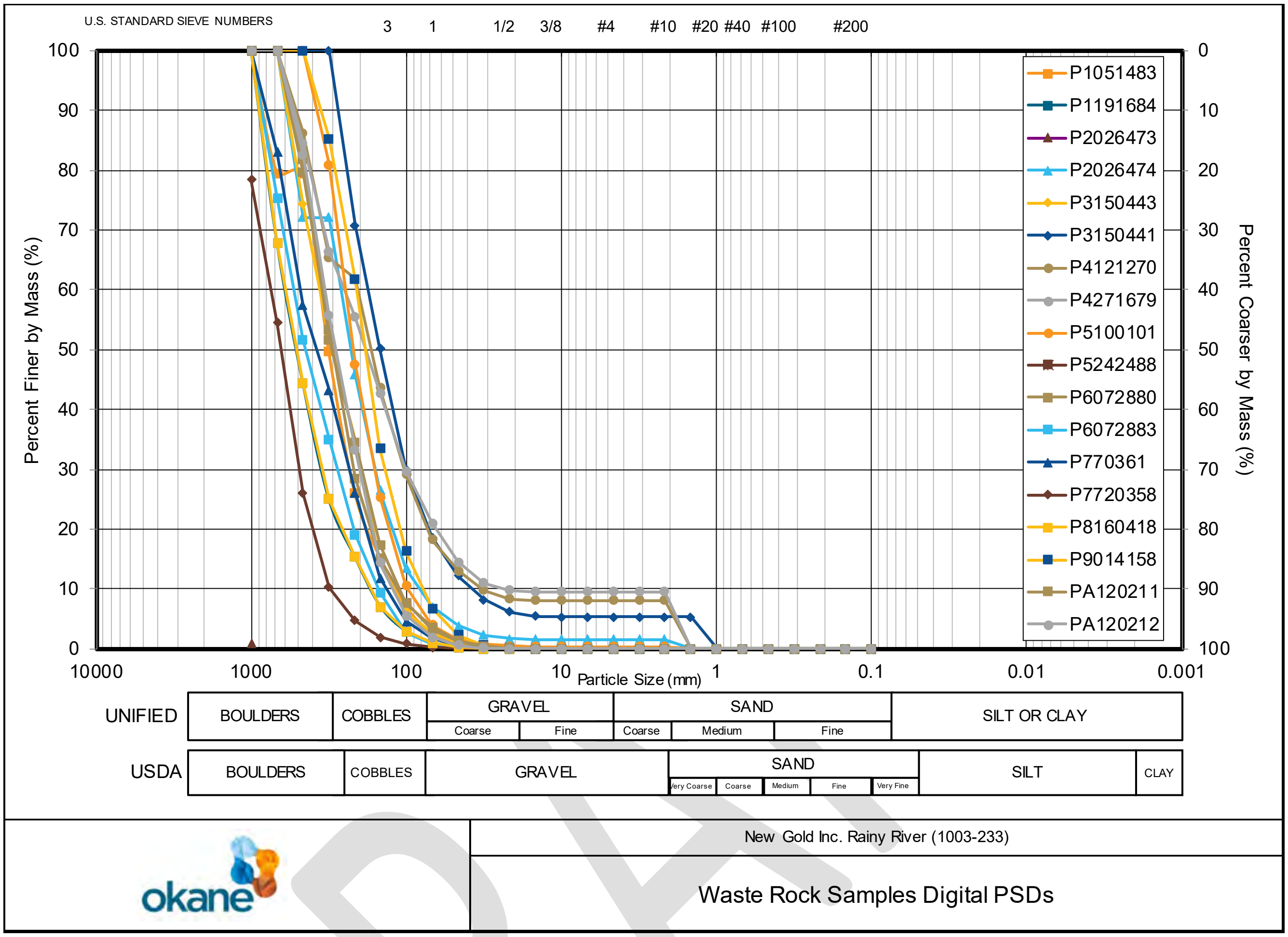

Figure 4.4: Digital PSD results.

4.2 Geochemical Characterization

Nineteen samples were collected throughout the monitoring period during mine rock deposition and submitted for geochemical analysis. Additionally, samples taken at the end of 2023 that could not be included in the 2023 EMRS Rock Monitoring report have been added to this report increasing the amount of grab samples analyzed for the 2023 report from 20 to 24. Geochemical characterization of the samples included:

- Acid-base accounting;
- Sulfur and carbon speciation;
- Elemental analysis (by four-acid digestion); and
- Shake flask extraction.

Summarized results for all geochemical analyses are provided below. Detailed geochemical analysis results are provided in Appendix B.

4.2.1 Sulfur Speciation and Abundance

Regular sampling of the EMRS mine rock for monitoring began in 2020. Although this report focuses on comparing the 2023 to 2024 datasets, previous datasets can be found in the 2021 and 2022 EMRS Rock Monitoring Reports (Okane, 2021; 2022). For the 2023 samples, sulfur (S) concentrations ranged from 0.9 to 5.5 wt.% S, with an average of 1.8 wt.% S, while sulfur concentrations for the 2024 samples ranged from 0.3 to 3.1 wt.% S, with an average of 1.8 wt.% S (Table 4.3).

Total sulfur in most samples was dominated by sulfide, with sulfide ranging from 80 to 90% of total sulfur for the 2023 samples, and 64 to 92% for the 2024 samples (Figure 4.5). The samples collected were considered "fresh" run-of-mine materials; therefore, limited time for weathering resulted in minimal sulfide oxidation and therefore, corroborates with the high sulfide content relative to sulfate content.

Acid potential (AP) calculated from the total sulfur concentration ranged from 26 to 150 kg $CaCO_3$/tonne, with an average of 49 kg $CaCO_3$/t for the 2023 samples. For the 2024 samples, AP ranged from 6.5 to 82 kg $CaCO_3$/t, with an average of 48 kg $CaCO_3$/tonne (Table 4.3 and Figure 4.6). Modified Sobek neutralization potential (NP) ranged from 11 to 98 kg $CaCO_3$/t, with an average of 47 kg $CaCO_3$/tonne in the 2023 samples and from 19 to 173 kg $CaCO_3$/tonne, with an average of 65 kg $CaCO_3$/tonne in 2024 samples (Table 4.3 and Figure 4.7). Based on these data, the acid potential slightly decreased and the NP increased from 2023 to 2024.

Table 4.3: Summary of acid-base accounting results for 2023 and 2024 samples

Parameter	Unit	2023 Samples (n = 24)			2024 Samples (n = 19)		
		Min.	Avg.	Max.	Min.	Avg.	Max.
AP	kg $CaCO_3$/t	26	49	150	6.5	48	82
Modified Sobek NP	kg $CaCO_3$/t	11	47	98	19	65	173
NNP	-	-93	-1.9	59	-53	17	129
NPR	-	0.3	1.1	3.2	0.3	1.9	7.3
Paste pH	-	8.6	9.3	9.6	8.6	9.2	9.8
Total Sulfur	wt.% S	0.9	1.8	5.5	0.3	1.8	3.1
Sulfate-Sulfur	wt.% S	0.3	0.7	2.1	0.4	0.8	1.8
Sulfide-Sulfur	wt.% S	0.8	1.6	4.8	0.3	1.6	2.7
Total Carbon	wt.% C	0.2	0.7	1.2	0.2	0.6	1.1
CO_2	wt.% C	0.1	2.2	4.2	0.3	2.0	4.9

AP = Acid Potential; NP = Neutralization Potential; Neutralization Potential Ratio (NPR) = NP/AP; NNP = Net Neutralization Potential

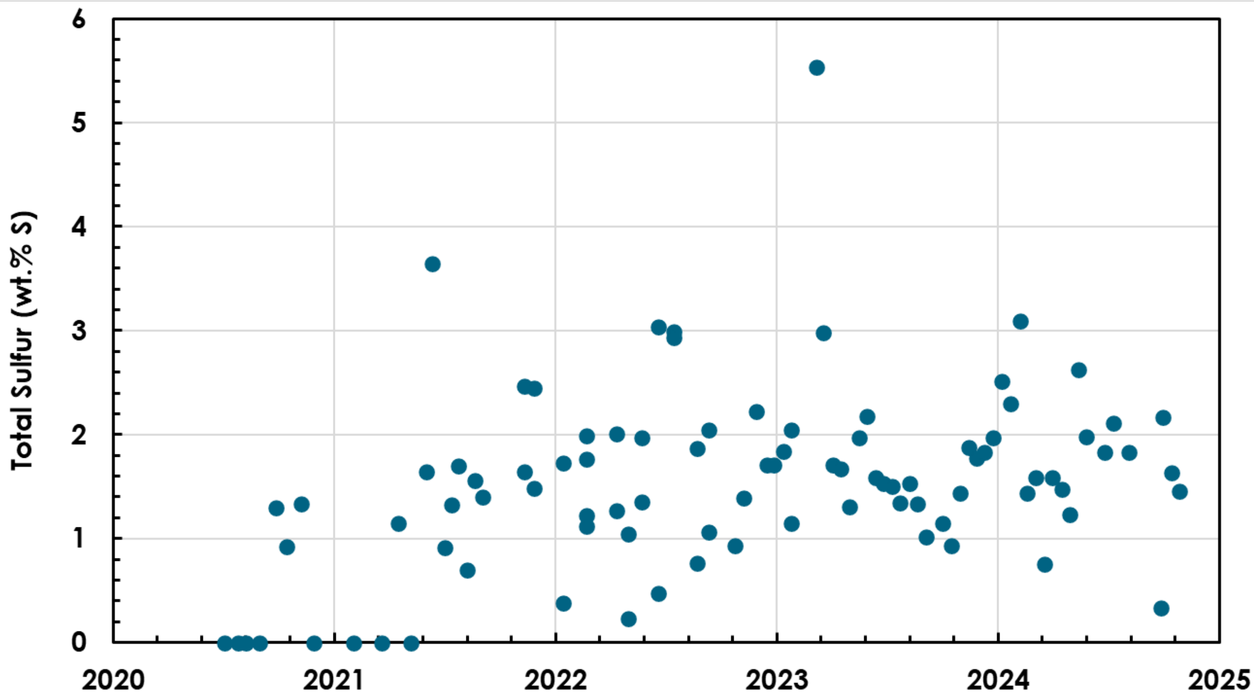

Figure 4.5: Total sulfur (wt.% S) of sampled EMRS mine rock over time.

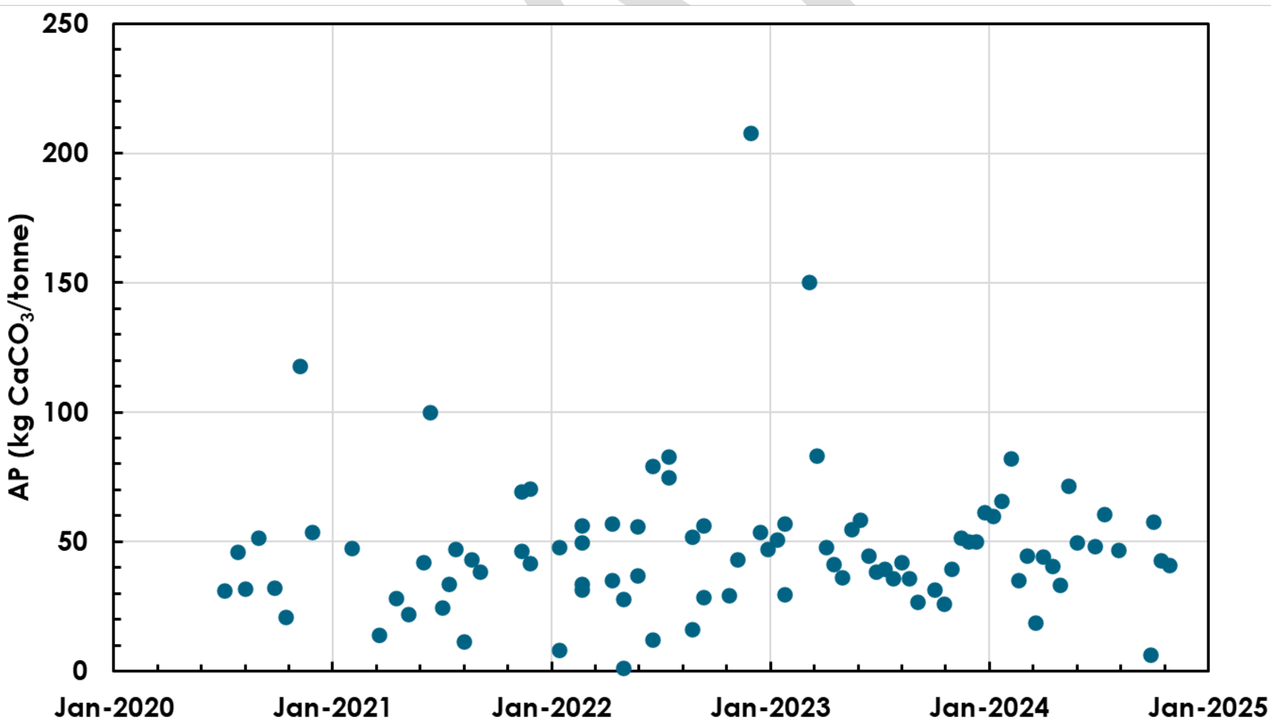

Figure 4.6: Acid potential (kg $CaCO_3$/tonne) of sampled EMRS mine rock over time.

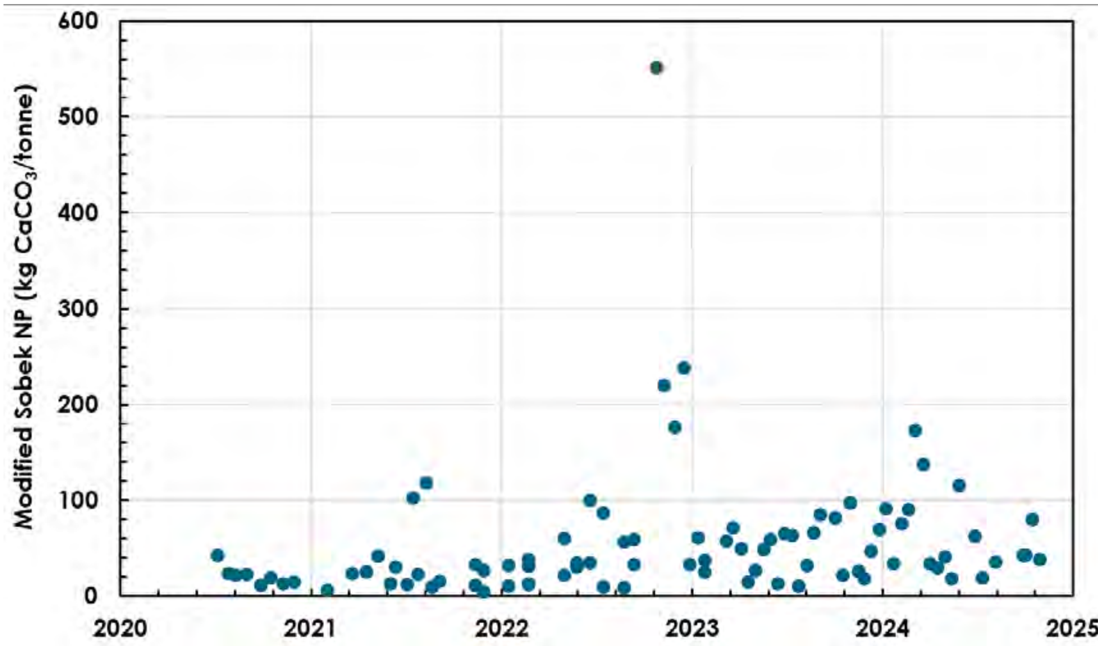

Figure 4.7: Modified Sobek NP (kg $CaCO_3$/tonne) of sampled EMRS mine rock over time.

4.2.2 Carbon Speciation and Abundance

Total carbon ranged from 0.2 to 1.2 wt.% C with an average of 0.7 wt.% C for the 2023 samples. For the 2024 samples, total carbon ranged from 0.2 to 1.1 wt.% C from with an average of 0.6 wt.% C (Figure 4.8). The presence of carbon, which is predominantly in the form of carbonate (Okane, 2020), provides neutralization potential capable of buffering acidity from sulfide oxidation. Neutralization potential for the 2023 samples ranged from 11 to 98 kg $CaCO_3$/tonne (average of 47 kg $CaCO_3$/tonne), whereas for 2024 samples NP ranged from 18 to 173 kg $CaCO_3$/tonne (average of 65 kg $CaCO_3$/tonne; Table 4.3).

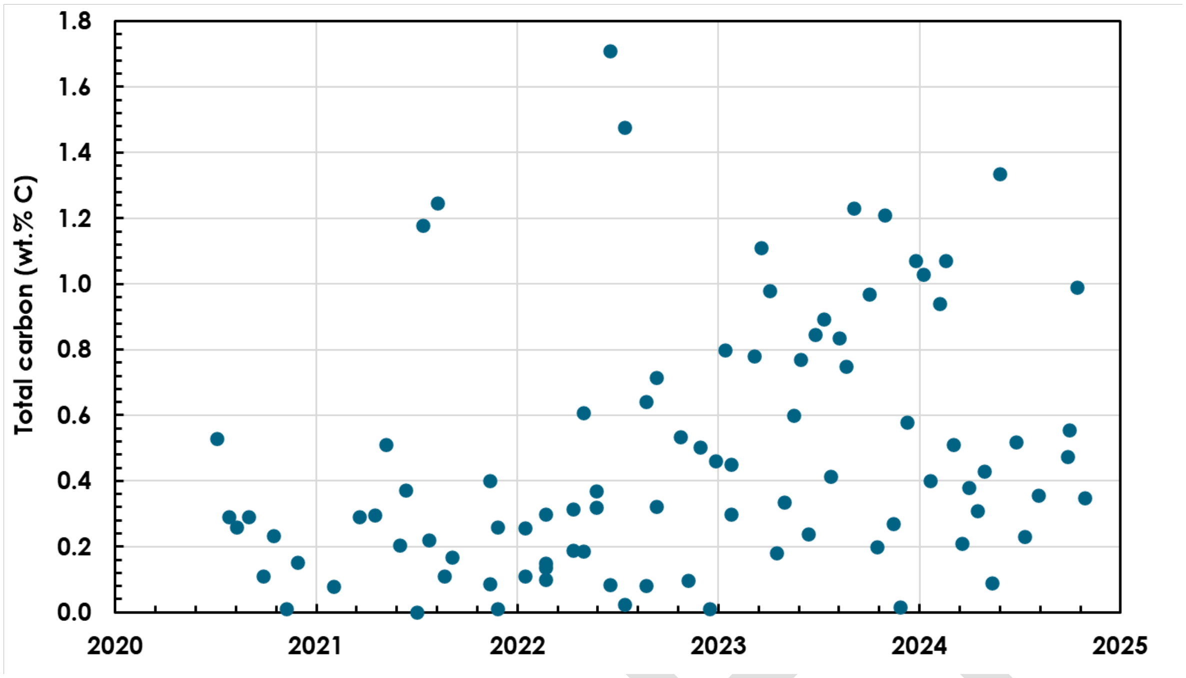

Figure 4.8: Total carbon (wt.% C) of sampled EMRS mine rock over time.

4.2.3 Acid Rock Drainage Potential

The acid rock drainage (ARD) potential of the samples was assessed using the neutralization potential ratio (NPR = NP/AP) and Rainy River's ARD classification system (Okane, 2021). Seventeen out of 24 samples analyzed in 2022 were classified as potentially acid generating (PAG) given their NPRs were below 2 (Okane, 2022). For 2023 samples, 21 of the 24 samples were classified as PAG. For 2024 samples, 14 samples were classified as PAG while five samples were classified as non-potentially acid generating (NPAG). Acid potential is plotted against NP for the 2022 to 2024 samples to indicate the ARD classification visually (Figure 4.9). The paste pH of all but one sample was ≥ 8.6, indicating that any acid generation from the fresh samples is still being neutralized as it is placed in the EMRS. One sample at the end of 2022 had a paste pH of 6.8 (Figure 4.10).

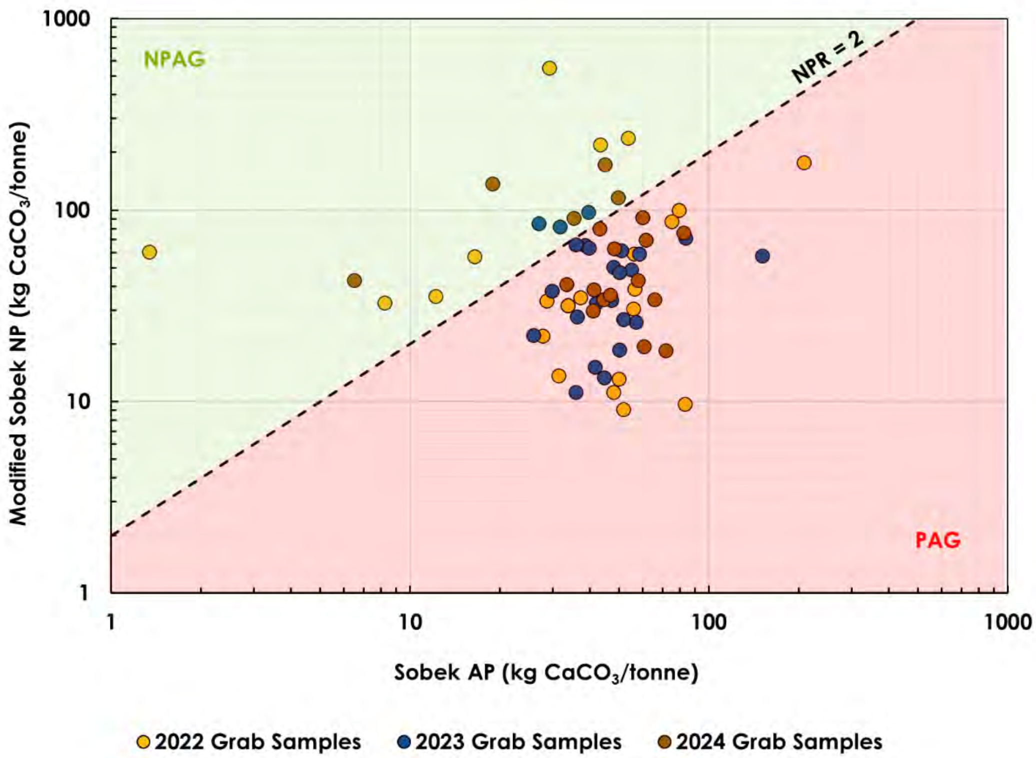

Figure 4.9: Sobek acid potential (AP) versus modified Sobek neutralization potential (NP) for 2022 to 2024 samples.

PAG: NPR < 2; NPAG: NPR > 2

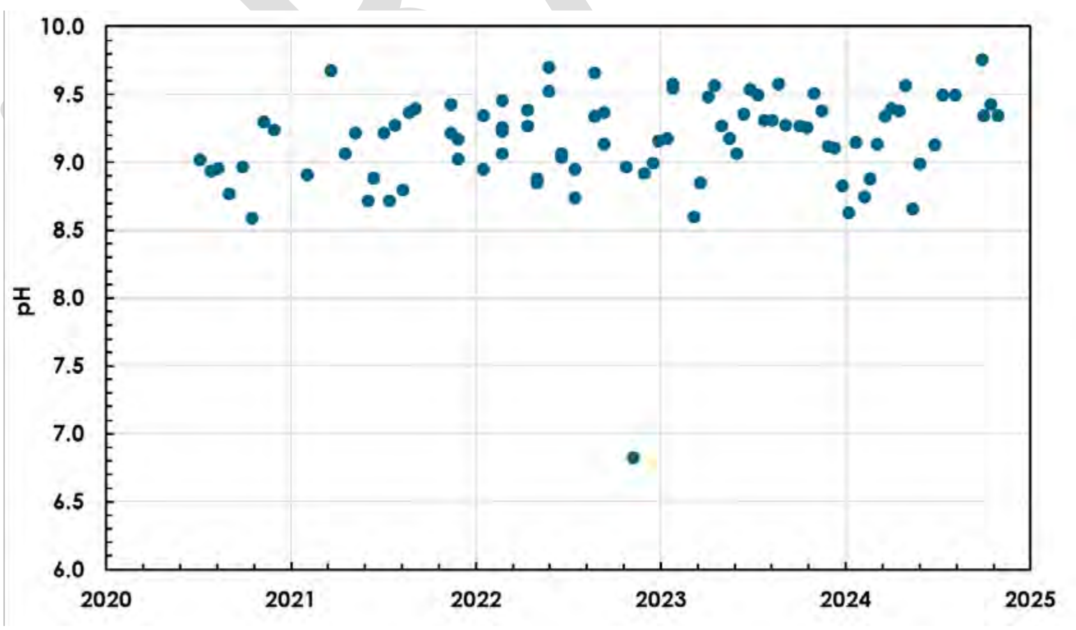

Figure 4.10: pH of sampled EMRS mine rock over time.

Samples classified as PAG were further classified as PAG1, PAG2, and PAG3 based on threshold values of available NP (Okane, 2021). Further classification is summarized below:

- PAG1: PAG samples with NP less than 12.5 kg $CaCO_3$/tonne;
- PAG2: PAG samples with NP greater than 12.5 kg $CaCO_3$/t but less than 19 $CaCO_3$/tonne;
- PAG3: PAG samples with NP greater than or equal to 19 kg $CaCO_3$/tonne.

For the 17 samples classified as PAG from 2022, five were classified as PAG1, two were classified as PAG 2, and ten were classified as PAG3. For the 21 samples classified as PAG in 2023, one was classified as PAG1 and three were classified as PAG2, and 17 were classified as PAG3. For the 14 samples classified as PAG in 2024, one was classified as PAG2 and 13 were classified as PAG3.

4.2.4 Whole Rock and Trace Metal Composition

Statistical results from the trace metal analysis of four-acid digestion (Table 4.4) are presented below. The trace metals data will allow for a database of mine rock composition in the EMRS to be constructed. The monitoring data will allow for metal trends in the EMRS to be tracked.

Overall, samples from 2023 and 2024 show geochemical heterogeneity from the major and trace elements given the range in concentrations observed from the four-acid digestion results. The difference in composition may reflect changes in lithology or mineralogy from the mine rock being sampled.

Due to elevated concentrations of cadmium and zinc observed in EMRS seepage water, solids concentrations of these metals have been plotted from 2020 to 2024 (Figure 4.11 and Figure 4.12). Cadmium concentrations are trending upward in 2022 and 2023. In 2024, cadmium concentrations also show an upward trend; however, they remain lower compared to 2023 samples. Similarly, zinc concentrations increased from 2022 to 2023. In 2024, zinc concentrations in EMRS samples continue to show an increasing trend but remain lower than those observed in 2023.

Table 4.4: Statistical summary of the four-acid results for the 2023 and 2024 samples

Parameter	Unit	2023 Samples (n = 24)			2024 Samples (n = 19)		
		Min.	Avg.	Max.	Min.	Avg.	Max.
Ag	ppm	0.5	1.4	5.59	0.2	1.1	3.15
Al	%	6.8	7.9	8.9	6.7	7.7	8.73
As	ppm	6.3	48.2	116	7.6	23.8	57
B	ppm	< 20	30.8	130	< 20	25.8	60
Ba	ppm	55.0	215.5	415	43.0	184.1	416
Be	ppm	0.6	0.8	1	0.4	0.7	1
Bi	ppm	0.1	0.3	1.03	0.1	0.5	2.32

Parameter	Unit	2023 Samples (n = 24)			2024 Samples (n = 19)		
		Min.	Avg.	Max.	Min.	Avg.	Max.
Ca	%	0.9	2.1	3.53	1.5	2.6	5.41
Cd	ppm	0.1	1.4	6.1	0.2	0.9	2.7
Ce	ppm	23.4	30.8	38.7	9.5	29.8	37.6
Co	ppm	5.8	10.3	28.1	6.3	14.6	45.7
Cr	ppm	10.0	35.4	155	5.0	52.8	255
Cs	ppm	5.2	7.1	9.43	1.0	6.9	10.6
Cu	ppm	14.1	47.8	117	16.7	64.5	214
Dy	ppm	0.7	1.1	3.2	0.6	1.4	3.9
Er	ppm	0.3	0.6	1.9	0.4	0.8	2.4
Eu	ppm	0.5	0.6	1.02	0.5	0.7	1.08
Fe	%	1.8	3.0	8.08	1.9	3.6	10.1
Ga	ppm	16.7	20.4	23.2	17.3	20.3	22.5
Gd	ppm	1.2	1.6	3.3	1.2	1.8	3.6
Ge	ppm	< 0.1	1.0	1	< 0.1	0.1	0.4
Hf	ppm	1.4	2.0	2.7	0.7	1.8	2.2
Ho	ppm	0.1	0.2	0.6	0.1	0.3	0.8
In	%	< 0.1	0.1	0.3	< 0.1	0.1	0.4
K	ppm	0.8	1.9	3.25	0.2	1.4	2.18
La	ppm	10.5	15.0	19.5	3.9	14.5	18.2
Li	ppm	15.9	61.1	112	38.4	72.7	123
Lu	%	< 0.1	0.1	0.3	< 0.1	0.1	0.3
Mg	ppm	0.3	1.3	2.88	0.5	1.7	4.22
Mn	ppm	320.0	850.6	1,980	412.0	879.3	1,960
Mo	%	0.4	1.2	4.15	0.3	1.1	2.92
Na	ppm	0.1	0.7	2.8	0.2	0.9	2.6
Nb	ppm	1.7	2.2	2.9	0.6	2.3	3.5
Nd	ppm	10.3	13.2	16.2	7.2	13.3	16.6
Ni	ppm	6.3	16.3	65.4	7.6	24.5	115
Pb	ppm	4.6	73.0	560	4.2	33.0	101
Pr	ppm	2.8	3.6	4.6	1.4	3.5	4.3
Rb	ppm	24.6	67.0	111	3.8	48.0	75.6
Re	ppm	< 0.001	0.01	0.08	< 0.001	0.0	0.004
Sb	ppm	0.8	2.2	10.6	0.2	1.1	2.4
Se	ppm	0.2	0.6	1.7	0.2	0.5	1.2
Sm	ppm	1.3	2.1	3.2	1.7	2.2	3.3
Sn	ppm	< 1	1.0	1	< 1	1.0	1
Sr	ppm	82.4	229	409	125	233	501

Parameter	Unit	2023 Samples (n = 24)			2024 Samples (n = 19)		
		Min.	Avg.	Max.	Min.	Avg.	Max.
Ta	ppm	0.10	0.13	0.20	0.10	0.14	0.20
Tb	ppm	0.1	0.2	0.5	0.1	0.3	0.6
Te	ppm	0.1	1.0	3.4	0.1	0.6	1.2
Th	ppm	1.3	2.1	2.9	0.4	2.0	2.5
Tl	ppm	0.3	0.8	1.61	0.2	0.6	1.02
Tm	ppm	< 0.1	0.1	0.3	< 0.1	0.1	0.3
U	ppm	0.4	0.5	0.7	0.1	0.5	1.0
V	ppm	38.0	60.1	162	35	95.3	372
W	ppm	0.7	2.3	8.2	0.3	1.8	4.4
Y	ppm	3.2	5.2	15.7	3.5	6.9	20.9
Yb	ppm	0.3	0.5	1.8	0.3	0.7	2.4
Zn	ppm	41.2	406.6	1490	82.0	260.6	663
Zr	ppm	46	71.7	97	23	62.6	80

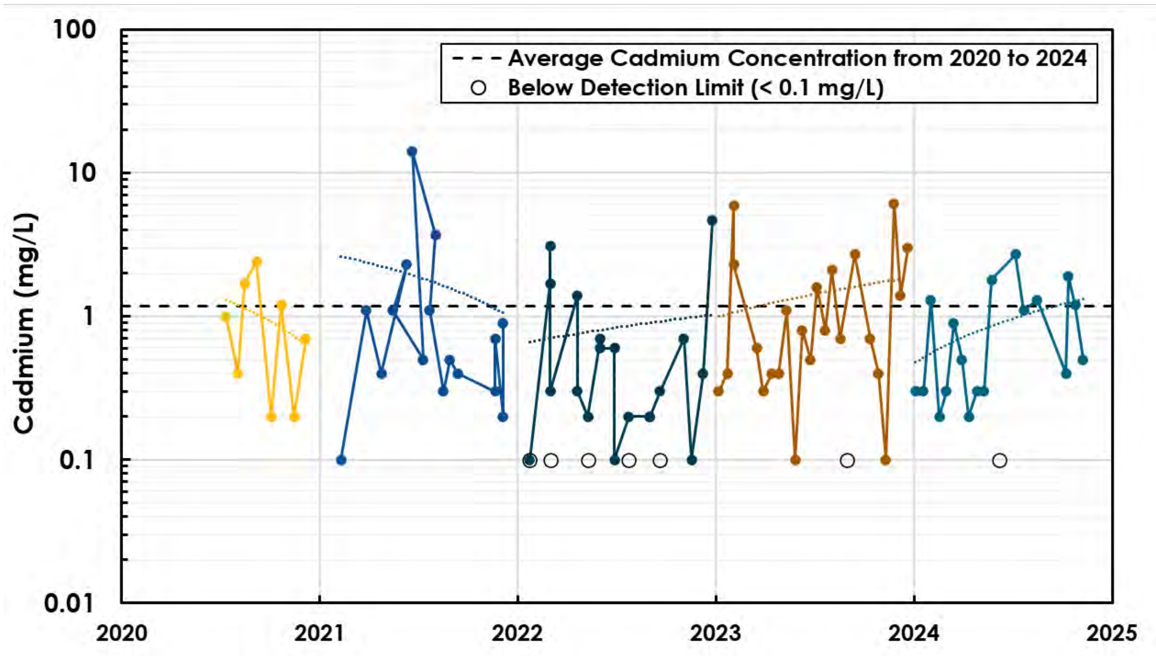

Figure 4.11: Solid phase cadmium concentrations (mg/L) of sampled EMRS mine rock over time.

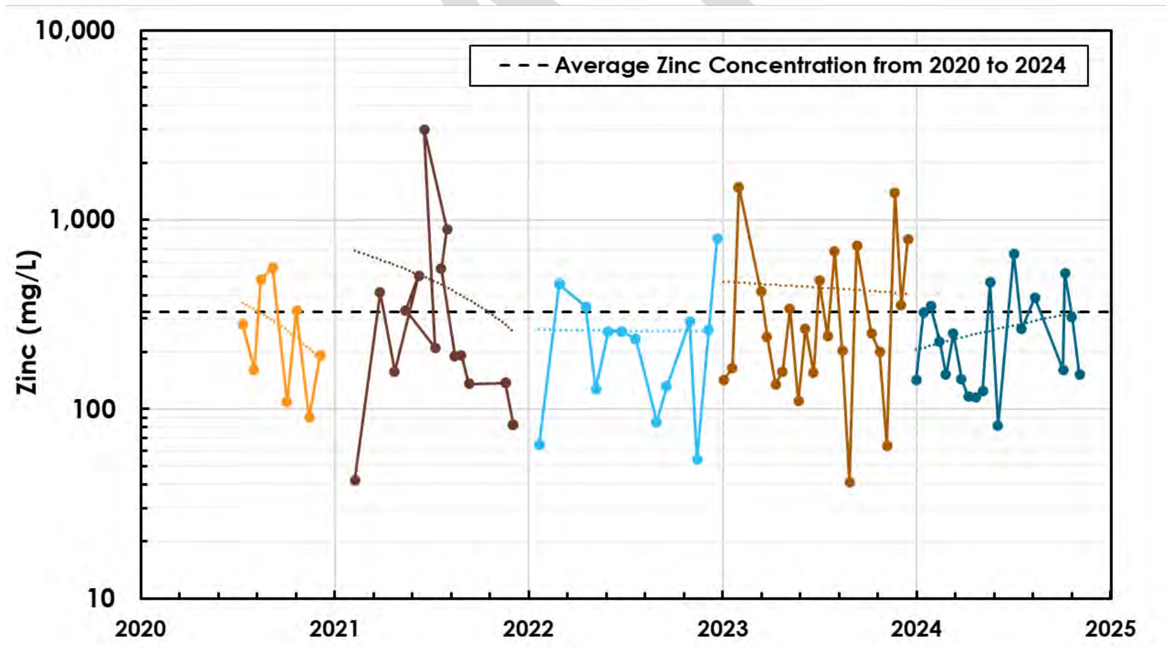

Figure 4.12: Solid phase zinc concentrations (mg/L) of sampled EMRS mine rock over time.

4.2.5 Shake Flask Extraction

The statistical results from shake flask extraction data (Table 4.5) provide a qualitative indication of contact water quality for fresh mine rock placed in the EMRS. Concentrations of two elements of metals with elevated concentrations (cadmium and zinc) were plotted over time to aid in identifying any trends in leachate chemistry (Figure 4.13 and Figure 4.14).

The pH of the shake flask extractions was circumneutral to alkaline (7.6 to 9.6 for the 2023 samples and 7.1 to 9.4 for the 2024 samples), and measured conductivities are between 34 to 89 µS/cm for the 2023 samples and 31 to 71 µS/cm for the 2024 samples. The concentrations of some elements, such as aluminum, potassium, and silicon, are high for alkaline waters, but may indicate localized silicate dissolution has occurred near oxidizing sulfide grains. Dissolved metals that have been elevated in observed EMRS seepage include zinc and cadmium. Leachable zinc was detected in the shake flask extractions, and average concentrations indicate leachable zinc has remained relatively stable over the monitoring period. Leachable cadmium has been below detection limit for the entire monitoring period.

Table 4.5: Statistics summary of the shake flask extraction results for 2023 and 2024 samples

Parameter	Unit	2023 Samples (n = 24)			2024 Samples (n = 19)		
		Min.	Avg.	Max.	Min.	Avg.	Max.
pH	pH	7.6	8.8	9.6	7.1	8.5	9.4
Conductivity	µS/cm	34	55	89	31	46	71
Fluoride (F)	mg/L	< 0.01	0.06	0.47	< 0.01	0.026	0.05
Chloride (Cl)	mg/L	0.08	0.87	5.9	< 0.03	0.14	0.56
Nitrite, as N	mg/L	< 0.01	0.045	0.2	< 0.01	0.012	0.05
Br	mg/L	< 0.03	0.13	0.6	< 0.03	0.03	0.03
Nitrate, as N	mg/L	< 0.01	0.66	12	0.01	0.025	0.15
Phosphate, as P	mg/L	< 0.02	0.085	0.4	< 0.02	0.021	0.03
Sulfate	mg/L	0.31	4.5	25	0.3	1.2	3.3
Ag	µg/L	< 0.2	2.2	4.0	< 0.2	< 0.2	< 0.2
Al	µg/L	526	8,992	20,500	542	1,053	1,750
As	µg/L	0.41	48	161	0.35	3.6	17
Ba	µg/L	0.2	3.1	11	0.3	1.2	6.3
Be	µg/L	< 0.1	1.1	2.0	< 0.1	< 0.1	< 0.1
Bi	µg/L	< 0.3	3.3	6.0	< 0.3	0.37	1.7
Ca	µg/L	6,100	71,867	163,000	5,800	7,353	9,900
Cd	µg/L	< 0.01	0.11	0.2	< 0.01	< 0.01	< 0.01
Ce	µg/L	< 0.001	0.098	0.34	< 0.001	0.035	0.12
Co	µg/L	< 0.005	0.076	0.25	< 0.005	0.0087	0.035
Cr	µg/L	< 0.5	5.4	10	< 0.5	< 0.5	< 0.5
Cs	µg/L	0.007	0.16	0.64	0.01	0.033	0.078
Cu	µg/L	< 0.2	2.2	4.0	< 0.2	0.22	0.6
Dy	µg/L	< 0.001	0.012	0.02	< 0.001	0.0016	0.004
Er	µg/L	< 0.001	0.011	0.02	< 0.001	0.0011	0.002
Eu	µg/L	< 0.001	0.011	0.02	< 0.001	0.0013	0.003
Fe	µg/L	< 10	117	210	< 10	15	50
Ga	µg/L	0.49	6.1	15	0.39	0.7	1.5
Gd	µg/L	< 0.001	0.012	0.023	< 0.001	0.0023	0.007
Ge	µg/L	< 0.01	0.14	0.36	< 0.01	0.014	0.03
Hf	µg/L	< 0.001	0.014	0.064	< 0.001	0.0026	0.01
Hg	µg/L	< 0.2	2.2	4.0	< 0.2	< 0.2	< 0.2
Ho	µg/L	< 0.001	0.011	0.02	< 0.001	< 0.001	< 0.001
In	µg/L	< 0.001	0.011	0.02	< 0.001	< 0.001	< 0.001

Parameter	Unit	2023 Samples (n = 24)			2024 Samples (n = 19)		
		Min.	Avg.	Max.	Min.	Avg.	Max.
K	µg/L	1,440	20,613	52,100	300	1,817	4,470
La	µg/L	< 0.001	0.043	0.19	< 0.001	0.017	0.059
Li	µg/L	< 1.0	18	52	< 1.0	3.7	32
Lu	µg/L	< 0.001	0.011	0.02	< 0.001	< 0.001	< 0.001
Mg	µg/L	127	7,276	26,500	175	427	1,050
Mn	µg/L	0.9	28	106	0.4	2.7	6.1
Mo	µg/L	< 0.1	2.2	13	< 0.1	0.13	0.3
Na	µg/L	357	9,536	35,400	510	1,077	2,060
Nb	µg/L	0.005	0.054	0.1	0.005	0.005	0.005
Nd	µg/L	< 0.001	0.04	0.13	< 0.001	0.016	0.051
Ni	µg/L	< 0.3	3.3	6.0	< 0.3	< 0.3	0.3
P	µg/L	< 4.0	54	128	< 4.0	5.3	11
Pb	µg/L	< 0.01	0.86	3.9	< 0.01	< 0.3	1.9
Pr	µg/L	< 0.001	0.017	0.038	< 0.001	0.0042	0.014
Rb	µg/L	0.28	5.7	29	0.2	0.56	1.8
Sb	µg/L	0.47	22	165	< 0.01	1.1	4.4
Sc	µg/L	< 1.0	11	20	< 1.0	< 1.0	< 1.0
Se	µg/L	< 0.2	2.2	4.0	< 0.2	0.21	0.3
Si	µg/L	900	14,800	29,800	900	1,495	2,300
Sm	µg/L	< 0.001	0.013	0.031	< 0.001	0.0027	0.008
Sn	µg/L	< 0.1	1.1	2.0	< 0.1	< 0.1	< 0.1
Sr	µg/L	10	153	470	5.6	16	53
Ta	µg/L	< 0.001	0.011	0.02	< 0.001	< 0.001	< 0.001
Tb	µg/L	< 0.001	0.011	0.02	< 0.001	< 0.001	< 0.001
Te	µg/L	< 0.1	1.1	2.0	< 0.1	0.11	0.3
Th	µg/L	< 0.001	0.012	0.042	< 0.001	0.0043	0.01
Ti	µg/L	< 0.1	16	48	1.2	3.3	11
Tl	µg/L	< 0.01	0.11	0.2	< 0.01	< 0.01	< 0.01
Tm	µg/L	< 0.001	0.011	0.02	< 0.001	< 0.001	< 0.001
U	µg/L	< 0.001	0.032	0.13	< 0.001	0.0052	0.036
V	µg/L	0.3	5.5	18	0.2	0.78	2.3
W	µg/L	< 0.02	0.91	4.3	< 0.02	0.092	0.23
Y	µg/L	< 0.003	0.04	0.12	< 0.003	0.0072	0.019
Yb	µg/L	< 0.001	0.011	0.02	< 0.001	< 0.001	< 0.001

Parameter	Unit	2023 Samples (n = 24)			2024 Samples (n = 19)		
		Min.	Avg.	Max.	Min.	Avg.	Max.
Zn	µg/L	< 0.5	6.0	23	< 0.5	0.68	2.7
Zr	µg/L	< 0.01	0.34	2.3	< 0.01	0.075	0.23

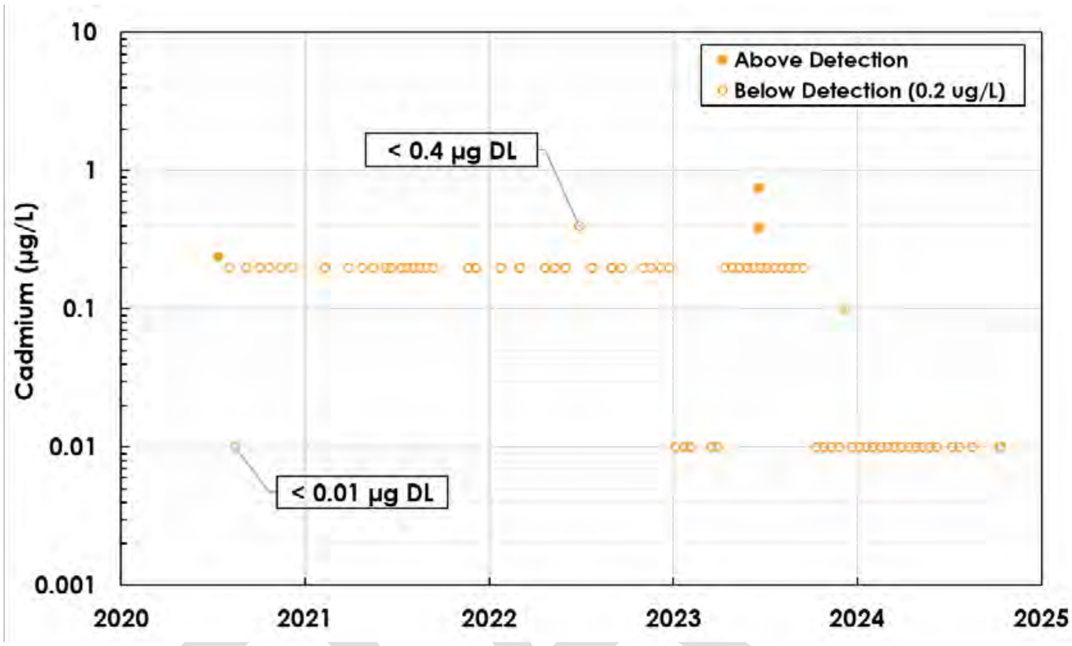

Figure 4.13: Shake flask extraction cadmium concentrations (µg/L) over time.

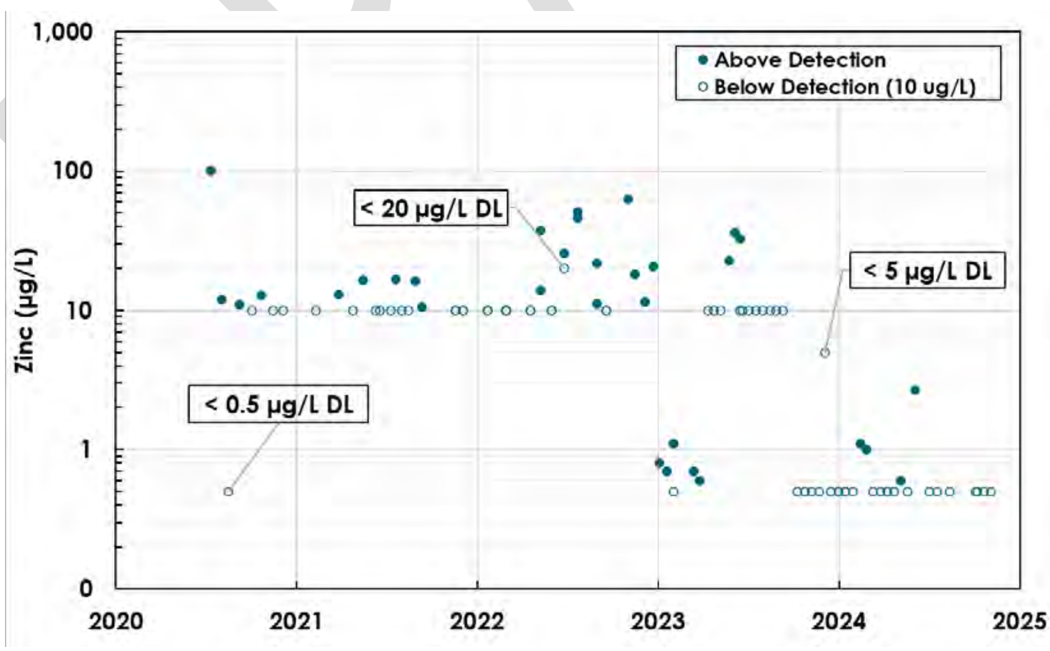

Figure 4.14: Shake flask extraction zinc concentrations (µg/L) over time.

5 SUMMARY

Monitoring of in-situ conditions in the EMRS began in November 2020 when sensors were installed in Lift #1. In-situ monitoring consists of monitoring oxygen, VWC, and temperature. The creation of a depth profile within the mine rock stockpile allows for the performance of the placed lifts to be evaluated as subsequent lifts are placed. The following key results and interpretations were taken from the in-situ monitoring program during the monitoring period are:

- Temperature data showed fluctuations between -8.0 °C to 6.5 °C in Lift #1, following climatic cycles. Further monitoring of mine rock temperatures will evaluate if there are internal processes driving temperature change within the EMRS(e.g. internal oxidation);
- Oxygen concentrations ranged between 16.3% and 19% throughout the monitoring period; remaining relatively steady and did not imply trends of any advective oxygen flux; and
- Volumetric water content data indicates that water contents are low (< 7%), indicating that the majority of pore space is composed of gas.

The mine rock characterization program conducted during the monitoring period consisted of digital PSDs and geochemical analysis on a bi-monthly intervals. Key results and interpretations taken from the characterization program during the monitoring period are:

- Three samples were identified as well-graded, and 15 samples were identified as poorly graded. The average D50 of the PSDs was 335 mm, and the maximum particle size of any PSD analysis was 1290 mm;
- Total sulfur in samples from 2023 and 2024 ranged from 0.33 to 5.53 wt. % S and was dominated by sulfide-S (0.21 to 4.81 wt. % S) rather than sulfate-S (0.31 to 2.14 wt. % S). Lower concentrations of sulfate-S relative to sulfide-S suggest limited oxidation of the samples had occurred prior, during or after sample collection. However, several outliers found elevated sulfate-S relative to sulfide-S indicating increased sulfide oxidation had occurred prior to sampling.
- Out of 43 samples from 2023 and 2024, 35 were classified as PAG with the remaining (8) classified as NPAG, which is consistent with ARD results from previous years (i.e., 31 out of 40 samples in 2021 and 2022 were classified as PAG). Samples were further classified based on their NP with one being classified as PAG1, four being classified as PAG2 and 30 being classified as PAG3.
- Due to the observations of elevated zinc and cadmium concentrations in recent EMRS seepage, trends of solid phase and soluble zinc and cadmium in EMRS mine rock have been included in this report. Concentrations of zinc and cadmium in sampled EMRS mine rock have not increased from 2020 to 2021 but did increase over 2022 to 2023. In 2024, an overall increasing trend was

observed in cadmium and zinc but actual concentrations remain lower than those observed in 2023 samples.

- Shake flask extraction results showed circumneutral to alkaline pH with some parameters present at elevated concentrations (i.e., aluminum and silicon) that indicate localized silicate dissolution may have occurred near oxidizing sulfide grains. Zinc and cadmium, which have been observed to be elevated in the EMRS seepage, appear to have remained stable over the monitoring timeframe.

6 RECOMMENDATIONS

To further classify the internal structure of the EMRS, Okane recommends the following to be completed during the upcoming monitoring period:

- Continue monitoring EMRS mine rock oxygen concentrations, volumetric water content, and temperature to understand internal mechanisms controlling potential acid generation.
- Continue collection of mine rock samples for geochemical analysis to better understand the sulfur and carbon abundance, metal composition, and ARD potential of the mine rock being placed in the EMRS.
- Continue monitoring solid phase and soluble zinc and cadmium for mine rock being placed in the EMRS.
- Update as-built drawings of instrumentation as construction of the mine rock stockpile progresses and New Gold provides updated elevation and surface survey points.

7 REFERENCES

Google Earth 10.73.0.1. (2024a). Rainy River Mine, ON Canada. 48° 50' 47.76"N, 94° 01' 10.85"W, Eye alt 14.11 km. Roads; places layers. Airbus 2025. September 17, 2023 Imagery. < https://earth.google.com/web/@48.85012379,-94.0204143,363.85739633a,13761.20009624d,35y,-0.01210156h,3.02611885t,359.99989893r/data=CgRCAggBQglIAEoNCP___________wEQAA> (Accessed January 30, 2024).

Google Earth (2024b). Rainy River Mine, ON Canada. 48.836743°N 93.979888°W. Eye alt 14.11 km. Airbus 2025. September 17, 2023 Imagery. https://earth.google.com/web/@48.83637361,-93.98003637,370.37144741a,5054.06874887d,30y,359.82024657h,0t,0r/data=CgRCAggBOgMKATBCAggASg0I____________ARAA (Accessed December 12, 2024).

Okane Consultants. (Okane). (2020). Rainy River Mine – Update to Carbonate Speciation Study. 1003-17-M-008. Technical Memorandum. Submitted to New Gold Inc. April 3, 2020.

Okane Consultants (Okane) (2021). Rainy River Mine – 2020 Annual Geochemical Monitoring Report. 1003-020-002. Technical Memorandum. Submitted to New Gold Inc. March 16, 2021.

Okane Consultants (Okane). (2022). Rainy River Mine – EMRS PAG Mine Rock 2021 Annual Monitoring Report. 1003-024-008. Technical Report. Submitted to New Gold Inc. January 5, 2022.

Okane Consultants (Okane). (2023). Rainy River Mine – East Mine Rock Stockpile Potentially Acid Generating Mine Rock 2022 Annual Monitoring Report. 1003-221-004. Technical Report. Submitted to New Gold Inc. April 10, 2023.

Okane Consultants (Okane). (2024). Rainy River Mine – East Mine Rock Stockpile Potentially Acid Generating Mine Rock 2023 Annual Monitoring Report. 1003-228-004. Technical Report. Submitted to New Gold Inc. January 26, 2024.

8 CLOSURE

We trust information provided is satisfactory for your requirements. Please do not hesitate to contact the undersigned at (306) 955 0702 for further information or questions.

Prepared by:

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Reviewed by:

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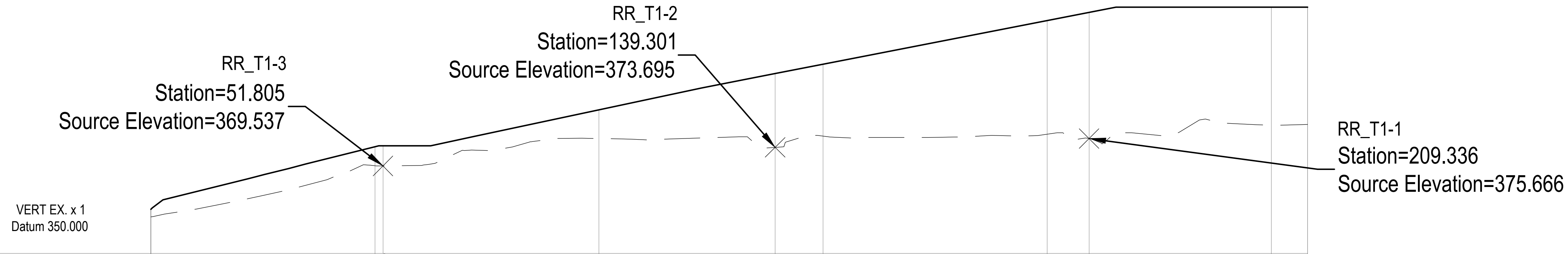
Senior Engineer

Appendix A

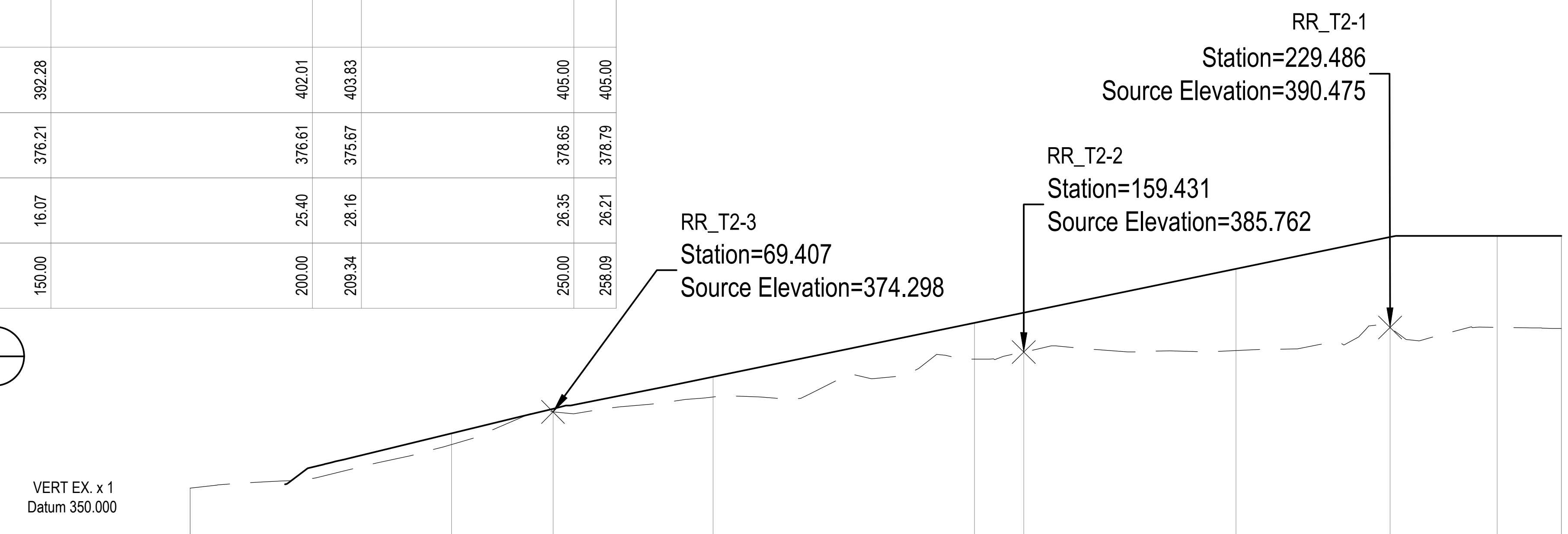
Drawings

PROJECT - 1003-233 DATE - 2024/12/30



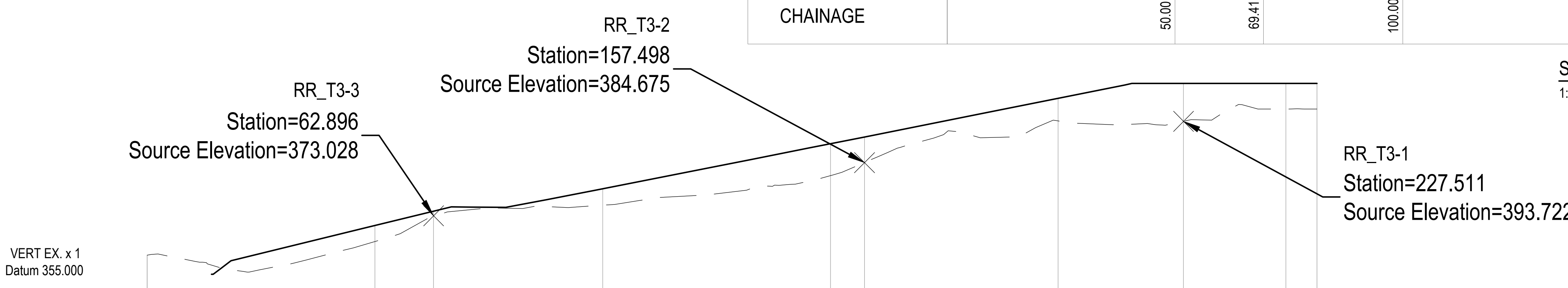
DESIGN LEVELS	373.85	374.07	382.07	390.20	392.28	402.01	403.83	405.00	405.00
EXISTING LEVELS	369.58	369.54	375.69	373.70	376.21	376.61	375.67	378.65	378.79
DEPTH	4.27	4.53	6.38	16.50	16.07	25.40	28.16	26.35	26.21
CHAINAGE	50.00	51.81	100.00	139.30	150.00	200.00	209.34	250.00	258.09

SECTION 1
1:1250



DESIGN LEVELS	370.19	374.91	381.01	391.34	393.29	401.67	407.77	408.00	408.00
EXISTING LEVELS	368.07	374.30	377.15	384.42	385.76	386.03	390.47	390.49	390.27
DEPTH	2.12	0.61	3.86	6.92	7.53	15.65	17.29	17.51	17.73
CHAINAGE	50.00	69.41	100.00	150.00	159.43	200.00	229.49	250.00	262.28

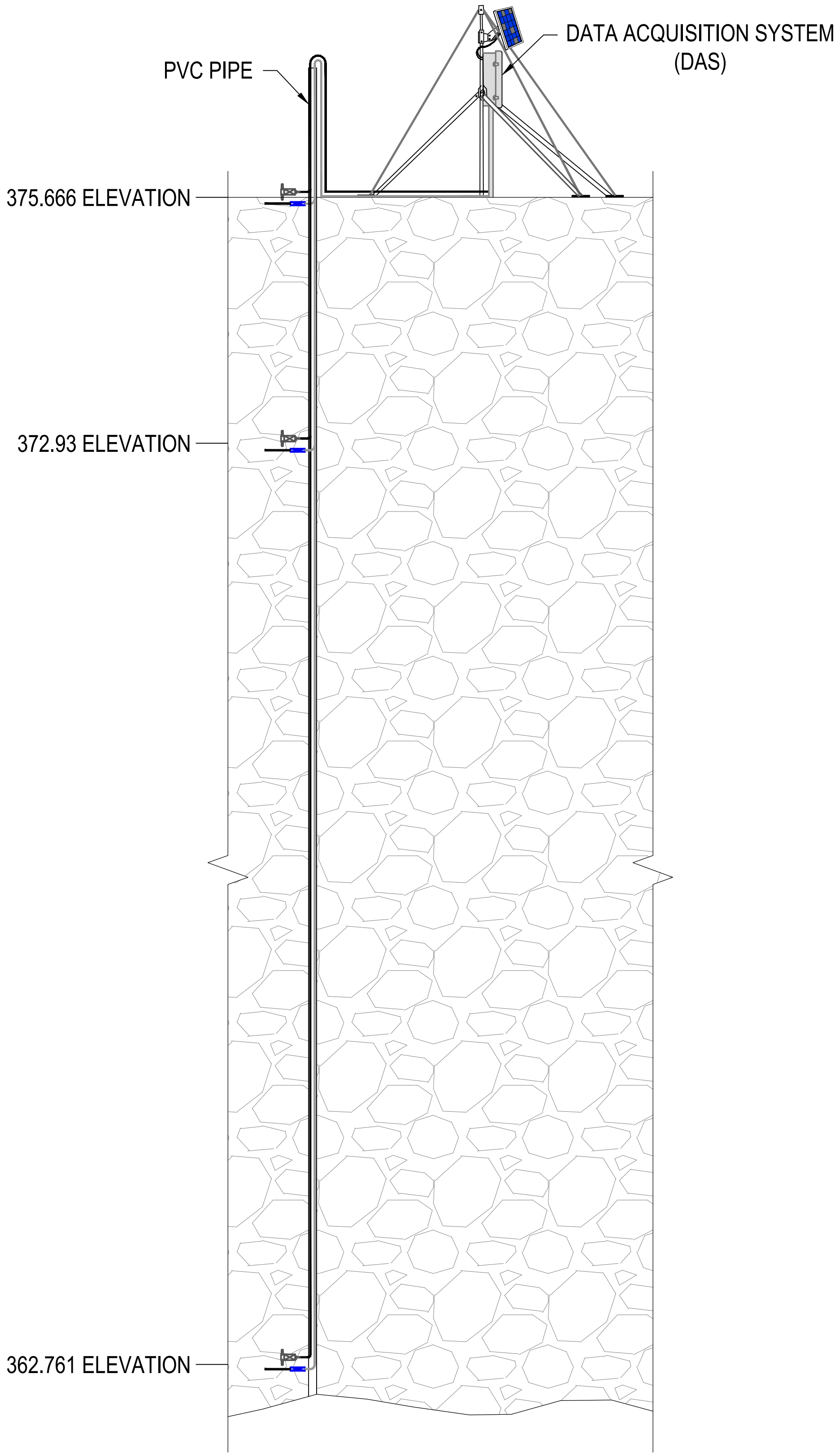
SECTION 2
1:1250



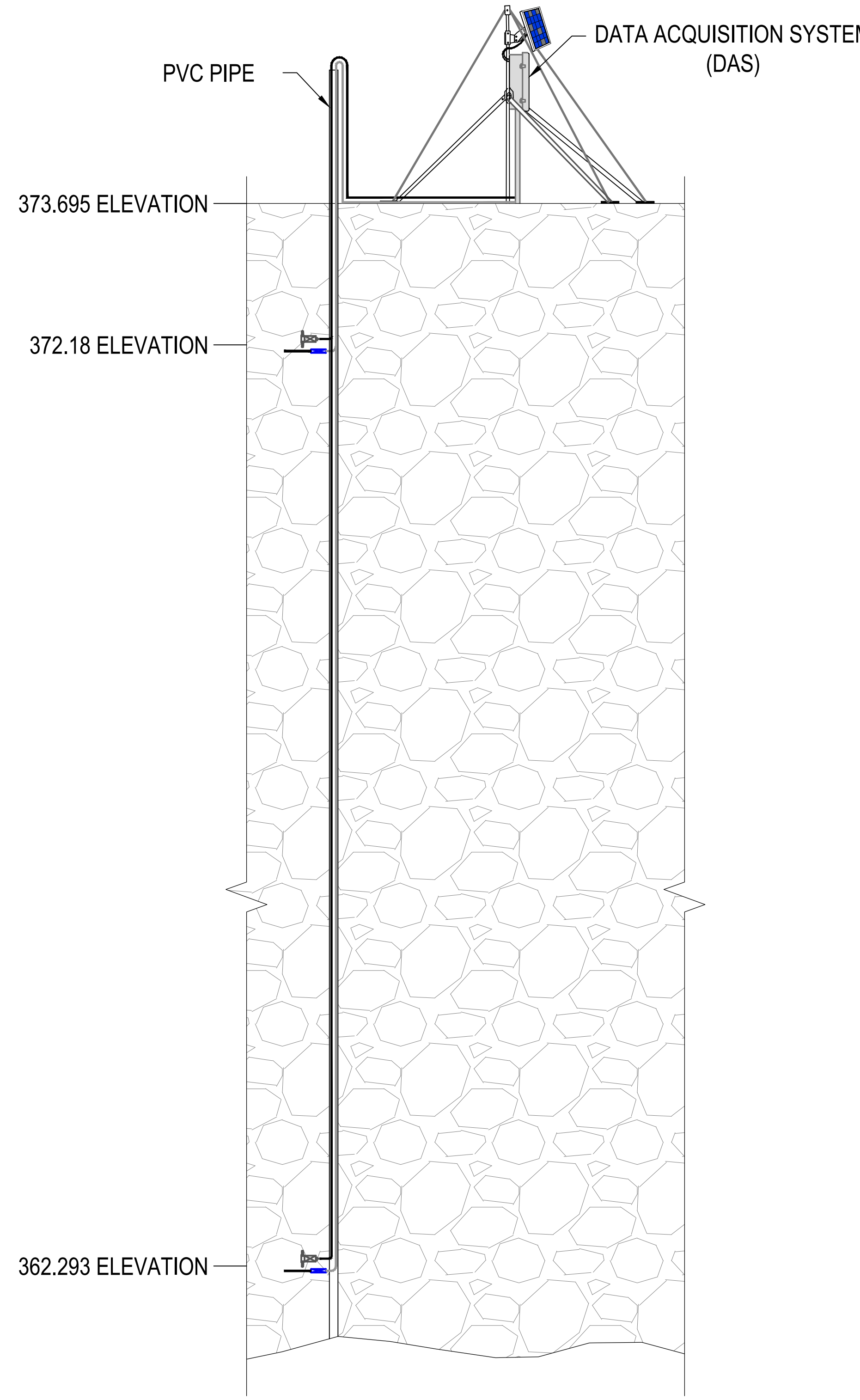
DESIGN LEVELS	370.90	374.05	378.96	388.79	390.27	398.77	402.00	402.00	402.00
EXISTING LEVELS	367.37	373.03	375.34	381.80	384.67	393.80	393.72	396.43	396.41
DEPTH	3.53	1.02	3.62	7.00	5.59	4.97	8.28	5.57	5.59
CHAINAGE	50.00	62.90	100.00	150.00	157.50	200.00	227.51	250.00	256.80

SECTION 3
1:1250

okane
Integrated Mine Closure and Relinquishment Solutions



RR_T1-1 INSTRUMENTED PROFILE
NTS



RR_T1-2 INSTRUMENTED PROFILE
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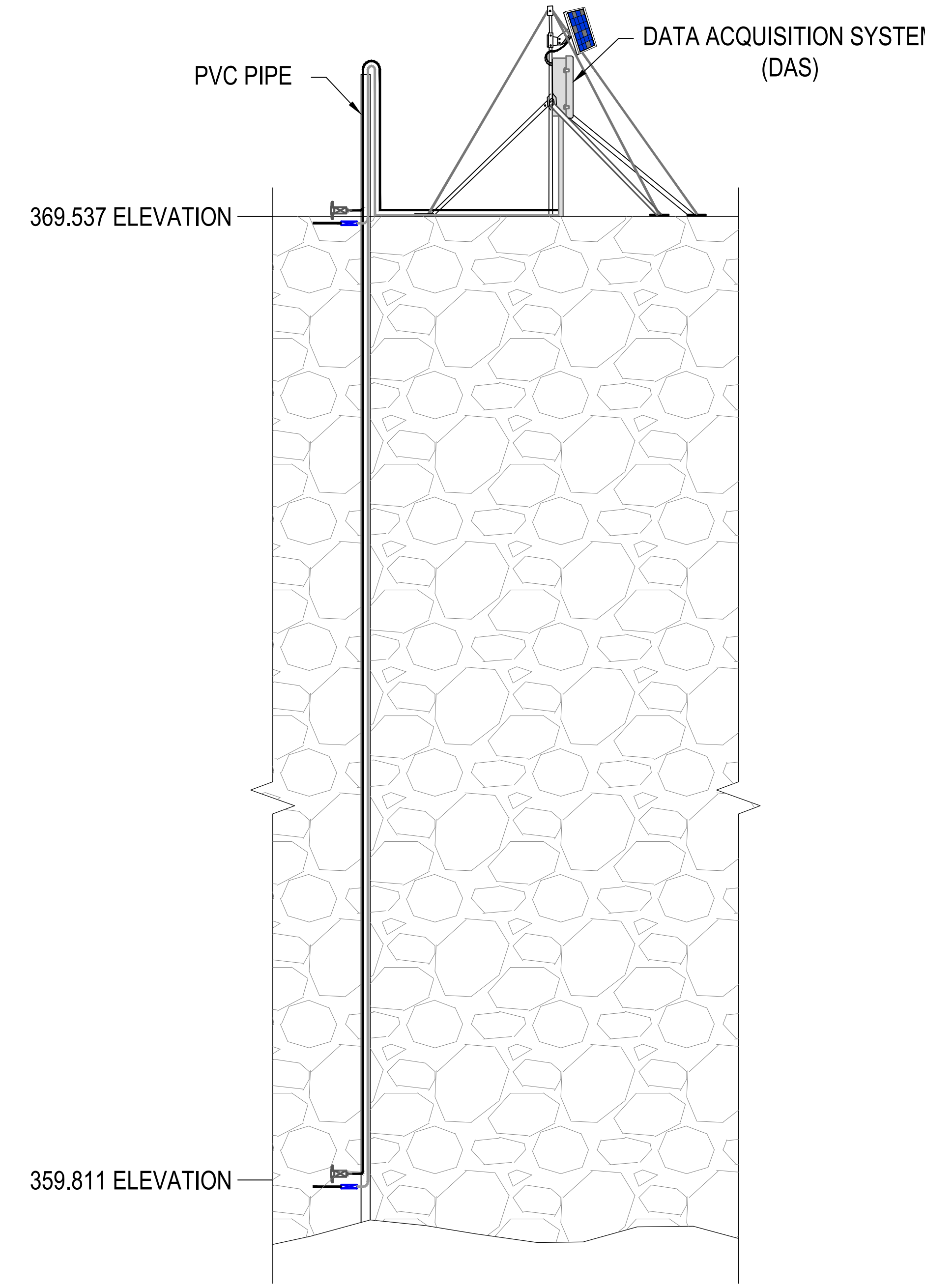

RR_T1-3 INSTRUMENTED PROFILE
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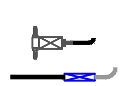
LEGEND



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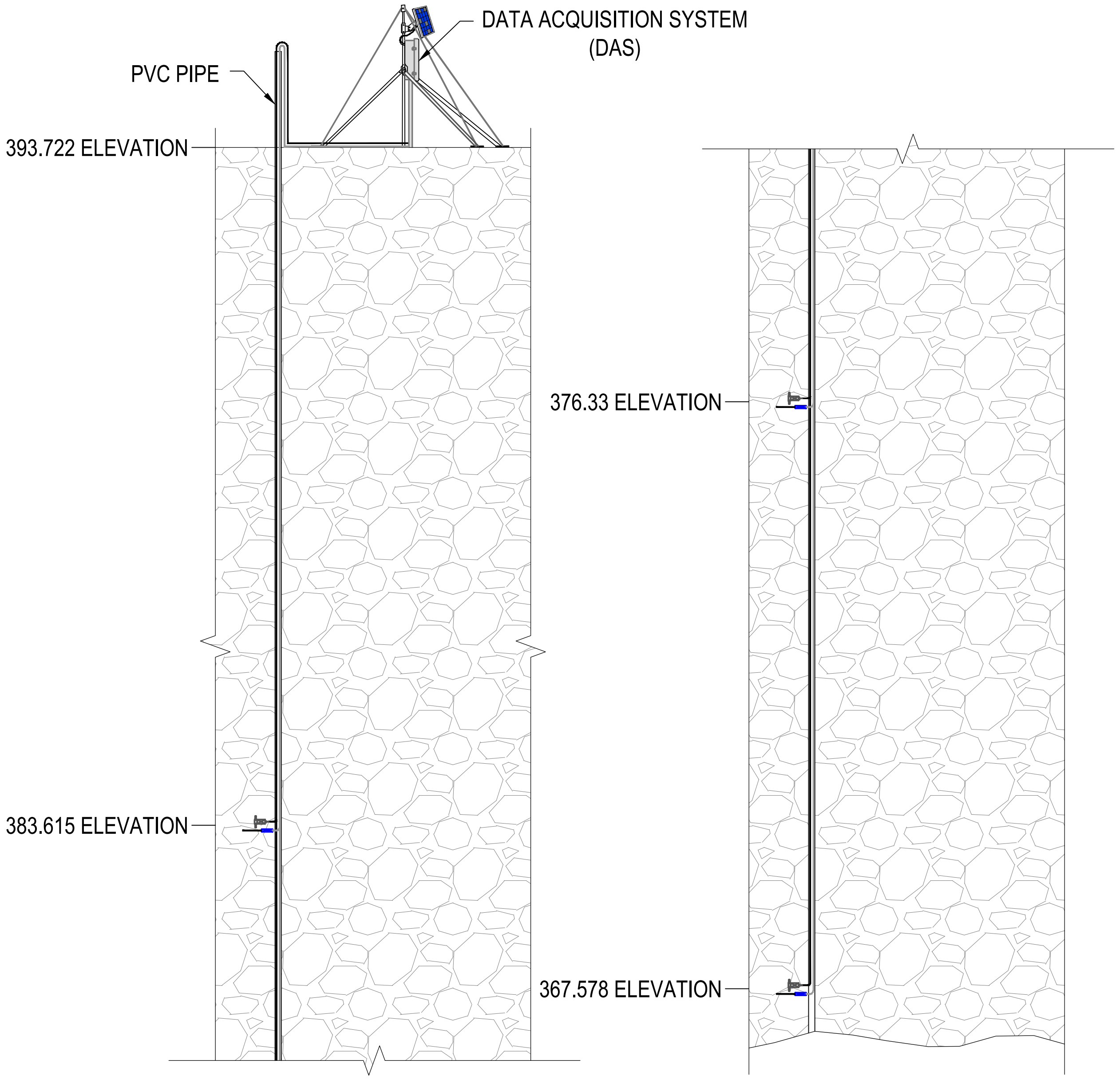
Integrated Mine Closure and Relinquishment Solutions

PROJECT - 1003-233 DATE - 2024/12/30



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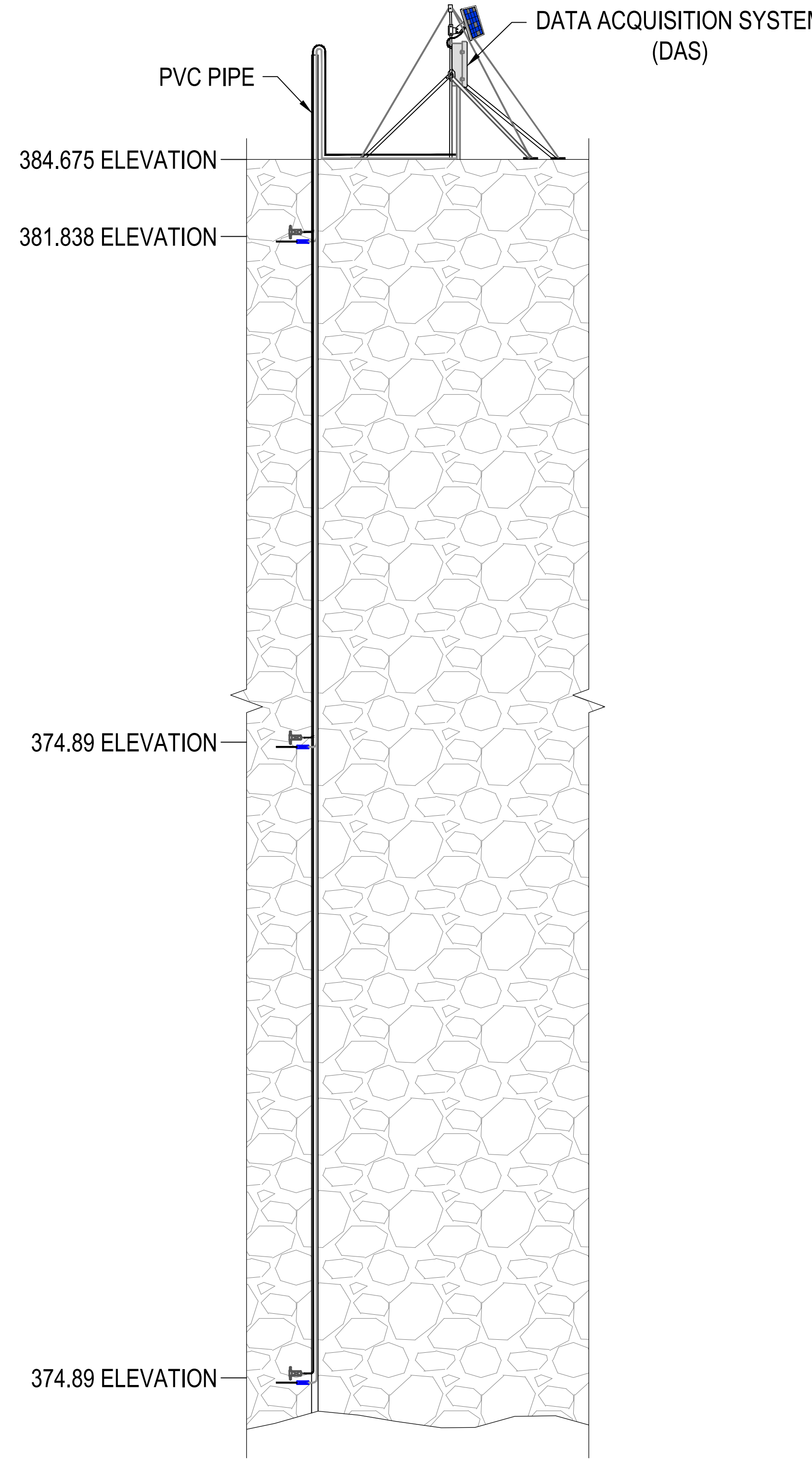

RR_T3-2 INSTRUMENTED PROFILE
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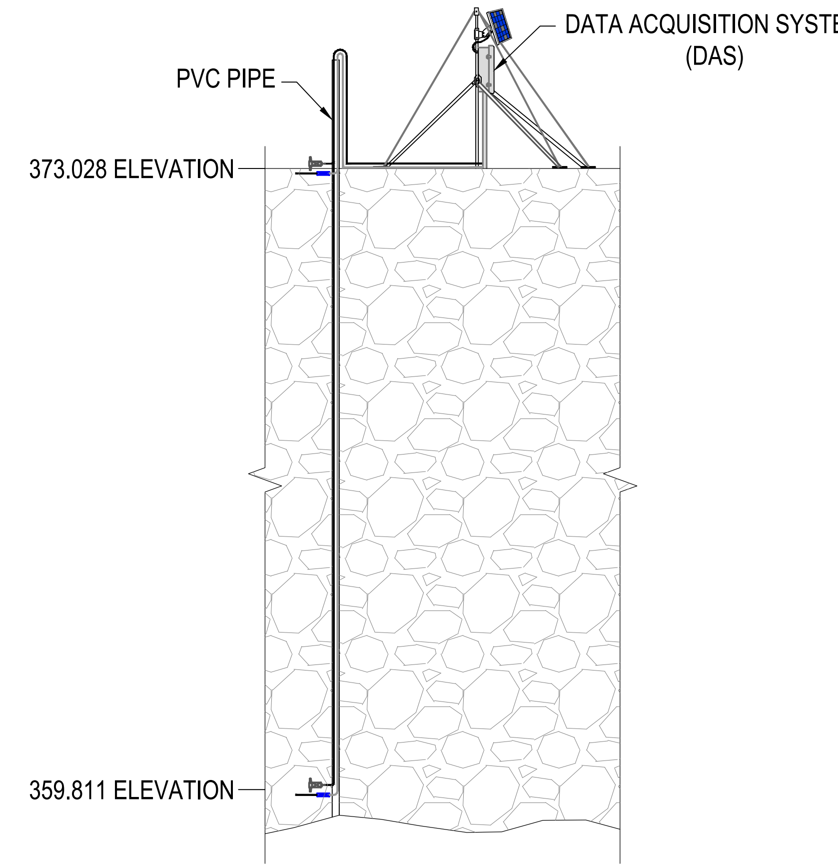

RR_T3-3 INSTRUMENTED PROFILE
NTS

LEGEND

SO-110 SENSOR

CS650 SENSOR

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Integrated Mine Closure and Relinquishment Solutions

PROJECT - 1003-233 DATE - 2024/12/30

Appendix B

Geochemistry Data

Date Received	Report Date	Analyte Symbol	Fizz Rating	AP (Sulphide)	Modified-NP	NNP	NPR	MPA	NP:MPA Ratio	Paste pH	Sulfate Sulfur	Sulphide Sulfur	S(HCl)	CO_2
		Unit Symbol	-	kg $CaCO_3$/t	kg $CaCO_3$/t	-	Ratio	kg $CaCO_3$/t	Ratio	pH	wt. % S	wt. % S	wt. % S	wt. % C
		Detection Limit	-	0.31		-	-	-	-	0.01	0.05	0.01	0.01	0.01
		Analysis Method	-	Calc	TITR	Calc	Calc	TITR	Calc	pH Meter	SO4	Calc	S(HCl)	CO2
2020-07-13	2020-07-29	Rock sample	-	31	43.4	12.4	0.71	38.9	1.12	9.02	0.83	1	0.06	1.75
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	-	46.2	23.7	-22.6	1.95	52.1	0.455	8.94	0.66	1.47	0.05	0.91
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	-	31.9	22	-9.87	1.45	38.3	0.575	8.96	0.69	1.1	0.18	0.93
2020-09-08	2020-11-10	Rock Sample	-	51.5	23.5	-28.1	2.19	61.3	0.383	8.77	1.05	1.65	< 0.01	1.05
2020-10-05	2020-11-26	Rock Sample	-	32.4	12	-20.4	2.70	39.8	0.301	8.97	0.79	1.03	0.04	0.4
2020-10-23	2020-11-26	ROCK SAMPLE	-	21	20.1	-0.901	1.04	28.2	0.714	8.59	0.74	0.67	0.01	0.86
2020-11-16	2021-01-18	ROCK SAMPLE	-	118	13.5	-104	8.74	122	0.111	9.3	0.62	1.12	1.33	< 0.01
2020-12-07	2021-01-20	ROCK SAMPLE	-	53.8	15.6	-38.2	3.45	66.8	0.233	9.24	1.37	1.85	0.02	0.56
2021-02-10	2021-03-17	ROCK SAMPLE	-	47.7	6.49	-41.2	7.35	51.8	0.125	8.91	0.49	1.53	0.02	0.2
2021-03-29	2021-04-20	ROCK SAMPLE	-	14.1	23.8	9.77	0.59	13.8	1.73	9.68	0.27	0.37	< 0.01	0.92
2021-04-26	2021-05-13	ROCK SAMPLE	-	28.4	25.5	-2.97	1.11	35.2	0.72	9.07	0.72	0.91	0.08	1.09
2021-06-11	2021-07-21	ROCK SAMPLE	-	42	13.4	-28.6	3.13	50.2	0.27	8.72	0.89	1.34	< 0.01	0.75
2021-05-17	2021-08-13	ROCK SAMPLE	-	21.9	42.4	20.5	0.52	29.4	1.44	9.22	0.78	0.7	0.03	1.76
2021-07-12	2021-08-26	1	-	24.8	12.5	-12.3	1.98	27.9	0.45	9.22	0.35	-	-	-
2021-06-21	2021-09-02	ROCK SAMPLE	-	100	31.1	-69.2	3.22	111	0.28	8.89	1.29	3.22	0.2	1.36
2021-08-03	2021-09-24	ROCK SAMPLE	-	47.3	23	-24.3	2.06	52.1	0.44	9.28	0.56	-	0.05	0.68
2021-07-23	2021-10-13	2021-07-23	-	33.6	103	69.7	0.33	40.4	2.56	8.72	0.73	1.08	0.08	4.32
2021-08-18	2021-10-13	2021-08-18	-	11.5	119	107	0.10	21.4	5.55	8.8	0.99	0.37	0.06	4.57
2021-08-30	2021-11-16	2021-08-30	-	43.2	9.72	-33.5	4.44	47.8	0.2	9.37	0.53	1.38	< 0.01	0.4
2021-09-13	2021-11-16	2021-09-13	-	38.5	16.1	-22.4	2.39	42.9	0.38	9.4	0.5	1.23	< 0.01	0.62
2021-11-21	2022-02-02	EMRS1	-	46.5	33.6	-12.8	1.38	50.2	0.67	9.43	0.46	1.51	< 0.01	1.47
2021-11-21	2022-02-02	EMRS2	-	69.5	11.9	-57.6	5.84	75.6	0.16	9.22	0.74	2.22	< 0.01	0.32
2021-12-06	2022-02-04	EMRS 2021.11.29	-	70.6	5.12	-65.5	13.79	75	0.07	9.03	0.57	2.26	0.06	< 0.01
2021-12-06	2022-02-04	EMRS 2021.11.30	-	41.6	27.8	-13.7	1.50	45.3	0.61	9.17	0.45	1.32	< 0.01	0.95
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	-	47.8	11.2	-36.6	4.27	53	0.21	8.95	0.6	1.53	0.12	0.4
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	-	8.22	32.9	24.7	0.25	11.6	2.83	9.35	0.35	0.26	0.07	0.94
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	-	49.84	13.1	-36.7	3.80	53.9	0.46	9.07	0.49	1.59	0.02	0.5
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	-	31.42	13.7	-17.7	2.29	34.3	0.76	9.23	0.35	1.01	< 0.01	0.55
2022-03-03	2022-04-26	EMRS 2022-02-28	-	56.47	38.9	-17.5	1.45	60.9	1.24	9.26	0.54	1.81	0.16	1.61
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	-	33.74	31.9	-1.79	1.06	37.4	1.59	9.46	0.42	1.08	0.01	1.21
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	-	57.14	-104	-161	-0.55	-	-1.82	9.39	0.53	1.83	0.15	1.15
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	-	35.2	-114	-149	-0.31	-	-3.23	9.27	0.43	1.13	0.1	0.69
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	-	27.76	22	-5.81	1.26	-	0.791	8.85	0.46	0.89	0.04	0.68
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	-	1.34	60.6	59.2	0.02	-	45.2	8.88	0.55	0.04	< 0.01	2.23
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	-	37.11	34.9	-2.25	1.06	-	0.939	9.7	-	1.19	0.1	1.35
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	-	55.82	30.6	-25.2	1.82	-	0.549	9.53	-	1.79	0.03	1.17
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	-	79.19	100	20.9	0.79	-	1.26	9.04	1.5	2.53	< 0.01	6.26
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	-	12.18	35.4	23.2	0.34	-	2.91	9.07	0.24	0.4	< 0.01	0.31
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	-	74.82	87.1	12.3	0.86	-	1.16	8.74	1.78	2.4	< 0.01	5.41
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	-	83.02	9.72	-73.3	8.54	-	0.117	8.95	0.81	2.66	< 0.01	0.09
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	-	51.83	9.11	-42.7	5.69	-	0.176	9.34	0.64	1.66	0.62	0.3
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	-	16.4	57.1	40.7	0.29	-	3.48	9.66	0.71	0.52	0.26	2.35
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	-	28.62	33.5	4.83	0.85	-	1.17	9.37	0.44	0.92	0.96	1.18
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	-	56.18	59.2	3.06	0.95	-	1.05	9.14	0.74	1.8	1.82	2.62
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	Strong	29.2	552	523	18.9	-	-	8.97	0.69	0.93	0.59	1.96
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	Moderate	43.3	220	177	5.08	-	-	6.83	0.56	1.19	1.01	0.36
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	Moderate	208	177	-30.5	0.853	-	-	8.92	1.4	1.75	1.1	1.84
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	Moderate	53.6	238	184	4.44	-	-	9	0.54	1.54	0.76	< 0.01
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	Slight	47.06	34	-13.1	0.722	-	-	9.16	0.56	1.49	< 0.01	1.64
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	Slight	50.87	61.5	10.6	1.21	-	-	9.18	0.63	1.63	< 0.01	2.66
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	Slight	29.76	38	8.22	1.28	-	-	9.58	0.59	0.95	< 0.01	1.59
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	None	56.95	26	-31	0.456	-	-	9.55	0.64	1.82	0.15	1.15
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	Slight	150.44	57.8	-92.6	0.384	-	-	8.6	2.14	4.81	0.55	2.35
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	Slight	83.39	71.7	-11.7	0.86	-	-	8.85	0.95	2.69	0.06	3.73
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	None	47.83	50.5	2.63	1.05	-	-	9.49	0.62	1.53	0.02	3.46
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	None	41.44	15.2	-26.2	0.368	-	-	9.57	0.44	1.33	0.1	0.48
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	Slight	36.2	27.7	-8.5	0.765	-	-	9.27	0.45	1.16	0.04	1.23
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	Slight	55	48.8	-6.21	0.887	-	-	9.18	0.61	1.76	0.1	2.2
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	Moderate	58.34	59.2	0.857	1.01	-	-	9.07	0.94	1.87	0.3	2.48
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	Moderate	44.62	13.4	-31.2	0.301	-	-	9.36	0.49	1.43	0.1	0.77
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	Slight	38.51	65.7	27.2	1.71	-	-	9.54	0.89	1.23	0.06	3.1
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	Slight	39.63	63.6	24	1.61	-	-	9.5	0.71	1.27	0.08	3.27
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	Strong	35.8	11.2	-24.6	0.313	-	-	9.31	0.57	1.15	0.08	1.52
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	Moderate	41.97	32.7	-9.25	0.78	-	-	9.31	0.56	1.34	0.1	3.06
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	Slight	35.8	66.2	30.4	1.85	-	-	9.58	0.56	1.15	< 0.01	2.51
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	Slight	26.97	85.4	58.5	3.17	-	-	9.28	0.47	0.86	0.04	4.07
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	SLIGHT	31.69	82	50.3	2.59	-	-	9.27	0.4	1.01	< 0.01	3.41
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	None	25.91	22.2	-3.75	0.855	-	-	9.26	0.31	0.83	< 0.01	0.73
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	Slight	39.45	98	58.5	2.48	-	-	9.51	0.54	1.26	0.1	4.21
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	None	51.63	26.9	-24.7	0.521	-	-	9.38	0.67	1.65	0.13	1.02
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	Slight	50.09	18.7	-31.4	0.373	-	-	9.12	0.51	1.6	0.13	0.06
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	Slight	50.21	47.4	-2.81	0.944	-	-	9.11	0.66	1.61	0.11	2.03
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	Slight	61.51	70.1	8.63	1.14	-	-	8.83	0.77	1.71	< 0.01	2.99
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	Moderate	60.05	91.4	31.3	1.52	-	-	8.63	1.77	1.92	0.11	3.55
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	Slight	65.86	34.2	-31.6	0.52	-	-	9.15	0.57	2.11	0.21	1.45
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	Slight	82.29	76.3	-5.97	0.927	-	-	8.75	1.34	2.63	0.13	3.18
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	Slight	35.24	91	55.8	2.58	-	-	8.88	0.95	1.13	0.11	3.61
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	Moderate	44.76	173	129	3.87	-	-	9.14	0.45	1.43	0.03	1.69
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	Slight	18.86	138	119	7.32	-	-	9.34	0.44	0.6	0.02	0.69
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	Slight	44.38	34.2	-10.2	0.771	-	-	9.4	0.51	1.42	0.06	1.32
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	Slight	40.81	29.8	-11	0.729	-	-	9.38	0.5	1.31	0.04	1.09
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	None	33.42	41.1	7.68	1.23	-	-	9.57	0.49	1.07	0.1	1.49
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	Slight	71.53	18.5	-53	0.259	-	-	8.66	0.99	2.29	0.13	0.33
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	Moderate	49.67	116	66.7	2.34	-	-	8.99	1.21	1.59	0.02	4.89
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	Moderate	48.17	63	14.8	1.31	-	-	9.13	0.85	1.54	0.12	1.9
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	Slight	60.63	19.4	-41.2	0.32	-	-	9.5	0.5	1.94	0.05	0.75
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	Moderate	46.68	36	-10.7	0.77	-	-	9.5	0.53	1.66	0.06	1.31
2024-10-08	2024-10-08	EMRS ROCK	Slight	6.5	42.9	36.4	6.6	-	-	9.76	0.37	0.21	0.03	1.74
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	Moderate	57.81	43	-14.8	0.745	-	-	9.35	0.98	1.85	0.08	2.03
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	Moderate	42.97	80.3	37.3	1.87	-	-	9.43	0.77	1.38	< 0.01	3.63
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	Moderate	41.19	38.6	-2.64	0.936	-	-	9.35	0.41	1.32	< 0.01	1.28

Date Received	Report Date	Analyte Symbol	Total Carbon	Total Sulfur	Carbonate NP	pH	Conductivity	F	Cl	NO_2 (as N)	Br	NO_3 (as N)	PO_4 (as P)	SO_4	Ag
		Unit Symbol	wt. % C	wt. % S	kg $CaCO_3$/t	pH	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
		Detection Limit	0.01	0.01	0.01	0.1	0.01	0.01	0.03	0.01	0.03	0.01	0.02	0.03	0.2
		Analysis Method	CS	CS	Calc	pH	ISE	IC							ICP-MS
2020-07-13	2020-07-29	Rock sample	0.53	1.27	-	9.2	70.2	0.06	0.31	< 0.01	< 0.03	0.22	0.37	5.89	< 4
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	0.29	1.7	-	8.6	61.5	< 0.01	0.37	< 0.01	< 0.03	0.28	0.71	3.64	< 4
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	0.26	1.25	-	8.3	49.6	0.04	0.15	< 0.01	< 0.03	0.05	0.52	2.57	< 0.2
2020-09-08	2020-11-10	Rock Sample	0.29	2	-	7.3	61.4	0.01	1.6	< 0.01	< 0.03	0.18	0.55	8.31	< 4
2020-10-05	2020-11-26	Rock Sample	-	1.3	-	9.2	48.2	0.55	6.22	< 0.2	< 0.6	1.69	< 0.4	79.4	< 4
2020-10-23	2020-11-26	ROCK SAMPLE	-	0.92	-	8.1	52.2	0.45	1.59	0.34	< 0.6	0.3	< 0.4	83.4	< 4
2020-11-16	2021-01-18	ROCK SAMPLE	-	1.33	-	7.6	46.1	1.06	1.96	< 0.2	< 0.6	< 0.2	< 0.4	16	< 4
2020-12-07	2021-01-20	ROCK SAMPLE	-	-	-	9.4	47.4	0.43	3.11	< 0.2	< 0.6	< 0.2	13.6	28.1	< 4
2021-02-10	2021-03-17	ROCK SAMPLE	0.08	1.69	-	7.8	49	0.52	6.46	0.42	< 0.6	1.76	13.9	43	< 4
2021-03-29	2021-04-20	ROCK SAMPLE	0.29	0.45	-	9.2	67.1	0.28	2.26	< 0.2	< 0.6	1.65	< 0.4	10.4	< 4
2021-04-26	2021-05-13	ROCK SAMPLE	-	1.15	-	8.7	48.5	0.04	0.23	< 0.01	< 0.03	0.02	< 0.02	1.36	< 4
2021-06-11	2021-07-21	ROCK SAMPLE	-	1.64	-	9.2	50.4	0.42	2.15	< 0.2	< 0.6	< 0.2	< 0.4	33.9	< 4
2021-05-17	2021-08-13	ROCK SAMPLE	0.51	0.96	-	7.4	45.1	0.89	4.55	< 0.2	< 0.6	1.13	< 0.4	29.8	< 4
2021-07-12	2021-08-26	1	-	0.91	-	9.5	48.1	0.72	4.06	< 0.2	< 0.6	0.46	< 0.4	17.2	< 4
2021-06-21	2021-09-02	ROCK SAMPLE	-	3.64	-	7.7	77.9	0.6	10.2	< 0.2	< 0.6	1.72	< 0.4	84.3	< 4
2021-08-03	2021-09-24	ROCK SAMPLE	0.22	1.7	-	7.4	49.6	< 0.2	3.15	< 0.2	< 0.6	0.44	< 0.4	42.5	< 4
2021-07-23	2021-10-13	2021-07-23	-	1.32	-	8.9	56.8	0.75	8.01	< 0.2	< 0.6	0.5	7.77	31.6	< 4
2021-08-18	2021-10-13	2021-08-18	-	0.7	-	9.1	66.5	7.74	2.78	< 0.2	< 0.6	9.25	1.4	259	< 4
2021-08-30	2021-11-16	2021-08-30	-	1.56	-	9.2	46.8	0.02	0.53	< 0.01	< 0.03	0.04	< 0.02	1.5	< 4
2021-09-13	2021-11-16	2021-09-13	-	1.4	-	9.3	48.3	< 0.01	0.79	< 0.01	< 0.03	0.11	< 0.02	1.19	< 4
2021-11-21	2022-02-02	EMRS1	-	1.64	-	8.4	47.9	< 0.01	< 0.03	< 0.01	< 0.03	< 0.01	< 0.02	< 0.03	< 4
2021-11-21	2022-02-02	EMRS2	-	2.47	-	8.3	42.8	0.14	0.66	< 0.02	< 0.06	0.04	< 0.04	29.2	< 4
2021-12-06	2022-02-04	EMRS 2021.11.29	-	2.45	-	8.3	99.5	0.06	0.88	0.04	< 0.03	0.03	< 0.02	6.13	< 4
2021-12-06	2022-02-04	EMRS 2021.11.30	-	1.48	-	8.5	105	0.04	0.45	0.03	< 0.03	0.02	< 0.02	3.49	< 4
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	-	1.73	-	7.7	46.3	0.02	0.25	< 0.01	< 0.03	0.03	< 0.02	0.74	< 4
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	-	0.38	-	8.9	42.4	0.02	0.47	< 0.01	< 0.03	0.08	< 0.02	0.74	< 4
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	-	1.76	-	8.2	45	0.01	0.2	0.01	< 0.03	0.03	< 0.02	1.01	< 4
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	-	1.12	-	8.7	39.1	< 0.01	0.15	< 0.01	< 0.03	0.03	< 0.02	0.42	< 4
2022-03-03	2022-04-26	EMRS 2022-02-28	0.1	1.99	-	8.7	48.5	< 0.01	0.13	< 0.01	< 0.03	0.06	< 0.02	0.89	< 4
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	0.3	1.22	-	8.8	44.8	< 0.01	0.21	< 0.01	< 0.03	0.06	< 0.02	9.31	< 4
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	-	2.01	-	8.9	48.9	0.03	0.15	< 0.01	< 0.03	0.05	< 0.02	0.93	< 4
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	-	1.27	-	8.4	45.3	0.03	0.17	< 0.01	< 0.03	0.03	< 0.02	0.51	< 4
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	-	1.04	-	9.1	61.1	0.03	0.75	< 0.01	< 0.03	0.08	< 0.02	2.93	< 4
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	-	0.23	-	9.3	63.7	0.05	0.73	0.01	< 0.03	0.04	< 0.02	5.42	< 4
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	-	1.35	-	8.6	61.4	0.03	0.3	< 0.01	< 0.03	0.02	< 0.02	1.28	< 4
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	-	1.97	-	8.8	61.8	0.02	0.3	< 0.01	< 0.03	0.02	< 0.02	1.72	< 4
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	-	3.04	-	8.7	76.9	0.04	0.26	< 0.01	< 0.03	0.04	< 0.02	3.73	< 8
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	-	0.47	-	9.2	36.2	0.03	0.23	< 0.01	< 0.03	0.02	< 0.02	0.36	< 8
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	-	2.99	-	8.2	72.5	0.02	0.2	< 0.01	< 0.03	0.06	< 0.02	2.19	< 4
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	-	2.93	-	8.2	52.4	0.04	0.82	0.04	< 0.03	0.18	< 0.02	15.2	< 4
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	-	1.87	-	8.2	58.1	0.04	15.2	< 0.01	0.14	0.06	< 0.02	2.81	< 4
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	-	0.76	-	9	61.9	0.05	0.27	< 0.01	< 0.03	0.02	< 0.02	1.54	< 4
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	-	1.06	-	9.3	45.6	0.05	0.24	0.02	< 0.03	0.03	< 0.02	1.48	< 4
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	-	2.04	-	9.4	48.4	0.07	0.13	0.01	< 0.03	0.06	< 0.02	1.74	< 4
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	-	0.93	44.6	9.4	47.9	0.02	0.19	< 0.01	< 0.03	0.03	< 0.02	6.9	< 4
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	-	1.39	8.23	9.1	33.7	0.04	0.14	< 0.01	< 0.03	0.04	< 0.02	1.21	< 4
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	-	2.22	41.88	9.2	35.8	< 0.01	0.1	< 0.01	< 0.03	0.02	< 0.02	0.69	< 4
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	-	1.71	0.13	8.9	33.9	< 0.01	0.19	< 0.01	< 0.03	0.02	< 0.02	0.8	< 4
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	0.46	1.71	37.25	9.1	39.7	0.02	0.42	0.07	< 0.03	0.18	< 0.02	1.22	< 0.2
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	0.8	1.84	60.38	9.1	45.1	0.02	0.18	< 0.01	< 0.03	0.04	< 0.02	0.94	< 0.2
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	0.45	1.15	36.17	9.1	34.2	< 0.01	0.16	< 0.01	< 0.03	0.1	0.05	0.31	< 0.2
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	0.3	2.04	26.15	8.9	41.5	< 0.01	0.2	< 0.01	< 0.03	0.03	< 0.02	1.23	< 0.2
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	0.78	5.53	53.39	7.6	81.2	0.03	0.09	0.01	< 0.03	0.08	< 0.02	4.64	< 0.2
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	1.11	2.98	84.87	8.2	63.3	0.03	0.15	< 0.01	< 0.03	0.05	< 0.02	2.03	< 0.2
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	0.98	1.71	78.58	9	56.9	0.02	0.32	< 0.01	< 0.03	0.07	< 0.02	1.6	< 4
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	0.18	1.67	10.93	8.8	42.3	0.02	0.15	< 0.01	< 0.03	0.05	< 0.02	1.25	< 4
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	-	1.31	28	9	46.1	< 0.01	0.11	< 0.01	< 0.03	0.11	< 0.02	1.15	< 4
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	-	1.97	49.97	8.6	58.8	< 0.01	0.17	< 0.01	< 0.03	0.03	< 0.02	1.18	< 4
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	0.77	2.18	56.42	8.5	54.1	0.01	0.08	< 0.01	< 0.03	0.15	< 0.02	0.86	< 4
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	0.24	1.59	17.51	8.4	47.9	0.01	0.08	< 0.01	< 0.03	0.02	< 0.02	1.39	< 4
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	-	1.53	70.46	9	58.9	< 0.01	0.1	< 0.01	< 0.03	0.03	< 0.02	1.47	< 4
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	-	1.5	74.41	8.9	56.4	< 0.01	0.14	< 0.01	< 0.03	0.04	< 0.02	1.29	< 4
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	-	1.34	34.61	9.6	60.3	0.47	5.88	< 0.2	< 0.6	1.18	< 0.4	24	< 4
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	-	1.53	69.54	9.6	54.5	< 0.2	4.54	< 0.2	< 0.6	0.64	< 0.4	24.6	< 4
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	0.75	1.33	57.02	8.7	55.5	< 0.2	3.83	< 0.2	< 0.6	0.5	< 0.4	20.2	< 4
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	1.23	1.02	92.65	8.7	60.5	< 0.2	2.91	< 0.2	< 0.6	11.6	< 0.4	13.5	< 4
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	0.97	1.15	77.6	9.2	89.4	0.01	0.31	< 0.01	< 0.03	< 0.01	< 0.02	1.05	< 0.2
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	0.2	0.93	16.56	9.4	53.8	0.02	0.17	< 0.01	< 0.03	0.02	< 0.02	0.93	< 0.2
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	1.21	1.44	95.66	8.3	54.2	< 0.01	0.15	< 0.01	< 0.03	< 0.01	< 0.02	0.88	< 0.2
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	0.27	1.88	23.15	8	52.6	0.07	0.09	< 0.01	< 0.03	< 0.01	< 0.02	0.92	< 0.2
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08		1.77	1.44	8.8	54.3	0.03	0.41	0.02	< 0.03	0.1	< 0.02	1.02	< 2
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	0.58	1.83	46.26	9.2	64.7	< 0.01	0.22	0.01	< 0.03	0.72	< 0.02	1.14	< 0.2
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05		1.97	67.91	9.2	51.5	0.02	0.56	0.05	< 0.03	0.15	< 0.02	1.78	< 0.2
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	1.03	2.51	80.84	9.1	55	0.01	0.13	< 0.01	< 0.03	< 0.01	< 0.02	0.91	< 0.2
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	0.4	2.3	33.07	8.4	59.8	0.05	0.25	< 0.01	< 0.03	0.02	< 0.02	1.21	< 0.2
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	0.94	3.09	72.41	8.9	70.5	0.03	0.04	< 0.01	< 0.03	0.02	0.03	2.43	< 0.2
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	1.07	1.44	82.1	9.4	42	< 0.01	0.05	< 0.01	< 0.03	< 0.01	< 0.02	0.59	< 0.2
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	0.51	1.59	38.38	8.8	56.1	0.02	0.24	< 0.01	< 0.03	0.05	< 0.02	0.92	< 0.2
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	0.21	0.75	15.81	9.2	40.9	0.02	0.11	< 0.01	< 0.03	< 0.01	< 0.02	0.34	< 0.2
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	0.38	1.59	30.05	8.4	40.4	0.02	0.12	< 0.01	< 0.03	< 0.01	< 0.02	0.88	< 0.2
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	0.31	1.47	24.86	9.1	36	0.02	< 0.03	< 0.01	< 0.03	< 0.01	< 0.02	0.72	< 0.2
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	0.43	1.23	33.91	9.1	1.34	< 0.01	0.1	< 0.01	< 0.03	< 0.01	< 0.02	0.64	< 0.2
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	-	2.62	7.56	7.1	31.4	0.02	0.1	< 0.01	< 0.03	0.01	< 0.02	3.3	< 0.2
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	-	1.98	111.3	9.2	44.6	0.05	0.1	< 0.01	< 0.03	< 0.01	< 0.02	1.81	< 0.2
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	-	1.83	43.21	8.1	53.7	0.03	0.09	< 0.01	< 0.03	< 0.01	< 0.02	1.11	< 0.2
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	0.23	2.11	19.41	7.6	50.7	0.02	0.1	< 0.01	< 0.03	< 0.01	< 0.02	0.83	< 0.2
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	-	1.83	29.84	8.9	44.3	0.03	0.12	< 0.01	< 0.03	0.01	< 0.02	1.01	< 0.2
2024-10-08	2024-10-08	EMRS ROCK	-	0.33	39.49	8.3	45	0.03	0.08	< 0.01	< 0.03	< 0.01	< 0.02	0.3	< 0.2
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	-	2.17	< 0.01	7.9	56.3	0.03	0.13	< 0.01	< 0.03	0.03	< 0.02	1.21	< 0.2
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	-	1.63	82.56	8.2	59.7	0.04	0.2	< 0.01	< 0.03	0.06	< 0.02	1.36	< 0.2
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	-	1.46	29.13	7.3	35.7	0.03	0.14	< 0.01	< 0.03	0.03	< 0.02	0.58	< 0.2

Date Received	Report Date	Analyte Symbol	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga
		Unit Symbol	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
		Detection Limit	2	0.03	0.1	0.1	0.3	700	0.01	0.001	0.005	0.5	0.001	0.2	0.001	0.001	0.001	10	0.01
		Analysis Method	ICP-MS																
2020-07-13	2020-07-29	Rock sample	59800	61.4	323	< 2	< 6	167000	0.24	20.7	2.39	42.6	13.8	17.3	0.638	0.263	0.319	8600	35
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	16000	40	16.5	< 2	< 6	157000	< 0.2	0.516	0.168	< 10	0.25	< 4	0.098	< 0.02	0.038	230	12.1
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	975	2.43	1.2	< 0.1	< 0.3	7100	< 0.01	0.033	0.009	< 0.5	0.037	< 0.2	0.007	0.002	0.003	20	0.61
2020-09-08	2020-11-10	Rock Sample	18400	119	17.8	< 2	< 6	168000	< 0.2	0.519	0.143	< 10	0.661	< 4	0.031	< 0.02	0.033	< 200	14.9
2020-10-05	2020-11-26	Rock Sample	22000	33.9	16.9	< 2	< 6	130000	< 0.2	0.682	0.134	< 10	0.539	< 4	0.026	< 0.02	0.029	380	15.7
2020-10-23	2020-11-26	ROCK SAMPLE	20000	49.2	23	< 2	< 6	137000	< 0.2	1.5	0.158	< 10	0.641	5	0.039	< 0.02	0.048	350	14.6
2020-11-16	2021-01-18	ROCK SAMPLE	21300	45.1	18.3	< 2	< 6	137000	< 0.2	1.1	0.139	< 10	0.41	< 4	0.063	0.026	0.047	400	12.5
2020-12-07	2021-01-20	ROCK SAMPLE	18100	32.5	19.8	< 2	< 6	140000	< 0.2	1.48	0.168	< 10	0.334	< 4	0.06	< 0.02	0.047	400	12.1
2021-02-10	2021-03-17	ROCK SAMPLE	30000	30.6	12.9	< 2	< 6	146000	< 0.2	0.546	< 0.10	< 10	0.622	< 4	< 0.02	< 0.02	< 0.02	460	17.9
2021-03-29	2021-04-20	ROCK SAMPLE	19700	42.1	38.9	< 2	< 6	108000	< 0.2	0.858	0.989	< 10	0.566	< 4	0.034	< 0.02	0.089	620	15.9
2021-04-26	2021-05-13	ROCK SAMPLE	24800	78.4	30.2	< 2	< 6	123000	< 0.2	0.725	< 0.10	< 10	0.566	< 4	0.023	< 0.02	< 0.02	450	16.5
2021-06-11	2021-07-21	ROCK SAMPLE	23800	32.7	23.9	< 2	< 6	153000	< 0.2	1.39	0.322	< 10	0.663	< 4	0.052	< 0.02	0.056	690	20.8
2021-05-17	2021-08-13	ROCK SAMPLE	20100	63.4	21.5	< 2	< 6	137000	< 0.2	0.437	< 0.10	< 10	0.641	< 4	< 0.02	0.025	0.024	250	19.8
2021-07-12	2021-08-26	1	29300	24.6	9.8	< 2	< 6	120000	< 0.2	0.809	0.104	< 10	0.495	< 4	0.052	< 0.02	0.03	750	17.5
2021-06-21	2021-09-02	ROCK SAMPLE	12900	103	10.6	< 2	< 6	239000	< 0.2	0.037	0.361	< 10	0.084	< 4	0.035	< 0.02	< 0.02	< 200	11.1
2021-08-03	2021-09-24	ROCK SAMPLE	21900	44.8	49.1	< 2	< 6	154000	< 0.2	1.35	< 0.1	< 10	0.296	< 4	< 0.02	< 0.02	0.024	380	19.9
2021-07-23	2021-10-13	2021-07-23	19500	13.2	18.3	< 2	< 6	147000	< 0.2	< 0.02	< 0.10	< 10	0.706	< 4	< 0.02	< 0.02	< 0.02	< 200	17.5
2021-08-18	2021-10-13	2021-08-18	18800	14	35.4	< 2	< 6	173000	< 0.2	0.034	< 0.10	< 10	0.906	< 4	< 0.02	< 0.02	0.033	< 200	21.5
2021-08-30	2021-11-16	2021-08-30	22800	22.2	24.1	< 2	< 6	141000	< 0.2	1.1	0.113	< 10	0.524	< 4	0.03	< 0.02	0.03	550	12.7
2021-09-13	2021-11-16	2021-09-13	19200	51.7	32.2	< 2	< 6	141000	< 0.2	1.2	0.109	< 10	0.673	< 4	0.046	< 0.02	0.03	590	11.6
2021-11-21	2022-02-02	EMRS1	21100	191	4.5	< 2	< 6	209000	< 0.2	0.243	0.319	< 10	0.309	< 4	< 0.02	< 0.02	< 0.02	< 200	13
2021-11-21	2022-02-02	EMRS2	19900	38.1	12	< 2	< 6	197000	< 0.2	0.585	0.378	< 10	0.263	< 4	0.031	< 0.02	< 0.02	280	11.9
2021-12-06	2022-02-04	EMRS 2021.11.29	15800	21.5	15.2	< 2	< 6	138000	< 0.2	0.626	0.173	< 10	0.382	< 4	0.024	< 0.02	< 0.02	330	11.1
2021-12-06	2022-02-04	EMRS 2021.11.30	16300	124	11	< 2	< 6	126000	< 0.2	0.479	0.159	< 10	0.508	< 4	< 0.02	< 0.02	< 0.02	< 200	11.3
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	20300	27.9	8.5	< 2	< 6	132000	< 0.2	0.395	0.111	< 10	0.211	< 4	< 0.02	< 0.02	< 0.02	210	12.8
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	20700	35	16.1	< 2	< 6	110000	< 0.2	0.528	0.169	< 10	0.151	< 4	0.023	< 0.02	< 0.02	310	12.6
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	22600	79	16.9	< 2	< 6	132000	< 0.2	0.905	0.161	< 10	0.701	< 4	0.037	0.023	0.025	360	14.4
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	20900	42.5	30.9	< 2	< 6	116000	< 0.2	1.29	0.427	< 10	0.726	< 4	0.046	0.022	0.024	600	11.2
2022-03-03	2022-04-26	EMRS 2022-02-28	16600	40.3	8.1	< 2	< 6	142000	< 0.2	0.804	< 0.1	< 10	0.299	< 4	< 0.02	< 0.02	< 0.02	< 200	9.77
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	18400	25.8	21.8	< 2	< 6	128000	< 0.2	0.847	0.204	< 10	0.318	< 4	0.072	0.061	0.021	600	11.5
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	19600	69.6	9.6	< 2	< 6	120000	< 0.2	0.701	0.111	< 10	0.376	< 4	< 0.02	< 0.02	< 0.02	< 200	13.5
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	22200	26.8	17.6	< 2	< 6	102000	< 0.2	0.861	0.149	< 10	0.659	< 4	0.028	< 0.02	< 0.02	400	15
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	30900	53.5	131	< 2	< 6	133000	< 0.2	0.846	0.229	< 10	1.28	< 4	< 0.02	< 0.02	< 0.02	290	25.5
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	17100	50.3	4870	< 2	< 6	117000	< 0.2	0.946	0.149	< 10	1.04	< 4	< 0.02	< 0.02	0.051	< 200	20.1
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	33300	182	11.2	< 2	< 6	150000	< 0.2	0.669	< 0.1	< 10	2.24	< 4	< 0.02	0.116	< 0.02	< 200	34.6
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	29000	121	11.5	< 2	< 6	164000	< 0.2	0.315	< 0.1	< 10	1.61	< 4	< 0.02	0.11	< 0.02	< 200	28.2
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	16200	19.5	59	< 4	< 10	232000	< 0.4	0.041	0.247	< 20	2.2	< 8	< 0.04	< 0.04	< 0.04	< 400	25.5
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	26000	28.7	36.9	< 4	< 10	116000	< 0.4	0.727	0.367	< 20	1.5	< 8	< 0.04	< 0.04	< 0.04	660	24
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	22300	9.79	9	< 2	< 6	272000	< 0.2	0.1	< 0.1	< 10	0.853	< 4	0.031	< 0.02	< 0.02	< 200	20
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	24300	18.7	17.1	< 2	< 6	210000	< 0.2	1.13	0.197	< 10	0.41	< 4	0.033	< 0.02	< 0.02	330	11.4
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	30000	87.1	31.3	< 2	< 6	141000	< 0.2	2.08	< 0.10	< 10	2.15	4	0.052	0.02	0.033	770	26
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	27100	74.6	87.2	< 2	< 6	134000	< 0.2	0.258	0.121	< 10	1.06	< 4	< 0.02	< 0.02	< 0.02	230	29.8
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	28600	63.9	20.8	< 2	< 6	127000	< 0.2	0.462	0.145	< 10	0.917	< 4	< 0.02	< 0.02	< 0.02	600	22.1
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	26800	81	15.9	< 2	< 6	135000	< 0.2	0.404	< 0.10	< 10	0.295	< 4	< 0.02	< 0.02	< 0.02	< 200	19.6
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	17700	258	40.5	< 2	< 6	151000	< 0.2	0.139	0.246	< 10	0.923	< 4	< 0.02	< 0.02	< 0.02	< 200	15
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	24900	48.1	10.6	< 2	< 6	126000	< 0.2	0.829	0.234	< 10	0.626	< 4	0.028	< 0.02	< 0.02	280	14.7
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	18900	19	30.8	< 2	< 6	130000	< 0.2	0.365	0.396	< 10	1.38	< 4	0.045	0.028	< 0.02	870	12.8
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	15800	101	10.7	< 2	< 6	125000	< 0.2	0.595	0.128	< 10	0.378	9.7	0.034	< 0.02	< 0.02	310	10.4
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	1090	3.47	4	< 0.1	< 0.3	6200	< 0.01	0.324	0.048	< 0.5	0.034	0.3	0.011	0.005	0.004	120	0.6
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	853	5.75	2	< 0.1	< 0.3	6900	< 0.01	0.24	< 0.005	< 0.5	0.106	< 0.2	0.009	0.004	0.005	40	0.59
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	1000	7.96	0.4	< 0.1	< 0.3	6100	< 0.01	< 0.001	0.245	< 0.5	0.036	< 0.2	< 0.001	< 0.001	< 0.001	10	0.58
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	687	9.13	0.5	< 0.1	< 0.3	7600	< 0.01	0.003	< 0.005	< 0.5	0.013	< 0.2	0.002	< 0.001	< 0.001	< 10	0.49
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	526	0.41	1	< 0.1	< 0.3	11200	< 0.01	0.006	0.01	< 0.5	0.018	< 0.2	0.001	< 0.001	< 0.001	< 10	0.6
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	772	1.61	0.7	< 0.1	< 0.3	8800	< 0.01	0.005	< 0.005	< 0.5	0.021	< 0.2	< 0.001	< 0.001	< 0.001	< 10	0.67
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	17700	133	8.3	< 2	< 6	113000	< 0.2	0.051	0.133	< 10	0.23	< 4	< 0.02	< 0.02	< 0.02	< 200	14.2
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	19100	94.5	11.2	< 2	< 6	114000	< 0.2	0.337	0.172	< 10	0.223	< 4	< 0.02	< 0.02	< 0.02	< 200	14.6
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	16800	122	10	< 2	< 6	128000	< 0.2	0.217	0.14	< 10	0.166	< 4	0.02	< 0.02	< 0.02	210	10.1
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	14900	47.3	9.6	< 2	< 6	163000	< 0.2	0.047	< 0.10	< 10	0.36	< 4	< 0.02	< 0.02	< 0.02	< 200	9.75
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	18900	38.7	< 2	< 2	< 6	146000	< 0.2	0.116	< 0.10	< 10	0.49	< 4	< 0.02	< 0.02	< 0.02	< 200	11.5
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	20500	55.6	< 2	< 2	< 6	128000	< 0.2	0.297	< 0.10	< 10	0.096	< 4	< 0.02	< 0.02	< 0.02	< 200	12.2
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	19000	124	< 2	< 2	< 6	143000	< 0.2	< 0.02	< 0.10	< 10	0.111	< 4	< 0.02	< 0.02	< 0.02	< 200	11.5
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	16500	53.9	< 2	< 2	< 6	134000	< 0.2	< 0.02	< 0.10	< 10	0.164	< 4	< 0.02	< 0.02	< 0.02	< 200	9.93
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	15800	132	4.6	< 2	< 6	161000	< 0.2	0.19	0.109	< 10	0.639	< 4	< 0.02	< 0.02	< 0.02	< 200	13.9
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	18100	67.2	8.1	< 2	< 6	135000	< 0.2	0.069	0.165	< 10	0.241	< 4	< 0.02	< 0.02	< 0.02	< 200	11.9
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	15300	48	< 2	< 2	< 6	136000	< 0.2	0.052	< 0.10	< 10	0.224	< 4	< 0.02	< 0.02	< 0.02	< 200	11.7
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	12300	161	< 2	< 2	< 6	133000	< 0.2	0.177	< 0.10	< 10	0.407	< 4	< 0.02	< 0.02	< 0.02	< 200	8.51
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	1110	9.75	0.3	< 0.1	< 0.3	7500	< 0.01	< 0.001	< 0.005	< 0.5	0.024	< 0.2	< 0.001	< 0.001	< 0.001	< 10	0.59
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	1350	2.86	0.9	< 0.1	< 0.3	6900	< 0.01	0.076	< 0.005	< 0.5	0.032	< 0.2	0.002	< 0.001	0.001	40	0.81
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	935	2.75	0.2	< 0.1	< 0.3	6700	< 0.01	< 0.001	< 0.005	< 0.5	0.007	< 0.2	< 0.001	< 0.001	< 0.001	< 10	0.62
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	913	3.74	0.5	< 0.1	< 0.3	6800	< 0.01	< 0.001	< 0.005	< 0.5	0.027	< 0.2	< 0.001	< 0.001	< 0.001	20	0.65
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	898	7.5	< 1	< 1	< 3	7300	< 0.1	0.106	< 0.05	< 5	0.038	< 2	< 0.01	< 0.01	< 0.01	< 100	0.63
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	765	9.12	0.2	< 0.1	< 0.3	8800	< 0.01	< 0.001	0.007	< 0.5	0.028	< 0.2	< 0.001	< 0.001	< 0.001	10	0.49
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	833	2.22	0.5	< 0.1	< 0.3	7500	< 0.01	0.013	0.007	< 0.5	0.011	< 0.2	< 0.001	< 0.001	< 0.001	< 10	0.43
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	913	0.92	0.9	< 0.1	< 0.3	6900	< 0.01	0.004	< 0.005	< 0.5	0.028	< 0.2	< 0.001	< 0.001	< 0.001	< 10	0.73
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	1750	16.8	2	< 0.1	< 0.3	6500	< 0.01	0.12	0.013	< 0.5	0.078	< 0.2	0.003	0.001	0.002	20	1.51
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	542	0.35	1.1	< 0.1	< 0.3	8600	< 0.01	0.005	0.012	< 0.5	0.049	< 0.2	< 0.001	< 0.001	< 0.001	< 10	0.6
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	768	1.26	0.7	< 0.1	< 0.3	6300	< 0.01	0.003	< 0.005	< 0.5	0.016	< 0.2	< 0.001	< 0.001	< 0.001	< 10	0.59
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	1150	8.97	0.6	< 0.1	< 0.3	6900	< 0.01	0.044	0.008	< 0.5	0.027	< 0.2	0.002	0.001	0.001	< 10	0.76
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	1410	9.28	1.5	< 0.1	< 0.3	5900	< 0.01	0.089	0.035	< 0.5	0.04	< 0.2	0.002	< 0.001	0.002	30	0.7
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	1080	1.67	0.3	< 0.1	< 0.3	6500	< 0.01	0.009	< 0.005	< 0.5	0.01	< 0.2	< 0.001	0.001	< 0.001	< 10	0.39
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	949	1.85	1	< 0.1	< 0.3	7400	< 0.01	0.019	0.006	< 0.5	0.024	< 0.2	< 0.001	< 0.001	< 0.001	10	0.62
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	1180	4.02	1.2	< 0.1	< 0.3	6800	< 0.01	0.023	0.009	< 0.5	0.051	< 0.2	< 0.001	< 0.001	< 0.001	20	0.78
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	1180	1.51	0.9	< 0.1	< 0.3	7800	< 0.01	0.043	< 0.005	< 0.5	0.023	< 0.2	0.002	0.001	< 0.001	10	0.81
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	822	0.86	6.3	< 0.1	< 0.3	7900	< 0.01	0.001	< 0.005	< 0.5	0.051	< 0.2	< 0.001	< 0.001	< 0.001	< 10	0.9
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	1100	2.53	0.4	< 0.1	< 0.3	9900	< 0.01	0.017	< 0.005	< 0.5	0.034	< 0.2	0.001	0.001	< 0.001	< 10	0.73
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	1350	2.15	0.7	< 0.1	< 0.3	8100	< 0.01	0.047	0.006	< 0.5	0.029	< 0.2	0.003	0.001	0.002	10	0.7
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	1040	3.47	0.6	< 0.1	< 0.3	7600	< 0.01	0.022	0.006	< 0.5	0.015	< 0.2	0.001	< 0.001	< 0.001	10	0.67
2024-10-08	2024-10-08	EMRS ROCK	1280	1.83	2.1	< 0.1	< 0.3	5800	< 0.01	0.06	0.012	< 0.5	0.044	< 0.2	0.003	0.001	0.002	50	0.79
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	835	3.34	0.9	< 0.1	1.7	7900	< 0.01	0.018	0.005	< 0.5	0.019	< 0.2	0.001	< 0.001	< 0.001	< 10	0.58
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	868	3.79	0.3	< 0.1	< 0.3	8500	< 0.01	0.011	0.007	< 0.5	0.012	< 0.2	< 0.001	< 0.001	< 0.001	< 10	0.57
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	958	2.46	1.4	< 0.1	< 0.3	6900	< 0.01	0.113	0.009	< 0.5	0.065	0.6	0.004	0.002	0.003	20	0.45

Date Received	Report Date	Analyte Symbol	Gd	Ge	Hf	Hg	Ho	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni
		Unit Symbol	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
		Detection Limit	0.001	0.01	0.001	0.2	0.001	0.001	30	0.001	1	0.001	2	0.1	0.1	5	0.005	0.001	0.3
		Analysis Method	ICP-MS																
2020-07-13	2020-07-29	Rock sample	1.06	1.37	0.639	< 4	0.101	0.053	96900	9.2	114	< 0.02	22200	260	38.7	38600	0.585	7.88	16.3
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	0.034	0.45	< 0.02	< 4	< 0.02	< 0.02	37800	0.281	39	0.185	12200	40.4	6	21200	< 0.1	0.276	< 6
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	0.004	0.04	0.008	< 0.2	< 0.001	< 0.001	2320	0.017	1	0.015	456	1.9	0.3	931	< 0.005	0.019	< 0.3
2020-09-08	2020-11-10	Rock Sample	0.032	0.41	0.027	< 4	< 0.02	< 0.02	46600	0.287	55	< 0.02	10200	38.1	6.4	27000	< 0.1	0.248	< 6
2020-10-05	2020-11-26	Rock Sample	0.053	0.31	0.021	< 4	< 0.02	< 0.02	42400	0.351	40	< 0.02	9550	21.7	6.3	19600	< 0.1	0.298	< 6
2020-10-23	2020-11-26	ROCK SAMPLE	0.1	0.54	0.131	< 4	< 0.02	< 0.02	43800	0.899	28	0.03	9680	19.2	5.5	11700	< 0.1	0.884	< 6
2020-11-16	2021-01-18	ROCK SAMPLE	0.084	0.44	0.165	< 4	0.023	< 0.02	27200	0.502	26	0.035	7120	14.7	< 2	13200	< 0.10	0.491	< 6
2020-12-07	2021-01-20	ROCK SAMPLE	0.095	0.38	0.06	< 4	< 0.02	< 0.02	34000	0.667	31	0.026	6630	67.5	< 2	13900	< 0.1	0.696	< 6
2021-02-10	2021-03-17	ROCK SAMPLE	< 0.02	0.37	< 0.02	< 4	< 0.02	< 0.02	40300	0.302	47	< 0.02	6780	12.4	3.8	26600	< 0.10	0.263	< 6
2021-03-29	2021-04-20	ROCK SAMPLE	0.041	1.28	< 0.02	< 4	< 0.02	< 0.02	66400	0.553	74	< 0.02	7470	20.9	2.1	29300	< 0.1	0.554	< 6
2021-04-26	2021-05-13	ROCK SAMPLE	0.037	0.37	0.056	8.2	< 0.02	< 0.02	62300	0.31	38	< 0.02	8460	37.2	24.9	16200	< 0.10	0.252	< 6
2021-06-11	2021-07-21	ROCK SAMPLE	0.042	< 0.2	< 0.02	< 4	< 0.02	< 0.02	50700	0.618	43	0.045	9190	22.3	2.2	19300	< 0.1	0.561	< 6
2021-05-17	2021-08-13	ROCK SAMPLE	< 0.02	< 0.2	< 0.02	< 4	< 0.02	< 0.02	45900	0.307	42	< 0.02	9540	14.9	20.6	23100	< 0.10	0.225	< 6
2021-07-12	2021-08-26	1	0.076	0.36	< 0.02	6.5	< 0.02	< 0.02	1850	0.656	30	0.026	4850	23.1	5.3	21800	< 0.1	0.574	< 6
2021-06-21	2021-09-02	ROCK SAMPLE	< 0.02	< 0.2	0.035	< 4	< 0.02	0.024	61400	< 0.02	28	< 0.02	13500	234	6.1	10600	< 0.1	< 0.02	< 6
2021-08-03	2021-09-24	ROCK SAMPLE	0.054	0.54	< 0.02	< 4	< 0.02	< 0.02	1740	0.617	34	0.023	6500	47.5	< 2	13700	< 0.1	0.346	< 6
2021-07-23	2021-10-13	2021-07-23	< 0.02	< 0.2	< 0.02	< 4	< 0.02	< 0.02	34700	< 0.02	< 20	< 0.02	12400	23.8	2.4	14800	0.126	< 0.02	< 6
2021-08-18	2021-10-13	2021-08-18	0.028	< 0.2	< 0.02	< 4	< 0.02	< 0.02	72200	< 0.02	90	< 0.02	13500	40.1	4.9	17600	0.119	< 0.02	< 6
2021-08-30	2021-11-16	2021-08-30	0.059	0.29	0.025	< 4	< 0.02	< 0.02	34900	0.526	32	0.048	7300	31.3	< 2	12800	< 0.10	0.423	< 6
2021-09-13	2021-11-16	2021-09-13	0.066	0.29	0.066	< 4	< 0.02	< 0.02	29200	0.624	54	0.041	4620	44.5	14.6	17400	< 0.10	0.53	< 6
2021-11-21	2022-02-02	EMRS1	0.03	0.26	< 0.02	< 4	< 0.02	< 0.02	62500	0.127	70	< 0.02	8600	62.3	4.1	14800	< 0.1	0.078	< 6
2021-11-21	2022-02-02	EMRS2	0.038	0.48	< 0.02	< 4	< 0.02	< 0.02	43000	0.281	36	< 0.02	6780	23.5	< 2	17900	< 0.1	0.184	< 6
2021-12-06	2022-02-04	EMRS 2021.11.29	0.041	< 0.2	< 0.02	< 4	< 0.02	< 0.02	45800	0.252	27	< 0.02	7020	9.3	< 2	12400	< 0.1	0.26	< 6
2021-12-06	2022-02-04	EMRS 2021.11.30	0.022	0.36	< 0.02	< 4	< 0.02	< 0.02	47400	0.21	28	< 0.02	6130	30	4.8	25700	< 0.1	0.217	< 6
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	< 0.02	0.22	< 0.02	< 4	< 0.02	< 0.02	26600	0.194	47	< 0.02	5450	12.5	7.2	19500	< 0.1	0.188	< 6
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	0.039	0.26	< 0.02	< 4	< 0.02	< 0.02	28000	0.281	28	< 0.02	3790	13.2	< 2	18700	< 0.1	0.217	< 6
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	0.048	0.69	0.063	< 4	< 0.02	< 0.02	47900	0.454	39	< 0.02	6110	51.9	2.5	20200	< 0.1	0.455	< 6
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	0.077	0.3	0.04	< 4	< 0.02	< 0.02	30000	0.65	36	< 0.02	4530	28.1	< 2	17200	< 0.1	0.501	< 6
2022-03-03	2022-04-26	EMRS 2022-02-28	0.045	0.22	0.037	< 4	< 0.02	< 0.02	34200	0.392	30	< 0.02	5410	58	< 2	22100	< 0.1	0.335	< 6
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	0.074	0.28	0.151	< 4	< 0.02	< 0.02	39700	0.346	47	< 0.02	4670	22.5	< 2	17100	< 0.1	0.481	< 6
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	0.033	0.32	< 0.02	< 4	< 0.02	< 0.02	45500	0.311	37	< 0.02	5790	48	< 2	23500	< 0.1	0.267	< 6
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	0.037	0.4	< 0.02	< 4	< 0.02	< 0.02	35200	0.419	33	< 0.02	4450	13.9	2.1	16300	< 0.1	0.307	< 6
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	0.021	0.34	< 0.02	< 4	< 0.02	< 0.02	105000	0.388	56	< 0.02	6450	29.7	2.7	40400	< 0.1	0.283	< 6
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	< 0.02	0.22	< 0.02	< 4	< 0.02	< 0.02	119000	0.437	27	< 0.02	8800	29	< 2	51300	< 0.1	0.249	< 6
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	0.059	0.32	< 0.02	5.6	< 0.02	< 0.02	144000	0.395	89	< 0.02	6360	54.1	< 2	35300	< 0.1	0.488	< 6
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	< 0.02	0.41	0.03	< 4	< 0.02	< 0.02	107000	0.21	69	< 0.02	7220	70.1	7.9	33300	< 0.1	0.342	< 6
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	< 0.04	< 0.4	0.049	< 8	< 0.04	< 0.04	34500	< 0.04	113	< 0.04	39800	102	11.2	18100	< 0.2	< 0.04	< 10
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	0.042	0.76	< 0.04	< 8	< 0.04	< 0.04	21700	0.355	< 40	< 0.04	6950	16.3	< 4	21600	< 0.2	0.304	< 10
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	< 0.02	< 0.2	0.044	< 4	< 0.02	< 0.02	42700	0.064	93	< 0.02	34100	71.7	2.2	18600	< 0.1	0.069	< 6
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	0.047	0.31	0.074	< 4	< 0.02	< 0.02	32500	0.533	32	< 0.02	6470	26.8	< 2	14300	< 0.1	0.468	< 6
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	0.098	0.28	0.05	< 4	< 0.02	< 0.02	103000	1.15	34	< 0.02	5730	25.8	< 2	26400	< 0.10	0.902	< 6
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	< 0.02	0.42	< 0.02	< 4	< 0.02	< 0.02	108000	0.177	134	< 0.02	11800	25	< 2	37100	< 0.10	0.157	< 6
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	0.021	0.3	< 0.02	< 4	< 0.02	< 0.02	58900	0.24	65	< 0.02	11700	24.4	3.7	19700	< 0.10	0.239	< 6
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	< 0.02	0.41	< 0.02	< 4	< 0.02	< 0.02	28300	0.199	38	< 0.02	15500	26.9	31	37500	< 0.10	0.141	< 6
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	< 0.02	< 0.2	< 0.02	< 4	< 0.02	< 0.02	45000	0.071	54	< 0.02	7960	11.8	2.2	15400	< 0.10	0.065	< 6
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	0.036	0.44	< 0.02	< 4	< 0.02	< 0.02	23700	0.392	49	< 0.02	4850	11.3	10.4	17400	< 0.10	0.328	< 6
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	0.034	< 0.2	< 0.02	4.4	< 0.02	< 0.02	41600	0.168	86	< 0.02	7120	33	< 2	14000	< 0.10	0.219	< 6
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	0.029	0.22	< 0.02	< 4	< 0.02	< 0.02	35500	0.306	30	< 0.02	6040	27.4	< 2	12400	< 0.10	0.259	< 6
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	0.013	0.02	0.002	< 0.2	0.002	< 0.001	1450	0.168	2	< 0.001	550	6.4	0.2	890	< 0.005	0.125	< 0.3
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	0.013	< 0.01	0.011	< 0.2	< 0.001	< 0.001	2150	0.12	3	< 0.001	343	13.8	< 0.1	927	< 0.005	0.115	< 0.3
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	< 0.001	0.03	< 0.001	< 0.2	< 0.001	< 0.001	1990	0.006	2	< 0.001	127	1.2	< 0.1	1200	< 0.005	0.005	< 0.3
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	< 0.001	0.02	0.002	< 0.2	< 0.001	< 0.001	2920	0.004	< 1	< 0.001	175	4.7	< 0.1	357	< 0.005	0.007	< 0.3
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	< 0.001	< 0.01	< 0.001	< 0.2	< 0.001	< 0.001	1590	0.003	3	0.003	1680	9.9	0.2	905	< 0.005	0.004	< 0.3
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	< 0.001	< 0.01	< 0.001	< 0.2	< 0.001	< 0.001	2370	0.003	2	0.003	1190	3.9	0.4	556	< 0.005	0.003	< 0.3
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	< 0.02	0.28	< 0.02	< 4	< 0.02	< 0.02	42700	0.034	41	< 0.02	16000	27.8	9.9	24100	< 0.10	0.027	< 6
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	0.021	0.33	0.064	< 4	< 0.02	< 0.02	28400	0.189	52	< 0.02	8870	58.3	4.5	29000	< 0.10	0.129	< 6
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	0.021	< 0.2	0.034	< 4	< 0.02	< 0.02	36000	0.035	31	< 0.02	8870	69.5	12.5	16200	< 0.10	0.084	< 6
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	< 0.02	< 0.2	< 0.02	< 4	< 0.02	< 0.02	37900	< 0.02	37	< 0.02	13100	60.2	< 2	11900	< 0.10	< 0.02	< 6
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	< 0.02	< 0.2	< 0.02	< 4	< 0.02	< 0.02	48600	< 0.02	36	< 0.02	11400	15.6	< 2	14200	< 0.10	< 0.02	< 6
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	0.023	0.25	< 0.02	< 4	< 0.02	< 0.02	26900	0.112	45	< 0.02	9430	30.1	< 2	23500	< 0.10	0.075	< 6
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	< 0.02	< 0.2	< 0.02	< 4	< 0.02	< 0.02	44300	< 0.02	27	< 0.02	21900	58.8	3.7	21500	< 0.10	< 0.02	< 6
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	< 0.02	< 0.2	< 0.02	< 4	< 0.02	< 0.02	49800	< 0.02	27	< 0.02	26500	95.5	2.5	11700	< 0.10	< 0.02	< 6
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	< 0.02	0.32	< 0.02	< 4	< 0.02	< 0.02	45100	< 0.02	24	< 0.02	8200	51.1	< 2	11000	< 0.10	0.051	< 6
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	< 0.02	0.25	0.025	< 4	< 0.02	< 0.02	40300	< 0.02	31	< 0.02	17700	46.5	3.2	15100	< 0.10	0.038	< 6
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	< 0.02	< 0.2	< 0.02	< 4	< 0.02	< 0.02	17000	0.038	30	< 0.02	7610	< 2	3.3	35400	< 0.10	0.03	< 6
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	< 0.02	0.36	< 0.02	< 4	< 0.02	< 0.02	52100	0.099	< 20	< 0.02	18000	106	< 2	4740	< 0.10	0.072	< 6
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	< 0.001	0.02	< 0.001	< 0.2	< 0.001	< 0.001	1950	< 0.001	4	< 0.001	845	2.6	< 0.1	1470	< 0.005	< 0.001	< 0.3
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	0.004	0.02	< 0.001	< 0.2	< 0.001	< 0.001	2030	0.04	2	< 0.001	320	1.3	0.1	840	< 0.005	0.032	< 0.3
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	< 0.001	0.02	< 0.001	< 0.2	< 0.001	< 0.001	1440	< 0.001	2	< 0.001	712	0.9	0.4	1450	< 0.005	0.004	< 0.3
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	< 0.001	0.02	< 0.001	< 0.2	< 0.001	< 0.001	2160	< 0.001	2	< 0.001	319	2.2	< 0.1	787	< 0.005	0.029	< 0.3
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	< 0.01	< 0.1	< 0.01	< 2	< 0.01	< 0.01	2660	0.052	< 10	< 0.01	319	3.1	< 1	706	< 0.05	0.046	< 3
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	< 0.001	0.01	< 0.001	< 0.2	< 0.001	< 0.001	2890	0.011	< 1	< 0.001	466	5.6	< 0.1	431	< 0.005	0.007	< 0.3
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	< 0.001	0.01	< 0.001	< 0.2	< 0.001	< 0.001	1430	0.005	2	< 0.001	610	1.5	0.2	935	< 0.005	0.008	< 0.3
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	< 0.001	< 0.01	< 0.001	< 0.2	< 0.001	< 0.001	1550	0.005	1	< 0.001	526	0.5	< 0.1	927	< 0.005	< 0.001	< 0.3
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	0.004	0.02	0.001	< 0.2	< 0.001	< 0.001	4470	0.059	4	< 0.001	450	6.1	< 0.1	1120	< 0.005	0.051	< 0.3
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	0.001	< 0.01	< 0.001	< 0.2	< 0.001	< 0.001	1050	0.003	1	< 0.001	1050	2.1	< 0.1	2060	< 0.005	0.003	< 0.3
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	< 0.001	< 0.01	< 0.001	< 0.2	< 0.001	< 0.001	1170	0.002	< 1	< 0.001	455	0.4	< 0.1	729	< 0.005	0.002	< 0.3
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	0.003	0.02	0.004	< 0.2	< 0.001	< 0.001	2360	0.017	3	< 0.001	412	3.5	0.3	1240	< 0.005	0.019	< 0.3
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	0.004	0.02	0.004	< 0.2	< 0.001	< 0.001	1420	0.039	2	< 0.001	175	1.7	0.2	856	< 0.005	0.047	0.3
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	0.001	< 0.01	< 0.001	< 0.2	< 0.001	< 0.001	1940	0.004	1	< 0.001	396	1.3	< 0.1	1330	< 0.005	0.004	< 0.3
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	< 0.001	0.01	0.002	< 0.2	< 0.001	< 0.001	1530	0.008	32	< 0.001	365	3.7	< 0.1	941	< 0.005	0.008	< 0.3
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	0.002	< 0.01	< 0.001	0.2	< 0.001	< 0.001	1720	0.012	3	< 0.001	381	1.2	0.2	1810	< 0.005	0.01	< 0.3
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	0.002	0.03	0.002	< 0.2	< 0.001	< 0.001	1130	0.022	3	< 0.001	302	2.1	< 0.1	1210	< 0.005	0.017	< 0.3
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	< 0.001	< 0.01	< 0.001	< 0.2	< 0.001	< 0.001	300	< 0.001	1	< 0.001	728	0.4	< 0.1	1320	< 0.005	< 0.001	< 0.3
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	0.002	0.01	0.006	< 0.2	< 0.001	< 0.001	2380	0.008	4	< 0.001	321	3.9	< 0.1	510	< 0.005	0.013	< 0.3
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	0.004	0.02	0.01	< 0.2	< 0.001	< 0.001	2030	0.027	2	< 0.001	208	3.1	< 0.1	1010	< 0.005	0.022	< 0.3
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	0.002	0.01	0.001	< 0.2	< 0.001	< 0.001	1790	0.012	3	< 0.001	319	5.2	< 0.1	839	< 0.005	0.01	< 0.3
2024-10-08	2024-10-08	EMRS ROCK	0.004	0.02	0.002	< 0.2	< 0.001	< 0.001	1980	0.033	2	< 0.001	238	1.3	< 0.1	1180	< 0.005	0.031	< 0.3
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	0.002	< 0.01	0.003	< 0.2	< 0.001	< 0.001	2200	0.008	2	< 0.001	388	5.5	< 0.1	735	< 0.005	0.009	< 0.3
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	< 0.001	0.01	< 0.001	< 0.2	< 0.001	< 0.001	2460	0.005	2	< 0.001	568	5.2	< 0.1	669	< 0.005	0.004	< 0.3
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	0.007	0.02	0.006	< 0.2	< 0.001	< 0.001	1620	0.057	1	< 0.001	221	2.7	< 0.1	1040	< 0.005	0.05	< 0.3

Date Received	Report Date	Analyte Symbol	P	Pb	Pr	Rb	Sb	Sc	Se	Si	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl
		Unit Symbol	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
		Detection Limit	4	0.01	0.001	0.005	0.01	1	0.2	200	0.001	0.1	0.04	0.001	0.001	0.1	0.001	0.1	0.01
		Analysis Method	ICP-MS																
2020-07-13	2020-07-29	Rock sample	192	10.9	1.94	90.4	16.8	< 20	6.4	96700	1.26	< 2	946	0.102	0.129	< 2	1.58	443	0.47
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	175	1.72	0.067	10	12.9	< 20	< 4	29300	0.048	< 2	407	< 0.02	0.023	< 2	< 0.02	3.7	< 0.2
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	< 4	0.07	0.006	0.689	0.65	< 1	< 0.2	1800	0.004	< 0.1	23.2	< 0.001	0.002	< 0.1	0.004	1	< 0.01
2020-09-08	2020-11-10	Rock Sample	293	3.61	0.063	12.4	35.7	< 20	4.3	30400	0.035	< 2	653	< 0.02	< 0.02	< 2	0.074	10	< 0.2
2020-10-05	2020-11-26	Rock Sample	371	0.89	0.188	12	14.1	< 20	< 4	33700	0.051	< 2	444	< 0.02	< 0.02	< 2	0.039	13.6	< 0.2
2020-10-23	2020-11-26	ROCK SAMPLE	265	1.5	0.294	13.4	17.6	< 20	< 4	36000	0.091	< 2	481	< 0.02	0.036	< 2	0.151	21.3	< 0.2
2020-11-16	2021-01-18	ROCK SAMPLE	< 80	0.54	0.258	8.24	20.5	< 20	< 4	33400	0.101	< 2	306	< 0.02	0.039	< 2	0.872	22.4	< 0.2
2020-12-07	2021-01-20	ROCK SAMPLE	447	6.46	0.291	8.71	15.6	< 20	< 4	30200	0.108	< 2	198	< 0.02	0.031	< 2	0.103	15.8	< 0.2
2021-02-10	2021-03-17	ROCK SAMPLE	11900	2.21	0.078	13.4	30.3	< 20	< 4	30400	0.084	< 2	536	< 0.02	< 0.02	< 2	< 0.02	10	< 0.2
2021-03-29	2021-04-20	ROCK SAMPLE	294	1.72	0.219	19.6	18.4	< 20	< 4	42700	0.079	< 2	258	< 0.02	< 0.02	< 2	< 0.02	30.6	< 0.2
2021-04-26	2021-05-13	ROCK SAMPLE	272	6	0.085	19.5	20.6	< 20	< 4	36600	0.048	< 2	517	< 0.02	< 0.02	< 2	< 0.02	26.6	< 0.2
2021-06-11	2021-07-21	ROCK SAMPLE	162	3.66	0.162	17	27.2	< 20	13.1	36000	0.148	< 2	332	< 0.02	< 0.02	< 2	0.084	27.8	< 0.2
2021-05-17	2021-08-13	ROCK SAMPLE	192	0.71	0.055	13.6	13.5	< 20	< 4	34500	0.041	< 2	450	< 0.02	< 0.02	< 2	< 0.02	4	< 0.2
2021-07-12	2021-08-26	1	< 80	2.96	0.183	8.67	14.7	< 20	< 4	33400	0.043	< 2	416	< 0.02	< 0.02	< 2	< 0.02	11.9	< 0.2
2021-06-21	2021-09-02	ROCK SAMPLE	< 80	1.83	< 0.02	16.2	37.4	< 20	< 4	23600	0.069	< 2	367	< 0.02	0.021	< 2	< 0.02	4	< 0.2
2021-08-03	2021-09-24	ROCK SAMPLE	< 80	1.97	0.195	8.86	19.3	< 20	< 4	31100	< 0.02	< 2	371	< 0.02	< 0.02	< 2	< 0.02	11.3	< 0.2
2021-07-23	2021-10-13	2021-07-23	292	< 0.2	< 0.02	15.5	21.6	< 20	< 4	< 4000	< 0.02	< 2	418	0.122	< 0.02	< 2	0.039	11.8	< 0.2
2021-08-18	2021-10-13	2021-08-18	102	< 0.2	< 0.02	54.3	16.9	< 20	< 4	< 4000	< 0.02	< 2	334	0.085	< 0.02	< 2	< 0.02	5.6	< 0.2
2021-08-30	2021-11-16	2021-08-30	261	2.65	0.124	11.5	11.5	< 20	< 4	32000	0.072	< 2	293	< 0.02	< 0.02	< 2	0.122	24.6	< 0.2
2021-09-13	2021-11-16	2021-09-13	178	2.17	0.147	11	10.9	< 20	< 4	36300	0.08	< 2	473	< 0.02	< 0.02	< 2	0.033	27.8	< 0.2
2021-11-21	2022-02-02	EMRS1	< 80	3.02	0.041	16.6	43.1	< 20	< 4	50800	< 0.02	< 2	240	< 0.02	< 0.02	< 2	< 0.02	10.2	< 0.2
2021-11-21	2022-02-02	EMRS2	< 80	1.92	0.056	9.39	23.6	< 20	11.5	48700	0.028	< 2	232	< 0.02	< 0.02	< 2	0.205	14.2	< 0.2
2021-12-06	2022-02-04	EMRS 2021.11.29	< 4	< 0.2	0.073	11.2	8.57	< 20	< 4	26300	0.038	< 2	249	< 0.02	< 0.02	< 2	< 0.02	10.2	< 0.2
2021-12-06	2022-02-04	EMRS 2021.11.30	< 80	1.7	0.051	14.5	111	< 20	< 4	33200	0.031	< 2	394	< 0.02	< 0.02	< 2	< 0.02	4.6	< 0.2
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	136	< 0.2	0.048	7.26	16.7	< 20	< 4	27100	0.034	< 2	349	< 0.02	< 0.02	< 2	< 0.02	4.4	< 0.2
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	227	0.25	0.06	8.95	2.85	< 20	< 4	39400	0.044	< 2	150	< 0.02	< 0.02	< 2	< 0.02	12.6	< 0.2
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	243	2.34	0.11	17	48.9	< 20	4.3	35100	0.107	< 2	264	< 0.02	< 0.02	< 2	0.085	16.8	< 0.2
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	146	0.51	0.156	11.9	10.2	< 20	< 4	39200	0.112	< 2	247	< 0.02	< 0.02	< 2	0.05	38.4	< 0.2
2022-03-03	2022-04-26	EMRS 2022-02-28	117	1	0.089	9.9	25.6	< 20	< 4	28600	0.056	< 2	279	< 0.02	< 0.02	< 2	0.035	7.9	< 0.2
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	104	< 0.2	0.094	13.6	5.56	< 20	< 4	37000	0.07	< 2	175	< 0.02	< 0.02	< 2	0.05	31	< 0.2
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	< 80	3.91	0.072	14.7	30.2	< 20	10.6	30200	0.058	< 2	261	< 0.02	< 0.02	< 2	< 0.02	10.6	< 0.2
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	212	0.57	0.094	14	13.6	< 20	< 4	27900	0.062	< 2	395	< 0.02	< 0.02	< 2	< 0.02	17.8	< 0.2
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	143	0.45	0.079	49.6	24	< 20	6.3	41100	0.033	< 2	768	< 0.02	< 0.02	< 2	< 0.02	11.1	< 0.2
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	125	0.35	0.101	31.7	18.3	< 20	< 4	40300	0.034	< 2	2680	< 0.02	< 0.02	< 2	< 0.02	< 2	< 0.2
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	139	2.44	0.079	85.9	94.6	< 20	< 4	45600	0.065	< 2	213	< 0.02	< 0.02	< 2	< 0.02	12.1	0.28
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	124	2.4	0.034	57.1	61.8	< 20	16.3	38700	< 0.02	< 2	289	< 0.02	< 0.02	< 2	< 0.02	8.4	0.25
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	< 200	0.75	< 0.04	40.9	54.4	< 40	< 8	14400	< 0.04	< 4	1470	< 0.04	< 0.04	< 4	< 0.04	< 4	< 0.4
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	392	1.19	0.076	13.8	12	< 40	< 8	36400	0.047	< 4	695	< 0.04	< 0.04	< 4	0.049	23.6	< 0.4
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	< 80	0.74	< 0.02	17.4	102	< 20	< 4	24900	< 0.02	< 2	450	< 0.02	< 0.02	< 2	0.09	7.9	< 0.2
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	< 80	0.8	0.115	8.46	13.4	< 20	< 4	39000	0.063	< 2	274	< 0.02	< 0.02	< 2	0.175	19.4	< 0.2
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	103	2.83	0.262	61.6	49.6	< 20	5.9	50000	0.151	< 2	301	< 0.02	< 0.02	< 2	0.033	53.7	< 0.2
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	< 80	16.6	0.046	39.5	28.8	< 20	< 4	45800	0.046	< 2	1320	< 0.02	< 0.02	< 2	< 0.02	2.3	< 0.2
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	187	0.74	0.061	25	22.7	< 20	< 4	36100	0.022	< 2	364	< 0.02	< 0.02	2.4	< 0.02	17	< 0.2
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	< 80	0.25	0.049	4.75	18.3	< 20	< 4	32100	< 0.02	< 2	556	< 0.02	< 0.02	4.5	< 0.02	2.8	< 0.2
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	150	5.42	< 0.02	23.6	37.9	< 20	< 4	30100	< 0.02	< 2	742	< 0.02	< 0.02	< 2	< 0.02	< 2	< 0.2
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	194	3.9	0.095	8.77	36.9	< 20	< 4	30500	0.056	< 2	463	< 0.02	< 0.02	< 2	< 0.02	2.8	< 0.2
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	< 80	0.32	0.044	27.2	17.3	< 20	< 4	27300	0.035	< 2	248	< 0.02	< 0.02	< 2	< 0.02	8.4	< 0.2
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	< 80	1	0.07	12.6	45.1	< 20	< 4	26300	0.04	< 2	288	< 0.02	< 0.02	< 2	< 0.02	2.8	< 0.2
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	11	1.33	0.035	0.475	0.47	< 1	0.4	1600	0.016	< 0.1	10.6	< 0.001	0.002	< 0.1	0.002	1.5	< 0.01
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	5	< 0.01	0.029	1.12	1.97	< 1	< 0.2	1800	0.02	< 0.1	12.4	< 0.001	0.002	< 0.1	0.003	2.9	0.01
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	6	< 0.01	0.001	0.595	1.86	< 1	< 0.2	1600	0.002	< 0.1	10.5	< 0.001	< 0.001	< 0.1	0.002	< 0.1	< 0.01
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	7	0.3	0.002	0.983	9.06	< 1	< 0.2	1300	0.002	< 0.1	10.2	< 0.001	< 0.001	< 0.1	< 0.001	0.3	< 0.01
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	103	0.04	< 0.001	0.357	0.52	< 1	< 0.2	900	< 0.001	< 0.1	37.3	< 0.001	< 0.001	< 0.1	0.001	< 0.1	0.03
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	23	0.03	< 0.001	0.526	1.34	< 1	< 0.2	1000	< 0.001	< 0.1	17.6	< 0.001	< 0.001	< 0.1	0.001	0.2	0.03
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	112	1.16	< 0.02	8.94	19.6	< 20	< 4	28300	< 0.02	< 2	414	< 0.02	< 0.02	< 2	< 0.02	< 2	< 0.2
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	< 80	2.94	0.038	5	17.2	< 20	< 4	29300	0.031	< 2	250	< 0.02	< 0.02	< 2	0.042	4.4	< 0.2
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	< 80	2.85	0.033	8.14	10.8	< 20	< 4	29800	0.024	< 2	184	< 0.02	< 0.02	< 2	< 0.02	4.9	< 0.2
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	< 80	< 0.2	< 0.02	9.34	34.3	< 20	< 4	23800	< 0.02	< 2	274	< 0.02	< 0.02	< 2	< 0.02	< 2	< 0.2
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	< 80	< 0.2	< 0.02	10.9	51.9	< 20	< 4	28900	< 0.02	< 2	319	< 0.02	< 0.02	< 2	< 0.02	45.5	< 0.2
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	128	< 0.2	0.035	4.29	9.03	< 20	< 4	28200	0.023	< 2	231	< 0.02	< 0.02	< 2	< 0.02	41	< 0.2
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	< 80	< 0.2	< 0.02	8.98	26.4	< 20	< 4	27700	< 0.02	< 2	347	< 0.02	< 0.02	< 2	< 0.02	46.2	< 0.2
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	< 80	< 0.2	< 0.02	12.4	8.24	< 20	< 4	27700	< 0.02	< 2	234	< 0.02	< 0.02	< 2	< 0.02	41.6	< 0.2
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	84	1.22	0.025	15.4	117	< 20	< 4	27500	< 0.02	< 2	282	< 0.02	< 0.02	< 2	< 0.02	48	< 0.2
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	108	< 0.2	< 0.02	10.9	8.53	< 20	< 4	28600	< 0.02	< 2	280	< 0.02	< 0.02	< 2	< 0.02	45	< 0.2
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	< 80	< 0.2	< 0.02	4.15	8.48	< 20	< 4	29500	< 0.02	< 2	470	< 0.02	< 0.02	< 2	< 0.02	44.4	< 0.2
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	< 80	3.32	0.026	28.8	32.7	< 20	< 4	28100	< 0.02	< 2	200	< 0.02	< 0.02	< 2	< 0.02	46.9	< 0.2
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	6	< 0.01	< 0.001	0.493	1.55	< 1	< 0.2	1700	< 0.001	< 0.1	18.7	< 0.001	< 0.001	< 0.1	0.001	2.1	0.01
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	7	0.03	0.01	0.779	0.99	< 1	< 0.2	2200	0.005	< 0.1	15.1	< 0.001	< 0.001	< 0.1	< 0.001	3	< 0.01
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	< 4	< 0.01	0.001	0.281	1.23	< 1	< 0.2	1200	< 0.001	< 0.1	15.4	< 0.001	< 0.001	< 0.1	< 0.001	2.2	< 0.01
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	7	3.89	0.008	0.742	4.49	< 1	0.9	1200	0.005	< 0.1	12.7	< 0.001	< 0.001	< 0.1	0.001	2.6	< 0.01
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	< 40	2.06	0.012	1.09	165	< 10	< 2	< 2000	< 0.01	< 1	14.4	< 0.01	< 0.01	< 1	< 0.01	4.9	< 0.1
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	< 4	0.09	0.003	1.68	2.83	< 1	< 0.2	1300	< 0.001	< 0.1	10.2	< 0.001	< 0.001	< 0.1	0.002	3	< 0.01
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	< 4	< 0.01	< 0.001	0.329	0.52	< 1	< 0.2	1100	< 0.001	< 0.1	13.1	< 0.001	< 0.001	< 0.1	0.002	2.8	< 0.01
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	< 4	< 0.01	< 0.001	0.668	0.75	< 1	< 0.2	900	< 0.001	< 0.1	11.1	< 0.001	< 0.001	< 0.1	< 0.001	11.1	< 0.01
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	5	1.45	0.014	1.84	2.98	< 1	0.3	2000	0.008	< 0.1	10.7	< 0.001	< 0.001	0.3	0.007	3.8	< 0.01
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	< 4	< 0.01	< 0.001	0.399	< 0.01	< 1	< 0.2	900	< 0.001	< 0.1	53.3	< 0.001	< 0.001	< 0.1	< 0.001	2.9	< 0.01
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	8	0.08	< 0.001	0.454	0.54	< 1	< 0.2	1200	< 0.001	< 0.1	16.3	< 0.001	< 0.001	< 0.1	< 0.001	2	< 0.01
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	6	0.35	0.005	0.587	1.84	< 1	< 0.2	1400	0.002	< 0.1	12.2	< 0.001	< 0.001	< 0.1	0.003	2.7	< 0.01
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	< 4	1.92	0.01	0.509	1.02	< 1	< 0.2	2300	0.004	< 0.1	12.2	< 0.001	< 0.001	< 0.1	0.008	3.4	< 0.01
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	9	0.08	< 0.001	0.2	0.74	< 1	< 0.2	1600	0.001	< 0.1	5.59	< 0.001	< 0.001	< 0.1	< 0.001	1.2	< 0.01
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	7	0.16	0.002	0.405	0.75	< 1	< 0.2	1300	0.001	< 0.1	9.63	< 0.001	< 0.001	< 0.1	0.005	2.8	< 0.01
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	< 4	0.12	0.003	0.568	1.46	< 1	< 0.2	2100	0.002	< 0.1	20.4	< 0.001	< 0.001	< 0.1	0.004	2.9	< 0.01
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	7	0.05	0.005	0.337	0.93	< 1	< 0.2	1600	0.003	< 0.1	18.1	< 0.001	< 0.001	< 0.1	0.008	2.9	< 0.01
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	< 4	0.36	< 0.001	0.233	0.41	< 1	< 0.2	1100	< 0.001	< 0.1	41.3	< 0.001	< 0.001	< 0.1	< 0.001	2.2	< 0.01
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	11	0.1	0.002	0.74	4.37	< 1	0.3	1500	0.003	< 0.1	16.8	< 0.001	< 0.001	< 0.1	0.008	3	< 0.01
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	< 4	0.1	0.006	0.511	0.5	< 1	< 0.2	1800	0.004	< 0.1	8.7	< 0.001	< 0.001	< 0.1	0.01	3.4	< 0.01
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	< 4	< 0.01	0.003	0.392	0.57	< 1	0.2	1300	0.001	< 0.1	9.38	< 0.001	< 0.001	< 0.1	0.005	2.2	< 0.01
2024-10-08	2024-10-08	EMRS ROCK	< 4	0.03	0.007	0.615	0.55	< 1	< 0.2	2300	0.005	< 0.1	10.7	< 0.001	< 0.001	< 0.1	0.004	4.8	< 0.01
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	< 4	0.28	0.002	0.56	0.86	< 1	< 0.2	1200	0.003	< 0.1	15.8	< 0.001	< 0.001	< 0.1	< 0.001	2.8	< 0.01
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	< 4	0.23	0.001	0.613	0.88	< 1	< 0.2	1100	0.001	< 0.1	10.1	< 0.001	< 0.001	< 0.1	0.002	2.4	< 0.01
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	< 4	0.29	0.013	0.622	0.92	< 1	< 0.2	1700	0.008	< 0.1	16.2	< 0.001	< 0.001	< 0.1	0.01	3.5	< 0.01

Date Received	Report Date	Analyte Symbol	Tm	U	V	W	Y	Yb	Zn	Zr	SiO_2	$Al2O_3$	$Fe_2O_3(T)$	MnO	MgO	CaO	Na2O	K2O	TiO_2
		Unit Symbol	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%
		Detection Limit	0.001	0.001	0.1	0.02	0.003	0.001	0.5	0.01	0.01	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.001
		Analysis Method	ICP-MS								FUS-ICP								
2020-07-13	2020-07-29	Rock sample	0.033	0.704	77.3	7.2	2.75	0.136	101	24.5	67.22	14.65	3.59	0.066	2.11	3.3	1.63	2.77	0.362
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	< 0.02	0.1	13.9	1.34	0.064	< 0.02	12	0.26	68.61	14.65	4.14	0.075	1.99	2.94	1.82	2	0.382
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	0.001	0.006	0.6	0.07	0.01	0.002	< 0.5	0.08	67.87	15.38	3.66	0.091	2.17	3.04	0.87	2.68	0.372
2020-09-08	2020-11-10	Rock Sample	< 0.02	0.07	32.3	1.65	0.201	< 0.02	11	1.22	65.79	15.42	3.97	0.087	2.14	3.03	1.18	2.3	0.518
2020-10-05	2020-11-26	Rock Sample	< 0.02	0.075	26.2	1.85	0.107	< 0.02	< 10	0.48	69.35	15.6	3.91	0.07	2.09	2.8	1.16	2.14	0.367
2020-10-23	2020-11-26	ROCK SAMPLE	< 0.02	0.419	34.7	2.91	0.136	< 0.02	12.9	5.09	67.18	16.08	4	0.09	2.04	3.5	1.16	2.34	0.4
2020-11-16	2021-01-18	ROCK SAMPLE	0.028	0.313	14.2	1.94	0.421	0.045	< 10	1.92	69.14	15.16	3.71	0.046	2.66	2.92	0.94	1.99	0.354
2020-12-07	2021-01-20	ROCK SAMPLE	< 0.02	0.239	10.2	1.78	0.198	0.024	< 10	0.96	67.71	14.97	4.28	0.076	2.17	3.21	1.2	2.08	0.373
2021-02-10	2021-03-17	ROCK SAMPLE	< 0.02	0.115	15.7	5.05	0.171	< 0.02	< 10	0.58	70.85	15.1	4.43	0.035	1.68	2.62	0.76	1.65	0.337
2021-03-29	2021-04-20	ROCK SAMPLE	< 0.02	3.37	36.4	0.79	0.525	< 0.02	13.1	0.4	65.77	15.28	4.1	0.096	2.83	4.28	3.35	1.78	0.359
2021-04-26	2021-05-13	ROCK SAMPLE	< 0.02	0.27	36.4	2.06	0.181	< 0.02	< 10	3.91	67.31	14.36	3.76	0.103	1.82	2.74	1.25	3.01	0.398
2021-06-11	2021-07-21	ROCK SAMPLE	< 0.02	0.493	21.7	1.61	0.151	< 0.02	16.6	1.27	66	15.16	4.27	0.075	2.28	3.03	1.38	2.09	0.366
2021-05-17	2021-08-13	ROCK SAMPLE	< 0.02	0.071	36	1.63	0.105	< 0.02	< 10	< 0.2	64.23	15.03	5.37	0.115	2.28	4.07	2.17	2.09	0.536
2021-07-12	2021-08-26	1	0.074	0.107	15.5	2.55	< 0.06	0.059	< 10	< 0.2	69.49	15.43	4.39	0.06	1.76	2.39	0.59	2.03	0.341
2021-06-21	2021-09-02	ROCK SAMPLE	0.05	< 0.02	2.7	< 0.4	0.111	0.029	< 10	0.58	65.44	13.66	5.2	0.162	2.09	1.75	0.23	3.61	0.319
2021-08-03	2021-09-24	ROCK SAMPLE	0.056	0.058	15	1.56	0.145	< 0.02	16.8	< 0.2	68.55	15.19	3.64	0.084	1.95	3.58	0.95	2.22	0.386
2021-07-23	2021-10-13	2021-07-23	< 0.02	< 0.02	34.5	21.8	< 0.06	< 0.02	< 10	< 0.2	44.2	15.27	14.52	0.272	6.08	8.15	1.3	0.78	1.524
2021-08-18	2021-10-13	2021-08-18	< 0.02	0.056	54.9	13.9	< 0.06	< 0.02	< 10	< 0.2	51.15	13.76	12.54	0.26	2.46	9.65	1.87	1.29	1.311
2021-08-30	2021-11-16	2021-08-30	< 0.02	0.083	11	1.5	0.163	< 0.02	16.3	1.1	68.43	15.31	4.28	0.063	2.24	2.51	1.02	2.25	0.353
2021-09-13	2021-11-16	2021-09-13	< 0.02	0.075	13.4	0.5	0.147	< 0.02	10.5	1.57	68.75	15.03	3.66	0.078	1.45	3.85	1.78	1.77	0.343
2021-11-21	2022-02-02	EMRS1	< 0.02	0.039	16.3	0.96	0.063	< 0.02	< 10	1.63	63.75	15.21	3.8	0.25	2.72	3.73	0.97	3.22	0.39
2021-11-21	2022-02-02	EMRS2	< 0.02	0.036	12.4	1.64	0.083	< 0.02	< 10	1.2	67.14	14.77	4.36	0.047	2.13	2.13	1.31	2.46	0.351
2021-12-06	2022-02-04	EMRS 2021.11.29	< 0.02	< 0.02	5.5	42.2	0.113	< 0.02	< 10	0.7	66.82	15.52	5.41	0.047	3.06	0.76	0.64	3.2	0.377
2021-12-06	2022-02-04	EMRS 2021.11.30	< 0.02	< 0.02	11.8	3.09	< 0.06	< 0.02	< 10	0.38	66.8	15.53	3.4	0.085	2.24	2.16	0.28	4.01	0.363
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	< 0.02	0.049	11.5	2.44	< 0.06	< 0.02	< 10	0.51	69.07	15.13	3.91	0.041	1.96	2.71	0.95	1.81	0.337
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	< 0.02	0.12	17.9	1.29	0.123	< 0.02	< 10	0.7	68.58	15.32	2.86	0.059	1.3	3.43	2.81	2.21	0.365
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	< 0.02	< 0.02	18	89.6	0.149	< 0.02	< 10	3.07	70.72	15.95	2.99	0.083	1.45	1.91	0.3	2.48	0.362
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	< 0.02	< 0.02	13.6	1.41	0.183	< 0.02	< 10	2	68.05	14.65	3.76	0.08	1.69	3.26	1.47	2.16	0.35
2022-03-03	2022-04-26	EMRS 2022-02-28	< 0.02	< 0.02	6.3	1.78	0.088	< 0.02	< 10	1.76	65.26	15.36	3.79	0.15	2.01	3.43	0.39	3.25	0.383
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	< 0.02	< 0.02	17.6	2.47	0.426	0.05	< 10	8.21	68.75	13.94	4.43	0.103	1.43	3.11	2.17	2.37	0.391
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	< 0.02	0.052	13.8	3.09	0.097	< 0.02	< 10	0.43	68.41	15.01	3.86	0.128	1.8	2.89	0.44	3.47	0.373
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	< 0.02	0.053	14.6	4.52	0.073	< 0.02	< 10	0.36	67.66	14.55	5.85	0.095	2.36	3.12	0.55	2.08	0.354
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	< 0.02	0.251	49.1	5.42	< 0.06	< 0.02	14	1.07	66.77	14.7	5.47	0.08	2.34	3.19	1.17	2.16	0.35
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	< 0.02	0.098	91.3	4.35	< 0.06	< 0.02	37.4	< 0.2	56.37	14.82	6.9	0.11	5.01	6.34	2.65	1.94	0.51
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	< 0.02	1.02	45	2.2	< 0.06	< 0.02	< 10	0.23	68.21	14.65	3.24	0.102	1.34	3.1	0.94	3.11	0.332
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	< 0.02	0.246	37.6	3.89	< 0.06	< 0.02	< 10	0.67	68.32	14.8	3.65	0.103	1.63	2.78	0.58	3.07	0.369
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	< 0.04	0.049	12.6	8.96	< 0.1	< 0.04	< 20	< 0.4	46.49	13.2	14.97	0.284	4.65	7.33	1.17	0.93	1.793
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	< 0.04	0.165	52	3.52	< 0.1	< 0.04	25.8	0.78	65.23	15.26	4.92	0.098	3.1	4.93	1.07	1.52	0.447
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	< 0.02	< 0.02	8.3	13.4	0.251	0.041	51.1	1.07	47.71	11.64	16.3	0.331	4.1	6.66	0.8	0.74	2.104
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	< 0.02	0.067	9	1.23	0.2	< 0.02	46.1	2.28	67.49	13.94	5.75	0.044	1.97	2.42	1.04	2.11	0.4
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	< 0.02	0.151	39.2	1.94	0.199	0.029	11.2	10	67.55	15.27	4.42	0.053	1.38	2.14	0.73	3.05	0.353
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	< 0.02	0.315	101	3.88	0.07	< 0.02	21.7	< 0.2	59.15	15.14	6.89	0.158	2.38	5.5	2.69	1.71	0.687
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	< 0.02	0.158	63.5	1.85	0.093	< 0.02	< 10	0.33	66.54	14.86	5.33	0.118	2.14	3.99	1.84	2.02	0.565
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	< 0.02	0.127	50.9	0.41	0.087	< 0.02	< 10	0.74	65.42	14.49	4.97	0.094	2.11	3.38	1.54	1.77	0.436
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	< 0.02	0.108	51	3.35	< 0.06	< 0.02	62.6	< 0.2	61.1	14.79	8.38	0.159	2.29	4.71	2.94	1.53	0.937
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	< 0.02	0.14	17	2.43	0.117	< 0.02	18.3	0.3	70.84	15.19	3.44	0.04	1.82	3.1	0.81	1.33	0.333
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	< 0.02	0.025	32.3	3.25	0.192	< 0.02	11.5	2.74	55.07	14.38	14.09	0.355	2.46	5.62	1.99	1.42	1.305
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	< 0.02	0.023	5.5	2.28	0.083	< 0.02	20.7	0.3	67.5	15.01	5.64	0.117	2.57	1.33	0.22	2.93	0.342
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	< 0.001	0.005	1.2	0.04	0.045	0.005	0.8	0.17	65.08	14.41	6.71	0.096	2.72	3.66	1.38	1.99	0.708
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	< 0.001	0.007	0.7	0.04	0.038	0.002	0.7	0.42	65.41	14.85	3.77	0.202	2.38	3.87	0.56	3.61	0.363
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	< 0.001	0.005	0.7	0.1	< 0.003	< 0.001	1.1	0.02	68.9	15.36	3.07	0.071	0.97	2.77	0.67	3.2	0.343
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	< 0.001	0.005	0.3	0.09	< 0.003	< 0.001	< 0.5	0.13	70.08	15.81	3.14	0.054	0.67	1.64	0.12	4.89	0.399
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	< 0.001	0.004	0.3	0.08	0.005	< 0.001	0.7	0.01	52.17	14.01	12.96	0.202	3.95	3.71	0.69	1.33	1.117
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	< 0.001	0.003	0.5	0.07	0.005	< 0.001	0.6	0.01	55.43	13.47	10.13	0.197	4.7	3.64	0.54	2.18	0.942
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	< 0.02	0.061	17.8	4.29	< 0.06	< 0.02	< 10	< 0.2	66.5	14.14	3.16	0.095	2.24	3.34	0.78	2.58	0.34
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	< 0.02	0.067	14.6	2.81	0.096	< 0.02	< 10	2.34	71.5	15.2	3.07	0.061	1.86	1.4	1.03	1.97	0.363
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	< 0.02	0.118	10.5	0.65	0.115	< 0.02	< 10	1.37	69.29	14.74	3.02	0.125	1.38	1.93	0.66	2.83	0.321
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	< 0.02	0.049	8.5	0.99	< 0.06	< 0.02	22.7	< 0.2	63.5	14.6	5.23	0.124	2.23	3.93	0.96	2.66	0.424
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	< 0.02	< 0.02	9.1	0.65	< 0.06	< 0.02	< 10	< 0.2	64.47	14.28	5.14	0.104	2.71	3.8	0.69	2.87	0.333
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	< 0.02	< 0.02	11.1	1.94	< 0.06	< 0.02	< 10	0.38	69.47	15.97	3.14	0.046	1.75	1.72	1.05	2.06	0.375
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	< 0.02	0.053	8.7	0.8	< 0.06	< 0.02	< 10	< 0.2	67.76	14.95	3.13	0.107	1.67	3	0.8	2.97	0.325
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	< 0.02	0.056	8.1	1.9	< 0.06	< 0.02	< 10	0.47	68.54	14.74	3.03	0.144	1.67	2.92	0.43	3.39	0.329
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	< 0.02	0.03	6.1	2.1	< 0.06	< 0.02	< 10	< 0.2	66.27	14.88	3.42	0.181	2.83	2.41	0.26	3.55	0.335
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	< 0.02	0.131	12.5	1.65	< 0.06	< 0.02	< 10	< 0.2	67.21	14.58	3.05	0.114	1.66	2.94	0.6	3.12	0.325
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	< 0.02	0.033	13.7	1.05	< 0.06	< 0.02	< 10	0.61	63.82	14.83	4.89	0.058	2.34	4.14	3.43	1.24	0.412
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	< 0.02	0.088	3.8	1.8	< 0.06	< 0.02	< 10	0.59	65.58	14.68	2.72	0.249	1.96	3.13	0.11	4.31	0.333
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	< 0.001	0.003	0.8	0.29	< 0.003	< 0.001	< 0.5	0.06	67.99	14.19	2.77	0.152	1.58	3.83	0.59	2.6	0.319
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	< 0.001	0.001	1.5	0.09	0.01	< 0.001	< 0.5	0.04	69.06	15.21	3.77	0.077	2.01	3.06	1.47	2.28	0.405
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	< 0.001	< 0.001	0.7	0.06	< 0.003	< 0.001	< 0.5	0.02	65.04	14.44	3.92	0.065	2.31	4.56	2.16	1.87	0.321
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	< 0.001	< 0.001	0.3	0.05	0.007	< 0.001	< 0.5	0.02	68.08	15.09	4.1	0.088	1.98	2.32	1.89	2.61	0.336
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	< 0.01	< 0.01	< 1	< 0.2	< 0.03	< 0.01	< 5	0.15	69.04	14.92	4.78	0.129	1.78	1.72	0.27	3.77	0.355
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	< 0.001	0.003	0.3	< 0.02	0.006	< 0.001	< 0.5	0.08	69.71	14.62	4.17	0.119	1.35	2.3	0.28	3.85	0.355
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	< 0.001	0.003	0.7	0.15	0.006	< 0.001	< 0.5	0.04	61.33	14.71	5.85	0.116	2.26	4.62	1.7	1.76	0.678
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	< 0.001	< 0.001	0.8	0.23	< 0.003	< 0.001	< 0.5	< 0.01	45.05	15.69	15.06	0.264	5.33	7.38	1.46	0.87	1.285
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	< 0.001	0.011	2.3	0.05	0.013	< 0.001	< 0.5	0.07	67.31	15	3.14	0.096	1.59	2.9	0.83	3.31	0.382
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	< 0.001	< 0.001	0.5	0.04	< 0.003	< 0.001	1.1	< 0.01	51.03	14.8	12.97	0.194	4.77	5.8	1.36	0.76	1.515
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	< 0.001	< 0.001	1.6	0.15	< 0.003	< 0.001	1	< 0.01	55.14	14.41	9.49	0.159	4.09	6.09	1.51	1.55	1.07
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	< 0.001	0.004	0.7	0.1	0.006	< 0.001	< 0.5	0.12	68.06	14.7	2.97	0.118	2.29	2.75	0.47	2.56	0.342
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	< 0.001	0.036	0.9	0.04	0.008	0.001	< 0.5	0.11	69.33	16.11	3.19	0.07	1.32	4.09	0.99	2.05	0.367
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	0.001	0.001	0.4	0.03	< 0.003	< 0.001	< 0.5	< 0.01	67.29	15.47	3.31	0.114	2.33	2.96	1.15	2.34	0.36
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	< 0.001	0.001	0.5	0.04	0.004	< 0.001	< 0.5	0.05	68.55	15.56	3.26	0.107	2.27	2.5	1.06	2.49	0.353
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	< 0.001	0.004	0.9	< 0.02	0.007	< 0.001	0.6	0.04	69.76	14.92	3.11	0.046	1.77	3.04	2.87	2.13	0.313
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	< 0.001	0.002	0.6	0.08	0.009	< 0.001	< 0.5	0.12	68.62	15.76	4.18	0.078	2.35	2.97	0.8	1.4	0.367
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	< 0.001	< 0.001	1.3	0.12	< 0.003	< 0.001	2.7	< 0.01	46.28	12.73	12.88	0.154	6.45	7.59	2.35	0.22	0.869
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	< 0.001	0.003	0.6	0.07	0.011	< 0.001	< 0.5	0.21	67.8	14.66	3.2	0.116	1.8	3.2	0.29	2.59	0.329
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	< 0.001	0.004	0.7	0.11	0.009	< 0.001	< 0.5	0.12	69.28	16.08	3.3	0.068	1.89	2.33	0.67	2.69	0.383
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	< 0.001	0.002	0.4	0.18	0.007	< 0.001	< 0.5	0.05	69.54	15.23	3.12	0.12	2.31	2.53	0.54	2.52	0.371
2024-10-08	2024-10-08	EMRS ROCK	< 0.001	0.016	1.1	0.05	0.011	< 0.001	< 0.5	0.07	66.57	15.12	3.57	0.066	1.32	3.42	3.21	1.97	0.334
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	< 0.001	0.002	0.3	0.05	0.008	< 0.001	< 0.5	0.09	66.03	15	3.33	0.137	2.05	2.98	0.4	3.16	0.365
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	< 0.001	0.002	0.2	0.09	< 0.003	< 0.001	< 0.5	0.06	64.52	14.29	3.23	0.176	2.61	4.14	0.43	2.79	0.34
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	< 0.001	0.004	0.4	0.14	0.019	0.001	< 0.5	0.23	72.24	12.34	3.11	0.139	2.12	3.35	0.35	2.34	0.31

Date Received	Report Date	Analyte Symbol	$P2O_5$	LOI	Total	Sc	Be	V	Ag	As	Ba	Co	Cr	Cs	Cu	Ga	Ge	In	Mo
		Unit Symbol	**%**	**%**	**%**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**
		Detection Limit	**0.01**		**0.01**	**1**	**1**	**5**	**0.5**	**5**	**2**	**1**	**20**	**0.5**	**10**	**1**	**1**	**0.2**	**2**
		Analysis Method									**FUS-ICP**								
2020-07-13	2020-07-29	Rock sample	0.1	4.24	100	5	< 1	51	0.9	8	578	10	80	7.2	90	19	1	< 0.2	< 2
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	0.12	3.66	100.4	6	< 1	56	0.6	14	501	7	20	6.1	70	20	2	< 0.2	< 2
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	0.11	3.39	99.63	6	< 1	55	1.3	15	575	10	30	6.7	90	20	1	< 0.2	3
2020-09-08	2020-11-10	Rock Sample	0.1	4.15	98.7	8	< 1	77	1.4	16	507	11	30	7.7	80	20	1	0.2	< 2
2020-10-05	2020-11-26	Rock Sample	0.1	3.12	100.7	5	< 1	52	0.7	7	483	7	< 20	5.6	90	20	1	< 0.2	< 2
2020-10-23	2020-11-26	ROCK SAMPLE	0.11	3.48	100.4	6	< 1	56	0.7	9	558	9	20	6.4	50	17	2	< 0.2	< 2
2020-11-16	2021-01-18	ROCK SAMPLE	0.1	3.45	100.5	5	< 1	47	0.6	7	401	8	< 20	4.9	110	20	1	< 0.2	3
2020-12-07	2021-01-20	ROCK SAMPLE	0.1	3.93	100.1	6	< 1	54	0.6	10	449	9	30	6.8	30	18	< 1	< 0.2	< 2
2021-02-10	2021-03-17	ROCK SAMPLE	0.08	3.3	100.9	4	< 1	40	0.5	6	405	6	< 20	4.3	130	19	2	< 0.2	< 2
2021-03-29	2021-04-20	ROCK SAMPLE	0.14	2.35	100.3	7	< 1	60	< 0.5	< 5	482	12	70	9.1	20	19	< 1	< 0.2	< 2
2021-04-26	2021-05-13	ROCK SAMPLE	0.14	3.57	98.46	6	< 1	59	0.7	15	658	9	30	6.1	80	18	1	< 0.2	< 2
2021-06-11	2021-07-21	ROCK SAMPLE	0.09	4.1	98.83	5	< 1	52	< 0.5	9	538	8	< 20	5.9	170	19	< 1	< 0.2	< 2
2021-05-17	2021-08-13	ROCK SAMPLE	0.13	4.01	100	10	< 1	90	0.6	15	500	14	30	5.8	40	19	1	< 0.2	< 2
2021-07-12	2021-08-26	1	0.08	3.17	99.73	4	< 1	42	< 0.5	11	331	8	< 20	5.3	230	20	2	< 0.2	< 2
2021-06-21	2021-09-02	ROCK SAMPLE	0.11	5.46	98.02	5	< 1	46	2.5	66	435	6	< 20	4.9	140	18	< 1	0.7	< 2
2021-08-03	2021-09-24	ROCK SAMPLE	0.1	3.7	100.4	6	< 1	58	< 0.5	7	509	9	< 20	7	60	19	1	< 0.2	< 2
2021-07-23	2021-10-13	2021-07-23	0.12	8.08	100.3	33	< 1	427	2	12	115	42	160	4.6	130	18	1	0.2	< 2
2021-08-18	2021-10-13	2021-08-18	0.14	6.09	100.5	28	< 1	255	< 0.5	11	251	40	80	8.6	90	20	2	< 0.2	< 2
2021-08-30	2021-11-16	2021-08-30	0.11	3.61	100.2	5	< 1	46	0.5	8	499	8	< 20	5.8	80	19	1	< 0.2	< 2
2021-09-13	2021-11-16	2021-09-13	0.1	3.09	99.91	5	< 1	44	0.6	14	505	7	20	6.2	130	18	1	< 0.2	< 2
2021-11-21	2022-02-02	EMRS1	0.14	4.42	98.6	7	< 1	61	1.8	85	344	10	30	8.6	30	20	< 1	< 0.2	< 2
2021-11-21	2022-02-02	EMRS2	0.1	4.04	98.83	5	< 1	46	< 0.5	< 5	464	8	< 20	6.4	100	21	< 1	< 0.2	2
2021-12-06	2022-02-04	EMRS 2021.11.29	0.1	4.15	100.1	6	< 1	54	< 0.5	12	565	8	< 20	6	140	19	1	0.2	< 2
2021-12-06	2022-02-04	EMRS 2021.11.30	0.1	3.58	98.57	5	< 1	46	0.5	34	554	7	< 20	10	40	20	1	0.2	< 2
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	0.08	3.54	99.54	5	< 1	45	< 0.5	5	359	7	< 20	4.3	60	18	1	< 0.2	5
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	0.09	3.19	100.2	4	< 1	43	< 0.5	< 5	485	5	< 20	3.7	160	19	< 1	< 0.2	< 2
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	0.09	3.32	99.67	4	< 1	41	< 0.5	15	378	8	20	6.5	40	21	2	< 0.2	< 2
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	0.09	3	98.57	5	< 1	45	< 0.5	11	545	7	< 20	7.4	80	20	2	< 0.2	< 2
2022-03-03	2022-04-26	EMRS 2022-02-28	0.1	4.39	98.52	5	< 1	47	< 0.5	13	473	8	20	7.7	30	19	1	< 0.2	< 2
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	0.11	2.91	99.72	7	< 1	55	< 0.5	< 5	499	10	20	4	70	17	1	< 0.2	< 2
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	0.1	3.85	100.3	5	< 1	51	1.3	19	524	7	20	8.4	40	18	2	< 0.2	< 2
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	0.11	3.53	100.3	6	< 1	51	< 0.5	8	506	10	30	5.1	110	18	1	< 0.2	< 2
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	0.15	2.89	99.28	8	< 1	60	0.7	6	744	11	40	5.3	190	18	2	< 0.2	< 2
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	0.48	4.38	99.52	18	2	127	< 0.5	6	1259	25	110	6.8	40	17	1	< 0.2	< 2
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	0.09	3.67	98.78	4	< 1	40	< 0.5	23	471	6	< 20	7	20	19	1	< 0.2	< 2
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	0.1	4.04	99.45	5	< 1	47	0.8	17	533	7	< 20	8.6	50	20	1	< 0.2	< 2
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	0.18	7.67	98.67	34	< 1	324	0.8	20	182	37	90	6.3	90	20	1	< 0.2	3
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	0.1	2.56	99.23	14	< 1	95	< 0.5	< 5	445	17	80	5.7	40	19	2	< 0.2	< 2
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	0.24	8.24	98.87	31	< 1	216	0.8	16	95	34	40	5.7	70	22	1	< 0.2	< 2
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	0.1	4.09	99.36	6	< 1	54	< 0.5	7	463	9	20	7.1	30	21	1	< 0.2	2
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	0.09	3.49	98.52	5	< 1	43	0.8	17	573	7	< 20	6.8	150	20	1	< 0.2	< 2
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	0.13	4.02	98.46	14	1	131	< 0.5	6	551	20	40	9.3	40	20	1	< 0.2	< 2
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	0.1	3.06	100.6	10	< 1	86	< 0.5	11	486	13	30	6.3	60	19	1	< 0.2	< 2
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	0.12	5.45	99.78	8	1	75	< 0.5	< 5	733	14	40	9.2	90	19	2	< 0.2	3
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	0.14	3.57	100.5	17	< 1	155	< 0.5	140	399	21	70	5.4	90	18	1	< 0.2	< 2
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	0.08	3.17	100.1	4	< 1	41	< 0.5	7	328	6	< 20	6	170	18	1	< 0.2	14
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	0.15	3.43	100.3	25	< 1	250	0.6	10	444	52	50	6.5	110	18	1	< 0.2	< 2
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	0.09	3.78	99.54	5	< 1	48	0.5	39	405	12	< 20	5.5	50	18	1	0.2	< 2
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	0.11	3.52	100.4	13	< 1	127	0.9	19	453	15	50	5	40	18	1	< 0.2	< 2
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	0.08	5.05	100.1	6	< 1	56	1	80	423	9	20	8.5	50	17	< 1	< 0.2	< 2
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	0.08	3.8	99.23	4	< 1	40	< 0.5	42	520	6	< 20	8.3	40	18	1	0.2	< 2
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	0.1	3.9	100.8	5	< 1	48	0.7	56	562	9	20	6.3	20	19	1	< 0.2	< 2
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	0.17	7.55	97.86	22	< 1	194	< 0.5	< 5	397	26	70	6.6	100	21	< 1	< 0.2	< 2
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	0.16	6.77	97.39	19	< 1	162	0.9	17	524	28	210	7.1	30	20	1	0.2	< 2
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	0.08	6.01	99.27	5	< 1	45	0.9	25	505	7	20	6.9	20	22	1	< 0.2	< 2
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	0.1	3.81	100.4	6	1	47	0.6	23	428	8	20	5.6	20	23	2	< 0.2	< 2
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	0.1	3.49	97.89	5	< 1	43	0.8	32	509	7	< 20	6	40	22	1	< 0.2	2
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	0.11	4.76	98.51	7	1	67	0.7	30	667	11	30	9.2	20	22	2	< 0.2	2
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	0.12	4.7	99.2	6	< 1	52	8	23	674	10	80	10.6	220	20	2	0.2	< 2
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	0.11	3.72	99.44	5	1	47	1	30	449	9	20	5.9	20	23	2	< 0.2	< 2
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	0.08	5.53	100.3	5	< 1	42	0.8	34	479	7	< 20	6.6	40	20	< 1	< 0.2	< 2
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	0.09	5.53	100.8	5	< 1	42	0.7	17	514	7	< 20	6.6	30	19	< 1	< 0.2	< 2
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	0.1	4.57	98.8	4	< 1	41	0.5	45	378	7	< 20	7.9	30	20	1	< 0.2	< 2
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	0.1	5.18	98.88	5	< 1	43	< 0.5	23	484	7	< 20	6.6	20	19	1	< 0.2	< 2
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	0.09	4.4	99.66	10	< 1	77	0.9	7	247	15	90	5.4	80	22	1	< 0.2	< 2
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	0.08	5.97	99.12	4	< 1	38	< 0.5	23	493	5	< 20	5.8	30	22	1	< 0.2	< 2
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	0.09	5.06	99.17	5	< 1	39	1	31	395	5	110	6.1	10	20	3	< 0.2	< 2
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	0.09	2.75	100.2	7	< 1	58	< 0.5	7	454	10	120	7.2	40	20	1	< 0.2	2
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	0.11	5.95	100.7	5	< 1	46	< 0.5	11	338	7	< 20	6.1	10	18	1	< 0.2	< 2
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	0.11	3.74	100.3	5	< 1	47	3.7	27	421	7	< 20	8.1	90	20	1	< 0.2	< 2
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	0.11	3.47	100.3	5	< 1	46	< 0.5	34	402	8	20	6.8	50	19	1	0.2	< 2
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	0.1	4.07	100.9	5	< 1	48	< 0.5	64	381	6	20	7.3	20	20	1	0.2	< 2
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	0.14	5.03	98.2	12	1	111	< 0.5	31	378	15	150	6.9	50	19	1	< 0.2	< 2
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	0.11	6.9	99.39	24	< 1	285	1.7	14	132	42	210	5.8	160	19	1	< 0.2	< 2
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	0.1	3.96	98.61	6	< 1	53	1.6	17	645	8	20	9.8	40	20	< 1	< 0.2	< 2
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	0.07	6.63	99.91	34	< 1	402	< 0.5	6	229	33	80	4.2	110	20	1	< 0.2	2
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	0.13	5.75	99.38	23	< 1	284	0.9	14	459	26	90	6.5	90	17	1	< 0.2	< 2
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	0.08	4.1	98.45	5	< 1	44	1.1	17	470	< 20	6	6.3	30	18	1	< 0.2	2
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	0.11	2.78	100.4	4	< 1	45	< 0.5	20	437	20	< 20	8.2	20	22	1	< 0.2	2
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	0.1	4.04	99.47	5	< 1	48	0.7	9	480	8	< 20	7.7	20	20	1	< 0.2	< 2
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	0.09	3.94	100.2	5	< 1	48	1	11	499	7	< 20	7.9	20	19	1	< 0.2	< 2
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	0.09	3.79	98.05	4	< 1	38	< 0.5	20	564	7	< 20	9.2	20	20	< 1	< 0.2	< 2
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	0.1	4.2	100.8	5	< 1	46	< 0.5	6	444	6	< 20	5.1	180	20	2	0.3	< 2
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	0.1	8.39	98.02	33	< 1	240	0.6	11	38	33	320	0.9	120	17	2	< 0.2	4
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	0.09	4.98	99.1	4	< 1	41	0.5	16	500	6	< 20	6.7	30	19	1	< 0.2	< 2
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	0.09	3.99	100.8	5	1	50	0.6	< 5	521	7	< 20	8.1	20	20	1	< 0.2	< 2
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	0.1	4.28	100.6	5	< 1	45	1.8	23	462	7	< 20	5.7	50	18	1	< 0.2	< 2
2024-10-08	2024-10-08	EMRS ROCK	0.09	3.5	99.18	5	< 1	45	< 0.5	6	422	6	< 20	6.1	20	18	< 1	< 0.2	< 2
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	0.11	5.75	99.31	5	< 1	46	1.3	17	538	7	< 20	7.1	20	20	< 1	< 0.2	< 2
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	0.09	6.09	98.7	5	< 1	43	1.2	36	444	6	< 20	6.3	40	18	1	< 0.2	< 2
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	0.09	3.5	99.89	4	< 1	40	< 0.5	11	453	6	< 20	7.9	10	16	1	< 0.2	< 2

Date Received	Report Date	Analyte Symbol	Nb	Ni	Rb	Sb	Sn	Sr	Y	Zn	Zr	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb
		Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		Detection Limit	1	20	2	0.5	1	2	1	30	2	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1
		Analysis Method	FUS-MS																
2020-07-13	2020-07-29	Rock sample	2	30	73	0.6	1	344	5	250	93	18.7	37.2	4.13	15.8	2.5	0.65	1.6	0.2
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	2	< 20	53	< 0.5	< 1	379	5	150	92	15.5	31.2	3.59	12.8	2.2	0.62	1.4	0.2
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	2	20	66	1	1	310	5	430	94	15.8	31.6	3.72	14.1	2.4	0.68	1.6	0.2
2020-09-08	2020-11-10	Rock Sample	2	< 20	52	1.7	< 1	301	6	560	98	19.1	37.5	4.61	15.2	2.5	0.73	1.7	0.3
2020-10-05	2020-11-26	Rock Sample	2	< 20	51	0.5	1	327	4	110	96	13.4	26.7	3.16	11.6	2	0.58	1.4	0.2
2020-10-23	2020-11-26	ROCK SAMPLE	2	< 20	56	0.7	1	307	6	310	92	17.4	34.3	3.88	14.7	2.4	0.68	1.5	0.2
2020-11-16	2021-01-18	ROCK SAMPLE	2	< 20	55	< 0.5	1	338	4	100	93	13.6	30	3.34	11.9	2	0.58	1.5	0.2
2020-12-07	2021-01-20	ROCK SAMPLE	2	< 20	50	< 0.5	< 1	306	4	160	84	15.6	30.3	3.52	12.6	2.2	0.66	1.5	0.2
2021-02-10	2021-03-17	ROCK SAMPLE	2	< 20	47	< 0.5	< 1	308	3	40	95	13.3	24.9	2.9	10.9	1.8	0.61	1.2	0.2
2021-03-29	2021-04-20	ROCK SAMPLE	1	50	36	0.5	< 1	450	6	360	90	23.3	49	5.85	22.3	3.4	0.94	2.1	0.2
2021-04-26	2021-05-13	ROCK SAMPLE	2	< 20	70	0.5	< 1	321	5	150	96	21.4	43.2	5.04	18.7	2.9	0.8	1.9	0.2
2021-06-11	2021-07-21	ROCK SAMPLE	1	< 20	56	< 0.5	< 1	308	4	430	87	16.3	32.2	3.72	13.6	2.2	0.63	1.4	0.2
2021-05-17	2021-08-13	ROCK SAMPLE	2	< 20	45	0.6	< 1	329	8	350	91	20	41.2	4.88	18.6	3	0.8	2	0.3
2021-07-12	2021-08-26	1	2	< 20	52	0.6	< 1	235	4	130	83	14.7	28	3.08	11.5	1.8	0.51	1.2	0.2
2021-06-21	2021-09-02	ROCK SAMPLE	4	< 20	90	1.4	< 1	57	4	3090	85	15.8	31.2	3.63	13.4	2.2	0.52	1.4	0.2
2021-08-03	2021-09-24	ROCK SAMPLE	2	< 20	53	0.6	< 1	308	4	980	88	19.5	39.9	4.59	17.8	2.6	0.68	1.7	0.2
2021-07-23	2021-10-13	2021-07-23	2	100	14	1.4	< 1	145	17	540	66	4.7	11.3	1.67	8.5	2.3	0.89	3	0.5
2021-08-18	2021-10-13	2021-08-18	4	70	38	1.3	1	214	21	630	97	12.6	27.5	3.62	15.6	3.7	1.21	4	0.7
2021-08-30	2021-11-16	2021-08-30	2	< 20	58	1	< 1	286	4	170	96	13.4	27.4	3.14	11.9	1.8	0.54	1.2	0.2
2021-09-13	2021-11-16	2021-09-13	2	< 20	38	0.6	< 1	543	3	130	99	13.3	25.6	2.86	10.6	1.7	0.53	1.1	0.2
2021-11-21	2022-02-02	EMRS1	2	< 20	78	0.9	1	134	5	140	96	24.7	49.7	5.68	21.6	3.3	0.84	1.7	0.2
2021-11-21	2022-02-02	EMRS2	2	< 20	61	< 0.5	1	279	4	160	94	15.5	30.1	3.45	12.6	1.8	0.62	1.3	0.2
2021-12-06	2022-02-04	EMRS 2021.11.29	2	< 20	78	1.2	1	135	4	100	88	14.8	29.4	3.41	12.6	2.2	0.55	1.5	0.2
2021-12-06	2022-02-04	EMRS 2021.11.30	2	< 20	104	1.9	< 1	144	3	210	96	17.1	32.8	3.64	13.5	2.2	0.63	1.4	0.2
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	2	< 20	43	0.5	1	327	4	70	94	13.6	26.7	2.96	11.3	1.9	0.57	1.2	0.2
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	2	< 20	56	0.8	< 1	365	3	80	100	18.1	34.4	3.77	13.8	2.1	0.65	1.4	0.2
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	2	20	73	0.7	< 1	124	4	400	95	14.1	27.7	3.12	11.6	2	0.61	1.4	0.2
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	2	20	55	< 0.5	< 1	449	4	80	91	17	33.7	3.73	13.8	2.2	0.63	1.5	0.2
2022-03-03	2022-04-26	EMRS 2022-02-28	2	20	91	< 0.5	< 1	171	3	1290	91	17	33.5	3.66	13.1	2.2	0.66	1.5	0.2
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	3	20	50	< 0.5	1	245	14	210	119	21.3	45.3	5.3	20.4	3.7	0.9	3	0.4
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	7	< 20	93	0.7	1	128	5	300	101	15.8	31.4	3.59	13.3	2.3	0.62	1.5	0.2
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	6	< 20	51	0.5	1	285	5	170	103	19.7	39.4	4.44	17.2	2.7	0.76	1.8	0.2
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	3	30	54	0.5	1	396	5	120	105	23.7	47.1	5.4	20.6	3.3	0.82	2.1	0.3
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	7	70	42	0.7	1	1171	12	80	154	77.7	161	18.6	69.8	10.9	2.56	6.3	0.7
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	2	< 20	77	1	1	207	3	230	100	17.7	34.3	3.86	13.8	2.1	0.62	1.3	0.2
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	2	< 20	84	0.8	1	166	3	160	106	16	32	3.68	13.5	2.1	0.58	1.4	0.2
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	4	70	23	2.3	< 1	232	25	260	99	10.3	24.3	3.29	15.5	4.1	1.3	4.5	0.8
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	2	40	36	< 0.5	< 1	372	7	140	89	13.6	27.1	3.09	12.2	2.1	0.59	1.6	0.2
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	7	50	18	2	< 1	149	36	230	144	9.6	23.4	3.44	16.2	4.7	1.63	5.7	1
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	2	< 20	57	0.6	< 1	443	4	50	98	18	35.2	4.04	15.2	2.3	0.67	1.5	0.2
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	2	< 20	77	0.6	1	191	4	100	101	14.6	29.3	3.24	12.3	2.1	0.57	1.3	0.2
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	2	30	39	0.5	< 1	611	11	140	94	17.9	38.8	4.64	18.1	3.3	0.89	2.3	0.4
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	2	30	48	0.6	1	401	9	140	110	15.6	32.5	3.78	14.2	2.6	0.71	2	0.3
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	4	30	39	1.3	1	509	7	80	108	24.8	50.6	5.92	22.6	3.3	0.89	2.2	0.3
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	3	30	35	1.9	1	364	14	300	105	16.9	34.1	3.9	15	3.1	0.86	3	0.4
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	2	< 20	38	0.8	1	431	4	50	103	14.9	30.3	3.43	12.7	2	0.55	1.4	0.2
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	3	60	26	0.7	1	296	25	260	97	12.3	25.8	3.37	14.6	3.2	1.14	3.6	0.6
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	1	20	81	1.2	< 1	157	5	480	93	13.6	25.7	3.01	11.3	2	0.63	1.3	0.2
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	2	20	53	0.7	1	248	12	140	104	12.1	26.5	2.6	9.9	2.3	0.7	0.9	< 0.1
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	2	< 20	98	1	1	133	6	160	96	15.3	32.9	3.25	12	2.2	0.64	0.4	< 0.1
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	< 1	< 20	84	1.3	< 1	258	4	1270	99	15.3	29.6	3.26	11.9	1.9	0.56	1.3	0.2
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	< 1	< 20	122	6.6	< 1	92	5	570	109	21.3	41	4.37	16	2.5	0.72	1.6	0.2
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	3	40	30	1.8	1	172	17	450	91	15.5	33.3	4.11	16.6	3.4	1.02	3.4	0.5
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	3	60	50	1.1	1	137	14	250	97	19.3	40	4.87	19	3.8	1.04	3.4	0.5
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	< 1	< 20	75	0.6	< 1	314	4	130	91	16.5	32.1	3.64	13.8	2.1	0.6	1.5	0.2
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	< 1	< 20	53	0.5	< 1	329	4	130	100	16	31	3.45	13.2	2.1	0.62	1.4	0.2
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	2	< 20	71	0.6	< 1	189	4	360	92	15.5	31.5	3.53	13.7	2.3	0.57	1.3	0.2
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	2	< 20	54	1.3	< 1	211	6	110	86	13.6	28.2	3.26	12.6	2.2	0.62	1.5	0.2
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	2	< 20	56	18.5	1	197	5	250	102	15.7	31.1	3.69	14.7	2.5	0.66	1.5	0.2
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	2	< 20	54	1.7	< 1	350	4	170	98	14.8	28.7	3.44	12.3	2.1	0.63	1.3	0.2
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	2	< 20	83	0.9	< 1	409	4	490	106	16.1	32	3.66	13.4	2.3	0.61	1.4	0.2
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	2	< 20	95	0.7	< 1	208	4	280	102	16.3	32.9	3.79	13.9	2.3	0.58	1.3	0.2
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	2	< 20	96	1.5	< 1	120	5	420	96	17.2	32.7	3.51	13.2	2.1	0.59	1.3	0.2
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	2	< 20	88	0.8	< 1	262	5	170	94	17.7	35.5	3.92	15.3	2.4	0.65	1.5	0.2
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	2	40	26	0.6	< 1	354	6	40	86	12.9	27.3	3.24	12.7	2	0.6	1.5	0.2
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	2	< 20	108	0.9	< 1	119	3	430	96	17.1	32.7	3.55	13.3	2.1	0.64	1.3	0.2
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	2	< 20	63	1	< 1	130	5	220	94	14.5	26.9	2.83	10.2	1.7	0.51	1.2	0.1
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	2	30	53	< 0.5	< 1	330	5	210	98	14.9	30.1	3.43	12.8	1.9	0.58	1.4	0.2
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	2	< 20	45	1	0.5	359	5	100	92	17.4	35.5	3.75	14.7	2.2	0.61	1.5	0.2
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	2	< 20	68	< 1	2.1	243	4	1420	94	12.9	26.2	2.86	11.3	1.6	0.54	1.2	0.2
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	2	< 20	103	1.8	< 1	138	4	380	95	16.8	32	3.6	13.8	2.1	0.6	1.3	0.2
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	2	< 20	103	0.9	1	111	4	750	99	15.3	29	3.23	11.9	1.9	0.58	1.4	0.2
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	3	30	48	0.8	< 1	336	11	140	95	17	36.8	4.16	16.7	3	0.84	2.5	0.4
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	3	60	20	1	< 1	152	17	290	61	4	10	1.47	7.3	2.3	0.92	2.7	0.5
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	2	< 20	83	1.7	< 1	223	5	340	98	16.8	33.3	3.98	15	2.4	0.71	1.7	0.2
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	3	50	16	1.8	1	197	18	210	81	9.6	22.3	2.85	11.8	3.1	1	3.3	0.6
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	4	60	42	2.4	1	240	12	150	82	16.6	34.5	4.23	16.4	3.3	0.99	2.7	0.4
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	2	< 20	63	< 1	0.6	131	3	340	85	16.8	34	3.79	14	2.2	0.56	1.3	0.2
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	2	20	51	0.5	1	480	4	130	92	16.6	33.9	3.87	15.3	2.5	0.61	1.5	0.2
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	2	< 20	53	< 1	< 0.5	229	3	120	93	16.1	32.3	3.69	13.6	2.2	0.62	1.4	0.2
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	2	< 20	58	2	< 0.5	215	4	100	96	15.3	30.2	3.43	13.2	2	0.58	1.4	0.2
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	2	< 20	52	0.5	1	400	3	90	98	12.9	25.3	2.89	10.8	1.9	0.51	1.1	0.1
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	2	< 20	36	< 0.5	< 1	331	4	430	100	14.9	31.4	3.5	13.2	2.1	0.62	1.4	0.2
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	4	110	4	1.2	1	230	20	90	76	12.1	24.3	2.99	12.9	3.1	0.96	3.3	0.5
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	1	< 20	68	1.2	< 1	195	3	680	87	12.7	24.4	2.81	10.4	1.9	0.46	1.2	0.2
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	2	< 20	65	0.5	< 1	210	4	400	95	15.4	30.2	3.59	13	2.2	0.68	1.5	0.2
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	2	< 20	56	0.5	< 1	152	4	330	98	16.1	32.7	3.7	14	2.1	0.58	1.3	0.2
2024-10-08	2024-10-08	EMRS ROCK	2	< 20	41	< 0.5	< 1	312	4	120	109	15.2	29.4	3.4	12.4	2	0.56	1.4	0.2
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	2	< 20	86	0.6	< 1	142	4	460	100	18	36.8	4.15	15.1	2.4	0.63	1.5	0.2
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	2	< 20	72	1.1	< 1	129	4	300	100	16.3	32.2	3.76	14.4	2.2	0.64	1.5	0.2
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	2	< 20	61	0.5	< 1	161	4	120	83	14.2	28.2	3.16	12	2.1	0.59	1.3	0.2

Date Received	Report Date	Analyte Symbol	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	B	Li	Na
		Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
		Detection Limit	0.1	0.1	0.1	0.05	0.1	0.01	0.2	0.1	1	0.1	5	0.4	0.1	0.1	20	0.5	0.01
		Analysis Method	FUS-MS														TD-MS		
2020-07-13	2020-07-29	Rock sample	1	0.2	0.5	0.06	0.4	0.06	2.5	0.2	2	0.4	8	0.6	2.3	0.7	< 20	61.9	1.14
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	0.9	0.2	0.5	0.07	0.5	0.08	2.5	-	< 1	0.2	9	0.7	2.2	0.6	< 20	59.8	1.46
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	1	0.2	0.5	0.07	0.5	0.08	2.5	0.2	2	0.6	13	0.8	2.3	0.6	< 20	49.9	0.68
2020-09-08	2020-11-10	Rock Sample	1.2	0.2	0.7	0.11	0.7	0.1	2.2	0.2	2	0.5	15	0.7	2.7	0.7	< 20	67.9	0.92
2020-10-05	2020-11-26	Rock Sample	0.9	0.2	0.5	0.05	0.4	0.06	2.5	0.1	2	0.3	5	0.6	1.8	0.5	< 20	58	0.77
2020-10-23	2020-11-26	ROCK SAMPLE	1.1	0.2	0.5	0.07	0.5	0.08	2.4	0.2	2	0.4	9	0.8	2.2	0.6	60	62.3	0.86
2020-11-16	2021-01-18	ROCK SAMPLE	0.9	0.2	0.4	0.06	0.4	0.06	2.5	0.2	< 1	0.4	< 5	0.6	1.9	0.5	50	54.4	0.6
2020-12-07	2021-01-20	ROCK SAMPLE	1	0.2	0.5	0.06	0.4	0.05	1.9	0.2	2	0.3	13	0.4	2	0.6	< 20	58.1	0.95
2021-02-10	2021-03-17	ROCK SAMPLE	0.8	0.1	0.4	0.05	0.4	0.05	2.5	0.2	4	0.3	< 5	1.4	1.7	0.5	< 20	92.2	0.6
2021-03-29	2021-04-20	ROCK SAMPLE	1.2	0.2	0.6	0.08	0.5	0.07	2.2	0.1	1	0.3	5	< 0.4	2.8	0.7	20	83.5	2.47
2021-04-26	2021-05-13	ROCK SAMPLE	1.2	0.2	0.5	0.07	0.4	0.06	2.2	0.2	3	0.5	33	0.8	2.9	0.8	60	52.8	0.99
2021-06-11	2021-07-21	ROCK SAMPLE	1	0.2	0.4	0.06	0.4	0.06	2.1	0.1	< 1	0.4	5	0.5	2.1	0.5	40	62.9	1.15
2021-05-17	2021-08-13	ROCK SAMPLE	1.5	0.3	0.8	0.12	0.8	0.12	2.2	0.2	< 1	0.3	7	< 0.4	2.6	0.6	< 20	62.5	1.53
2021-07-12	2021-08-26	1	0.7	0.1	0.3	0.05	0.3	0.05	2.3	0.1	4	0.3	30	1.3	2.1	0.6	< 20	86.1	0.51
2021-06-21	2021-09-02	ROCK SAMPLE	0.8	0.2	0.4	0.06	0.3	0.05	2	1	2	0.9	67	< 0.4	2.1	0.6	< 20	31.9	0.16
2021-08-03	2021-09-24	ROCK SAMPLE	1	0.2	0.5	0.06	0.4	0.06	2.3	< 0.1	2	0.3	16	< 0.4	2.7	0.7	< 20	54.7	0.8
2021-07-23	2021-10-13	2021-07-23	3.3	0.7	2.1	0.29	2	0.31	1.7	0.2	< 1	0.1	< 5	< 0.4	0.5	0.1	< 20	113	0.95
2021-08-18	2021-10-13	2021-08-18	4.4	0.9	2.7	0.39	2.5	0.41	2.6	0.3	1	0.3	8	< 0.4	1.4	0.4	< 20	104	1.44
2021-08-30	2021-11-16	2021-08-30	0.8	0.2	0.4	0.06	0.4	0.06	2.3	0.2	2	0.5	6	0.7	1.8	0.5	< 20	65.6	0.78
2021-09-13	2021-11-16	2021-09-13	0.8	0.1	0.4	0.05	0.3	0.06	2.2	0.2	< 1	0.3	7	0.5	1.8	0.5	< 20	71.5	1.4
2021-11-21	2022-02-02	EMRS1	1.3	0.2	0.6	0.08	0.5	0.08	2.2	0.2	2	1.2	36	< 0.4	3.1	0.7	< 20	74.2	0.8
2021-11-21	2022-02-02	EMRS2	0.9	0.2	0.4	0.07	0.4	0.07	2.4	0.2	2	0.4	< 5	0.4	2.2	0.5	< 20	52	1.08
2021-12-06	2022-02-04	EMRS 2021.11.29	1	0.2	0.5	0.08	0.5	0.08	2.2	1.6	2	0.6	< 5	2.1	2	0.5	< 20	53	0.45
2021-12-06	2022-02-04	EMRS 2021.11.30	0.9	0.1	0.4	0.05	0.3	0.05	2.5	0.1	3	1.2	15	< 0.4	2.4	0.6	< 20	46.9	0.21
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	0.8	0.2	0.4	0.06	0.4	0.06	2.3	0.2	2	0.3	< 5	0.8	1.9	0.5	< 20	99.4	0.76
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	0.9	0.1	0.4	0.05	0.3	0.05	2.3	0.3	2	0.4	10	< 0.4	2.5	0.6	< 20	49.3	2.04
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	0.9	0.2	0.4	0.05	0.4	0.06	2.7	0.2	77	0.8	11	< 0.4	1.9	0.5	< 20	39.6	0.24
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	0.9	0.2	0.5	0.06	0.4	0.07	2.6	0.2	2	0.4	8	0.7	2.1	0.6	< 20	64.1	1.1
2022-03-03	2022-04-26	EMRS 2022-02-28	0.9	0.2	0.4	0.06	0.4	0.06	2.3	0.2	2	0.9	17	< 0.4	2	0.5	< 20	47.5	0.32
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	2.6	0.5	1.5	0.23	1.6	0.25	3.1	0.3	2	0.3	8	< 0.4	2.8	0.7	< 20	68.6	1.8
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	0.9	0.2	0.4	0.06	0.4	0.06	3.3	0.3	5	0.9	46	1.9	2	0.5	< 20	49.9	0.33
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	1	0.2	0.5	0.07	0.4	0.07	3	0.2	5	0.5	< 5	1.1	2.6	0.6	< 20	71.1	0.43
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	1.2	0.2	0.5	0.07	0.4	0.07	2.8	0.2	2	0.4	6	2	3.3	0.7	< 20	90.3	0.93
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	3	0.5	1.2	0.15	0.9	0.14	3.7	0.4	5	0.3	11	0.8	10.8	2.1	< 20	78.5	2.04
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	0.9	0.1	0.4	0.05	0.4	0.07	2.5	0.2	5	0.8	35	< 0.4	2.7	0.7	< 20	46.2	0.72
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	0.9	0.2	0.4	0.06	0.4	0.06	2.8	0.2	4	1.1	26	1.1	2.2	0.6	< 20	45.1	0.47
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	4.8	1	2.9	0.43	2.9	0.45	2.6	< 0.1	< 1	0.2	6	< 0.4	0.9	0.2	< 20	110	0.84
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	1.2	0.2	0.7	0.09	0.6	0.09	2.3	< 0.1	< 1	0.3	< 5	< 0.4	1.6	0.4	< 20	51.7	0.87
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	6.8	1.4	4.2	0.65	4.2	0.66	3.6	0.4	6	0.2	< 5	< 0.4	0.9	0.2	< 20	84.3	0.65
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	1	0.2	0.5	0.07	0.4	0.07	2.5	0.2	3	0.4	< 5	1.5	2.4	0.6	< 20	64.7	0.82
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	0.9	0.2	0.4	0.05	0.3	0.05	2.3	0.2	1	0.6	< 5	1.8	1.9	0.4	< 20	46.1	0.53
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	2	0.4	1.1	0.16	1	0.16	2.2	0.2	< 1	0.3	7	< 0.4	2.2	0.5	< 20	95.8	2.1
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	1.7	0.3	0.9	0.14	0.9	0.14	2.4	0.2	2	0.4	8	0.6	2.1	0.5	< 20	59	1.25
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	1.4	0.3	0.7	0.1	0.7	0.1	2.4	0.2	3	0.3	< 5	< 0.4	3.5	0.7	< 20	69.2	1.11
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	2.8	0.6	1.6	0.23	1.5	0.26	2.3	0.3	4	0.2	19	< 0.4	1.8	0.4	40	69	2.07
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	0.9	0.2	0.4	0.06	0.4	0.06	2.3	0.2	6	0.2	< 5	0.4	2.2	0.6	60	95.3	0.58
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	3.9	0.9	2.4	0.37	2.4	0.38	2.3	0.3	< 1	0.3	5	< 0.4	1.5	0.3	40	84.9	1.51
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	0.9	0.2	0.4	0.06	0.4	0.06	2.3	0.1	< 1	1.4	7	< 0.4	1.7	0.4	50	63.3	0.17
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	0.4	0.1	0.4	0.06	0.4	0.06	2.5	0.2	< 1	0.6	21	< 0.4	1.7	0.4	< 20	59.1	1.04
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.01	2.4	0.2	< 1	1.4	32	< 0.4	2.2	0.6	< 20	52.6	0.39
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	0.8	0.2	0.4	0.06	0.3	0.06	2.2	0.1	3	0.9	20	< 0.4	2.1	0.5	< 20	84.8	0.46
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	0.9	0.2	0.5	0.07	0.4	0.06	2.5	0.1	2	1.3	142	< 0.4	2.3	0.6	< 20	20.7	0.08
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	3.4	0.7	2	0.29	2	0.33	2.4	0.3	< 1	0.3	5	< 0.4	1.8	0.5	< 20	108	0.55
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	2.9	0.6	1.6	0.23	1.5	0.27	2.6	0.2	2	0.4	< 5	< 0.4	2.4	0.6	< 20	71.5	0.45
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	0.9	0.2	0.4	0.06	0.4	0.06	2.7	0.2	2	0.8	31	< 0.4	2.1	0.6	< 20	55.4	0.68
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	0.9	0.2	0.4	0.06	0.4	0.06	2.7	0.2	4	0.5	23	< 0.4	2.1	0.6	< 20	106	0.85
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	0.9	0.2	0.4	0.06	0.3	0.03	2.5	0.1	2	0.9	43	< 0.4	2.2	0.5	40	52.4	0.6
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	1.2	0.2	0.6	0.09	0.6	0.09	2.4	0.2	1	0.5	< 5	< 0.4	2	0.5	< 20	50.7	0.73
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	0.9	0.2	0.5	0.07	0.5	0.08	2.8	0.1	< 1	0.6	6	< 0.4	2.2	0.6	< 20	56.4	0.58
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	0.9	0.2	0.4	0.06	0.4	0.07	2.5	0.1	6	0.7	28	< 0.4	2.1	0.6	< 20	112	0.98
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	0.8	0.1	0.4	0.06	0.4	0.06	2.7	0.2	1	0.9	38	< 0.4	2.2	0.6	90	50.4	0.64
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	0.8	0.1	0.4	0.06	0.4	0.07	2.5	0.1	3	1.1	36	< 0.4	2.2	0.6	< 20	43.2	0.31
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	0.8	0.1	0.4	0.06	0.4	0.05	2.4	0.1	2	1	88	< 0.4	2.6	0.6	< 20	47.2	0.23
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	0.9	0.2	0.4	0.06	0.4	0.06	2.3	0.1	2	1	29	< 0.4	2.3	0.6	< 20	49.1	0.53
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	1.2	0.2	0.7	0.1	0.7	0.1	2.3	0.1	1	0.2	< 5	< 0.4	1.6	0.5	30	94.9	2.8
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	0.8	0.1	0.4	0.05	0.4	0.05	2.4	0.2	3	1	101	< 0.4	2.5	0.6	< 20	15.9	0.08
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	0.8	0.1	0.4	0.05	0.4	0.05	2.2	0.1	6	0.8	13	< 0.4	2	0.5	< 20	91	0.48
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	1	0.2	0.5	0.07	0.5	0.07	2.4	0.1	2	0.4	5	< 0.4	2	0.5	< 20	55.5	1
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	0.9	0.2	0.5	0.07	0.4	0.06	2	< 0.1	2	0.4	8	< 0.4	2	0.5	< 20	63.1	1.7
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	0.9	0.2	0.4	0.06	0.4	0.05	2.2	0.1	< 1	0.6	338	0.4	1.8	0.5	130	62.5	1.3
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	0.9	0.1	0.4	0.05	0.3	0.05	2	0.1	2	1	32	< 0.4	2.4	0.6	< 20	34.5	0.19
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	0.9	0.1	0.4	0.05	0.4	0.06	2.3	0.2	1	1.1	14	< 0.4	1.9	0.4	70	28.6	0.22
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	2	0.4	1.2	0.18	1.1	0.15	2.4	0.2	4	0.4	8	< 0.4	2.2	0.6	60	86.9	1.24
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	3.2	0.7	2	0.29	2	0.33	1.6	0.2	1	0.1	5	< 0.4	0.4	0.1	< 20	107	1
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	1.2	0.2	0.5	0.07	0.5	0.09	2.7	0.2	3	0.8	42	0.8	2.2	0.6	< 20	41.4	0.67
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	3.5	0.8	2.1	0.32	2.1	0.32	2.2	0.2	< 1	0.2	< 5	< 0.4	1.1	0.3	30	92	0.81
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	2.3	0.5	1.4	0.2	1.3	0.19	2.2	0.2	3	0.3	9	< 0.4	2.1	0.5	< 20	63.7	1.14
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	0.8	0.2	0.4	0.05	0.3	0.05	2	0.1	2	0.6	28	< 0.4	2.3	0.6	60	69.8	0.34
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	0.8	0.2	0.4	0.05	0.3	0.05	2.5	0.1	< 1	0.5	12	< 0.4	2.5	1.1	< 20	60.7	0.78
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	0.8	0.2	0.4	0.06	0.4	0.06	2.2	0.1	4	0.5	24	< 0.4	2.2	0.5	20	52.9	0.79
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	0.9	0.2	0.4	0.06	0.4	0.05	2.5	0.1	< 1	0.6	26	< 0.4	2	0.5	< 20	59.2	0.8
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	0.8	0.1	0.4	< 0.05	0.3	0.05	2.6	0.2	< 1	0.4	11	< 0.4	1.9	0.5	< 20	60.6	1.96
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	0.9	0.1	0.4	0.06	0.4	0.06	2.3	0.1	3	0.3	7	0.4	1.9	0.5	40	103	0.54
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	3.4	0.7	2.2	0.32	2.2	0.34	1.9	0.3	7	< 0.1	< 5	0.9	1.1	0.3	< 20	123	1.74
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	0.8	0.1	0.4	0.06	0.4	0.06	2.2	0.2	4	0.9	24	< 0.4	1.9	0.5	< 20	93.6	0.22
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	1	0.2	0.5	0.07	0.5	0.08	2.4	0.1	13	0.6	14	< 0.4	2	0.6	< 20	67.3	0.56
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	0.8	0.1	0.4	< 0.05	0.3	0.05	1.9	0.1	2	0.5	30	< 0.4	2.2	0.6	< 20	94.3	0.4
2024-10-08	2024-10-08	EMRS ROCK	0.8	0.2	0.5	0.07	0.4	0.06	2.3	0.1	< 1	0.3	5	< 0.4	2	0.6	< 20	58.6	2.6
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	0.9	0.2	0.4	0.05	0.4	0.05	2.3	0.1	2	0.9	63	< 0.4	2.5	0.6	< 20	44.8	0.33
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	0.9	0.2	0.4	0.06	0.4	0.07	2.3	0.1	2	0.7	59	< 0.4	2.2	0.6	< 20	64.6	0.31
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	0.9	0.1	0.4	0.05	0.4	0.05	1.9	0.1	2	0.6	21	< 0.4	1.6	0.4	< 20	38.4	0.26

Date Received	Report Date	Analyte Symbol	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Ag	Cs	Co
		Unit Symbol	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		Detection Limit	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	0.5	0.1	0.1	0.1	0.05	0.05	0.1
		Analysis Method	TD-MS																
2020-07-13	2020-07-29	Rock sample	1.29	7.78	1.69	2.33	1	48	46	473	2.45	1.9	33	0.4	0.8	0.2	1.1	7.03	10.1
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	1.22	7.73	1.33	1.98	0.4	51	16	508	3.04	2.1	12.2	0.4	0.9	0.2	0.58	6.06	7.8
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	1.39	8.24	1.92	2.13	1.7	57	17	660	2.64	2.4	16.9	0.4	0.8	0.1	1.28	7.31	9.8
2020-09-08	2020-11-10	Rock Sample	1.32	6.83	1.95	1.96	2.4	80	25	595	2.55	2.5	17.3	0.5	0.6	0.2	1.43	7.89	11.4
2020-10-05	2020-11-26	Rock Sample	1.23	6.96	1.22	1.8	0.2	45	25	441	2.3	1.9	10.6	0.4	0.7	0.1	0.55	5.5	7
2020-10-23	2020-11-26	ROCK SAMPLE	1.27	8.31	1.6	2.32	1.2	55	32	684	2.75	2.3	12.7	0.5	0.7	0.2	0.61	6.62	10.1
2020-11-16	2021-01-18	ROCK SAMPLE	1.66	7.44	1.34	1.81	0.2	47	13	325	2.44	2.2	10.6	0.4	0.7	0.1	0.45	5.23	6.7
2020-12-07	2021-01-20	ROCK SAMPLE	1.39	8.34	1.69	2.14	0.7	61	17	507	3.3	2	14.2	0.6	0.9	0.2	0.64	7.38	9.8
2021-02-10	2021-03-17	ROCK SAMPLE	1.05	8.02	1.53	1.73	0.1	40	9	254	3.12	2	6.6	0.3	0.8	0.2	0.43	4.11	5.5
2021-03-29	2021-04-20	ROCK SAMPLE	1.69	7.73	0.97	2.82	1.1	54	60	705	2.77	2	45.2	0.6	1	0.2	0.19	8.6	11.8
2021-04-26	2021-05-13	ROCK SAMPLE	1.16	7.33	1.66	1.67	0.4	53	36	799	2.57	2.4	15.4	0.5	0.8	0.2	0.73	6.15	9.7
2021-06-11	2021-07-21	ROCK SAMPLE	1.69	8.2	2	2.38	2.3	51	26	568	3.41	2.3	12.2	0.5	0.6	0.2	1.31	5.86	9.2
2021-05-17	2021-08-13	ROCK SAMPLE	1.44	7.44	1.58	2.59	1.1	78	30	812	3.36	2.2	21.8	0.8	0.8	0.3	0.66	5.44	13.7
2021-07-12	2021-08-26	1	1.14	8.86	1.66	1.82	0.5	45	18	444	2.92	1.8	8	0.4	0.7	0.2	0.41	5.6	7.8
2021-06-21	2021-09-02	ROCK SAMPLE	1.22	8.14	3.22	1	14.1	50	13	755	4.57	2.3	13.7	0.5	0.7	0.2	4.81	5.88	9.5
2021-08-03	2021-09-24	ROCK SAMPLE	1.31	8.5	1.54	2.47	3.7	54	10	607	2.78	2.2	10.7	0.5	0.7	0.2	0.43	6.94	9.7
2021-07-23	2021-10-13	2021-07-23	3.52	8.66	0.68	5.29	1.1	326	149	2040	10.4	0.9	94.7	2.1	0.5	0.7	4.33	4.82	46.1
2021-08-18	2021-10-13	2021-08-18	1.56	7.73	1.05	6.79	0.3	184	80	2220	9.99	1.6	64.3	2.7	0.7	0.9	0.38	8.5	46.7
2021-08-30	2021-11-16	2021-08-30	1.38	7.83	1.83	1.7	0.5	52	18	474	2.93	2.2	9.8	0.4	0.7	0.2	0.7	5.85	9.5
2021-09-13	2021-11-16	2021-09-13	0.93	7.49	1.39	2.77	0.4	53	31	570	2.46	2.8	12.3	0.4	0.7	0.1	0.91	6.69	8.5
2021-11-21	2022-02-02	EMRS1	1.66	7.91	1.69	2.45	0.3	65	24	1690	2.69	2.3	20	0.5	0.7	0.2	2.11	9.35	10.7
2021-11-21	2022-02-02	EMRS2	1.32	7.73	1.65	1.46	0.7	49	13	321	2.99	2	7.7	0.4	0.9	0.1	0.6	6.61	7.7
2021-12-06	2022-02-04	EMRS 2021.11.29	1.82	7.81	2.46	0.51	0.2	48	13	290	3.49	2	9.2	0.5	0.7	0.2	0.55	5.99	8
2021-12-06	2022-02-04	EMRS 2021.11.30	1.35	7.88	3.13	1.37	0.9	41	14	539	2.19	2.3	7.7	0.4	0.8	0.2	0.7	10.4	6.8
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	1.37	8.22	1.59	2.02	0.1	48	19	309	2.95	1.9	10.3	0.4	0.8	0.2	0.44	4.33	8.7
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	0.59	7.89	1.92	2.03	< 0.1	40	15	426	1.98	2.1	6.9	0.4	0.8	0.2	0.19	3.82	6.5
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	1.04	7.36	2.26	1.41	1.7	42	20	643	2.39	2.4	12.7	0.4	0.7	0.2	0.89	7.18	8.5
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	1.1	7.87	1.8	2.16	< 0.1	43	21	514	2.57	2.1	8.8	0.4	0.8	0.1	0.49	7.28	7.2
2022-03-03	2022-04-26	EMRS 2022-02-28	1.3	7.99	2.75	2.47	3.1	45	17	1040	2.49	2.1	10.8	0.4	0.8	0.2	0.56	7.91	8
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	1.02	7.2	1.96	2.26	0.3	49	20	698	3.22	3.4	15.8	1.5	0.9	0.5	0.65	4.22	11.1
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	1.15	8.99	2.18	2.08	1.4	46	20	969	2.72	2.2	12.5	0.4	0.9	0.2	1.63	9.14	8.2
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	1.49	8.09	1.98	2.15	0.3	47	23	714	4.07	2.4	12.1	0.5	1	0.2	0.67	5.71	9.4
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	1.4	8.12	1.51	2.37	0.2	67	32	653	3.85	2.3	23.3	0.5	0.8	0.2	0.71	5.04	12
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	3.12	7.69	1.67	4.93	< 0.1	143	76	973	5.34	2.7	70.6	1.3	1.4	0.4	0.17	7.01	27.9
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	0.88	7.46	1.46	1.84	0.7	38	12	673	1.86	2.1	7.6	0.4	0.3	0.2	0.49	8.02	5.8
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	1.13	8.01	1.43	1.73	0.6	42	14	669	2.19	2.2	9.1	0.5	0.2	0.2	1.02	9.68	6.9
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	2.57	6.09	0.75	4.8	0.6	155	76	2180	10.6	1.1	49.5	2.5	0.7	0.9	2	6.35	36
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	1.96	8.24	1.13	3.54	0.1	98	62	812	3.85	2.4	28.3	0.6	0.8	0.2	0.13	5.89	16.6
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	2.54	6.42	0.66	4.91	0.2	104	50	2680	11.9	1.6	20.2	4	0.8	1.3	1.36	5.69	34.2
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	1.24	7.57	1.32	1.66	< 0.1	51	22	328	3.76	2	13	0.5	0.8	0.2	0.37	6.45	8.4
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	0.78	7.53	1.64	1.38	0.2	42	15	361	2.98	2.1	8.6	0.4	0.6	0.1	1.32	6.12	6.3
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	1.54	7.62	1.52	4.03	0.2	142	32	1270	5.11	2.2	34.1	1.1	0.7	0.4	0.34	9.26	20.1
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	1.23	7.08	1.65	2.91	0.3	87	28	816	3.47	2.1	17.2	0.8	0.8	0.3	0.56	6.36	13.2
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	1.26	7.69	1.44	2.44	< 0.1	78	26	749	3.36	2.3	22.6	0.6	1	0.2	0.36	9.79	13.1
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	1.28	6.62	0.94	3.4	0.7	145	77	1180	5.58	2.2	32.5	1.4	0.8	0.5	0.56	5.4	18.8
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	1.07	7.12	0.71	2.21	0.1	41	19	306	2.33	1.6	6.9	0.4	0.7	0.1	0.6	5.4	6.3
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	1.39	6.36	1.2	3.79	0.4	248	59	2720	10.1	2.1	51.7	2.4	0.6	0.8	0.9	6.9	53.6
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	1.54	7.55	1.38	0.95	4.7	46	43	928	4.08	2.3	18.1	0.5	0.7	0.2	0.99	5.74	13.1
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	1.53	7.9	1.65	2.53	0.3	115	58	648	4.73	2.2	23.5	1.1	0.7	0.4	1.46	5.22	15
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	1.3	7.77	2.86	2.58	0.4	51	31	1370	2.46	1.9	14.8	0.5	0.7	0.2	1.17	8.5	9
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	0.54	7.77	1.84	1.86	5.9	38	14	427	1.76	2.4	6.3	0.4	0.7	0.1	0.7	8.25	6.2
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	0.34	7.83	2.79	1.08	2.3	45	16	323	1.8	2.7	11.7	0.4	0.7	0.1	1.23	6.43	9.3
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	2.12	7.2	1.29	2.86	0.6	162	57	1360	8.08	1.9	38.9	1.9	0.6	0.6	0.68	7	28.1
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	2.88	7.79	1.86	2.52	0.3	144	155	1370	6.92	2.2	65.4	1.3	0.6	0.5	1.77	7.02	27.6
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	1.58	8.44	2.48	2.51	0.4	46	62	722	2.36	2.4	13	0.5	0.8	0.2	1.4	7.22	8
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	1.27	8.9	1.71	0.99	0.4	46	36	447	2.22	2.5	11.9	0.4	0.9	0.2	1	5.89	8.1
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	0.7	7.61	2	1.2	1.1	41	18	904	2.05	1.9	7	0.4	0.7	0.1	1.04	5.88	6.8
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	1.38	7.75	1.67	2.73	0.1	67	21	895	3.87	1.6	16.1	0.6	0.9	0.2	1.25	9.23	10.6
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	1.59	6.83	2.03	2.77	0.8	57	56	829	3.45	1.4	22.4	0.5	0.8	0.2	5.59	9.43	9.8
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	1.11	8.5	1.85	1.11	0.5	55	51	320	2.03	2.5	12	0.5	0.8	0.1	1.07	5.98	7.9
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	1.12	7.35	1.84	2.22	1.6	41	18	776	2.17	2	8.5	0.4	0.8	0.1	1.47	6.66	7.3
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	1.06	7.73	1.8	2.02	0.8	41	11	1030	1.94	2	7.7	0.4	0.9	0.1	0.9	6.23	6.9
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	2.09	8.59	3.25	1.71	2.1	46	12	1510	2.6	2.2	7.8	0.4	0.8	0.1	1.06	8.48	8
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	1.18	8.64	2.26	2.21	0.7	49	14	848	2.28	2.1	10.3	0.5	1	0.2	0.85	7.64	8.7
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	1.75	8.37	0.81	3.53	< 0.1	86	72	478	3.83	1.7	32.7	0.6	0.9	0.2	1.49	5.79	16.1
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	1.62	8.56	2.08	2.59	2.7	43	10	1980	2.23	1.9	7.1	0.4	0.9	0.1	0.53	5.92	5.8
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	0.92	8.04	1.36	2.65	0.7	40	19	1000	2.01	1.7	9.4	0.3	0.8	0.1	1.43	6.44	6.7
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	1.3	7.96	1.41	2.31	0.4	60	46	593	2.59	2	24.9	0.5	0.7	0.2	0.52	6.91	10.5
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	1.3	7.73	1.76	2.54	0.1	45	14	416	2.53	1.7	11.3	0.5	0.8	0.1	0.75	6.74	8.5
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	1.2	7.67	1.88	1.42	6.1	43	27	648	2.98	1.8	10.7	0.4	0.8	0.1	5.36	8.19	8.3
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	0.98	7.25	1.75	0.88	1.4	39	11	695	2.8	2	9	0.4	0.7	0.1	1.07	7.14	6.7
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	0.82	7.71	2.02	1.63	3	42	21	826	2.8	2.2	8.9	0.5	0.8	0.1	0.65	7.62	6.2
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	1.39	7.58	1.53	3.13	0.3	120	131	883	4.07	0.7	24.8	1	0.8	0.4	0.62	7.44	16
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	3.25	7.62	0.78	4.92	0.3	214	181	1960	10.1	0.8	82.6	1.8	0.4	0.6	3.15	6.44	45.7
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	0.96	8.73	1.9	2.11	1.3	52	15	698	2.51	2	11.3	0.5	0.7	0.2	2.19	10.6	8.9
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	2.66	7.03	0.6	3.91	0.2	372	73	1440	8.22	1.6	52.2	2.1	0.5	0.7	0.45	4.27	35.9
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	2.49	7.29	1.34	3.91	0.3	259	103	1190	6.3	1.8	58.1	1.1	0.5	0.4	0.64	6.55	29.8
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	1.4	7.14	1.33	1.93	0.9	42	16	934	1.91	2	8.1	0.5	0.7	0.1	1.66	6.26	6.3
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	0.54	8.62	1.39	2.86	0.5	45	12	506	1.88	2.2	20.8	0.4	0.7	0.1	0.3	8.5	21
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	1.3	6.97	1.22	1.86	0.2	41	14	764	2.12	2	8.2	0.4	0.7	0.2	1.13	7.71	7.1
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	1.37	7.94	1.52	1.73	0.3	45	9	739	2.12	2	8.2	0.4	0.9	0.2	1.22	7.63	7.4
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	1.21	7.27	1.86	2.32	0.3	35	24	412	2.27	1.6	8.1	0.4	0.6	0.1	0.25	7.96	6.7
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	1.49	7.51	1.2	1.87	1.8	42	64	523	2.7	2	8.7	0.5	0.8	0.1	1.35	5.68	7.5
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	4.22	7.54	0.2	5.41	< 0.1	234	255	1170	9.13	1.5	115	2.4	0.5	0.8	0.78	1.03	34.4
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	1.13	6.9	1.7	1.93	2.7	37	5	747	2.17	2	7.6	0.4	0.6	0.1	0.89	6.05	6.3
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	1.26	8.68	2.04	1.52	1.1	52	17	413	2.01	2.2	9.2	0.5	1	0.2	0.94	8.71	7.8
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	1.58	7.96	1.45	1.82	1.3	49	15	811	2.15	2.1	8.3	0.4	0.6	0.2	2.03	6.55	7.5
2024-10-08	2024-10-08	EMRS ROCK	0.87	8.61	1.14	2.25	0.4	44	20	524	2.45	1.7	9.1	0.5	0.7	0.1	0.23	7.1	7.2
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	1.31	7.96	1.9	1.97	1.9	48	14	952	2.3	2.1	8.6	0.4	0.8	0.1	1.65	7.61	8.1
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	1.67	7.38	1.93	2.76	1.2	42	21	1240	2.13	2.2	8.9	0.4	0.7	0.1	1.37	7.02	7
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	1.3	6.68	2.18	1.88	0.5	38	15	800	2.33	1.7	8.5	0.4	0.8	0.1	0.68	7.98	6.6

Date Received	Report Date	Analyte Symbol	Eu	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La
		Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		Detection Limit	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1
		Analysis Method	TD-MS																
2020-07-13	2020-07-29	Rock sample	0.61	1.56	0.5	281	18.7	11	64.7	4.5	68	2.2	1.87	< 0.1	< 1	0.9	0.4	460	17.4
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	0.58	1.99	0.7	161	20.7	16.8	42.7	4.2	74	2.1	1.96	< 0.1	< 1	1	0.3	182	11.8
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	0.52	1.72	0.6	482	21.2	19.7	74.4	4.9	100	2.6	4.47	0.1	< 1	1.3	0.4	550	15.1
2020-09-08	2020-11-10	Rock Sample	0.51	2.03	1.4	559	20.7	23.2	55.9	5.3	95	2.7	0.96	0.2	< 1	2.2	0.6	132	16
2020-10-05	2020-11-26	Rock Sample	0.54	9.86	0.4	109	17.3	9.6	39.6	3.9	67	1.9	1.38	< 0.1	< 1	0.7	0.3	145	11.3
2020-10-23	2020-11-26	ROCK SAMPLE	0.55	1.51	0.5	330	18.2	12.2	50.9	4.9	89	2.3	0.91	< 0.1	< 1	0.9	0.3	442	14.7
2020-11-16	2021-01-18	ROCK SAMPLE	0.55	1.69	0.7	90.2	19	9.6	48.9	4.1	80	1.9	3.29	< 0.1	< 1	0.8	0.2	237	12.9
2020-12-07	2021-01-20	ROCK SAMPLE	0.57	1.12	0.9	192	17.7	13.5	49.9	5	69	2	0.65	< 0.1	< 1	1.1	0.3	127	14.2
2021-02-10	2021-03-17	ROCK SAMPLE	0.65	3.81	1.2	42.1	20.7	8.3	50.3	3.9	68	1.9	1.24	< 0.1	1	0.5	0.4	60	12.5
2021-03-29	2021-04-20	ROCK SAMPLE	0.91	0.16	0.5	412	15.2	12.4	30.2	5.7	64	2.1	0.63	< 0.1	< 1	0.7	0.1	438	21.8
2021-04-26	2021-05-13	ROCK SAMPLE	0.72	2	< 0.1	158	19.3	19.1	58.1	4.9	89	2.7	1.25	< 0.1	< 1	0.9	0.3	151	17.8
2021-06-11	2021-07-21	ROCK SAMPLE	0.65	1.91	0.8	507	22.8	16.6	58.2	4.9	93	2.7	0.91	0.2	< 1	1.2	0.4	64	13.2
2021-05-17	2021-08-13	ROCK SAMPLE	0.72	0.82	0.5	332	17	16.5	37.8	6.9	77	3.5	0.94	< 0.1	< 1	0.8	0.3	437	16.8
2021-07-12	2021-08-26	1	0.49	1.99	< 0.1	211	21.9	10.4	50.8	3.8	70	2.1	1.06	< 0.1	< 1	0.6	0.1	296	14.5
2021-06-21	2021-09-02	ROCK SAMPLE	0.64	1.15	0.2	2990	18.9	127	90.4	4.6	81	4.7	0.68	0.8	< 1	2.7	0.6	25	20.4
2021-08-03	2021-09-24	ROCK SAMPLE	0.73	1.22	0.4	894	21.3	11	50.1	4.6	77	2	0.77	0.1	< 1	0.9	0.2	452	18.9
2021-07-23	2021-10-13	2021-07-23	0.8	0.26	< 0.1	552	18.8	8.7	15.8	16.6	34	0.3	0.07	0.1	< 1	< 0.1	< 0.1	96	4.2
2021-08-18	2021-10-13	2021-08-18	1.08	0.12	0.4	191	20.8	10.3	34.6	22.5	56	0.6	0.08	< 0.1	< 1	0.1	< 0.1	223	9.5
2021-08-30	2021-11-16	2021-08-30	0.53	2.09	1.1	193	17.5	13.6	59.2	4.1	79	2.1	1.15	< 0.1	< 1	1.2	0.3	247	13.5
2021-09-13	2021-11-16	2021-09-13	0.53	1.62	0.8	136	14.9	21.3	40.1	3.8	109	2.3	0.71	0.1	< 1	0.9	0.5	310	12.6
2021-11-21	2022-02-02	EMRS1	0.72	0.12	< 0.1	137	17.7	83.7	65.1	5.5	82	2.3	0.7	< 0.1	< 1	1.1	0.2	236	20.9
2021-11-21	2022-02-02	EMRS2	0.53	3.31	1.3	226	20.2	12	55.2	3.9	66	2.1	1.92	0.1	< 1	1.6	0.8	58	12.1
2021-12-06	2022-02-04	EMRS 2021.11.29	0.52	3.56	0.7	82.6	19.3	15.2	76.5	4.3	66	1.9	0.76	0.2	< 1	1.4	0.8	89	12.4
2021-12-06	2022-02-04	EMRS 2021.11.30	0.7	0.6	0.1	211	19.3	60.7	107	3.6	76	2.1	0.55	0.2	< 1	3	< 0.1	169	15
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	0.58	2.29	1.3	64.4	23.6	7.3	47.4	4.4	62	2	6.5	0.1	< 1	0.6	0.3	150	12.8
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	0.59	0.08	0.2	67.3	17.8	4	62.2	4.2	70	2.5	1.77	< 0.1	< 1	0.4	< 0.1	471	17.8
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	0.64	0.54	0.4	456	18.4	26.5	69.9	4.2	83	0.9	1.05	< 0.1	< 1	1	0.5	238	13.9
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	0.58	1.7	0.3	72.9	19.6	17.8	48.3	3.9	75	2	1.1	0.1	< 1	0.5	0.1	454	13.5
2022-03-03	2022-04-26	EMRS 2022-02-28	0.61	0.59	0.6	759	19.3	23.3	82.1	3.7	74	1.8	1.14	< 0.1	< 1	0.7	0.2	163	13.6
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	0.94	0.46	0.4	231	17.4	6.1	46.5	13.2	118	4.6	0.81	< 0.1	1	0.5	0.3	390	19.4
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	0.64	3.31	1.5	347	18.5	32	87.5	4.4	78	2.3	1.09	< 0.1	< 1	0.8	2	91	16.1
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	0.75	1.76	0.6	185	18.9	11.4	57.2	4.9	81	2.5	1.95	0.1	< 1	0.7	0.3	294	19.6
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	0.75	3.03	0.3	128	19.9	7.9	48.5	5	93	3.1	0.64	< 0.1	< 1	0.6	0.2	205	22.1
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	2.23	0.74	< 0.1	76.4	16.5	6.4	42.4	12.5	147	1.4	0.35	< 0.1	< 1	0.3	< 0.1	1320	76.5
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	0.68	0.2	0.8	257	18.8	28.3	67.8	4.1	71	2.4	0.47	< 0.1	< 1	1.3	< 0.1	262	19.3
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	0.64	2.24	1.3	172	19	21.1	71.5	4.2	80	2.4	1.12	< 0.1	< 1	0.9	0.6	75	16.4
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	1.24	0.39	< 0.1	256	20.4	19.9	22.2	22.2	36	0.6	0.63	0.2	< 1	0.2	0.1	118	9.8
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	0.58	0.29	< 0.1	124	20.5	5.7	30.2	6.1	85	2.4	0.5	< 0.1	< 1	0.4	< 0.1	426	12.7
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	1.63	0.37	0.8	236	23.6	17.8	18	31.2	55	0.9	0.13	0.1	< 1	0.2	0.2	93	9.7
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	0.63	4.06	0.9	111	21.7	10.7	43.5	4.3	65	2	2.54	< 0.1	< 1	5.1	0.3	115	16.6
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	0.5	3.47	0.2	85.6	18.5	20.2	60.9	3.4	75	2.1	0.77	< 0.1	< 1	0.7	0.3	224	12.4
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	0.88	0.13	0.3	160	19.8	8.1	38.5	9.5	72	2.6	0.43	< 0.1	< 1	0.8	0.2	533	16.1
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	0.62	1.59	0.7	131	21.3	11	47.6	7	76	2.7	1.3	< 0.1	< 1	0.5	0.3	478	11.9
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	0.9	0.11	0.8	76.2	20.8	3.5	37.8	6.4	87	4.1	3.8	< 0.1	< 1	1.7	0.8	159	23.8
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	0.71	0.15	0.5	289	14.8	146	28.1	11.7	77	4.1	0.53	< 0.1	< 1	1.8	0.2	362	12.3
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	0.48	1.52	1.3	54.1	18.6	10.9	24.9	4.1	49	2.4	15.9	< 0.1	2	1.2	0.2	264	10.9
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	0.89	0.4	0.9	263	23	11.3	24.5	18.2	71	4.1	1.03	< 0.1	< 1	0.6	0.8	81	8.2
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	0.59	0.22	0.4	794	18.9	61.6	65.2	4.5	80	2.1	0.55	0.3	< 1	1.6	< 0.1	214	12
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	0.71	0.84	1.5	142	18.6	24.9	51.7	11	73	2.8	0.73	< 0.1	< 1	1	1.2	105	10.5
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	0.6	0.16	0.2	165	16.7	116	96.4	5	63	2.1	0.77	< 0.1	< 1	1.4	0.4	131	13.3
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	0.52	0.11	< 0.1	1490	18.3	58.6	76.5	3.4	83	2	0.52	0.1	< 1	1.6	< 0.1	346	14.5
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	0.66	0.07	< 0.1	711	20.5	96.7	111	3.6	97	2.2	0.4	< 0.1	< 1	10.6	< 0.1	105	19.5
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	1.02	0.46	1.6	416	21.1	6.3	30.3	15.7	61	2.8	1.33	0.1	< 1	2	0.6	77	12.7
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	0.92	0.6	0.8	241	21.2	23.2	47.3	11	72	2.9	0.78	0.1	< 1	1.5	2.2	55	13.6
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	0.6	0.16	0.5	135	21.5	43.8	79.6	3.9	83	1.7	1.12	< 0.1	< 1	1.2	0.7	115	16
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	0.59	0.23	0.4	158	22.3	32	54.3	4.1	91	1.7	0.48	< 0.1	< 1	0.9	0.8	263	16.3
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	0.53	0.07	0.3	339	20.2	39.4	65.3	3.5	61	1.9	2.06	< 0.1	< 1	0.8	< 0.1	220	14.6
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	0.56	0.38	0.7	110	19.1	36.8	46.2	5	52	2.2	1.89	< 0.1	< 1	2.1	1.5	88	10.8
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	0.64	0.37	1	266	20.2	34	49.9	4.6	46	2.2	3.54	0.1	< 1	6.3	3.4	180	13.5
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	0.6	0.25	0.5	155	23.2	25.6	56.8	3.9	93	2.6	4.15	< 0.1	< 1	1.2	0.8	330	14.8
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	0.63	0.15	0.4	476	22.1	66.4	65.3	3.6	63	2	1.17	< 0.1	< 1	1.5	0.6	212	15.3
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	0.57	0.13	0.3	242	21.3	29.5	71.4	3.5	65	1.9	0.64	< 0.1	< 1	1.3	0.3	191	15.2
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	0.66	0.18	0.4	684	23.2	97.4	108	4.4	80	2.4	1.33	< 0.1	< 1	3.1	0.1	271	18.2
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	0.68	0.21	0.4	203	22.4	34.8	97.8	4.7	78	2.4	1.01	< 0.1	< 1	1.6	0.4	210	18.7
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	0.64	1.03	0.6	41.2	20.8	14	24.6	6.1	62	2.4	1.21	< 0.1	< 1	1.4	1.9	219	13.5
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	0.61	0.17	0.8	730	20.2	40.1	82.1	4.1	65	2.3	1.13	< 0.1	< 1	1.8	< 0.1	390	16.9
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	0.56	0.05	0.5	250	18.9	77.6	55.3	3.5	66	1.9	0.56	< 0.1	< 1	1.8	0.2	344	14.6
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	0.62	0.61	0.6	201	18.2	12.3	51.3	5.1	77	2.1	1.46	< 0.1	< 1	0.8	0.2	415	15.2
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	0.66	0.21	0.4	64	19.6	14.1	49.4	4.5	56	2.1	0.51	< 0.1	< 1	1.2	0.4	252	18.7
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	0.54	0.75	1.7	1390	20.5	48.5	68.4	4	62	2.2	1.56	0.1	< 1	4.2	2.4	208	12.3
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	0.65	0.61	0.3	356	18.4	77.6	81.8	3.8	73	2.5	0.5	0.2	< 1	2.7	< 0.1	242	15.7
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	0.61	0.47	0.2	792	21.1	107	86.1	3.2	84	2.2	0.68	0.3	< 1	1.3	< 0.1	202	15.4
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	0.88	0.36	0.4	142	18.3	52.2	45.9	8.8	23	2.9	1.61	0.1	< 1	1.2	0.5	382	16.6
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	0.8	0.2	0.3	323	20	10.6	17.1	16.6	32	0.6	< 0.05	0.1	< 1	0.2	0.1	122	3.9
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	0.72	1.35	0.4	349	22.5	28.7	67	5.1	77	2.4	0.79	< 0.1	< 1	2.4	1.1	117	17
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	0.96	0.27	1.2	228	19.6	9.5	16.7	16.8	60	3	2.42	0.1	< 1	2.4	0.4	107	10
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	0.92	0.24	0.2	152	20.3	19.3	40.5	11	67	2.7	0.32	< 0.1	< 1	1.4	0.5	227	16.1
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	0.63	0.18	0.2	250	20.7	32.3	52	3.7	68	2.1	1.56	< 0.1	< 1	0.9	0.9	124	17.5
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	0.63	0.25	< 0.1	144	19.9	34.5	50.1	4	80	2.1	2.92	< 0.1	< 1	0.7	< 0.1	416	15.1
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	0.65	0.27	< 0.1	116	19.4	19.6	47.1	4	65	2.1	0.62	< 0.1	< 1	0.5	1.1	204	17
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	0.59	0.2	< 0.1	115	21.4	18.5	54.4	4.1	72	2.1	0.66	< 0.1	< 1	0.6	0.9	181	14.7
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	0.48	0.15	0.4	125	19.6	29.2	47.7	3.5	55	2.1	1.02	< 0.1	< 1	0.6	< 0.1	238	11.7
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	0.65	2.32	0.9	466	20.4	12.6	37.1	4.4	68	2.3	1.24	0.4	< 1	1.2	0.5	59	15.3
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	1.08	1.42	0.5	82	21.9	9.7	3.8	20.9	57	1.3	1.79	0.2	< 1	0.2	0.3	43	13.3
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	0.5	0.29	< 0.1	663	18.4	23.3	64.3	3.5	64	2	0.5	< 0.1	< 1	2.1	0.2	221	11.7
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	0.65	1.32	0.5	265	21	12.9	65.2	4.3	69	3.5	0.84	< 0.1	< 1	1.4	0.6	95	15.2
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	0.62	0.29	0.2	388	21.6	29.7	55.3	4.1	68	2.5	0.35	< 0.1	< 1	0.7	1.2	269	16.5
2024-10-08	2024-10-08	EMRS ROCK	0.58	0.19	0.5	161	20.9	7.6	38.1	4.7	59	2.2	0.76	< 0.1	< 1	0.6	0.5	416	14.5
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	0.62	0.36	1.1	524	22.4	27.1	75.6	4.3	65	3	0.63	< 0.1	< 1	1	0.7	74	18.2
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	0.67	0.11	0.2	307	20.1	57	68.7	4.2	76	2.3	0.63	< 0.1	< 1	1.6	0.7	135	16.9
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	0.55	0.51	0.3	152	17.3	18.6	65.9	3.7	64	2.1	0.63	< 0.1	< 1	0.7	0.4	68	13.6

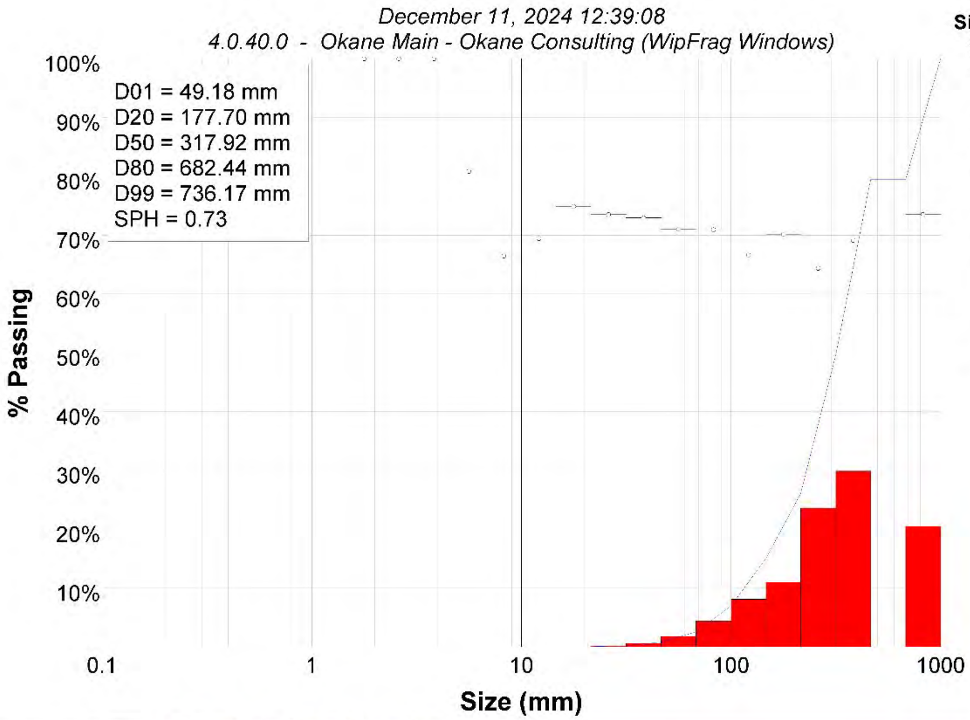
Date Received	Report Date	Analyte Symbol	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl
		Unit Symbol	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**
		Detection Limit	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.001**	**0.05**
		Analysis Method	**TD-MS**																
2020-07-13	2020-07-29	Rock sample	36.3	3.8	14.8	2.5	1.8	0.2	1	114	< 0.1	< 0.1	0.4	< 0.1	0.1	356	2	< 0.001	0.53
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	28.8	2.9	11.5	2.2	1.5	0.2	0.9	97.3	< 0.1	< 0.1	0.4	< 0.1	0.1	400	2.1	< 0.001	0.54
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	33.8	3.6	14.6	1.6	1.4	0.1	0.9	104	< 0.1	< 0.1	0.4	< 0.1	0.2	304	2.6	0.002	0.71
2020-09-08	2020-11-10	Rock Sample	31.7	3.3	15.1	2.3	1.6	0.2	1.1	111	0.1	< 0.1	0.5	< 0.1	0.2	268	2	< 0.001	0.59
2020-10-05	2020-11-26	Rock Sample	25.1	3.1	10.6	1.7	1.2	0.1	0.7	95.1	< 0.1	< 0.1	0.3	< 0.1	0.1	263	2.2	< 0.001	0.52
2020-10-23	2020-11-26	ROCK SAMPLE	32.7	3.3	13.8	1.6	1.5	0.2	0.9	52.9	< 0.1	< 0.1	0.4	< 0.1	0.2	316	2.6	< 0.001	0.53
2020-11-16	2021-01-18	ROCK SAMPLE	25.7	3	10.3	1.7	1.4	0.2	0.9	115	0.2	< 0.1	0.4	< 0.1	0.1	318	2.3	0.001	0.46
2020-12-07	2021-01-20	ROCK SAMPLE	30.1	3.4	13.2	1.9	1.6	0.2	1	52.5	< 0.1	< 0.1	0.5	< 0.1	0.1	295	1.8	< 0.001	0.57
2021-02-10	2021-03-17	ROCK SAMPLE	26.9	3	10.4	2.1	1.4	0.2	0.8	186	< 0.1	< 0.1	0.3	< 0.1	< 0.1	295	4.1	0.002	0.37
2021-03-29	2021-04-20	ROCK SAMPLE	51.6	6.1	22.1	3.8	2.2	0.2	1.3	30.4	< 0.1	< 0.1	0.5	< 0.1	0.1	422	0.6	0.002	0.34
2021-04-26	2021-05-13	ROCK SAMPLE	41.8	4.5	16.1	2.5	1.9	0.2	1.1	89.6	< 0.1	< 0.1	0.5	< 0.1	0.2	294	1.9	< 0.001	0.73
2021-06-11	2021-07-21	ROCK SAMPLE	34	3.6	13.6	1.7	1.6	0.2	1.1	316	< 0.1	< 0.1	0.4	< 0.1	0.2	326	2.2	< 0.001	0.57
2021-05-17	2021-08-13	ROCK SAMPLE	38.1	4.5	16.7	3.1	2.2	0.3	1.5	45.3	0.1	0.1	0.7	0.1	1	309	1.2	0.001	0.36
2021-07-12	2021-08-26	1	28.4	3.3	11.8	1.6	1.5	0.1	0.7	178	< 0.1	< 0.1	0.3	< 0.1	0.1	230	3.9	< 0.001	0.36
2021-06-21	2021-09-02	ROCK SAMPLE	44.4	5.2	19.5	2.6	1.9	0.2	1	205	< 0.1	< 0.1	0.4	< 0.1	1.4	47.8	1.8	< 0.001	1.34
2021-08-03	2021-09-24	ROCK SAMPLE	39.6	4.6	16.4	3	1.7	0.2	0.9	63.3	< 0.1	< 0.1	0.4	< 0.1	0.2	325	2.2	< 0.001	0.48
2021-07-23	2021-10-13	2021-07-23	10.3	1.4	6.9	2.3	2.7	0.4	3.3	165	0.2	0.3	1.9	0.3	< 0.1	133	< 0.1	< 0.001	0.14
2021-08-18	2021-10-13	2021-08-18	21.6	2.7	12.3	3.6	3.8	0.6	4.2	107	0.2	0.4	2.5	0.3	< 0.1	205	0.2	< 0.001	0.36
2021-08-30	2021-11-16	2021-08-30	27.8	3.1	11.7	1.8	1.4	0.2	0.9	107	< 0.1	< 0.1	0.4	< 0.1	0.1	291	2.1	< 0.001	0.56
2021-09-13	2021-11-16	2021-09-13	26.3	2.6	9.5	2.1	1.3	0.2	0.8	168	< 0.1	< 0.1	0.4	< 0.1	0.2	561	0.5	< 0.001	0.39
2021-11-21	2022-02-02	EMRS1	47.7	5.3	19.4	2.1	2	0.2	1.2	26.4	< 0.1	< 0.1	0.5	< 0.1	0.2	115	0.6	< 0.001	1.25
2021-11-21	2022-02-02	EMRS2	27.2	3.1	11.4	2.3	1.4	0.1	0.9	110	< 0.1	< 0.1	0.4	< 0.1	0.2	250	1.7	< 0.001	0.53
2021-12-06	2022-02-04	EMRS 2021.11.29	25.6	3	11.6	1.9	1.4	0.2	0.9	164	< 0.1	< 0.1	0.4	< 0.1	0.1	118	2.2	< 0.001	0.61
2021-12-06	2022-02-04	EMRS 2021.11.30	30.1	3.3	12.6	2.5	1.5	0.2	0.8	34.3	< 0.1	< 0.1	0.3	< 0.1	0.1	135	2.5	< 0.001	1.43
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	25.7	3	10.3	2.2	1.3	0.2	0.8	114	< 0.1	< 0.1	0.4	< 0.1	0.1	320	2.7	0.005	0.39
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	35.4	4	13.4	2.9	1.4	0.2	0.8	155	0.1	< 0.1	0.4	< 0.1	0.2	350	2	< 0.001	0.56
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	28.1	3.4	12.3	2.2	1.5	0.2	1	45.2	0.1	< 0.1	0.4	< 0.1	< 0.1	141	139	< 0.001	0.99
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	27.6	3.2	11.5	2.4	1.4	0.2	0.8	83.6	< 0.1	< 0.1	0.4	< 0.1	0.1	420	2	< 0.001	0.47
2022-03-03	2022-04-26	EMRS 2022-02-28	27.3	3.3	12	2	1.4	0.2	0.9	25.8	< 0.1	< 0.1	0.3	< 0.1	0.1	155	1.9	< 0.001	1.17
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	43	5.5	20.8	4.3	3.1	0.4	2.7	91.7	< 0.1	0.2	1.6	0.2	0.4	252	1.9	< 0.001	0.36
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	33.3	3.8	13.8	2.5	1.6	0.2	0.9	54	< 0.1	< 0.1	0.4	< 0.1	0.1	139	3	0.003	1.25
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	39.7	4.4	16	2.9	1.9	0.2	1	181	< 0.1	< 0.1	0.4	< 0.1	0.2	313	3.4	0.003	0.45
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	47.5	5.4	19.9	2.9	2.1	0.2	1	207	< 0.1	< 0.1	0.4	< 0.1	0.2	418	3	< 0.001	0.48
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	161	18.3	69.8	11	6.4	0.7	3	44.7	< 0.1	0.2	0.9	0.1	< 0.1	1230	0.6	< 0.001	0.32
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	38.3	4.1	14.3	2.2	1.6	0.2	0.8	18.1	0.2	< 0.1	0.4	< 0.1	0.2	223	1.2	0.001	0.74
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	34.6	3.9	13.9	2.3	1.6	0.2	0.9	58.9	0.1	< 0.1	0.4	< 0.1	0.2	168	2.8	< 0.001	1.03
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	23.7	3.2	15.2	3.6	4.1	0.7	4.3	111	0.1	0.4	2.5	0.4	< 0.1	238	0.4	0.003	0.15
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	25.4	3	11.1	2	1.6	0.2	1.2	48.6	< 0.1	< 0.1	0.6	< 0.1	0.2	410	1.7	< 0.001	0.27
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	25.7	3.7	16.2	4.8	5.8	1	6	68.3	0.3	0.5	3.3	0.5	< 0.1	162	1	0.001	0.15
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	35.8	4.1	13.5	2.2	1.6	0.2	0.9	29.9	< 0.1	< 0.1	0.4	< 0.1	0.1	435	4.2	< 0.001	0.41
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	25.7	3.1	10.4	2	1.4	0.2	0.7	125	< 0.1	< 0.1	0.3	< 0.1	0.1	178	1.3	< 0.001	0.65
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	36.6	4.8	17.4	2.9	2.5	0.4	2	35.3	< 0.1	0.2	1.1	0.2	0.1	657	1	< 0.001	0.39
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	28.8	3.2	13.1	2.1	1.8	0.2	1.4	62	< 0.1	0.1	0.7	< 0.1	0.1	389	1.7	0.001	0.43
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	56.9	6.4	25.4	3.4	2.4	0.3	1.3	114	< 0.1	< 0.1	0.6	< 0.1	0.1	491	2.3	0.005	0.32
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	25.7	3.4	12.4	2.6	2.3	0.4	2.4	90.3	0.1	0.2	1.3	0.2	0.2	390	1.2	0.002	0.26
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	25.4	3	10.5	1.9	1.4	0.2	0.9	187	< 0.1	< 0.1	0.4	< 0.1	0.1	461	3.1	0.012	0.3
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	22.5	2.7	12.2	2.6	3.1	0.5	3.6	151	0.1	0.3	2.1	0.3	0.2	317	0.9	0.002	0.31
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	24.7	2.8	11.6	2.4	1.5	0.2	0.9	76.3	< 0.1	< 0.1	0.4	< 0.1	0.1	159	3.3	< 0.001	1.69
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	23.8	2.8	11.1	2.4	2	0.3	2	51.8	0.1	0.2	1.2	0.2	0.2	265	2.2	0.003	0.63
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	28.6	3.3	12.4	2.3	1.6	0.2	0.9	46.9	< 0.1	< 0.1	0.4	< 0.1	0.1	138	0.8	0.003	1.43
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	27.9	3.1	10.9	2.1	1.2	0.1	0.7	37.3	< 0.1	< 0.1	0.3	< 0.1	0.2	238	3.7	< 0.001	1.03
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	38.4	4.5	15.8	1.6	1.7	0.2	0.9	19.3	< 0.1	< 0.1	0.3	< 0.1	0.2	82.4	2.3	< 0.001	1.61
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	30.7	4	16.2	3.2	3.3	0.5	3.2	113	< 0.1	0.3	1.8	0.3	0.2	166	0.7	0.002	0.31
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	32	4.1	15.5	3	2.8	0.4	2.3	28.8	< 0.1	0.2	1.2	0.2	0.2	127	1	0.002	0.48
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	32.3	3.6	13.3	2.4	1.5	0.2	0.9	26.5	< 0.1	< 0.1	0.4	< 0.1	0.1	338	2.1	< 0.001	0.86
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	31.6	3.5	12.7	1.9	1.4	0.2	0.9	26.7	< 0.1	< 0.1	0.4	< 0.1	0.1	334	3.2	< 0.001	0.58
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	28.8	3.4	12.5	2	1.2	0.1	0.7	43.7	< 0.1	< 0.1	0.3	< 0.1	0.1	176	1.4	< 0.001	0.88
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	23.4	2.8	10.3	1.9	1.5	0.2	1	27.5	0.1	< 0.1	0.5	< 0.1	0.1	199	1.6	0.012	0.49
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	29.9	3.5	13.6	1.8	1.6	0.2	1	117	< 0.1	< 0.1	0.4	< 0.1	0.1	211	1.6	0.01	0.64
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	29.6	3.4	12.5	1.9	1.4	0.2	0.8	25.3	< 0.1	< 0.1	0.4	< 0.1	0.2	334	4.6	0.08	0.67
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	30.4	3.8	13.5	2.1	1.5	0.2	0.8	43.3	< 0.1	< 0.1	0.4	< 0.1	0.1	409	1.3	< 0.001	0.94
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	30.9	3.8	13.7	2.5	1.4	0.2	0.8	37.6	< 0.1	< 0.1	0.3	< 0.1	0.1	196	2.2	< 0.001	1.14
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	36.7	4.2	14.2	2	1.5	0.2	0.9	62.6	< 0.1	< 0.1	0.4	< 0.1	0.1	126	2.5	< 0.001	1.07
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	38.7	4.5	15.8	2.8	1.7	0.2	1	37.3	< 0.1	< 0.1	0.4	< 0.1	0.2	281	2.4	< 0.001	1.17
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	27.9	3.3	12.1	2.2	1.7	0.2	1.2	100	< 0.1	< 0.1	0.6	< 0.1	0.1	406	1.4	0.001	0.27
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	33.2	3.9	13.6	2	1.6	0.2	0.8	44.7	< 0.1	< 0.1	0.3	< 0.1	0.1	142	3.1	< 0.001	1.14
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	28	3.2	11.7	1.6	1.3	0.1	0.7	14.1	< 0.1	< 0.1	0.3	< 0.1	0.1	129	8.2	< 0.001	0.88
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	31.4	3.5	12.6	1.8	1.5	0.2	1	38.6	< 0.1	< 0.1	0.5	< 0.1	0.1	327	1.9	< 0.001	0.44
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	37.5	4.6	15.2	2.4	1.5	0.2	0.9	17.3	< 0.1	< 0.1	0.4	< 0.1	0.1	396	1.9	< 0.001	0.52
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	25.6	3.1	11.2	1.3	1.3	0.1	0.8	110	< 0.1	< 0.1	0.4	< 0.1	0.1	231	1.3	< 0.001	0.68
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	31.2	3.9	13	1.8	1.5	0.2	0.8	58.6	< 0.1	< 0.1	0.3	< 0.1	0.1	137	3.3	< 0.001	1.23
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	29.6	3.3	12.3	2	1.5	0.2	0.8	18.8	< 0.1	< 0.1	0.3	< 0.1	0.1	108	1.5	0.007	1.15
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	36.3	4.3	16.6	2.8	2.5	0.3	1.9	60.7	0.1	0.1	0.8	0.1	0.2	314	2.7	< 0.001	0.28
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	9.5	1.4	7.2	2	2.6	0.5	3	152	0.2	0.3	1.9	0.3	< 0.1	156	0.8	0.002	0.17
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	33.6	4	15.1	2	1.7	0.2	1	53.8	< 0.1	< 0.1	0.4	< 0.1	0.1	210	0.9	< 0.001	0.94
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	23.4	3.1	13	2.6	3	0.5	3.4	151	0.1	0.3	1.9	0.2	0.2	190	0.9	0.004	0.16
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	32.9	4	15.8	2.4	2.4	0.4	2.2	91	< 0.1	0.2	1.2	0.2	0.1	242	2.6	< 0.001	0.37
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	33.8	3.9	13.9	1.9	1.6	0.2	0.8	32.6	< 0.1	< 0.1	0.3	< 0.1	0.1	125	1.9	< 0.001	0.69
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	33.9	3.9	14.2	1.9	1.5	0.2	1	22	< 0.1	< 0.1	0.3	< 0.1	0.1	501	1.1	< 0.001	0.52
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	34.1	3.9	14.7	2.3	1.6	0.2	0.9	20	< 0.1	< 0.1	0.4	< 0.1	0.1	208	1.5	< 0.001	0.59
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	29.3	3.6	12.6	1.9	1.4	0.2	0.9	21.1	< 0.1	< 0.1	0.4	< 0.1	0.1	213	1.5	< 0.001	0.6
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	23.2	2.6	9.7	1.7	1.2	0.1	0.7	16.7	< 0.1	< 0.1	0.3	< 0.1	0.2	385	0.3	< 0.001	0.44
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	29.3	3.5	13.8	2.2	1.5	0.2	0.9	214	< 0.1	< 0.1	0.4	< 0.1	0.2	328	2.3	0.004	0.34
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	27.3	3.5	14.1	3.3	3.6	0.6	3.9	123	0.4	0.3	2.4	0.3	< 0.1	275	0.3	0.001	< 0.05
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	22.6	2.7	9.7	1.9	1.2	0.1	0.6	32	< 0.1	< 0.1	0.3	< 0.1	0.1	185	3.1	< 0.001	0.95
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	33.6	3.8	15	2	1.6	0.2	0.9	34.2	< 0.1	< 0.1	0.4	< 0.1	0.2	184	4.4	< 0.001	0.83
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	34.4	4	14.8	2.1	1.5	0.2	1	60.9	< 0.1	< 0.1	0.4	< 0.1	0.2	160	1.6	< 0.001	0.67
2024-10-08	2024-10-08	EMRS ROCK	29.3	3.2	12.2	2	1.3	0.2	1	57.2	0.1	< 0.1	0.4	< 0.1	0.1	346	1	< 0.001	0.31
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	37.6	4.3	14.7	2.2	1.7	0.2	0.9	26.7	< 0.1	< 0.1	0.4	< 0.1	0.1	129	1.8	< 0.001	1.02
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	34.1	3.9	13.7	2.3	1.5	0.2	0.9	39.6	< 0.1	< 0.1	0.3	< 0.1	0.1	133	1.9	< 0.001	0.83
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	27.5	3.1	12	1.7	1.4	0.2	0.8	16.9	< 0.1	< 0.1	0.3	< 0.1	0.1	152	2.9	< 0.001	0.81

Date Received	Report Date	Analyte Symbol	Pb	Th	U
		Unit Symbol	ppm	ppm	ppm
		Detection Limit	0.5	0.1	0.1
		Analysis Method	TD-MS		
2020-07-13	2020-07-29	Rock sample	10	2.3	0.7
2020-08-04	2020-08-01	ROCK SAMPLE SHIPMENT 2	11.8	2	0.6
2020-08-17	2020-09-15	ROCK SAMPLE SHIPMENT 3	20.5	2.1	0.6
2020-09-08	2020-11-10	Rock Sample	22.7	2.3	0.6
2020-10-05	2020-11-26	Rock Sample	7.4	1.6	0.5
2020-10-23	2020-11-26	ROCK SAMPLE	11.8	2	0.5
2020-11-16	2021-01-18	ROCK SAMPLE	3.8	1.8	0.5
2020-12-07	2021-01-20	ROCK SAMPLE	16.3	2.1	0.6
2021-02-10	2021-03-17	ROCK SAMPLE	3.8	1.6	0.5
2021-03-29	2021-04-20	ROCK SAMPLE	6.9	3	0.7
2021-04-26	2021-05-13	ROCK SAMPLE	58	2.8	0.7
2021-06-11	2021-07-21	ROCK SAMPLE	9.5	2	0.5
2021-05-17	2021-08-13	ROCK SAMPLE	10.2	2.5	0.6
2021-07-12	2021-08-26	1	67.3	2.1	0.6
2021-06-21	2021-09-02	ROCK SAMPLE	142	1.9	0.7
2021-08-03	2021-09-24	ROCK SAMPLE	9.9	3	0.6
2021-07-23	2021-10-13	2021-07-23	7.8	0.4	< 0.1
2021-08-18	2021-10-13	2021-08-18	9	1	0.2
2021-08-30	2021-11-16	2021-08-30	7.4	1.8	0.5
2021-09-13	2021-11-16	2021-09-13	10.7	1.7	0.4
2021-11-21	2022-02-02	EMRS1	46.3	2.8	0.7
2021-11-21	2022-02-02	EMRS2	4.8	1.7	0.5
2021-12-06	2022-02-04	EMRS 2021.11.29	3.4	1.5	0.5
2021-12-06	2022-02-04	EMRS 2021.11.30	23.6	2.3	0.7
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-10	3.1	1.9	0.6
2022-01-24	2022-05-07	RRM EMRS Rock 2021-12-22	10.8	2.6	0.6
2022-03-03	2022-04-26	EMRS 2022-01-28 AM	15.4	1.9	0.5
2022-03-03	2022-04-26	EMRS 2022-02-28 PM	9.9	1.9	0.4
2022-03-03	2022-04-26	EMRS 2022-02-28	27.5	1.8	0.4
2022-03-03	2022-04-26	CMRS ROCK 2022-02-14	12.5	2.9	0.7
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-15	54.2	1.9	0.5
2022-04-22	2022-06-16	RRM EMRS ROCK 2022-03-23	3.4	2.7	0.6
2022-05-11	2022-07-19	EMRS ROCK 2022-04-01	5.2	3.4	0.7
2022-05-11	2022-07-19	EMRS ROCK 2022-04-22	12.2	11.7	2.1
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-06	52.9	2.9	0.7
2022-06-03	2022-07-14	RRM EMRS ROCK 2022-05-20	36.8	2	0.6
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-07	8.8	0.9	0.2
2022-06-29	2022-09-13	RRM EMRS ROCK 2022-06-24	5.8	1.6	0.4
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-08	7.6	1	0.2
2022-07-25	2022-09-27	RRM EMRS ROCKS 2022-07-21	10.7	2.2	0.6
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-05	6.1	1.8	0.4
2022-09-02	2022-11-21	RRM EMRS ROCKS 2022-08-19	13.5	2.2	0.5
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-02	10.8	1.9	0.4
2022-09-21	2022-12-14	RRM EMRS ROCK 2022-09-16	4.3	3.7	0.6
2022-11-04	2023-02-17	RRM EMRS WR 2022-11-04	41.1	1.3	0.4
2022-11-18	2023-02-17	RRM EMRS WR 2022-11-18	4.2	1.9	0.4
2022-12-09	2023-02-17	RRM EMRS ROCK 2022-12-09	8.9	0.9	0.3
2022-12-26	2023-02-17	RRM EMRS ROCK 2022-12-26	11.5	1.5	0.4
2023-01-07	2023-04-05	RRM EMRS Rock 2023-01-07	28.1	1.7	0.4
2023-01-23	2023-04-05	RRM EMRS Rock 2023-01-23	47.3	2	0.5
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 11:02	32.3	2.4	0.5
2023-02-04	2023-03-31	RRM EMRS Rock 2023-02-04 14:15	270	2.2	0.5
2023-03-18	2023-03-18	RRM EMRS ROCK 2023-03-18	7	1.3	0.4
2023-03-30	2023-03-18	RRM EMRS ROCK 2023-03-30	4.6	1.7	0.5
2023-04-15	2023-05-31	EMRS ROCK 2023-04-15	45.6	2.1	0.5
2023-04-28	2023-05-31	EMRS ROCK 2023-04-28	33.4	2.3	0.5
2023-05-12	2023-06-19	RRM EMRS Rock 2023-05-12	60.2	2.1	0.5
2023-05-28	2023-06-19	RRM EMRS Rock 2023-05-28	5.9	1.5	0.5
2023-06-10	2023-08-17	EMRS ROCK 2023-06-10	9.6	2.1	0.6
2023-06-25	2023-08-17	EMRS ROCK 2023-06-25	35.2	2.2	0.6
2023-07-07	2023-08-17	RRM EMRS ROCK 07/07/2023	68.1	2.3	0.5
2023-07-22	2023-08-17	RRM EMRS ROCK 22/07/2023	60.9	2.3	0.5
2023-08-04	2023-10-12	RRM EMRS ROCK 2023 08 04	150	2.9	0.7
2023-08-19	2023-10-12	RRM EMRS ROCK 2023 08 19	45.8	2.7	0.7
2023-09-01	2023-10-25	RRM EMRS ROCK 2023-09-01	5	1.7	0.5
2023-09-15	2023-10-25	RRM EMRS ROCK 2023-09-15	179	2.6	0.6
2023-10-13	2023-11-30	RRM EMRS ROCK 2023-10-13	20.3	2	0.4
2023-10-28	2023-11-30	RRM EMRS ROCK 2023-10-28	7.3	1.9	0.4
2023-11-11	2023-12-28	RRM EMRS ROCK 2023-11-11	12.7	2.4	0.6
2023-11-26	2023-12-28	RRM EMRS ROCK 2023-11-26	560	2	0.5
2023-12-08	2024-02-02	RRM EMRS ROCK 2023-12-08	40.1	2.4	0.6
2023-12-21	2024-01-26	RRM-EMRS ROCK 2023-12-21	23.8	2	0.5
2024-01-05	2024-02-08	RRM-EMRS ROCK 2024-01-05	12.8	2.3	0.6
2024-01-19	2024-02-28	RRM EMRS ROCK 2024-01-19	10.5	0.4	0.1
2024-02-02	2024-02-26	RRM EMRS ROCK 2024-02-02	58.3	2	0.6
2024-02-18	2024-03-18	RRM EMRS ROCK 2024-02-18	4.2	1.3	0.3
2024-03-01	2021-04-10	RRM CMRS ROCK 2024-03-01	15.5	2.2	0.5
2024-03-15	2024-04-17	RRM EMRS ROCK 2024-03-15	51.8	2.5	0.6
2024-03-30	2024-04-19	RRM EMRS ROCK 2024-03-30	16.1	2.2	1
2024-04-12	2024-05-07	RRM EMRS ROCK 2024-04-12	44.1	2.3	0.6
2024-04-27	2024-05-23	RRM EMRS ROCK 2024-04-27	39.1	2.1	0.6
2024-05-10	2024-05-29	RRM EMRS ROCK 2024-05-10	15.9	1.8	0.5
2024-05-24	2024-06-17	RRM EMRS ROCK 2024-05-24	13.1	2	0.5
2024-06-07	2024-09-19	RRM EMRS ROCK 2024-06-07	6.6	1.2	0.4
2024-07-07	2024-09-30	RRM EMRS ROCK 2024-07-07	30.4	2	0.5
2024-07-22	2024-10-01	EMRS ROCK 22/07/2024 11:30	27.9	2.1	0.6
2024-08-16	2024-10-09	EMRS ROCK 08/16/2024	46.8	2.5	0.7
2024-10-08	2024-10-08	EMRS ROCK	10.3	2.2	0.6
2024-10-12	2024-12-18	RRM EMRS ROCK 2024-10-12	101	2.2	0.6
2024-10-25	2024-11-28	RRM EMRS ROCK 2024-10-25	85.5	2.2	0.6
2024-11-08	2024-12-24	RRM EMRS ROCK 2024-11-08	36.7	1.7	0.5

Appendix C

Particle Size Distribution Photos

P1051483



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147.00	15.03%
100.00	6.92%
68.10	2.55%
46.40	0.77%
31.60	0.17%
21.50	0.03%
14.70	0.00%
10.00	0.00%
6.81	0.00%
4.64	0.00%
3.16	0.00%
2.15	0.00%
1.47	0.00%
1.00	0.00%
0.68	0.00%
0.46	0.00%
0.32	0.00%
0.22	0.00%
0.15	0.00%
0.10	0.00%

Longitude
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Latitude
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Altitude
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Heading
-

Camera Distance
-

Camera Angle
-

Camera
OLYMPUS CORPORATION TG-4

Resolution
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Date Taken
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Edit Time
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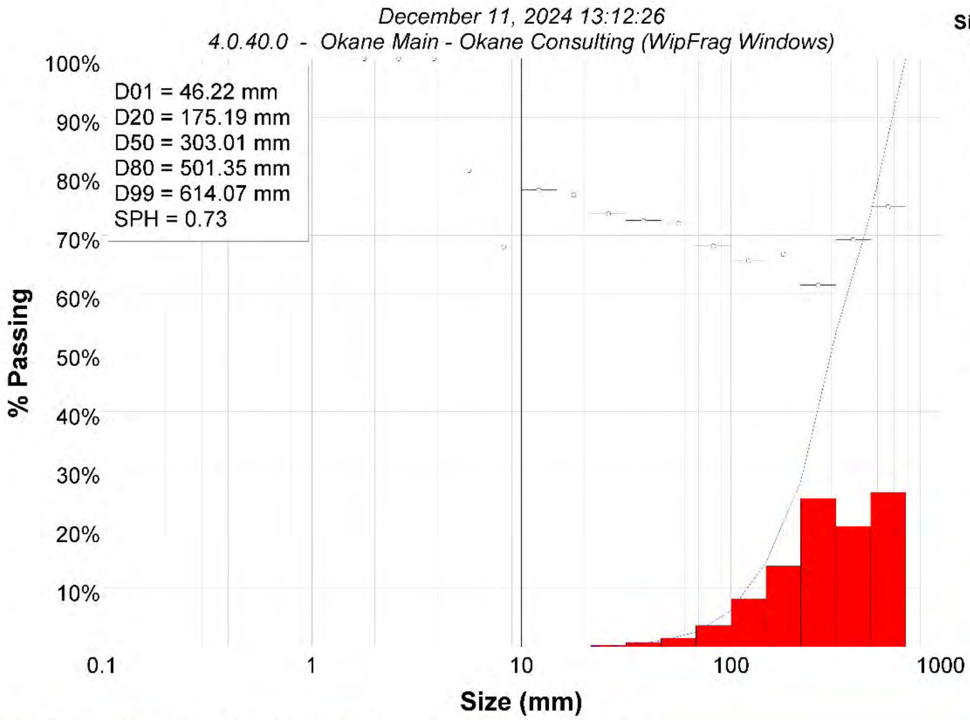
Legend

Fines

Ignored

P1191684



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100.00	6.13%
68.10	2.49%
46.40	1.01%
31.60	0.26%
21.50	0.04%
14.70	0.00%
10.00	0.00%
6.81	0.00%
4.64	0.00%
3.16	0.00%
2.15	0.00%
1.47	0.00%
1.00	0.00%
0.68	0.00%
0.46	0.00%
0.32	0.00%
0.22	0.00%
0.15	0.00%
0.10	0.00%

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Altitude
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Heading
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Camera Distance
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Camera Angle
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Camera
OLYMPUS CORPORATION TG-4

Resolution
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Date Taken
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Legend
Fines
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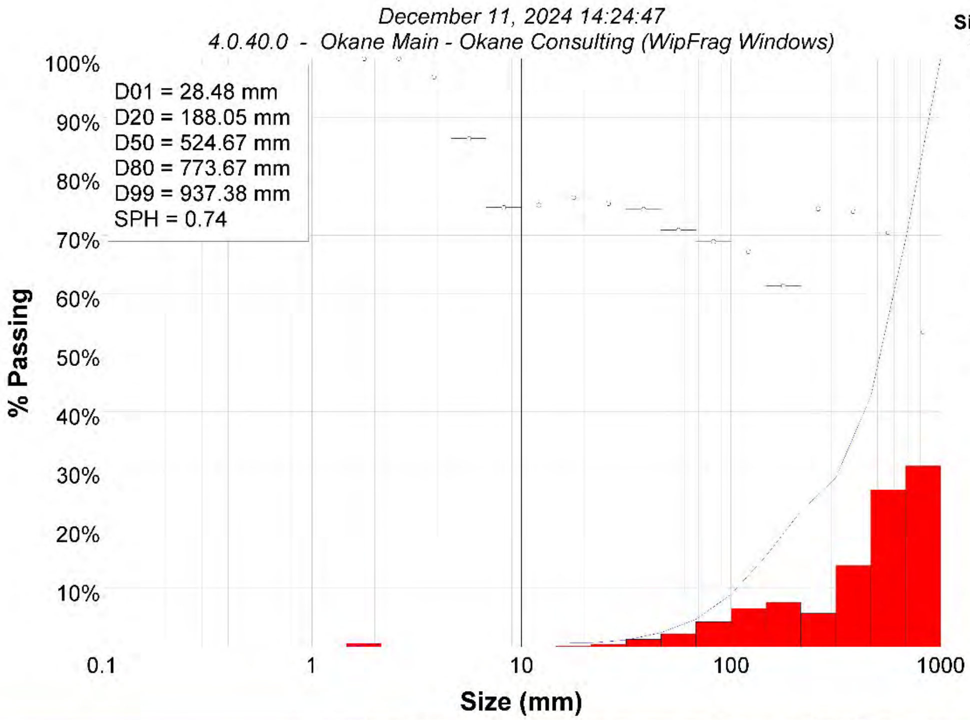
P2026473



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215.00	23.00%
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100.00	8.88%
68.10	4.66%
46.40	2.41%
31.60	1.14%
21.50	0.68%
14.70	0.58%
10.00	0.58%
6.81	0.58%
4.64	0.58%
3.16	0.58%
2.15	0.58%
1.47	0.00%
1.00	0.00%
0.68	0.00%
0.46	0.00%
0.32	0.00%
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Altitude
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Heading
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Camera Distance
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Camera Angle
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Camera
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Resolution
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Date Taken
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Edit Time
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Legend
Fines
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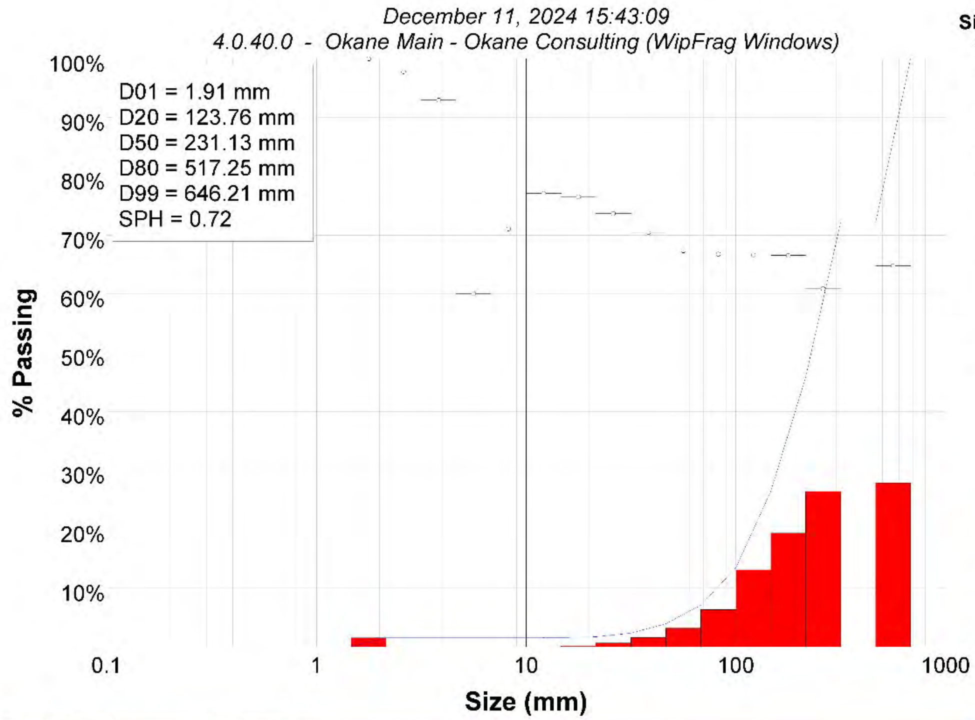
P2026474



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316.00	72.15%
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100.00	13.39%
68.10	7.08%
46.40	3.90%
31.60	2.32%
21.50	1.69%
14.70	1.56%
10.00	1.54%
6.81	1.54%
4.64	1.54%
3.16	1.54%
2.15	1.54%
1.47	0.00%
1.00	0.00%
0.68	0.00%
0.46	0.00%
0.32	0.00%
0.22	0.00%
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0.10	0.00%

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Latitude
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Altitude
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Heading
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Camera Distance
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Camera Angle
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Camera
OLYMPUS CORPORATION TG-4

Resolution
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Date Taken
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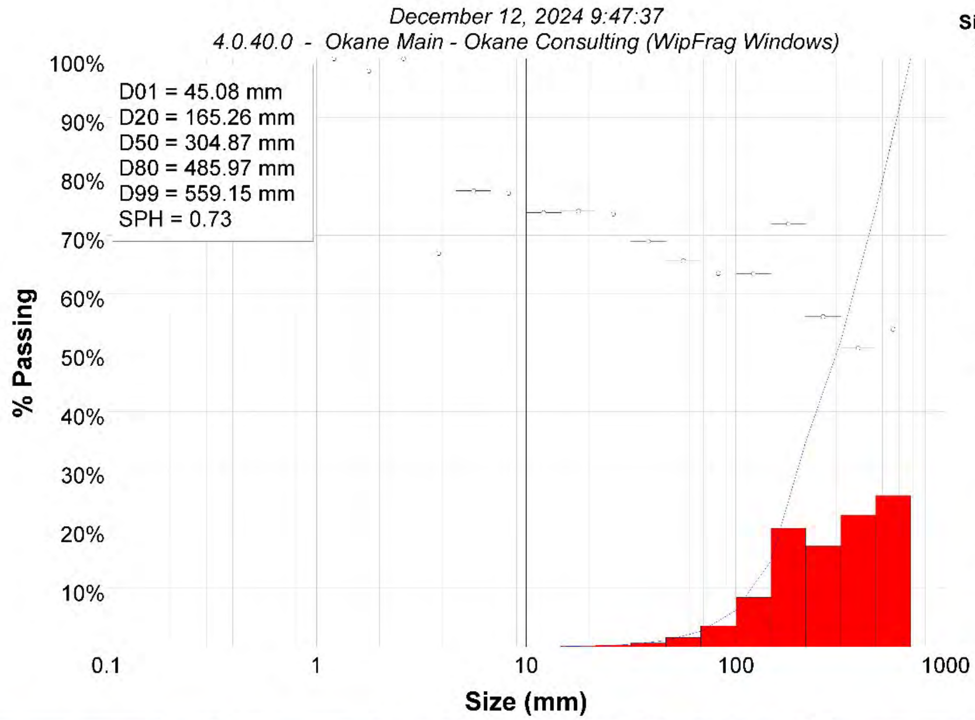
Edit Time
1039s

Legend
Fines
Ignored

P3150443



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316.00	51.89%
215.00	34.75%
147.00	14.59%
100.00	6.17%
68.10	2.64%
46.40	1.06%
31.60	0.42%
21.50	0.14%
14.70	0.03%
10.00	0.00%
6.81	0.00%
4.64	0.00%
3.16	0.00%
2.15	0.00%
1.47	0.00%
1.00	0.00%
0.68	0.00%
0.46	0.00%
0.32	0.00%
0.22	0.00%
0.15	0.00%
0.10	0.00%

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Latitude
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Altitude
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Heading
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Camera Distance
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Camera Angle
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Camera
OM Digital Solutions TG-7

Resolution
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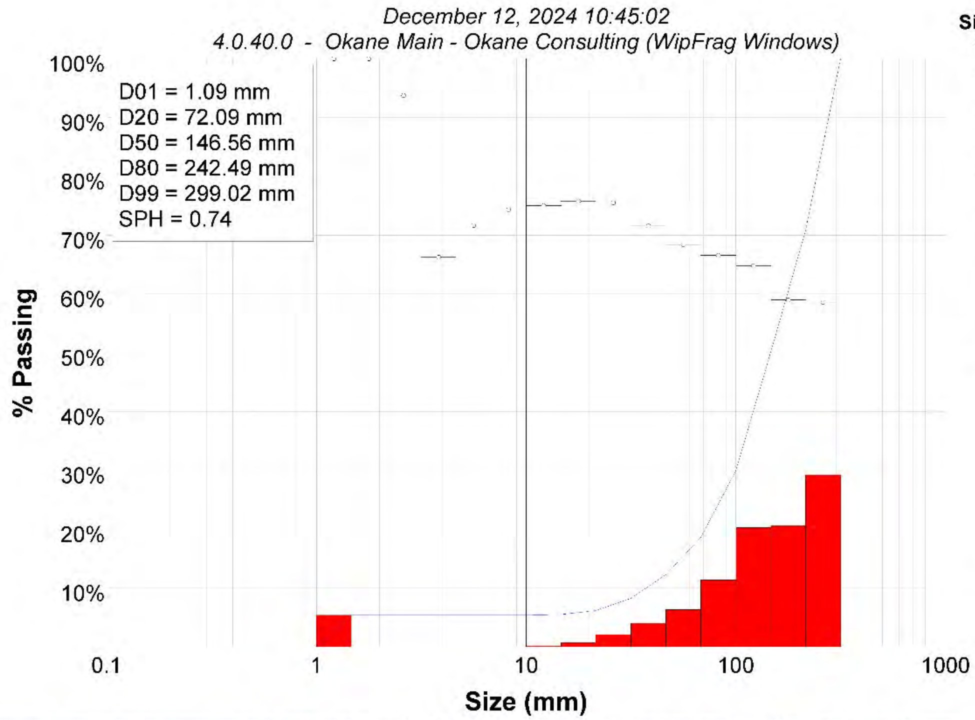
Date Taken
-

Edit Time
838s

Legend
Fines
Ignored

P3150441



Size (mm)	% Passing
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464.00	100.00%
316.00	100.00%
215.00	70.76%
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100.00	29.93%
68.10	18.58%
46.40	12.26%
31.60	8.23%
21.50	6.16%
14.70	5.49%
10.00	5.39%
6.81	5.38%
4.64	5.38%
3.16	5.38%
2.15	5.38%
1.47	5.38%
1.00	0.00%
0.68	0.00%
0.46	0.00%
0.32	0.00%
0.22	0.00%
0.15	0.00%
0.10	0.00%

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Latitude
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Altitude
298.4

Heading
-

Camera Distance
-

Camera Angle
-

Camera
OM Digital Solutions TG-7

Resolution
1440x1080

Date Taken
-

Edit Time
631s

Legend
Fines
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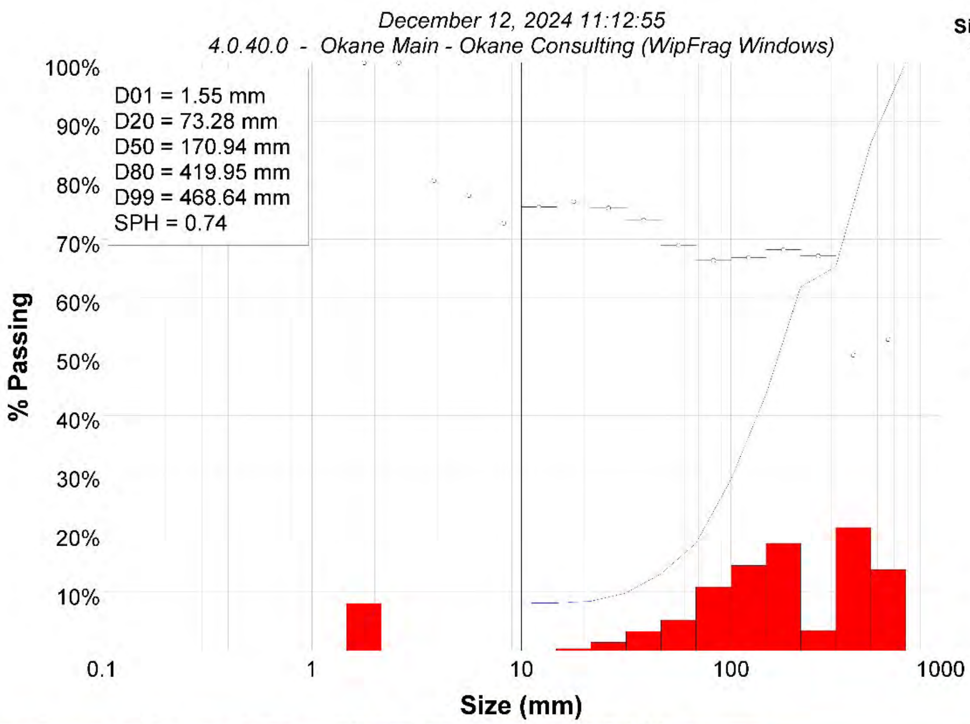

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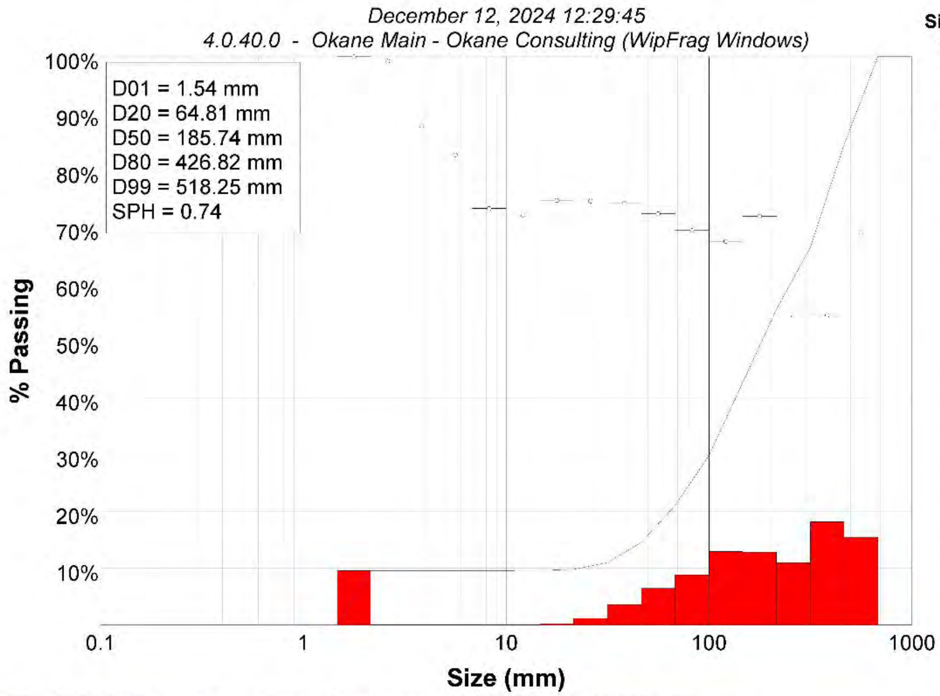

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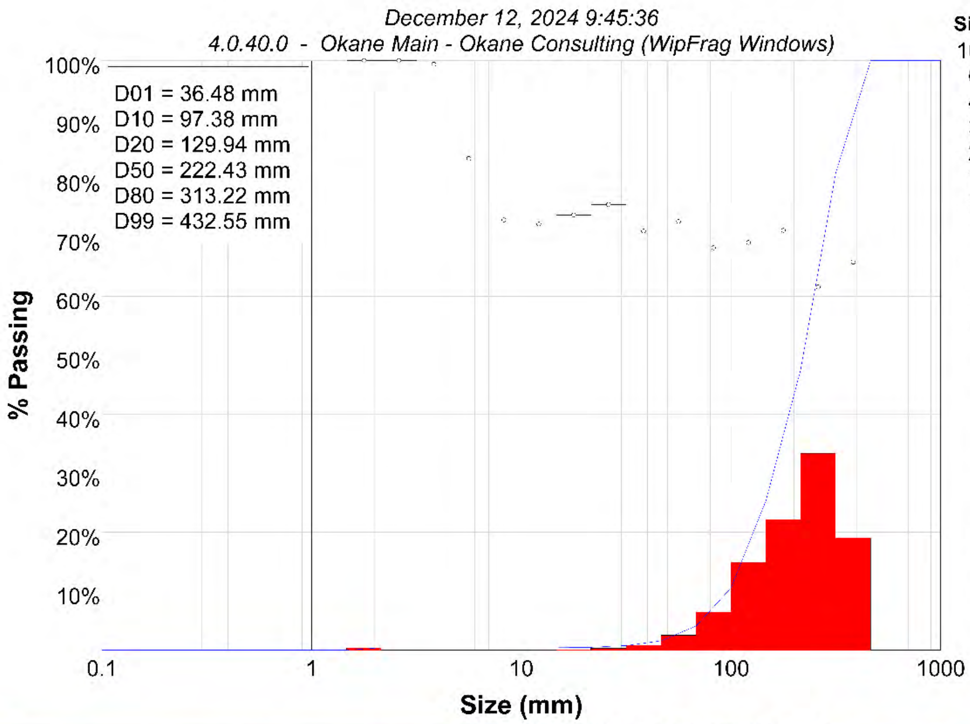

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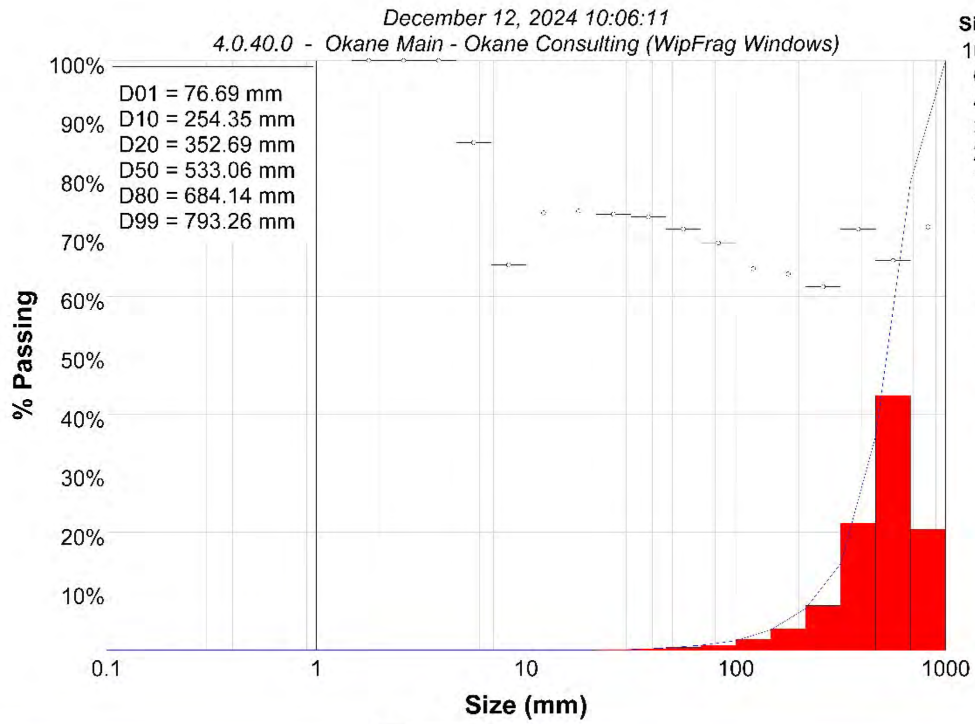

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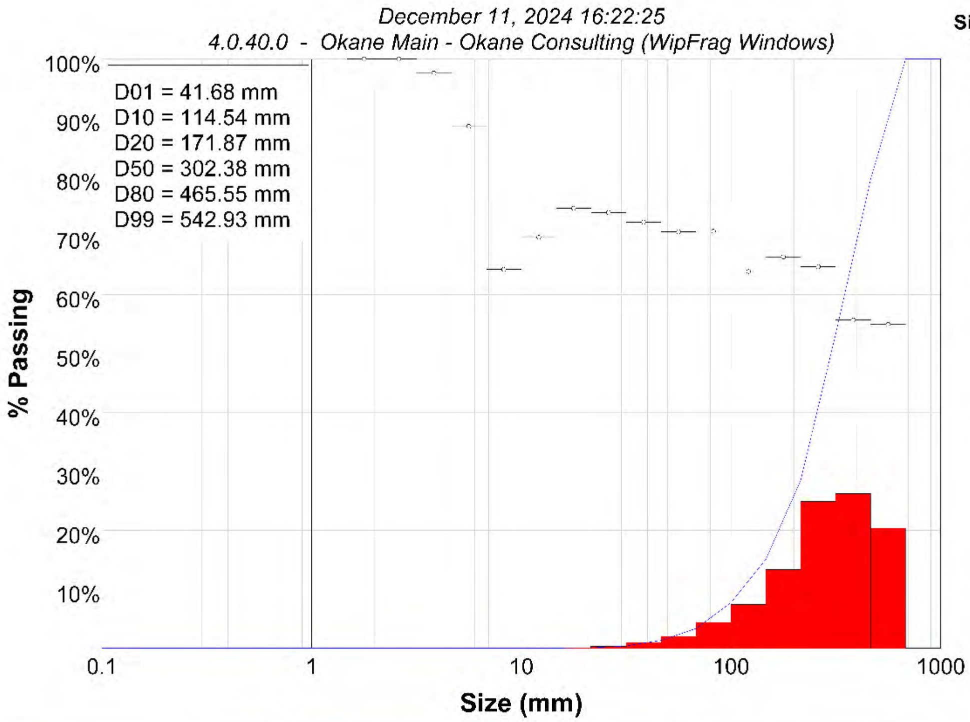

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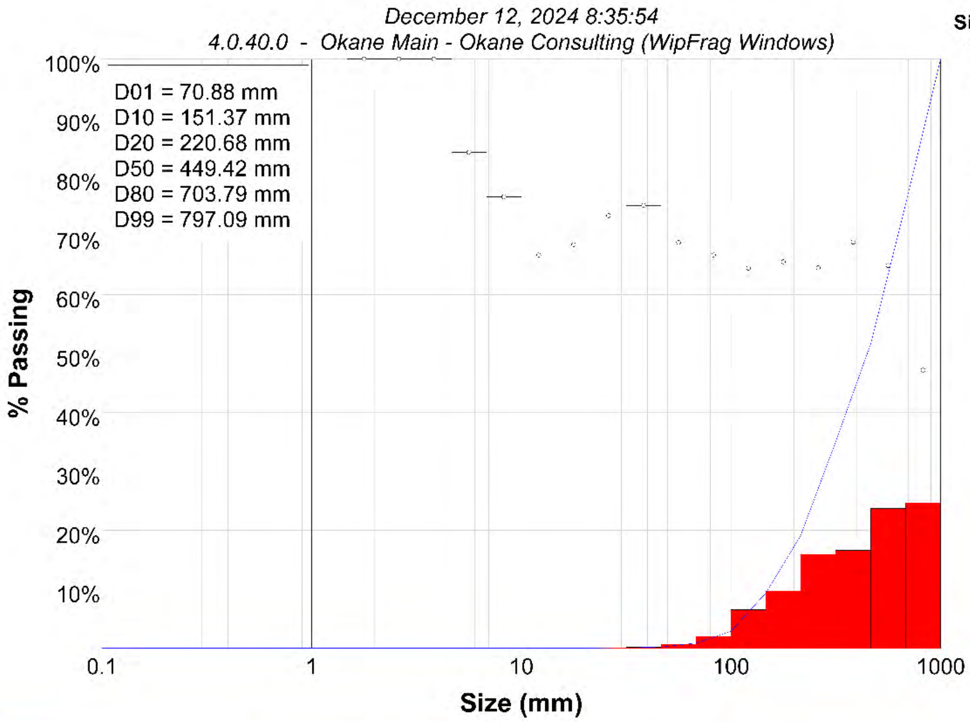

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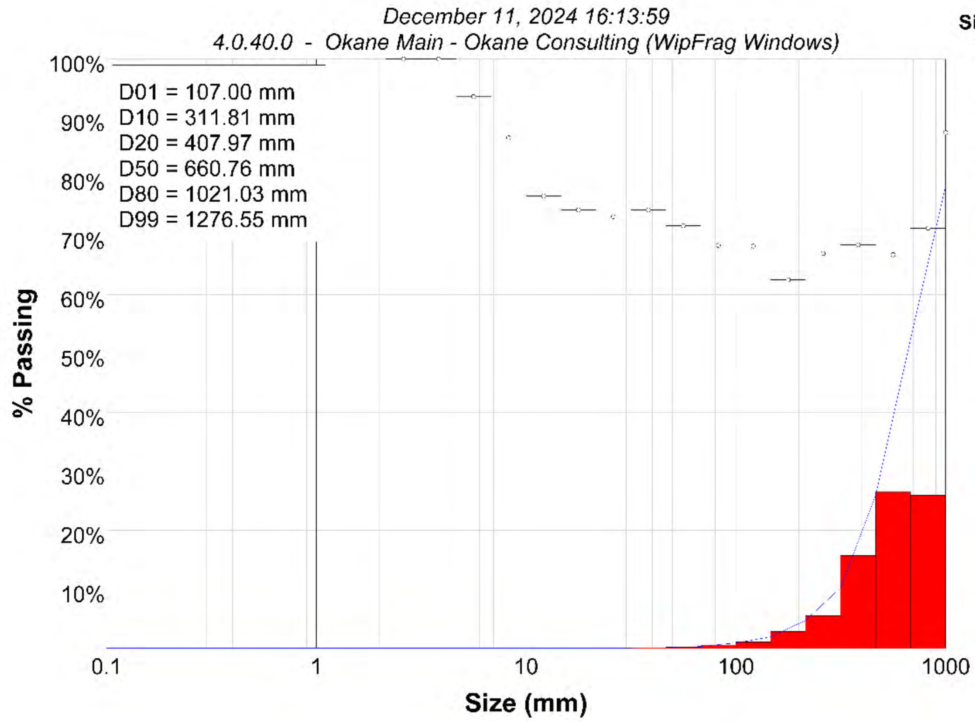

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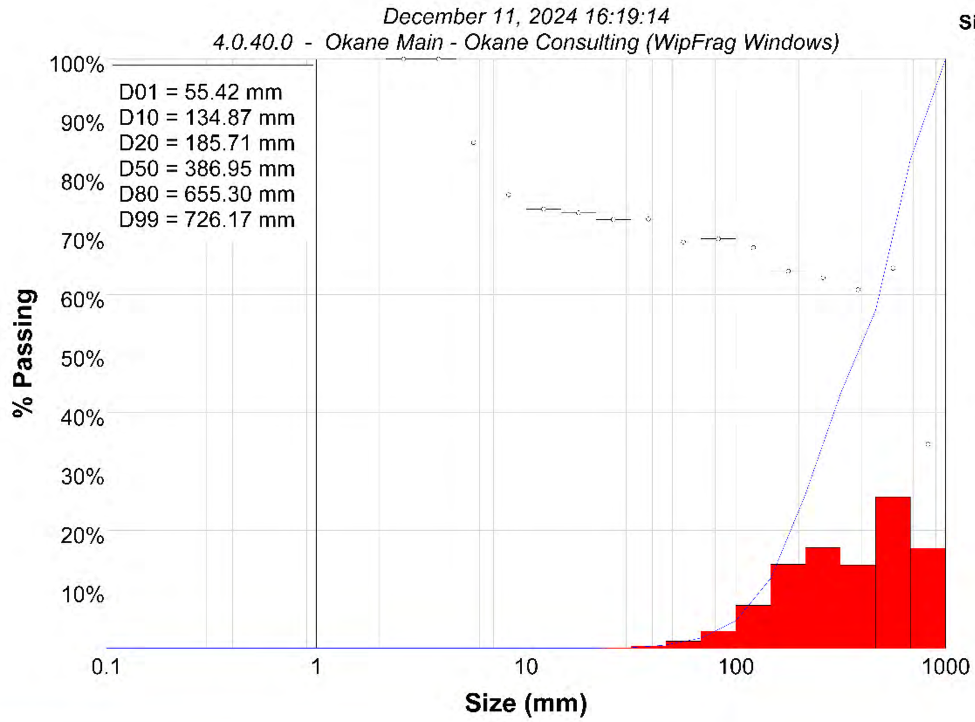

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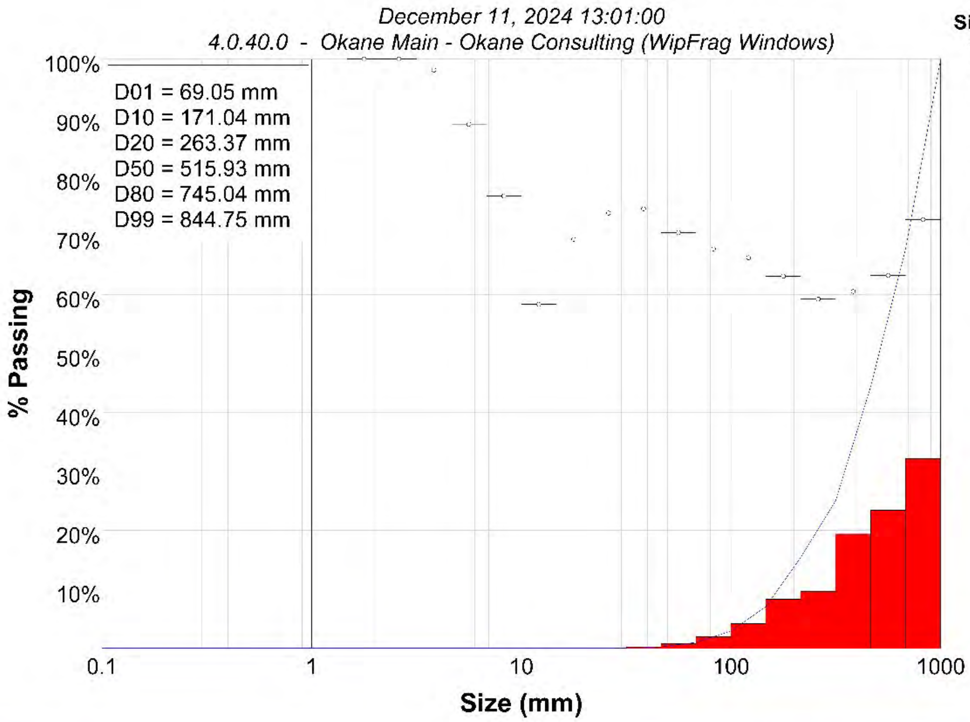

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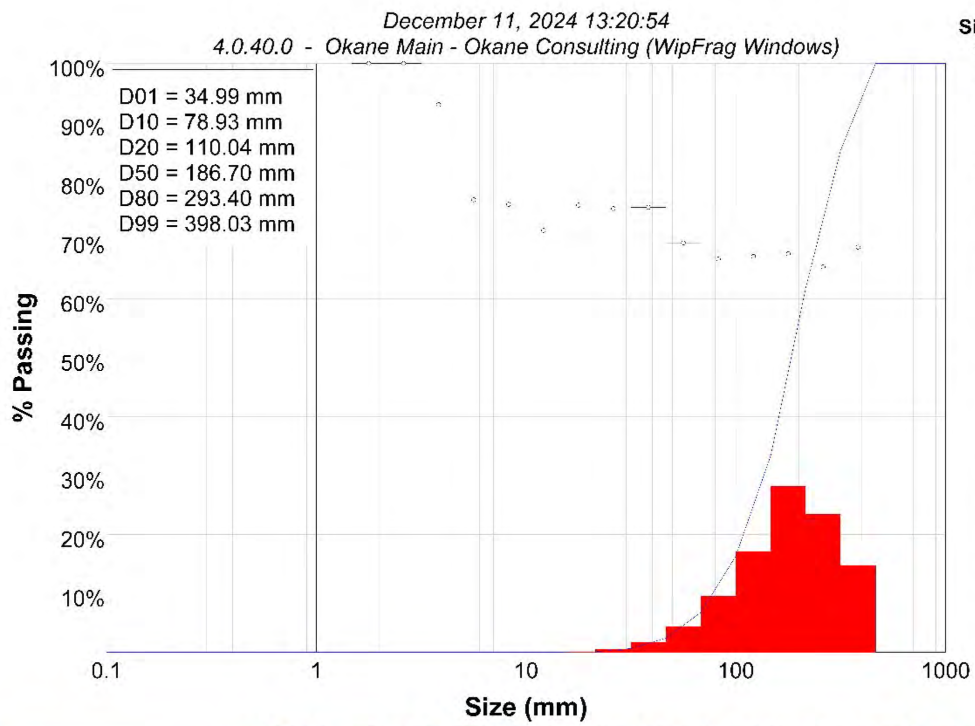

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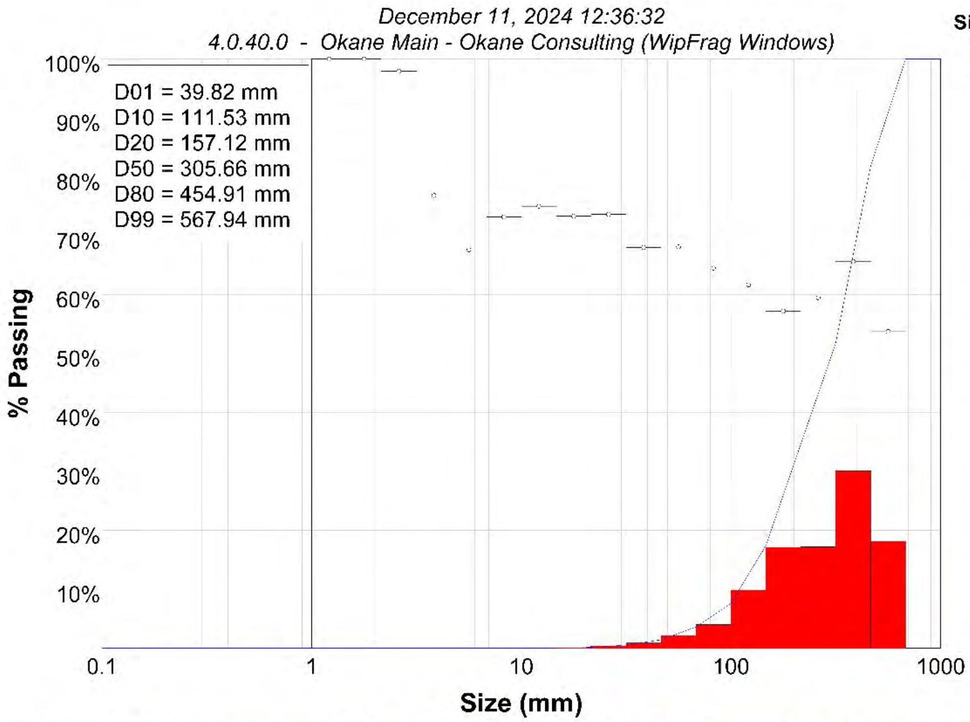

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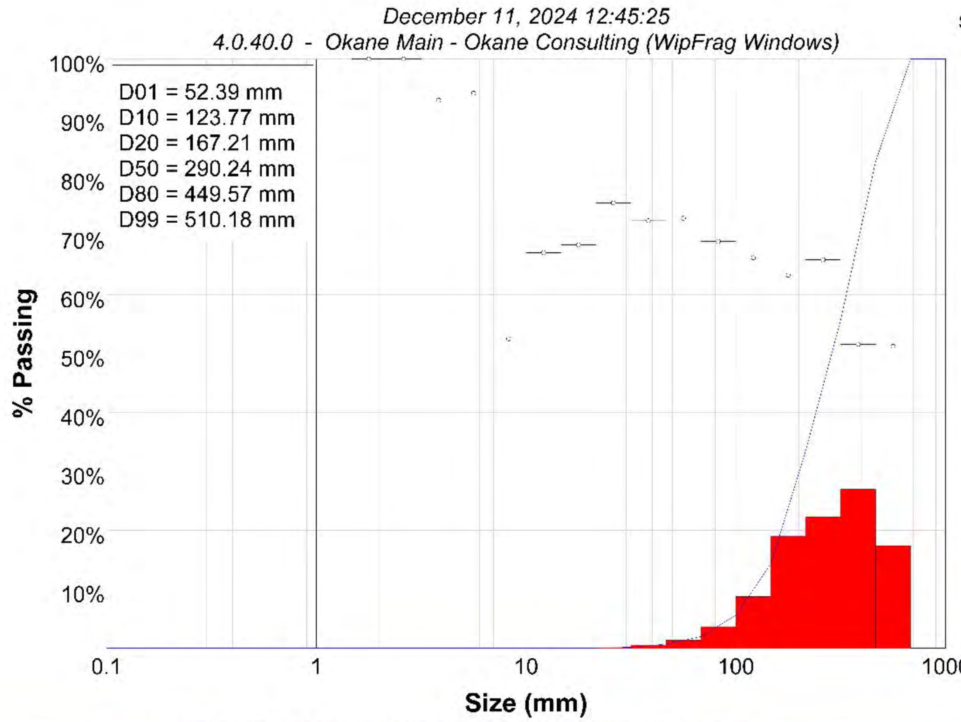

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Rainy River Mine – 2024 East Mine Rock Stockpile Cover System Annual Monitoring Report

February 5, 2025

newgold™

okane

Integrated Mine Closure and Relinquishment Solutions

Rainy River Mine – 2024 East Mine Rock Stockpile Cover System Annual Monitoring Report

B-1003-233-007

February 2025

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0	Draft	February 5, 2025	PS	DC	

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EXECUTIVE SUMMARY

New Gold Inc. (New Gold) has completed progressive reclamation on some areas of the lower bench slopes of the East Mine Rock Stockpile (EMRS) at the Rainy River Mine. Okane Consultants (Okane) was retained to design, instrument, and interpret monitoring data collected from performance monitoring systems installed at EMRS progressive reclamation areas. Monitoring systems installed within the progressive reclamation cover system will allow New Gold to track cover system performance in response to full-scale and site-specific physical, chemical, and biological processes. This report summarizes and interpretates monitoring data obtained between November 1, 2023 and October 31, 2024.

The primary objectives of the EMRS cover system monitoring program are to determine the suitability of in-pit sourced overburden as a compacted layer cover system material, evaluate cover system performance under full-scale construction techniques, determine conceptual performance models on a sloped area through simple water balances, and determine if the degree of saturation maintained within the compacted layer is sufficient to act as an oxygen ingress barrier. The cover system at the EMRS consists of a 0.5 m thick compacted clay layer, constructed from two, 0.25 m thick compacted lifts, overlain with a 1.0 m thick non-compacted clay layer, constructed from two 0.5 m thick lifts. Soil instrumentation nests were installed on the EMRS slope and commissioned on September 23, 2020, and June 6, 2021 at the south (SS1) and north (SS2) stations, respectively.

The ability of the cover system to limit oxygen ingress is evaluated by monitoring the degree of saturation of the compacted layer. A cover system containing a layer maintained at a degree of saturation of approximately 85% is generally expected to efficiently limit oxygen ingress (McMullen et al., 1997, MEND, 2004). During the 2023-2024 monitoring period, the annual average saturation levels measured at both SS1 and SS2 was greater than 90% in the compacted layer. Maintaining a 90% degree of saturation in the cover system demonstrates that the compacted layer is retaining sufficient pore-water to prevent advective oxygen transport, and limit oxygen ingress through diffusion. The 2023-2024 monitoring period observed a minimum degree of saturation within the compacted layer of 94% and 97% at SS1 and SS2, respectively.

A simple water balance at SS2 to estimate net percolation (NP) of meteoric waters into the underlying mine rock. The total estimated NP over the monitoring year was 27 mm (4% of annual precipitation). Runoff was calculated at 315 mm (48% of annual precipitation). Due to the sloping nature of the cover system, and lack of snow accumulation, runoff was observed continuously throughout the monitoring period. The results of the water balance estimate align with the anticipated conceptual model of performance for the site.

Performance monitoring of the cover system provides insight into cover system response to climatic variation in terms of temperature and water storage dynamics. The monitoring systems installed at the EMRS are providing data required to assess the performance trajectories for the site. Continued

monitoring and reporting offers insight to field-derived material properties and the opportunity to optimize future closure activities at site.

TABLE OF CONTENTS

1 INTRODUCTION 1

1.1 Project Objectives and Scope 1

2 BACKGROUND 2

2.1 Description of EMRS Progressive Reclamation 2

2.2 Conceptual Model of Cover System Performance 3

2.3 2023 – 2024 Monitoring Activities 4

2.4 2023 – 2024 Data Capture 4

3 COVER SYSTEM PERFORMANCE MONITORING RESULTS 6

3.1 Meteorology 6

3.1.1 Air Temperature 6

1.1.1 Rainfall 7

3.1.2 Snowfall 9

3.1.3 Reference Evapotranspiration 9

3.2 Cover System Temperature Profiles 10

3.3 Cover System Water Dynamics 13

3.3.1 Degree of Saturation 13

3.3.2 Matric Suction 15

3.3.3 Total Water Storage 18

3.4 Water Balance 19

3.4.1 Discussion of Water Balance Inputs 19

3.4.2 Water Balance Results 20

3.5 Salinity 22

4 RECOMMENDATIONS 24

5 REFERENCES 25

6 CLOSURE 27

LIST OF TABLES

Table 2.1: 2023-2024 monitoring period activities. 4
Table 3.1: Historical ambient winter air temperature (December to March). 7
Table 3.2: April to October monthly rainfall 8
Table 3.3: Three-year monitoring period snow survey results....9
Table 3.4: Summary of freezing depths and dates.... 12
Table 3.5: Degree of saturation throughout cover system profile. 13
Table 3.7: Water balance components. 20
Table 3.8: Water balance components over the two-year monitoring period.... 21

LIST OF FIGURES

Figure 2.1: EMRS progressive cover reclamation locations....2
Figure 3.1: SS1 bulk EC during the monitoring period. 22
Figure 3.2 : SS2 bulk EC during the monitoring period. 23
Figure 3.3: Maximum and minimum daily air temperatures recorded at Barron weather station compared to 30-year averages....6
Figure 3.4: Daily and cumulative rainfall recorded at SS1 since November 2021....8
Figure 3.9: Reference evapotranspiration at PAG Cover Trial #2 and total rainfall at SS1 measured from April to October 2024. 10
Figure 3.10: Soil temperature profile measured at SS1 Primary Nest from November 2023 to August 2024 (blank areas indicate period of missing data). 11
Figure 3.11: Soil temperature profile measured at SS2 Primary Nest during the monitoring period. 12
Figure 3.12: Change in degree of saturation at SS1 Primary nest period (blank areas indicate period of missing and/or frozen). 14
Figure 3.13: Change in degree of saturation at SS2 Primary nest.... 15
Figure 3.14: Matric suction profile measured at SS1 Primary nest.... 16
Figure 3.15: Matric suction profile measured at SS2 Primary nest.... 17
Figure 3.16: Measured storage at the SS1 and SS2 Primary nests. 18
Figure 3.17: Annual water balance at SS2 for the 2023-2024 monitoring period. 21

1 INTRODUCTION

New Gold Inc. (New Gold) has continued progressive reclamation on the lower bench slopes of the East Mine Rock Stockpile (EMRS) at the Rainy River Mine. Okane Consultants (Okane) was retained to design, instrument, and interpret monitoring data collected from performance monitoring systems installed at the EMRS progressive cover reclamation. Monitoring systems installed within the progressive reclamation cover will allow New Gold to track cover system performance in response to full-scale and site-specific physical, chemical, and biological processes. This report summarizes and interpretates monitoring data obtained between November 1, 2023 and October 31, 2024 (referred to herein as 'the monitoring period').

1.1 Project Objectives and Scope

The objectives of the EMRS cover system monitoring system are to:

1) Evaluate in-pit sourced overburden as a suitable cover system material, as a compacted layer within the closure cover system;
2) Evaluate cover system performance under full-scale construction techniques;
3) Develop conceptual models of performance for the cover system on a sloped area through simple water balances; and
4) Determine if the degree of saturation maintained within the compacted layer is sufficient to act as a barrier to oxygen ingress and limit its' migration to the underlying mine rock on a slope to levels consistent with the anticipated conceptual performance of the cover system.

2 BACKGROUND

2.1 Description of EMRS Progressive Reclamation

Cover system construction began on the lower bench slopes of the EMRS in September 2020 with approximately 3.9 ha of reclamation completed on the southern slope of the EMRS. Progressive reclamation continued in 2021 with an additional 8.2 ha of progressive reclamation completed during the 2021 construction season on the north, and southeast slopes of the EMRS. During the 2022 construction season, 1.6 ha of closure cover was constructed. The three-year total for progressive reclamation cover construction is 13.6 ha (Figure 2.1).

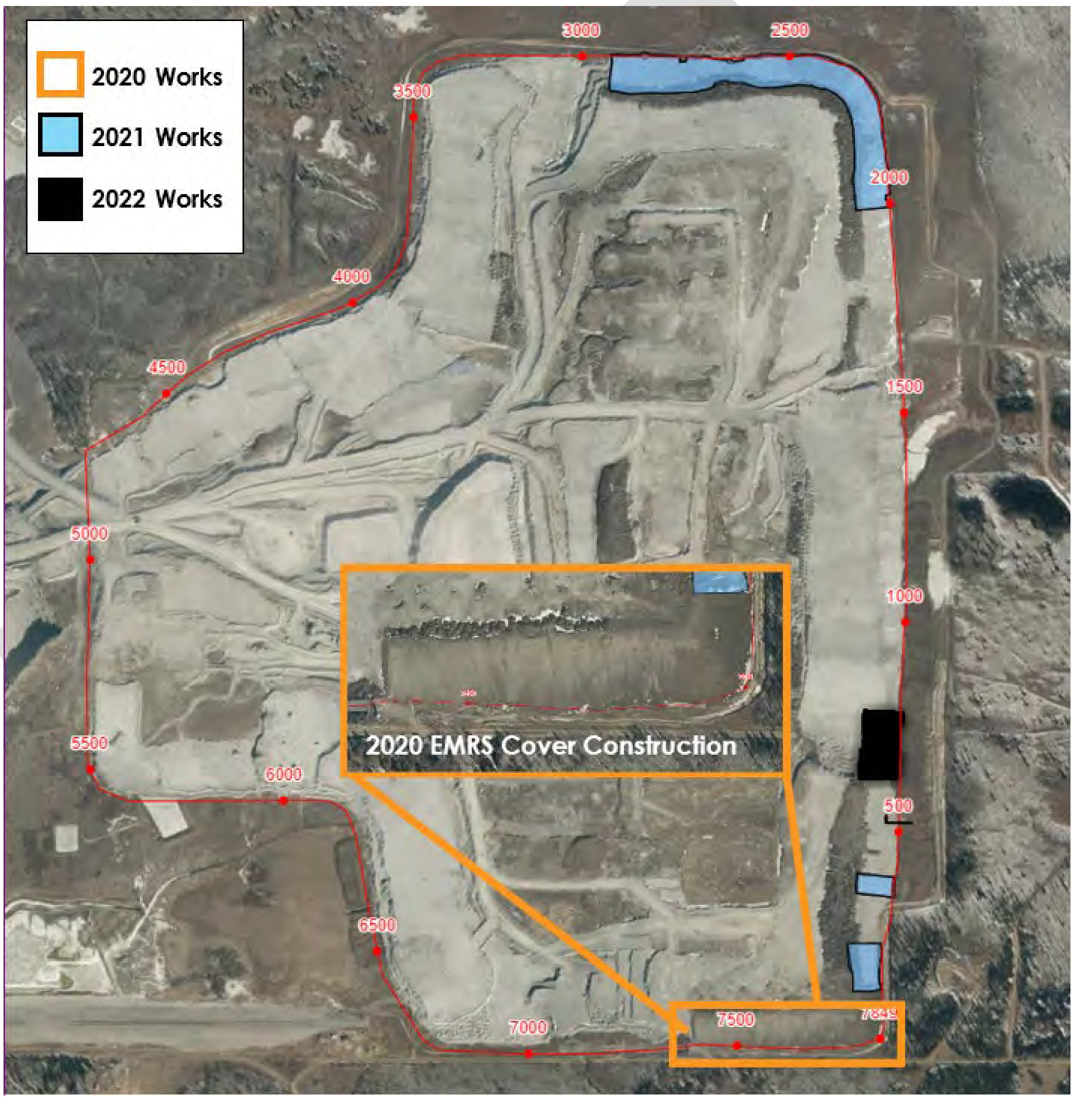


Figure 2.1: EMRS progressive cover reclamation locations.

Okane personnel installed and commissioned meteorological and in situ instrumentation to monitor cover system performance over time under site-specific conditions. Two instrumentation nests (Primary and Secondary) were installed on the south and north EMRS slopes. Primary nests consist of a full arrangement of sensors throughout the cover system profile. Secondary nests consist of a reduced number of sensors and was implemented to ensure data redundancy in the profile. Soil Station 1 (herein referred to as 'SS1') was installed on the south slope of the EMRS on September 12, 2020. Soil Station 2 (herein referred to as 'SS2') was installed on the north slope of the EMRS on June 18, 2021. The following in situ instrumentation was installed at each monitoring station:

- Twelve Campbell Scientific (CS) 650-L water content reflectometers to measure changes in volumetric water content (VWC), bulk electrical conductivity, and temperature throughout the cover system profile;
- Nine CS229-L heat dissipation sensors to measure changes in negative pore water pressure (suction); and

A Texas Electronics model TE-525M tipping bucket rain gauge (TBRG) to capture trial area specific rainfall events was also installed at SS1 on June 18, 2021. Additional site-specific meteorological data will be collected from New Gold's on-site Barron weather station.

In 2022, additional CS616 water content sensors were installed at both the SS1 and SS2 stations to measure VWC within the cover system profile. Due to elevated salinity levels within the cover system, bulk electrical conductivity (EC) measurements were higher than the operation range of several of the CS650 sensors. When measurements fall outside of the sensors operating range, VWC is unable to be measured. Seven CS616 sensors were installed and commissioned at both the SS1 and SS2 stations in 2022. The CS650 sensors remain wired at the stations and are used to measure temperature, and VWC, when in electrical conductivity operating range (0 – 0.8 dS/m).

2.2 Conceptual Model of Cover System Performance

A conceptual model of cover system performance was developed by Okane. The conceptual model was used to identify key processes and mechanisms, and then evaluate the cover system design's control on those mechanisms under a range of potential scenarios. It was identified that weathering (oxidation) and leaching (net percolation) in the MRSs will cause acid rock drainage and have negative environmental effects on the receiving environment. The cover system design aims to provide controls on oxygen ingress and net percolation to limit acid rock drainage.

Diffusion and advection represent the primary mechanisms for oxygen transport through a cover system. Oxygen diffusion can be restricted by decreasing the bulk diffusion coefficient of the cover system, generally by increasing the degree of saturation. A cover system containing a layer maintained at a degree of saturation at approximately 85% is expected to efficiently limit oxygen ingress (McMullen et al., 1997, MEND, 2004). The compacted clay layer (CCL) incorporated in both cover system configurations is designed to provide higher water retention characteristics of the cover system profile. It is expected that the compacted layer will maintain a degree of saturation greater than, or close to 85% for the majority of the climate cycle. Limiting advective transport of oxygen requires that the cover restrict air flow by reducing pressure and thermal gradients or the permeability of the material. The CCL aims to reduce permeability of the material to limit advective air movement.

Net percolation is limited by taking advantage of the store-and-release properties of the 1 m non-compacted layer. Infiltrating water is stored within the cover system so it can be subsequently released via transpiration and evaporation. A store-and-release cover system uses the variability in timing, volume, and intensity of precipitation events to take advantage of available evaporative energy during summer. Additionally, the compacted layers form a barrier-type cover system which limits net percolation by reducing the hydraulic conductivity within the layer.

The conceptual model was based on Rainy River Mine's site-specific climate, hydrogeological setting, and materials. Given the site-specific climate of Rainy River Mine, the conceptual ranges of performance could be classified as low net percolation (5 to 15% of average annual precipitation) and low oxygen flux (1 to 10 mol/m^2/year) according to the INAP Guidance Document (INAP 2017).

2.3 2023 – 2024 Monitoring Activities

The cover system was monitored throughout the monitoring period. Major activities that were completed on the EMRS progressive cover system include automated data collection and data quality assurance and quality control (QA/QC), field inspections, and cover system performance updates (Table 2.1).

Table 2.1: 2023-2024 monitoring period activities.

Activity	Date
Automated Data Download and QA/QC	March 13, April 8, June 4, July 28, August 25, October 8 and November 23, 2024
Site Visit & Instrumentation Maintenance	July 10 and November 26, 2024
Semi-annual performance update	June 2024

2.4 2023 – 2024 Data Capture

Persistent modem issues in the EMRS SS1 station occurred in early March 2024, which resulted in data unavailable for remote download and data loss. Okane staff worked with New Gold field technicians to troubleshoot the modem connection and manually download data. Modem troubleshooting was unsuccessful, and a remote connection could not be established. New Gold field technicians successfully collected data on March 13 and April 8, 2024.

New Gold field technicians attempted to manually collect data on April 25, 2024, and indicated that there was no power to the datalogger and connection could not be established. Okane staff visited site on May 28. 2024 to troubleshoot, and it was observed that the solar panel regulator was faulty. The station had no power and there was no program running on the datalogger, resulting in data loss between April 8 and May 28, 2024. Okane disconnected the solar panel to prevent continued unregulated charging of the battery.

On July 10, 2024, Okane staff were on site conducting a vegetation assessment, and assisted with troubleshooting of the EMRS SS1 station. Okane staff installed a solar panel regulator and replaced the modem with a modem from a decommissioned monitoring station. The station remained operational, and data was remotely collected on July 30, 2024. Okane attempted to remotely collect data on August 26, 2024, but were unable to establish connection with the datalogger, indicating additional modem and/or power issues.

Okane completed a site visit in late November to perform annual maintenance and install additional meteorological sensors. Okane field staff indicated the EMRS SS1 station had no power, and no program was running on the datalogger, resulting in data loss from July 30, 2024, onward. Okane field staff replaced the fuse and attempted to determine the root of the power issues but were unable to determine the cause of the power failure. While troubleshooting, battery power appeared to fluctuate outside of the expected range and the modem was not able to find a signal.

Persistent power supply issues and solar panel regulator failure may have damaged the equipment within the enclosure, and it's Okane's recommendation that the datalogger and power supply components (solar panel and battery) be replaced in effort to make the station operational again and prevent further data loss.

3 COVER SYSTEM PERFORMANCE MONITORING RESULTS

3.1 Meteorology

Meteorological parameters were measured at EMRS SS1 and Barron weather station to monitor site-specific climate conditions. A tipping bucket rainfall gauge (TBRG) was installed and began collecting measurements directly on the south slope of the EMRS in June 2021, while air temperature, relative humidity, and wind speed and direction were monitored at Rainy River Mine's Barron weather station. Minor data gaps exist in the Barron station meteorological monitoring.

3.1.1 Air Temperature

Annual average air temperature recorded at the Barron weather station during the monitoring period was 5.5 °C, 2.2 °C warmer than the 30-year historical average of 3.3°C (Figure 3.1). The average winter temperature is of interest with respect to performance monitoring for the purpose of evaluating frost penetration into the cover system. Between December 2023 and March 2024, ambient air temperature ranged from -32.9 °C to 16.7 °C with an average temperature of -6.0 °C. Historic winter air temperatures since 2019-2020 range from a low of -43.0 °C and a high of 17.2 °C both occurring during 2020-2021 monitoring period (Table 3.1).

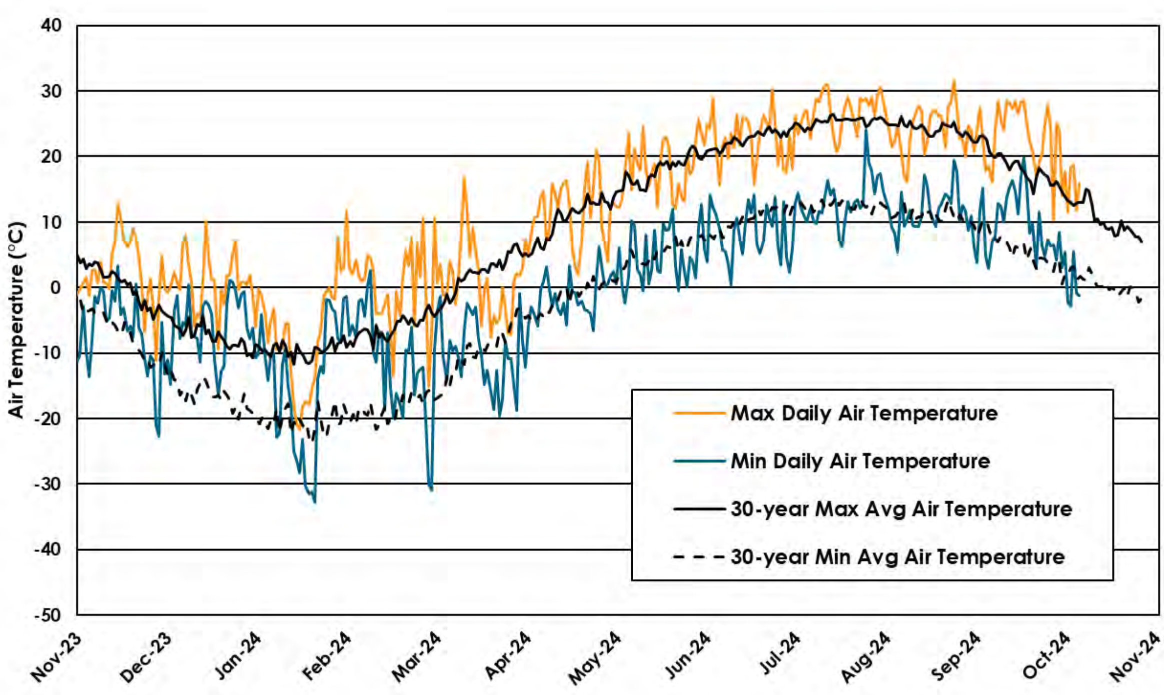


Figure 3.1: Maximum and minimum daily air temperatures recorded at Barron weather station compared to 30-year averages.

Table 3.1: Historical ambient winter air temperature (December to March).

Monitoring Period	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Lowest Winter Temperature (°C)	-39.9	-43.0	-39.9	-39.8	-32.9
Highest Winter Temperature (°C)	12.4	17.2	14.6	7.5	16.7
Average Winter Temperature (°C)	-10.5	-8.9	-13.8	-10.6	-6.0
Average Annual Temperature (°C)	2.6	4.8	2.3	4.0	5.5

3.1.2 Rainfall

Rainfall is collected directly on site with a Texas Electronics TE-525M TBRG located at the SS1 station. The TBRG began collecting data on September 17, 2021. Missing rainfall data (due to power loss) was amended with data collected from the potentially acid generating (PAG) mine rock stockpiles cover Trial #2 monitoring station (PAG Cover Trial #2).

A total of 660.5 mm of rainfall was recorded during the monitoring period, including winter rainfall. From April to October, total rainfall recorded was 544.2 mm (42.8 mm less than the 30-year historic average of 587 mm) with the largest rainfall event of 45.9 mm occurring on August 29, 2024. (Figure 3.2). Monthly rainfall from April to October 2024 was compared to the 30-year historic average (Table 3.2). It was observed that May and July were months wetter than average. In previous monitoring periods, winter precipitation typically occurs as snowfall and is measured during the annual snow survey. During the 2024 monitoring period, winter rainfall was measured as a result of above freezing temperatures, and was included in the water balance.

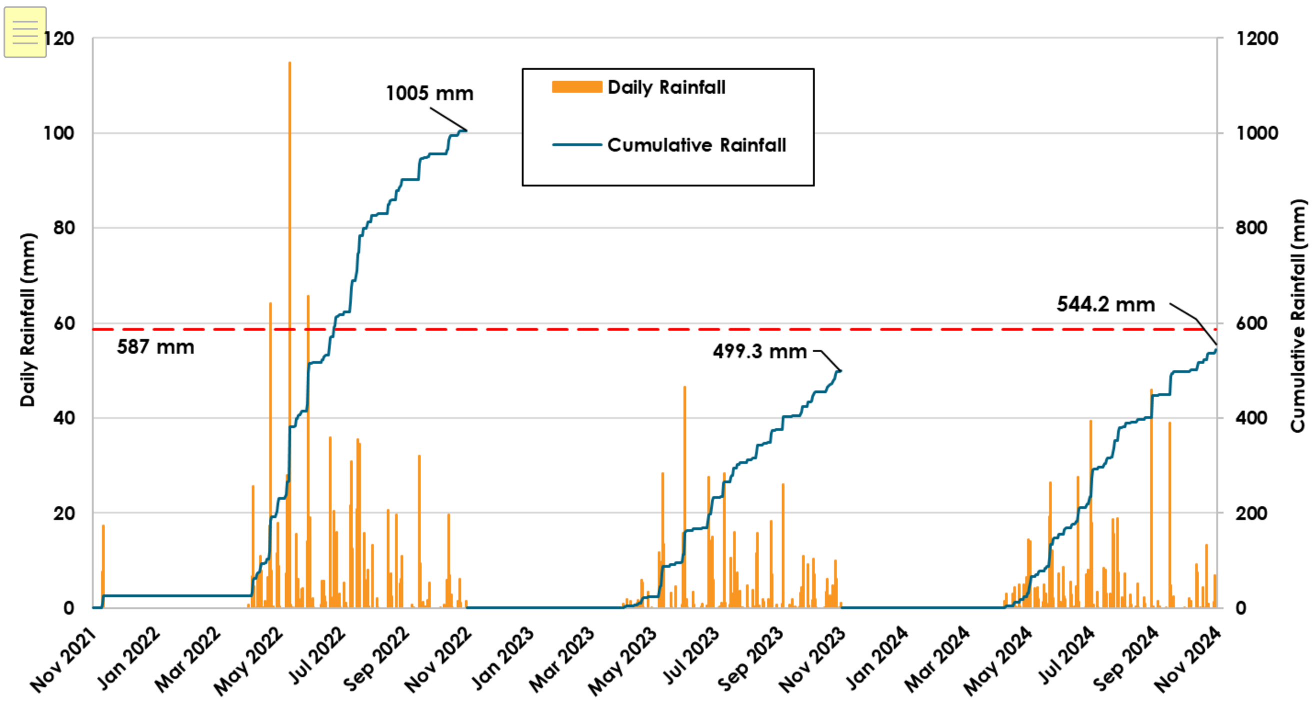


Figure 3.2: Daily and cumulative rainfall recorded at SS1 since November 2021.

Table 3.2: April to October monthly rainfall

Month	2022		2023		2024		30-year Average	
	Rain Days	Rainfall (mm)	Rain Days	Rainfall (mm)	Rain Days	Rainfall (mm)	Rain Days	Rainfall (mm)
November	2	24.9	-	-	10	30.4	-	-
April*	21	196.7	15	24.1	12	30.9	8	48.4
May*	18	292.4	11	88.1	16	123.5	13	87.2
June	17	102.5	14	120.3	14	79.3	13	107.9
July	16	209.9	17	73.9	14	147.3	11	123.6
August*	10	74.9	15	68.5	13	66.2	10	78.6
September*	13	54.2	13	58.8	8	49.7	11	77.5
October*	13	50.0	19	65.6	11	47.3	11	63.6
Sum	**110**	**1005.5**	**104**	**499.3**	**88**	**660.5**	**77**	**586.8**

***Data amended with rainfall record at PAG Cover Trial TBRG (Okane, 2025)**

3.1.3 Snowfall

The TBRG at the SS1 Station only measures rainfall and does not directly measure snow accumulation. Okane personnel did not conduct a snow survey during the monitoring period as snow cover thickness was considered negligible.

Lack of snow accumulation may be attributed to fluctuating temperatures that limits the steady accumulation of snow from November to March. The average snow water equivalent (SWE) is typically used in the annual water balance, however the 2023-2024 SWE is assumed to be negligible. Snow depth sensors were installed at the EMRS SS1 and SS2 stations in November 2024, and will provide area specific measurements for snow depth.

The previous snow surveys at the EMRS was conducted on February 22, 2022 and March 8, 2023 (Table 3.3).

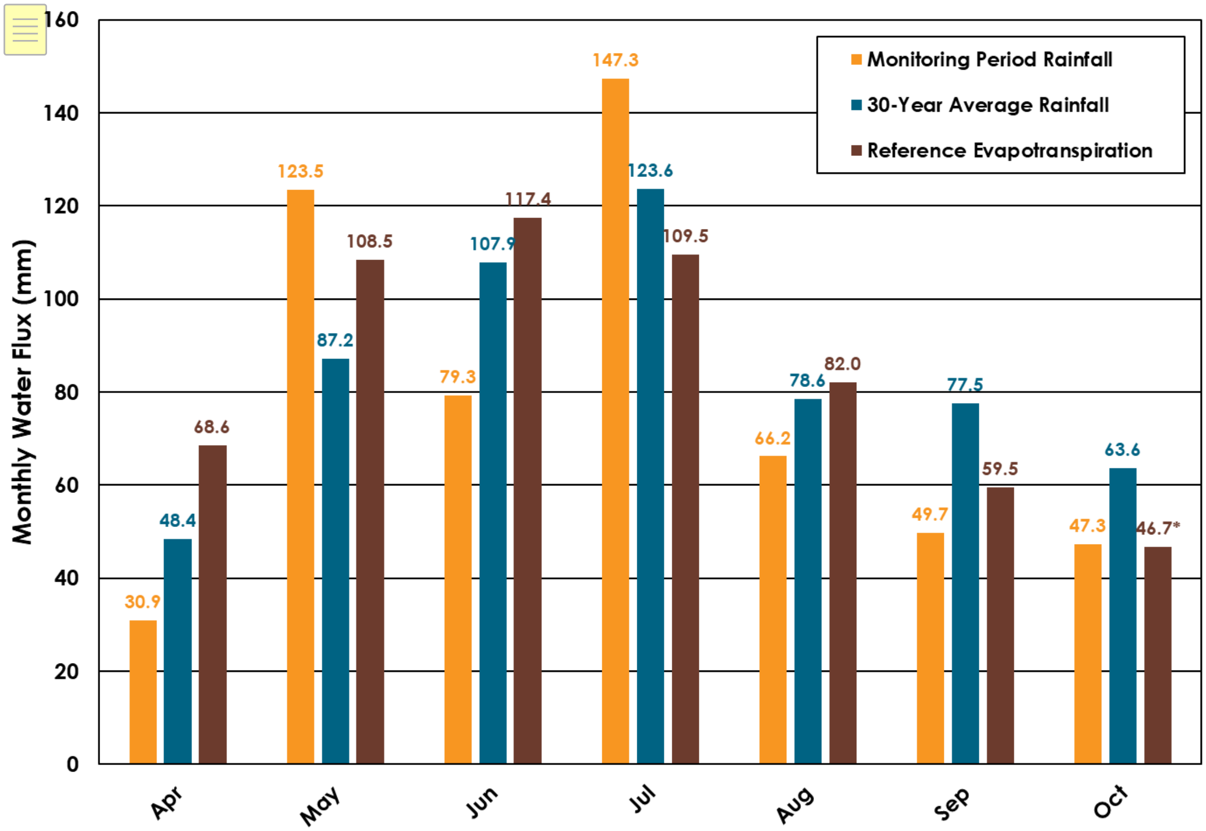
Table 3.3: Three-year monitoring period snow survey results.

Measured Parameter	2022		2023		2024	
	SS1 (North)	SS2 (South)	SS1 (North)	SS2 (South)	SS1 (North)	SS2 (South)
Snow Density (kg/m^3)	198	186	301	202	N/A	N/A
Snow-water Equivalent (SWE)	112 mm	113 mm	102 mm	86 mm	N/A	N/A

3.1.4 Reference Evapotranspiration

Reference evapotranspiration (ET_0) was calculated using the Penman-Monteith method. The Penman-Monteith method is the sum of transpiration of water within vegetation and evaporation of free water from the surface. A hypothetical grass crop having a height of 0.12 m, 70 s m-1 surface resistance, and albedo of 0.23 was used (Allen et al. 1998). Reference evapotranspiration was calculated based on air temperature, relative humidity, and wind speed data collected at the Barron weather station, and net radiation measured at the PAG Cover Trial #2. Between March and October 2024, a total of 557.3 mm of ET_0 calculated at Trial #2 (Okane, 2025). Net radiation data collected from Trial #2 was used as an estimation for ET_0 at the EMRS cover but does not account for area-specific differences such as slope angle and aspect, as well as vegetation differences. Net radiometers were installed at the EMRS SS1 and SS2 stations in November 2024 and will provide area specific estimates for ET_0.

Monthly ET_0 was compared to monthly rainfall for April to October (Figure 3.3). A decrease in the water stored within the upper layers of the cover system is observed in months where ET_0 is greater than rainfall (e.g. June, August, and September). During these months there is higher potential for drying of the compacted layer resulting in a reduction in maintained degree of saturation. Similarly, periods where ET_0 is less than rainfall observe an increase in water storage and increased potential for NP into the underlying mine rock (e.g., May, July and October). During April, the ET_0 is greater than the recorded rainfall but the water stored in cover system increased which is attributed to freshet and cover system thaw.



** Reference evapotranspiration was estimated based on historical monitoring data (2019-2023) (Okane 2020a, 2020b, 2022, 2023, 2024) and climate data from Environment and Climate Change Canada's weather station located in Barwick, Ontario (ECCC, 2024).*

Figure 3.3: Reference evapotranspiration at PAG Cover Trial #2 and total rainfall at SS1 measured from April to October 2024.

3.2 Cover System Temperature Profiles

Soil temperature was monitored over the entire cover system profile of SS1 and SS2 to observe freeze-thaw cycling and the depth of frost penetration. The largest implication of freeze-thaw cycles on cover system performance is potential changes to physical properties of the material, such as altering the hydraulic conductivity. Freezing temperatures within the cover system profile were observed at the SS1 monitoring station beginning November 23, 2023, and reached the 54 cm sensor (Figure 3.4). Freezing temperatures within the cover system profile were observed at the SS2 monitoring station beginning after November 27, 2023. Freezing temperatures were recorded at a maximum depth of approximately 90 cm at SS2 (Figure 3.5).

The average temperature within the compacted layer recorded during the monitoring period was 7.7 °C and 7.3 °C at SS1 and SS2, respectively. Warmer temperatures may have been observed at the SS1 station due to the south facing slope aspect, receiving more direct sun throughout the summer.

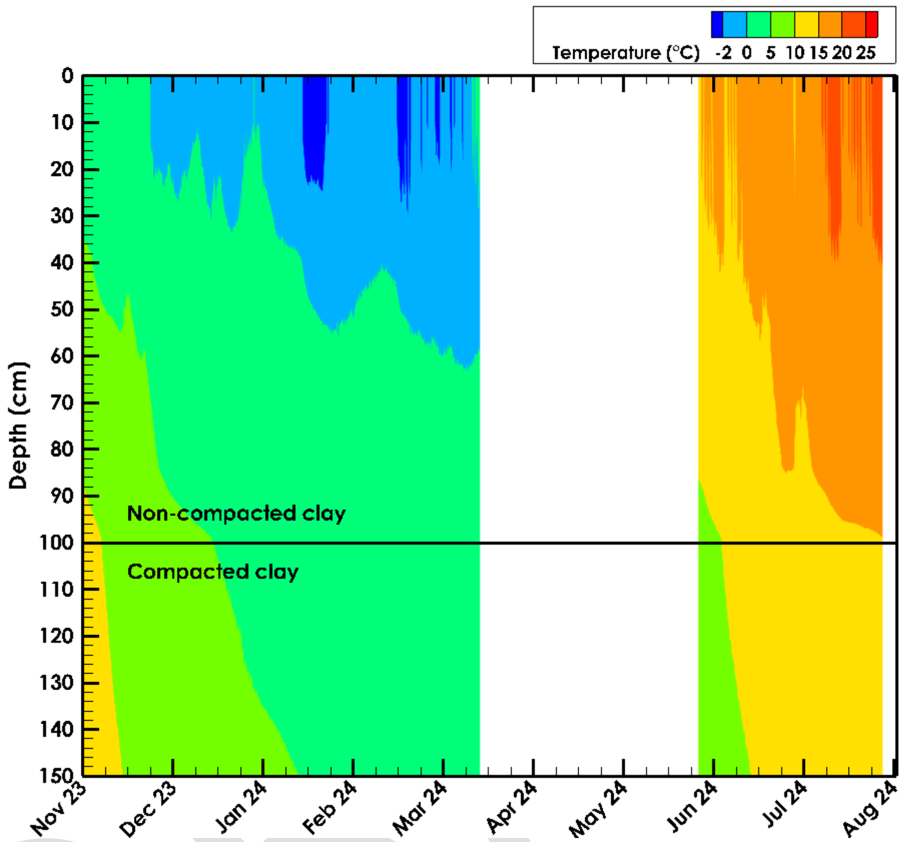


Figure 3.4: Soil temperature profile measured at SS1 Primary Nest from November 2023 to August 2024 (blank areas indicate period of missing data).

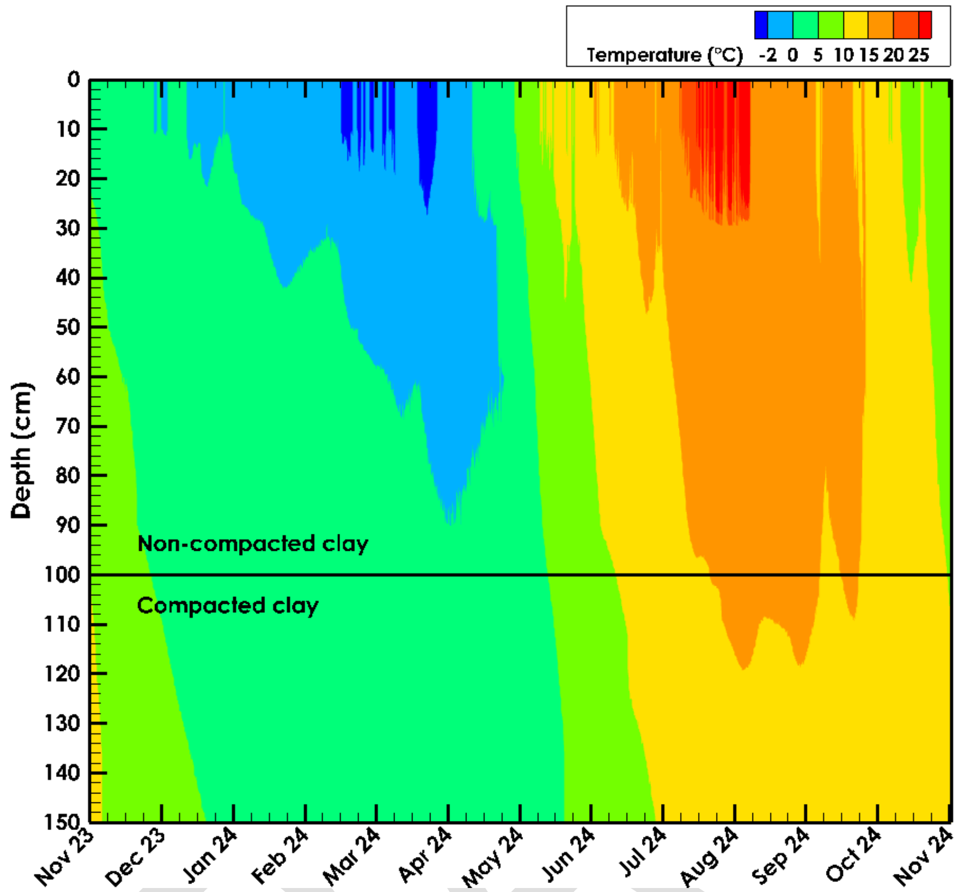


Figure 3.5: Soil temperature profile measured at SS2 Primary Nest during the monitoring period.

Table 3.4: Summary of freezing depths and dates.

Measured Parameter	2021-2022		2022-2023		2023-2024	
	SS1 (North)	SS2 (South)	SS1 (North)	SS2 (South)	SS1 (North)	SS2 (South)
Date of freezing	Nov. 22, 2021	Nov. 25. 2021	Dec. 1, 2022	After Dec. 13, 2022	Nov. 23, 2023	Nov. 27, 2023
Depth of freezing (cm)	84	90	30	30	54	90

The 2023-2024 monitoring period measured more severe freezing than the 2022-2023 monitoring period, but less severe than the 2021-2022 monitoring period (Table 3.4). This may be due to the lack of snow cover on the surface which provides an insulating effect. Freezing temperatures were not observed to penetrate the CCL during the monitoring period.

3.3 Cover System Water Dynamics

Volumetric water content (VWC) and matric suction were measured throughout the SS1 and SS2 monitoring profile. Volumetric water content and matric suction measurements can be further analyzed to investigate performance and water dynamics within the compacted layer of the cover system. This section presents the results of the data analysis, while direct in situ measurements are presented in Appendix B. The top of each cover system was selected as origin datum for all instrumentation depths.

3.3.1 Degree of Saturation

Volumetric water content was measured at each monitoring station to observe changes in the degree of saturation of the CCL. To successfully mitigate the ingress of oxygen into the underlying waste rock, a material must remain at or near saturated levels. As the degree of saturation of a soil exceeds approximately 80%, the diffusion coefficient typically decreases by several orders of magnitude. A general guideline suggests that maintaining a consistent degree of saturation of approximately 85% or greater within a layer will effectively limit the amount of oxygen movement through diffusion rather than advection (Aachib *et al.*, 2004).

Water content data measured at the SS1 and SS2 nest observed that the CCL maintained an average degree of saturation of 98% and 99%, respectively (Figure 3.6, Figure 3.7). There are some variations in the degree of saturation between SS1 and SS2, likely a result of the south facing slope and climatic conditions caused by the sloped aspect, as well as the missing data from the SS1 station being non-reflective of the complete monitoring period. (Table 3.5). Based on available 2024 data and previous years' performances, the non-compacted clay layer of the SS1 cover system appears to be maintaining a high degree of saturation in the CCL preventing it from experiencing drying. The growth medium layer of the SS2 cover system is also performing as the intended store and release system and prevents the CCL from drying out. The degree of saturation maintained in the cover system demonstrates that the compacted clay layer is retaining sufficient pore-water to attenuate oxygen transport. The objective of mitigating oxygen ingress is effectively achieved through the maintenance of an adequate degree of saturation in the compacted clay during extended periods of dry and warm weather.

Table 3.5: Degree of saturation throughout cover system profile.

Monitoring Station	Non-compacted clay	Compacted clay		
	Average	Maximum	Minimum	Average
SS1 Primary Nest	81%	100%	94%	98%
SS2 Primary Nest	82%	100%	97%	99%

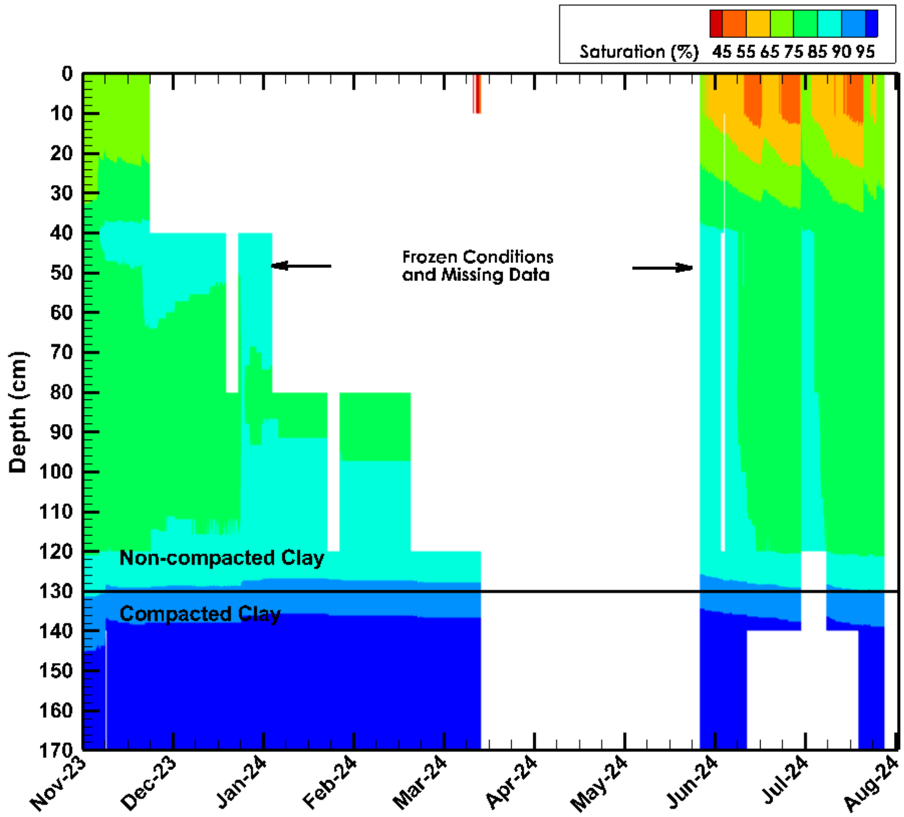


Figure 3.6: Change in degree of saturation at SS1 Primary nest period (blank areas indicate period of missing data and/or frozen conditions).

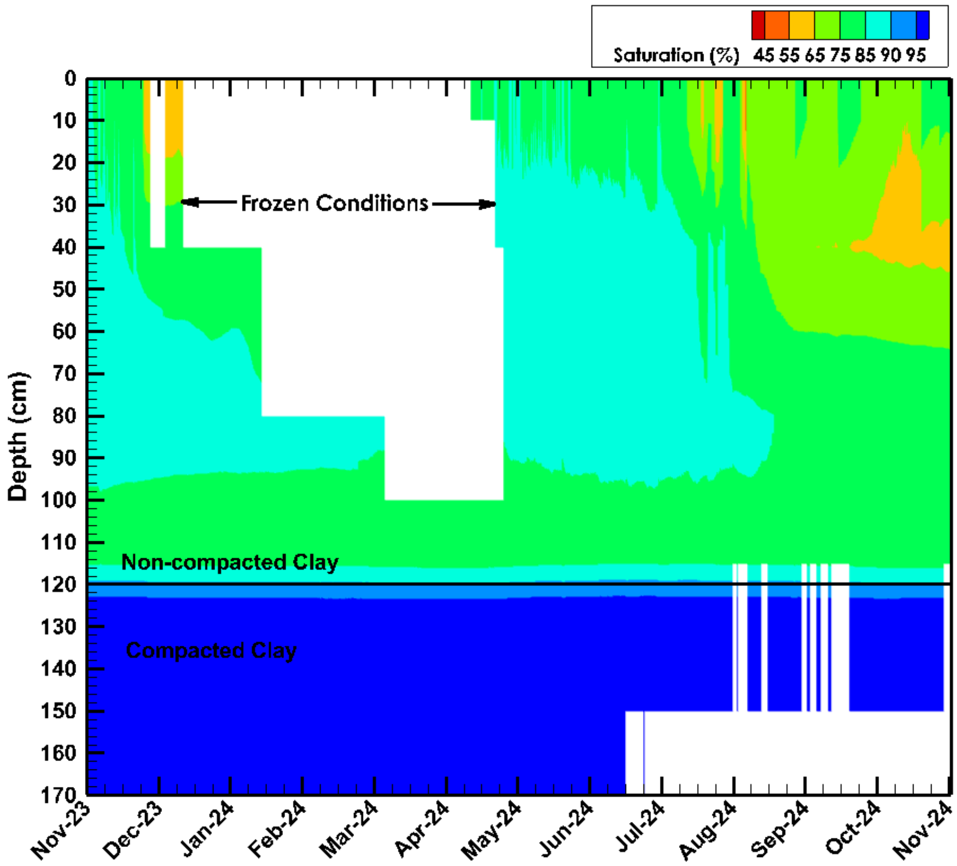


Figure 3.7: Change in degree of saturation at SS2 Primary nest.

3.3.2 Matric Suction

Matric suction sensors were installed in each cover system profile to measure negative pore-water pressure (suction). In unsaturated soils, suction provides an indication of the affinity of a soil for water, expressed as an energy potential. Measurements of less than 10 kPa are outside the installed sensor measurement range as the resolution of measurements in this range cannot be specifically measured and can be considered as any value between 0 to 10 kPa. Suction values greater than 400 kPa are calculated from laboratory calibrations completed with salt brines generating osmotic suction. Calibration of individual sensors in this suction range can be challenging and therefore values greater than 400 kPa have increasing uncertainty and reduced accuracy.

SS1 observed suction values between 10 kPa and 42.5 kPa in the CCL (Figure 3.8) while SS2 observed suction values between 10 kPa and 120 kPa, (Figure 3.7). Based on available data, SS1 generally maintained <10 kPa in the CCL. Matric suction in the CCL at SS2 maintained matric suction of <10 kPa until late August when it increased up to 120 kPa. This correlates to the lower-than-average rainfall and ET_0 exceeding rainfall in August and September. Higher suction was observed in the non-compacted layer at SS1, mirroring the degree of saturation results. This trend is likely due to the south facing slope aspect and increased drying potential at SS1.

Typically, water content levels recover in October/November and are at a seasonal high following freshet in April, resulting in reduced suctions throughout the cover profile between these months. Although the compacted layer in SS2 observed higher suctions during the 2023-2024 monitoring period, the compacted layer was able to maintain a high degree of saturation, as discussed in Section 3.3.1

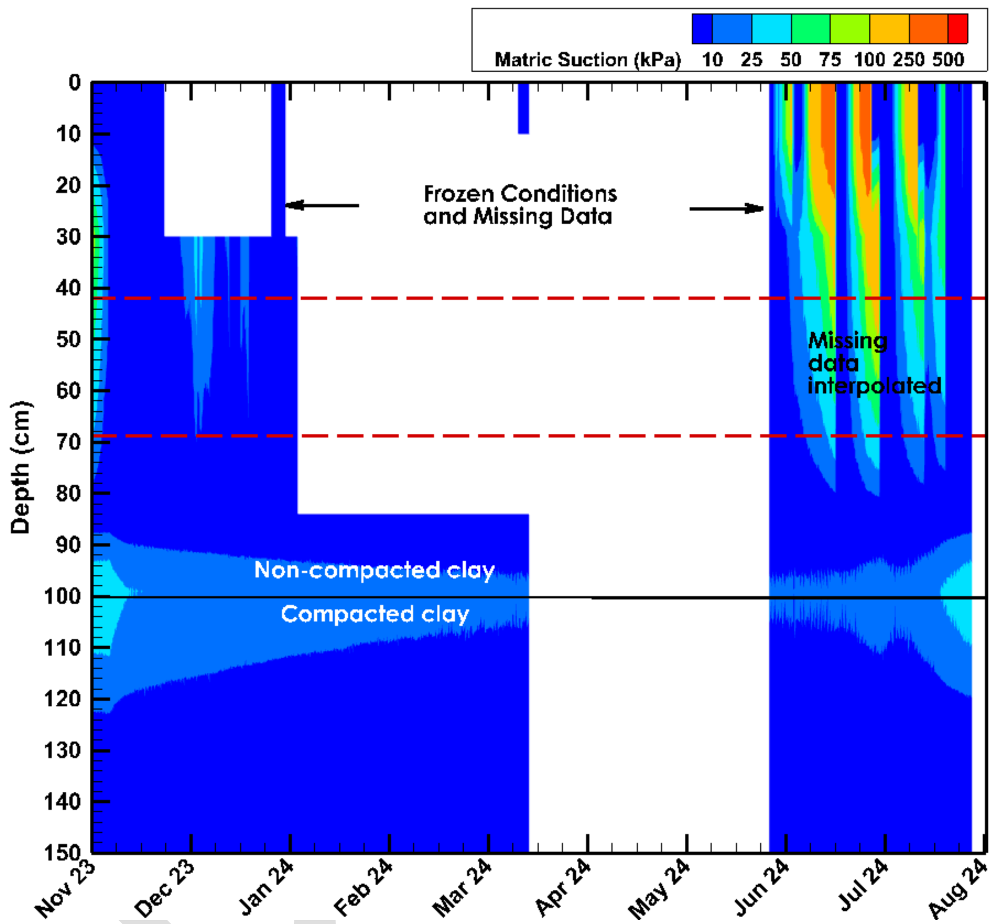


Figure 3.8: Matric suction profile measured at SS1 Primary nest.

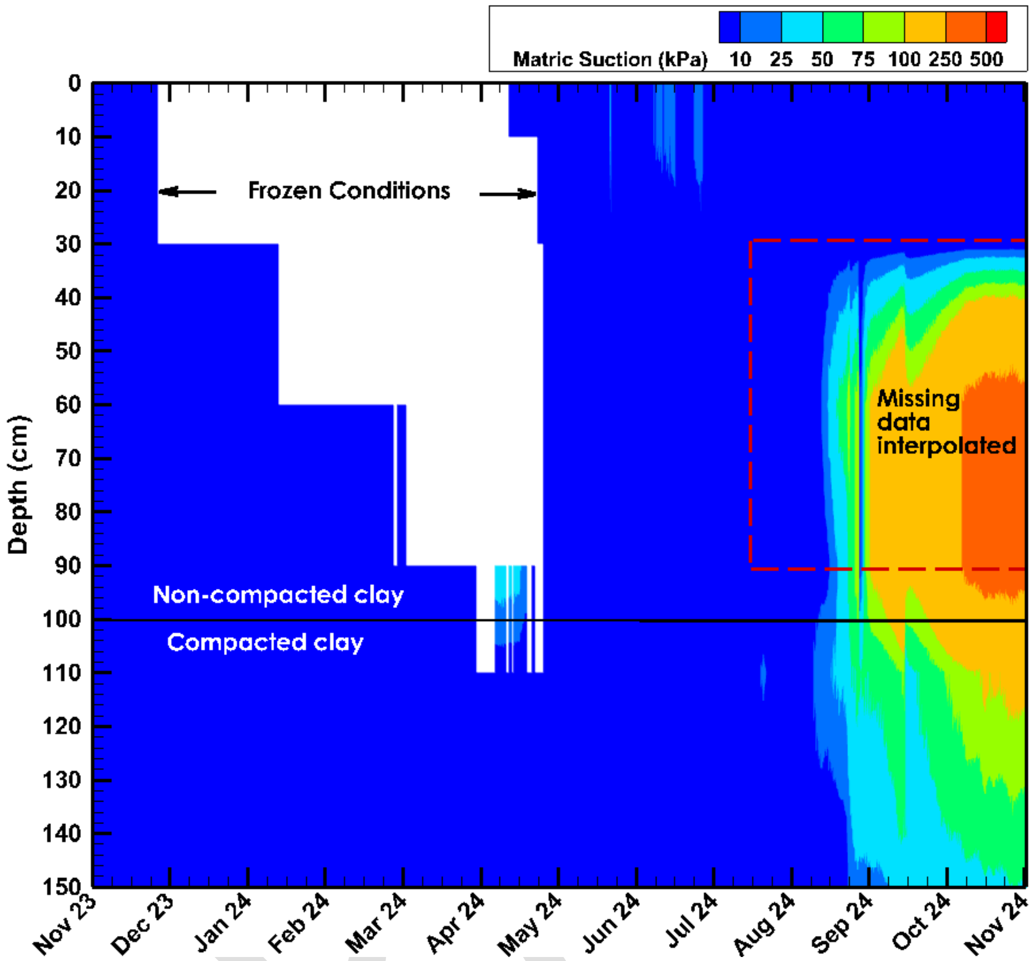


Figure 3.9: Matric suction profile measured at SS2 Primary nest.

3.3.3 Total Water Storage

Volumetric water content data was used to calculate the total measured water storage within each primary nest profile. A total water storage profile was created from sectioning the cover system into representative layers, with each layer having a VWC sensor at the centre. For example, sensors placed at 10 cm, 40 cm, and 80 cm have representative layers of 0 to 25 cm, 25 to 60 cm. Trends in measured storage can be analyzed to evaluate the effect of the store and release cover system throughout the monitoring period. Overall, the SS2 Primary has a higher total storage and higher VWC due to the total cover system thickness of 191 cm, compared to the 180 cm thick SS1 Primary profile (Figure 3.10). Measured storage in both SS1 and SS2 fluctuated throughout the monitoring period, reflecting the degree of saturation data presented earlier (Section 3.3.1). From what is shown in Figure 3.10, SS1 measured total storage was more responsive to precipitation events compared to SS2, which may be attributed to the thinner cover system. SS1 measured a total decrease in storage in late August, corresponding with a decreased degree of saturation and increased matric suction between 60 cm and 100 cm of cover material. Decreased water stored in the cover system is due to drying of the upper soil layer throughout the summer. Typically, water levels tend to recover in the fall, however during the 2023-2024 monitoring period, it continued to decrease until November.

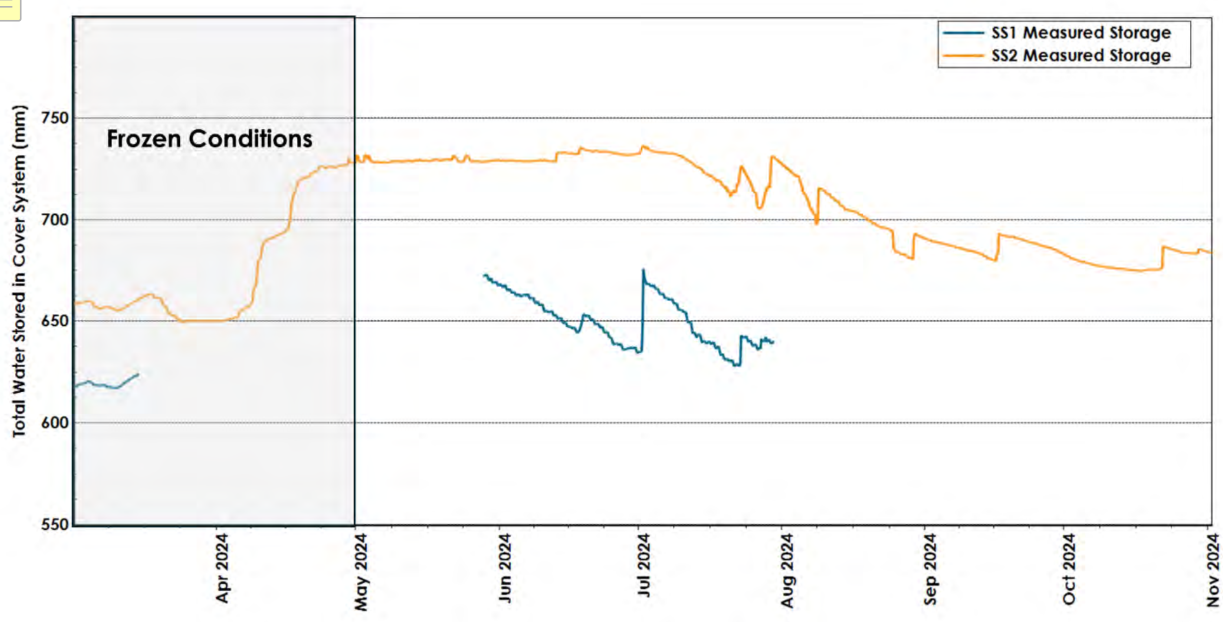


Figure 3.10: Measured storage at the SS1 and SS2 Primary nests.

3.4 Water Balance

3.4.1 Discussion of Water Balance Inputs

A numerical model was utilized for water balance estimation that uses inputs of both meteorological data and soil monitoring data (suction gradients, VWC, measured storage) and estimates the remaining water balance components to balance the equation daily (Equation 1). The use of this software increases accuracy and consistency of water balances. Water balances were developed for each primary station to estimate the NP to the underlying mine rock.

$$PPT = SB + RO + ET_0 + NP + \Delta S + ITF \quad [1]$$

where:

PPT = precipitation (rainfall plus snow water equivalent)
SB = sublimation (assumed to be zero)
RO = runoff;
ET0 = evapotranspiration;
NP = net percolation;
ΔS = change in water storage within the cover system profile; and
ITF = interflow (assumed to be zero)

Effective precipitation was calculated using a combination of measured rainfall and accumulated snow. Spring melt was assumed to be negligible due to the lack of snow on site during the monitoring period. Effective precipitation was estimated as 661 mm SS2. No water balance was completed for the SS1 station due to missing data.

The primary purpose of the water balance is to estimate NP rates based on changes in water storage in the compacted clay layer, suction gradients, and conservative flow limitations of a barrier layer (hydraulic conductivity equal to or lesser than 10^{-7} cm/s).

The water balance is an indirect method of calculating NP. Therefore, the uncertainty associated with the individual components of the water balance are compounded when estimating NP. Water balance uncertainties are constrained to the extent possible using engineering judgement. The estimated NP rates and patterns determined using the water balance method generally support the conceptual model, and as such support the suitability of the water balance method for this site.

The numerical model uses soil parameters such as hydraulic conductivity and porosity to improve accuracy in estimating runoff and NP. Manual adjustments are also completed based on site specific conditions that the simulation may not account for, such as hard panning of the topsoil or site topography, which help further improve the accuracy of the water balance results. The numerical simulation software utilizes the Soil Conservation Science (SCS) curve number (CN) to increase the accuracy of runoff estimation. The CN is determined through defining the Hydrologic Soil Group (HSG), cover description, and hydrologic condition. HSG Group C was chosen based on the results of the permeability testing completed on the compacted clay at the EMRS. An HSG Group C classification means that the soil has a slow infiltration rate. The other parameter used in the simulation is the vegetation cover type, which was chosen to be brush in fair condition (50 – 75% of the surface is covered), based on site observations during the various 2023 site visits. The vegetation SS2 resulted in a curve number for the hydrologic soil group of 70 (USACE et.al., 2022).

3.4.2 Water Balance Results

Calculated change in storage matched measured change in storage for SS2 (Figure 3.11, Table 3.6). Estimated NP was 27 mm (4% of annual precipitation), resulting in very low NP rates (INAP, 2017). ET_0 was 370 mm (56%) of annual precipitation, which was expected due to the northern facing slope at SS2. Runoff was estimated to be 315 mm (48%) of annual precipitation, primarily occurring in the winter months, and following large rainfall events. There was a decrease of 51 mm of water storage in the SS2 cover system measured over the monitoring period and is likely a result of persisting evapotranspiration and diminishing rainfall into the later summer months. The cover system at the EMRS is mitigating meteoric water from percolating into the underlying waste rock.

Table 3.6: Water balance components.

	Effective Precipitation (mm)	ET_0 mm (% PPT)	Runoff mm (% PPT)	Net Percolation mm (% PPT)	Change in Storage mm (% PPT)
SS1	-	-	-	-	-
SS2	661	370 (56%)	315 (48%)	27 (4%)	-51 (-8%)

PPT = Annual Precipitation

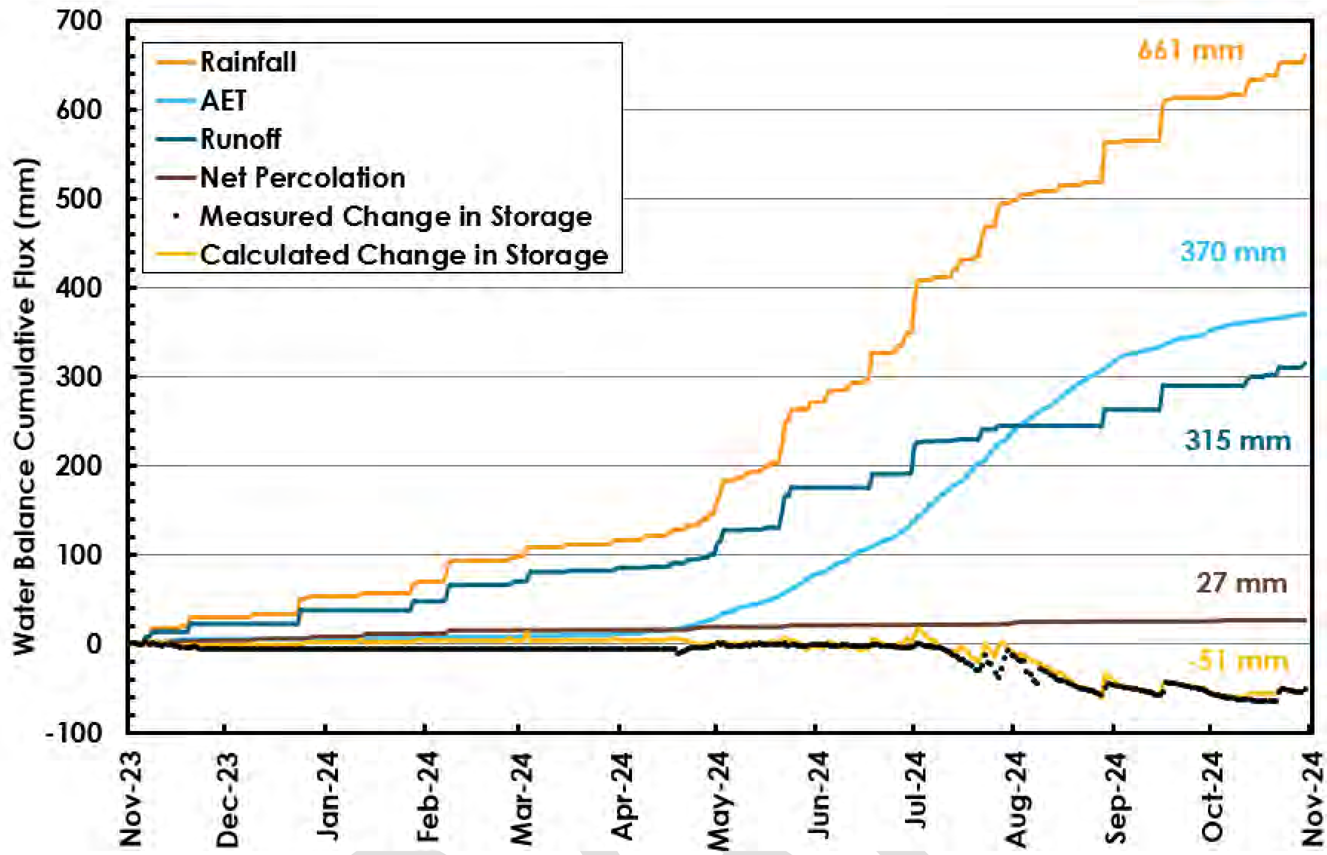


Figure 3.11: Annual water balance at SS2 for the 2023-2024 monitoring period.

The results of the previous water balance are provided for comparison (Table 3.7). Evapotranspiration was the same for both monitoring periods. The total runoff increased during the 2023-2024 monitoring period and is likely a result of winter rainfall events occurring throughout the monitoring period, as well as higher rainfall measured throughout the monitoring period. An increase in net percolation was observed during the 2023-2024 monitoring period, but the rate still remains classified as very low. A decrease in soil water storage was observed during the 2023-2024 monitoring period that was not observed in the 2022-2023 monitoring period. The decrease in soil water storage may be a result of persisting evapotranspiration into the later summer months or decreased late summer rainfall events not as evident in the 2022-2023 monitoring period.

Table 3.7: Water balance components over the two-year monitoring period.

Monitoring period		Effective Precipitation (mm)	ET_0 mm (% PPT)	Runoff mm (% PPT)	Net Percolation mm (% PPT)	Change in Storage mm (% PPT)
2022-2023	SS1	602	359 (60%)	283 (45%)	9 (1%)	-38 (-6%)
	SS2	584	332 (57%)	243 (42%)	2 (0.3%)	5 (1%)
2023-2024	SS1	-	-	-	-	-
	SS2	661	370 (56%)	315 (48%)	27 (4%)	-51 (-8%)

3.5 Salinity

Soluble electrical conductivity (EC) measurements were higher than the operation range of the CS650 sensors (~3.0 dS/m) (CSI, 2021). Elevated EC readings indicate the presence of elevated salinity levels within the cover system. Measurements in this range (~3.0 dS/m) indicate the soil can still be classified as non-saline and should have no effects of plant growth (University of Saskatchewan, 2009). To date, the salinity of the soil has not affected vegetation catch, as shown in the photos of the hydroseeded cover system in Appendix A.

The CS650 sensors continuously measure soil bulk EC. The bulk soil EC is the measure of the electric conductivity of the soil/water/air matrix recorded by the sensors, whereas the soluble EC is the electrical conductivity of the water in the pore spaces alone. The soluble EC limit for the operation of the CS650 sensors is ~3.0 dS/m, which corresponds with a bulk EC of approximately 0.8 dS/m. When the sensors bulk EC exceeds 0.8 dS/m, errors are returned for volumetric water content (VWC) readings.

CS650 sensors at SS1 recorded bulk EC measurements less than 0.8 dS/m in CCL sensors in SS1 but more than 0.8 dS/m in SS2 for the majority of the monitoring period (Figure 3.12 and Figure 3.13). Both sensors installed in the waste rock recorded bulk EC values of less than 0.1 dS/m, well within range, with no variance measured throughout the monitoring period. Okane will continue to monitor the bulk EC of the overburden at both SS1 and SS2.

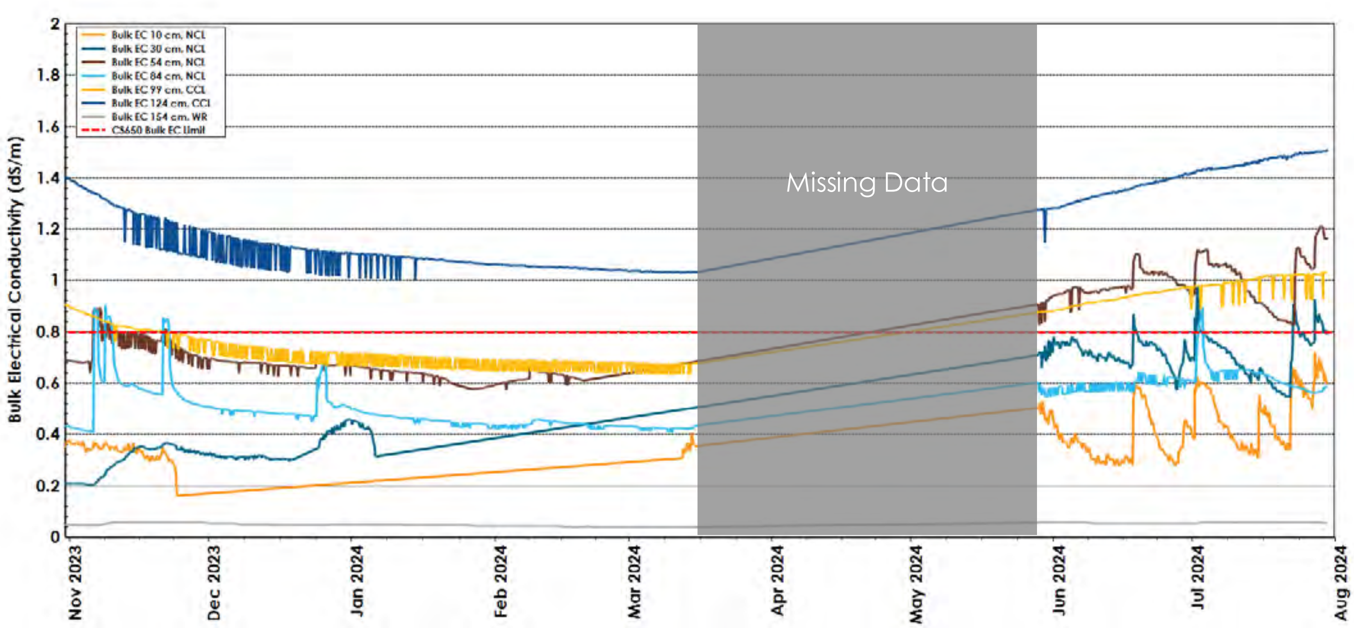


Figure 3.12: SS1 bulk EC during the monitoring period.

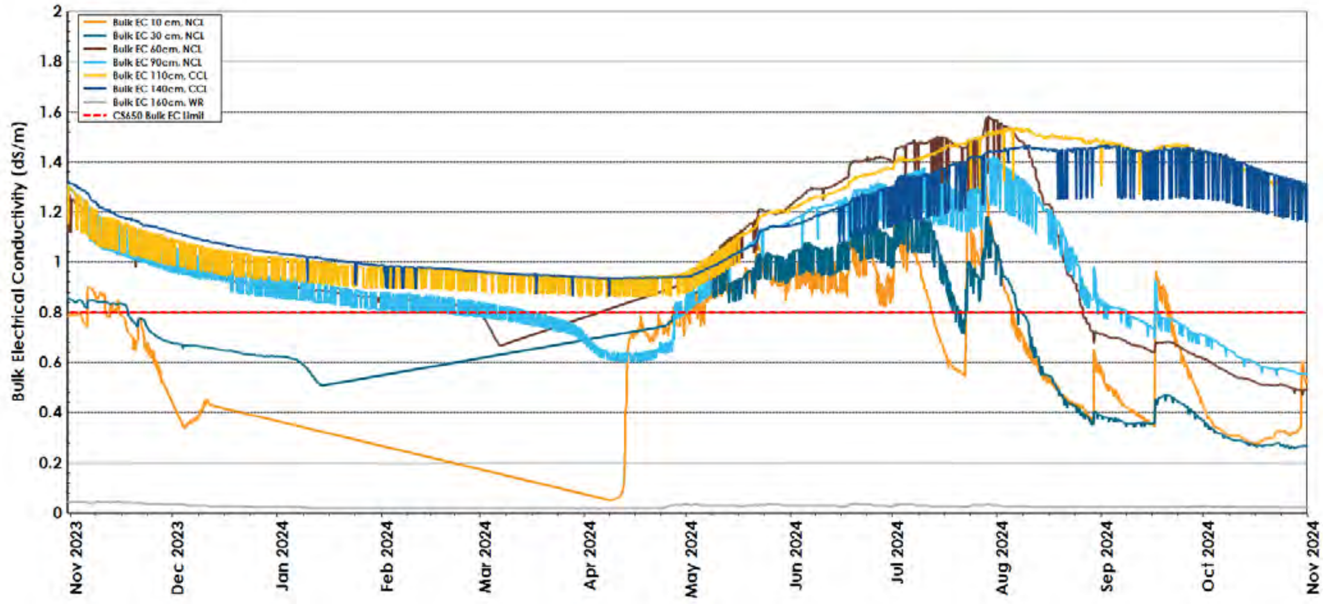


Figure 3.13 : SS2 bulk EC during the monitoring period.

4 RECOMMENDATIONS

To further understand cover system performance, the following is recommended to be completed during the upcoming monitoring period:

- Replacement of the datalogger and power supply components (solar panel and battery) at the SS1 monitoring station.
- Continued salinity monitoring to determine what impact, if any, elevated soil conductivities have on vegetation success.
- Continued generation of an annual water balance to better understand climatic cycles and the influence of further established vegetation to modify the water fluxes.
- Completion of an annual snow survey prior to observing above 0°C temperatures, to limit the amount of snow water equivalent that may be lost prior to the snow survey.

5 REFERENCES

Aachib, M., Mbonimpa, M., and M. Aubertin. 2004. Measurement and Prediction of the Oxygen Diffusion Coefficient in Unsaturated Media, with Applications to Soil Covers. Water, Air, and Soil Pollution 156: 163–193, 2004.

Allen, R. G., Pereira, L.S., Raes, D. and Smith, M. (1998). Crop evapotranspiration – Guidelines for computing crop water requirements. FAO Irrigation and Drainage Paper 56. Food and Agriculture Organization (FAO) of the United Nations, Rome, Italy.

Campbell Scientific Inc. (CSI). 2021. Product Manual for CS650 and CS655 Water Content Reflectometers. November 2021.

Environment and Climate Change Data (ECCC). 2024. 2024 historical climate data from Barwick Station extracted from the Environment and Climate Change Canada Historical Climate Data web site (https://climate.weather.gc.ca/index_e.html) on December 11, 2024.

International Network for Acid Prevention (INAP). 2017. Global Cover System Design – Technical Guidance Document.

McMullen, J., Firlotte, R., Knapp, R., Aubertin, M. 1997. Les Terrains Auriferes property site closure and rehabilitation – conceptual to construction. In Proceedings of the 29th Annual meeting of the Canadian mineral processors, Ottawa, Ont. 274-292.

Mine Environment Neutral Drainage (MEND). 2004. Design, construction, and performance monitoring of cover systems for waste rock and tailings. Canadian MEND Program, Project 2.21.4, July 2004.

Okane Consultants (Okane). 2020a. Rainy River PAG Cover Trial – (2019) Annual Monitoring Report. Submitted to New Gold January 21, 2020.

Okane Consultants (Okane). 2020b. Rainy River PAG Cover Trial – 2020 Annual Monitoring Report. Submitted to New Gold December 16, 2020.

Okane Consultants (Okane). 2022. Rainy River PAG Cover Trial – 2021 Annual Monitoring Report. Submitted to New Gold January 5, 2022.

Okane Consultants (Okane). 2023. Rainy River Mine – Potentially Acid Generating Mine Rock Cover Trial 2022 Annual Monitoring Report. Revision 1. Submitted to New Gold January 9, 2023.

Okane Consultants (Okane). 2024. Rainy River Mine – Potentially Acid Generating Mine Rock Cover Trial 2023 Annual Monitoring Report. Submitted to New Gold January 26, 2024.

Okane Consultants (Okane). 2025. Potentially Acid Generating Mine Rock Cover Trial 2024 Annual Monitoring Report. Okane report no. B-1003-233-005.

University of Saskatchewan. 2009. Salinity Class – Soil Salinity Degree.

6 CLOSURE

We trust information provided is satisfactory for your requirements. Please do not hesitate to contact the undersigned at (306) 241-3111 for further information or questions.

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Appendix A

Photo Log

Photo A.1: EMRS south slope cover, looking west. July 11, 2024.

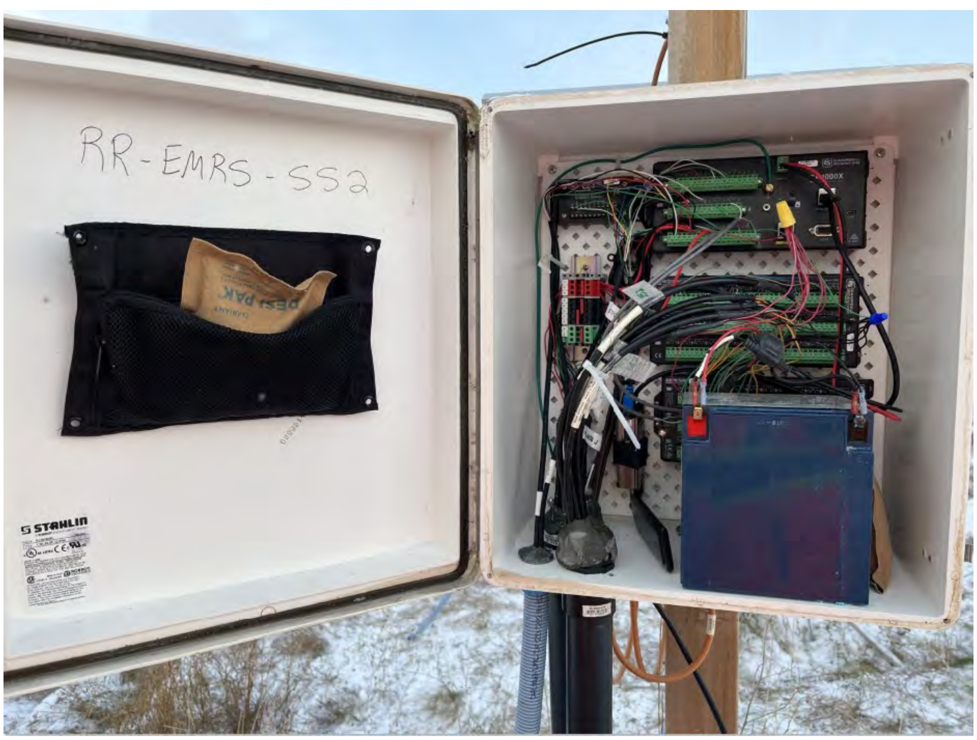

Photo A.2: SS2 enclosure.

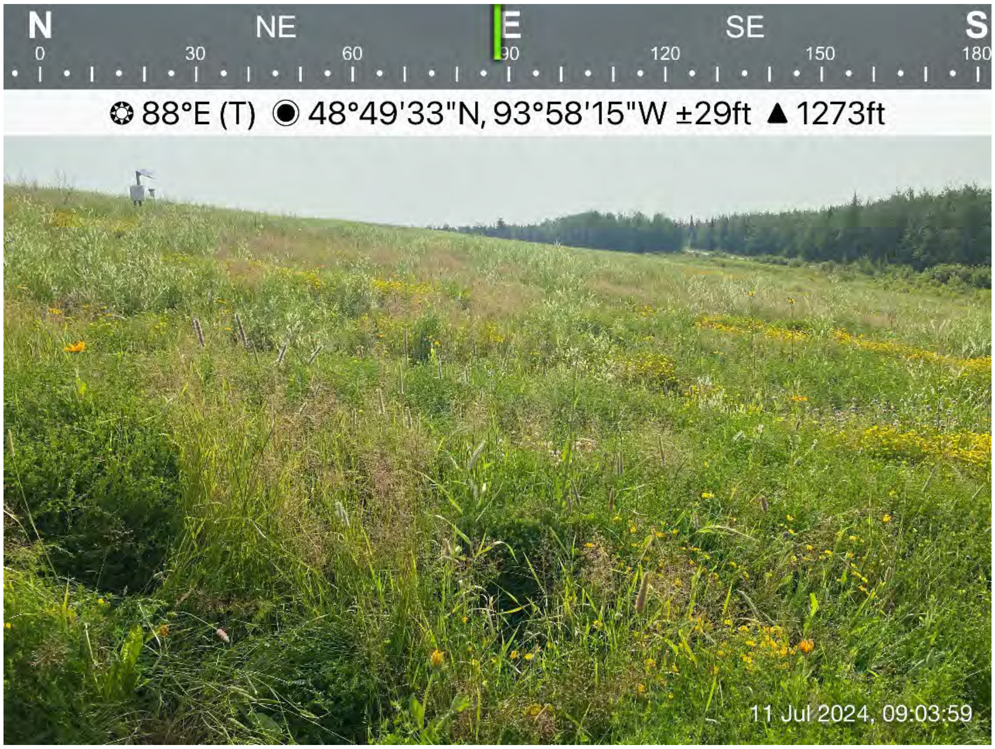

Photo A.3: EMRS south slope, looking east, July 11, 2024.

Photo A.4: SS1 enclosure.

Appendix B

In Situ Instrumentation Measurements

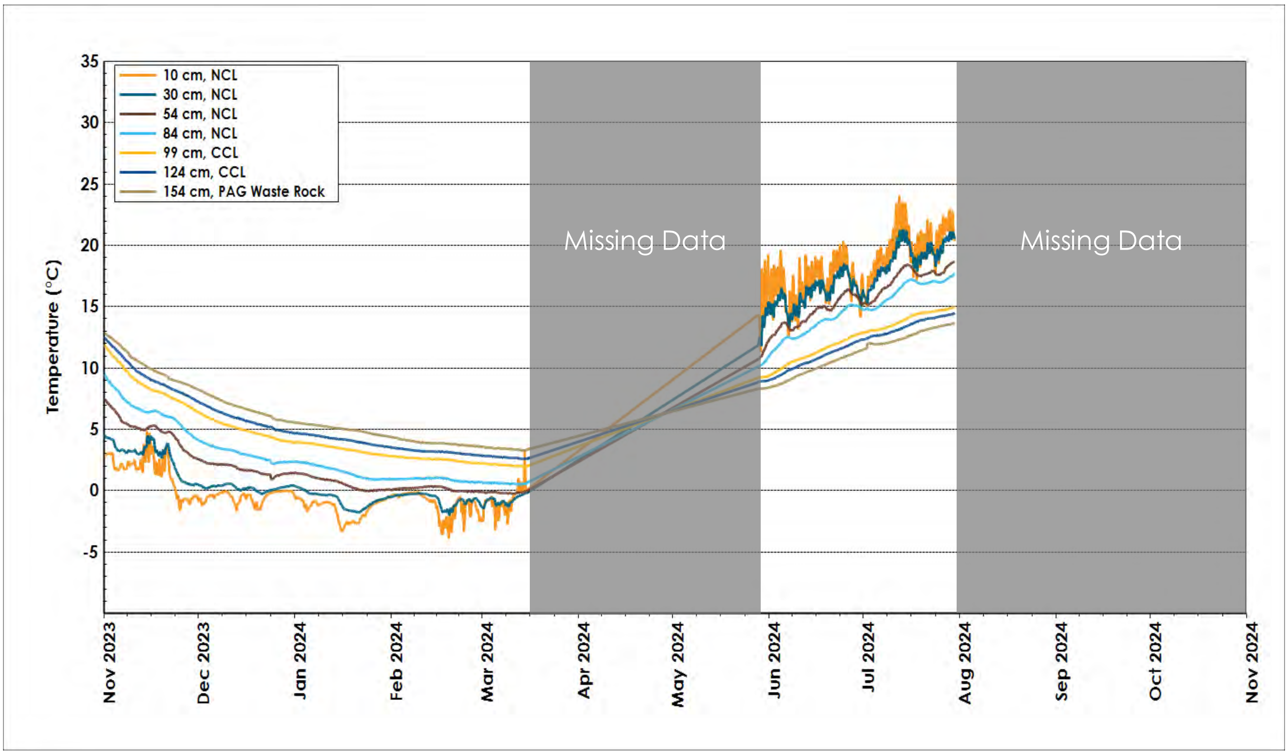

Figure B.1: Temperature profile at the SS1 Primary during the monitoring period.

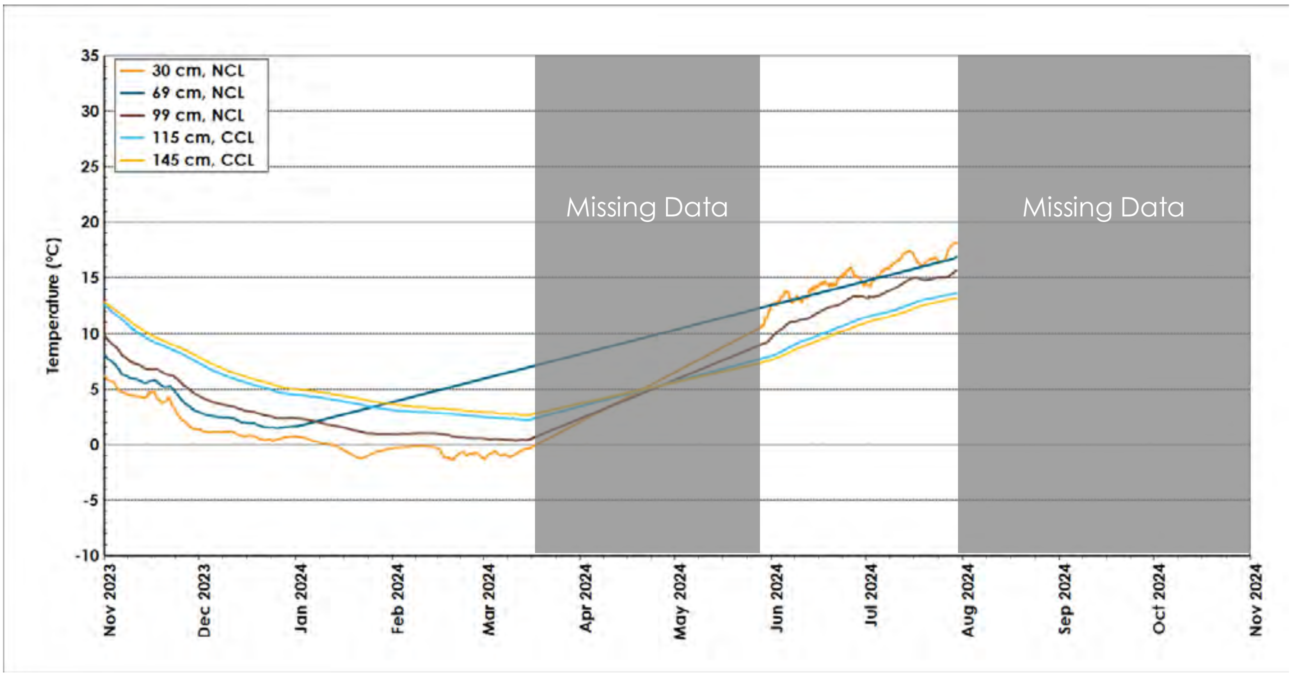

Figure B.2: Temperature profile at the SS1 Secondary during the monitoring period.

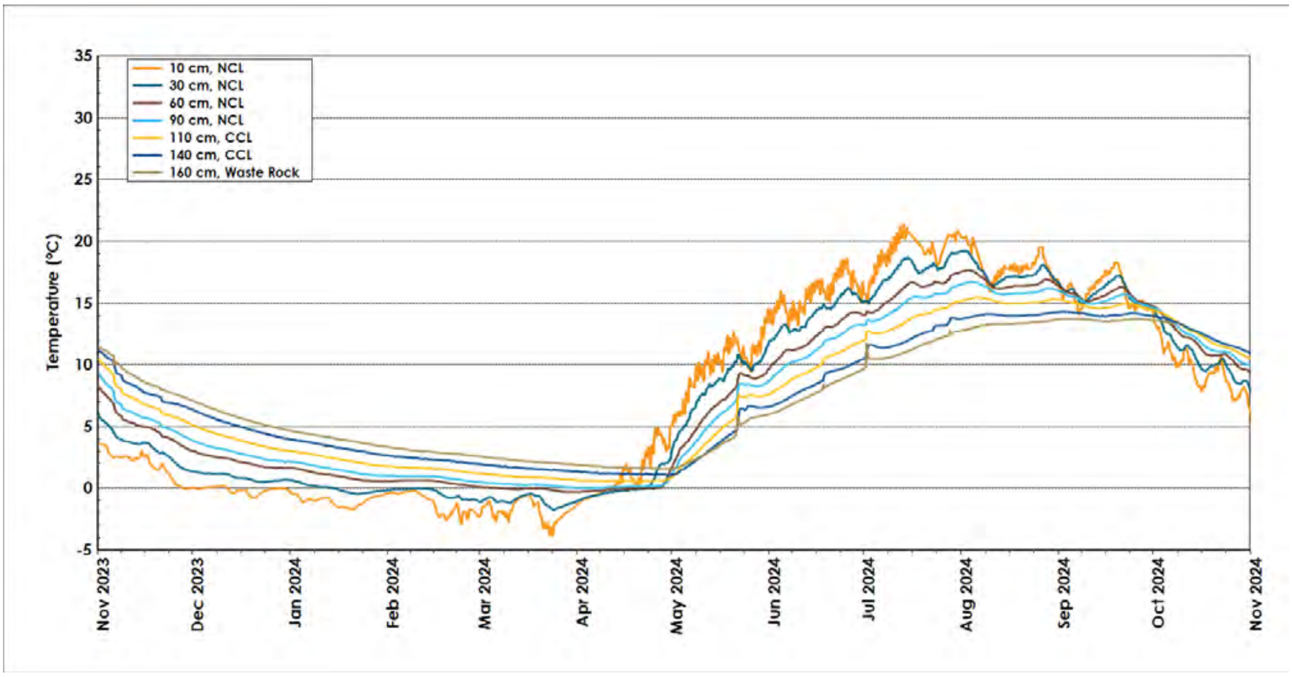

Figure B.3: Temperature profile at the SS2 Primary during the monitoring period.

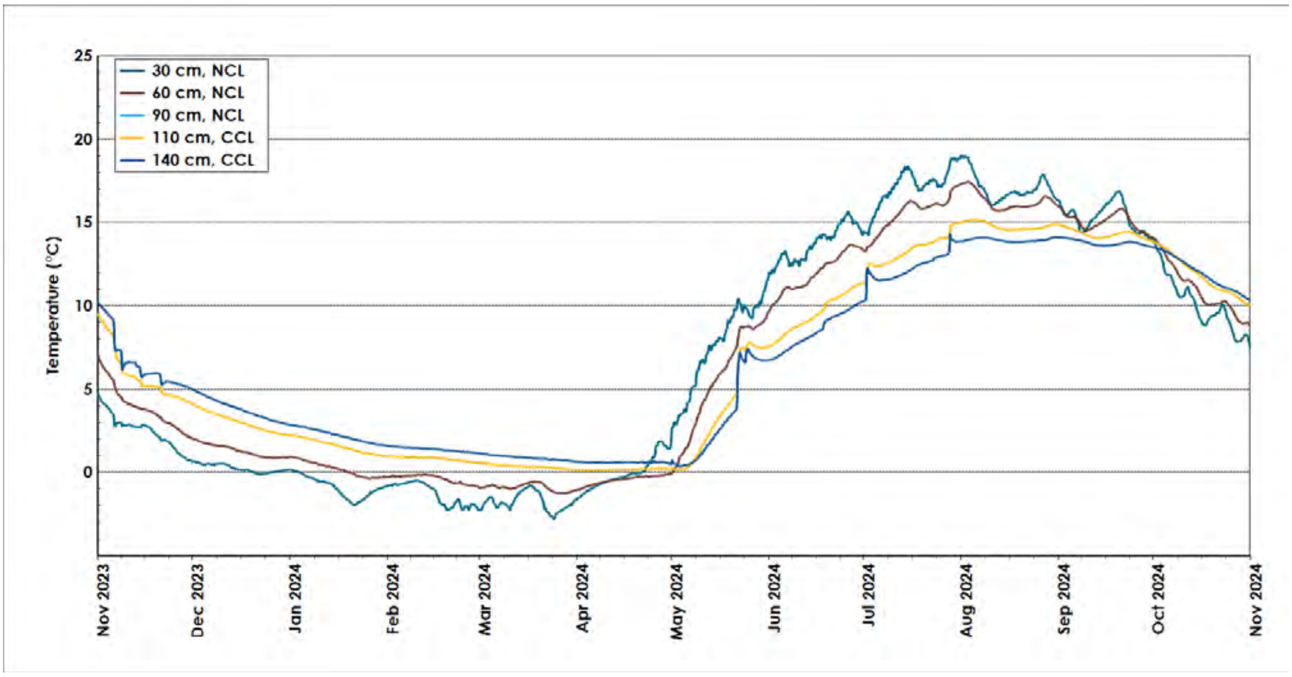

Figure B.4: Temperature profile at the SS2 Secondary during the monitoring period.

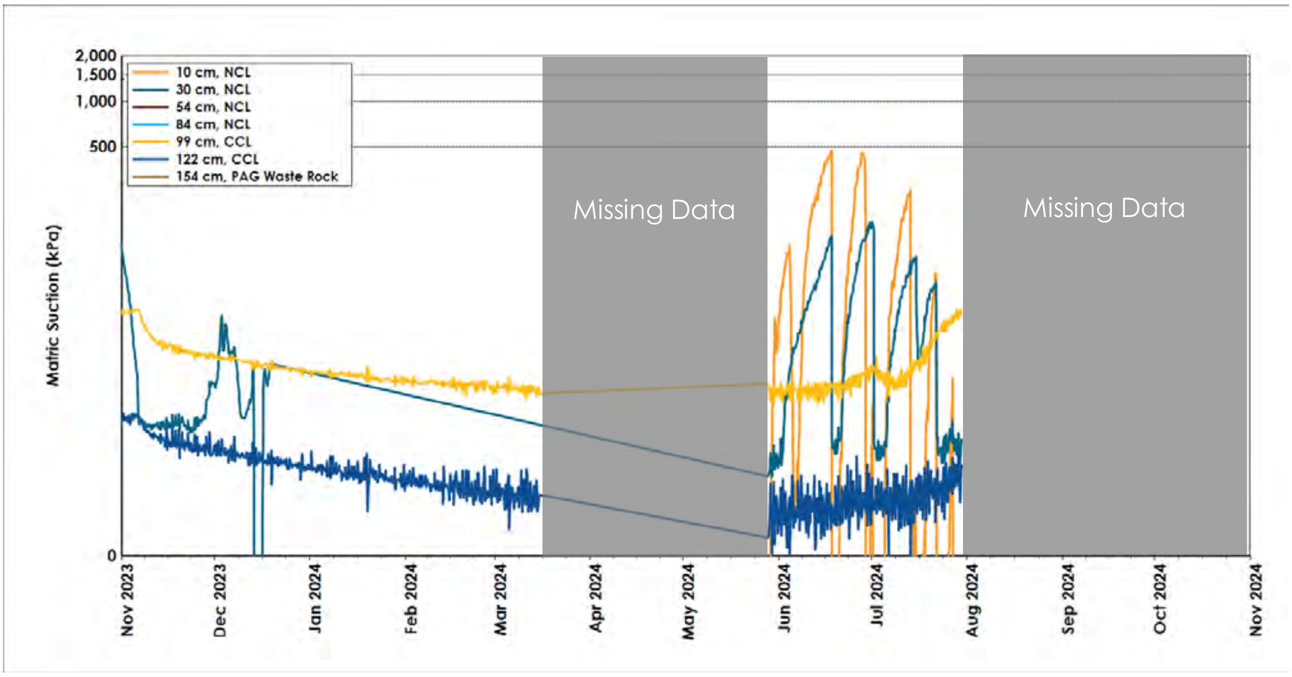

Figure B.5: Matric suction profile at the SS1 Primary during the monitoring period.

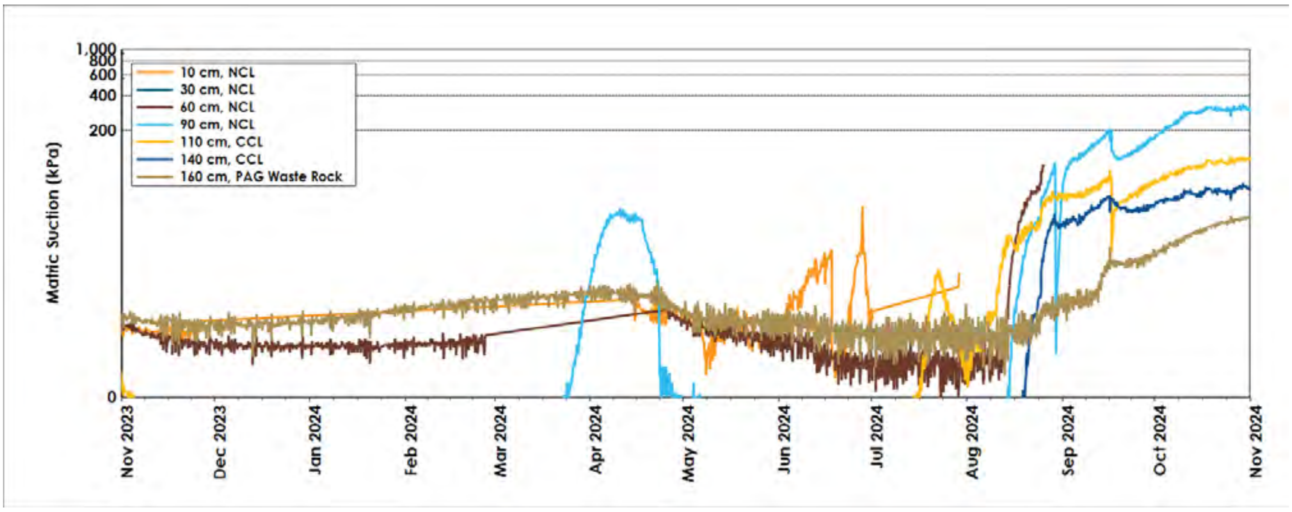

Figure B.6: Matric suction profile at the SS2 Primary during the monitoring period.

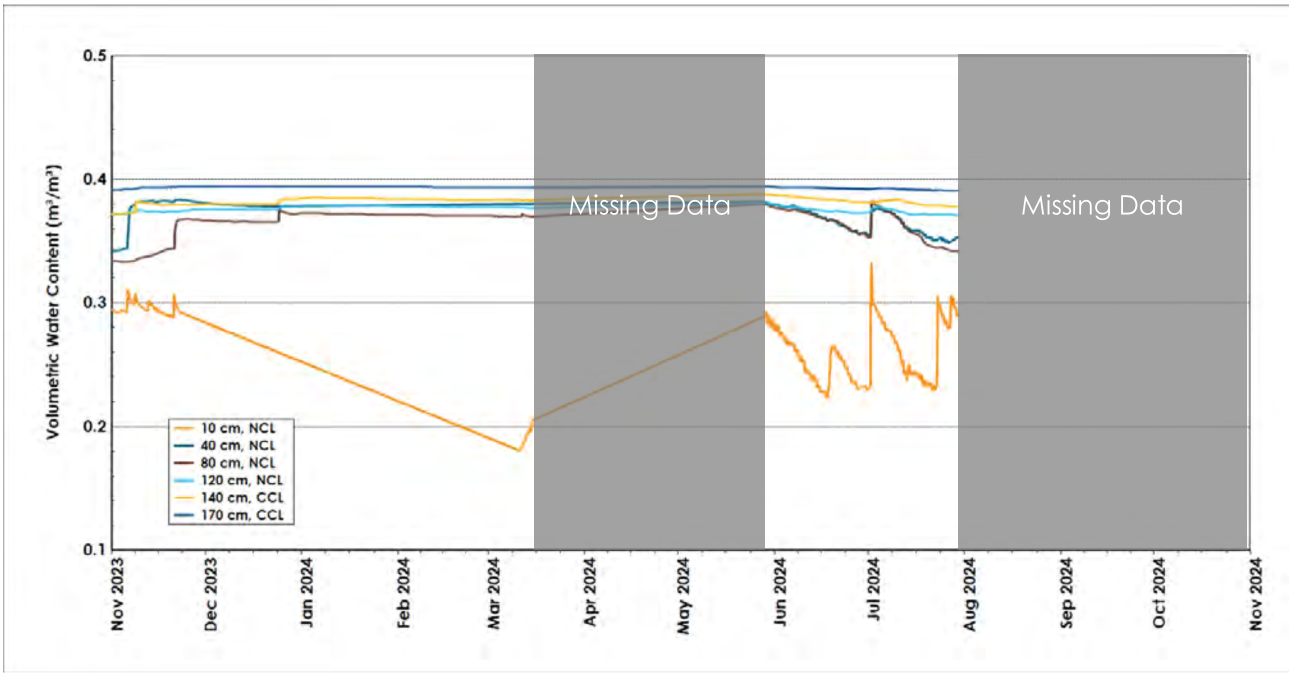

Figure B.7: Volumetric water content profile at the SS1 Primary during the monitoring period.

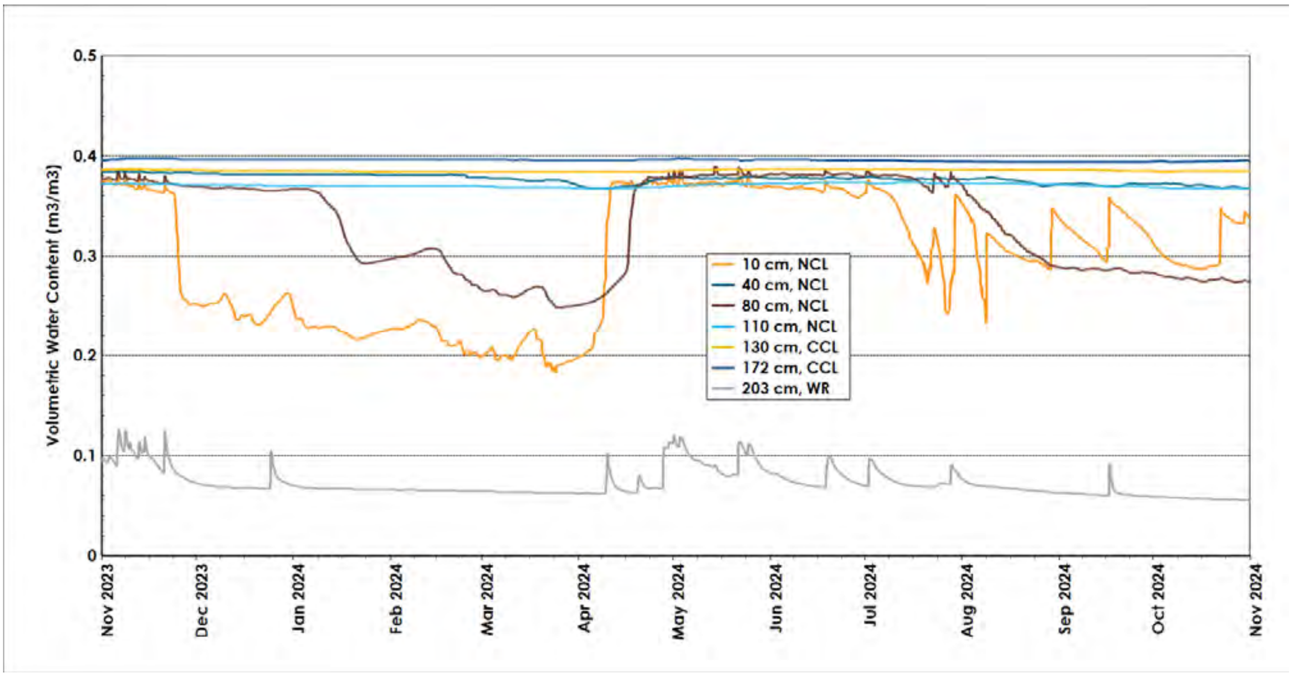

Figure B.8: Volumetric water content profile at the SS2 Primary during the monitoring period.

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