

Baseline Water Quality Report

Bendigo-Ophir Gold Project

4 August 2025

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EXECUTIVE SUMMARY

Mine Waste Management Limited (MWM) has prepared this baseline water quality report for Matakanui Gold Limited (MGL) for the proposed Bendigo-Ophir Gold Project (BOGP). This report presents water quality data for the period September 2022 to November 2024.

Objectives of this Study

The objectives of this report are to:

- Summarise the water quality monitoring plan that has been established to characterise baseline conditions including historic mining effects and any effects of natural mineralisation.
- Present data as a factual report.
- Provide recommendations.

Findings

For this report, the proposed BOGP water quality compliance limits (Ryder, 2025) are used as a screening tool to determine whether baseline water quality data are elevated. This assessment indicated that:

- Shepherds Creek is elevated in copper (Cu).
- Bendigo Creek is elevated in arsenic (As), cobalt (Co), Cu, and iron (Fe).
- Groundwater is elevated in As, Cu, Fe, zinc (Zn), and on occasion strontium (Sr) within the project area. Thallium (Tl) was elevated on one occasion (although this appears anomalous).

Baseline Studies

A number of the streams associated with the BOGP have been impacted by historical mining activities contributing to elevated metals such as As in waterways. Some streams are also elevated in metals such as Cu due to natural baseline conditions unaffected by mining (e.g., Shepherds Creek). Ongoing baseline water quality monitoring is recommended to develop a robust dataset to support the development of site-specific water quality criteria for the BOGP.

Management

These baseline conditions should be considered when setting water quality objectives for the operational and closure phases of the BOGP. Further discussion is provided by Ryder (2025).

Some monitoring locations have <2 years of data. ANZG (2018) notes that site-specific guideline values should be based on at least 2 years of monthly monitoring data from an appropriate site to address seasonality during different flow regimes (low, median, and high flow). Such data should be assessed once it is available to confirm baseline conditions.

General Background

MGL is proposing to establish the BOGP, which comprises gold mining operations, processing operations, ancillary facilities and environmental mitigation measures on Bendigo and Ardgour Stations in the Dunstan Mountains of Central Otago. The project site is located approximately 20 km north of Cromwell and will have a maximum disturbance footprint of 550 hectares.

The total Mineral Resource Estimate for the BOGP using a 0.5 g/t cut-off for open pit and 1.5 g/t for underground is 34.3 Mt at 2.1 g/t for 2.34 M oz (MGL, 2025). The Bendigo-Ophir resources occur in four deposits: Come in Time (CIT), Rise and Shine (RAS), Srex (SRX), Srex East (SRE). The majority of identified mineral resources are located within the RAS deposit. Three primary geological units are recognised at site:

- RSSZ – Rise and Shine Shear Zone
- TZ3 – Lower Greenschist facies Textural Zone 3 rocks of the Otago Schist
- TZ4 – Upper Greenschist facies Textural Zone 4 rocks of the Otago Schist

The resources will be mined by open pit methods at each deposit within the project site, with underground mining methods also proposed to be utilised at RAS to access the deeper gold deposits. The majority of the mining activities, ancillary facilities and associated infrastructure will be located in the Shepherds Valley – which includes a conventional carbon-in-leach (CIL) gold processing plant and water treatment plant, a tailing storage facility, three engineered landforms, internal haul roads, topsoil stockpiles, water pipelines, underground utilities and electrical supply with non-operational infrastructure located on the adjoining Ardgour Terrace. The BOGP also involves the taking of groundwater from the Bendigo Aquifer for use in mining-related activities and the realignment of Thomson Gorge Road via Ardgour Station.

There are numerous historic mine workings throughout the project area, which can impact baseline water quality. The archaeological survey completed by Lawrence et al. (2019) indicated 59 historic mine archaeological sites were identified within a 16 km² survey area. The majority of mine workings were pre-1900 mining activities and included the following key historic workings (Lawrence et al., 2019):

- Stamping batteries and processing areas.
- Underground mine adits.
- Mullock piles.
- Tailings mounds.
- Sluicing areas.

Baseline Water Quality Review

The BOGP covers several catchments and sub-catchments, including:

- Shepherds Creek (SC): This creek flows intermittently towards the Lindis River. Downstream of the SC01 monitoring site, an irrigation water-take diverts surface water to an irrigation reservoir, causing cessation of the creek's surficial flow. Potential groundwater movement through alluvial gravels along the Shepherds Creek bed remains unexplored.

- Jean Creek (JC): This creek is an intermittent tributary to Shepherds Creek.
- Rise and Shine (RAS) Creek (Bendigo Creek): This creek joins Clearwater Creek (CC) just Southeast of the Come in Time Battery and flows into Bendigo Creek.
- Groundwater: Groundwater has been assessed at drillhole locations within the BOGP footprint.

A metal ecotoxicity quotient (MEQ) is used in this report to identify potential constituents of concern (PCOC) that may be elevated with respect to water quality guidelines, compliance limits, or trigger values that manage ecotoxicity risks (Weber and Olds, 2016). For this report, the proposed BOGP water quality compliance limits (Ryder, 2025) are used as a MEQ screening tool to determine whether baseline water quality data were elevated. The approach does not use toxicity modification factors to calculate MEQ and uses conservative data when available (e.g., chronic limits rather than acute limits). Where no limits have been proposed by Ryder (2025) the 95% ANZG (2018) limits, or similar, have been used as a screening tool to determine if the PCOC is elevated.

The MEQ value for a PCOC is determined by dividing the measured maximum concentration by the water quality reference limit (WQ Limit). MEQ values greater than 1 indicate parameters that exceed the relevant WQ Limit. Conversely, MEQ values less than 1 are below the relevant WQ Limit. If any constituents are within 50% of the WQ Limit (i.e., $1 \geq \text{MEQ} \geq 0.5$) they are considered potentially elevated (and are noted as being potentially elevated in this report) and ongoing monitoring is recommended to confirm trends and/or potential hazards. This approach is similar to using 50% of maximum acceptable value (MAV) for New Zealand drinking water where it is used as a screening level for follow up action (Taumata Arowai, 2022).

From the available water quality data provided, the following observations were made:

Shepherds Creek:

- Sample site JC01 had elevated Cu concentrations (maximum MEQ value of 1.67). Average Cu concentrations were 0.0014 mg/L.
- MEQ data $0.5 \leq \text{MEQ} < 1.0$ indicate that a PCOC is potentially elevated but still below the respective WQ Limit. The following was observed:
 - Sampling sites SC01 and SC03 had elevated Cu concentrations (MEQ values of 0.556 and 0.611 respectively). Average Cu concentrations were 0.0005 mg/L and 0.0006 mg/L respectively.
 - Sample site SC01 had elevated Sr concentrations (MEQ value of 0.500). Average Sr concentrations were 0.947 mg/L.
- E3 Scientific (2023) noted that concentrations of nutrients (e.g., nitrate and ammoniacal nitrogen) were elevated in Shepherds Creek and may be attributed to the presence of livestock in the vicinity. Similarly, TKN¹ concentrations could also be a result of animal waste inputs or rock weathering processes within those watersheds (E3 Scientific, 2023).

¹ TKN = Total Kjeldahl Nitrogen

Bendigo Creek:

- Arsenic concentrations were reported as exceeding the WQ Limit across RSA1 and LBA (i.e., MEQ >1). Note that baseline data shows that CC01 (Clearwater Creek) and RS04 above the Rise and Shine historic workings were not elevated in As.
- Cobalt concentrations were reported as exceeding the WQ Limit at RSA1 (maximum MEQ value of 1.80).
- Copper was elevated above the WQ Limit for RSA1 with a maximum MEQ value of 18.9.
- MEQ data $0.5 \leq \text{MEQ} < 1.0$ indicate that a PCOC is potentially elevated but still below the respective WQ Limit. The following was observed:
 - Aluminium concentrations from the sampling site CC01 had a MEQ value of 0.613.
 - Arsenic concentrations from the sampling site RS01 had a MEQ value of 0.833.
 - Cadmium concentrations from the sampling site LBA had a MEQ value of 0.636.
 - Copper from the sampling site RS01, RS02, RS04, and CC01 with MEQ values of 0.833, 0.889, 0.944, and 0.500 respectively.
 - Zinc concentrations from the sampling sites RSA1 and RS03 had a MEQ values of 0.791 and 0.594 respectively.
 - Strontium had a MEQ value of 0.536 at the sampling site RSA1.

Groundwater:

- Arsenic concentrations were reported as exceeding the WQ Limit for sampling sites MDD015, MRC002, and MDD302.
- Copper concentrations were reported as exceeding the WQ Limit for sampling sites MRC002, Base (Office), and Base (Exploration Camp).
- Iron concentrations exceeded their WQ Limit at MDD015, MRC002, and MDD302.
- Lead concentrations were reported as exceeding the WQ Limit for the sampling site Base (Exploration Camp).
- Strontium concentrations exceeded the WQ Limit at MDD015.
- Thallium concentrations exceeded the WQ Limit at sampling site MDD015 during the sampling event in April 2024.
- Zinc concentrations exceeded their WQ Limit at MRC002 and Base (Exploration Camp).
- MEQ data $0.5 \leq \text{MEQ} < 1.0$ indicate that a PCOC is potentially elevated but still below the adopted WQ Limit. The following was observed:
 - Ammoniacal nitrogen concentrations at MDD015 had a MEQ value of 0.833.
 - Strontium concentrations at MRC002 had a MEQ value of 0.893.

- Zinc concentrations at Base (Office) had a MEQ value of 0.914.

Summary and Recommendations

An understanding of the baseline water quality conditions is required to assess whether any potential future effects are associated with the project. The following recommendations are provided:

Water Quality Monitoring Program

- Continue baseline water quality sampling for all current sampling sites. This will ensure that there are sufficient data available to understand baseline conditions prior to the BOGP starting operations.
- Water quality datasets need to be compared to historical mining activity and soil mineralisation mapping to confirm natural baseline water quality versus water quality affected by historic mining activities. Such effects, based on preliminary data, have been considered as part of determining appropriate compliance water quality limits for the BOGP (Ryder, 2025).
- Monitoring of flow rates is a critical component of understanding potential project effects. Continuous monitoring is recommended and will form part of the proposed consent conditions (Ryder, 2025). This will enable an ongoing understanding of loads associated with PCOC.
- It is important that current monitoring sites align with any future resource consent monitoring locations (compliance monitoring). If other sites are to be used for compliance monitoring, then it is recommended that monitoring commence as soon as possible to obtain baseline data. Current proposed compliance monitoring sites include SC01 in Shepherds Creek (surface and groundwater) and RS03 in Rise and Shine Creek. A groundwater quality compliance site is required within the Ardgour Aquifer to understand any potential effects of mine-impacted water discharge from Shepherds Creek. These groundwater monitoring bores will be installed once the BOGP is approved. Further details are provided in Rekker and Dumont (2025).
- The groundwater quality datasets are limited at this early stage of the BOGP as monitoring requirements have only been recently identified. Further samples taken at regular intervals are required to understand baseline water quality and seasonal fluctuations. A groundwater monitoring network needs to be established for performance and compliance monitoring purposes.
- The frequency of monitoring should be reviewed after 2 years of consistent data collection to consider the parameters that require monitoring (e.g., not all metals are elevated) and the monitoring intensity (e.g., monthly/quarterly/etc). Currently, some monitoring locations have <2 years of data. ANZG (2018) notes that site-specific guideline values should be based on at least 2 years of monthly monitoring data from an appropriate site to address seasonality during different flow regimes (low, median, and high flow).
- Develop a management process for sample collection, dispatch, and analysis that will be used operationally.

- For QA/QC² purposes, duplicate samples should be taken and submitted to the laboratory for analysis to assess the precision and consistency of the results, ensuring that the sampling, handling, and analytical processes produce reliable and reproducible data. Industry standards indicate one duplicate should be collected for every 10 samples (Department of Environment, Science and Innovation, 2018).
- Monitoring should also include temperature, pH, dissolved organic carbon (DOC), and hardness as these parameters are toxicity modifying factors that are required to adjust trigger values.

Data Management

MGL should continue to compile and maintain a monitoring database for all water quantity and quality data to ensure robust datasets for future assessments and studies. MWM has provided guidance on QA/QC procedures for the water quality database, and this should be utilised (MWM, 2025a).

Annual Reporting

It is recommended that this baseline water quality report be updated annually in an Annual Water Report (AWR) to summarise baseline water quality (and quantity) during the project operational phase and into the active closure and post closure phases of the project. The provision of long-term water quality datasets in the AWR will be a key dataset for understanding any potential effects of the BOGP and to demonstrate that any engineering controls introduced to mitigate any deleterious effects are working effectively.

² *Quality Assurance / Quality Control*

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1 INTRODUCTION

Mine Waste Management Limited (MWM) has prepared this factual baseline water quality report for Matakanui Gold Limited (MGL) for the proposed Bendigo-Ophir Gold Project (BOGP). This report presents water quality data for the period September 2022 to November 2024.

1.1 Project Description

MGL is proposing to establish the BOGP (Figure 1), which comprises gold mining operations, processing operations, ancillary facilities, and environmental mitigation measures on Bendigo and Ardgour Stations in the Dunstan Mountains of Central Otago. The project site is located approximately 20 km north of Cromwell and will have a maximum disturbance footprint of 550 hectares.

The total Mineral Resource Estimate for the BOGP using a 0.5 g/t cut-off for open pit and 1.5 g/t for underground is 34.3 Mt at 2.1 g/t for 2.34 M oz (MGL, 2025). The Bendigo-Ophir resources occur in four deposits: Come in Time (CIT), Rise and Shine (RAS), Srex (SRX), Srex East (SRE). The majority of identified mineral resources are located within the RAS deposit. Three primary geological units are recognised at site:

- RSSZ – Rise and Shine Shear Zone
- TZ3 – Lower Greenschist facies Textural Zone 3 rocks of the Otago Schist
- TZ4 – Upper Greenschist facies Textural Zone 4 rocks of the Otago Schist

The resources will be mined by open pit methods at each deposit within the project site, with underground mining methods also proposed to be utilised at RAS to access the deeper gold deposits. The majority of the mining activities, ancillary facilities and associated infrastructure will be located in the Shepherds Valley with non-operational infrastructure located on the adjoining Ardgour Terrace. The BOGP also involves the taking of groundwater from the Bendigo Aquifer for use in mining-related activities and the realignment of Thomson Gorge Road via Ardgour Station.

The following mine facilities are proposed (Figure 2):

- Open pits targeting the RAS, SRX, SRE, and CIT deposits.
- An underground mine targeting the RAS deposit.
- Three ex-pit engineered landforms (ELFs) – Shepherds ELF, SRX ELF, and West ELF (WELF).
- Two in-pit landforms (backfill) – CIT and SRE³.
- Plant and processing area, where carbon-in-leach extraction (CIL) extraction technologies will be used as part of the ore recovery process.
- A tailings storage facility (TSF) and TSF Embankment.
- Other ancillary support services/structures (e.g., roads, water management infrastructure, water treatment plants, etc).

³ Note: SRE Pit is backfilled by the SRX ELF.

These facilities will be placed in the catchment of Shepherds and Bendigo creeks. Understanding baseline water quality (surface and groundwater) is important to enable the establishment of site-specific water quality compliance criteria for any resource consent that may be granted in the future.

1.2 Report Objectives

The objectives of this report are to:

- Summarise the water quality monitoring plan that has been undertaken to characterise baseline conditions including historic mining effects and any effects of natural mineralisation.
- Present data as a factual report.
- Provide recommendations.

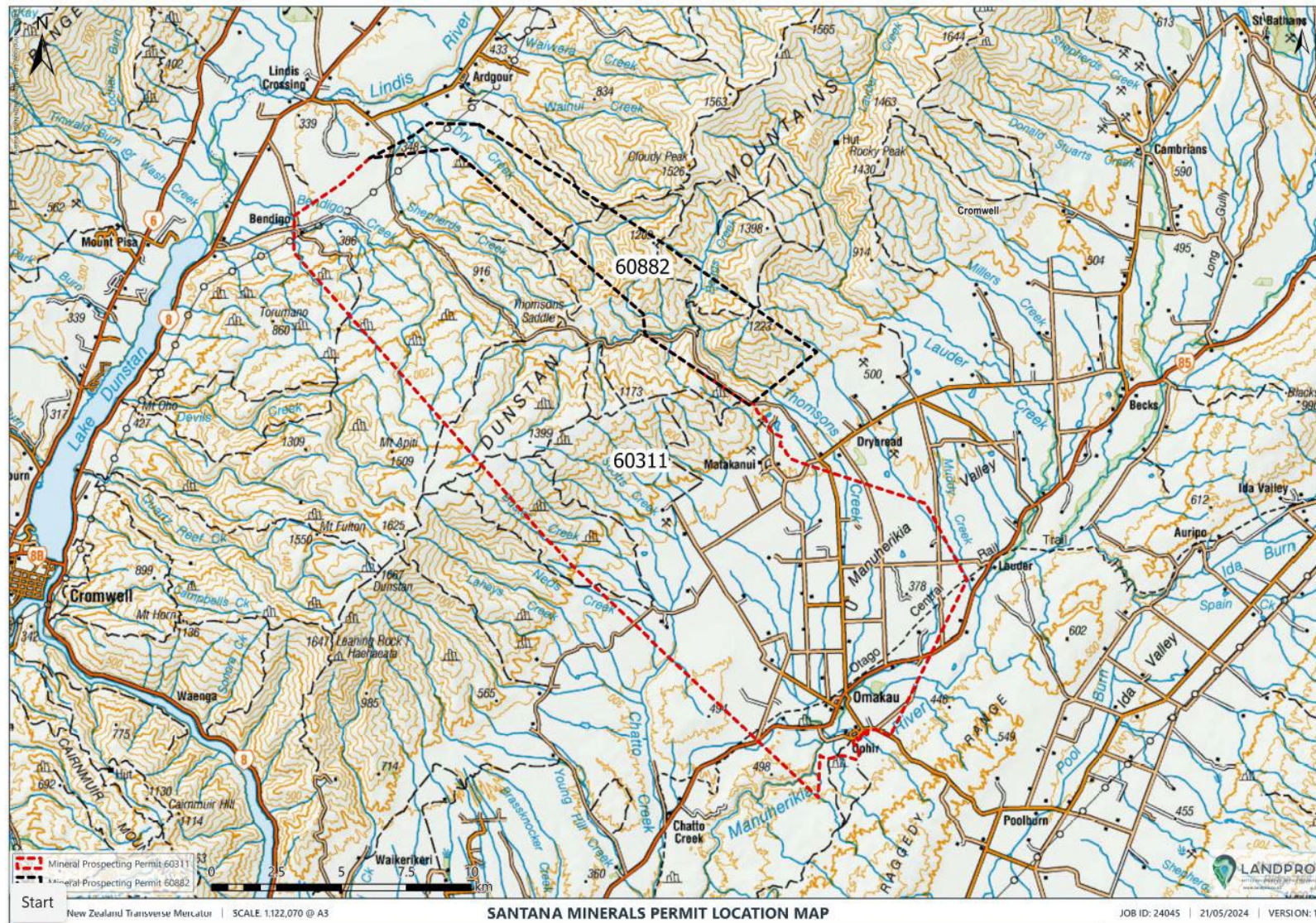


Figure 1. Location map showing the permit boundaries showing MEP60311 and PEP60882.

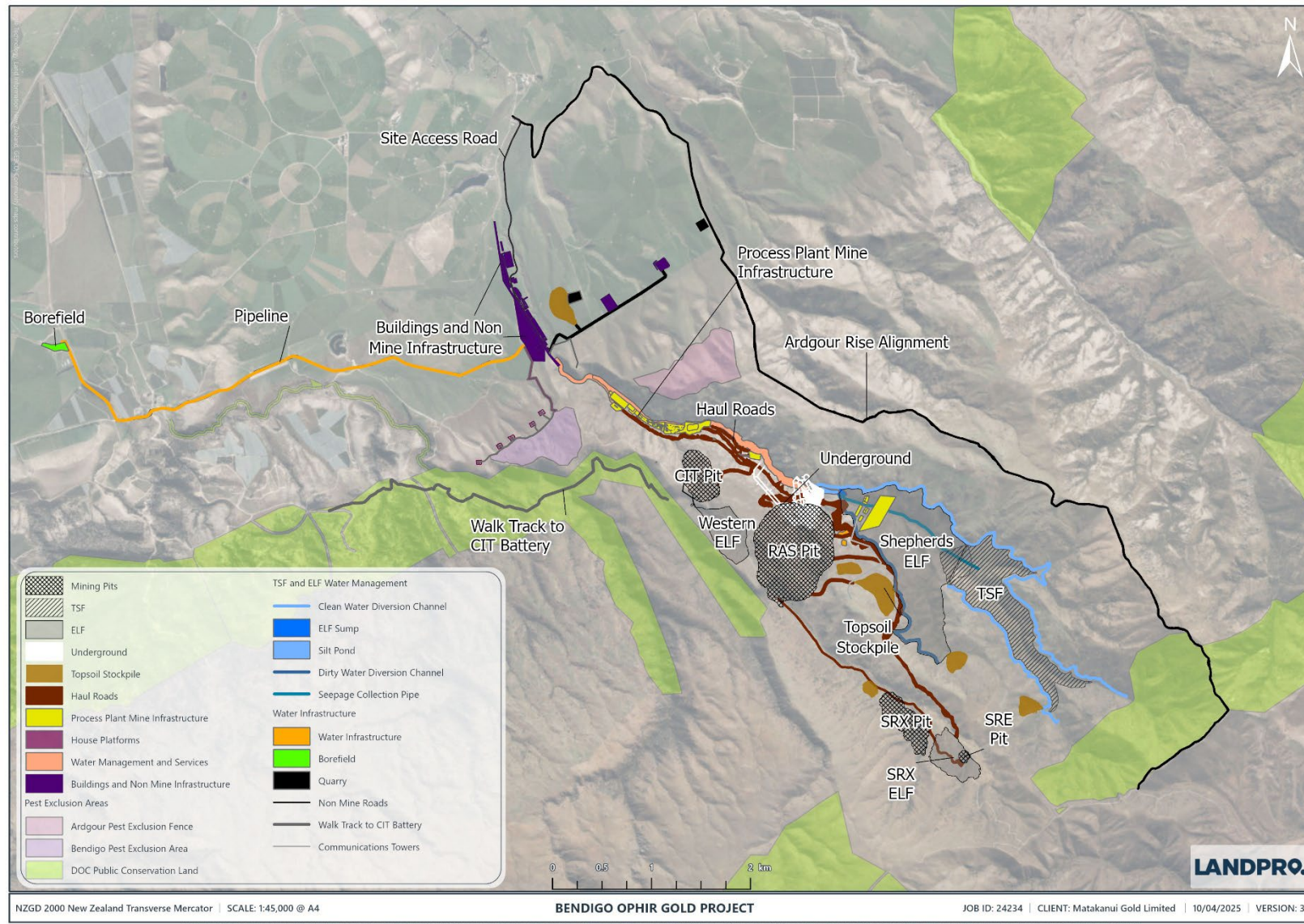


Figure 2. Bendigo-Ophir Gold Project Infrastructure .

2 HISTORIC MINE WORKINGS

There are numerous historic mine workings throughout the BOGP area, which may have the potential to impact baseline conditions (Figure 3). An archaeological survey (Lawrence et al., 2019) indicated 59 historic mine archaeological sites were identified within a 16 km² survey area. The majority of mine workings were pre-1900 mining activities (Lawrence et al., 2019) and included the following key historic workings:

- Stamping batteries and processing areas.
- Underground mine adits.
- Mullock piles.
- Tailings mounds.
- Sluicing areas.

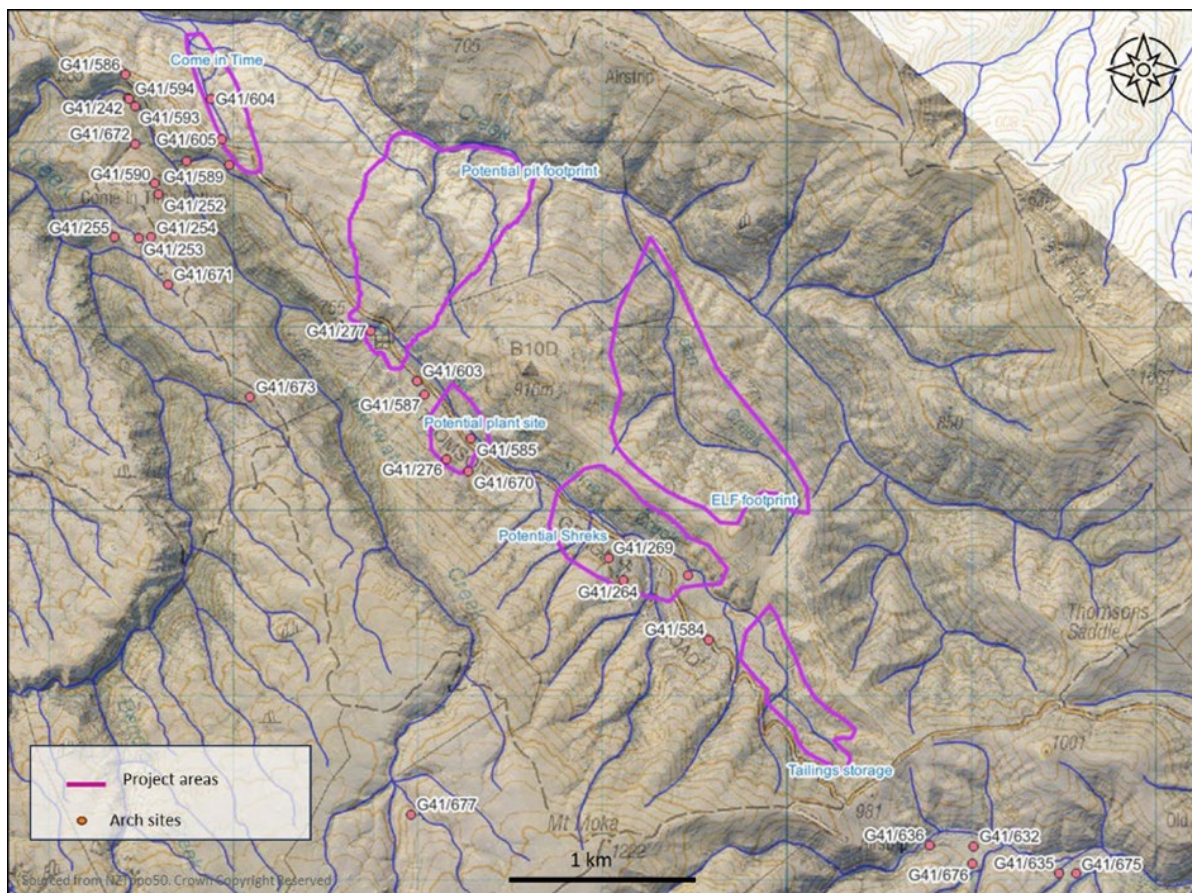


Figure 3. Location of archaeological sites related to mining activities.

Source: Lawrence et al (2019).

3 WATER SAMPLING PLAN

The following section details the baseline water sampling and analysis plan.

3.1 Water Quality Monitoring Sites

The BOGP area covers several catchments and sub-catchments (Table 1 and Figure 4), including:

- **Shepherds Creek (SC):** This creek flows intermittently towards the Lindis River. Downstream of the SC01 monitoring site, an irrigation water-take diverts surface water to an irrigation reservoir, causing cessation of the creek's surficial flow. There is potential for groundwater to flow past this point via a thin layer of alluvial gravels along the creek bed.
- **Jean Creek (JC):** This creek is an intermittent tributary to Shepherds Creek.
- **Rise and Shine (RAS) Creek:** This creek joins Clearwater Creek just southeast of the Come in Time Battery and flows into Bendigo Creek.
- **Clearwater Creek:** Flows into Bendigo Creek.
- **Bendigo Creek:** Several irrigation water-takes are in place on this creek (RM20.079.01 and RM20.079.02).
- **Groundwater:** Groundwater has been assessed at drillhole locations within the BOGP footprint.

Water quality monitoring locations were chosen (E3 Scientific, 2023) during early baseline studies. Later sites were identified during the MWM site visit (MWM, 2025a) as being suitable to assess groundwater and surface water.

Table 1. Water quality sampling sites.

DOMAINS	SITE ID	DESCRIPTION
Shepherds Creek	SC01	Shepherds Creek at Bendigo Terrace. Downstream monitoring site.
	SC03	Shepherds Creek below Rise and Shine. Just upstream from Jeans Creek confluence.
	Jean Creek (JC01)	An intermittent tributary to Shepherds Creek.
Bendigo Creek	RSB	Rise and Shine Battery Site within the Rise and Shine Creek.
	RSA1	Rise and Shine Adit. Historic workings.
	RS01	Immediately downstream of the Rise and Shine workings.
	RS02	Rise and Shine Creek above Rise and Shine workings. Upstream baseline.
	RS03	Rise and Shine Creek below Come in Time.
	RS04	Rise and Shine Creek above Rise and Shine workings. Upstream baseline.
	CC01	Water quality monitoring site in Clearwater Creek.
	LBA	Lower Bendigo Adit – historical working.
Groundwater	MRC002	Groundwater from drillhole MRC002
	MDD015	Drillhole within the potential pit footprint.
	MDD302	Groundwater from drillhole in RAS Valley.
	Base (from water supply)	At the downstream base. Example of water supply.
	Base (exploration camp)	At the exploration camp. Example of water supply.

Source: E3 (2023) and MGL.

Three groundwater monitoring sites are proposed (MW-101, MW-102, MW-103) and may be used for compliance monitoring of groundwater if the BOGP proceeds (Figure 4).

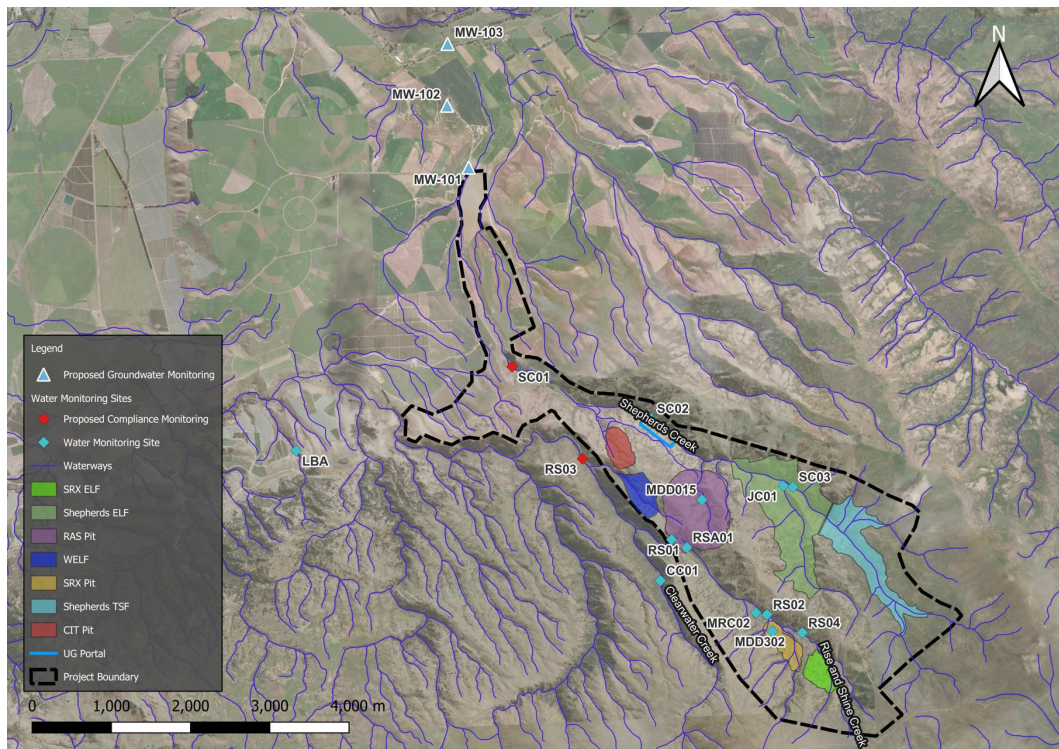


Figure 4. Water monitoring sites.

3.2 Monitoring Program and Frequency

Several water quality datasets were provided by MGL for the assessment of baseline water quality for the BOGP (Table 2). Table 3 provides the number of samples per sampling site taken between September 2022 and November 2024. MGL has indicated that groundwater and surface water sampling is in accordance with the standard operating procedures (SOP) in Appendix B.

Table 2. Water quality analysis suite.

MEASUREMENT TYPE	PARAMETER
Field	flow, pH, redox potential (ORP), electrical conductivity (EC), temperature, turbidity, dissolved oxygen (DO).
Physical Parameters	pH, electrical conductivity (EC), total hardness, total dissolved solids (TDS), total suspended solids (TSS), turbidity,
Major Anions	alkalinity – total, acidity, chloride (Cl), fluoride (F), bromide (Br), sulfate (SO ₄), sum of anions
Nutrients and Organics	nitrate (NO ₃), nitrite (NO ₂), ammoniacal nitrogen (Amm-N), total nitrogen (TN), total phosphorus (TP), total cyanide (TCN), dissolved silicon (DSi), silicon (Si), phosphorus (P), total organic carbon (TOC), dissolved organic carbon (DOC), total Kjeldahl nitrogen (TKN), dissolved reactive phosphorus (DRP).
Total & Dissolved Metals	silver (Ag), aluminium (Al), arsenic (As), boron (B), barium (Ba), beryllium (Be), bismuth (Bi), calcium (Ca), cadmium (Cd), cobalt (Co), chromium (Cr), caesium (Cs), copper (Cu), iron (Fe), germanium (Ge), mercury (Hg), potassium (K), lanthanum (La), lithium (Li), magnesium (Mg), manganese (Mn), molybdenum (Mo), sodium (Na), nickel (Ni), phosphorus (P), lead (Pb), rubidium (Rb), sulfur (S), antimony (Sb), selenium (Se), tin (Sn), strontium (Sr), titanium (Ti), thallium (Tl), uranium (U), vanadium (V), yttrium (Y), zinc (Zn).

1 – Acidity titrations have been completed to pH 4, 5, 7, and 8.3.

Note: Not all sites had all analyses completed.

Table 3. Sample numbers for each monitoring site (September 2022 to December 2024).

DOMAIN	SAMPLE SITE	NUMBER OF SAMPLES
Shepherds Creek	SC01	25
	SC03	21
	JC01	6
Bendigo Creek	RSB	2
	RSA1	25
	RS01	26
	RS02	26
	RS03	25
	RS04	14
	CC01	16
	LBA	18
	MRC002	1
Groundwater	MDD015	18
	MDD302	12
	Base (office water supply)	1
	Base (exploration camp water supply)	1

Samples were assessed for total and dissolved parameters as appropriate. Full datasets are provided in Appendix D. The analysis provided in this report focus on dissolved parameters being the constituents of interest for water quality compliance limits.

The frequency of monitoring should be reviewed after 2 years of consistent data collection to consider the parameters that require monitoring (e.g., not all metals are elevated) and the monitoring intensity (e.g., monthly/quarterly, etc.). Currently some monitoring locations have <2 years of data. ANZG (2018) notes that that site-specific guideline values should be based on at least 2 years of monthly monitoring data from an appropriate site to address seasonality during different flow regimes (low, median, and high flow). As shown in Table 3 some sites need additional data to comply with the ANZG (2018) guidance.

3.3 Water Quality Analysis

This section explains how water quality data were assessed as being elevated or not elevated to understand baseline water quality.

3.3.1 Metal Ecotoxicity Quotient

A metal ecotoxicity quotient (MEQ) is used in this report to identify potential constituents of concern (PCOC) that may be elevated with respect to water quality guidelines, compliance limits, or trigger values that manage ecotoxicity risks (Weber and Olds, 2016). For this report, the proposed BOGP water quality compliance limits (Ryder, 2025) are used as a MEQ screening tool to determine whether baseline water quality data were elevated. The approach does not use toxicity modification factors to calculate MEQ and uses conservative data when available (e.g., chronic limits rather than acute limits).

Where no water quality limit (WQ Limit) was provided by Ryder (2025), other guideline values were applied to have a water quality limit (WQ Limit) for assessment purposes. Iron (Fe) and U are not used in the assessment of surface water, instead the groundwater limits for iron and uranium remain

applicable and will be used to assess compliance at SC01 and RS03, as well as in test work and baseline studies. The following WQ Limits have been adopted:

- The 95% ANZG (2018) DGVs:
 - Surface water: Ag, B, Ni, Pb, Se, and V.
 - Groundwater: Ag, B, Ni, and V.
- The 90% ANZG (2018) DGVs:
 - Surface water: Al, Cu, and Zn.
 - Groundwater: Al, Cu, and Zn.
- Guidelines from the NPS⁴ for Freshwater Management (MfE, 2020) for ammoniacal-N in groundwater: 0.24 mg/L.
- A limit of 2.5 mg/L was applied to Sr in surface and groundwater. This guideline is based on the Canadian Federal Environmental Quality Guidelines (2020), but its noted Ryder (2025) recommends 4 mg/L for groundwater.

The MEQ value for a PCOC is determined by dividing the measured maximum concentration by the WQ Limit. MEQ values greater than 1 indicate parameters that exceed the relevant WQ Limit. Conversely, MEQ values less than 1 are below the relevant WQ Limit. If any constituents are within 50% of the WQ Limit (i.e., $MEQ \geq 0.5$) they are considered potentially elevated (and are noted as being potentially elevated in this report) and ongoing monitoring is recommended to confirm trends and/or potential hazards. This approach is similar to using 50% of maximum acceptable value (MAV) for New Zealand drinking water where it is used as a screening level for follow up action (Taumata Arowai, 2022).

In this report MEQ data are colour coded for ease of analysis and data interpretation whereby:

- **Red MEQ** indicates that concentrations exceed the adopted WQ Limit or similar guidelines (i.e., $MEQ \geq 1$).
- **Orange MEQ** indicated the PCOC is potentially elevated (i.e., $0.5 \leq MEQ < 1$).
- **Blue MEQ** indicates all data are influenced by the limit of reporting (LOR) being higher than the adopted WQ Limit and may not be elevated.

3.4 Change in Laboratories

Several laboratories have been contracted by MGL to analyse the water quality samples throughout the baseline monitoring period:

- Analytica Laboratories (Analytica) were contracted to analyse the first round of water quality samples in September 2022.
- SGS Laboratories (SGS) were contracted to analyse the water quality samples taken in October 2022 and March 2023.

⁵ *nephelometric turbidity units*

- Eurofins Laboratories (Eurofins) were contracted to analyse the water quality samples taken from April 2023 through to May 2024. Hill Laboratories (Hills) were used during this period to analyse duplicate samples for inter-lab quality assurance / quality control (QA/QC) purposes. Inter-lab QA/QC is discussed further in Section 4.5.
- Analytica are the current supplier of laboratory analysis services and analysed the water quality samples taken from late May 2024 through to November 2024. It should be noted that the ALS Laboratories (ALS) acquired Analytica in 2024 (hence the shift in laboratories during the October sampling events).

The primary reason for the change in laboratory to Analytica/ALS in May 2024 was for the capability to provide analysis at a lower limit of reporting (LOR) for a range of key parameters. For example, the LOR for chromium at Analytica Laboratories is 0.0002 mg/L, compared to 0.001 mg/L at Eurofins.

As noted by MWM (2024a) small concentration changes at low analyte concentrations (typically defines as <10x LOR) will result in larger calculated variations in precision – the significance of this large change should be considered in the context of the data quality objectives (e.g., Australian Standards, 2005).

4 DATA ANALYSIS

The following sections examine the water quality data for surface and groundwater samples. Seasonal trends are discussed where applicable. All laboratory certificates are provided in Appendix C. Full tabulated water quality analyses are presented in Appendix D.

4.1 Baseline Surface Water Quality Data Analysis

Surface water quality data from 204 samples collected from Shepherds Creek and Bendigo Creek catchments between September 2022 and November 2024 were reviewed. This section presents and discusses the key water quality parameters obtained from each water monitoring location.

4.1.1 Shepherds Creek Catchment

Water quality data for Shepherds Creek Catchment comprised 52 samples from three sampling sites (SC01 (n=25), SC03 (n=21), and JC01 (n=6)). The MEQ analyses are presented in Table 4, Figure 5 and Figure 6. Table 5 presents a summary of additional parameters (e.g., physical parameters, nutrients, anions, and cations).

Based on the data the following observations were made:

- The pH ranged from 5.40 to 8.50 across all Shepherd Creek sites, with site averages of 8.11 (SC01), 7.88 (SC03), and 8.30 (JC01).
- Acidity (pH 8.3) concentrations ranged from 1.0 mg CaCO₃/L to 12.0 mg CaCO₃/L across all Shepherd Creek sites.
- Alkalinity ranged from 2.0 mg CaCO₃/L to 285 mg CaCO₃/L across all Shepherd Creek sites. Site averages were 216 mg CaCO₃/L (SC01), 136 mg CaCO₃/L (SC03), and 246 mg CaCO₃/L (JC01).
- The EC ranged from 253 µS/cm to 626 µS/cm. Site averages were 489 µS/cm (SC01), 319 µS/cm (SC03), and 498 µS/cm (JC01).
- MEQ values in **blue** (Table 4) indicate that data are influenced by the LOR being higher than the WQ Limit. The following was noted:
 - Ag has a MEQ of 10.0 indicating that it is elevated above the WQ Limit (0.00005 mg/L). However, all data for Ag were below the LOR (0.0005 mg/L), indicating the MEQ is elevated due to the LOR.
 - Similarly, Co, Hg, and TI have MEQ values of 0.500, 0.833, and 16.7 respectively, due to a LOR > WQ Limit for all Shepherd Creek Catchment sites.
- MEQ data in **red** indicate that the maximum value for a parameter exceeds its adopted WQ Limit:
 - Sample site JC01 had elevated Cu concentrations (maximum MEQ value of 1.67). Average Cu concentrations were 0.0014 mg/L.
- MEQ data in **orange** (i.e., 0.5 ≤ MEQ < 1.0) indicates that a PCOC is potentially elevated but still below the WQ Limit. The following was observed:

- Sampling sites SC01 and SC03 had elevated Cu concentrations (maximum MEQ values of 0.556 and 0.611 respectively). Average Cu concentrations were 0.0005 mg/L and 0.0006 mg/L respectively.
- Sample site SC01 had elevated Sr concentrations (MEQ value of 0.500). Average Sr concentrations were 0.947 mg/L.
- Sulfate concentrations were low (e.g., below 100 mg/L) but higher at SC01 (average of 40.5 mg/L) than at SC03 (average of 14.4 mg/L) and JC01 (average of 18.5 mg/L), possibly reflecting the presence of mineralisation mid-catchment (e.g., the RAS deposit).
- Chloride had an average value of 6.08 mg/L at SC01, 2.7 mg/L at SC03, and 5.5 mg/L at JC01. Chloride has been identified as a sulfate toxicity modifier when concentrations are >5 mg/L (Ryder, 2025).
- Average Ca, K, and Mg concentrations were consistent across all Shepherd Creek Catchment.
- All other PCOC had MEQ values <0.50.
- The majority of parameters shown in Table 5 exhibited consistent concentrations across the Shepherd Creek Catchment. E3 Scientific (2023) noted that concentrations of nutrients (e.g., nitrate and ammoniacal nitrogen) were elevated in Shepherds Creek and may be attributed to the presence of livestock. Similarly, total Kjeldahl nitrogen (TKN) concentrations could be a result of animal waste inputs or rock weathering processes within those watersheds (E3 Scientific, 2023).
- From the data available, the following observations are noted:
 - Nitrite-N ranged from 0.001 mg/L to 0.040 mg/L.
 - TCN ranged from 0.001 mg/L to 0.005 mg/L.
 - TKN ranged from 0.100 mg/L to 0.750 mg/L.
 - TN ranged from 0.100 mg/L to 1.4 mg/L.
 - TOC ranged from 0.500 mg/L to 6.30 mg/L.
 - TSS ranged from 3.00 mg/L to 122 mg/L.
 - Turbidity ranged from 0.170 NTU⁵ to 57.0 NTU.
 - TDS ranged from 120 mg/L to 380 mg/L.

⁵ *nephelometric turbidity units*

Table 4. MEQ analysis and average concentrations for Shepherds Creek Catchment.

PARAMETERS	WQ LIMIT	SC01 (N=25)		SC03 (N=21)		JC01 (N=6)	
		MEQ (MAX VALUE)	AVE (mg/L)	MEQ (MAX VALUE)	AVE (mg/L)	MEQ (MAX VALUE)	AVE (mg/L)
Ag	0.00005	10.0	0.0005	10.0	0.0005	10.0	0.0005
Al	0.08	0.124	0.0045	0.200	0.0064	0.150	0.0070
As	0.042	0.143	0.0024	0.024	0.0008	0.024	0.0008
B	0.94	0.064	0.033	0.043	0.028	0.053	0.034
Cd	0.0004	0.455	0.0001	0.455	0.0001	0.455	0.0001
Co	0.001	0.500	0.0003	0.500	0.0003	0.500	0.0003
Cr	0.0033	0.303	0.0006	0.303	0.0006	0.303	0.0006
Cu	0.0018	0.556	0.0005	0.611	0.0006	1.67	0.0014
Fe (dissolved)	0.30	0.133	0.0113	0.233	0.0215	0.033	0.0075
Hg	0.0006	0.833	0.0003	0.833	0.0003	0.833	0.0003
Mn	0.40	0.040	0.0026	0.029	0.0036	0.005	0.001
Mo	0.034	0.024	0.0005	0.024	0.0004	0.041	0.001
Ni	0.011	0.045	0.0004	0.045	0.0004	0.045	0.0004
Pb	0.0034	0.147	0.0002	0.147	0.0003	0.147	0.0003
Total Sb	0.074	0.081	0.0010	0.108	0.0013	0.027	0.0011
Se	0.011	0.455	0.0025	0.455	0.0029	0.455	0.0028
Sr	2.50	0.500	0.947	0.318	0.675	0.392	0.718
Tl	0.00003	16.7	0.0002	16.7	0.0003	16.7	0.0003
U	0.03	-	0.0051	-	0.0022	-	0.0061
V	0.006	0.083	0.0005	0.083	0.0005	0.100	0.0005
Zn	0.015	0.075	0.0017	0.031	0.0015	0.038	0.0025
Sulfate	500	0.127	40.5	0.037	14.4	0.053	18.5
Ammoniacal nitrogen	0.400	0.100	0.010	0.100	0.0117	0.025	0.0075
Nitrate-N	3.50	0.089	0.0829	0.091	0.139	0.043	0.0623

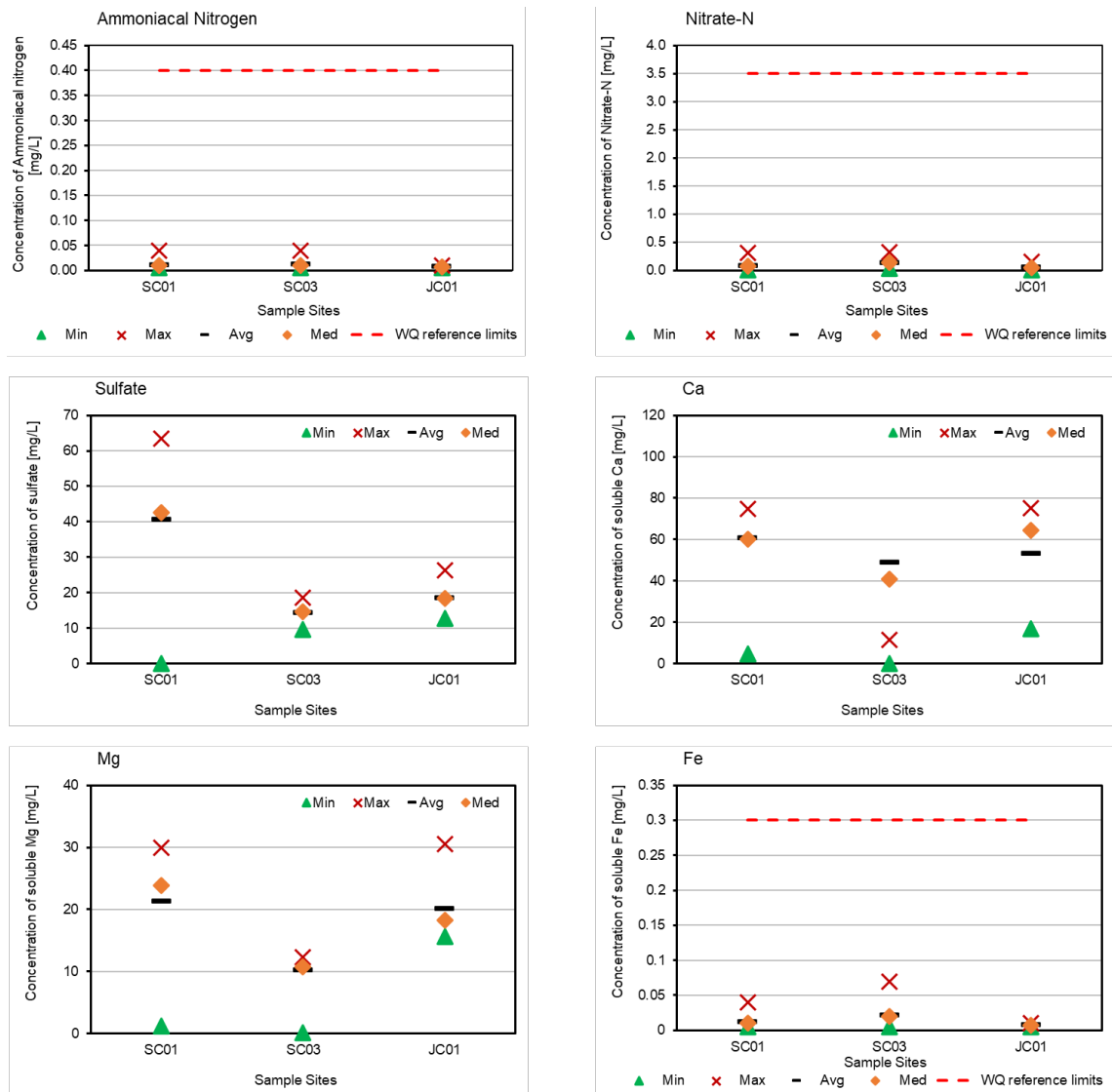


Figure 5. Selected key water quality parameters for Shepherds Creek Catchment (Part 1).

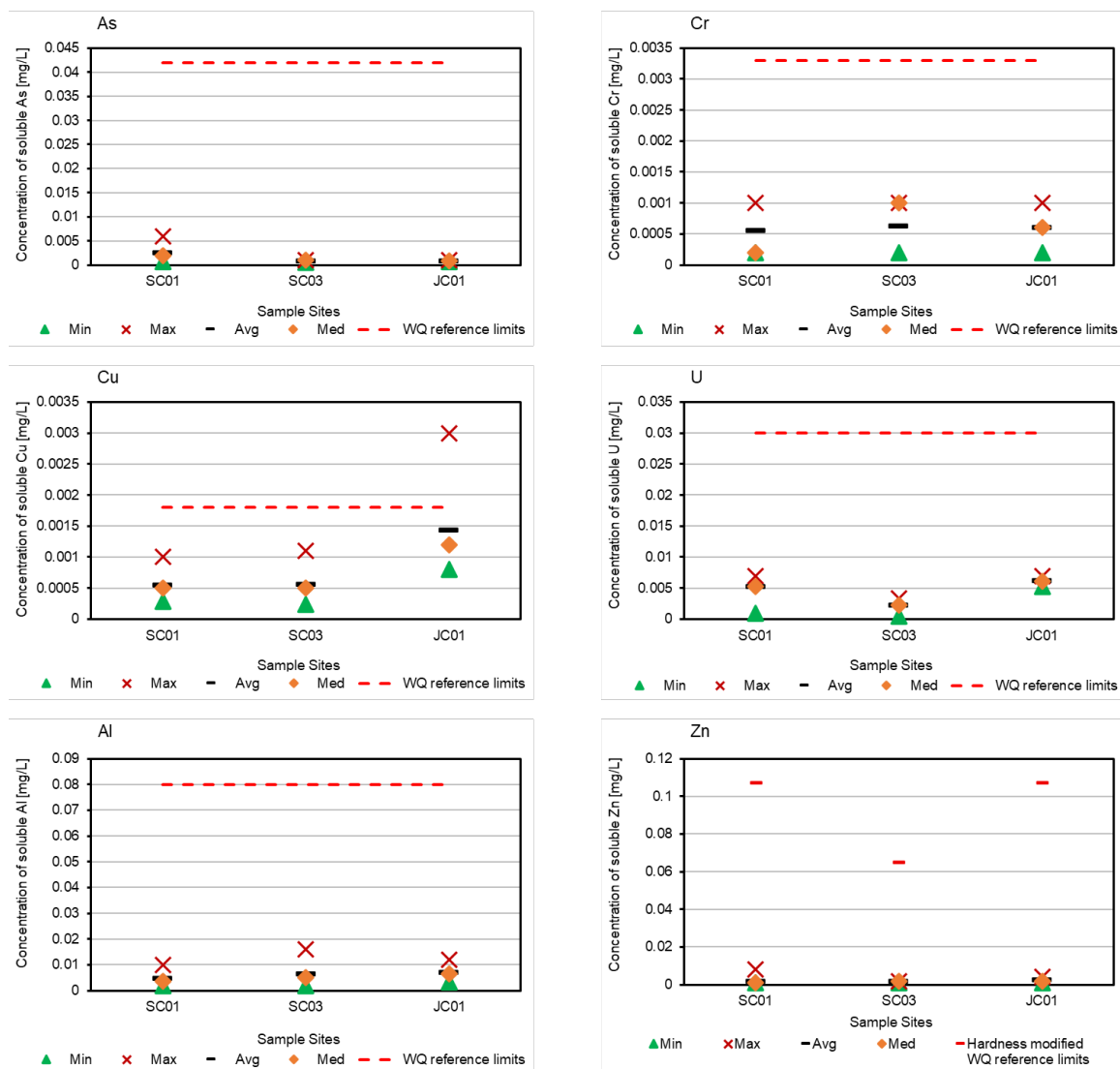


Figure 6. Selected key water quality parameters for Shepherds Creek Catchment (Part 2).

Table 5. Water quality summary in Shepherds Creek Catchment.

PARAMETERS	SC01 (n=25)			SC03 (n=21)			JC01 (n=6)		
	MIN	MAX	AVE	MIN	MAX	AVE	MIN	MAX	AVE
Acidity to pH 7 (mg CaCO ₃ /L)	1.0	5.0 ¹	1.36	1.0	5.0 ¹	1.36	1.0	1.0	1.0
Acidity to pH 8.3 (mg CaCO ₃ /L)	1.0	12.0	3.88	1.0	10.0	3.85	1.0	2.0	1.17
Alkalinity (mg CaCO ₃ /L)	145	273	216	2	160	136	207	285	246
pH (pH units)	7.70	8.50	8.11	5.40	8.20	7.88	8.20	8.40	8.30
EC (µS/cm)	342	626	489	253	359	319	404	560	498
DO (%)	0.02	2202	127	9.62	16.8	12.9	10.7	16.2	12.8
ORP (mV)	-0.70	328	112	-0.200	313	123	18.2	194	99.2
Temp (°C)	2.60	16.6	9.25	0.500	15.2	6.86	3.10	11.6	7.72
Ca	4.60	74.7	60.8	11.6	48.7	40.9	16.8	75.3	53.3
Cl	3.63	9.30	6.08	1.73	3.94	2.74	4.03	7.04	5.55
F	0.057	0.230	0.103	0.076	0.290	0.119	0.055	0.100	0.076
K	1.25	3.97	2.01	0.640	3.87	1.43	1.34	2.36	1.98
Mg	1.17	30.0	21.3	0.150	12.3	10.2	15.6	30.5	20.1
Na	8.16	198	20.3	5.41	471	36.2	13.3	196	59.0
Nitrite N	0.001	0.010	0.006	0.001	0.040	0.008	0.001	0.010	0.006
TCN	0.001	0.005	0.003	0.001	0.005	0.003	0.001	0.005	0.003
TKN	0.100	1.29	0.373	0.130	0.750	0.406	0.260	0.500	0.377
TN	0.100	1.40	0.371	0.171	0.940	0.473	0.350	0.610	0.458
TOC	0.500	3.60	2.08	0.500	3.80	2.01	3.30	6.30	4.40
TP	0.005	0.500	0.039	0.005	0.100	0.023	0.005	0.052	0.029
TSS	3.00	122	12.0	3.0	54.0	14.0	6.0	42.0	15.4
Turbidity (NTU)	0.170	57.0	4.75	1.33	32.0	5.78	0.620	9.06	4.10
TDS	186	380	269	120	212	164	230	280	265

Note: Other parameters are presented in Table 4.

All units are presented in mg/L unless otherwise specified.

¹ - Maximum acidity (to pH 7) concentrations are a result of the LOR at SGS. The average concentration presented is therefore influenced by the LOR.

Average pH presented is not based on H⁺ content due to approx. consistent pH values for each site.

4.1.2 Bendigo Creek Catchment

Water quality data for the Bendigo Creek Catchment comprises 124 samples from seven sampling sites (RSA1 (n=25), RS01 (n=26), RS02 (n=26), RS03 (n=25), RS04 (n=14), CC01 (n=16), and LBA (n=18). The MEQ analyses are presented in Table 6, Figure 7, and Figure 8. Table 7 and Table 8 present a summary of additional parameters (e.g., physical parameters, nutrients, anions, and cations).

Based on the data the following observations were made:

- The pH ranged from 6.00 to 9.30 across all Bendigo Creek Catchment sites with an average of 7.32 (RSA1), 7.61 (RS01), 7.57 (RS02), 7.42 (RS03), 7.51 (RS04), 7.03 (CC01), and 8.06 (LBA).
- Acidity (pH 8.3) concentrations ranged from 1.00 mg CaCO₃/L to 53.0 mg CaCO₃/L.

- Alkalinity ranged from 7.40 mg CaCO₃/L to 242 mg CaCO₃/L with an average of 108 mg CaCO₃/L (RSA1), 87.5 mg CaCO₃/L (RS01), 65.8 mg CaCO₃/L (RS02), 39.1 mg CaCO₃/L (RS03), 72.8 mg CaCO₃/L (RS04), 14.7 mg CaCO₃/L (CC01), and 191 mg CaCO₃/L (LBA)
- EC ranged from 21.8 µS/cm to 526 µS/cm with an average of 212 µS/cm (RSA1), 182 µS/cm (RS01), 151 µS/cm (RS02), 86.4 µS/cm (RS03), 165 µS/cm (RS04), 34.0 µS/cm (CC01), and 468 µS/cm (LBA).
- MEQ values in **blue** indicate that all data are influenced by the LOR being higher than the WQ Limit. For example:
 - Ag has a MEQ of 10.0 indicating that it is elevated above the WQ Limit (0.00005 mg/L). However, all data for Ag were below the LOR (0.0005 mg/L), indicating the MEQ is elevated due to the LOR.
 - Similarly, Hg, and Tl have MEQ values of 0.833 and 16.7, which were due to a LOR > WQ Limit for all Bendigo Creek Catchment sites.
 - A number of sites had MEQ values of 0.500 for Co (with the exception of RSA1), which were attributed to LOR values.
 - RS03, CC01, and LBA had MEQ values of 0.606 for Cr, which were attributed to LOR values.
- MEQ data in **red** indicates that the maximum value for a parameter exceeds the WQ Limit.
 - Arsenic concentrations were reported as exceeding the WQ Limit at RSA1 and LBA (i.e., MEQ >1). Note that baseline data show that CC01 (Clearwater Creek) and RS04 above the Rise and Shine historic workings were not elevated in As.
 - Cobalt concentrations were reported as exceeding the WQ Limit at RSA1 (MEQ 1.80).
 - Copper was elevated above the WQ Limit for RSA1 with a MEQ value of 18.9.
 - Iron concentrations were elevated above the WQ Limit for RSA1 and LBA with MEQ values of 3.57 and 1.37 respectively.
- MEQ data in **orange** (i.e., 0.5 ≤ MEQ < 1.0) indicates that a PCOC is potentially elevated but still below the respective WQ Limit. The following was observed:
 - Aluminium concentrations from the sampling site CC01 had a MEQ value of 0.613.
 - Arsenic concentrations from the sampling site RS01 had a MEQ value of 0.833.
 - Cadmium concentrations from the sampling site LBA had a MEQ value of 0.636.
 - Copper concentrations from the sampling sites RS01, RS02, RS04, and CC01 had MEQ values of 0.833, 0.889, 0.944, and 0.500, respectively.
 - Iron concentrations from the sampling sites RS01, RS04, and CC01 had MEQ values of 0.767, 0.700, and 0.800, respectively.

- Zinc concentrations from the sampling sites RSA1 and RS03 had MEQ values of 0.791 and 0.594, respectively.
- Strontium had a MEQ value of 0.536 at the sampling site RSA1.
- All other PCOC had MEQ values <0.5.
- Sulfate concentrations were typically low (e.g., <100 mg/L). The only site that had sulfate > 10 mg/L was LBA (Lower Bendigo Adit), which is mine-impacted water.
- The majority of parameters shown in Table 7 and Table 8 exhibited consistent concentrations across the Bendigo Creek Catchment with minor exceptions. The following was observed:
 - Maximum nitrite-N concentrations were reported as 0.010 mg/L.
 - TCN ranged from 0.001 mg/L to 0.005 mg/L.
 - TKN ranged from 0.1 mg/L to 2.35 mg/L.
 - TN ranged from 0.047 mg/L to 2.40 mg/L.
 - TSS and turbidity concentrations were consistent across all sites with the exception of RS01, which had 1,200 mg/L and 750 NTU, respectively.
 - TDS concentrations were consistent across all sites with the exception of the RSA1 and LBA, which had maximum concentration of 310 mg/L and 271 mg/L, respectively.
- One sample from site RSB (Rise and Shine Battery Site within the Rise and Shine Creek) recorded elevated manganese (Mn) of 2.76 mg/L, which is above the proposed water quality compliance limits of 0.4 mg/L. This sample was collected during preliminary fieldwork and involved sampling of the old battery site (MWM, 2024b) where the stream vegetation (reeds) was disturbed mobilising a significant amount of Fe precipitates. Subsequent samples of this site were much lower (0.67 mg/L) and involved minor disturbance to the stream vegetation. The risks to water quality from Mn are considered low (i.e., Mn is not identified as being elevated in surface water and only performance monitoring is recommended).

Table 6. MEQ analysis and average concentrations for Bendigo Creek Catchment.

PARAMETERS	WQ LIMIT	RSA1 (n=25)		RS01 (n=26)		RS02 (n=26)		RS03 (n=25)		RS04 (n=14)		CC01 (n=16)		LBA (n=18)	
		MEQ (MAX VALUE)	AVE (mg/L)	MEQ (MAX VALUE)	AVE (mg/L)	MEQ (MAX VALUE)	AVE (mg/L)	MEQ (MAX VALUE)	AVE (mg/L)	MEQ (MAX VALUE)	AVE (mg/L)	MEQ (MAX VALUE)	AVE (mg/L)	MEQ (MAX VALUE)	AVE (mg/L)
Ag	0.00005	10.0	0.0005	10.0	0.0005	10.0	0.0005	10.0	0.0005	10.0	0.0003	10.0	0.0004	10.0	0.0004
Al	0.080	0.065	0.0029	0.325	0.0042	0.413	0.0082	0.350	0.0076	0.388	0.007	0.613	0.0123	0.085	0.003
As	0.042	3.10	0.0386	0.833	0.0193	0.169	0.0049	0.333	0.0085	0.045	0.001	0.026	0.0010	27.6	1.05
B	0.94	0.032	0.0188	0.032	0.0185	0.032	0.0185	0.032	0.0188	0.032	0.011	0.032	0.0175	0.032	0.018
Cd	0.0004	0.455	0.0001	0.455	0.0001	0.455	0.0001	0.455	0.0001	0.455	0.00003	0.455	0.0001	0.636	0.0001
Co	0.001	1.80	0.0005	0.500	0.0003	0.500	0.0003	0.500	0.0002	0.500	0.0001	0.500	0.0002	0.500	0.0002
Cr	0.003	0.303	0.0006	0.303	0.0005	0.303	0.0005	0.606	0.0006	0.303	0.0003	0.606	0.0006	0.606	0.0004
Cu	0.0018	18.9	0.0018	0.833	0.0006	0.889	0.0006	0.411	0.0005	0.944	0.001	0.500	0.0004	0.278	0.0003
Fe (dissolved)	0.30	3.57	0.205	0.767	0.061	0.367	0.024	0.333	0.037	0.700	0.068	0.800	0.0293	1.37	0.045
Hg	0.0006	0.833	0.0003	0.833	0.0003	0.833	0.0003	0.833	0.0003	0.833	0.00011	0.833	0.0002	0.833	0.0002
Mn	0.40	0.299	0.1614	0.025	0.0211	0.002	0.0011	0.010	0.0095	0.012	0.006	0.002	0.0009	0.015	0.023
Mo	0.034	0.015	0.0003	0.024	0.0003	0.015	0.0003	0.015	0.0003	0.015	0.0002	0.015	0.0003	0.044	0.0011
Ni	0.011	0.236	0.0005	0.100	0.0004	0.053	0.0004	0.045	0.0003	0.127	0.0005	0.400	0.0006	0.045	0.0003
Pb	0.0034	0.147	0.0002	0.147	0.0002	0.147	0.0003	0.147	0.0002	0.147	0.0001	0.147	0.0002	0.147	0.0002
Total Sb	0.074	0.027	0.0008	0.027	0.0008	0.027	0.0008	0.027	0.0008	0.002	0.00011	0.027	0.0007	0.027	0.0005
Se	0.011	0.455	0.0025	0.455	0.0024	0.455	0.0024	0.455	0.0025	0.455	0.0008	0.455	0.0022	0.455	0.002
Sr	2.50	0.536	0.381	0.206	0.358	0.158	0.266	0.076	0.136	0.162	0.315	0.021	0.042	0.209	0.468
Tl	0.00003	16.7	0.0002	16.7	0.0002	16.7	0.0002	16.7	0.0002	16.7	0.00005	16.7	0.0002	16.7	0.0001
U	0.03	0.073	0.0002	0.007	0.0001	0.013	0.0003	0.007	0.0001	0.014	0.0003	0.007	0.0001	0.090	0.0021
V	0.006	0.083	0.0005	0.083	0.0005	0.083	0.0005	0.083	0.0005	0.083	0.0005	0.083	0.0005	0.083	0.0005
Zn	0.015	0.791	0.0047	0.148	0.0018	0.356	0.0020	0.594	0.0023	0.105	0.0014	0.321	0.0016	0.045	0.0014
Sulfate	500	0.037	4.52	0.030	5.13	0.015	2.72	0.008	1.57	0.013	2.80	0.008	0.843	0.068	27.6
Ammoniacal nitrogen	0.400	0.325	0.02	0.125	0.01	0.250	0.0121	0.075	0.0092	0.275	0.013	0.075	0.0086	0.025	0.006
Nitrate-N	3.50	0.040	0.015	0.037	0.0171	0.066	0.0308	0.014	0.0088	0.003	0.003	0.008	0.0096	0.074	0.214

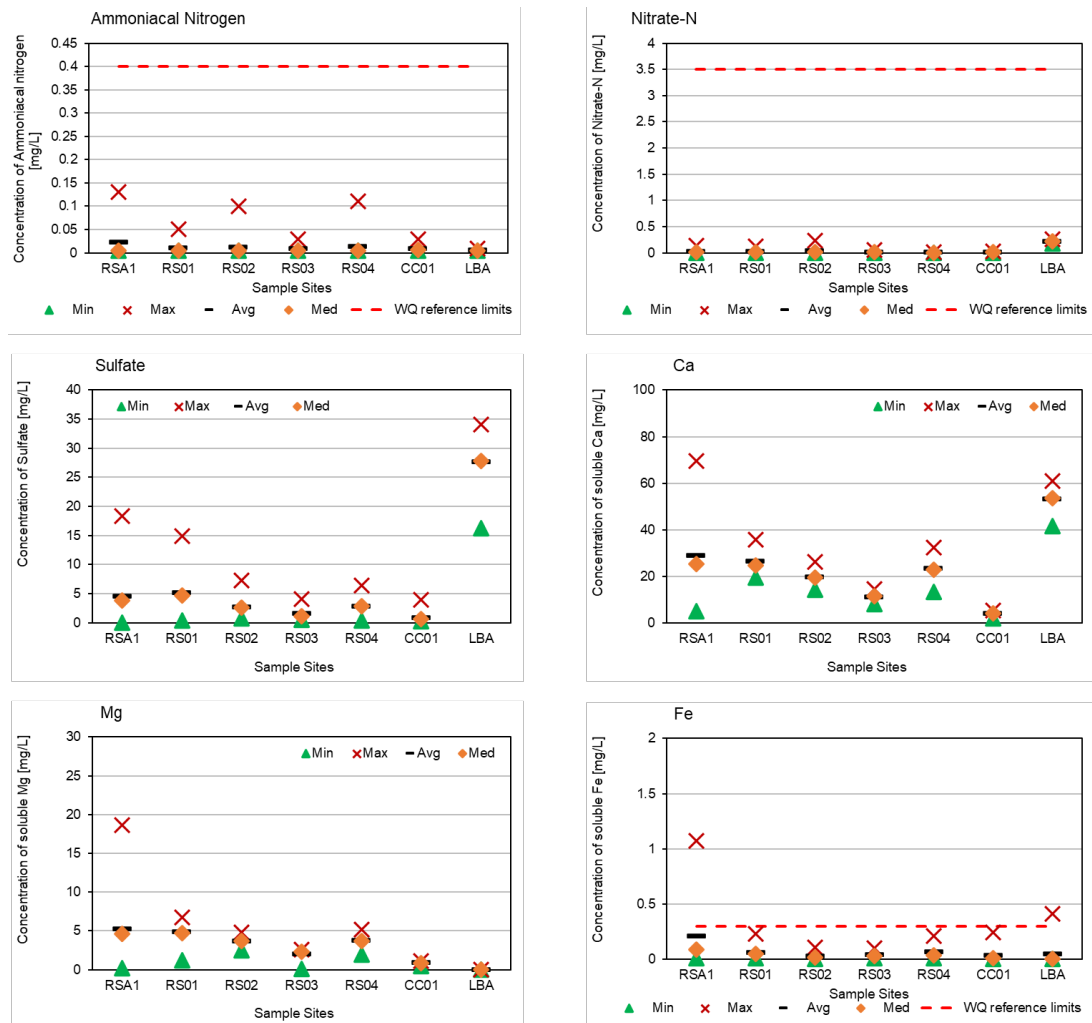


Figure 7. Selected key water quality parameters for Bendigo Creek Catchment (Part 1).

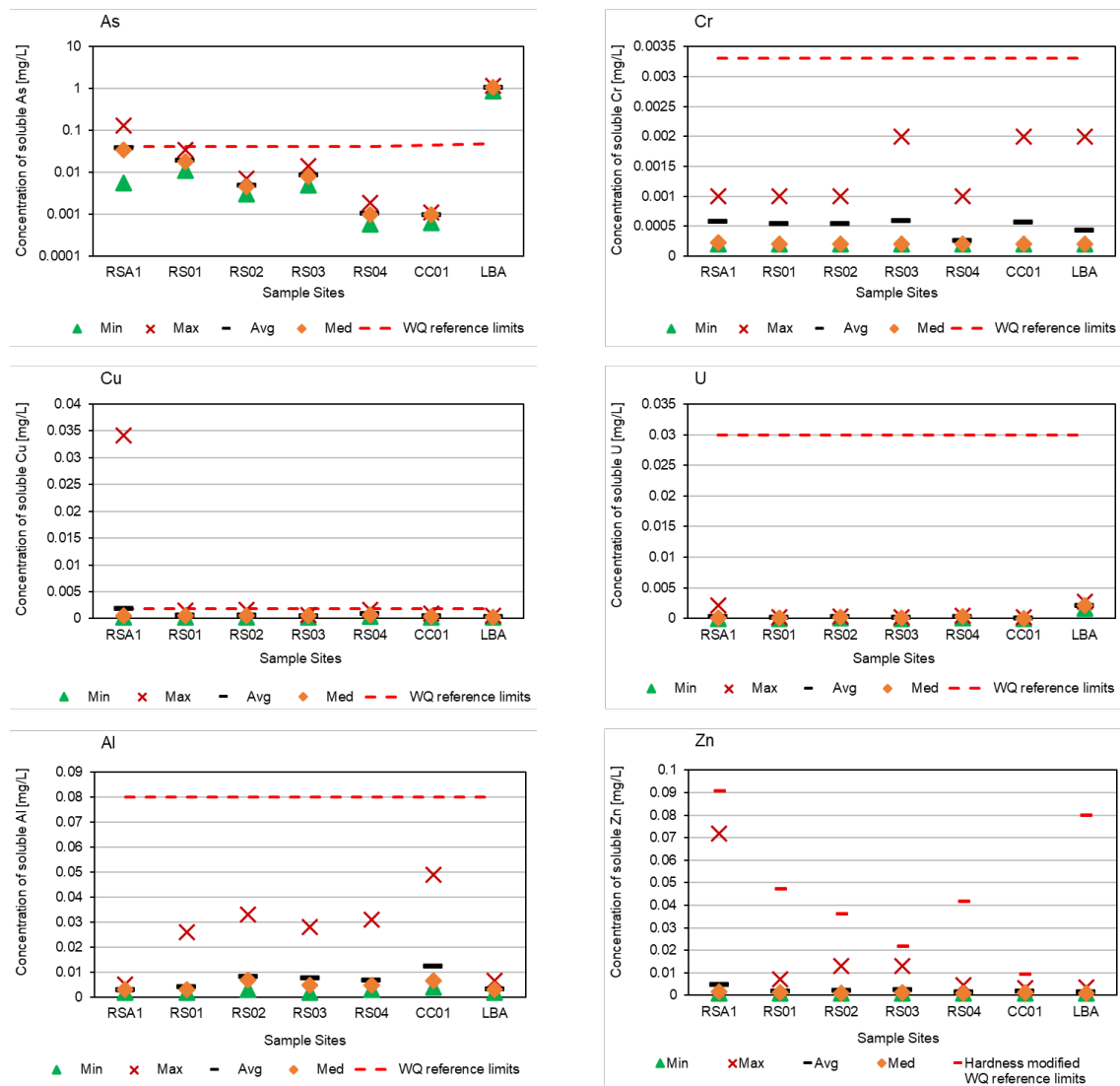


Figure 8. Selected key water quality parameters for Bendigo Creek Catchment (Part 2).

Table 7. Water quality summary in Bendigo Creek Catchment (RSA1, RS01, RS02, RS03).

PARAMETERS	RSA1 (N=25)			RS01 (N=26)			RS02 (N=26)			RS03 (N=25)		
	MIN	MAX	AVE	MIN	MAX	AVE	MIN	MAX	AVE	MIN	MAX	AVE
Acidity to pH 7 (mg CaCO ₃ /L)	1.00	26.0	3.82	1.00	5.00 ¹	1.36	1.00	5.00 ¹	1.36	1.00	1.00	1.00
Acidity to pH 8.3 (mg CaCO ₃ /L)	1.00	53.0	18.0	1.00	13.0	4.19	1.00	6.67	2.97	1.00	6.00	2.97
Alkalinity (mg CaCO ₃ /L)	64.3	242	108	65.4	125	87.5	44.2	96.3	65.8	23.0	58.0	39.1
pH (pH units)	6.70	8.00	7.32	7.10	7.90	7.61	6.90	7.90	7.57	7.00	9.30	7.42
EC (µS/cm)	149	481	212	156	212	182	103	204	151	54.2	108	86.4
DO (%)	1.33	12.6	6.88	7.78	20.2	11.6	8.99	125	17.8	9.07	25.9	12.7
ORP (mV)	-134	173	11.4	-13.8	182	36.7	-3.20	241	91.8	-20.4	166	52.4
Temp (°C)	1.10	13.0	7.37	0.060	14.6	7.32	-0.100	13.9	6.48	2.20	11.8	6.50
Ca	5.00	69.6	28.7	19.5	35.8	26.3	14.3	26.3	19.7	8.04	14.5	11.1
Cl	0.430	7.91	2.55	0.830	4.18	2.38	1.12	3.51	2.07	0.700	2.44	1.33
F	0.040	0.240	0.096	0.043	0.190	0.086	0.04	0.25	0.08	0.040	0.090	0.057
K	0.140	2.79	1.04	0.100	2.10	1.14	0.49	2.50	1.07	0.220	1.100	0.578
Mg	0.170	18.6	5.22	1.23	6.74	4.82	2.50	4.79	3.61	0.070	2.60	1.99
Na	4.59	648	52.5	4.78	122	10.4	3.15	63.1	6.87	2.59	620	39.5
Nitrite-N	0.001	0.010	0.005	0.001	0.010	0.005	0.001	0.01	0.0047	0.001	0.010	0.005
TCN	0.001	0.005	0.003	0.001	0.005	0.003	0.001	0.01	0.0028	0.001	0.005	0.003
TKN	0.100	2.33	0.479	0.100	1.53	0.369	0.100	2.35	0.53	0.100	0.390	0.199
TN	0.065	1.83	0.367	0.106	1.71	0.357	0.095	2.40	0.40	0.053	0.390	0.161
TOC	0.960	10.4	4.04	0.600	7.80	2.77	0.500	3.60	2.09	0.890	2.900	1.749
TP	0.005	0.420	0.052	0.005	0.861	0.050	0.005	0.160	0.02	0.005	0.092	0.013
TSS	3.00	87.0	21.4	3.00	1200	54.2	3.00	75.0	12.0	3.00	8.00	4.36
TDS	77.0	310	123	66.0	130	101	61.0	120	77.8	13.0	83.0	47.3
Turbidity (NTU)	0.700	60.5	13.0	0.200	750	35.8	1.00	47.00	6.16	0.200	3.10	0.786

Note: Other parameters are presented in Table 6.

All units are presented in mg/L unless otherwise specified. Average pH presented is not based on H⁺ content due to consistent pH values for each site. A hyphen (-) indicates no value is given.

¹ - Maximum acidity (to pH 7) for sample sites RS01 and RS02 concentrations are a result of the LOR at SGS. The average concentration presented is therefore influenced by the LOR.

Table 8. Water quality summary in Bendigo Creek Catchment (RS04, CC01, LBA).

PARAMETERS	RS04 (N=14)			CC01 (N=16)			LBA (N=18)		
	MIN	MAX	AVE	MIN	MAX	AVE	MIN	MAX	AVE
Acidity to pH 7 (mg CaCO ₃ /L)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Acidity to pH 8.3 (mg CaCO ₃ /L)	1.00	9.00	3.57	1.00	6.67	2.85	1.00	4.00	1.24
Alkalinity (mg CaCO ₃ /L)	41.9	99.6	72.8	7.40	18.1	14.7	181	198	191
pH (pH units)	7.40	7.70	7.51	6.60	7.40	7.03	6.00	8.30	8.06
EC (µS/cm)	90	213	165	21.8	42.3	34.0	427	526	468
DO (%)	7.92	19.9	11.6	9.62	17.2	12.6	8.10	10.8	9.56
ORP (mV)	11.4	118	66.9	-2.10	242	117	-61.7	282	82.4
Temp (°C)	0.600	13.8	6.52	2.10	11.1	6.13	10.0	12.4	11.1
Ca	13.3	32.5	23.3	2.00	5.30	3.88	41.70	60.9	53.1
Cl	0.870	3.28	1.96	0.500	1.61	0.79	5.05	8.06	7.19
F	0.040	0.100	0.059	0.040	0.080	0.055	0.220	0.350	15.4
K	0.400	1.70	1.18	0.260	0.460	0.335	1.66	2.20	19.9
Mg	1.95	5.13	3.74	0.460	1.12	0.844	14.5	16.6	0.003
Na	2.87	7.72	5.15	1.76	2.92	2.35	18.6	23.1	0.002
Nitrite-N	0.0010	0.010	0.0017	0.0010	0.010	0.004	0.0010	0.010	0.149
TCN	0.0010	0.005	0.0013	0.0010	0.005	0.003	0.0010	0.005	0.322
TKN	0.290	0.970	0.46	0.100	0.250	0.139	0.100	0.450	1.40
TN	0.290	1.47	0.54	0.047	0.250	0.118	0.200	0.700	0.225
TOC	2.00	3.50	2.75	0.500	2.10	1.23	0.500	2.30	5.33
TP	0.005	0.070	0.023	0.005	0.016	0.011	0.014	0.390	245
TSS	3.00	56.0	13.9	3.00	6.00	3.75	3.00	22.0	2.92
TDS	47.0	153	92.2	14.0	45.0	23.8	209	271	0.074
Turbidity (NTU)	0.400	26.0	6.35	0.200	1.00	0.390	0.600	28.1	-

Note: Other parameters are presented in Table 6.

All units are presented in mg/L unless otherwise specified. Average pH presented is not based on H⁺ content due to consistent pH values for each site. A hyphen (-) indicates no value is given.

4.2 Surface Water Seasonal Trends

The following section examines the seasonal trends for the surface water data in the Shepherds Creek and Bendigo Creek catchments.

4.2.1 *Shepherds Creek*

Data from 2022 to 2024 were used to determine if seasonal trends were observable, however, due to inconsistent sampling over those two years, determining if seasonal trends are observable is difficult. Within the limitations of the data, the following observations were noted:

- Maximum ammoniacal nitrogen concentrations were observed in March 2024 (SC01 and SC03) and October 2024 (SC03).
- Fluctuations were observed for Fe, As, and Al concentrations but remained relatively consistent for each individual sampling site.
- Sulfate concentrations were consistent for SC03 and JC01. Sulfate concentrations at SC01 appear to peak in March each year. During the May 2024 sampling round, sulfate concentrations at SC01 dropped to 0.020 mg/L. This laboratory result is likely erroneous when compared to the overall dataset. Since May 2024, sulfate concentrations have seen a general decrease in concentrations in SC01.
- Calcium and Mg concentrations across all Shepherd Creek Catchment sites can be observed following similar trends. Of note was a decrease in concentrations July 2023 (SC03 and JC01) and September 2023 (SC01). The decrease at SC01 appears anomalous to other data and may be a lab error.
- Chromium and Pb concentrations remained below LOR for all sampling sites (i.e., the reported change in concentrations is due to a change in laboratories and the respective LOR). Lead concentrations at SC03 were observed increasing during the November 2024 sampling event.
- Copper concentrations decreased since monitoring began for all sampling sites; however, no seasonal effect can be conclusively determined from the data. Copper concentrations at SC03 were observed increasing during the November 2024 sampling event.
- Zinc concentrations can be observed fluctuating at the sampling site JC01. SC01 and SC03 remained consistent over the sampling period. A spike in Zn concentrations was observed in May 2024, however, this seems anomalous.

Fluctuations may be a result of flow rates and wetter/dryer periods. A larger dataset will help inform the impact of seasonal trends.

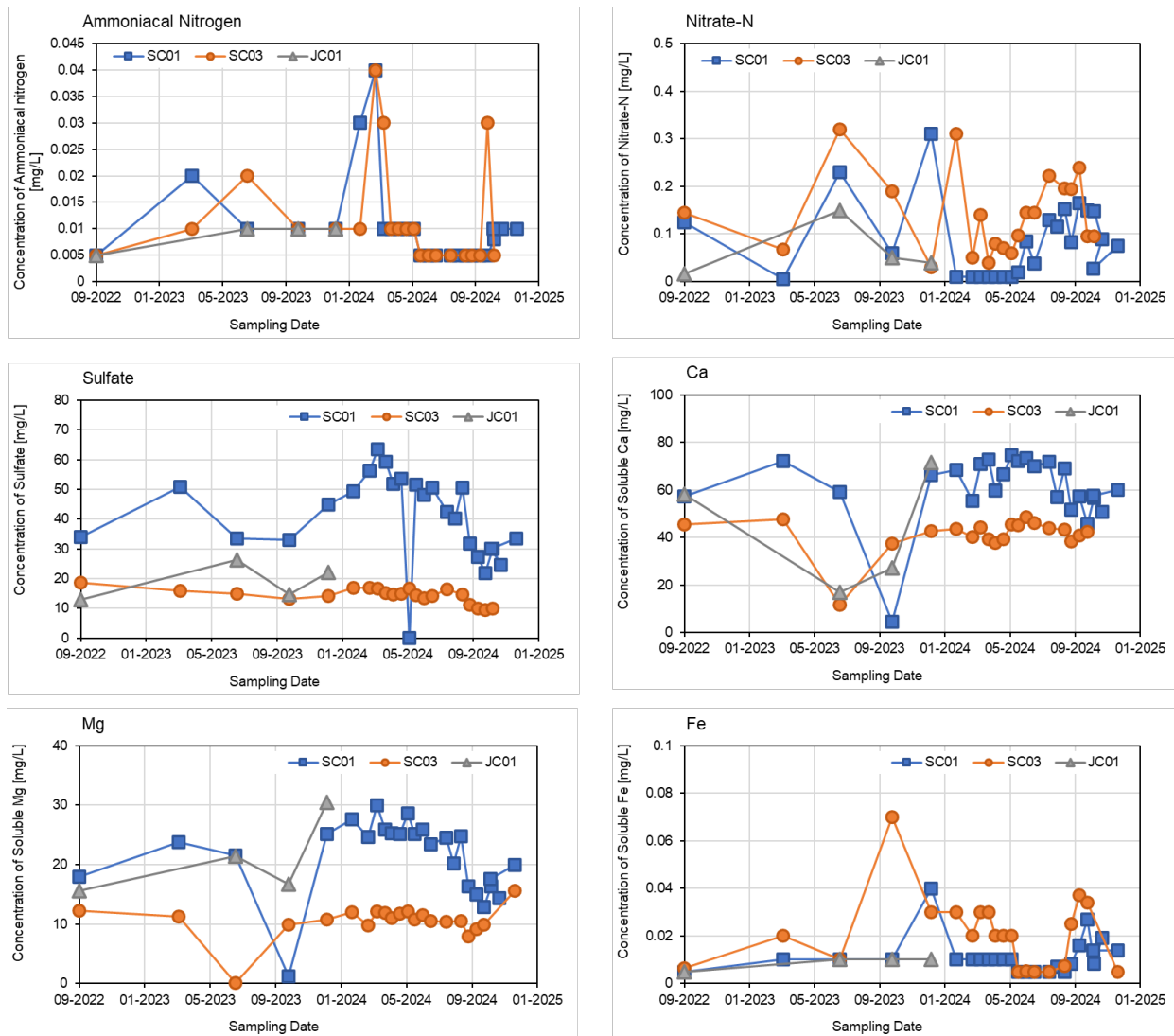


Figure 9. Seasonal trends of selected key water quality parameters of the Shepherds Creek Catchment (Part 1).

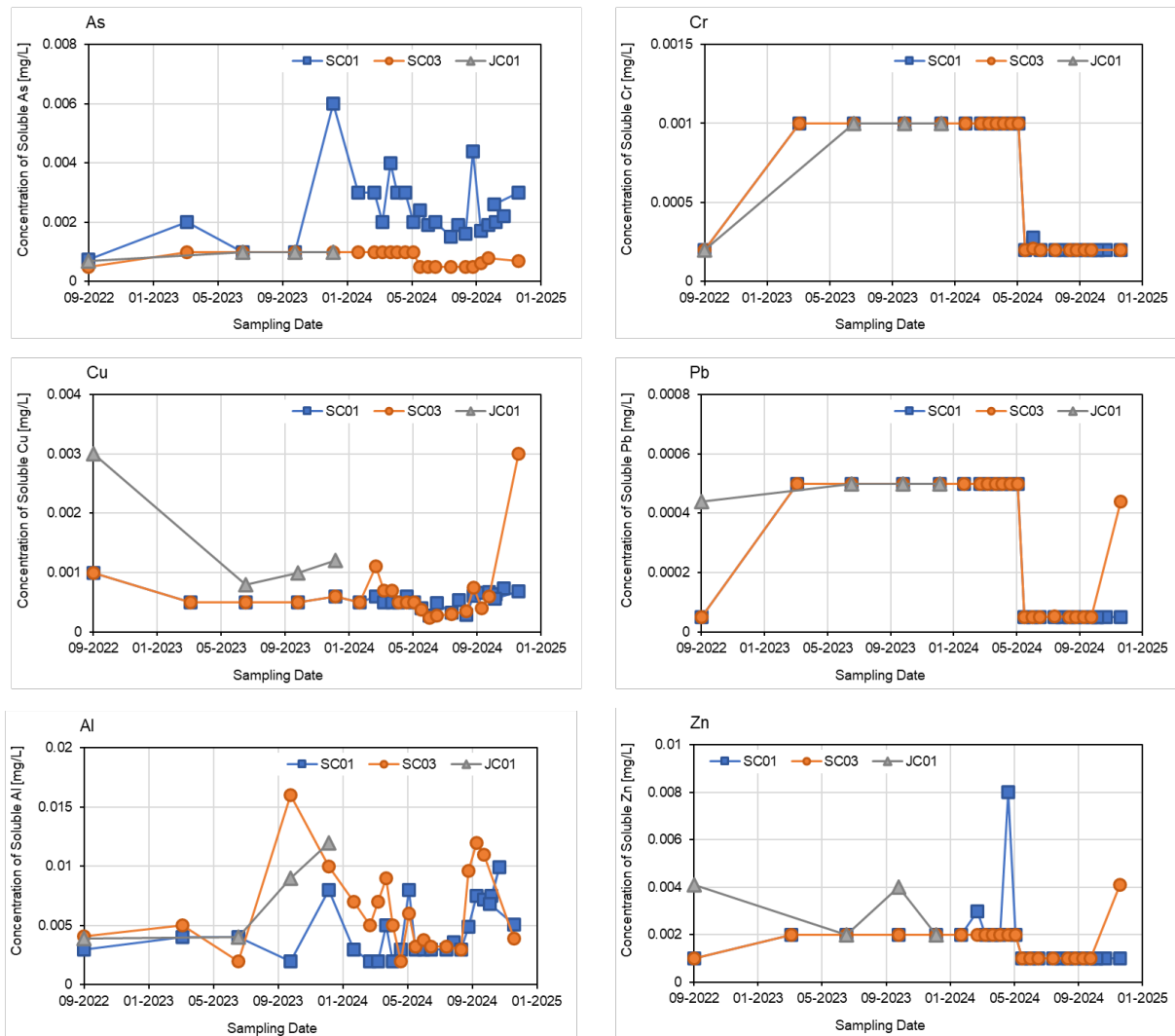


Figure 10. Seasonal trends of selected key water quality parameters of the Shepherds Creek Catchment (Part 2).

4.2.2 Bendigo Creek Catchment

Due to the limited data, seasonal trends were unable to be determined. However, the following observations were noted:

- Ammoniacal nitrogen concentrations at RSA1 can be observed to increase in September 2023. RS01 and RS02 exhibited similar increases in December 2023.
- Nitrate-N concentrations at RSA1, RS01, and RS02 can be observed to fluctuate in concentration throughout the sampling period. Nitrate-N concentrations are consistently higher for the LBA monitoring site compared to other sites.
- Iron concentrations at RSA1, RS01, and RS02 were relatively stable. A spike in concentrations for RSA1 was observed in February 2024 and then in May 2024 before decreasing.
- Arsenic concentrations at RSA1, RS01, and RS02 were relatively stable. RSA1 can be observed gradually decreasing throughout the sampling period. LBA concentrations are stable yet notably elevated compared to the other monitoring sites.

- Aluminium concentrations fluctuated at RSA1, RS01, and RS02 respectively. A general decreasing trend can be observed throughout the sampling period, prior to spikes in concentrations in winter 2024. A spike in concentrations can be observed during August 2024 and September 2024 sampling events for RS01, RS02, and CC01.
- Sulfate concentrations at RS01 and RS02 increased in March 2023 before decreasing. Sulfate concentrations at RSA1 exhibited fluctuations throughout the sampling period. Sulfate concentrations again increased in autumn 2024 for most sites before a gradual reduction to the end of the sampling period. Sulfate is notably higher at site LBA compared to other sites, which is due to mine-impacted water.
- Calcium and Mg concentrations from site RSA1 decreased until Sep 2023 and then increased, while concentrations for all other sites were generally stable. Calcium and Mg are notably higher at site LBA compared to other sites.
- Chromium and Pb concentrations remained close to, or below, the LOR (the observed change in concentrations is due to a change in laboratories). The apparent reduction in concentrations from May 2024 is a result of switching to a different laboratory with a lower LOR for Cr and Pb. Lead concentrations were observed increasing during the last November 2024 event for the sampling site RS02.
- Copper concentrations from Bendigo Creek Catchment exhibited minor fluctuations but generally remained below 0.0008 mg/L. A spike in Cu concentrations at RS01 and RSA1 was observed in May 2024.
- Zinc concentrations from all monitoring sites generally remained below the LOR, however spikes were observed in February 2024 for RSA1, RS01, and RS03. RSA1 observed a spike in Zn concentration in May 2024, and RS02 observed spikes in March 2024, July 2024, and September 2024.

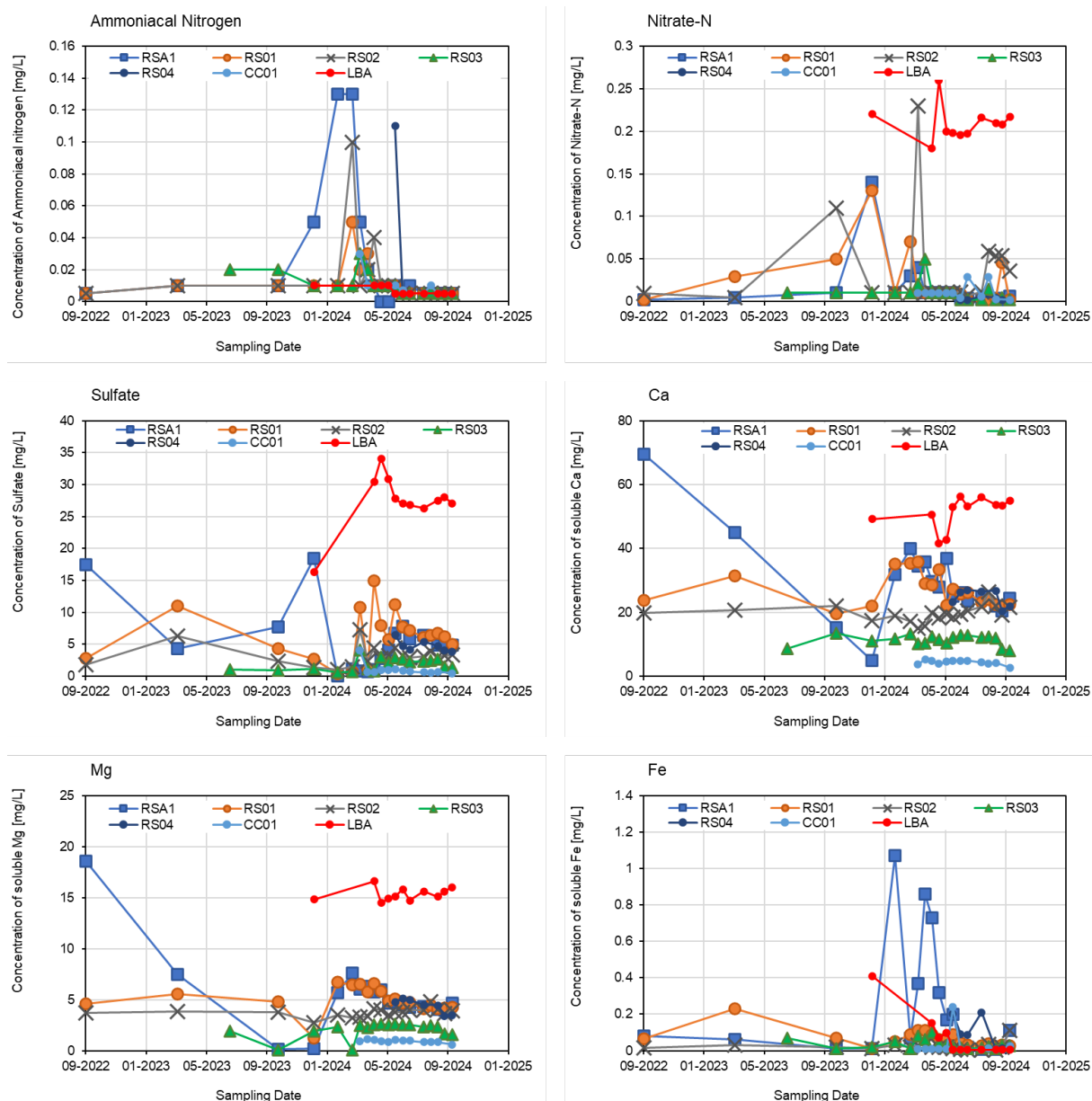


Figure 11. Seasonal trends of selected key water quality parameters of the Bendigo Creek Catchment (Part 1).

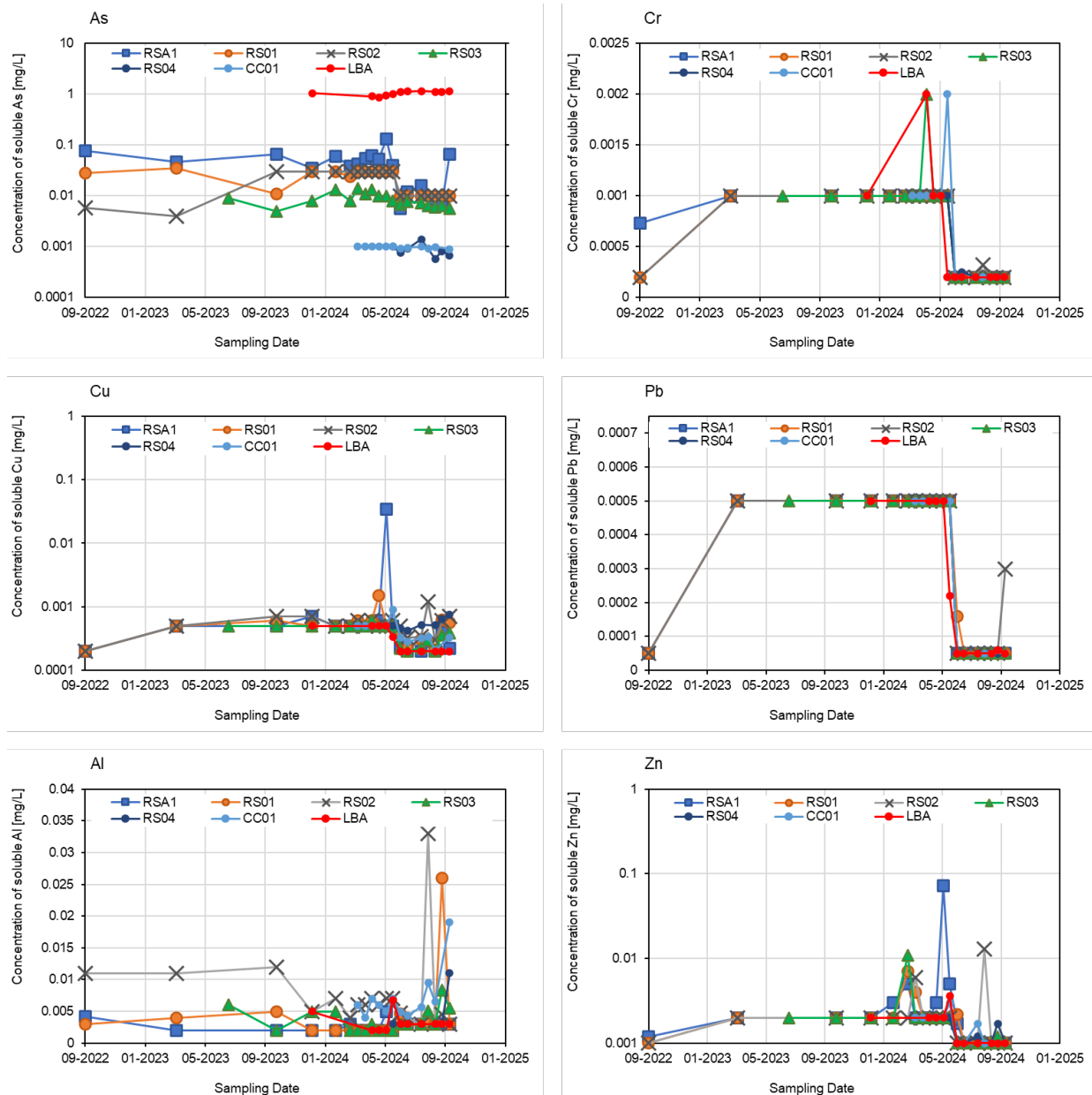


Figure 12. Seasonal trends of selected key water quality parameters of the Bendigo Creek Catchment (Part 2).

4.3 Groundwater Quality Data Analysis

Groundwater quality data from samples collected from across the BOGP site between September 2022 and August 2024 were analysed. This section presents and discusses the key water quality data obtained from each monitoring site.

4.3.1 Groundwater Quality

Groundwater quality data comprised 33 samples from five sampling sites (MRC002 (n=1), MDD015 (n=18), MDD302 (n=12), Base (office) (n=1), and Base (exploration camp) (n=1)). The MEQ analyses are presented in Table 9, Figure 13, and Figure 14. Table 10 presents a summary of additional parameters (e.g., physical parameters, nutrients, anions, and cations).

Based on the data the following observations were made:

- The pH ranged from 6.8 to 8.7, with an average of 8.1 (MDD015), 8.0 (MRC002), 7.8 (MDD302), 8.0 (Base (Office)), and 6.8 (Base (Exploration Camp)).
- Acidity (to pH 8.3) concentrations ranged from 1.0 to 16.7 mg CaCO₃/L.
- Alkalinity ranged from 36.0 mg CaCO₃/L to 251 mg CaCO₃/L across all groundwater sites, with averages of 202 mg CaCO₃/L (MDD015), 110 mg CaCO₃/L (MRC002), 150 mg CaCO₃/L (Base (Office)), 237 mg CaCO₃/L (MDD302), and 36.0 mg CaCO₃/L (Base (Exploration Camp)).
- The EC ranged from 106 µS/cm to 550 µS/cm across all groundwater sites, with site averages of 446 µS/cm (MDD015), 250 µS/cm (MRC002), 360 µS/cm (Base (Office)), 493 µS/cm (MDD302), and 106 µS/cm (Base (Exploration Camp)).
- MEQ values in **blue** indicate that all data are influenced by the LOR being higher than the adopted WQ Limits. For example:
 - Ag has a MEQ of 10 for MDD015, MRC002 and Base (Office), indicating that it is elevated above the adopted WQ Limit (0.00005 mg/L). MDD302 had a MEQ of 1.60, although this reflected a lower LOR from a different lab. All data for Ag were below the LOR, indicating the MEQ is elevated due to the LOR.
 - For sites MDD015, MRC002, and Base (Office), Hg concentrations MEQ values 0.833, which were due to a LOR > WQ Limit.
 - For sites MRC002 and Base (Office), TI has an MEQ value of 16.7 due to a LOR > WQ Limit.
- MEQ data in **red** indicates that the maximum value for a parameter exceeds the WQ Limit.
 - Arsenic concentrations were reported as exceeding the WQ Limit for sampling sites MDD015, MRC002, and MDD302.
 - Copper concentrations were reported as exceeding the WQ Limit for sampling sites MRC002, Base (Office), and Base (Exploration Camp).
 - Iron concentrations exceeded their WQ Limit at MDD015, MRC002, and MDD302.
 - Lead concentrations were reported as exceeding the WQ Limit for the sampling site Base (Exploration Camp).
 - Strontium concentrations exceeded their WQ Limit at MDD015.
 - Thallium concentrations exceeded the WQ Limit at sampling site MDD015 during the sampling event in April 2024.
 - Zinc concentrations exceeded their WQ Limit at MRC002 and Base (Exploration Camp).
- MEQ data in **orange** (i.e., $0.5 \leq \text{MEQ} < 1.0$) indicates that a PCOC is potentially elevated but still below the adopted WQ Limit. The following was observed:
 - Ammoniacal nitrogen concentrations at MDD015 had a MEQ value of 0.833.

- Strontium concentrations at MRC002 had a MEQ value of 0.893.
- Zinc concentrations at Base (Office) had a MEQ value of 0.914.
- All other PCOC had MEQ values <0.50.
- Average Fe concentrations were reported as being <0.10 mg/L.
- Sulfate concentrations were reported <100 mg/L.
- Due to the limited data, the majority of parameters shown in Table 10 are comparable across the groundwater sampling sites (where data exists).

Table 9. MEQ analysis and average concentrations for groundwater.

PARAMETERS	WQ LIMIT	MDD015 (n=18)		MRC002 (n=1)		MDD302 (n=12)		Office Base (n=1)		Base (Exploration Camp) (n=1)	
		MEQ (max value)	AVE (mg/L)	MEQ (max value)	AVE (mg/L)	MEQ (max value)	AVE (mg/L)	MEQ (max value)	REPORTED VALUE (mg/L)	MEQ (max value)	REPORTED VALUE (mg/L)
Ag	0.00005	10.0	0.0002	10.0	0.0005	1.60	0.00008	10.0	0.0005	-	-
Al	0.08	0.238	0.0061	0.075	0.006	0.150	0.004	0.025	0.002	0.038	0.003
As	0.01	5.47	0.024	1.10	0.011	5.84	0.052	0.100	0.001	0.083	0.001
B	0.94	0.064	0.033	-	-	0.011	0.010	-	-	0.011	0.010
Cd	0.004	0.050	0.0001	0.050	0.0002	0.005	0.00002	0.050	0.0002	0.025	0.00010
Co	1.0	0.001	0.00019	0.001	0.0005	0.00001	0.00001	0.001	0.0005	0.00003	0.00003
Cr	0.05	0.020	0.00047	0.020	0.001	0.004	0.0002	0.020	0.001	0.004	0.0002
Cu	0.0018	0.278	0.0003	1.11	0.002	0.406	0.0002	2.22	0.004	85.6	0.154
Total Fe	0.3	11.8	0.315	6.67	2.00	1.30	0.338	0.333	0.100	0.017	0.005
Hg	0.0006	0.833	0.0002	0.833	0.0005	0.133	0.0001	0.833	0.0005	0.133	0.0001
Mn	0.4	0.021	0.0068	0.009	0.0034	0.014	0.005	0.0013	0.0005	0.0013	0.001
Mo	0.01	0.070	0.0004	0.090	0.0009	0.040	0.0003	0.050	0.0005	0.020	0.0002
Ni	0.011	0.045	0.0003	0.045	0.0005	0.018	0.0002	0.064	0.0007	0.118	0.0013
Pb	0.01	0.050	0.0002	0.050	0.0005	0.005	0.00005	0.050	0.0005	1.80	0.0180
Total Sb	0.02	0.100	0.0006	-	-	0.010	0.00017	-	-	0.005	0.0001
Se	0.02	0.250	0.0018	-	-	0.025	0.0005	-	-	0.025	0.001
Sr	4.0	2.65	9.76	0.893	3.57	0.300	1.13	0.111	0.443	0.027	0.109
Tl	0.00003	110	0.0003	16.7	0.0005	0.333	0.00001	16.7	0.0005	0.333	0.00001
U	0.03	0.040	0.0010	-	-	0.168	0.005	-	-	0.001	0.00003
V	0.006	0.083	0.0005	0.083	0.001	0.083	0.001	0.083	0.0005	0.083	0.0005
Zn	0.015	0.041	0.001	3.28	0.094	0.010	0.001	0.914	0.057	25.5	0.468
Sulfate	250	0.068	10.3	0.022	5.40	0.041	9.59	0.096	24.0	0.016	4.10
Ammoniacal nitrogen	0.24	0.833	0.109	-	-	0.208	0.050	-	-	0.021	0.005
Nitrate-N	11.3	0.001	0.005	-	-	0.001	0.0033	-	-	0.045	0.508

All units are presented in mg/L unless otherwise specified. A hyphen (-) indicates no value is given.

For quality assurance the Office Base and Base (Exploration Camp) sampling sites were compared the New Zealand drinking water standards (NZDWS) (2022). All reported concentrations had a MEQ below <0.50 (for the available NZDWS WQ Limits) indicating that the parameters are not elevated.

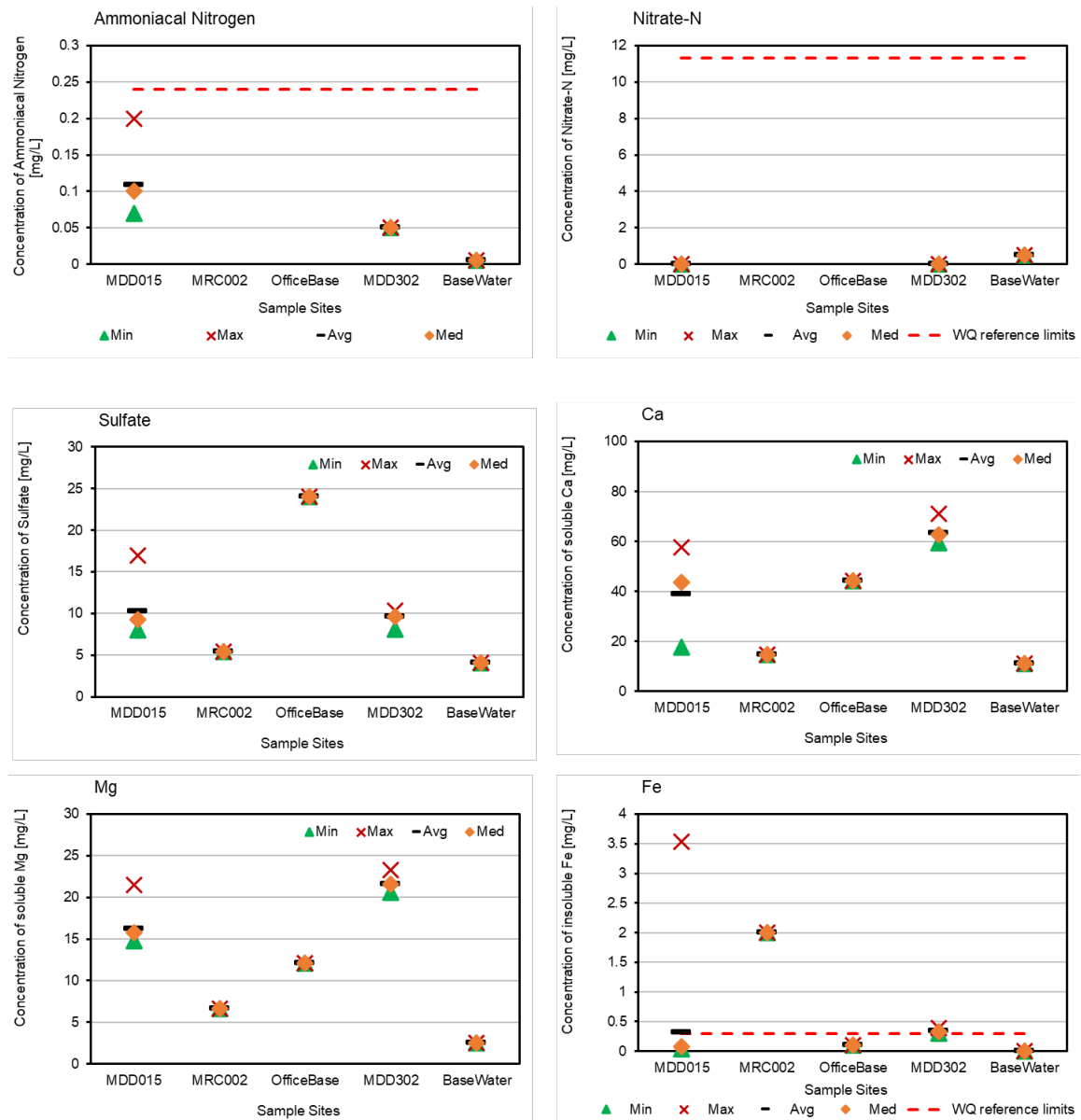


Figure 13. Selected groundwater quality parameters (Part 1).

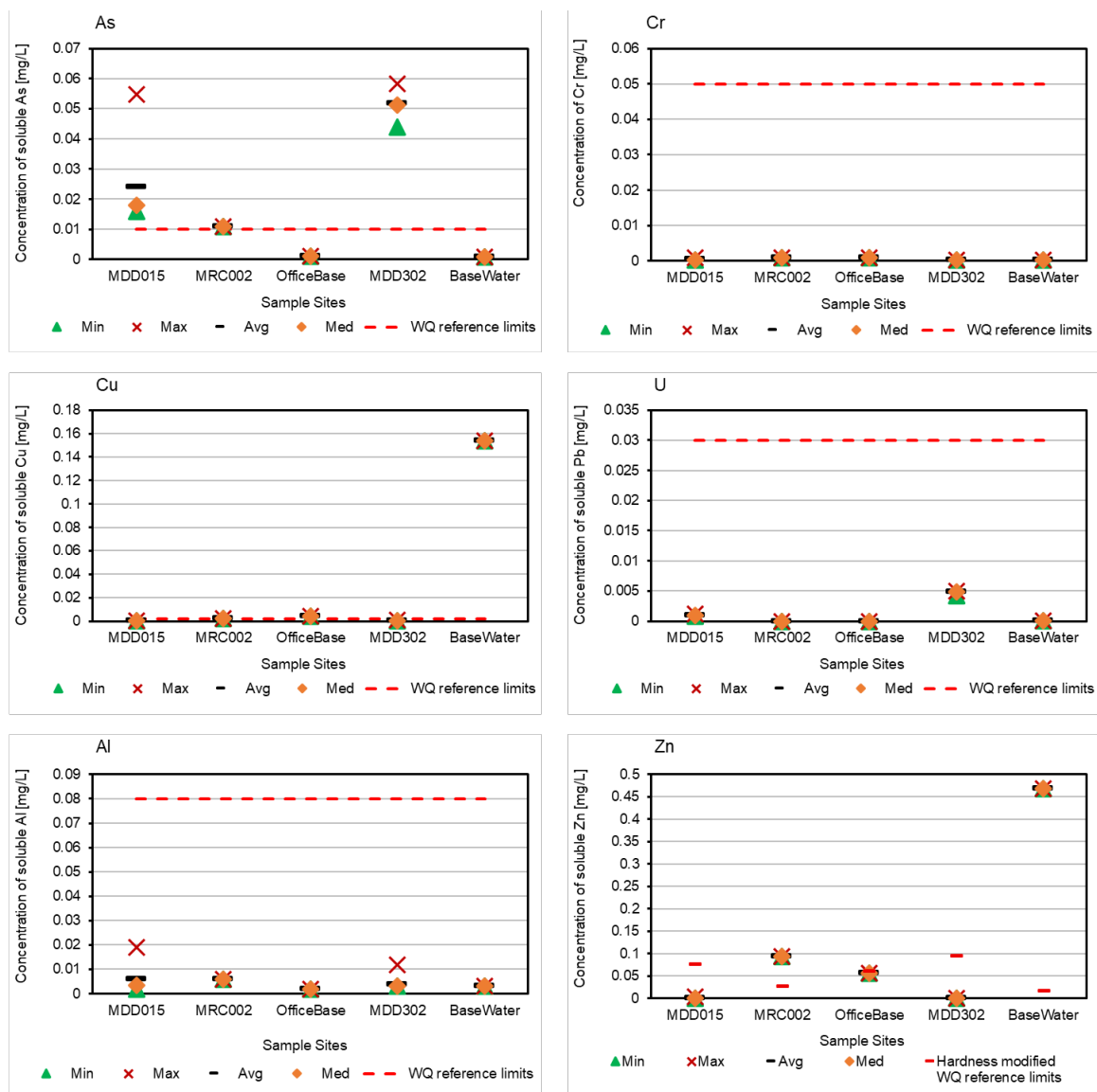


Figure 14. Selected key groundwater quality parameters (Part 2).

Table 10. Groundwater water quality summary.

PARAMETERS	MDD015 (n=18)			MRC002 (n=1)			MDD302 (n=12)			OFFICE BASE (n=1)	BASE (EXPLORATION CAMP) (n=1)
	MIN	MAX	AVG	MIN	MAX	AVG	MIN	MAX	AVG	REPORTED VALUE	REPORTED VALUE
Acidity to pH 7 (mg CaCO ₃ /L)	1.0	1.00	1.00	-	-	-	-	-	-	-	-
Acidity to pH 8.3 (mg CaCO ₃ /L)	1.0	6.00	3.20	-	-	-	4.67	16.7	8.05	-	6.67
Alkalinity (mg CaCO ₃ /L)	195	205	202	110	110	110	232	251	237	150	36.0
pH (pH units)	8.00	8.70	8.10	8.00	8.00	8.00	7.70	7.90	7.78	8.00	6.80
EC (µS/cm)	410	498	446	250	250	250	458	550	493	360	106
Ca	17.6	57.7	38.9	14.8	14.8	14.8	59.5	71.2	63.3	44.3	11.0
Cl	7.65	10.6	9.42	3.50	3.50	3.50	2.32	3.41	2.96	6.00	2.45
F	0.12	0.230	0.162	-	-	-	0.11	0.18	0.14	-	0.054
K	1.27	1.88	1.44	-	-	-	1.30	1.70	1.42	-	-
Mg	14.8	21.5	16.2	6.61	6.61	6.61	20.6	23.3	21.6	12.1	2.57
Na	36.8	59.6	43.6	27.0	27.0	27.0	7.60	8.92	7.98	16.7	5.07
Nitrite-N	0.001	0.010	0.004	-	-	-	-	-	-	-	0.001
TCN	0.001	0.005	0.002	-	-	-	-	-	-	-	0.001
TN	0.107	0.320	0.161	-	-	-	0.100	0.130	0.106	-	0.510
TOC	0.1	0.500	0.300	-	-	-	0.500	0.500	0.500	-	-
TP	0.005	0.470	0.040	-	-	-	0.005	0.150	0.021	-	0.005
TSS	3	160	13.8	-	-	-	3.00	3.00	3.00	-	3.00
Turbidity (NTU)	206	260	227	170	170	170	232	282	257	200	71.0
TDS	0.17	110	7.47	-	-	-	2.40	4.30	3.42	-	0.900

All units are presented in mg/L unless otherwise specified. Average pH presented is not based on H⁺ content due to consistent pH values for each site.

A hyphen (-) indicates no value is given.

4.3.2 *Groundwater Seasonal Trends*

Based on the limited groundwater data, no seasonal trends could be observed (Figure 15 and Figure 16). Only MDD015 has data spanning longer than a year, although data were not collected on a regular basis. However, the following observations are noted:

- All parameters measured at MDD302 were relatively consistent through the monitoring period.
- Maximum Fe concentrations were observed in April 2024 at MDD015, before gradually reducing. However, no data were collected in the previous 12 months.
- Calcium notably increased in May 2024, whilst Mg stays relatively consistent.
- Notable decreases in nitrate-N, Cr, Pb, and Zn in May 2024 are due to switching to a laboratory with lower LORs for those parameters.
- Sulfate concentrations have remained relatively consistent from May 2024 onwards.
- Zinc had a reported spike in concentrations in October 2024 at the Base (Exploration Camp) during the October sampling event. MDD015 and MDD302 have remained fairly consistent over their respective monitoring periods.

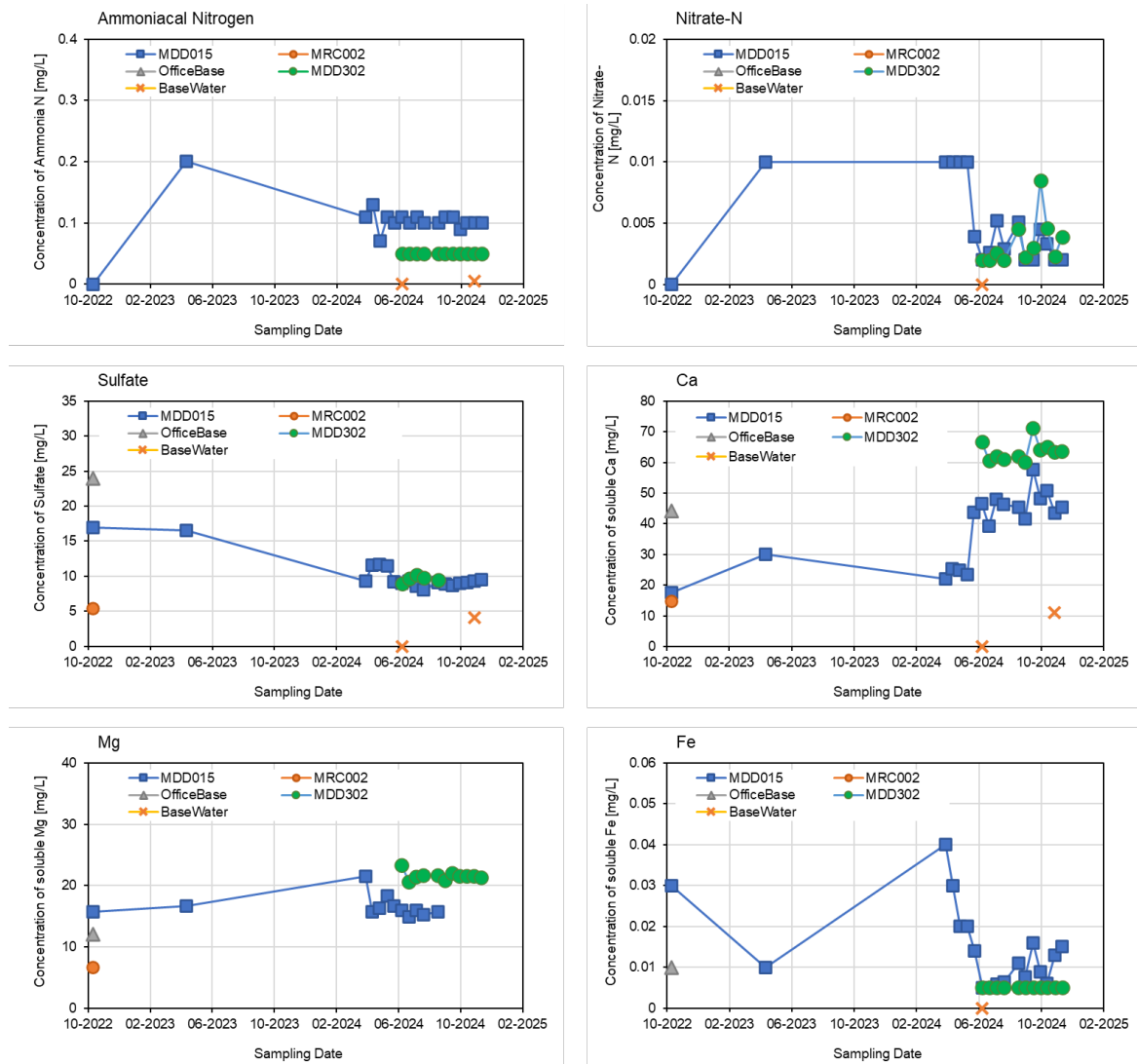


Figure 15. Seasonal trends of selected key water quality parameters from groundwater monitoring wells (Part 1).

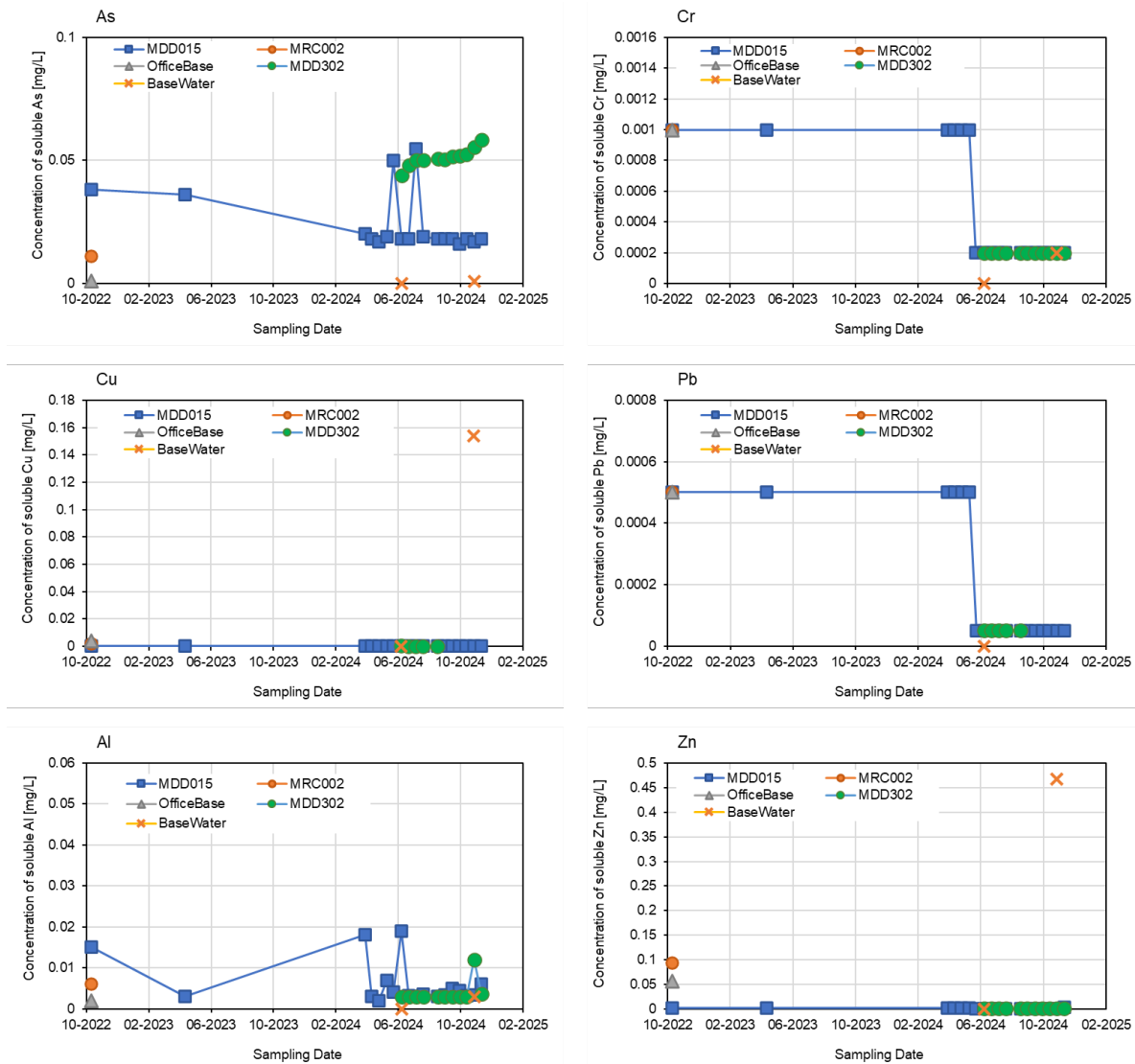


Figure 16. Seasonal trends of selected key water quality parameters from groundwater monitoring wells (Part 2).

4.4 Flow Rate Monitoring

Five weirs have been installed for the project to provide accurate low to moderate flow conditions at the following sampling sites:

- SC01 (December 2022 – May 2024).
- SC03 (December 2022 – May 2024).
- JC01 (July 2023 – May 2024).
- RS01 (December 2022 – May 2024).
- RS02 (December 2022 – May 2024).

Table 11 provides a statistical summary of the flow measurements monitored at each location. It should be noted that the data presented are the statistical analyses of the mean daily averages captured at each weir. Where applicable, negative flow data points were removed from the analyses. The following observations were noted:

- SC01 had the highest recorded flow in Shepherds Creek (133.3 L/s). The average recorded flow was 10.4 L/s.
- SC03 had flow rates of 0.00 to 103.0 L/s with an average of 9.70 L/s.
- JC01 had flow rates of 0.00 to 13.9 L/s with an average of 1.47 L/s.
- RS02 had the highest recorded flow in Bendigo Creek (76.9 L/s). The average recorded flow was 7.28 L/s.
- RS01 had flow rates of 0.01 to 74.7 L/s with an average of 7.12 L/s.

Table 11. Reported flow monitoring statistics.

SAMPLE SITE	READING COUNT	MIN	MAX	AVE	MED
SC01	482	2.17	113.3	14.0	10.4
SC03	472	0.00	103.0	9.70	5.71
JC01	284	0.00	13.9	1.47	1.38
RS01	388	0.01	74.7	7.12	4.29
RS02	479	0.52	76.9	7.28	4.93

All units are provided in L/s.

Monitoring of flow rates is a critical component of understanding potential project effects and is ongoing. Continuous monitoring is recommended as part of the proposed consent conditions (Ryder, 2025) and will enable an ongoing understanding of loads associated with PCOC.

4.5 Quality Assurance and Quality Control

QA/QC are essential steps to ensure the data are fit for purpose and suitable for informed decision making. QA/QC can be further defined as:

- QA: is focused on providing confidence that quality requirements will be fulfilled and includes for instance: prevention of mistakes or defects by paying attention to detail; and reviewing the way in which processes are performed to ensure the quality of a product or service.
- QC: is focused on fulfilling quality requirements and includes for instance: detection of mistakes or defects through monitoring products and verifying quality of output; and systematic processes for determining whether a product/service meets specified requirements.

For the purposes of this report, an inter-laboratory assessment was conducted. Samples from the monitoring location RS01 were sent to both Eurofins and Hills on six occasions between July 2023 and May 2024.

To determine if there were differences in concentration values a relative percent difference (RPD) calculation was used. As a conservative approach, a RPD of $\leq 20\%$ was used as an indicator for determining appropriate discrepancies between the two laboratories. A RPD of $\leq 20\%$ was used as:

- The samples were taken at the same time; and
- The water samples are expected to be homogeneous.

Appendix E provides a summary of the inter-laboratory analysis and shows the concentrations (total and dissolved) for parameters that had a calculated RPD $\leq 20\%$ (without being influenced by the different laboratory LORs).

Based on the data, the following observations can be made:

- On average Hills Laboratory had lower LOR than Eurofins Laboratory. For some parameters there was an order of magnitude difference between the two laboratories (e.g., Cd, Cr, and Cu).
- The statistical summary of RPDs (that weren't influenced by LORs) were:
 - RPDs for the July 2023 samples ranged between 0% and 187.6%.
 - RPDs for the October 2023 samples ranged between 0% and 182.7%.
 - RPDs for the February 2024 samples ranged between 0% and 196.7%.
 - RPDs for the March 2024 samples ranged between 0% and 194.4%.
 - RPDs for the April 2024 samples ranged between 0% and 194.4%.
 - RPDs for the May 2024 samples ranged between 0% and 193.4%.

Further QA/QC studies are required to provide confidence in data reliability. Additional inter-laboratory testing should be completed for Analytica Laboratory results given they are the current preferred service provider.

4.6 Water Quality Data Summary

Analysis of water quality data indicated:

4.6.1 *Shepherds Creek:*

- Sample site JC01 had elevated Cu concentrations (MEQ value of 1.67). Average Cu concentrations were 0.0014 mg/L.
- Sampling sites had an exceedance for Cu. SC01 and SC03 had elevated Cu concentrations (MEQ values of 0.556 and 0.611 respectively). Average Cu concentrations were 0.0005 mg/L and 0.0006 mg/L, respectively.
- Sample site SC01 had elevated Sr concentrations (MEQ value of 0.500). The average Sr concentration was 0.947 mg/L.
- MEQ data in orange (i.e., $0.5 \leq \text{MEQ} < 1.0$) indicate that a PCOC is potentially elevated but still below the respective WQ Limit. The following was observed:
 - Sampling sites SC01 and SC03 had elevated Cu concentrations (MEQ values of 0.556 and 0.611 respectively). Average Cu concentrations were 0.0005 mg/L and 0.0006 mg/L respectively.
 - Sample site SC01 had elevated Sr concentrations (MEQ value of 0.500). Average Sr concentrations were 0.947 mg/L.
- E3 Scientific (2023) noted that concentrations of nutrients (e.g., nitrate and ammoniacal nitrogen) were elevated in Shepherds Creek and may be attributed to the presence of livestock

in the vicinity. Similarly, TKN⁶ concentrations could also be a result of animal waste inputs or rock weathering processes within those watersheds (E3 Scientific, 2023).

4.6.2 Bendigo Creek:

- Arsenic concentrations were reported as exceeding the WQ Limit across RSA1 and LBA (i.e., MEQ >1). Note: baseline data shows that CC01 (Clearwater Creek) and RS04 above the Rise and Shine historic workings were not elevated in As.
- Cobalt was elevated above the WQ Limit at RSA1 (MEQ 1.80).
- Copper was elevated above the WQ Limit for RSA1 with a MEQ value of 18.9.
- Iron was elevated above the WQ Limit for RSA1 and LBA with MEQ values of 3.57 and 1.37 respectively.
- MEQ data in orange (i.e., $0.5 \leq \text{MEQ} < 1.0$) indicates that a PCOC is potentially elevated but still below the respective WQ Limit. The following was observed:
 - Aluminium concentrations from the sampling site CC01 had a MEQ value of 0.613.
 - Arsenic concentrations from the sampling site RS01 had a MEQ value of 0.833.
 - Cadmium concentrations from the sampling site LBA had a MEQ value of 0.636.
 - Copper from the sampling site RS01, RS02, RS04, and CC01 with MEQ values of 0.833, 0.889, 0.944, and 0.500 respectively.
 - Zinc concentrations from the sampling sites RSA1 and RS03 had a MEQ values of 0.791 and 0.594 respectively.
 - Strontium had a MEQ value of 0.536 at the sampling site RSA1.
 - Iron concentrations were elevated above the WQ Limit for RSA1 and LBA with MEQ values of 3.57 and 1.37 respectively.

Groundwater:

- Arsenic concentrations were reported as exceeding the WQ Limit for sampling sites MDD015, MRC002, and MDD302.
- Copper concentrations were reported as exceeding the WQ Limit for sampling sites MRC002, Base (Office), and Base (Exploration Camp).
- Iron concentrations exceeded their WQ Limit at MDD015, MRC002, and MDD302.
- Lead concentrations were reported as exceeding the WQ Limit for the sampling site Base (Exploration Camp).
- Strontium concentrations exceeded their WQ Limit at MDD015.
- Thallium concentrations exceeded the WQ Limit at sampling site MDD015 during the sampling event in April 2024.

⁶ TKN = Total Kjeldahl Nitrogen

- Zinc concentrations exceeded their WQ Limit at MRC002 and Base (Exploration Camp).
- MEQ data in orange (i.e., $0.5 \leq \text{MEQ} < 1.0$) indicates that a PCOC is potentially elevated but still below the adopted WQ Limit. The following was observed:
 - Ammoniacal nitrogen concentrations at MDD015 had a MEQ value of 0.833.
 - Strontium concentrations at MRC002 had a MEQ value of 0.893.
 - Zinc concentrations at Base (Office) had a MEQ value of 0.914.

5 **SUMMARY AND RECOMMENDATIONS**

A number of the streams associated with BOGP have elevated metals, which is either a function of:

- Historical mining activities; or
- Natural baseline conditions.

Ongoing baseline water quality monitoring is recommended to develop a robust dataset to support the development of site-specific water quality criteria for the BOGP. Further work is required to define the source of elevated metals in the catchment as being a function of natural mineralisation, or whether elevated metals is due to historic mining activities. The following recommendations are provided.

5.1 **Water Quality Monitoring Program**

- Continue baseline water quality sampling for all current sampling sites. This will ensure that sufficient data are available to understand baseline conditions prior to the BOGP starting operations.
- Water quality datasets need to be compared to historical mining activity and soil mineralisation mapping to confirm natural baseline water quality versus water quality affected by historic mining activities. Such effects, based on preliminary data, have been considered as part of determining appropriate compliance water quality limits for the BOGP (Ryder, 2025).
- Monitoring of flow rates is a critical component of understanding potential project effects. Continuous monitoring is recommended and will form part of the proposed consent conditions (Ryder, 2025). This will enable an ongoing understanding of loads associated with PCOC.
- It is important that current monitoring sites align with any future resource consent monitoring locations (compliance monitoring). If other sites are to be used for compliance monitoring, then it is recommended that monitoring commence as soon as possible to obtain baseline data. Current proposed compliance monitoring sites include SC01 in Shepherds Creek (surface and groundwater) and RS03 in Rise and Shine Creek. A groundwater quality compliance site is required within the Ardgour Aquifer to understand any potential effects of mine-impacted water discharge from Shepherds Creek; these groundwater monitoring bores will be installed once the BOGP is approved. Further details are provided in Rekker and Dumont (2025).
- The groundwater quality datasets are limited at this early stage of the BOGP as monitoring requirements have only been recently identified. Further samples taken at regular intervals are required to understand baseline water quality and seasonal fluctuations. A groundwater monitoring network needs to be established for performance and compliance monitoring purposes.
- The frequency of monitoring should be reviewed after 2 years of consistent data collection to consider the parameters that require monitoring (e.g., not all metals are elevated) and the monitoring intensity (e.g., monthly / quarterly / etc). Currently, some monitoring locations have <2 years of data. ANZG (2018) notes that site-specific guideline values should be based on at least 2 years of monthly monitoring data from an appropriate site to address seasonality during different flow regimes (low, median, and high flow).

- A management process should be developed for sample collection, dispatch, and analysis that will be used operationally.
- For QA/QC⁷ purposes, duplicate samples should be taken and submitted to the laboratory for analysis to assess the precision and consistency of the results, ensuring that the sampling, handling, and analytical processes produce reliable and reproducible data. Industry standards indicate one duplicate should be collected for every 10 samples (Department of Environment, Science and Innovation, 2018).
- Monitoring should also include temperature, pH, dissolved organic carbon (DOC), and hardness as these parameters are toxicity modifying factors that are required to adjust trigger values.

5.2 Data Management

MGL should continue to compile and maintain a monitoring database for all water quantity and quality data to ensure robust datasets for future assessments and studies. MWM has provided guidance on QA/QC procedures for the water quality database, and this should be utilised (MWM, 2025a).

5.3 Annual Reporting

It is recommended that this baseline water quality report be updated annually (Annual Water Report [AWR]) to summarise baseline water quality (and quantity) during the project operational phase and into the active closure and post closure phases of the project. The provision of long-term water quality datasets in the AWR will be a key dataset for understanding any potential effects of the BOGP and to demonstrate that any engineering controls introduced to mitigate any deleterious effects are working effectively.

⁷ Quality Assurance / Quality Control

6 REFERENCES

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7 LIMITATIONS

Attention is drawn to the document “Limitations”, which is included in Appendix F of this report. The statements presented in this document are intended to provide advice on what the realistic expectations of this report should be, and to present recommendations on how to minimise the risks associated with this project. The document is not intended to reduce the level of responsibility accepted by Mine Waste Management, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in doing so.

APPENDIX A ABBREVIATIONS

ABBREVIATION	DEFINITION
AMD	Acid and metalliferous drainage
AWR	Annual water report
CIL	Carbon-in-leach
CIT	Come in Time
DGV	Default guideline value
ELF	Engineered landform
LOR	Limit of reporting
LRT	Low reliability trigger
MAV	Maximum acceptable value
MEQ	Metal ecotox quotient
MfE	Ministry for the Environment
Mt	Million tonnes
MGL	Matakanui Gold Limited
MWM	Mine Waste Management Limited
NPS	National Policy Statement
NZDWS	New Zealand drinking water standards
PCOC	Potential constituents of concern
QA/QC	Quality assurance and quality control
RAS	Rise and Shine
RPD	Relative percent difference
RSSZ	Rise and Shine Shear Zone
SRX	Srex
SOP	Standard operating procedure
SRE	Srex East
TSF	Tailings Storage Facility
WQ Limit	Water Quality Limit
WELF	West ELF
WRS	Waste rock stack

APPENDIX B STANDARD OPERATING PROCEDURES

Water Sampling SOP

DOCUMENT OWNER: Hamish McLauchlan

APPROVED BY:

Signature: Date:

REVISION HISTORY:

Date	Revision	Author	Detail / Changes
29/10/2024	Version 1	P Becker	Creation

TITLE: VWP Download

Document Number: Matakanui Gold SOP

PLANNED REVIEW:

Water Sampling SOP

1. APPLICATION

To provide a standard work practice for sampling both ground and surface water from around site by Santana Minerals staff and contractors. The standard operating procedure (SOP) presented in this document outlines the field procedures for collecting samples from monitoring locations. The SOP refers to health and safety considerations, personnel undertaking the fieldwork, materials and equipment, as well as the methodology for sampling. The methodology described in this document provides guidance on preparation, and sampling. The SOP further provides guidance on quality assurance (QA) and quality control (QC) procedures associated with the aforementioned activities.

2. HAZARDS AND RISKS

The SOP has been designed to provide technical guidance for water sampling. The health and safety considerations for each sampling event need to be assessed using established health and safety procedures, take-5 or Job Safety Analysis (JSA). Health and safety considerations that will need to be considered would be expected to include considerations associated with:

- Travel to and from the sampling locations.
- Manual handling of sampling equipment, sample preservatives and sample bottles.
- Potentially encountering water samples that may have deleterious water quality.
- Movement of vehicles and traffic risks associated with sampling locations.
- Environmental hazards (including heat stress and biological hazards) associated with the sampling locations.

All health and safety considerations and potential hazards associated with the tasks will need to be assessed through formal health and safety processes with relevant documentation completed.

The following risks and hazards have been identified for collecting data while water sampling:

- **Physical hazards:** these can include slips, trips, and falls especially when working near water bodies, or uneven terrain. It is important to wear appropriate footwear and use safety gear to mitigate this risk.
- **Weather-related hazards:** exposure to extreme weather conditions such as heat, cold rain or strong winds can pose risks. Proper protective clothing and hydration are essential to prevent weather related illnesses. Road conditions need to be assessed in poor weather.
- **Remote location risk:** Drill sites may be located in remote areas posing risks related to limited communication, access, and medical facilities. Ensure proper planning, communication devices, and emergency protocols are in place.
- **Electric fences:** Sampling locations could be behind electric fences.

Water Sampling SOP

3. PPE REQUIREMENTS

Personal Protective Equipment (PPE): It is essential to protect yourself from injury by wearing appropriate PPE when risks and hazards cannot be removed or sufficiently mitigated.

- Gloves: protect your hands from cuts and abrasions. Choose gloves that are appropriate for the specific task and hazard present.
- **NB – Each Site requires New Gloves to be worn**
- Footwear: safety boots to provide protection from sharp objects, slips and falls. Boots with slip resistant soles are recommended, especially when working in wet or muddy conditions.
- High-visibility clothing improves your visibility to others, especially in low-light conditions or when working near the tracks.

4. EQUIPMENT REQUIREMENTS

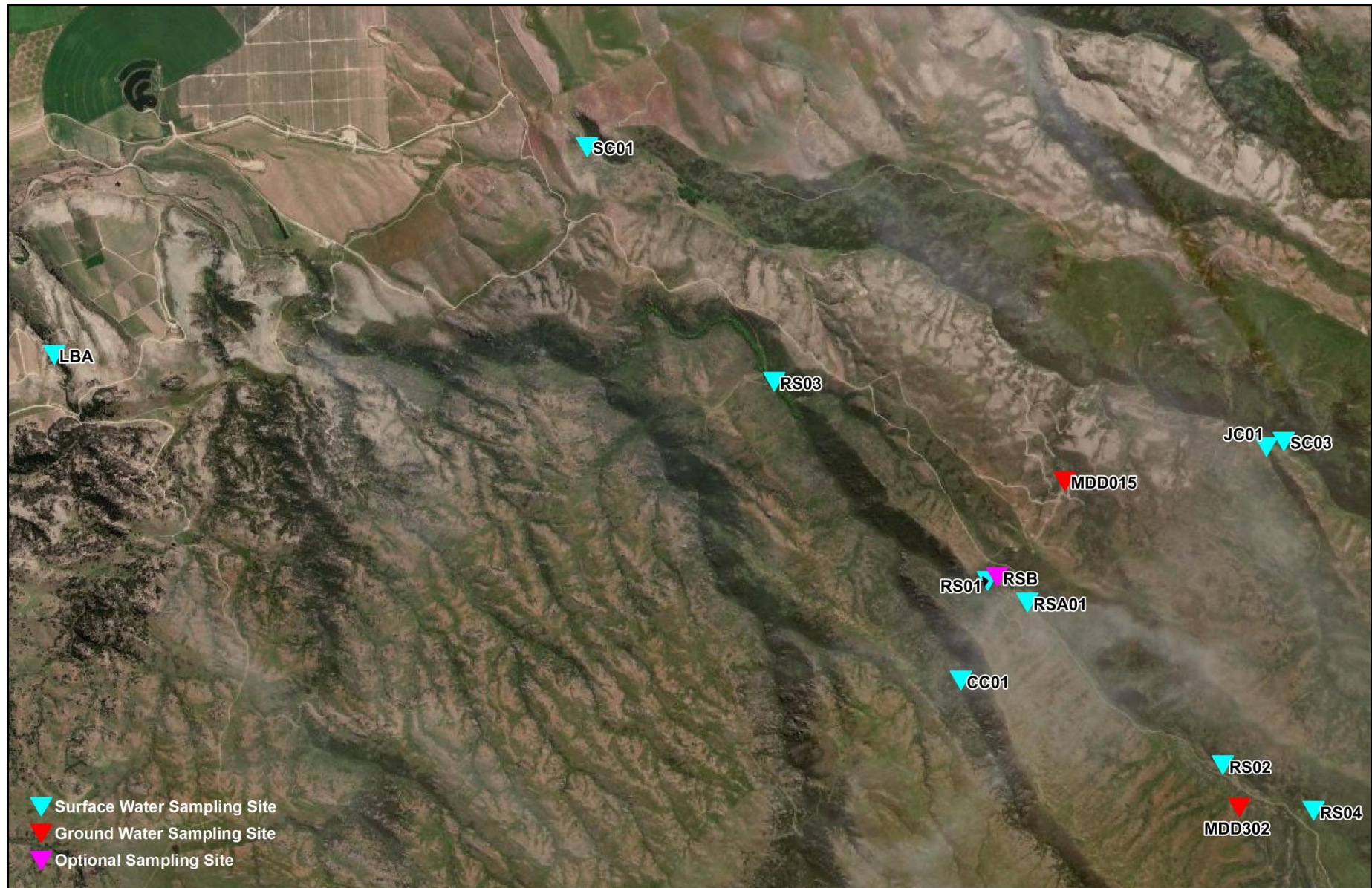
1. 20L Bucket
2. Sample Bottles – pre-labelled
3. Turbidity meter
4. Tablet
5. Shovel
6. Rubber Gloves

5. COLLECTION OF WATER SAMPLES

WATER SAMPLING LOCATIONS

- CC01 - Clearwater Creek - Surface Water site
- LBA - Lower Bendigo Adit - Surface Water site
- RS01 - RAS Creek at downstream flume - Surface Water site
- RS02 - RAS Creek at upstream flume - Surface Water site
- RS03 - RAS Creek upstream of Alta crossing - Surface Water site
- RS04 - RAS Creek upstream of Poplar track - Surface Water site
- RSA01 - RAS Adit at the cattle yards - Surface Water site
- SC01 - Shepherds Creek at bottom flume - Surface Water site
- SC03 - Shepherds Creek at top flume - Surface Water site
- JC01 - Jean Creek at flume - Surface Water site
- MDD015 - Artesian flow at MDD015 - Ground Water site
- MDD302 - Artesian flow at MDD302 - Ground Water site
- BASE - Optional Base drinking water - Ground Water site
- RSB - Optional RAS Battery - Surface water site (Total and dissolved metals only)

Water Sampling SOP



Water Sampling SOP

GROUND WATER SAMPLING PROCEDURE

The following guidance is provided for groundwater sampling:

- Samples are taken from artesian wells and collected from PVC pipes at collar.
- Readings of Turbidity / pH / Dissolved Oxygen etc are taken once the field parameters have stabilized.
- Photos of meter taken as a record with Site ID from bag included.
- Take samples for specific analysis in a consistent order across sampling locations (for example, take samples for organic compound analysis first, major ions second, nutrients third follow by samples for metal and metalloid analysis). As a general rule, and where applicable, samples should be taken in order of decreasing volatility.
- Samples taken for volatile organic compound (VOC) or isotope analysis must be taken with no head space. This can be done by filling the sample vial or bottle with a positive meniscus, i.e. above the rim of the sample container. Once the sample container has been closed, turn the container upside down and tap the side of the bottle to see whether air bubbles are present (if the bubbles are present refill the sample container).
- For samples with acid preservative, care should be taken not to overfill the sample bottle. If overfilling occurs, the bottle should be discarded and replaced with a new sample container.
- Label all samples with relevant project information, including the sample ID, and sample date. This is also recorded into the tablet along with sample time and field technician.
- Place samples into a chilled cooler directly after sampling. Ensure that samples bottles and vials are securely packed in the cooler and utilize bubble wrap or similar material if required. Aim to maintain the cooler temperature at 4 degrees Celsius (note do not freeze samples).

Once samples have been taken, complete laboratory COC paperwork and send samples to the contract laboratory within the holding times that apply to the specific laboratory analysis being undertaken.

Water Sampling SOP

SURFACE WATER SAMPLING PROCEDURE

The following guidance is provided for surface water quality sampling.

- Surface water samples are typically collected either by directly filling the sample bottle or vial from the feature being sampled or by decanting water from a collection device into a sample bottle (US EPA, 2021).
- Collect a water quality sample approximately 10 cm below the surface of the surface water feature (Department of Water, 2009a). Water samples should not be taken directly at the surface as residue or films floating on the surface may affect analytical results of laboratory testing.
- Water quality measurements can be taken directly from the surface water feature (if the sample location is readily accessible) or from samples taken from the collection device. Water quality measurements to be taken in the field include pH, temperature, electrical conductivity (EC), oxidation reduction potential (ORP) and dissolved oxygen (DO).
- For each set of recorded measurements, note down the time, water quality parameter values and any visual (such as extent of turbidity) and olfactory observations (such as hydrogen sulfide which is indicative of highly reducing conditions – influencing the redox chemistry of a number of metals and metalloids). Also record observations on the degree of flow and biological activity within the surface water feature.
- Use well maintained and calibrated field probes for the field parameter measurements. Probes are supplied to SMI calibrated.
- For laboratory analysis, take samples for specific analysis in a consistent order across sampling locations (for example, take samples for organic compound analysis first, major ions second, nutrients third follow by samples for metal and metalloid analysis). As a general rule, and where applicable, samples should be taken in order of decreasing volatility.
- Samples taken for volatile organic compound (VOC) or isotope analysis must be taken with no head space. This can be done by filling the sample vial or bottle with a positive meniscus, i.e. above the rim of the sample container. Once the sample container has been closed, turn the container upside down and tap the side of the bottle to see whether air bubbles are present (if the bubbles are present refill the sample container).
- For samples with acid preservative, care should be taken not to overfill the sample bottle. If overfilling occurs, the bottle should be discarded and replaced with a new sample container.
- Label all samples with relevant project information, including the sample ID, and sample date. This is also recorded into the tablet along with sample time and field technician.
- Place samples into a chilled cooler directly after sampling. Ensure that samples bottles and vials are securely packed in the cooler and utilize bubble wrap or similar material if required. Aim to maintain the cooler temperate at 4 degrees Celsius (note do not freeze samples).

Once samples have been taken, complete laboratory COC paperwork and send samples to the contract laboratory within the holding times that apply to the specific laboratory analysis being undertaken.

APPENDIX C LABORATORY REPORTS



Certificate of Analysis

e3 Scientific Limited
Arrow Lane
Arrowtown

Attention: Brian McGlynn
Phone: 0211697362
Email: brian.mcglynn@e3scientific.co.nz

Lab Reference: 22-35194
Submitted by: McGlynn
Date Received: 23/09/2022
Testing Initiated: 23/09/2022
Date Completed: 6/10/2022
Order Number:
Reference: 22065

Sampling Site: Matakanui

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories. Samples were in acceptable condition unless otherwise noted on this report.
Specific testing dates are available on request.

Please note Fraction 4 was not received in a glass container for TOC and DOC analysis. The laboratory aliquoted from a plastic container upon receipt. Please interpret results with caution.

Anion/Cation Suite

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
pH	pH	1	7.8	7.7	8.0	8.0	8.4
Electrical Conductivity	µS/cm	0.2	160	134	481	261	404
Total Alkalinity (CaCO ₃)	g CaCO ₃ /m ³	1	99.4	68.8	235	124	207
Chloride	g/m ³	0.5	3.14	2.17	7.91	3.02	6.58
Sulfate	g/m ³	0.15	2.74	1.77	17.5	12.7	12.9
Nitrate-N	g/m ³	0.002	<0.0020	0.0092	<0.0020	0.144	0.0158
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Ammonia as N	g/m ³	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium	g/m ³	0.01	5.57	4.60	15.5	6.59	13.3
Potassium	g/m ³	0.05	1.3	1.0	1.3	1.2	2.0
Calcium	g/m ³	0.05	23.8	19.9	69.6	38.3	58.2
Magnesium	g/m ³	0.01	4.61	3.68	18.6	9.69	15.6
Iron	g/m ³	0.005	0.066	0.015	0.080	0.021	<0.0050
Zinc	g/m ³	0.001	<0.0010	<0.0010	0.0012	<0.0010	0.0041
Manganese	g/m ³	0.0005	0.0059	0.00062	0.035	0.0042	0.00095
Sum of Anions*	meq/L	0.01	2.15	1.48	5.35	2.87	4.73
Sum of Cations*	meq/L	0.01	1.85	1.53	5.71	3.03	4.82
EC/10*	(mS/m)/10	0.002	1.60	1.34	4.81	2.61	4.04
Conductivity of Water (mS/m)	mS/m	0.02	16.0	13.0	48.0	26.0	40.0

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation with the exception of tests marked *, which are not accredited.
This test report shall not be reproduced except in full, without the written permission of Analytica Laboratories.

Anion/Cation Suite

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
pH	pH	1	8.2	8.3
Electrical Conductivity	µS/cm	0.2	318	408
Total Alkalinity (CaCO ₃)	g CaCO ₃ /m ³	1	147	181
Chloride	g/m ³	0.5	3.94	5.61
Sulfate	g/m ³	0.15	18.6	34.0
Nitrate-N	g/m ³	0.002	0.144	0.124
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002	0.004
Ammonia as N	g/m ³	0.005	<0.005	<0.005
Sodium	g/m ³	0.01	9.15	10.9
Potassium	g/m ³	0.05	1.3	1.5
Calcium	g/m ³	0.05	45.4	57.1
Magnesium	g/m ³	0.01	12.3	17.9
Iron	g/m ³	0.005	0.0065	<0.0050
Zinc	g/m ³	0.001	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0012	<0.00050
Sum of Anions*	meq/L	0.01	3.53	4.59
Sum of Cations*	meq/L	0.01	3.71	4.84
EC/10*	(mS/m)/10	0.002	3.18	4.08
Conductivity of Water (mS/m)	mS/m	0.02	32.0	41.0

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
Total Kjeldahl Nitrogen	g/m ³	0.1	0.24	0.35	2.33	0.24	0.26

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
Total Kjeldahl Nitrogen	g/m ³	0.1	0.21	0.22

Total Phosphorus in Water

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
Total Phosphorus	g/m ³	0.005	0.0080	0.048	0.42	0.014	<0.0050

Total Phosphorus in Water

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
Total Phosphorus	g/m ³	0.005	0.0088	0.0064

Cyanide in Water

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
Total Cyanide	g/m ³	0.001	<0.001	0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
Total Cyanide	g/m ³	0.001	<0.001	<0.001

Carbon in Water

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
Total Organic Carbon	g/m ³	0.5	3.1	2.5	7.1	2.7	6.3
Dissolved Organic Carbon*	g/m ³	0.5	3.6	2.5	7.1	2.6	6.2

Carbon in Water

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
Total Organic Carbon	g/m ³	0.5	3.2	3.6
Dissolved Organic Carbon*	g/m ³	0.5	3.2	3.7

Water Hardness

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	77	66	260	140	210

Water Hardness

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	170	210

Solids in Water

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
Total Dissolved Solids	g/m ³	3	116	102	310	174	272

Solids in Water

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
Total Dissolved Solids	g/m ³	3	212	286

Water Aggregate Properties

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
Total Acidity to pH 8.3 (CaCO ₃)	g/m ³	1.0	4.00	2.00	6.00	2.00	<2

Water Aggregate Properties

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
Total Acidity to pH 8.3 (CaCO ₃)	g/m ³	1.0	2.00	2.00

Elements in Water (Soluble)

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
Arsenic	g/m ³	0.0005	0.028	0.0059	0.0761	<0.00050	0.00069
Aluminium	g/m ³	0.003	<0.0030	0.011	0.0042	0.0060	0.0039
Barium	g/m ³	0.0002	0.0106	0.0095	0.0189	0.0255	0.0258
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.01	<0.010	<0.010	<0.010	0.023	0.024
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.000094	0.000077	0.00019	0.000057	0.00012

Elements in Water (Soluble)

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Chromium	g/m ³	0.0002	<0.00020	<0.00020	0.00073	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.0030
Germanium	g/m ³	0.00005	0.00014	<0.000050	0.000082	<0.000050	<0.000050
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Lithium	g/m ³	0.00001	0.00228	0.00275	0.00646	0.00440	0.00785
Molybdenum	g/m ³	0.0002	<0.00020	<0.00020	0.00031	0.00031	0.00096
Nickel	g/m ³	0.0002	0.00050	0.00029	0.00041	0.00023	0.00030
Phosphorus	g/m ³	0.04	<0.040	<0.040	0.13	0.11	0.16
Lead	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	0.00044
Rubidium	g/m ³	0.00002	0.00026	0.00028	0.00047	0.00025	0.00022
Sulfur*	g/m ³	10	<10	<10	<10	<10	<10
Antimony	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	0.00037
Selenium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.302	0.304	1.34	0.692	0.835
Thallium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.00011	0.00037	0.00219	0.00270	0.00550
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000016	0.000020	0.000014	0.000017	0.000029

Elements in Water (Soluble)

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
Arsenic	g/m ³	0.0005	<0.00050	0.00074
Aluminium	g/m ³	0.003	0.0041	<0.0030
Barium	g/m ³	0.0002	0.0258	0.0290
Beryllium	g/m ³	0.00001	<0.000010	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010
Boron	g/m ³	0.01	0.024	0.029
Cadmium	g/m ³	0.00002	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.000065	0.000057
Chromium	g/m ³	0.0002	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	<0.000010
Copper	g/m ³	0.0002	0.0010	0.0010
Germanium	g/m ³	0.00005	<0.000050	<0.000050
Mercury	g/m ³	0.00008	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010	<0.000010
Lithium	g/m ³	0.00001	0.00570	0.00756
Molybdenum	g/m ³	0.0002	0.00044	0.00046
Nickel	g/m ³	0.0002	0.00020	0.00030
Phosphorus	g/m ³	0.04	0.14	0.12
Lead	g/m ³	0.00005	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00021	0.00020
Sulfur*	g/m ³	10	<10	13
Antimony	g/m ³	0.0001	0.00011	0.00012
Selenium	g/m ³	0.0005	<0.00050	0.00057
Tin	g/m ³	0.0002	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.755	0.968
Thallium	g/m ³	0.00001	<0.000010	<0.000010

Elements in Water (Soluble)

Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Uranium	g/m ³	0.00003	0.00336	0.00492
Vanadium	g/m ³	0.0005	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000023	0.000030

Elements in Water (Total Recoverable)

Client Sample ID			RS1	RS2	RSA1	SC4	Jean Crk
Date Sampled			22/09/2022	22/09/2022	22/09/2022	22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-1	22-35194-2	22-35194-3	22-35194-4	22-35194-5
Arsenic	g/m ³	0.0005	0.038	0.012	0.243	0.00061	0.00086
Aluminium	g/m ³	0.003	0.037	0.380	0.0074	0.329	0.026
Barium	g/m ³	0.0001	0.0131	0.0183	0.0263	0.0391	0.0337
Beryllium	g/m ³	0.00001	<0.000010	0.000024	<0.000010	<0.000010	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.005	<0.0050	<0.0050	0.010	0.029	0.031
Calcium	g/m ³	0.05	23.4	20.1	71.2	38.6	58.3
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.00015	0.00032	0.00024	0.00029	0.00015
Chromium	g/m ³	0.0002	<0.00020	0.00029	<0.00020	0.00038	<0.00020
Caesium	g/m ³	0.00001	<0.000010	0.000068	<0.000010	0.000061	<0.000010
Copper	g/m ³	0.0002	0.00055	0.0013	0.00035	0.00089	0.0014
Iron	g/m ³	0.005	0.543	0.780	0.913	0.515	0.028
Germanium	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m ³	0.05	1.3	1.2	1.3	1.4	2.0
Lanthanum	g/m ³	0.00001	0.000047	0.00034	0.000012	0.00026	0.000027
Lithium	g/m ³	0.00001	0.00219	0.00286	0.00592	0.00451	0.00747
Magnesium	g/m ³	0.01	4.45	3.71	18.8	9.57	15.9
Manganese	g/m ³	0.0005	0.0538	0.028	0.0510	0.034	0.0016
Molybdenum	g/m ³	0.0002	<0.00020	<0.00020	0.00030	0.00031	0.00097
Sodium	g/m ³	0.01	5.48	4.76	15.8	6.57	13.8
Nickel	g/m ³	0.0002	0.00036	0.00061	0.00028	0.00042	0.00025
Phosphorus	g/m ³	0.04	<0.040	<0.040	0.084	<0.040	<0.040
Lead	g/m ³	0.00005	0.000095	0.00064	<0.000050	0.00034	<0.000050
Rubidium	g/m ³	0.00005	0.00040	0.0016	0.00056	0.0012	0.00030
Sulfur*	g/m ³	10	<10	<10	<10	<10	<10
Antimony	g/m ³	0.0001	<0.00010	0.00011	0.00014	0.00013	0.00050
Selenium	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m ³	0.0001	0.349	0.306	1.38	0.719	0.847
Thallium	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m ³	0.00003	0.00010	0.00028	0.0014	0.0017	0.00351
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00005	<0.000050	0.00020	<0.000050	0.00016	<0.000050
Zinc	g/m ³	0.003	<0.0030	0.0052	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

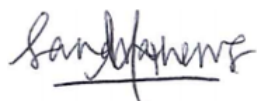
Client Sample ID			SC3	SC1
Date Sampled			22/09/2022	22/09/2022
Analyte	Unit	Reporting Limit	22-35194-6	22-35194-7
Arsenic	g/m³	0.0005	0.00060	0.0011
Aluminium	g/m³	0.003	0.26	0.047
Barium	g/m³	0.0001	0.0380	0.0384
Beryllium	g/m³	0.00001	0.000011	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010
Boron	g/m³	0.005	0.034	0.034
Calcium	g/m³	0.05	45.9	55.2
Cadmium	g/m³	0.00002	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.00021	0.00010
Chromium	g/m³	0.0002	0.00041	0.00034
Caesium	g/m³	0.00001	0.000047	<0.000010
Copper	g/m³	0.0002	0.00084	0.0043
Iron	g/m³	0.005	0.35	0.057
Germanium	g/m³	0.00005	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010
Potassium	g/m³	0.05	1.4	1.5
Lanthanum	g/m³	0.00001	0.00017	0.000047
Lithium	g/m³	0.00001	0.00605	0.00751
Magnesium	g/m³	0.01	12.5	17.5
Manganese	g/m³	0.0005	0.016	0.0025
Molybdenum	g/m³	0.0002	0.00046	0.00045
Sodium	g/m³	0.01	9.19	11.1
Nickel	g/m³	0.0002	0.00040	0.00029
Phosphorus	g/m³	0.04	<0.040	<0.040
Lead	g/m³	0.00005	0.00028	0.000073
Rubidium	g/m³	0.00005	0.0010	0.00040
Sulfur*	g/m³	10	<10	<10
Antimony	g/m³	0.0001	0.00019	0.00018
Selenium	g/m³	0.001	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.793	0.980
Thallium	g/m³	0.0001	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00220	0.00310
Vanadium	g/m³	0.0005	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.00013	0.000052
Zinc	g/m³	0.003	<0.0030	<0.0030

Method Summary

pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO ₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).

Method Summary

NO3-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{Org} D - Modified - Discrete Analyser - Online edition).
Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Total Cyanide (Trace)	On-line distillation and colourmetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Organic Carbon	Samples analysed as received by combustion analysis at 850°C. Organic carbon is calculated through subtraction of inorganic carbon from total carbon (APHA 5310 B - Online edition)
Dissolved Organic Carbon	Samples analysed as received by combustion analysis at 850°C following a filtration step.(APHA 5310 B - Online edition)
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.



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Technician



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ANALYSIS REPORT

WP22-11185.001

Client:

Matakanui Gold Limited
PO Box 11

7842 Hokitika NEW ZEALAND
Attention:

Description:

Sample ID: Base 25/10/22

Received: 26/10/2022

Completed: 14/11/2022

Job Number: WP22-11185

Report Number: 0000023708

Order Reference: Matakanui Gold Water

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.0	pH unit
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	360	µS/cm
Total Dissolved Solids g/m3	APHA 2510 SGS Westport	240	g/m3
Chloride	APHA 4110 B	6.0	g/m3
Sulphate as SO4	APHA 4110 B	24	g/m3
Total Alkalinity as CaCO3	APHA 2320B	150	g/m3
Bicarbonate Alkalinity as HCO3	APHA 2320B	180	mg/l
Carbonate Alkalinity as CO3	APHA 2320B	<5	mg/l
Total Dissolved Solids Dried at 104°C	APHA 2540 C	200	mg/l
Sample density	In-house	0.998	g/cm3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.01	g/m3
Bismuth (Bi) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	44.3	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.004	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.36	g/m3
Lithium (Li) dissolved	APHA 3125 subcontracted ELS	0.002	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	12.1	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	16.7	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0007	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.443	g/m3
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.057	g/m3
Aluminium (Al) total recoverable	APHA 3125 (modified) subcontracted ELS	0.007	g/m3
Arsenic (As) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m3
Silver, (Ag) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Barium (Ba) total recoverable	APHA 3125 (modified) subcontracted ELS	0.016	g/m3
Bismuth (Bi) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m3
Calcium (Ca) total recoverable	APHA 3125 (modified) subcontracted ELS	41.9	g/m3
Cadmium (Cd) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Cobalt (Co) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m3
Chromium (Cr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.002	g/m3

Analysis	Method	Result	Unit
Copper (Cu) total recoverable	APHA 3125 (modified) subcontracted ELS	0.004	g/m3
Iron (Fe) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.1	g/m3
Mercury (Hg) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Potassium (K) total recoverable	APHA 3125 (modified) subcontracted ELS	1.3	g/m3
Lithium (Li) total recoverable	APHA 3125 (modified) subcontracted ELS	0.003	g/m3
Magnesium (Mg) total recoverable	APHA 3125 (modified) subcontracted ELS	11.4	g/m3
Manganese (Mn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.001	g/m3
Molybdenum (Mo) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Sodium (Na) total recoverable	APHA 3125 (modified) subcontracted ELS	16.3	g/m3
Nickel (Ni) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Lead (Pb) total recoverable	APHA 3125 (modified) subcontracted ELS	0.007	g/m3
Strontium (Sr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.492	g/m3
Thallium (Tl) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Titanium (Ti) total recoverable	APHA 3125 (modified) subcontracted ELS	0.001	g/m3
Vanadium (V) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Zinc (Zn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.060	g/m3
Phosphorus	APHA 3120B subcontracted ELS	<0.01	g/m3
Phosphorus P) total recoverable	APHA 3120B subcontracted ELS	<0.025	g/m3

Analysis of Total and Dissolved Metals subcontracted to Eurofins ELS Ltd, 85 Port Rd, Seaview, Lower Hutt 5045 :

Report No. AR-22NW039420-01.

Note analyte Phosphorus is the dissolved phosphorus.

Date Start/End Analysis (26/10/2022 - 14/11/2022)

Reported: 14/11/2022 4:27:08PM

ANALYSIS REPORT

WP22-11185.002

Client:

Matakanui Gold Limited
PO Box 11

7842 Hokitika NEW ZEALAND
Attention:

Description:

Sample ID: MRC002 25/10/22

Received: 26/10/2022

Completed: 14/11/2022

Job Number: WP22-11185

Report Number: 0000023708

Order Reference: Matakanui Gold Water

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.0	pH unit
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	250	µS/cm
Total Dissolved Solids g/m3	APHA 2510 SGS Westport	170	g/m3
Chloride	APHA 4110 B	3.5	g/m3
Sulphate as SO4	APHA 4110 B	5.4	g/m3
Total Alkalinity as CaCO3	APHA 2320B	110	g/m3
Bicarbonate Alkalinity as HCO3	APHA 2320B	130	mg/l
Carbonate Alkalinity as CO3	APHA 2320B	<5	mg/l
Total Dissolved Solids Dried at 104°C	APHA 2540 C	170	mg/l
Sample density	In-house	0.998	g/cm3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.006	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.011	g/m3
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.26	g/m3
Bismuth (Bi) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	14.8	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.090	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.88	g/m3
Lithium (Li) dissolved	APHA 3125 subcontracted ELS	0.017	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	6.61	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0034	g/m3
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.0009	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	27.0	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0005	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	3.57	g/m3
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.094	g/m3
Aluminium (Al) total recoverable	APHA 3125 (modified) subcontracted ELS	0.545	g/m3
Arsenic (As) total recoverable	APHA 3125 (modified) subcontracted ELS	0.021	g/m3
Silver, (Ag) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Barium (Ba) total recoverable	APHA 3125 (modified) subcontracted ELS	0.308	g/m3
Bismuth (Bi) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m3
Calcium (Ca) total recoverable	APHA 3125 (modified) subcontracted ELS	14.4	g/m3
Cadmium (Cd) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Cobalt (Co) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m3
Chromium (Cr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.002	g/m3

Analysis	Method	Result	Unit
Copper (Cu) total recoverable	APHA 3125 (modified) subcontracted ELS	0.004	g/m3
Iron (Fe) total recoverable	APHA 3125 (modified) subcontracted ELS	2.0	g/m3
Mercury (Hg) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Potassium (K) total recoverable	APHA 3125 (modified) subcontracted ELS	2.1	g/m3
Lithium (Li) total recoverable	APHA 3125 (modified) subcontracted ELS	0.019	g/m3
Magnesium (Mg) total recoverable	APHA 3125 (modified) subcontracted ELS	6.7	g/m3
Manganese (Mn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.033	g/m3
Molybdenum (Mo) total recoverable	APHA 3125 (modified) subcontracted ELS	0.001	g/m3
Sodium (Na) total recoverable	APHA 3125 (modified) subcontracted ELS	27.9	g/m3
Nickel (Ni) total recoverable	APHA 3125 (modified) subcontracted ELS	0.001	g/m3
Lead (Pb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Strontium (Sr) total recoverable	APHA 3125 (modified) subcontracted ELS	3.66	g/m3
Thallium (Tl) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Titanium (Ti) total recoverable	APHA 3125 (modified) subcontracted ELS	0.016	g/m3
Vanadium (V) total recoverable	APHA 3125 (modified) subcontracted ELS	0.001	g/m3
Zinc (Zn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.135	g/m3
Phosphorus	APHA 3120B subcontracted ELS	<0.01	g/m3
Phosphorus (P) total recoverable	APHA 3120B subcontracted ELS	0.07	g/m3

Analysis of Total and Dissolved Metals subcontracted to Eurofins ELS Ltd, 85 Port Rd, Seaview, Lower Hutt 5045 :

Report No. AR-22NW039420-01.

Note analyte Phosphorus is the dissolved phosphorus.

Date Start/End Analysis (26/10/2022 - 14/11/2022)

Reported: 14/11/2022 4:27:08PM

ANALYSIS REPORT

WP22-11185.003

Client:

Matakanui Gold Limited
PO Box 11

7842 Hokitika NEW ZEALAND
Attention:

Description:

Sample ID: MDD015 25/10/22

Received: 26/10/2022

Completed: 14/11/2022

Job Number: WP22-11185

Report Number: 0000023708

Order Reference: Matakanui Gold Water

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.7	pH unit
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	410	µS/cm
Total Dissolved Solids g/m3	APHA 2510 SGS Westport	280	g/m3
Chloride	APHA 4110 B	9.9	g/m3
Sulphate as SO4	APHA 4110 B	17	g/m3
Total Alkalinity as CaCO3	APHA 2320B	200	g/m3
Bicarbonate Alkalinity as HCO3	APHA 2320B	240	mg/l
Carbonate Alkalinity as CO3	APHA 2320B	<5	mg/l
Total Dissolved Solids Dried at 104°C	APHA 2540 C	260	mg/l
Sample density	In-house	0.998	g/cm3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.015	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.038	g/m3
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.12	g/m3
Bismuth (Bi) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	17.6	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.030	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.42	g/m3
Lithium (Li) dissolved	APHA 3125 subcontracted ELS	0.046	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	15.7	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0050	g/m3
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.0005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	42.0	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	9.00	g/m3
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m3
Aluminium (Al) total recoverable	APHA 3125 (modified) subcontracted ELS	0.128	g/m3
Arsenic (As) total recoverable	APHA 3125 (modified) subcontracted ELS	0.039	g/m3
Silver, (Ag) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Barium (Ba) total recoverable	APHA 3125 (modified) subcontracted ELS	0.128	g/m3
Bismuth (Bi) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m3
Calcium (Ca) total recoverable	APHA 3125 (modified) subcontracted ELS	15.7	g/m3
Cadmium (Cd) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Cobalt (Co) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m3
Chromium (Cr) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3

Analysis	Method	Result	Unit
Copper (Cu) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m3
Iron (Fe) total recoverable	APHA 3125 (modified) subcontracted ELS	0.2	g/m3
Mercury (Hg) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Potassium (K) total recoverable	APHA 3125 (modified) subcontracted ELS	1.4	g/m3
Lithium (Li) total recoverable	APHA 3125 (modified) subcontracted ELS	0.049	g/m3
Magnesium (Mg) total recoverable	APHA 3125 (modified) subcontracted ELS	15.0	g/m3
Manganese (Mn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.009	g/m3
Molybdenum (Mo) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Sodium (Na) total recoverable	APHA 3125 (modified) subcontracted ELS	41.4	g/m3
Nickel (Ni) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Lead (Pb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Strontium (Sr) total recoverable	APHA 3125 (modified) subcontracted ELS	8.75	g/m3
Thallium (Tl) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Titanium (Ti) total recoverable	APHA 3125 (modified) subcontracted ELS	0.006	g/m3
Vanadium (V) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m3
Zinc (Zn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.009	g/m3
Phosphorus	APHA 3120B subcontracted ELS	<0.01	g/m3
Phosphorus (P) total recoverable	APHA 3120B subcontracted ELS	<0.025	g/m3

Analysis of Total and Dissolved Metals subcontracted to Eurofins ELS Ltd, 85 Port Rd, Seaview, Lower Hutt 5045 :

Report No. AR-22NW039420-01.

Note analyte Phosphorus is the dissolved phosphorus.

Date Start/End Analysis (26/10/2022 - 14/11/2022)

Reported: 14/11/2022 4:27:08PM



Signed and dated on 14-Nov-2022

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ANALYSIS REPORT

WP23-11797.001

Client:

Matakanui Gold Limited
PO Box 11

7842 Hokitika NEW ZEALAND
Attention:

Description: Matakanui Gold
Sample ID: RS1

Received: 23/03/2023

Completed: 11/04/2023

Job Number: WP23-11797

Report Number: 0000024791

Order Reference: Matakanui Gold Water

Analysis	Method	Result	Unit
Date and time sampled		23/3/23 12:01	
Date & Time Received		24/3/23 7:00	
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.1	pH unit
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	210	µS/cm
Acidity to pH 4.0	APHA 2310	<5	mg/l
Acidity to pH 5.0	APHA 2310	<5	mg/l
Acidity to pH 7.0	APHA 2310	<5	mg/l
Turbidity	APHA 2130 B (modified) SGS Westport	750	NTU
Total Alkalinity as CaCO ₃	APHA 2320B	110	g/m3
Bromide*	APHA 4110 B	<0.01	g/m3
Chloride*	APHA 4110 B	2.4	g/m3
Fluoride*	APHA 4110 B	0.19	g/m3
Nitrate, NO ₃ *	APHA 4110 B	0.13	g/m3
Nitrite, NO ₂ *	APHA 4110 B	<0.01	g/m3
Sulphate as SO ₄ *	APHA 4110 B	11	g/m3
Total Dissolved Solids Dried at 104°C*	APHA 2540 C	130	mg/l
Total suspended solids	APHA2540 D modified SGS Westport	1200	mg/l
Total Suspended Solids Dried at 103-105°C - use minimum 500mL	APHA2540 D modified SGS Westport	1200	g/m3
Aluminium (Al) dissolved*	APHA 3125 subcontracted ELS	0.004	g/m3
Antimony*	APHA 3125 subcontracted ELS	<0.001	g/m3
Arsenic (As) dissolved*	APHA 3125 subcontracted ELS	0.035	g/m3
Barium (Ba) dissolved*	APHA 3125 subcontracted ELS	0.011	g/m3
Beryllium (Be) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Bismuth (Bi) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved*	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved*	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved*	APHA 3125 subcontracted ELS	31.4	g/m3
Chromium (Cr) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved*	APHA 3125 subcontracted ELS	0.23	g/m3
Lead (Pb) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Lithium (Li) dissolved*	APHA 3125 subcontracted ELS	0.003	g/m3
Magnesium (Mg) dissolved*	APHA 3125 subcontracted ELS	5.54	g/m3
Manganese (Mn) dissolved*	APHA 3125 subcontracted ELS	0.0146	g/m3
Mercury (Hg) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved*	APHA 3125 subcontracted ELS	1.17	g/m3
Selenium (Se) dissolved*	APHA 3125 subcontracted ELS	<0.005	g/m3
Silver (Ag) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved*	APHA 3125 subcontracted ELS	6.46	g/m3
Strontium (Sr) dissolved*	APHA 3125 subcontracted ELS	0.347	g/m3
Tin (Sn) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Thallium (Tl) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Titanium (Ti) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Uranium (U) dissolved*	APHA 3125 subcontracted ELS	<0.0002	g/m3
Vanadium (V) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved*	APHA 3125 subcontracted ELS	<0.002	g/m3

Analysis	Method	Result	Unit
Total Hardness*	APHA 3125 subcontracted ELS	100	mg/l CaCO ₃
Aluminium (Al) total recoverable	APHA 3125 (modified) subcontracted ELS	5.69	g/m ³
Antimony (Sb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Arsenic (As) total recoverable	APHA 3125 (modified) subcontracted ELS	3.19	g/m ³
Barium (Ba) total recoverable	APHA 3125 (modified) subcontracted ELS	0.245	g/m ³
Beryllium (Be) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Bismuth (Bi) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Boron (B) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.05	g/m ³
Cadmium (Cd) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Calcium (Ca) total recoverable	APHA 3125 (modified) subcontracted ELS	33.9	g/m ³
Chromium (Cr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.005	g/m ³
Cobalt (Co) total recoverable	APHA 3125 (modified) subcontracted ELS	0.009	g/m ³
Copper (Cu) total recoverable	APHA 3125 (modified) subcontracted ELS	0.008	g/m ³
Iron (Fe) total recoverable	APHA 3125 (modified) subcontracted ELS	76.9	g/m ³
Lead (Pb) total recoverable	APHA 3125 (modified) subcontracted ELS	0.006	g/m ³
Lithium (Li) total recoverable	APHA 3125 (modified) subcontracted ELS	0.010	g/m ³
Magnesium (Mg) total recoverable	APHA 3125 (modified) subcontracted ELS	6.2	g/m ³
Manganese (Mn) total recoverable	APHA 3125 (modified) subcontracted ELS	8.15	g/m ³
Mercury (Hg) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Molybdenum (Mo) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Nickel (Ni) total recoverable	APHA 3125 (modified) subcontracted ELS	0.006	g/m ³
Potassium (K) total recoverable	APHA 3125 (modified) subcontracted ELS	3.7	g/m ³
Selenium (Se) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Silver, (Ag) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Sodium (Na) total recoverable	APHA 3125 (modified) subcontracted ELS	5.6	g/m ³
Strontium (Sr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.569	g/m ³
Thallium (Tl) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Tin (Sn) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Titanium (Ti) total recoverable	APHA 3125 (modified) subcontracted ELS	0.115	g/m ³
Uranium (U) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Vanadium (V) total recoverable	APHA 3125 (modified) subcontracted ELS	0.008	g/m ³
Zinc (Zn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.022	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	4.68	g/m ³
Silicon (Si) total recoverable	APHA 3120B subcontracted ELS	13.8	g/m ³
Total Cyanide by distillation and colorimetric finish	APHA 4500-CN C,E subcontracted	<0.005	g/m ³
Ammonia nitrogen by CFA/FIA	APHA 4500 NH ₃ H online edition subcontracted ELS	<0.01	g/m ³

Analysis Report:
WP23-11797.001

Analysis	Method	Result	Unit
Total nitrogen in water	APHA 4500-NO3 I Subcontracted ELS	1.71	g/m3
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.861	g/m3
Dissolved Organic Carbon	APHA 5310 B Subcontracted	3.1	g/m3
Total Organic Carbon	APHA 5310 B Subcontracted	7.8	g/m3

* denotes test not IANZ accredited.

Analysis of Total Phosphorus, Total Nitrogen, Ammonia Nitrogen, TOC,DOC,Total and Dissolved Metals subcontracted to IANZ

Accredited Laboratory Eurofins ELS Ltd, 85 Port Rd, Seaview, Lower Hutt 5045 :

Report No. AR-23-NW-015529-01

Note: SC2 changed to SC3 via email Hamish 23/3/23 & no collection of Jean Creek as no water.

Cyanide analysed without NaOH preservation and without repeat samples as request for cyanide added after analysis for samples had been sent to third party laboratory

Date Start/End Analysis (23/3/2023 - 11/4/2023)

Reported: 11/04/2023 4:20:09PM

ANALYSIS REPORT

WP23-11797.002

Client:

Matakanui Gold Limited
PO Box 11

7842 Hokitika NEW ZEALAND
Attention:

Description: Matakanui Gold
Sample ID: RS2

Received: 23/03/2023

Completed: 11/04/2023

Job Number: WP23-11797

Report Number: 0000024791

Order Reference: Matakanui Gold Water

Analysis	Method	Result	Unit
Date and time sampled		23/3/23 12:30	
Date & Time Received		24/3/23 7:00	
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.9	pH unit
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	150	µS/cm
Acidity to pH 4.0	APHA 2310	<5	mg/l
Acidity to pH 5.0	APHA 2310	<5	mg/l
Acidity to pH 7.0	APHA 2310	<5	mg/l
Turbidity	APHA 2130 B (modified) SGS Westport	5.9	NTU
Total Alkalinity as CaCO ₃	APHA 2320B	68	g/m3
Bromide*	APHA 4110 B	0.06	g/m3
Chloride*	APHA 4110 B	2.0	g/m3
Fluoride*	APHA 4110 B	0.25	g/m3
Nitrate, NO ₃ *	APHA 4110 B	<0.02	g/m3
Nitrite, NO ₂ *	APHA 4110 B	<0.01	g/m3
Sulphate as SO ₄ *	APHA 4110 B	6.3	g/m3
Total Dissolved Solids Dried at 104°C*	APHA 2540 C	120	mg/l
Total suspended solids	APHA2540 D modified SGS Westport	13	mg/l
Total Suspended Solids Dried at 103-105°C - use minimum 500mL	APHA2540 D modified SGS Westport	13	g/m3
Aluminium (Al) dissolved*	APHA 3125 subcontracted ELS	0.011	g/m3
Antimony*	APHA 3125 subcontracted ELS	<0.001	g/m3
Arsenic (As) dissolved*	APHA 3125 subcontracted ELS	0.004	g/m3
Barium (Ba) dissolved*	APHA 3125 subcontracted ELS	0.009	g/m3
Beryllium (Be) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Bismuth (Bi) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved*	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved*	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved*	APHA 3125 subcontracted ELS	20.6	g/m3
Chromium (Cr) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved*	APHA 3125 subcontracted ELS	0.03	g/m3
Lead (Pb) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Lithium (Li) dissolved*	APHA 3125 subcontracted ELS	0.003	g/m3
Magnesium (Mg) dissolved*	APHA 3125 subcontracted ELS	3.83	g/m3
Manganese (Mn) dissolved*	APHA 3125 subcontracted ELS	0.0009	g/m3
Mercury (Hg) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved*	APHA 3125 subcontracted ELS	0.65	g/m3
Selenium (Se) dissolved*	APHA 3125 subcontracted ELS	<0.005	g/m3
Silver (Ag) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved*	APHA 3125 subcontracted ELS	5.05	g/m3
Strontium (Sr) dissolved*	APHA 3125 subcontracted ELS	0.247	g/m3
Tin (Sn) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Thallium (Tl) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Titanium (Ti) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Uranium (U) dissolved*	APHA 3125 subcontracted ELS	0.0002	g/m3
Vanadium (V) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved*	APHA 3125 subcontracted ELS	<0.002	g/m3

Analysis	Method	Result	Unit
Total Hardness*	APHA 3125 subcontracted ELS	67	mg/l CaCO ₃
Aluminium (Al) total recoverable	APHA 3125 (modified) subcontracted ELS	0.304	g/m ³
Antimony (Sb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Arsenic (As) total recoverable	APHA 3125 (modified) subcontracted ELS	0.006	g/m ³
Barium (Ba) total recoverable	APHA 3125 (modified) subcontracted ELS	0.015	g/m ³
Beryllium (Be) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Bismuth (Bi) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Boron (B) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.05	g/m ³
Cadmium (Cd) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Calcium (Ca) total recoverable	APHA 3125 (modified) subcontracted ELS	21.2	g/m ³
Chromium (Cr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.002	g/m ³
Cobalt (Co) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Copper (Cu) total recoverable	APHA 3125 (modified) subcontracted ELS	0.005	g/m ³
Iron (Fe) total recoverable	APHA 3125 (modified) subcontracted ELS	0.4	g/m ³
Lead (Pb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Lithium (Li) total recoverable	APHA 3125 (modified) subcontracted ELS	0.010	g/m ³
Magnesium (Mg) total recoverable	APHA 3125 (modified) subcontracted ELS	3.7	g/m ³
Manganese (Mn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.012	g/m ³
Mercury (Hg) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Molybdenum (Mo) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Nickel (Ni) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Potassium (K) total recoverable	APHA 3125 (modified) subcontracted ELS	0.9	g/m ³
Selenium (Se) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Silver, (Ag) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Sodium (Na) total recoverable	APHA 3125 (modified) subcontracted ELS	4.9	g/m ³
Strontium (Sr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.260	g/m ³
Thallium (Tl) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Tin (Sn) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Titanium (Ti) total recoverable	APHA 3125 (modified) subcontracted ELS	0.016	g/m ³
Uranium (U) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Vanadium (V) total recoverable	APHA 3125 (modified) subcontracted ELS	0.006	g/m ³
Zinc (Zn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.006	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	4.91	g/m ³
Silicon (Si) total recoverable	APHA 3120B subcontracted ELS	4.79	g/m ³
Total Cyanide by distillation and colorimetric finish	APHA 4500-CN C,E subcontracted	<0.005	g/m ³
Ammonia nitrogen by CFA/FIA	APHA 4500 NH ₃ H online edition subcontracted ELS	<0.01	g/m ³

Analysis Report:
WP23-11797.002

Analysis	Method	Result	Unit
Total nitrogen in water	APHA 4500-NO3 I Subcontracted ELS	0.26	g/m3
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.024	g/m3
Dissolved Organic Carbon	APHA 5310 B Subcontracted	2.7	g/m3
Total Organic Carbon	APHA 5310 B Subcontracted	3.0	g/m3

* denotes test not IANZ accredited.

Analysis of Total Phosphorus, Total Nitrogen, Ammonia Nitrogen, TOC,DOC,Total and Dissolved Metals subcontracted to IANZ

Accredited Laboratory Eurofins ELS Ltd, 85 Port Rd, Seaview, Lower Hutt 5045 :

Report No. AR-23-NW-015529-01

Note: SC2 changed to SC3 via email Hamish 23/3/23 & no collection of Jean Creek as no water.

Cyanide analysed without NaOH preservation and without repeat samples as request for cyanide added after analysis for samples had been sent to third party laboratory

Date Start/End Analysis (23/3/2023 - 11/4/2023)

Reported: 11/04/2023 4:20:09PM

ANALYSIS REPORT

WP23-11797.004

Client:

Matakanui Gold Limited
PO Box 11

7842 Hokitika NEW ZEALAND
Attention:

Description: Matakanui Gold
Sample ID: SC1

Received: 23/03/2023

Completed: 11/04/2023

Job Number: WP23-11797

Report Number: 0000024791

Order Reference: Matakanui Gold Water

Analysis	Method	Result	Unit
Date and time sampled		23/3/23 13:20	
Date & Time Received		24/3/23 7:00	
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	570	µS/cm
Acidity to pH 4.0	APHA 2310	<5	mg/l
Acidity to pH 5.0	APHA 2310	<5	mg/l
Acidity to pH 7.0	APHA 2310	<5	mg/l
Turbidity	APHA 2130 B (modified) SGS Westport	1.1	NTU
Total Alkalinity as CaCO ₃	APHA 2320B	250	g/m3
Bromide*	APHA 4110 B	0.23	g/m3
Chloride*	APHA 4110 B	8.1	g/m3
Fluoride*	APHA 4110 B	0.23	g/m3
Nitrate, NO ₃ *	APHA 4110 B	<0.02	g/m3
Nitrite, NO ₂ *	APHA 4110 B	<0.01	g/m3
Sulphate as SO ₄ *	APHA 4110 B	51	g/m3
Total Dissolved Solids Dried at 104°C*	APHA 2540 C	380	mg/l
Total suspended solids	APHA2540 D modified SGS Westport	<3	mg/l
Total Suspended Solids Dried at 103-105°C - use minimum 500mL	APHA2540 D modified SGS Westport	<3	g/m3
Aluminium (Al) dissolved*	APHA 3125 subcontracted ELS	0.004	g/m3
Antimony*	APHA 3125 subcontracted ELS	<0.001	g/m3
Arsenic (As) dissolved*	APHA 3125 subcontracted ELS	0.002	g/m3
Barium (Ba) dissolved*	APHA 3125 subcontracted ELS	0.039	g/m3
Beryllium (Be) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Bismuth (Bi) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved*	APHA 3125 subcontracted ELS	0.06	g/m3
Cadmium (Cd) dissolved*	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved*	APHA 3125 subcontracted ELS	72.1	g/m3
Chromium (Cr) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved*	APHA 3125 subcontracted ELS	<0.01	g/m3
Lead (Pb) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Lithium (Li) dissolved*	APHA 3125 subcontracted ELS	0.013	g/m3
Magnesium (Mg) dissolved*	APHA 3125 subcontracted ELS	23.8	g/m3
Manganese (Mn) dissolved*	APHA 3125 subcontracted ELS	0.0009	g/m3
Mercury (Hg) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved*	APHA 3125 subcontracted ELS	0.0005	g/m3
Nickel (Ni) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved*	APHA 3125 subcontracted ELS	2.88	g/m3
Selenium (Se) dissolved*	APHA 3125 subcontracted ELS	<0.005	g/m3
Silver (Ag) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved*	APHA 3125 subcontracted ELS	13.8	g/m3
Strontium (Sr) dissolved*	APHA 3125 subcontracted ELS	0.975	g/m3
Tin (Sn) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Thallium (Tl) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Titanium (Ti) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Uranium (U) dissolved*	APHA 3125 subcontracted ELS	0.0055	g/m3
Vanadium (V) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved*	APHA 3125 subcontracted ELS	<0.002	g/m3

Analysis	Method	Result	Unit
Total Hardness*	APHA 3125 subcontracted ELS	280	mg/l CaCO ₃
Aluminium (Al) total recoverable	APHA 3125 (modified) subcontracted ELS	0.015	g/m ³
Antimony (Sb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Arsenic (As) total recoverable	APHA 3125 (modified) subcontracted ELS	0.003	g/m ³
Barium (Ba) total recoverable	APHA 3125 (modified) subcontracted ELS	0.049	g/m ³
Beryllium (Be) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Bismuth (Bi) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Boron (B) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.05	g/m ³
Cadmium (Cd) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Calcium (Ca) total recoverable	APHA 3125 (modified) subcontracted ELS	78.2	g/m ³
Chromium (Cr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.001	g/m ³
Cobalt (Co) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Copper (Cu) total recoverable	APHA 3125 (modified) subcontracted ELS	0.005	g/m ³
Iron (Fe) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.1	g/m ³
Lead (Pb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Lithium (Li) total recoverable	APHA 3125 (modified) subcontracted ELS	0.019	g/m ³
Magnesium (Mg) total recoverable	APHA 3125 (modified) subcontracted ELS	26.5	g/m ³
Manganese (Mn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.002	g/m ³
Mercury (Hg) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Molybdenum (Mo) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Nickel (Ni) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Potassium (K) total recoverable	APHA 3125 (modified) subcontracted ELS	3.2	g/m ³
Selenium (Se) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Silver, (Ag) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Sodium (Na) total recoverable	APHA 3125 (modified) subcontracted ELS	15.3	g/m ³
Strontium (Sr) total recoverable	APHA 3125 (modified) subcontracted ELS	1.34	g/m ³
Thallium (Tl) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Tin (Sn) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Titanium (Ti) total recoverable	APHA 3125 (modified) subcontracted ELS	0.007	g/m ³
Uranium (U) total recoverable	APHA 3125 (modified) subcontracted ELS	0.006	g/m ³
Vanadium (V) total recoverable	APHA 3125 (modified) subcontracted ELS	0.005	g/m ³
Zinc (Zn) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	4.77	g/m ³
Silicon (Si) total recoverable	APHA 3120B subcontracted ELS	4.23	g/m ³
Total Cyanide by distillation and colorimetric finish	APHA 4500-CN C,E subcontracted	<0.005	g/m ³
Ammonia nitrogen by CFA/FIA	APHA 4500 NH ₃ H online edition subcontracted ELS	0.02	g/m ³

Analysis Report:
WP23-11797.004

Analysis	Method	Result	Unit
Total nitrogen in water	APHA 4500-NO3 I Subcontracted ELS	0.22	g/m3
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.019	g/m3
Dissolved Organic Carbon	APHA 5310 B Subcontracted	2.7	g/m3
Total Organic Carbon	APHA 5310 B Subcontracted	2.8	g/m3

* denotes test not IANZ accredited.

Analysis of Total Phosphorus, Total Nitrogen, Ammonia Nitrogen, TOC,DOC,Total and Dissolved Metals subcontracted to IANZ

Accredited Laboratory Eurofins ELS Ltd, 85 Port Rd, Seaview, Lower Hutt 5045 :

Report No. AR-23-NW-015529-01

Note: SC2 changed to SC3 via email Hamish 23/3/23 & no collection of Jean Creek as no water.

Cyanide analysed without NaOH preservation and without repeat samples as request for cyanide added after analysis for samples had been sent to third party laboratory

Date Start/End Analysis (23/3/2023 - 11/4/2023)

Reported: 11/04/2023 4:20:09PM

ANALYSIS REPORT

WP23-11797.005

Client:

Matakanui Gold Limited
PO Box 11

7842 Hokitika NEW ZEALAND
Attention:

Description: Matakanui Gold
Sample ID: SC3

Received: 23/03/2023

Completed: 11/04/2023

Job Number: WP23-11797

Report Number: 0000024791

Order Reference: Matakanui Gold Water

Analysis	Method	Result	Unit
Date and time sampled		23/3/23 13:00	
Date & Time Received		24/3/23 7:00	
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	350	µS/cm
Acidity to pH 4.0	APHA 2310	<5	mg/l
Acidity to pH 5.0	APHA 2310	<5	mg/l
Acidity to pH 7.0	APHA 2310	<5	mg/l
Turbidity	APHA 2130 B (modified) SGS Westport	1.4	NTU
Total Alkalinity as CaCO ₃	APHA 2320B	160	g/m3
Bromide*	APHA 4110 B	<0.01	g/m3
Chloride*	APHA 4110 B	3.5	g/m3
Fluoride*	APHA 4110 B	0.29	g/m3
Nitrate, NO ₃ *	APHA 4110 B	0.30	g/m3
Nitrite, NO ₂ *	APHA 4110 B	<0.02	g/m3
Sulphate as SO ₄ *	APHA 4110 B	16	g/m3
Total Dissolved Solids Dried at 104°C*	APHA 2540 C	200	mg/l
Total suspended solids	APHA2540 D modified SGS Westport	3	mg/l
Total Suspended Solids Dried at 103-105°C - use minimum 500mL	APHA2540 D modified SGS Westport	3	g/m3
Aluminium (Al) dissolved*	APHA 3125 subcontracted ELS	0.005	g/m3
Antimony*	APHA 3125 subcontracted ELS	<0.001	g/m3
Arsenic (As) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Barium (Ba) dissolved*	APHA 3125 subcontracted ELS	0.027	g/m3
Beryllium (Be) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Bismuth (Bi) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved*	APHA 3125 subcontracted ELS	0.04	g/m3
Cadmium (Cd) dissolved*	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved*	APHA 3125 subcontracted ELS	47.6	g/m3
Chromium (Cr) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved*	APHA 3125 subcontracted ELS	0.02	g/m3
Lead (Pb) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Lithium (Li) dissolved*	APHA 3125 subcontracted ELS	0.006	g/m3
Magnesium (Mg) dissolved*	APHA 3125 subcontracted ELS	11.2	g/m3
Manganese (Mn) dissolved*	APHA 3125 subcontracted ELS	0.0034	g/m3
Mercury (Hg) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved*	APHA 3125 subcontracted ELS	1.50	g/m3
Selenium (Se) dissolved*	APHA 3125 subcontracted ELS	<0.005	g/m3
Silver (Ag) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved*	APHA 3125 subcontracted ELS	7.70	g/m3
Strontium (Sr) dissolved*	APHA 3125 subcontracted ELS	0.682	g/m3
Tin (Sn) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Thallium (Tl) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Titanium (Ti) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Uranium (U) dissolved*	APHA 3125 subcontracted ELS	0.0021	g/m3
Vanadium (V) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved*	APHA 3125 subcontracted ELS	<0.002	g/m3

Analysis	Method	Result	Unit
Total Hardness*	APHA 3125 subcontracted ELS	160	mg/l CaCO ₃
Aluminium (Al) total recoverable	APHA 3125 (modified) subcontracted ELS	0.063	g/m ³
Antimony (Sb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Arsenic (As) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Barium (Ba) total recoverable	APHA 3125 (modified) subcontracted ELS	0.035	g/m ³
Beryllium (Be) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Bismuth (Bi) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Boron (B) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.05	g/m ³
Cadmium (Cd) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Calcium (Ca) total recoverable	APHA 3125 (modified) subcontracted ELS	47.8	g/m ³
Chromium (Cr) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Cobalt (Co) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Copper (Cu) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Iron (Fe) total recoverable	APHA 3125 (modified) subcontracted ELS	0.1	g/m ³
Lead (Pb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Lithium (Li) total recoverable	APHA 3125 (modified) subcontracted ELS	0.005	g/m ³
Magnesium (Mg) total recoverable	APHA 3125 (modified) subcontracted ELS	10.4	g/m ³
Manganese (Mn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.011	g/m ³
Mercury (Hg) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Molybdenum (Mo) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Nickel (Ni) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Potassium (K) total recoverable	APHA 3125 (modified) subcontracted ELS	1.7	g/m ³
Selenium (Se) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Silver, (Ag) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Sodium (Na) total recoverable	APHA 3125 (modified) subcontracted ELS	7.0	g/m ³
Strontium (Sr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.907	g/m ³
Thallium (Tl) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Tin (Sn) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Titanium (Ti) total recoverable	APHA 3125 (modified) subcontracted ELS	0.002	g/m ³
Uranium (U) total recoverable	APHA 3125 (modified) subcontracted ELS	0.002	g/m ³
Vanadium (V) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Zinc (Zn) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	4.22	g/m ³
Silicon (Si) total recoverable	APHA 3120B subcontracted ELS	3.60	g/m ³
Total Cyanide by distillation and colorimetric finish	APHA 4500-CN C,E subcontracted	<0.005	g/m ³
Ammonia nitrogen by CFA/FIA	APHA 4500 NH ₃ H online edition subcontracted ELS	<0.01	g/m ³

Analysis Report:
WP23-11797.005

Analysis	Method	Result	Unit
Total nitrogen in water	APHA 4500-NO3 I Subcontracted ELS	0.55	g/m3
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.016	g/m3
Dissolved Organic Carbon	APHA 5310 B Subcontracted	2.7	g/m3
Total Organic Carbon	APHA 5310 B Subcontracted	2.7	g/m3

* denotes test not IANZ accredited.

Analysis of Total Phosphorus, Total Nitrogen, Ammonia Nitrogen, TOC,DOC,Total and Dissolved Metals subcontracted to IANZ

Accredited Laboratory Eurofins ELS Ltd, 85 Port Rd, Seaview, Lower Hutt 5045 :

Report No. AR-23-NW-015529-01

Note: SC2 changed to SC3 via email Hamish 23/3/23 & no collection of Jean Creek as no water.

Cyanide analysed without NaOH preservation and without repeat samples as request for cyanide added after analysis for samples had been sent to third party laboratory

Date Start/End Analysis (23/3/2023 - 11/4/2023)

Reported: 11/04/2023 4:20:09PM

ANALYSIS REPORT

WP23-11797.006

Client:

Matakanui Gold Limited
PO Box 11

7842 Hokitika NEW ZEALAND
Attention:

Description: Matakanui Gold
Sample ID: RSA1

Received: 23/03/2023

Completed: 11/04/2023

Job Number: WP23-11797

Report Number: 0000024791

Order Reference: Matakanui Gold Water

Analysis	Method	Result	Unit
Date and time sampled		23/3/23 12:15	
Date & Time Received		24/3/23 7:00	
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	270	µS/cm
Acidity to pH 4.0	APHA 2310	<5	mg/l
Acidity to pH 5.0	APHA 2310	<5	mg/l
Acidity to pH 7.0	APHA 2310	<5	mg/l
Turbidity	APHA 2130 B (modified) SGS Westport	10	NTU
Total Alkalinity as CaCO ₃	APHA 2320B	140	g/m3
Bromide*	APHA 4110 B	<0.01	g/m3
Chloride*	APHA 4110 B	2.6	g/m3
Fluoride*	APHA 4110 B	0.24	g/m3
Nitrate, NO ₃ *	APHA 4110 B	<0.02	g/m3
Nitrite, NO ₂ *	APHA 4110 B	<0.01	g/m3
Sulphate as SO ₄ *	APHA 4110 B	4.3	g/m3
Total Dissolved Solids Dried at 104°C*	APHA 2540 C	200	mg/l
Total suspended solids	APHA2540 D modified SGS Westport	87	mg/l
Total Suspended Solids Dried at 103-105°C - use minimum 500mL	APHA2540 D modified SGS Westport	87	g/m3
Aluminium (Al) dissolved*	APHA 3125 subcontracted ELS	<0.002	g/m3
Antimony*	APHA 3125 subcontracted ELS	<0.001	g/m3
Arsenic (As) dissolved*	APHA 3125 subcontracted ELS	0.047	g/m3
Barium (Ba) dissolved*	APHA 3125 subcontracted ELS	0.017	g/m3
Beryllium (Be) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Bismuth (Bi) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved*	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved*	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved*	APHA 3125 subcontracted ELS	45.0	g/m3
Chromium (Cr) dissolved*	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved*	APHA 3125 subcontracted ELS	0.06	g/m3
Lead (Pb) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Lithium (Li) dissolved*	APHA 3125 subcontracted ELS	0.004	g/m3
Magnesium (Mg) dissolved*	APHA 3125 subcontracted ELS	7.49	g/m3
Manganese (Mn) dissolved*	APHA 3125 subcontracted ELS	0.0325	g/m3
Mercury (Hg) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved*	APHA 3125 subcontracted ELS	1.23	g/m3
Selenium (Se) dissolved*	APHA 3125 subcontracted ELS	<0.005	g/m3
Silver (Ag) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved*	APHA 3125 subcontracted ELS	7.72	g/m3
Strontium (Sr) dissolved*	APHA 3125 subcontracted ELS	0.503	g/m3
Tin (Sn) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Thallium (Tl) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Titanium (Ti) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Uranium (U) dissolved*	APHA 3125 subcontracted ELS	<0.0002	g/m3
Vanadium (V) dissolved*	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved*	APHA 3125 subcontracted ELS	<0.002	g/m3

Analysis	Method	Result	Unit
Total Hardness*	APHA 3125 subcontracted ELS	140	mg/l CaCO ₃
Aluminium (Al) total recoverable	APHA 3125 (modified) subcontracted ELS	0.046	g/m ³
Antimony (Sb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Arsenic (As) total recoverable	APHA 3125 (modified) subcontracted ELS	0.122	g/m ³
Barium (Ba) total recoverable	APHA 3125 (modified) subcontracted ELS	0.022	g/m ³
Beryllium (Be) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Bismuth (Bi) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Boron (B) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.05	g/m ³
Cadmium (Cd) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Calcium (Ca) total recoverable	APHA 3125 (modified) subcontracted ELS	41.4	g/m ³
Chromium (Cr) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Cobalt (Co) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Copper (Cu) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.002	g/m ³
Iron (Fe) total recoverable	APHA 3125 (modified) subcontracted ELS	0.8	g/m ³
Lead (Pb) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Lithium (Li) total recoverable	APHA 3125 (modified) subcontracted ELS	0.003	g/m ³
Magnesium (Mg) total recoverable	APHA 3125 (modified) subcontracted ELS	6.3	g/m ³
Manganese (Mn) total recoverable	APHA 3125 (modified) subcontracted ELS	0.050	g/m ³
Mercury (Hg) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Molybdenum (Mo) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Nickel (Ni) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Potassium (K) total recoverable	APHA 3125 (modified) subcontracted ELS	1.3	g/m ³
Selenium (Se) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Silver, (Ag) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Sodium (Na) total recoverable	APHA 3125 (modified) subcontracted ELS	6.4	g/m ³
Strontium (Sr) total recoverable	APHA 3125 (modified) subcontracted ELS	0.619	g/m ³
Thallium (Tl) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Tin (Sn) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Titanium (Ti) total recoverable	APHA 3125 (modified) subcontracted ELS	0.003	g/m ³
Uranium (U) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Vanadium (V) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.001	g/m ³
Zinc (Zn) total recoverable	APHA 3125 (modified) subcontracted ELS	<0.005	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	5.75	g/m ³
Silicon (Si) total recoverable	APHA 3120B subcontracted ELS	4.94	g/m ³
Total Cyanide by distillation and colorimetric finish	APHA 4500-CN C,E subcontracted	<0.005	g/m ³
Ammonia nitrogen by CFA/FIA	APHA 4500 NH ₃ H online edition subcontracted ELS	<0.01	g/m ³

Analysis Report:
WP23-11797.006

Analysis	Method	Result	Unit
Total nitrogen in water	APHA 4500-NO3 I Subcontracted ELS	0.34	g/m3
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.017	g/m3
Dissolved Organic Carbon	APHA 5310 B Subcontracted	4.1	g/m3
Total Organic Carbon	APHA 5310 B Subcontracted	4.3	g/m3

* denotes test not IANZ accredited.

Analysis of Total Phosphorus, Total Nitrogen, Ammonia Nitrogen, TOC, DOC, Total and Dissolved Metals subcontracted to IANZ

Accredited Laboratory Eurofins ELS Ltd, 85 Port Rd, Seaview, Lower Hutt 5045 :

Report No. AR-23-NW-015529-01

Note: SC2 changed to SC3 via email Hamish 23/3/23 & no collection of Jean Creek as no water.

Cyanide analysed without NaOH preservation and without repeat samples as request for cyanide added after analysis for samples had been sent to third party laboratory

Date Start/End Analysis (23/3/2023 - 11/4/2023)

Reported: 11/04/2023 4:20:09PM



Signed and dated on 11-Apr-2023

Julie HALLIGAN
Environmental Technician

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Food & Water Testing

ANALYTICAL REPORT

REPORT CODE	AR-23-NC-010499-01	REPORT DATE	11/05/2023

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders:	James Thornton	Order code:	EUNZCH-00134989
Contract:	Water (Dunedin) - Service Now	Purchase Order Number:	10104

SAMPLE CODE	817-2023-00038807

Client Reference: MDD015

Reception Date & Time: 28/04/2023 9:00

Analysis Start Date & Time: 28/04/2023 15:27

Sampled Date & Time 27/04/2023 11:30

Reception temperature: 9.7 °C

Analysis Ending Date: 11/05/2023

RESULTS

LOQ

②NW409 Acidity to pH 3.7

Acidity	<1	mg CaCO ₃ /l	1

③NW410 Acidity to pH 7.0

Acidity	<1	mg CaCO ₃ /l	1

②NW345 Acidity to pH 8.3

Acidity	<1	mg CaCO ₃ /l	1

②NW179 Ammonia Nitrogen

Ammoniacal nitrogen (N)	0.20	mg/l	0.01

②NW583 Arsenic - Soluble

Arsenic (As)	0.036	mg/l	0.001

②NW009 Bromide

Bromide	0.09	mg/l	0.02

②NW007 Chloride

Chloride (Cl)	10.1	mg/l	0.02

②NW023 Conductivity

Conductivity	42.1	mS/m	0.1

②NW679 Cyanide

Cyanide	<0.005	mg/l	0.005

③NW671 Dissolved (NP) Organic Carbon

Carbon	0.1	mg/l	0.1

②NW006 Fluoride

Fluoride	0.19	mg/l	0.02

②NW010 Nitrate-N

Nitrate-N	<0.01	mg/l	0.01

②NW008 Nitrite-N

Nitrite Nitrogen as N	<0.01	mg/l	0.01

Food & Water Testing

RESULTS		LOQ	
②NW195 pH			
pH	8.2		0.1
②NW472 Silica - Dissolved			
Sand/silica	18.8	mg/l	0.02
②NW098 Soluble Aluminium			
Aluminium	0.003	mg/l	0.002
②NW099 Soluble Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW100 Soluble Barium			
Barium (Ba)	0.124	mg/l	0.002
②NW101 Soluble Beryllium			
Beryllium (Be)	<0.001	mg/l	0.001
②NW102 Soluble Bismuth			
Bismuth (Bi)	<0.001	mg/l	0.001
②NW103 Soluble Boron			
Boron (B)	0.04	mg/l	0.03
②NW104 Soluble Cadmium			
Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105 Soluble Calcium			
Calcium (Ca)	30.2	mg/l	0.1
②NW106 Soluble Chromium			
Chromium (Cr)	<0.001	mg/l	0.001
②NW107 Soluble Cobalt			
Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108 Soluble Copper			
Copper (Cu)	<0.0005	mg/l	0.0005
②NW109 Soluble Iron			
Iron (Fe)	<0.01	mg/l	0.01
②NW110 Soluble Lead			
Lead (Pb)	<0.0005	mg/l	0.0005
②NW111 Soluble Lithium			
Lithium (Li)	0.049	mg/l	0.001
②NW112 Soluble Magnesium			
Magnesium (Mg)	16.7	mg/l	0.01
②NW113 Soluble Manganese			
Manganese (Mn)	0.0064	mg/l	0.0005
②NW114 Soluble Mercury			
Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115 Soluble Molybdenum			
Molybdenum (Mo)	0.0007	mg/l	0.0005
②NW116 Soluble Nickel			
Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117 Soluble Potassium			
Potassium (K)	1.58	mg/l	0.01

Food & Water Testing

RESULTS		LOQ	
②NW118	Soluble Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW119	Soluble Silver		
	Silver (Ag)	<0.0005	mg/l
			0.0005
②NW120	Soluble Sodium		
	Sodium (Na)	36.8	mg/l
			0.01
②NW121	Soluble Strontium		
	Strontium (Sr)	8.45	mg/l
			0.0005
②NW122	Soluble Tin		
	Tin (Sn)	<0.0005	mg/l
			0.0005
②NW123	Soluble Titanium		
	Titanium (Ti)	<0.0005	mg/l
			0.0005
②NW124	Soluble Vanadium		
	Vanadium (V)	<0.0005	mg/l
			0.0005
②NW125	Soluble Zinc		
	Zinc (Zn)	<0.002	mg/l
			0.002
②NW011	Sulphate		
	Sulphate	16.5	mg/l
			0.02
②NW206	Suspended Solids		
	Suspended Solids	10	mg/l
			3
②NW584	Thallium - Soluble		
	Thallium (Tl)	<0.0005	mg/l
			0.0005
②NW580	Thallium - Total		
	Thallium (Tl)	<0.001	mg/l
			0.001
②NW003	Total Alkalinity		
	Alkalinity total	195	mg CaCO ₃ /l
			1
②NW147	Total Aluminium		
	Aluminium	0.193	mg/l
			0.005
②NW148	Total Antimony		
	Antimony (Sb)	<0.002	mg/l
			0.002
②NW149	Total Arsenic		
	Arsenic (As)	0.035	mg/l
			0.002
②NW150	Total Barium		
	Barium (Ba)	0.146	mg/l
			0.005
②NW151	Total Beryllium		
	Beryllium (Be)	<0.005	mg/l
			0.005
②NW152	Total Bismuth		
	Bismuth (Bi)	<0.005	mg/l
			0.005
②NW153	Total Boron		
	Boron (B)	0.10	mg/l
			0.05
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001	mg/l
			0.001
②NW156	Total Calcium		
	Calcium (Ca)	31.5	mg/l
			0.1

Food & Water Testing

RESULTS		LOQ	
②NW157	Total Chromium		
	Chromium (Cr)	<0.001	mg/l
			0.001
②NW158	Total Cobalt		
	Cobalt (Co)	<0.002	mg/l
			0.002
②NW159	Total Copper		
	Copper (Cu)	<0.002	mg/l
			0.002
③NW339	Total Dissolved Solids		
	Total dissolved Solids	206	mg/l
			1
②NW030	Total Hardness		
	Hardness	7	mg CaCO3/l
			1
②NW160	Total Iron		
	Iron (Fe)	0.3	mg/l
			0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001	mg/l
			0.001
②NW162	Total Lithium		
	Lithium (Li)	0.055	mg/l
			0.001
②NW163	Total Magnesium		
	Magnesium (Mg)	17.7	mg/l
			0.1
②NW164	Total Manganese		
	Manganese (Mn)	0.009	mg/l
			0.001
②NW165	Total Mercury		
	Mercury (Hg)	<0.001	mg/l
			0.001
②NW166	Total Molybdenum		
	Molybdenum (Mo)	<0.001	mg/l
			0.001
②NW167	Total Nickel		
	Nickel (Ni)	<0.001	mg/l
			0.001
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.150	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	0.1	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.010	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	1.4	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	7.43	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	43.3	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	8.97	mg/l
			0.002

Food & Water Testing

	RESULTS		LOQ
②NW173 Total Tin			
Tin (Sn)	<0.001	mg/l	0.001
②NW174 Total Titanium			
Titanium (Ti)	0.004	mg/l	0.001
②NW176 Total Vanadium			
Vanadium (V)	<0.001	mg/l	0.001
②NW177 Total Zinc			
Zinc (Zn)	<0.005	mg/l	0.005
②NW212 Turbidity			
Turbidity	0.44	NTU	0.01
②NW585 Uranium - Soluble			
Uranium (U)	0.0012	mg/l	0.0002
②NW581 Uranium - Total			
Uranium (U)	0.001	mg/l	0.001

SAMPLE CODE 817-2023-00038808

Client Reference: RSB

Reception Date & Time: 28/04/2023 9:00

Reception temperature: 9.7 °C

Analysis Start Date & Time: 28/04/2023 15:27

Analysis Ending Date: 11/05/2023

Sampled Date & Time 27/04/2023 13:30

	RESULTS		LOQ
②NW584 Thallium - Soluble			
Thallium (Tl)	<0.0005	mg/l	0.0005
②NW580 Thallium - Total			
Thallium (Tl)	<0.001	mg/l	0.001
②NW147 Total Aluminium			
Aluminium	1.17	mg/l	0.005
②NW148 Total Antimony			
Antimony (Sb)	<0.002	mg/l	0.002
②NW149 Total Arsenic			
Arsenic (As)	5.29	mg/l	0.002
②NW150 Total Barium			
Barium (Ba)	0.130	mg/l	0.005
②NW151 Total Beryllium			
Beryllium (Be)	<0.005	mg/l	0.005
②NW152 Total Bismuth			
Bismuth (Bi)	<0.005	mg/l	0.005
②NW153 Total Boron			
Boron (B)	0.05	mg/l	0.05
②NW154 Total Cadmium			
Cadmium (Cd)	<0.001	mg/l	0.001
②NW156 Total Calcium			
Calcium (Ca)	29.6	mg/l	0.1
②NW157 Total Chromium			

Food & Water Testing

	RESULTS		LOQ
②NW157 Total Chromium			
Chromium (Cr)	<0.001	mg/l	0.001
②NW158 Total Cobalt			
Cobalt (Co)	0.006	mg/l	0.002
②NW159 Total Copper			
Copper (Cu)	0.002	mg/l	0.002
②NW160 Total Iron			
Iron (Fe)	86.5	mg/l	0.1
②NW161 Total Lead			
Lead (Pb)	0.003	mg/l	0.001
②NW162 Total Lithium			
Lithium (Li)	0.003	mg/l	0.001
②NW163 Total Magnesium			
Magnesium (Mg)	5.3	mg/l	0.1
②NW164 Total Manganese			
Manganese (Mn)	4.40	mg/l	0.001
②NW165 Total Mercury			
Mercury (Hg)	<0.001	mg/l	0.001
②NW166 Total Molybdenum			
Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167 Total Nickel			
Nickel (Ni)	0.004	mg/l	0.001
②NW168 Total Potassium			
Potassium (K)	2.7	mg/l	0.1
②NW169 Total Selenium			
Selenium (Se)	<0.005	mg/l	0.005
②NW143 Total Silicon			
Silicon (Si)	6.49	mg/l	0.03
②NW170 Total Silver			
Silver (Ag)	<0.001	mg/l	0.001
②NW171 Total Sodium			
Sodium (Na)	7.0	mg/l	0.1
②NW172 Total Strontium			
Strontium (Sr)	0.414	mg/l	0.002
②NW173 Total Tin			
Tin (Sn)	<0.001	mg/l	0.001
②NW174 Total Titanium			
Titanium (Ti)	0.020	mg/l	0.001
②NW176 Total Vanadium			
Vanadium (V)	0.002	mg/l	0.001
②NW177 Total Zinc			
Zinc (Zn)	0.079	mg/l	0.005
②NW585 Uranium - Soluble			
Uranium (U)	<0.0002	mg/l	0.0002

Food & Water Testing

RESULTS			LOQ
②NW581 Uranium - Total			
Uranium (U)	<0.001	mg/l	0.001
SAMPLE CODE 817-2023-00038809			
Client Reference:		RS03	
Reception Date & Time:		28/04/2023 9:00	Reception temperature: 9.7 °C
Analysis Start Date & Time:		28/04/2023 15:27	Analysis Ending Date: 11/05/2023
Sampled Date & Time		27/04/2023 14:53	
RESULTS			LOQ
②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO ₃ /l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO ₃ /l	1
②NW345 Acidity to pH 8.3			
Acidity	<1	mg CaCO ₃ /l	1
②NW179 Ammonia Nitrogen			
Ammoniacal nitrogen (N)	0.02	mg/l	0.01
②NW583 Arsenic - Soluble			
Arsenic (As)	0.009	mg/l	0.001
②NW009 Bromide			
Bromide	<0.02	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	1.47	mg/l	0.02
②NW023 Conductivity			
Conductivity	7.1	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	2.1	mg/l	0.1
②NW006 Fluoride			
Fluoride	0.07	mg/l	0.02
②NW010 Nitrate-N			
Nitrate-N	<0.01	mg/l	0.01
②NW008 Nitrite-N			
Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195 pH			
pH	7.4		0.1
②NW472 Silica - Dissolved			
Sand/silica	9.82	mg/l	0.02
②NW098 Soluble Aluminium			
Aluminium	0.006	mg/l	0.002
②NW099 Soluble Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW100 Soluble Barium			

Food & Water Testing

RESULTS			LOQ
②NW100 Soluble Barium			
Barium (Ba)	0.006	mg/l	0.002
②NW101 Soluble Beryllium			
Beryllium (Be)	<0.001	mg/l	0.001
②NW102 Soluble Bismuth			
Bismuth (Bi)	<0.001	mg/l	0.001
②NW103 Soluble Boron			
Boron (B)	<0.03	mg/l	0.03
②NW104 Soluble Cadmium			
Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105 Soluble Calcium			
Calcium (Ca)	8.7	mg/l	0.1
②NW106 Soluble Chromium			
Chromium (Cr)	<0.001	mg/l	0.001
②NW107 Soluble Cobalt			
Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108 Soluble Copper			
Copper (Cu)	<0.0005	mg/l	0.0005
②NW109 Soluble Iron			
Iron (Fe)	0.07	mg/l	0.01
②NW110 Soluble Lead			
Lead (Pb)	<0.0005	mg/l	0.0005
②NW111 Soluble Lithium			
Lithium (Li)	0.001	mg/l	0.001
②NW112 Soluble Magnesium			
Magnesium (Mg)	1.90	mg/l	0.01
②NW113 Soluble Manganese			
Manganese (Mn)	0.0170	mg/l	0.0005
②NW114 Soluble Mercury			
Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115 Soluble Molybdenum			
Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116 Soluble Nickel			
Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117 Soluble Potassium			
Potassium (K)	0.51	mg/l	0.01
②NW118 Soluble Selenium			
Selenium (Se)	<0.005	mg/l	0.005
②NW119 Soluble Silver			
Silver (Ag)	<0.0005	mg/l	0.0005
②NW120 Soluble Sodium			
Sodium (Na)	4.58	mg/l	0.01
②NW121 Soluble Strontium			
Strontium (Sr)	0.105	mg/l	0.0005

Food & Water Testing

RESULTS			LOQ
②NW122	Soluble Tin		
	Tin (Sn)	<0.0005	mg/l
			0.0005
②NW123	Soluble Titanium		
	Titanium (Ti)	<0.0005	mg/l
			0.0005
②NW124	Soluble Vanadium		
	Vanadium (V)	<0.0005	mg/l
			0.0005
②NW125	Soluble Zinc		
	Zinc (Zn)	<0.002	mg/l
			0.002
②NW011	Sulphate		
	Sulphate	1.07	mg/l
			0.02
②NW206	Suspended Solids		
	Suspended Solids	<6	mg/l
			3
②NW584	Thallium - Soluble		
	Thallium (Tl)	<0.0005	mg/l
			0.0005
②NW580	Thallium - Total		
	Thallium (Tl)	<0.001	mg/l
			0.001
②NW003	Total Alkalinity		
	Alkalinity total	36	mg CaCO3/l
			1
②NW147	Total Aluminium		
	Aluminium	0.012	mg/l
			0.005
②NW148	Total Antimony		
	Antimony (Sb)	<0.002	mg/l
			0.002
②NW149	Total Arsenic		
	Arsenic (As)	0.011	mg/l
			0.002
②NW150	Total Barium		
	Barium (Ba)	0.005	mg/l
			0.005
②NW151	Total Beryllium		
	Beryllium (Be)	<0.005	mg/l
			0.005
②NW152	Total Bismuth		
	Bismuth (Bi)	<0.005	mg/l
			0.005
②NW153	Total Boron		
	Boron (B)	<0.05	mg/l
			0.05
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001	mg/l
			0.001
②NW156	Total Calcium		
	Calcium (Ca)	8.2	mg/l
			0.1
②NW157	Total Chromium		
	Chromium (Cr)	<0.001	mg/l
			0.001
②NW158	Total Cobalt		
	Cobalt (Co)	<0.002	mg/l
			0.002
②NW159	Total Copper		
	Copper (Cu)	<0.002	mg/l
			0.002
③NW339	Total Dissolved Solids		
	Total dissolved Solids	35	mg/l
			1

Food & Water Testing

RESULTS			LOQ
②NW030	Total Hardness		
	Hardness	7	mg CaCO ₃ /l
②NW160	Total Iron		
	Iron (Fe)	0.1	mg/l
②NW161	Total Lead		
	Lead (Pb)	<0.001	mg/l
②NW162	Total Lithium		
	Lithium (Li)	0.001	mg/l
②NW163	Total Magnesium		
	Magnesium (Mg)	1.7	mg/l
②NW164	Total Manganese		
	Manganese (Mn)	0.019	mg/l
②NW165	Total Mercury		
	Mercury (Hg)	<0.001	mg/l
②NW166	Total Molybdenum		
	Molybdenum (Mo)	<0.001	mg/l
②NW167	Total Nickel		
	Nickel (Ni)	<0.001	mg/l
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.120	mg/l
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.2	mg/l
②NW194	Total Phosphorus		
	Total phosphorus	0.016	mg/l
②NW168	Total Potassium		
	Potassium (K)	0.5	mg/l
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
②NW143	Total Silicon		
	Silicon (Si)	3.64	mg/l
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
②NW171	Total Sodium		
	Sodium (Na)	3.0	mg/l
②NW172	Total Strontium		
	Strontium (Sr)	0.071	mg/l
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l

Food & Water Testing

	RESULTS		LOQ
②NW212 Turbidity			
Turbidity	0.31	NTU	0.01
②NW585 Uranium - Soluble			
Uranium (U)	<0.0002	mg/l	0.0002
②NW581 Uranium - Total			
Uranium (U)	<0.001	mg/l	0.001

LIST OF METHODS

NW003 Total Alkalinity: APHA Online Edition 2320 B	NW006 Fluoride: APHA Online Edition 4110 B
NW007 Chloride: APHA Online Edition 4110 B	NW008 Nitrite-N: APHA Online Edition 4110 B
NW009 Bromide: APHA Online Edition 4110 B	NW010 Nitrate-N: APHA Online Edition 4110 B
NW011 Sulphate: APHA Online Edition 4110 B	NW023 Conductivity: APHA Online Edition 2510 B
NW030 Total Hardness: APHA Online Edition 2340 B	NW098 Soluble Aluminium: APHA Online Edition 3125 B mod.
NW099 Soluble Antimony: APHA Online Edition 3125 B mod.	NW100 Soluble Barium: APHA Online Edition 3125 B mod.
NW101 Soluble Beryllium: APHA Online Edition 3125 B mod.	NW102 Soluble Bismuth: APHA Online Edition 3125 B mod.
NW103 Soluble Boron: APHA Online Edition 3125 B mod.	NW104 Soluble Cadmium: APHA Online Edition 3125 B mod.
NW105 Soluble Calcium: APHA Online Edition 3125 B mod.	NW106 Soluble Chromium: APHA Online Edition 3125 B mod.
NW107 Soluble Cobalt: APHA Online Edition 3125 B mod.	NW108 Soluble Copper: APHA Online Edition 3125 B mod.
NW109 Soluble Iron: APHA Online Edition 3125 B mod.	NW110 Soluble Lead: APHA Online Edition 3125 B mod.
NW111 Soluble Lithium: APHA Online Edition 3125 B mod.	NW112 Soluble Magnesium: APHA Online Edition 3125 B mod.
NW113 Soluble Manganese: APHA Online Edition 3125 B mod.	NW114 Soluble Mercury: APHA Online Edition 3125 B mod.
NW115 Soluble Molybdenum: APHA Online Edition 3125 B mod.	NW116 Soluble Nickel: APHA Online Edition 3125 B mod.
NW117 Soluble Potassium: APHA Online Edition 3125 B mod.	NW118 Soluble Selenium: APHA Online Edition 3125 B mod.
NW119 Soluble Silver: APHA Online Edition 3125 B mod.	NW120 Soluble Sodium: APHA Online Edition 3125 B mod.
NW121 Soluble Strontium: APHA Online Edition 3125 B mod.	NW122 Soluble Tin: APHA Online Edition 3125 B mod.
NW123 Soluble Titanium: APHA Online Edition 3125 B mod.	NW124 Soluble Vanadium: APHA Online Edition 3125 B mod.
NW125 Soluble Zinc: APHA Online Edition 3125 B mod.	NW143 Total Silicon: APHA Online Edition 3120 B mod.
NW147 Total Aluminium: APHA Online Edition 3125 B mod.	NW148 Total Antimony: APHA Online Edition 3125 B mod.
NW149 Total Arsenic: APHA Online Edition 3125 B mod.	NW150 Total Barium: APHA Online Edition 3125 B mod.
NW151 Total Beryllium: APHA Online Edition 3125 B mod.	NW152 Total Bismuth: APHA Online Edition 3125 B mod.
NW153 Total Boron: APHA Online Edition 3125 B mod.	NW154 Total Cadmium: APHA Online Edition 3125 B mod.
NW156 Total Calcium: APHA Online Edition 3125 B mod.	NW157 Total Chromium: APHA Online Edition 3125 B mod.
NW158 Total Cobalt: APHA Online Edition 3125 B mod.	NW159 Total Copper: APHA Online Edition 3125 B mod.
NW160 Total Iron: APHA Online Edition 3125 B mod.	NW161 Total Lead: APHA Online Edition 3125 B mod.
NW162 Total Lithium: APHA Online Edition 3125 B mod.	NW163 Total Magnesium: APHA Online Edition 3125 B mod.
NW164 Total Manganese: APHA Online Edition 3125 B mod.	NW165 Total Mercury: APHA Online Edition 3125 B mod.
NW166 Total Molybdenum: APHA Online Edition 3125 B mod.	NW167 Total Nickel: APHA Online Edition 3125 B mod.
NW168 Total Potassium: APHA Online Edition 3125 B mod.	NW169 Total Selenium: APHA Online Edition 3125 B mod.
NW170 Total Silver: APHA Online Edition 3125 B mod.	NW171 Total Sodium: APHA Online Edition 3125 B mod.
NW172 Total Strontium: APHA Online Edition 3125 B mod.	NW173 Total Tin: APHA Online Edition 3125 B mod.
NW174 Total Titanium: APHA Online Edition 3125 B mod.	NW176 Total Vanadium: APHA Online Edition 3125 B mod.
NW177 Total Zinc: APHA Online Edition 3125 B mod.	NW179 Ammonia Nitrogen: APHA Online Edition 4500-NH3 H
NW189 Total Nitrogen: APHA Online Edition 4500-NO3- I	

Food & Water Testing

NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B	NW195	pH: APHA Online Edition 4500-H B
NW206	Suspended Solids: APHA Online Edition 2540 D	NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B
NW212	Turbidity: APHA Online Edition 2130 B	NW339	Total Dissolved Solids: Internal Method, Gravimetry
NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO ₂)	NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)
NW410	Acidity to pH 7.0: Internal Method, Titrimetry	NW472	Silica - Dissolved: APHA Online Edition 3120 B mod.
NW580	Thallium - Total: APHA Online Edition 3125 B mod.	NW581	Uranium - Total: APHA Online Edition 3125 B mod.
NW583	Arsenic - Soluble: APHA Online Edition 3125 B mod.	NW584	Thallium - Soluble: APHA Online Edition 3125 B mod.
NW585	Uranium - Soluble: APHA Online Edition 3125 B mod.	NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C
NW679	Cyanide: APHA Online Edition 4500-CN C & E		

Signature



Tim Marcinowski Senior Laboratory Technician

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE **AR-23-NC-028806-02 #** REPORT DATE **16/12/2023**

This amended report supersedes Analytical Report number AR-23-NC-028806-01, dated 26/10/2023.

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders: James Thornton
Contract: Matakanui Gold Water Monitoring
Submission Reference: Oct-10 collection
Comments: Analysis start date and time corrected
Order code: EUNZCH-00153232
Purchase Order Number: NA

SAMPLE CODE **817-2023-00110960**

Client Reference: RAS_01

Sample described as: Rise and shine stream 1

Client described sample as: naturally occurring water

Reception Date & Time: 11/10/2023 9:00

Analysis Start Date & Time: 11/10/2023 14:54

Sampling date 2023-10-10

Reception temperature: 14.9 °C

Analysis Ending Date: 24/10/2023

RESULTS

LOQ

②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO ₃ /l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO ₃ /l	1
②NW345 Acidity to pH 8.3			
Acidity	1	mg CaCO ₃ /l	1
②NW179 Ammonia Nitrogen			
Ammoniacal nitrogen (N)	<0.01	mg/l	0.01
②NW009 Bromide			
Bromide	<0.02	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	1.42	mg/l	0.02
②NW023 Conductivity			
Conductivity	17.1	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	3.4	mg/l	0.1
②NW098 Dissolved Aluminium			
Aluminium	<0.002	mg/l	0.002
②NW099 Dissolved Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW583 Dissolved Arsenic			
Arsenic (As)	0.015	mg/l	0.001
②NW100 Dissolved Barium			

Food & Water Testing

		RESULTS		LOQ
②NW100	Dissolved Barium Barium (Ba)	0.011	mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	22.1	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	1.23	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.74	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	7.37	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	122	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.244	mg/l	0.0005
②NW584	Dissolved Thallium			

Food & Water Testing

		RESULTS		LOQ
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.13	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.9		0.1
②NW011	Sulphate Sulphate	2.64	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<5	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	81	mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.084	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.046	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.013	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	19.3	mg/l	0.1
②NW157	Total Chromium			

Food & Water Testing

		RESULTS		LOQ
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	84	mg/l	1
②NW030	Total Hardness			
	Hardness	60	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.7	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	3.7	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.071	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.260	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	3.5	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.011	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	0.6	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	3.19	mg/l	0.03
②NW170	Total Silver			
	Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium			
	Sodium (Na)	38.6	mg/l	0.1
②NW172	Total Strontium			
	Strontium (Sr)	0.276	mg/l	0.002
②NW173	Total Tin			
	Tin (Sn)	0.001	mg/l	0.001
②NW174	Total Titanium			

Food & Water Testing

	RESULTS		LOQ
②NW174 Total Titanium			
Titanium (Ti)	0.003	mg/l	0.001
②NW176 Total Vanadium			
Vanadium (V)	<0.001	mg/l	0.001
②NW177 Total Zinc			
Zinc (Zn)	<0.005	mg/l	0.005
②NW212 Turbidity			
Turbidity	4.59	NTU	0.01
②NW581 Uranium - Total			
Uranium (U)	<0.001	mg/l	0.001

SAMPLE CODE **817-2023-00110961**

Client Reference: SC01

Sample described as: Sheperd Creek

Client described sample as: naturally occurring water

Reception Date & Time: 11/10/2023 9:00

Reception temperature: 14.9 °C

Analysis Start Date & Time: 11/10/2023 11:21

Analysis Ending Date: 25/10/2023

Sampling date 2023-10-10

	RESULTS		LOQ
②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO3/l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO3/l	1
②NW345 Acidity to pH 8.3			
Acidity	<1	mg CaCO3/l	1
②NW179 Ammonia Nitrogen			
Ammoniacal nitrogen (N)	<0.01	mg/l	0.01
②NW009 Bromide			
Bromide	0.03	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	4.70	mg/l	0.02
②NW023 Conductivity			
Conductivity	42.5	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	1.7	mg/l	0.1
②NW098 Dissolved Aluminium			
Aluminium	<0.002	mg/l	0.002
②NW099 Dissolved Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW583 Dissolved Arsenic			
Arsenic (As)	<0.001	mg/l	0.001
②NW100 Dissolved Barium			
Barium (Ba)	0.002	mg/l	0.002
②NW101 Dissolved Beryllium			
Beryllium (Be)	<0.001	mg/l	0.001
②NW102 Dissolved Bismuth			

Food & Water Testing

		RESULTS		LOQ
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	4.6	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	1.17	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	0.0007	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.25	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	3.61	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	198	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.167	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			

Food & Water Testing

		RESULTS		LOQ
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0009	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.11	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.06	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.5		0.1
②NW011	Sulphate Sulphate	33.0	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<5	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	187	mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.054	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	0.006	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.034	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	46.1	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	0.001	mg/l	0.001
②NW158	Total Cobalt Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			

Food & Water Testing

		RESULTS		LOQ
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	208	mg/l	1
②NW030	Total Hardness			
	Hardness	16	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	<0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.006	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	15.5	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.003	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.260	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.7	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.005	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.1	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	2.58	mg/l	0.03
②NW170	Total Silver			
	Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium			
	Sodium (Na)	101	mg/l	0.1
②NW172	Total Strontium			
	Strontium (Sr)	0.794	mg/l	0.002
②NW173	Total Tin			
	Tin (Sn)	0.001	mg/l	0.001
②NW174	Total Titanium			
	Titanium (Ti)	0.002	mg/l	0.001
②NW176	Total Vanadium			
	Vanadium (V)	<0.001	mg/l	0.001
②NW177	Total Zinc			

Food & Water Testing

	RESULTS		LOQ
②NW177 Total Zinc			
Zinc (Zn)	<0.005	mg/l	0.005
②NW212 Turbidity			
Turbidity	0.62	NTU	0.01
②NW581 Uranium - Total			
Uranium (U)	0.003	mg/l	0.001

SAMPLE CODE		817-2023-00110962	
Client Reference:		SC03	
Sample described as:		Sheperd Creek 3	
Client described sample as:		naturally occurring water	
Reception Date & Time:		11/10/2023	9:00
Analysis Start Date & Time:		11/10/2023	14:54
Sampling date		2023-10-10	
		Reception temperature:	14.9 °C
		Analysis Ending Date:	24/10/2023

	RESULTS		LOQ
②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO3/l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO3/l	1
②NW345 Acidity to pH 8.3			
Acidity	<1	mg CaCO3/l	1
②NW179 Ammonia Nitrogen			
Ammoniacal nitrogen (N)	<0.01	mg/l	0.01
②NW009 Bromide			
Bromide	<0.02	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	2.72	mg/l	0.02
②NW023 Conductivity			
Conductivity	27.2	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	2.4	mg/l	0.1
②NW098 Dissolved Aluminium			
Aluminium	0.016	mg/l	0.002
②NW099 Dissolved Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW583 Dissolved Arsenic			
Arsenic (As)	<0.001	mg/l	0.001
②NW100 Dissolved Barium			
Barium (Ba)	0.033	mg/l	0.002
②NW101 Dissolved Beryllium			
Beryllium (Be)	<0.001	mg/l	0.001
②NW102 Dissolved Bismuth			
Bismuth (Bi)	<0.001	mg/l	0.001
②NW103 Dissolved Boron			
Boron (B)	<0.03	mg/l	0.03
②NW104 Dissolved Cadmium			

Food & Water Testing

		RESULTS		LOQ
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	37.5	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.07	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	9.90	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0114	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.16	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	7.27	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	22.2	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.618	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0022	mg/l	0.0002
②NW124	Dissolved Vanadium			

Food & Water Testing

		RESULTS		LOQ
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.13	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.19	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.1		0.1
②NW011	Sulphate			
	Sulphate	13.2	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	18	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	125	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.464	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.038	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	32.9	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	133	mg/l	1
②NW030	Total Hardness			

Food & Water Testing

RESULTS			LOQ
②NW030	Total Hardness		
	Hardness	134	mg CaCO ₃ /l
			1
②NW160	Total Iron		
	Iron (Fe)	0.6	mg/l
			0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001	mg/l
			0.001
②NW162	Total Lithium		
	Lithium (Li)	0.005	mg/l
			0.001
②NW163	Total Magnesium		
	Magnesium (Mg)	8.3	mg/l
			0.1
②NW164	Total Manganese		
	Manganese (Mn)	0.036	mg/l
			0.001
②NW165	Total Mercury		
	Mercury (Hg)	<0.001	mg/l
			0.001
②NW166	Total Molybdenum		
	Molybdenum (Mo)	<0.001	mg/l
			0.001
②NW167	Total Nickel		
	Nickel (Ni)	<0.001	mg/l
			0.001
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.740	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.4	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.038	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	1.3	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.41	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	131	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.544	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.007	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	7.99	NTU
			0.01
②NW581	Uranium - Total		

Food & Water Testing

	RESULTS	LOQ

②NW581	Uranium - Total		
	Uranium (U)	0.002	mg/l
			0.001

SAMPLE CODE	817-2023-00110963		
Client Reference:	JC1		
Sample described as:	Jean Creek 1		
Client described sample as:	naturally occurring water		
Reception Date & Time:	11/10/2023 9:00	Reception temperature:	14.9 °C
Analysis Start Date & Time:	11/10/2023 11:21	Analysis Ending Date:	26/10/2023
Sampling date	2023-10-10		

	RESULTS	LOQ

②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	<1	mg CaCO3/l
			1
②NW179	Ammonia Nitrogen		
	Ammoniacal nitrogen (N)	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.04	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	4.03	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	46.8	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	3.9	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.009	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	<0.001	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.015	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	0.04	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	27.1	mg/l
			0.1
②NW106	Dissolved Chromium		

Food & Water Testing

		RESULTS		LOQ
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0010	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.006	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	16.7	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0011	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	0.0010	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	1.34	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	6.53	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	83.6	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.385	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	0.0053	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	0.004	mg/l	0.002
②NW006	Fluoride			

Food & Water Testing

		RESULTS		LOQ
②NW006	Fluoride			
	Fluoride	0.09	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.05	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.3		0.1
②NW011	Sulphate			
	Sulphate	14.7	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	42	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	235	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.974	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.044	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	55.6	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	230	mg/l	1
②NW030	Total Hardness			
	Hardness	137	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.9	mg/l	0.1
②NW161	Total Lead			

Food & Water Testing

		RESULTS		LOQ
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.009	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	16.0	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.028	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.520	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	3.9	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.042	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.9	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	3.88	mg/l	0.03
②NW170	Total Silver			
	Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium			
	Sodium (Na)	105	mg/l	0.1
②NW172	Total Strontium			
	Strontium (Sr)	0.722	mg/l	0.002
②NW173	Total Tin			
	Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium			
	Titanium (Ti)	0.018	mg/l	0.001
②NW176	Total Vanadium			
	Vanadium (V)	0.002	mg/l	0.001
②NW177	Total Zinc			
	Zinc (Zn)	0.006	mg/l	0.005
②NW212	Turbidity			
	Turbidity	9.06	NTU	0.01
②NW581	Uranium - Total			
	Uranium (U)	0.004	mg/l	0.001

Food & Water Testing

SAMPLE CODE 817-2023-00110964

Client Reference: RS2

Sample described as: Rise and shine stream 2

Client described sample as: naturally occurring water

Reception Date & Time: 11/10/2023 9:00

Reception temperature: 14.9 °C

Analysis Start Date & Time: 11/10/2023 11:21

Analysis Ending Date: 26/10/2023

Sampling date 2023-10-10

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO ₃ /l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO ₃ /l	1
②NW345	Acidity to pH 8.3			
	Acidity	<1	mg CaCO ₃ /l	1
②NW179	Ammonia Nitrogen			
	Ammoniacal nitrogen (N)	0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.68	mg/l	0.02
②NW023	Conductivity			
	Conductivity	13.2	mS/m	0.1
②NW679	Cyanide			
	Cyanide	0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.7	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.005	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.005	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.011	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	17.3	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			

Food & Water Testing

		RESULTS		LOQ
②NW108	Dissolved Copper Copper (Cu)	0.0007	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	2.72	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0005	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.55	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.08	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	63.1	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.190	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0003	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.09	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			

Food & Water Testing

RESULTS			LOQ
②NW008	Nitrite-N		
	Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)		
	pH	7.9	0.1
②NW011	Sulphate		
	Sulphate	1.38 mg/l	0.02
②NW206	Suspended Solids		
	Suspended Solids	6 mg/l	3
②NW580	Thallium - Total		
	Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		
	Alkalinity total	61 mg CaCO ₃ /l	1
②NW147	Total Aluminium		
	Aluminium	0.129 mg/l	0.005
②NW148	Total Antimony		
	Antimony (Sb)	<0.002 mg/l	0.002
②NW149	Total Arsenic		
	Arsenic (As)	0.007 mg/l	0.002
②NW150	Total Barium		
	Barium (Ba)	0.013 mg/l	0.005
②NW151	Total Beryllium		
	Beryllium (Be)	<0.005 mg/l	0.005
②NW152	Total Bismuth		
	Bismuth (Bi)	<0.005 mg/l	0.005
②NW153	Total Boron		
	Boron (B)	<0.05 mg/l	0.05
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001 mg/l	0.001
②NW156	Total Calcium		
	Calcium (Ca)	15.9 mg/l	0.1
②NW157	Total Chromium		
	Chromium (Cr)	<0.001 mg/l	0.001
②NW158	Total Cobalt		
	Cobalt (Co)	<0.002 mg/l	0.002
②NW159	Total Copper		
	Copper (Cu)	<0.002 mg/l	0.002
③NW339	Total Dissolved Solids		
	Total dissolved Solids	65 mg/l	1
②NW030	Total Hardness		
	Hardness	54 mg CaCO ₃ /l	1
②NW160	Total Iron		
	Iron (Fe)	0.2 mg/l	0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001 mg/l	0.001
②NW162	Total Lithium		
	Lithium (Li)	0.003 mg/l	0.001
②NW163	Total Magnesium		

Food & Water Testing

RESULTS			LOQ
②NW163	Total Magnesium Magnesium (Mg)	3.0 mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.006 mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001 mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.210 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	2.7 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.012 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.5 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	3.45 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	44.5 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.246 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.004 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	2.40 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE 817-2023-00110965

Client Reference: RSA1

Sample described as: Rise and shine Adit

Client described sample as: naturally occurring water

Reception Date & Time: 11/10/2023 9:00

Analysis Start Date & Time: 11/10/2023 11:21

Sampling date 2023-10-10

Reception temperature: 14.9 °C

Analysis Ending Date: 26/10/2023

Food & Water Testing

RESULTS		LOQ	
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO ₃ /l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO ₃ /l
			1
②NW345	Acidity to pH 8.3		
	Acidity	28	mg CaCO ₃ /l
			1
②NW179	Ammonia Nitrogen		
	Ammoniacal nitrogen (N)	0.05	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	6.09	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	49.5	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	5.0	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	<0.002	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.035	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.003	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	5.0	mg/l
			0.1
②NW106	Dissolved Chromium		
	Chromium (Cr)	<0.001	mg/l
			0.001
②NW107	Dissolved Cobalt		
	Cobalt (Co)	<0.0005	mg/l
			0.0005
②NW108	Dissolved Copper		
	Copper (Cu)	0.0007	mg/l
			0.0005
②NW109	Dissolved Iron		
	Iron (Fe)	0.01	mg/l
			0.01
②NW110	Dissolved Lead		
	Lead (Pb)	<0.0005	mg/l
			0.0005
②NW111	Dissolved Lithium		

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	0.18	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0020	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.12	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.94	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	512	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.145	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0008	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	<0.2	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.14	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.3		0.1
②NW011	Sulphate Sulphate	18.4	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

		RESULTS		LOQ
②NW206	Suspended Solids			
	Suspended Solids	7	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	242	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.100	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.113	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.030	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	59.5	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	0.002	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	243	mg/l	1
②NW030	Total Hardness			
	Hardness	13	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	0.8	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.009	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	15.5	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.161	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	0.004 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.410 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	5.1 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.014 mg/l	0.005
②NW168	Total Potassium Potassium (K)	1.4 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	5.83 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	895 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.873 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.004 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	0.002 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	5.71 NTU	0.01
②NW581	Uranium - Total Uranium (U)	0.003 mg/l	0.001

SAMPLE CODE 817-2023-00110966

Client Reference: RS3

Sample described as: Rise and shine stream 3

Client described sample as: naturally occurring water

Reception Date & Time: 11/10/2023 9:00

Analysis Start Date & Time: 11/10/2023 14:54

Sampling date 2023-10-10

Reception temperature: 14.9 °C

Analysis Ending Date: 25/10/2023

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		

Food & Water Testing

		RESULTS		LOQ
②NW345	Acidity to pH 8.3			
	Acidity	1	mg CaCO ₃ /l	1
②NW179	Ammonia Nitrogen			
	Ammoniacal nitrogen (N)	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.11	mg/l	0.02
②NW023	Conductivity			
	Conductivity	8.4	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.5	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.005	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.008	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.006	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	11.0	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.001	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	1.92	mg/l	0.01
②NW113	Dissolved Manganese			

Food & Water Testing

RESULTS			LOQ
②NW113	Dissolved Manganese Manganese (Mn)	0.0033 mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005 mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.45 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.70 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	56.0 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.114 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.07 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.6	0.1
②NW011	Sulphate Sulphate	1.17 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<5 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		

Food & Water Testing

		RESULTS		LOQ
②NW003	Total Alkalinity			
	Alkalinity total	38	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.019	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.010	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.007	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	9.1	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	41	mg/l	1
②NW030	Total Hardness			
	Hardness	35	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	1.9	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.013	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			

Food & Water Testing

RESULTS			LOQ
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.170	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.6	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.010	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.4	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.51	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	20.0	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.128	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.56	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE **817-2023-00111382**

Client Reference: LBA

Sample described as: Lower Bendigo Addit

Reception Date & Time: 11/10/2023 9:00

Reception temperature: 14.9 °C

Analysis Start Date & Time: 11/10/2023 15:27

Analysis Ending Date: 26/10/2023

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	<1	mg CaCO3/l
			1
②NW179	Ammonia Nitrogen		
	Ammoniacal nitrogen (N)	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.08	mg/l
			0.02

Food & Water Testing

RESULTS			LOQ
②NW007	Chloride Chloride (Cl)	5.05 mg/l	0.02
②NW023	Conductivity Conductivity	42.6 mS/m	0.1
②NW679	Cyanide Cyanide	<0.005 mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon Carbon	2.2 mg/l	0.1
②NW098	Dissolved Aluminium Aluminium	0.005 mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001 mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	1.05 mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.004 mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001 mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001 mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03 mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002 mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	49.2 mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001 mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005 mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005 mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.41 mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005 mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.010 mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	14.8 mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0281 mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005 mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	0.0015 mg/l	0.0005
②NW116	Dissolved Nickel		

Food & Water Testing

		RESULTS		LOQ
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.66	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	15.6	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	19.1	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.358	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0027	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.35	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.22	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.2		0.1
②NW011	Sulphate Sulphate	16.3	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	22	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	181	mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.073	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			

Food & Water Testing

		RESULTS		LOQ
②NW149	Total Arsenic			
	Arsenic (As)	2.21	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.008	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	53.5	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	209	mg/l	1
②NW030	Total Hardness			
	Hardness	184	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	3.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.016	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	14.4	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.115	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	0.002	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.570	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	2.3	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.091	mg/l	0.005
②NW168	Total Potassium			

Food & Water Testing

RESULTS			LOQ
②NW168	Total Potassium Potassium (K)	2.0 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	6.80 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	19.1 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.467 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.003 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	0.002 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	28.1 NTU	0.01
②NW581	Uranium - Total Uranium (U)	0.003 mg/l	0.001

LIST OF METHODS

NW003	Total Alkalinity: APHA Online Edition 2320 B	NW006	Fluoride: APHA Online Edition 4110 B
NW007	Chloride: APHA Online Edition 4110 B	NW008	Nitrite-N: APHA Online Edition 4110 B
NW009	Bromide: APHA Online Edition 4110 B	NW010	Nitrate-N: APHA Online Edition 4110 B
NW011	Sulphate: APHA Online Edition 4110 B	NW023	Conductivity: APHA 24th Edition 2510 B
NW030	Total Hardness: APHA Online Edition 2340 B	NW098	Dissolved Aluminium: APHA Online Edition 3125 B mod.
NW099	Dissolved Antimony: APHA Online Edition 3125 B mod.	NW100	Dissolved Barium: APHA Online Edition 3125 B mod.
NW101	Dissolved Beryllium: APHA Online Edition 3125 B mod.	NW102	Dissolved Bismuth: APHA Online Edition 3125 B mod.
NW103	Dissolved Boron: APHA Online Edition 3125 B mod.	NW104	Dissolved Cadmium: APHA Online Edition 3125 B mod.
NW105	Dissolved Calcium: APHA Online Edition 3125 B mod.	NW106	Dissolved Chromium: APHA Online Edition 3125 B mod.
NW107	Dissolved Cobalt: APHA Online Edition 3125 B mod.	NW108	Dissolved Copper: APHA Online Edition 3125 B mod.
NW109	Dissolved Iron: APHA Online Edition 3125 B mod.	NW110	Dissolved Lead: APHA Online Edition 3125 B mod.
NW111	Dissolved Lithium: APHA Online Edition 3125 B mod.	NW112	Dissolved Magnesium: APHA Online Edition 3125 B mod.
NW113	Dissolved Manganese: APHA Online Edition 3125 B mod.	NW114	Dissolved Mercury: APHA Online Edition 3125 B mod.
NW115	Dissolved Molybdenum: APHA Online Edition 3125 B mod.	NW116	Dissolved Nickel: APHA Online Edition 3125 B mod.
NW117	Dissolved Potassium: APHA Online Edition 3125 B mod.	NW118	Dissolved Selenium: APHA Online Edition 3125 B mod.
NW119	Dissolved Silver: APHA Online Edition 3125 B mod.	NW120	Dissolved Sodium: APHA Online Edition 3125 B mod.
NW121	Dissolved Strontium: APHA Online Edition 3125 B mod.	NW122	Dissolved Tin: APHA Online Edition 3125 B mod.
NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.	NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.
NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.	NW143	Total Silicon: APHA Online Edition 3120 B mod.

Food & Water Testing

NW147	Total Aluminium: APHA Online Edition 3125 B mod.	NW148	Total Antimony: APHA Online Edition 3125 B mod.
NW149	Total Arsenic: APHA Online Edition 3125 B mod.	NW150	Total Barium: APHA Online Edition 3125 B mod.
NW151	Total Beryllium: APHA Online Edition 3125 B mod.	NW152	Total Bismuth: APHA Online Edition 3125 B mod.
NW153	Total Boron: APHA Online Edition 3125 B mod.	NW154	Total Cadmium: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW157	Total Chromium: APHA Online Edition 3125 B mod.
NW158	Total Cobalt: APHA Online Edition 3125 B mod.	NW159	Total Copper: APHA Online Edition 3125 B mod.
NW160	Total Iron: APHA Online Edition 3125 B mod.	NW161	Total Lead: APHA Online Edition 3125 B mod.
NW162	Total Lithium: APHA Online Edition 3125 B mod.	NW163	Total Magnesium: APHA Online Edition 3125 B mod.
NW164	Total Manganese: APHA Online Edition 3125 B mod.	NW165	Total Mercury: APHA Online Edition 3125 B mod.
NW166	Total Molybdenum: APHA Online Edition 3125 B mod.	NW167	Total Nickel: APHA Online Edition 3125 B mod.
NW168	Total Potassium: APHA Online Edition 3125 B mod.	NW169	Total Selenium: APHA Online Edition 3125 B mod.
NW170	Total Silver: APHA Online Edition 3125 B mod.	NW171	Total Sodium: APHA Online Edition 3125 B mod.
NW172	Total Strontium: APHA Online Edition 3125 B mod.	NW173	Total Tin: APHA Online Edition 3125 B mod.
NW174	Total Titanium: APHA Online Edition 3125 B mod.	NW176	Total Vanadium: APHA Online Edition 3125 B mod.
NW177	Total Zinc: APHA Online Edition 3125 B mod.	NW179	Ammonia Nitrogen: APHA Online Edition 4500-NH3 H
NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I	NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B
NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B	NW206	Suspended Solids: APHA Online Edition 2540 D
NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B	NW212	Turbidity: APHA 24th Edition 2130 B
NW339	Total Dissolved Solids: Internal Method, Gravimetry	NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)
NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)	NW410	Acidity to pH 7.0: Internal Method, Titrimetry
NW472	Dissolved Silica: APHA Online Edition 3120 B mod.	NW580	Thallium - Total: APHA Online Edition 3125 B mod.
NW581	Uranium - Total: APHA Online Edition 3125 B mod.	NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.
NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.	NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.
NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C	NW679	Cyanide: APHA Online Edition 4500-CN C & E

Signature



Leroy Swale Supervisor - Sampling Services - KTP

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

Food & Water Testing

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE **AR-24-NC-000295-01** REPORT DATE **07/01/2024**

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3

9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders: James Thornton **Order code:** EUNZCH-00161669
Contract: Matakanui Gold Water Monitoring
Submission Reference: 20-12-23 Sampling **Purchase Order Number:** NA

SAMPLE CODE **817-2023-00141591**

Client Reference: RS01

Sample described as: Rise and shine stream 1

Reception Date & Time: 21/12/2023 9:00

Analysis Start Date & Time: 21/12/2023 10:27

Product Type Water

Reception temperature: 21.9 °C

Analysis Ending Date: 07/01/2024

	RESULTS		LOQ
②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO3/l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO3/l	1
②NW345 Acidity to pH 8.3			
Acidity	3	mg CaCO3/l	1
②NW179 Ammonia Nitrogen			
Ammoniacal nitrogen (N)	<0.01	mg/l	0.01
②NW009 Bromide			
Bromide	<0.02	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	1.00	mg/l	0.02
②NW023 Conductivity			
Conductivity	24.4	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	3.5	mg/l	0.1
②NW098 Dissolved Aluminium			
Aluminium	<0.002	mg/l	0.002
②NW099 Dissolved Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW583 Dissolved Arsenic			
Arsenic (As)	0.021	mg/l	0.001
②NW100 Dissolved Barium			
Barium (Ba)	0.014	mg/l	0.002
②NW101 Dissolved Beryllium			

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	35.2	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.05	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	6.74	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0357	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.10	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	8.88	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	6.37	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.516	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

RESULTS			LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.11 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.7	0.1
②NW011	Sulphate Sulphate	0.36 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW003	Total Alkalinity Alkalinity total	125 mg CaCO3/l	1
③NW339	Total Dissolved Solids Total dissolved Solids	120 mg/l	1
②NW030	Total Hardness Hardness	116 mg CaCO3/l	1
②NW189	Total Nitrogen Total Nitrogen (N)	0.270 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	3.1 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.007 mg/l	0.005
②NW212	Turbidity Turbidity	0.68 NTU	0.01

SAMPLE CODE 817-2023-00141592

Client Reference: SC01

Sample described as: Shepherds Creek by irrigation take

Reception Date & Time: 21/12/2023 9:00

Reception temperature: 21.9 °C

Analysis Start Date & Time: 21/12/2023 10:27

Analysis Ending Date: 07/01/2024

Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0		

Food & Water Testing

		RESULTS		LOQ
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	6	mg CaCO3/l	1
②NW179	Ammonia Nitrogen			
	Ammoniacal nitrogen (N)	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	0.07	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	7.83	mg/l	0.02
②NW023	Conductivity			
	Conductivity	56.3	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	3.4	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.008	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.006	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.045	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	0.04	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	66.3	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.04	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.010	mg/l	0.001
②NW112	Dissolved Magnesium			

Food & Water Testing

RESULTS			LOQ
②NW112	Dissolved Magnesium Magnesium (Mg)	25.1 mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0067 mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005 mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	0.0007 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	3.97 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.47 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	15.4 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	1.08 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0058 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.12 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.31 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.0	0.1
②NW011	Sulphate Sulphate	44.9 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	12 mg/l	3
②NW003	Total Alkalinity		

Food & Water Testing

RESULTS			LOQ
②NW003	Total Alkalinity		
	Alkalinity total	247	mg CaCO3/l
			1
③NW339	Total Dissolved Solids		
	Total dissolved Solids	276	mg/l
			1
②NW030	Total Hardness		
	Hardness	269	mg CaCO3/l
			1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.430	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	3.2	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.034	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	1.95	NTU
			0.01

SAMPLE CODE 817-2023-00141593

Client Reference: SC03

Sample described as: Shepherds Creek 3 above Jean creek

Reception Date & Time: 21/12/2023 9:00

Reception temperature: 21.9 °C

Analysis Start Date & Time: 21/12/2023 10:27

Analysis Ending Date: 07/01/2024

Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	4	mg CaCO3/l
			1
②NW179	Ammonia Nitrogen		
	Ammoniacal nitrogen (N)	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	2.02	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	31.0	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	2.1	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.010	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	<0.001	mg/l
			0.001
②NW100	Dissolved Barium		

Food & Water Testing

		RESULTS		LOQ
②NW100	Dissolved Barium			
	Barium (Ba)	0.032	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	42.7	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	10.7	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0028	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.64	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	6.11	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	7.51	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.716	mg/l	0.0005
②NW584	Dissolved Thallium			

Food & Water Testing

RESULTS			LOQ
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0018 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.13 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.03 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.1	0.1
②NW011	Sulphate Sulphate	14.1 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW003	Total Alkalinity Alkalinity total	145 mg CaCO ₃ /l	1
③NW339	Total Dissolved Solids Total dissolved Solids	152 mg/l	1
②NW030	Total Hardness Hardness	151 mg CaCO ₃ /l	1
②NW189	Total Nitrogen Total Nitrogen (N)	0.240 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.7 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.020 mg/l	0.005
②NW212	Turbidity Turbidity	1.36 NTU	0.01

SAMPLE CODE 817-2023-00141594

Client Reference: JC01

Sample described as: Jean Creek 1

Reception Date & Time: 21/12/2023 9:00

Analysis Start Date & Time: 21/12/2023 10:35

Product Type Water

Reception temperature: 21.9 °C

Analysis Ending Date: 06/01/2024

RESULTS			LOQ
②NW409	Acidity to pH 3.7		

Food & Water Testing

RESULTS		LOQ	
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO ₃ /l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO ₃ /l	1
②NW345	Acidity to pH 8.3 Acidity	<1 mg CaCO ₃ /l	1
②NW179	Ammonia Nitrogen Ammoniacal nitrogen (N)	<0.01 mg/l	0.01
②NW009	Bromide Bromide	0.09 mg/l	0.02
②NW007	Chloride Chloride (Cl)	7.04 mg/l	0.02
②NW023	Conductivity Conductivity	57.2 mS/m	0.1
③NW671	Dissolved (NP) Organic Carbon Carbon	3.9 mg/l	0.1
②NW098	Dissolved Aluminium Aluminium	0.012 mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001 mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	0.001 mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.033 mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001 mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001 mg/l	0.001
②NW103	Dissolved Boron Boron (B)	0.05 mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002 mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	71.4 mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001 mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005 mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0012 mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.01 mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005 mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.013 mg/l	0.001
②NW112	Dissolved Magnesium		

Food & Water Testing

		RESULTS		LOQ
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	30.5	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0019	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	0.0014	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	2.36	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	8.36	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	22.5	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.957	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	0.0007	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	0.0065	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	0.0006	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.04	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.4		0.1
②NW011	Sulphate			
	Sulphate	22.2	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW003	Total Alkalinity			

Food & Water Testing

RESULTS			LOQ
②NW003	Total Alkalinity		
	Alkalinity total	285	mg CaCO3/l
			1
②NW156	Total Calcium		
	Calcium (Ca)	73.1	mg/l
			0.1
③NW339	Total Dissolved Solids		
	Total dissolved Solids	280	mg/l
			1
②NW030	Total Hardness		
	Hardness	276	mg CaCO3/l
			1
②NW163	Total Magnesium		
	Magnesium (Mg)	22.6	mg/l
			0.1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.350	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	3.3	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.036	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.62	NTU
			0.01

SAMPLE CODE 817-2023-00141595

Client Reference: RS02

Sample described as: Rise and shine stream 2 at Shreks

Reception Date & Time: 21/12/2023 9:00

Reception temperature: 21.9 °C

Analysis Start Date & Time: 21/12/2023 10:27

Analysis Ending Date: 07/01/2024

Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	3	mg CaCO3/l
			1
②NW179	Ammonia Nitrogen		
	Ammoniacal nitrogen (N)	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	1.32	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	14.0	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	2.0	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.007	mg/l
			0.002
②NW099	Dissolved Antimony		

Food & Water Testing

		RESULTS		LOQ
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.006	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.011	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	19.0	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	3.52	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0009	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.49	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	8.91	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			

Food & Water Testing

		RESULTS		LOQ
②NW120	Dissolved Sodium Sodium (Na)	4.34	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.277	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.7		0.1
②NW011	Sulphate Sulphate	1.00	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	6	mg/l	3
②NW003	Total Alkalinity Alkalinity total	67	mg CaCO3/l	1
③NW339	Total Dissolved Solids Total dissolved Solids	68	mg/l	1
②NW030	Total Hardness Hardness	62	mg CaCO3/l	1
②NW189	Total Nitrogen Total Nitrogen (N)	0.160	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.8	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.009	mg/l	0.005
②NW212	Turbidity Turbidity	1.50	NTU	0.01

Food & Water Testing

SAMPLE CODE 817-2023-00141596

Client Reference: RSA1

Sample described as: Rise and shine Adit

Reception Date & Time: 21/12/2023 9:00

Analysis Start Date & Time: 21/12/2023 10:27

Product Type Water

Reception temperature: 21.9 °C

Analysis Ending Date: 07/01/2024

	RESULTS		LOQ
②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO3/l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO3/l	1
②NW345 Acidity to pH 8.3			
Acidity	53	mg CaCO3/l	1
②NW179 Ammonia Nitrogen			
Ammoniacal nitrogen (N)	0.13	mg/l	0.01
②NW009 Bromide			
Bromide	<0.02	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	0.43	mg/l	0.02
②NW023 Conductivity			
Conductivity	22.8	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	3.2	mg/l	0.1
②NW098 Dissolved Aluminium			
Aluminium	<0.002	mg/l	0.002
②NW099 Dissolved Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW583 Dissolved Arsenic			
Arsenic (As)	0.060	mg/l	0.001
②NW100 Dissolved Barium			
Barium (Ba)	0.036	mg/l	0.002
②NW101 Dissolved Beryllium			
Beryllium (Be)	<0.001	mg/l	0.001
②NW102 Dissolved Bismuth			
Bismuth (Bi)	<0.001	mg/l	0.001
②NW103 Dissolved Boron			
Boron (B)	<0.03	mg/l	0.03
②NW104 Dissolved Cadmium			
Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105 Dissolved Calcium			
Calcium (Ca)	31.9	mg/l	0.1
②NW106 Dissolved Chromium			
Chromium (Cr)	<0.001	mg/l	0.001
②NW107 Dissolved Cobalt			
Cobalt (Co)	0.0014	mg/l	0.0005
②NW108 Dissolved Copper			

Food & Water Testing

		RESULTS		LOQ
②NW108	Dissolved Copper Copper (Cu)	0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	1.07	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	5.68	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.690	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.14	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	16.4	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.75	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.563	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.003	mg/l	0.002
②NW006	Fluoride Fluoride	0.12	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			

Food & Water Testing

RESULTS			LOQ
②NW008	Nitrite-N		
	Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)		
	pH	6.7	0.1
②NW011	Sulphate		
	Sulphate	0.06 mg/l	0.02
②NW206	Suspended Solids		
	Suspended Solids	87 mg/l	3
②NW003	Total Alkalinity		
	Alkalinity total	112 mg CaCO3/l	1
③NW339	Total Dissolved Solids		
	Total dissolved Solids	112 mg/l	1
②NW030	Total Hardness		
	Hardness	103 mg CaCO3/l	1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.480 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	6.6 mg/l	0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.016 mg/l	0.005
②NW212	Turbidity		
	Turbidity	60.5 NTU	0.01

SAMPLE CODE **817-2023-00141597**

Client Reference: RS03

Sample described as: Rise and shine stream 3 at Alta crossing

Reception Date & Time: 21/12/2023 9:00

Reception temperature: 21.9 °C

Analysis Start Date & Time: 21/12/2023 10:27

Analysis Ending Date: 07/01/2024

Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0		
	Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		
	Acidity	2 mg CaCO3/l	1
②NW179	Ammonia Nitrogen		
	Ammoniacal nitrogen (N)	<0.01 mg/l	0.01
②NW009	Bromide		
	Bromide	<0.02 mg/l	0.02
②NW007	Chloride		
	Chloride (Cl)	0.90 mg/l	0.02
②NW023	Conductivity		
	Conductivity	9.1 mS/m	0.1
②NW679	Cyanide		
	Cyanide	<0.005 mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon		

Food & Water Testing

RESULTS			LOQ
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.9	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.005	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.013	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.006	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	11.6	mg/l
			0.1
②NW106	Dissolved Chromium		
	Chromium (Cr)	<0.001	mg/l
			0.001
②NW107	Dissolved Cobalt		
	Cobalt (Co)	<0.0005	mg/l
			0.0005
②NW108	Dissolved Copper		
	Copper (Cu)	<0.0005	mg/l
			0.0005
②NW109	Dissolved Iron		
	Iron (Fe)	0.05	mg/l
			0.01
②NW110	Dissolved Lead		
	Lead (Pb)	<0.0005	mg/l
			0.0005
②NW111	Dissolved Lithium		
	Lithium (Li)	0.001	mg/l
			0.001
②NW112	Dissolved Magnesium		
	Magnesium (Mg)	2.31	mg/l
			0.01
②NW113	Dissolved Manganese		
	Manganese (Mn)	0.0057	mg/l
			0.0005
②NW114	Dissolved Mercury		
	Mercury (Hg)	<0.0005	mg/l
			0.0005
②NW115	Dissolved Molybdenum		
	Molybdenum (Mo)	<0.0005	mg/l
			0.0005
②NW116	Dissolved Nickel		
	Nickel (Ni)	<0.0005	mg/l
			0.0005
②NW117	Dissolved Potassium		
	Potassium (K)	0.27	mg/l
			0.01
②NW118	Dissolved Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW472	Dissolved Silica		

Food & Water Testing

		RESULTS		LOQ
②NW472	Dissolved Silica Sand/silica	8.65	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	3.61	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.150	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.08	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.5		0.1
②NW011	Sulphate Sulphate	0.63	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6	mg/l	3
②NW003	Total Alkalinity Alkalinity total	43	mg CaCO ₃ /l	1
③NW339	Total Dissolved Solids Total dissolved Solids	44	mg/l	1
②NW030	Total Hardness Hardness	38	mg CaCO ₃ /l	1
②NW189	Total Nitrogen Total Nitrogen (N)	0.100	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.6	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.015	mg/l	0.005
②NW212	Turbidity Turbidity	0.49	NTU	0.01

Food & Water Testing

LIST OF METHODS

NW003	Total Alkalinity: APHA Online Edition 2320 B	NW006	Fluoride: APHA Online Edition 4110 B
NW007	Chloride: APHA Online Edition 4110 B	NW008	Nitrite-N: APHA Online Edition 4110 B
NW009	Bromide: APHA Online Edition 4110 B	NW010	Nitrate-N: APHA Online Edition 4110 B
NW011	Sulphate: APHA Online Edition 4110 B	NW023	Conductivity: APHA 24th Edition 2510 B
NW030	Total Hardness: APHA Online Edition 2340 B	NW098	Dissolved Aluminium: APHA Online Edition 3125 B mod.
NW099	Dissolved Antimony: APHA Online Edition 3125 B mod.	NW100	Dissolved Barium: APHA Online Edition 3125 B mod.
NW101	Dissolved Beryllium: APHA Online Edition 3125 B mod.	NW102	Dissolved Bismuth: APHA Online Edition 3125 B mod.
NW103	Dissolved Boron: APHA Online Edition 3125 B mod.	NW104	Dissolved Cadmium: APHA Online Edition 3125 B mod.
NW105	Dissolved Calcium: APHA Online Edition 3125 B mod.	NW106	Dissolved Chromium: APHA Online Edition 3125 B mod.
NW107	Dissolved Cobalt: APHA Online Edition 3125 B mod.	NW108	Dissolved Copper: APHA Online Edition 3125 B mod.
NW109	Dissolved Iron: APHA Online Edition 3125 B mod.	NW110	Dissolved Lead: APHA Online Edition 3125 B mod.
NW111	Dissolved Lithium: APHA Online Edition 3125 B mod.	NW112	Dissolved Magnesium: APHA Online Edition 3125 B mod.
NW113	Dissolved Manganese: APHA Online Edition 3125 B mod.	NW114	Dissolved Mercury: APHA Online Edition 3125 B mod.
NW115	Dissolved Molybdenum: APHA Online Edition 3125 B mod.	NW116	Dissolved Nickel: APHA Online Edition 3125 B mod.
NW117	Dissolved Potassium: APHA Online Edition 3125 B mod.	NW118	Dissolved Selenium: APHA Online Edition 3125 B mod.
NW119	Dissolved Silver: APHA Online Edition 3125 B mod.	NW120	Dissolved Sodium: APHA Online Edition 3125 B mod.
NW121	Dissolved Strontium: APHA Online Edition 3125 B mod.	NW122	Dissolved Tin: APHA Online Edition 3125 B mod.
NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.	NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.
NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.	NW156	Total Calcium: APHA Online Edition 3125 B mod.
NW163	Total Magnesium: APHA Online Edition 3125 B mod.	NW179	Ammonia Nitrogen: APHA Online Edition 4500-NH3 H
NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I	NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B
NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B	NW206	Suspended Solids: APHA Online Edition 2540 D
NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B	NW212	Turbidity: APHA 24th Edition 2130 B
NW339	Total Dissolved Solids: Internal Method, Gravimetry	NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)
NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)	NW410	Acidity to pH 7.0: Internal Method, Titrimetry
NW472	Dissolved Silica: APHA Online Edition 3120 B mod.	NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.
NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.	NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.
NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C	NW679	Cyanide: APHA Online Edition 4500-CN C & E

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

Food & Water Testing

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE

AR-24-NC-005601-01

REPORT DATE

23/02/2024

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders: James Thornton
Contract: Matakanui Gold Water Monitoring
Submission Reference: 5-02-2024

Order code: EUNZCH-00166192

Purchase Order Number: NA

SAMPLE CODE 817-2024-00015361

Client Reference: RS01
Sample described as: Rise and shine stream 1
Reception Date & Time: 07/02/2024 8:30
Analysis Start Date & Time: 07/02/2024 10:33
Product Type Water
Sampled Date & Time 04/02/2024 00:00

Reception temperature: Ambient
Analysis Ending Date: 23/02/2024
Sampler(s) Hamish

RESULTS

LOQ

②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	4	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.05	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.05	mg/l	0.02
②NW023	Conductivity			
	Conductivity	24.9	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	3.4	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.024	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.013	mg/l	0.002

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	35.3	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.09	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	6.46	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0613	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.57	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.55	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.08	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.511	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

RESULTS			LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.007 mg/l	0.002
②NW006	Fluoride Fluoride	0.12 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.07 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.9	0.1
②NW011	Sulphate Sulphate	0.70 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	9 mg/l	3
②NW003	Total Alkalinity Alkalinity total	124 mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	31.2 mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	122 mg/l	1
②NW030	Total Hardness Hardness	100 mg CaCO3/l	1
②NW163	Total Magnesium Magnesium (Mg)	5.4 mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.240 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	3.9 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.012 mg/l	0.005
②NW212	Turbidity Turbidity	8.93 NTU	0.01

SAMPLE CODE 817-2024-00015362

Client Reference: SC01
Sample described as: Shepherds Creek by irrigation take
Reception Date & Time: 07/02/2024 8:30
Analysis Start Date & Time: 07/02/2024 10:33
Product Type Water
Sampled Date & Time 04/02/2024 00:00

Reception temperature: Ambient
Analysis Ending Date: 23/02/2024
Sampler(s) Hamish

Food & Water Testing

RESULTS		LOQ	
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO ₃ /l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO ₃ /l	1
②NW345	Acidity to pH 8.3 Acidity	<1 mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen Ammonia nitrogen	0.03 mg/l	0.01
②NW009	Bromide Bromide	0.07 mg/l	0.02
②NW007	Chloride Chloride (Cl)	7.09 mg/l	0.02
②NW023	Conductivity Conductivity	57.0 mS/m	0.1
②NW679	Cyanide Cyanide	<0.005 mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon Carbon	2.5 mg/l	0.1
②NW098	Dissolved Aluminium Aluminium	0.003 mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001 mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	0.003 mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.046 mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001 mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001 mg/l	0.001
②NW103	Dissolved Boron Boron (B)	0.04 mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002 mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	68.3 mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001 mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005 mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005 mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	<0.01 mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005 mg/l	0.0005
②NW111	Dissolved Lithium		

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.010	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	27.6	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0011	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.57	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.24	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	16.5	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	1.08	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0047	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.13	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.0		0.1
②NW011	Sulphate Sulphate	49.5	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

RESULTS			LOQ
②NW206	Suspended Solids		
	Suspended Solids	<5	mg/l
			3
②NW003	Total Alkalinity		
	Alkalinity total	241	mg CaCO3/l
			1
②NW156	Total Calcium		
	Calcium (Ca)	62.5	mg/l
			0.1
③NW339	Total Dissolved Solids		
	Total dissolved Solids	279	mg/l
			1
②NW030	Total Hardness		
	Hardness	255	mg CaCO3/l
			1
②NW163	Total Magnesium		
	Magnesium (Mg)	23.9	mg/l
			0.1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.220	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	3.1	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.038	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.79	NTU
			0.01

SAMPLE CODE	817-2024-00015363		
Client Reference:	SC03		
Sample described as:	Shepherds Creek 3		
Reception Date & Time:	07/02/2024 8:30	Reception temperature:	Ambient
Analysis Start Date & Time:	07/02/2024 10:33	Analysis Ending Date:	23/02/2024
Product Type	Water	Sampler(s)	Hamish
Sampled Date & Time	04/02/2024 00:00		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	<1	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	3.25	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	33.6	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	3.0	mg/l
			0.1
②NW098	Dissolved Aluminium		

Food & Water Testing

		RESULTS		LOQ
②NW098	Dissolved Aluminium Aluminium	0.007	mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	<0.001	mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.038	mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	43.5	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	12.0	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0038	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	3.87	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.14	mg/l	0.02
②NW119	Dissolved Silver			

Food & Water Testing

		RESULTS		LOQ
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	8.17	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.724	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0018	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.14	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.31	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	0.04	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.0		0.1
②NW011	Sulphate Sulphate	16.9	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	17	mg/l	3
②NW003	Total Alkalinity Alkalinity total	149	mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	39.4	mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	165	mg/l	1
②NW030	Total Hardness Hardness	138	mg CaCO3/l	1
②NW163	Total Magnesium Magnesium (Mg)	9.7	mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.940	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	3.4	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.018	mg/l	0.005
②NW212	Turbidity			

Food & Water Testing

RESULTS			LOQ

②NW212	Turbidity		
	Turbidity	4.79	NTU
			0.01

SAMPLE CODE		817-2024-00015364	
Client Reference:		RS02	
Sample described as:		Rise and shine stream 2 at Shreks	
Reception Date & Time:		07/02/2024 8:30	Reception temperature: Ambient
Analysis Start Date & Time:		07/02/2024 10:33	Analysis Ending Date: 23/02/2024
Product Type		Water	Sampler(s) Hamish
Sampled Date & Time		04/02/2024 00:00	

RESULTS			LOQ

②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	<1	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.10	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	1.52	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	13.0	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.8	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.004	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.004	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.009	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	17.2	mg/l
			0.1
②NW106	Dissolved Chromium		

Food & Water Testing

		RESULTS		LOQ
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	3.23	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0006	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.50	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	10.3	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	4.65	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.238	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			

Food & Water Testing

RESULTS			LOQ
②NW006	Fluoride		
	Fluoride	0.09 mg/l	0.02
②NW010	Nitrate-N		
	Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N		
	Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)		
	pH	7.6	0.1
②NW011	Sulphate		
	Sulphate	1.49 mg/l	0.02
②NW206	Suspended Solids		
	Suspended Solids	6 mg/l	3
②NW003	Total Alkalinity		
	Alkalinity total	58 mg CaCO3/l	1
②NW156	Total Calcium		
	Calcium (Ca)	15.0 mg/l	0.1
③NW339	Total Dissolved Solids		
	Total dissolved Solids	64 mg/l	1
②NW030	Total Hardness		
	Hardness	49 mg CaCO3/l	1
②NW163	Total Magnesium		
	Magnesium (Mg)	2.8 mg/l	0.1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.180 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.3 mg/l	0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.009 mg/l	0.005
②NW212	Turbidity		
	Turbidity	3.56 NTU	0.01

SAMPLE CODE 817-2024-00015365

Client Reference: RSA1

Sample described as: Rise and shine Adit

Reception Date & Time: 07/02/2024 8:30

Analysis Start Date & Time: 07/02/2024 10:33

Product Type Water

Sampled Date & Time 04/02/2024 00:00

Reception temperature: Ambient

Analysis Ending Date: 23/02/2024

Sampler(s) Hamish

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0		
	Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		
	Acidity	48 mg CaCO3/l	1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.13 mg/l	0.01
②NW009	Bromide		

Food & Water Testing

		RESULTS		LOQ
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	0.44	mg/l	0.02
②NW023	Conductivity			
	Conductivity	27.0	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	4.0	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.003	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.038	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.030	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	39.9	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.07	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	7.64	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0115	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.34 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	15.4 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.43 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.536 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.005 mg/l	0.002
②NW006	Fluoride Fluoride	0.13 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.03 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.6	0.1
②NW011	Sulphate Sulphate	1.15 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	69 mg/l	3
②NW003	Total Alkalinity Alkalinity total	134 mg CaCO ₃ /l	1
②NW156	Total Calcium Calcium (Ca)	33.7 mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	133 mg/l	1
②NW030	Total Hardness		

Food & Water Testing

RESULTS			LOQ
②NW030	Total Hardness		
	Hardness	108	mg CaCO ₃ /l
			1
②NW163	Total Magnesium		
	Magnesium (Mg)	5.9	mg/l
			0.1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	1.83	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	10.4	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.188	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	30.5	NTU
			0.01

SAMPLE CODE		817-2024-00015366	
Client Reference:		RS03	
Sample described as:		Rise and shine stream 3 at Alta crossing	
Reception Date & Time:		07/02/2024 8:30	Reception temperature: Ambient
Analysis Start Date & Time:		07/02/2024 10:33	Analysis Ending Date: 23/02/2024
Product Type		Water	Sampler(s) Hamish
Sampled Date & Time		04/02/2024 00:00	

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO ₃ /l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO ₃ /l
			1
②NW345	Acidity to pH 8.3		
	Acidity	<1	mg CaCO ₃ /l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	1.08	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	12.1	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.6	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	<0.002	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.008	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.007	mg/l
			0.002
②NW101	Dissolved Beryllium		

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	13.3	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	0.09	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.43	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.79	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	233	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.136	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

RESULTS			LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.011 mg/l	0.002
②NW006	Fluoride Fluoride	0.06 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	9.3	0.1
②NW011	Sulphate Sulphate	0.66 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<5 mg/l	3
②NW003	Total Alkalinity Alkalinity total	58 mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	11.2 mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	59 mg/l	1
②NW030	Total Hardness Hardness	36 mg CaCO3/l	1
②NW163	Total Magnesium Magnesium (Mg)	2.1 mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.120 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	2.3 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.014 mg/l	0.005
②NW212	Turbidity Turbidity	0.75 NTU	0.01

LIST OF METHODS

NW003	Total Alkalinity: APHA Online Edition 2320 B	NW006	Fluoride: APHA Online Edition 4110 B
NW007	Chloride: APHA Online Edition 4110 B	NW008	Nitrite-N: APHA Online Edition 4110 B
NW009	Bromide: APHA Online Edition 4110 B	NW010	Nitrate-N: APHA Online Edition 4110 B
NW011	Sulphate: APHA Online Edition 4110 B	NW023	Conductivity: APHA 24th Edition 2510 B
		NW030	Total Hardness: APHA Online Edition 2340 B

Food & Water Testing

NW098	Dissolved Aluminium: APHA Online Edition 3125 B mod.	NW099	Dissolved Antimony: APHA Online Edition 3125 B mod.
NW100	Dissolved Barium: APHA Online Edition 3125 B mod.	NW101	Dissolved Beryllium: APHA Online Edition 3125 B mod.
NW102	Dissolved Bismuth: APHA Online Edition 3125 B mod.	NW103	Dissolved Boron: APHA Online Edition 3125 B mod.
NW104	Dissolved Cadmium: APHA Online Edition 3125 B mod.	NW105	Dissolved Calcium: APHA Online Edition 3125 B mod.
NW106	Dissolved Chromium: APHA Online Edition 3125 B mod.	NW107	Dissolved Cobalt: APHA Online Edition 3125 B mod.
NW108	Dissolved Copper: APHA Online Edition 3125 B mod.	NW109	Dissolved Iron: APHA Online Edition 3125 B mod.
NW110	Dissolved Lead: APHA Online Edition 3125 B mod.	NW111	Dissolved Lithium: APHA Online Edition 3125 B mod.
NW112	Dissolved Magnesium: APHA Online Edition 3125 B mod.	NW113	Dissolved Manganese: APHA Online Edition 3125 B mod.
NW114	Dissolved Mercury: APHA Online Edition 3125 B mod.	NW115	Dissolved Molybdenum: APHA Online Edition 3125 B mod.
NW116	Dissolved Nickel: APHA Online Edition 3125 B mod.	NW117	Dissolved Potassium: APHA Online Edition 3125 B mod.
NW118	Dissolved Selenium: APHA Online Edition 3125 B mod.	NW119	Dissolved Silver: APHA Online Edition 3125 B mod.
NW120	Dissolved Sodium: APHA Online Edition 3125 B mod.	NW121	Dissolved Strontium: APHA Online Edition 3125 B mod.
NW122	Dissolved Tin: APHA Online Edition 3125 B mod.	NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.
NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.	NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW163	Total Magnesium: APHA Online Edition 3125 B mod.
NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I	NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B
NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B	NW206	Suspended Solids: APHA Online Edition 2540 D
NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B	NW212	Turbidity: APHA 24th Edition 2130 B
NW339	Total Dissolved Solids: Internal Method, Gravimetry	NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)
NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)	NW410	Acidity to pH 7.0: Internal Method, Titrimetry
NW472	Dissolved Silica: APHA Online Edition 3120 B mod.	NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.
NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.	NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.
NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C	NW676	Ammonia Nitrogen: Internal Method, Electrometry
NW679	Cyanide: APHA Online Edition 4500-CN C & E		

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

Food & Water Testing

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Accreditation does not apply to comments or graphical representations.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE **AR-24-NC-003109-02 #** REPORT DATE **20/02/2024**

This amended report supersedes Analytical Report number AR-24-NC-003109-01, dated 02/02/2024.

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders: James Thornton
Contract: Matakanui Gold Water Monitoring

Order code: EUNZCH-00163623

Purchase Order Number: NA

Comments: LOQs amended

SAMPLE CODE **817-2024-00005355**

Sample described as: MG41400

Reception Date & Time: 15/01/2024 14:50

Analysis Start Date & Time: 15/01/2024 15:51

Analysis Ending Date: 20/02/2024

Sampler(s) Hamish

Sampled Date & Time 20/12/2023 00:00

RESULTS			LOQ
④VQ050	Aluminium (Al) Aluminium	0.52 mg/l	0.02
④NU0ZC	Antimony (Sb) Antimony (Sb)	0.013 mg/l	0.005
④VQ364	Arsenic (As) Arsenic (As)	0.24 mg/l	0.0001
④NU0PF	Barium (Ba) Barium (Ba)	0.21 mg/l	0.001
④NU0LB	Beryllium (Be) Beryllium (Be)	<0.001 mg/l	0.005
④VQ022	Boron (B) Boron (B)	<0.05 mg/l	0.05
④VQ058	Chromium (Cr) Chromium (Cr)	<0.001 mg/l	0.001
④NU0YE	Cobalt (Co) Cobalt (Co)	0.0020 mg/l	0.001
④VQ107	Iron (Fe) Iron (Fe)	0.36 mg/l	0.001
④VQ368	Lead (Pb) Lead (Pb)	<0.01 mg/l	0.001
④VQ395	Manganese (Mn) Manganese (Mn)	0.52 mg/l	0.2
④NU0SJ	Molybdenum (Mo) Molybdenum (Mo)	0.0080 mg/l	0.005
④VQ068	Selenium (Se) Selenium (Se)	<0.001 mg/l	0.001

Food & Water Testing

RESULTS			LOQ
④NU0LE	Silver (Ag)		
	Silver (Ag)	<0.005	mg/l
			0.0005
⑤VQ763	Soil Preparation - Metals Digestion		
	Sample Preparation	done	-
④NU0K0	Tin (Sn)		
	Tin (Sn)	0.028	mg/l
			0.001
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001	mg/l
			0.001
②NW156	Total Calcium		
	Calcium (Ca)	23.4	mg/l
			0.1
②NW159	Total Copper		
	Copper (Cu)	0.003	mg/l
			0.002
②NW163	Total Magnesium		
	Magnesium (Mg)	3.9	mg/l
			0.1
②NW167	Total Nickel		
	Nickel (Ni)	0.001	mg/l
			0.001
②NW168	Total Potassium		
	Potassium (K)	12.7	mg/l
			0.1
②NW143	Total Silicon		
	Silicon (Si)	0.77	mg/l
			0.03
②NW171	Total Sodium		
	Sodium (Na)	1260	mg/l
			0.1
②NW174	Total Titanium		
	Titanium (Ti)	0.004	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.035	mg/l
			0.005
⑤VQ764	USA Leaching Procedure		
	Leachate Fluid	1.0	-
	pH (initial)	7.3	pH units
			0.01
	pH (Leachate fluid)	4.9	pH units
			0.01
	pH (off)	4.9	pH units
			0.01
	pH (USA HCl addition)	1.3	pH units
			0.01
④NU0M0	Vanadium (V)		
	Vanadium (V)	<0.005	mg/l
			0.005

SAMPLE CODE 817-2024-00005356

Sample described as: MG41405

Reception Date & Time: 15/01/2024 14:50

Analysis Start Date & Time: 15/01/2024 15:51

Analysis Ending Date: 20/02/2024

Sampler(s) Hamish

Sampled Date & Time 20/12/2023 00:00

RESULTS			LOQ
④VQ050	Aluminium (Al)		
	Aluminium	0.50	mg/l
			0.02
④NU0ZC	Antimony (Sb)		
	Antimony (Sb)	<0.005	mg/l
			1
④VQ364	Arsenic (As)		
	Arsenic (As)	0.020	mg/l
			0.0001

Food & Water Testing

		RESULTS		LOQ
④NU0PF	Barium (Ba)			
	Barium (Ba)	0.35	mg/l	0.001
④NU0LB	Beryllium (Be)			
	Beryllium (Be)	<0.001	mg/l	0.005
④VQ022	Boron (B)			
	Boron (B)	<0.05	mg/l	0.05
④VQ058	Chromium (Cr)			
	Chromium (Cr)	<0.001	mg/l	0.001
④NU0YE	Cobalt (Co)			
	Cobalt (Co)	0.0070	mg/l	0.001
④VQ107	Iron (Fe)			
	Iron (Fe)	0.27	mg/l	0.001
④VQ368	Lead (Pb)			
	Lead (Pb)	<0.01	mg/l	0.001
④VQ395	Manganese (Mn)			
	Manganese (Mn)	0.70	mg/l	0.2
④NU0SJ	Molybdenum (Mo)			
	Molybdenum (Mo)	<0.005	mg/l	1
④VQ068	Selenium (Se)			
	Selenium (Se)	<0.001	mg/l	0.005
④NU0LE	Silver (Ag)			
	Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763	Soil Preparation - Metals Digestion			
	Sample Preparation	done		-
④NU0K0	Tin (Sn)			
	Tin (Sn)	0.014	mg/l	0.001
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	21.7	mg/l	0.1
②NW159	Total Copper			
	Copper (Cu)	0.002	mg/l	0.002
②NW163	Total Magnesium			
	Magnesium (Mg)	4.4	mg/l	0.1
②NW167	Total Nickel			
	Nickel (Ni)	0.004	mg/l	0.001
②NW168	Total Potassium			
	Potassium (K)	6.7	mg/l	0.1
②NW143	Total Silicon			
	Silicon (Si)	0.44	mg/l	0.03
②NW171	Total Sodium			
	Sodium (Na)	1380	mg/l	0.1
②NW174	Total Titanium			
	Titanium (Ti)	0.003	mg/l	0.001
②NW177	Total Zinc			
	Zinc (Zn)	0.035	mg/l	0.005
⑤VQ764	USA Leaching Procedure			

Food & Water Testing

RESULTS			LOQ
⑤VQ764 USA Leaching Procedure			
Leachate Fluid	1.0		-
pH (initial)	6.3	pH units	0.01
pH (Leachate fluid)	4.9	pH units	0.01
pH (off)	4.9	pH units	0.01
pH (USA HCl addition)	1.3	pH units	0.01
④NU0M0 Vanadium (V)			
Vanadium (V)	<0.005	mg/l	0.005

SAMPLE CODE	817-2024-00005357		
Sample described as:	MG41409		
Reception Date & Time:	15/01/2024 14:50		
Analysis Start Date & Time:	15/01/2024 15:51	Analysis Ending Date:	20/02/2024
Sampler(s)	Hamish	Sampled Date & Time	20/12/2023 00:00

RESULTS			LOQ
④VQ050 Aluminium (Al)			
Aluminium	0.66	mg/l	0.02
④NU0ZC Antimony (Sb)			
Antimony (Sb)	<0.005	mg/l	1
④VQ364 Arsenic (As)			
Arsenic (As)	0.050	mg/l	0.0001
④NU0PF Barium (Ba)			
Barium (Ba)	0.30	mg/l	0.001
④NU0LB Beryllium (Be)			
Beryllium (Be)	<0.001	mg/l	0.005
④VQ022 Boron (B)			
Boron (B)	<0.05	mg/l	0.05
④VQ058 Chromium (Cr)			
Chromium (Cr)	<0.001	mg/l	0.005
④NU0YE Cobalt (Co)			
Cobalt (Co)	0.015	mg/l	0.01
④VQ107 Iron (Fe)			
Iron (Fe)	0.35	mg/l	0.001
④VQ368 Lead (Pb)			
Lead (Pb)	<0.01	mg/l	0.001
④VQ395 Manganese (Mn)			
Manganese (Mn)	0.91	mg/l	0.2
④NU0SJ Molybdenum (Mo)			
Molybdenum (Mo)	<0.005	mg/l	1
④VQ068 Selenium (Se)			
Selenium (Se)	<0.001	mg/l	0.005
④NU0LE Silver (Ag)			
Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763 Soil Preparation - Metals Digestion			
Sample Preparation	done		-
④NU0K0 Tin (Sn)			
Tin (Sn)	0.0090	mg/l	0.001

Food & Water Testing

RESULTS			LOQ
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001	mg/l
			0.001
②NW156	Total Calcium		
	Calcium (Ca)	12.1	mg/l
			0.1
②NW159	Total Copper		
	Copper (Cu)	0.004	mg/l
			0.002
②NW163	Total Magnesium		
	Magnesium (Mg)	2.0	mg/l
			0.1
②NW167	Total Nickel		
	Nickel (Ni)	0.008	mg/l
			0.001
②NW168	Total Potassium		
	Potassium (K)	4.3	mg/l
			0.1
②NW143	Total Silicon		
	Silicon (Si)	0.60	mg/l
			0.03
②NW171	Total Sodium		
	Sodium (Na)	1380	mg/l
			0.1
②NW174	Total Titanium		
	Titanium (Ti)	0.004	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.044	mg/l
			0.005
⑤VQ764	USA Leaching Procedure		
	Leachate Fluid	1.0	-
	pH (initial)	6.6	pH units
			0.01
	pH (Leachate fluid)	4.9	pH units
			0.01
	pH (off)	4.9	pH units
			0.01
	pH (USA HCl addition)	1.2	pH units
			0.01
④NU0M0	Vanadium (V)		
	Vanadium (V)	<0.005	mg/l
			0.005

SAMPLE CODE 817-2024-00005358

Sample described as: MG41410

Reception Date & Time: 15/01/2024 14:50

Analysis Start Date & Time: 15/01/2024 15:51

Analysis Ending Date: 20/02/2024

Sampler(s) Hamish

Sampled Date & Time 20/12/2023 00:00

RESULTS			LOQ
④VQ050	Aluminium (Al)		
	Aluminium	0.96	mg/l
			0.02
④NU0ZC	Antimony (Sb)		
	Antimony (Sb)	<0.005	mg/l
			0.005
④VQ364	Arsenic (As)		
	Arsenic (As)	0.050	mg/l
			0.0001
④NU0PF	Barium (Ba)		
	Barium (Ba)	0.21	mg/l
			0.001
④NU0LB	Beryllium (Be)		
	Beryllium (Be)	<0.001	mg/l
			0.005
④VQ022	Boron (B)		
	Boron (B)	<0.05	mg/l
			0.05

Food & Water Testing

RESULTS			LOQ
④VQ058	Chromium (Cr)		
	Chromium (Cr)	<0.001	mg/l
			0.005
④NU0YE	Cobalt (Co)		
	Cobalt (Co)	0.0050	mg/l
			0.001
④VQ107	Iron (Fe)		
	Iron (Fe)	0.10	mg/l
			0.001
④VQ368	Lead (Pb)		
	Lead (Pb)	<0.01	mg/l
			0.001
④VQ395	Manganese (Mn)		
	Manganese (Mn)	0.29	mg/l
			0.2
④NU0SJ	Molybdenum (Mo)		
	Molybdenum (Mo)	<0.005	mg/l
			1
④VQ068	Selenium (Se)		
	Selenium (Se)	<0.001	mg/l
			0.005
④NU0LE	Silver (Ag)		
	Silver (Ag)	<0.005	mg/l
			0.0005
⑤VQ763	Soil Preparation - Metals Digestion		
	Sample Preparation	done	-
④NU0K0	Tin (Sn)		
	Tin (Sn)	0.0060	mg/l
			0.001
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001	mg/l
			0.001
②NW156	Total Calcium		
	Calcium (Ca)	6.5	mg/l
			0.1
②NW159	Total Copper		
	Copper (Cu)	0.002	mg/l
			0.002
②NW163	Total Magnesium		
	Magnesium (Mg)	1.5	mg/l
			0.1
②NW167	Total Nickel		
	Nickel (Ni)	0.002	mg/l
			0.001
②NW168	Total Potassium		
	Potassium (K)	3.6	mg/l
			0.1
②NW143	Total Silicon		
	Silicon (Si)	0.47	mg/l
			0.03
②NW171	Total Sodium		
	Sodium (Na)	1340	mg/l
			0.1
②NW174	Total Titanium		
	Titanium (Ti)	0.002	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.032	mg/l
			0.005
⑤VQ764	USA Leaching Procedure		
	Leachate Fluid	1.0	-
	pH (initial)	6.2	pH units
	pH (Leachate fluid)	4.9	pH units
	pH (off)	4.9	pH units
	pH (USA HCl addition)	1.3	pH units
			0.01
④NU0M0	Vanadium (V)		
	Vanadium (V)	<0.005	mg/l
			0.005

Food & Water Testing

RESULTS	LOQ

SAMPLE CODE	817-2024-00005359

Sample described as:	MG41414		
Reception Date & Time:	15/01/2024	14:50	
Analysis Start Date & Time:	15/01/2024	15:51	Analysis Ending Date: 20/02/2024
Sampler(s)	Hamish		Sampled Date & Time 20/12/2023 00:00

RESULTS	LOQ

④VQ050	Aluminium (Al)			
	Aluminium	1.0	mg/l	0.02
④NU0ZC	Antimony (Sb)			
	Antimony (Sb)	<0.005	mg/l	0.005
④VQ364	Arsenic (As)			
	Arsenic (As)	0.010	mg/l	0.0001
④NU0PF	Barium (Ba)			
	Barium (Ba)	0.16	mg/l	0.001
④NU0LB	Beryllium (Be)			
	Beryllium (Be)	<0.001	mg/l	0.005
④VQ022	Boron (B)			
	Boron (B)	<0.05	mg/l	0.05
④VQ058	Chromium (Cr)			
	Chromium (Cr)	<0.001	mg/l	0.005
④NU0YE	Cobalt (Co)			
	Cobalt (Co)	0.0030	mg/l	0.001
④VQ107	Iron (Fe)			
	Iron (Fe)	0.14	mg/l	0.001
④VQ368	Lead (Pb)			
	Lead (Pb)	<0.01	mg/l	0.001
④VQ395	Manganese (Mn)			
	Manganese (Mn)	0.62	mg/l	0.2
④NU0SJ	Molybdenum (Mo)			
	Molybdenum (Mo)	<0.005	mg/l	1
④VQ068	Selenium (Se)			
	Selenium (Se)	<0.001	mg/l	0.005
④NU0LE	Silver (Ag)			
	Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763	Soil Preparation - Metals Digestion			
	Sample Preparation	done		-
④NU0K0	Tin (Sn)			
	Tin (Sn)	<0.005	mg/l	0.001
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	6.9	mg/l	0.1
②NW159	Total Copper			
	Copper (Cu)	0.003	mg/l	0.002
②NW163	Total Magnesium			
	Magnesium (Mg)	2.0	mg/l	0.1

Food & Water Testing

RESULTS			LOQ
②NW167	Total Nickel		
	Nickel (Ni)	0.004 mg/l	0.001
②NW168	Total Potassium		
	Potassium (K)	6.2 mg/l	0.1
②NW143	Total Silicon		
	Silicon (Si)	0.69 mg/l	0.03
②NW171	Total Sodium		
	Sodium (Na)	1900 mg/l	0.1
②NW174	Total Titanium		
	Titanium (Ti)	0.005 mg/l	0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.046 mg/l	0.005
⑤VQ764	USA Leaching Procedure		
	Leachate Fluid	1.0	-
	pH (initial)	6.1 pH units	0.01
	pH (Leachate fluid)	4.9 pH units	0.01
	pH (off)	4.9 pH units	0.01
	pH (USA HCl addition)	1.3 pH units	0.01
④NU0M0	Vanadium (V)		
	Vanadium (V)	<0.005 mg/l	0.005

LIST OF METHODS

NU0K0	Tin (Sn): US EPA 6020	NU0LB	Beryllium (Be): US EPA 6020
NU0LE	Silver (Ag): US EPA 6020	NU0M0	Vanadium (V): US EPA 6020
NU0PF	Barium (Ba): US EPA 6020	NU0SJ	Molybdenum (Mo): US EPA 6020
NU0YE	Cobalt (Co): US EPA 6020	NU0ZC	Antimony (Sb): US EPA 6020
NW143	Total Silicon: APHA Online Edition 3120 B mod.	NW154	Total Cadmium: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW159	Total Copper: APHA Online Edition 3125 B mod.
NW163	Total Magnesium: APHA Online Edition 3125 B mod.	NW167	Total Nickel: APHA Online Edition 3125 B mod.
NW168	Total Potassium: APHA Online Edition 3125 B mod.	NW171	Total Sodium: APHA Online Edition 3125 B mod.
NW174	Total Titanium: APHA Online Edition 3125 B mod.	NW177	Total Zinc: APHA Online Edition 3125 B mod.
VQ022	Boron (B): US EPA 6020	VQ050	Aluminium (Al): US EPA 6020
VQ058	Chromium (Cr): US EPA 6020	VQ068	Selenium (Se): US EPA 6020
VQ107	Iron (Fe): US EPA 6020	VQ364	Arsenic (As): US EPA 6020
VQ368	Lead (Pb): US EPA 6020	VQ395	Manganese (Mn): US EPA 6020
VQ763	Soil Preparation - Metals Digestion:	VQ764	USA Leaching Procedure: US EPA 1311

Signature



Leroy Swale
Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

Food & Water Testing

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE

AR-24-NC-005601-01

REPORT DATE

23/02/2024

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders: James Thornton
Contract: Matakanui Gold Water Monitoring
Submission Reference: 5-02-2024

Order code: EUNZCH-00166192

Purchase Order Number: NA

SAMPLE CODE 817-2024-00015361

Client Reference: RS01
Sample described as: Rise and shine stream 1
Reception Date & Time: 07/02/2024 8:30
Analysis Start Date & Time: 07/02/2024 10:33
Product Type Water
Sampled Date & Time 04/02/2024 00:00

Reception temperature: Ambient
Analysis Ending Date: 23/02/2024
Sampler(s) Hamish

RESULTS

LOQ

②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	4	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.05	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.05	mg/l	0.02
②NW023	Conductivity			
	Conductivity	24.9	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	3.4	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.024	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.013	mg/l	0.002

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	35.3	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.09	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	6.46	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0613	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.57	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	9.55	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	7.08	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.511	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

RESULTS			LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.007 mg/l	0.002
②NW006	Fluoride Fluoride	0.12 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.07 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.9	0.1
②NW011	Sulphate Sulphate	0.70 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	9 mg/l	3
②NW003	Total Alkalinity Alkalinity total	124 mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	31.2 mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	122 mg/l	1
②NW030	Total Hardness Hardness	100 mg CaCO3/l	1
②NW163	Total Magnesium Magnesium (Mg)	5.4 mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.240 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	3.9 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.012 mg/l	0.005
②NW212	Turbidity Turbidity	8.93 NTU	0.01

SAMPLE CODE		817-2024-00015362	
Client Reference:	SC01		
Sample described as:	Shepherds Creek by irrigation take		
Reception Date & Time:	07/02/2024	8:30	Reception temperature: Ambient
Analysis Start Date & Time:	07/02/2024	10:33	Analysis Ending Date: 23/02/2024
Product Type	Water		Sampler(s) Hamish
Sampled Date & Time	04/02/2024 00:00		

Food & Water Testing

RESULTS		LOQ	
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO ₃ /l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO ₃ /l	1
②NW345	Acidity to pH 8.3 Acidity	<1 mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen Ammonia nitrogen	0.03 mg/l	0.01
②NW009	Bromide Bromide	0.07 mg/l	0.02
②NW007	Chloride Chloride (Cl)	7.09 mg/l	0.02
②NW023	Conductivity Conductivity	57.0 mS/m	0.1
②NW679	Cyanide Cyanide	<0.005 mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon Carbon	2.5 mg/l	0.1
②NW098	Dissolved Aluminium Aluminium	0.003 mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001 mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	0.003 mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.046 mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001 mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001 mg/l	0.001
②NW103	Dissolved Boron Boron (B)	0.04 mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002 mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	68.3 mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001 mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005 mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005 mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	<0.01 mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005 mg/l	0.0005
②NW111	Dissolved Lithium		

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.010	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	27.6	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0011	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.57	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.24	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	16.5	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	1.08	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0047	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.13	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.0		0.1
②NW011	Sulphate Sulphate	49.5	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

		RESULTS		LOQ
②NW206	Suspended Solids			
	Suspended Solids	<5	mg/l	3
②NW003	Total Alkalinity			
	Alkalinity total	241	mg CaCO3/l	1
②NW156	Total Calcium			
	Calcium (Ca)	62.5	mg/l	0.1
③NW339	Total Dissolved Solids			
	Total dissolved Solids	279	mg/l	1
②NW030	Total Hardness			
	Hardness	255	mg CaCO3/l	1
②NW163	Total Magnesium			
	Magnesium (Mg)	23.9	mg/l	0.1
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.220	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	3.1	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.038	mg/l	0.005
②NW212	Turbidity			
	Turbidity	0.79	NTU	0.01

SAMPLE CODE 817-2024-00015363

Client Reference: SC03

Sample described as: Shepherds Creek 3

Reception Date & Time: 07/02/2024 8:30

Analysis Start Date & Time: 07/02/2024 10:33

Product Type Water

Sampled Date & Time 04/02/2024 00:00

Reception temperature: Ambient

Analysis Ending Date: 23/02/2024

Sampler(s) Hamish

		RESULTS	LOQ	
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	<1	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	3.25	mg/l	0.02
②NW023	Conductivity			
	Conductivity	33.6	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	3.0	mg/l	0.1
②NW098	Dissolved Aluminium			

Food & Water Testing

		RESULTS		LOQ
②NW098	Dissolved Aluminium Aluminium	0.007	mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	<0.001	mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.038	mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	43.5	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	12.0	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0038	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	3.87	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.14	mg/l	0.02
②NW119	Dissolved Silver			

Food & Water Testing

		RESULTS		LOQ
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	8.17	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.724	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0018	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.14	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.31	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	0.04	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.0		0.1
②NW011	Sulphate Sulphate	16.9	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	17	mg/l	3
②NW003	Total Alkalinity Alkalinity total	149	mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	39.4	mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	165	mg/l	1
②NW030	Total Hardness Hardness	138	mg CaCO3/l	1
②NW163	Total Magnesium Magnesium (Mg)	9.7	mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.940	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	3.4	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.018	mg/l	0.005
②NW212	Turbidity			

Food & Water Testing

	RESULTS	LOQ

②NW212 Turbidity	4.79	NTU	0.01
Turbidity			

SAMPLE CODE	817-2024-00015364		
Client Reference:	RS02		
Sample described as:	Rise and shine stream 2 at Shreks		
Reception Date & Time:	07/02/2024 8:30	Reception temperature:	Ambient
Analysis Start Date & Time:	07/02/2024 10:33	Analysis Ending Date:	23/02/2024
Product Type	Water	Sampler(s)	Hamish
Sampled Date & Time	04/02/2024 00:00		

	RESULTS	LOQ

②NW409 Acidity to pH 3.7	<1	mg CaCO3/l	1
Acidity			
③NW410 Acidity to pH 7.0	<1	mg CaCO3/l	1
Acidity			
②NW345 Acidity to pH 8.3	<1	mg CaCO3/l	1
Acidity			
②NW676 Ammonia Nitrogen	0.10	mg/l	0.01
Ammonia nitrogen			
②NW009 Bromide	<0.02	mg/l	0.02
Bromide			
②NW007 Chloride	1.52	mg/l	0.02
Chloride (Cl)			
②NW023 Conductivity	13.0	mS/m	0.1
Conductivity			
②NW679 Cyanide	<0.005	mg/l	0.005
Cyanide			
③NW671 Dissolved (NP) Organic Carbon	1.8	mg/l	0.1
Carbon			
②NW098 Dissolved Aluminium	0.004	mg/l	0.002
Aluminium			
②NW099 Dissolved Antimony	<0.001	mg/l	0.001
Antimony (Sb)			
②NW583 Dissolved Arsenic	0.004	mg/l	0.001
Arsenic (As)			
②NW100 Dissolved Barium	0.009	mg/l	0.002
Barium (Ba)			
②NW101 Dissolved Beryllium	<0.001	mg/l	0.001
Beryllium (Be)			
②NW102 Dissolved Bismuth	<0.001	mg/l	0.001
Bismuth (Bi)			
②NW103 Dissolved Boron	<0.03	mg/l	0.03
Boron (B)			
②NW104 Dissolved Cadmium	<0.0002	mg/l	0.0002
Cadmium (Cd)			
②NW105 Dissolved Calcium	17.2	mg/l	0.1
Calcium (Ca)			
②NW106 Dissolved Chromium			

Food & Water Testing

		RESULTS		LOQ
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	3.23	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0006	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.50	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	10.3	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	4.65	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.238	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			

Food & Water Testing

RESULTS			LOQ
②NW006	Fluoride		
	Fluoride	0.09 mg/l	0.02
②NW010	Nitrate-N		
	Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N		
	Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)		
	pH	7.6	0.1
②NW011	Sulphate		
	Sulphate	1.49 mg/l	0.02
②NW206	Suspended Solids		
	Suspended Solids	6 mg/l	3
②NW003	Total Alkalinity		
	Alkalinity total	58 mg CaCO3/l	1
②NW156	Total Calcium		
	Calcium (Ca)	15.0 mg/l	0.1
③NW339	Total Dissolved Solids		
	Total dissolved Solids	64 mg/l	1
②NW030	Total Hardness		
	Hardness	49 mg CaCO3/l	1
②NW163	Total Magnesium		
	Magnesium (Mg)	2.8 mg/l	0.1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.180 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.3 mg/l	0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.009 mg/l	0.005
②NW212	Turbidity		
	Turbidity	3.56 NTU	0.01

SAMPLE CODE 817-2024-00015365

Client Reference: RSA1

Sample described as: Rise and shine Adit

Reception Date & Time: 07/02/2024 8:30

Analysis Start Date & Time: 07/02/2024 10:33

Product Type Water

Sampled Date & Time 04/02/2024 00:00

Reception temperature: Ambient

Analysis Ending Date: 23/02/2024

Sampler(s) Hamish

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0		
	Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		
	Acidity	48 mg CaCO3/l	1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.13 mg/l	0.01
②NW009	Bromide		

Food & Water Testing

		RESULTS		LOQ
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	0.44	mg/l	0.02
②NW023	Conductivity			
	Conductivity	27.0	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	4.0	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.003	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.038	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.030	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	39.9	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.07	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	7.64	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0115	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.34 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	15.4 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.43 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.536 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.005 mg/l	0.002
②NW006	Fluoride Fluoride	0.13 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.03 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.6	0.1
②NW011	Sulphate Sulphate	1.15 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	69 mg/l	3
②NW003	Total Alkalinity Alkalinity total	134 mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	33.7 mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	133 mg/l	1
②NW030	Total Hardness		

Food & Water Testing

RESULTS			LOQ
②NW030	Total Hardness		
	Hardness	108	mg CaCO ₃ /l
			1
②NW163	Total Magnesium		
	Magnesium (Mg)	5.9	mg/l
			0.1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	1.83	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	10.4	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.188	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	30.5	NTU
			0.01

SAMPLE CODE		817-2024-00015366	
Client Reference:		RS03	
Sample described as:		Rise and shine stream 3 at Alta crossing	
Reception Date & Time:		07/02/2024 8:30	Reception temperature: Ambient
Analysis Start Date & Time:		07/02/2024 10:33	Analysis Ending Date: 23/02/2024
Product Type		Water	Sampler(s) Hamish
Sampled Date & Time		04/02/2024 00:00	

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO ₃ /l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO ₃ /l
			1
②NW345	Acidity to pH 8.3		
	Acidity	<1	mg CaCO ₃ /l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	1.08	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	12.1	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.6	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	<0.002	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.008	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.007	mg/l
			0.002
②NW101	Dissolved Beryllium		

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	13.3	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	0.09	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.43	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.79	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	233	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.136	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

RESULTS			LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.011 mg/l	0.002
②NW006	Fluoride Fluoride	0.06 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	9.3	0.1
②NW011	Sulphate Sulphate	0.66 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<5 mg/l	3
②NW003	Total Alkalinity Alkalinity total	58 mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	11.2 mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	59 mg/l	1
②NW030	Total Hardness Hardness	36 mg CaCO3/l	1
②NW163	Total Magnesium Magnesium (Mg)	2.1 mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.120 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	2.3 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.014 mg/l	0.005
②NW212	Turbidity Turbidity	0.75 NTU	0.01

LIST OF METHODS

NW003	Total Alkalinity: APHA Online Edition 2320 B	NW006	Fluoride: APHA Online Edition 4110 B
NW007	Chloride: APHA Online Edition 4110 B	NW008	Nitrite-N: APHA Online Edition 4110 B
NW009	Bromide: APHA Online Edition 4110 B	NW010	Nitrate-N: APHA Online Edition 4110 B
NW011	Sulphate: APHA Online Edition 4110 B	NW023	Conductivity: APHA 24th Edition 2510 B
		NW030	Total Hardness: APHA Online Edition 2340 B

Food & Water Testing

NW098	Dissolved Aluminium: APHA Online Edition 3125 B mod.	NW099	Dissolved Antimony: APHA Online Edition 3125 B mod.
NW100	Dissolved Barium: APHA Online Edition 3125 B mod.	NW101	Dissolved Beryllium: APHA Online Edition 3125 B mod.
NW102	Dissolved Bismuth: APHA Online Edition 3125 B mod.	NW103	Dissolved Boron: APHA Online Edition 3125 B mod.
NW104	Dissolved Cadmium: APHA Online Edition 3125 B mod.	NW105	Dissolved Calcium: APHA Online Edition 3125 B mod.
NW106	Dissolved Chromium: APHA Online Edition 3125 B mod.	NW107	Dissolved Cobalt: APHA Online Edition 3125 B mod.
NW108	Dissolved Copper: APHA Online Edition 3125 B mod.	NW109	Dissolved Iron: APHA Online Edition 3125 B mod.
NW110	Dissolved Lead: APHA Online Edition 3125 B mod.	NW111	Dissolved Lithium: APHA Online Edition 3125 B mod.
NW112	Dissolved Magnesium: APHA Online Edition 3125 B mod.	NW113	Dissolved Manganese: APHA Online Edition 3125 B mod.
NW114	Dissolved Mercury: APHA Online Edition 3125 B mod.	NW115	Dissolved Molybdenum: APHA Online Edition 3125 B mod.
NW116	Dissolved Nickel: APHA Online Edition 3125 B mod.	NW117	Dissolved Potassium: APHA Online Edition 3125 B mod.
NW118	Dissolved Selenium: APHA Online Edition 3125 B mod.	NW119	Dissolved Silver: APHA Online Edition 3125 B mod.
NW120	Dissolved Sodium: APHA Online Edition 3125 B mod.	NW121	Dissolved Strontium: APHA Online Edition 3125 B mod.
NW122	Dissolved Tin: APHA Online Edition 3125 B mod.	NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.
NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.	NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW163	Total Magnesium: APHA Online Edition 3125 B mod.
NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I	NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B
NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B	NW206	Suspended Solids: APHA Online Edition 2540 D
NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B	NW212	Turbidity: APHA 24th Edition 2130 B
NW339	Total Dissolved Solids: Internal Method, Gravimetry	NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)
NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)	NW410	Acidity to pH 7.0: Internal Method, Titrimetry
NW472	Dissolved Silica: APHA Online Edition 3120 B mod.	NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.
NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.	NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.
NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C	NW676	Ammonia Nitrogen: Internal Method, Electrometry
NW679	Cyanide: APHA Online Edition 4500-CN C & E		

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

Food & Water Testing

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND. The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE	AR-24-NC-007599-01	REPORT DATE	12/03/2024
Attention	Matakanui Gold Hamish McLauchlan 1460 Bendigo Station RD3 9383 Cromwell NEW ZEALAND		
Phone	0064275886631		
Email	hamish.mclauchlan@matakanuigold.co.nz		

Contact for your orders:	James Thornton	Order code:	EUNZCH-00166903
Contract:	Matakanui Gold Water Monitoring	Purchase Order Number:	NA

SAMPLE CODE	817-2024-00018180		
Sample Reference	MG41400		
Reception Date & Time:	12/02/2024 10:55		
Analysis Started on:	12/02/2024	Analysis Ending Date:	08/03/2024
Sampler(s)	Hamish	Sampled Date & Time	20/12/2023 00:00

RESULTS		LOQ	
④VQ050	Aluminium (Al)		
	Aluminium	0.33	mg/l 0.02
④NU0ZC	Antimony (Sb)		
	Antimony (Sb)	<0.005	mg/l 0.005
④VQ364	Arsenic (As)		
	Arsenic (As)	0.33	mg/l 0.0001
④NU0PF	Barium (Ba)		
	Barium (Ba)	0.090	mg/l 0.001
④NU0LB	Beryllium (Be)		
	Beryllium (Be)	<0.001	mg/l 0.005
④NU0Q1	Boron (B) - Low Level		
	Boron (B)	<0.05	mg/l 0.005
④VQ058	Chromium (Cr)		
	Chromium (Cr)	<0.001	mg/l 0.001
④NU0YE	Cobalt (Co)		
	Cobalt (Co)	0.0040	mg/l 0.001
④VQ107	Iron (Fe)		
	Iron (Fe)	0.55	mg/l 0.001
④VQ368	Lead (Pb)		
	Lead (Pb)	<0.01	mg/l 0.001
④VQ395	Manganese (Mn)		
	Manganese (Mn)	0.31	mg/l 0.2
④NU0SJ	Molybdenum (Mo)		
	Molybdenum (Mo)	<0.005	mg/l 0.005
④VQ068	Selenium (Se)		
	Selenium (Se)	<0.001	mg/l 0.001
④NU0LE	Silver (Ag)		
	Silver (Ag)	<0.005	mg/l 0.0005

Food & Water Testing

RESULTS			LOQ
⑤VQ763	Soil Preparation - Metals Digestion		
	Sample Preparation	complete	-
④NU0K0	Tin (Sn)		
	Tin (Sn)	0.0060	mg/l
			0.001
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001	mg/l
			0.001
②NW156	Total Calcium		
	Calcium (Ca)	1.4	mg/l
			0.1
②NW159	Total Copper		
	Copper (Cu)	0.012	mg/l
			0.002
②NW163	Total Magnesium		
	Magnesium (Mg)	1.0	mg/l
			0.1
②NW167	Total Nickel		
	Nickel (Ni)	0.004	mg/l
			0.001
②NW168	Total Potassium		
	Potassium (K)	7.8	mg/l
			0.1
②NW143	Total Silicon		
	Silicon (Si)	13.6	mg/l
			0.03
②NW171	Total Sodium		
	Sodium (Na)	2.5	mg/l
			0.1
②NW174	Total Titanium		
	Titanium (Ti)	0.154	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.080	mg/l
			0.005
④NU0M0	Vanadium (V)		
	Vanadium (V)	<0.005	mg/l
			0.005

SAMPLE CODE 817-2024-00018181

Sample Reference MG41400

Reception Date & Time: 12/02/2024 10:55

Analysis Started on: 12/02/2024

Analysis Ending Date: 08/03/2024

Sampler(s) Hamish

Sampled Date & Time 20/12/2023 00:00

RESULTS			LOQ
④VQ050	Aluminium (Al)		
	Aluminium	<0.05	mg/l
			0.02
④NU0ZC	Antimony (Sb)		
	Antimony (Sb)	<0.005	mg/l
			0.005
④VQ364	Arsenic (As)		
	Arsenic (As)	0.040	mg/l
			0.0001
④NU0PF	Barium (Ba)		
	Barium (Ba)	0.090	mg/l
			0.001
④NU0LB	Beryllium (Be)		
	Beryllium (Be)	<0.001	mg/l
			0.005
④NU0Q1	Boron (B) - Low Level		
	Boron (B)	<0.05	mg/l
			0.005
④VQ058	Chromium (Cr)		
	Chromium (Cr)	<0.001	mg/l
			0.001

Food & Water Testing

		RESULTS		LOQ
④NU0YE	Cobalt (Co)			
	Cobalt (Co)	0.0020	mg/l	0.001
④VQ107	Iron (Fe)			
	Iron (Fe)	0.49	mg/l	0.001
④VQ368	Lead (Pb)			
	Lead (Pb)	<0.01	mg/l	0.001
④VQ395	Manganese (Mn)			
	Manganese (Mn)	<0.2	mg/l	0.2
④NU0SJ	Molybdenum (Mo)			
	Molybdenum (Mo)	<0.005	mg/l	0.005
④VQ068	Selenium (Se)			
	Selenium (Se)	<0.001	mg/l	0.001
④NU0LE	Silver (Ag)			
	Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763	Soil Preparation - Metals Digestion			
	Sample Preparation	complete		-
④NU0K0	Tin (Sn)			
	Tin (Sn)	<0.005	mg/l	0.001
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	1.1	mg/l	0.1
②NW159	Total Copper			
	Copper (Cu)	0.007	mg/l	0.002
②NW163	Total Magnesium			
	Magnesium (Mg)	0.8	mg/l	0.1
②NW167	Total Nickel			
	Nickel (Ni)	0.003	mg/l	0.001
②NW168	Total Potassium			
	Potassium (K)	3.7	mg/l	0.1
②NW143	Total Silicon			
	Silicon (Si)	9.15	mg/l	0.03
②NW171	Total Sodium			
	Sodium (Na)	1.8	mg/l	0.1
②NW174	Total Titanium			
	Titanium (Ti)	0.122	mg/l	0.001
②NW177	Total Zinc			
	Zinc (Zn)	0.058	mg/l	0.005
④NU0M0	Vanadium (V)			
	Vanadium (V)	<0.005	mg/l	0.005

SAMPLE CODE	817-2024-00018182		
Sample Reference	MG41400		
Reception Date & Time:	12/02/2024 10:55		
Analysis Started on:	12/02/2024	Analysis Ending Date:	08/03/2024
Sampler(s)	Hamish	Sampled Date & Time	20/12/2023 00:00

RESULTS		LOQ	

Food & Water Testing

		RESULTS		LOQ
④VQ050	Aluminium (Al)			
	Aluminium	0.24	mg/l	0.02
④NU0ZC	Antimony (Sb)			
	Antimony (Sb)	<0.005	mg/l	0.005
④VQ364	Arsenic (As)			
	Arsenic (As)	0.10	mg/l	0.0001
④NU0PF	Barium (Ba)			
	Barium (Ba)	0.11	mg/l	0.001
④NU0LB	Beryllium (Be)			
	Beryllium (Be)	<0.001	mg/l	0.005
④NU0Q1	Boron (B) - Low Level			
	Boron (B)	<0.05	mg/l	0.005
④VQ058	Chromium (Cr)			
	Chromium (Cr)	<0.001	mg/l	0.001
④NU0YE	Cobalt (Co)			
	Cobalt (Co)	0.0080	mg/l	0.001
④VQ107	Iron (Fe)			
	Iron (Fe)	1.1	mg/l	0.001
④VQ368	Lead (Pb)			
	Lead (Pb)	<0.01	mg/l	0.001
④VQ395	Manganese (Mn)			
	Manganese (Mn)	0.36	mg/l	0.2
④NU0SJ	Molybdenum (Mo)			
	Molybdenum (Mo)	<0.005	mg/l	0.005
④VQ068	Selenium (Se)			
	Selenium (Se)	<0.001	mg/l	0.001
④NU0LE	Silver (Ag)			
	Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763	Soil Preparation - Metals Digestion			
	Sample Preparation	complete		-
④NU0K0	Tin (Sn)			
	Tin (Sn)	0.0070	mg/l	0.001
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	1.1	mg/l	0.1
②NW159	Total Copper			
	Copper (Cu)	0.012	mg/l	0.002
②NW163	Total Magnesium			
	Magnesium (Mg)	1.0	mg/l	0.1
②NW167	Total Nickel			
	Nickel (Ni)	0.007	mg/l	0.001
②NW168	Total Potassium			
	Potassium (K)	4.5	mg/l	0.1
②NW143	Total Silicon			
	Silicon (Si)	13.8	mg/l	0.03
②NW171	Total Sodium			

Food & Water Testing

RESULTS			LOQ
②NW171	Total Sodium		
	Sodium (Na)	1.5	mg/l
			0.1
②NW174	Total Titanium		
	Titanium (Ti)	0.225	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.080	mg/l
			0.005
④NU0M0	Vanadium (V)		
	Vanadium (V)	<0.005	mg/l
			0.005

SAMPLE CODE 817-2024-00018183

Sample Reference MG41400

Reception Date & Time: 12/02/2024 10:55

Analysis Started on: 12/02/2024

Analysis Ending Date: 08/03/2024

Sampler(s) Hamish

Sampled Date & Time 20/12/2023 00:00

RESULTS			LOQ
④VQ050	Aluminium (Al)		
	Aluminium	0.59	mg/l
			0.02
④NU0ZC	Antimony (Sb)		
	Antimony (Sb)	<0.005	mg/l
			0.005
④VQ364	Arsenic (As)		
	Arsenic (As)	0.10	mg/l
			0.0001
④NU0PF	Barium (Ba)		
	Barium (Ba)	0.090	mg/l
			0.001
④NU0LB	Beryllium (Be)		
	Beryllium (Be)	<0.001	mg/l
			0.005
④NU0Q1	Boron (B) - Low Level		
	Boron (B)	<0.05	mg/l
			0.005
④VQ058	Chromium (Cr)		
	Chromium (Cr)	<0.001	mg/l
			0.001
④NU0YE	Cobalt (Co)		
	Cobalt (Co)	0.0030	mg/l
			0.001
④VQ107	Iron (Fe)		
	Iron (Fe)	0.60	mg/l
			0.001
④VQ368	Lead (Pb)		
	Lead (Pb)	<0.01	mg/l
			0.001
④VQ395	Manganese (Mn)		
	Manganese (Mn)	0.22	mg/l
			0.2
④NU0SJ	Molybdenum (Mo)		
	Molybdenum (Mo)	<0.005	mg/l
			0.005
④VQ068	Selenium (Se)		
	Selenium (Se)	<0.001	mg/l
			0.001
④NU0LE	Silver (Ag)		
	Silver (Ag)	<0.005	mg/l
			0.0005
⑤VQ763	Soil Preparation - Metals Digestion		
	Sample Preparation	completed	-
④NU0K0	Tin (Sn)		
	Tin (Sn)	0.0050	mg/l
			0.001

Food & Water Testing

RESULTS			LOQ
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001	mg/l
			0.001
②NW156	Total Calcium		
	Calcium (Ca)	0.9	mg/l
			0.1
②NW159	Total Copper		
	Copper (Cu)	0.005	mg/l
			0.002
②NW163	Total Magnesium		
	Magnesium (Mg)	1.3	mg/l
			0.1
②NW167	Total Nickel		
	Nickel (Ni)	0.004	mg/l
			0.001
②NW168	Total Potassium		
	Potassium (K)	5.3	mg/l
			0.1
②NW143	Total Silicon		
	Silicon (Si)	16.7	mg/l
			0.03
②NW171	Total Sodium		
	Sodium (Na)	1.7	mg/l
			0.1
②NW174	Total Titanium		
	Titanium (Ti)	0.220	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.081	mg/l
			0.005
④NU0M0	Vanadium (V)		
	Vanadium (V)	<0.005	mg/l
			0.005

SAMPLE CODE	817-2024-00018184		
Sample Reference	MG41400		
Reception Date & Time:	12/02/2024 10:55		
Analysis Started on:	12/02/2024	Analysis Ending Date:	08/03/2024
Sampler(s)	Hamish	Sampled Date & Time	20/12/2023 00:00

RESULTS			LOQ
④VQ050	Aluminium (Al)		
	Aluminium	1.1	mg/l
			0.02
④NU0ZC	Antimony (Sb)		
	Antimony (Sb)	<0.005	mg/l
			0.005
④VQ364	Arsenic (As)		
	Arsenic (As)	0.020	mg/l
			0.0001
④NU0PF	Barium (Ba)		
	Barium (Ba)	0.10	mg/l
			0.001
④NU0LB	Beryllium (Be)		
	Beryllium (Be)	<0.001	mg/l
			0.005
④NU0Q1	Boron (B) - Low Level		
	Boron (B)	<0.05	mg/l
			0.005
④VQ058	Chromium (Cr)		
	Chromium (Cr)	<0.001	mg/l
			0.001
④NU0YE	Cobalt (Co)		
	Cobalt (Co)	0.0020	mg/l
			0.001
④VQ107	Iron (Fe)		
	Iron (Fe)	0.61	mg/l
			0.001

Food & Water Testing

		RESULTS		LOQ
④VQ368	Lead (Pb)			
	Lead (Pb)	<0.01	mg/l	0.001
④VQ395	Manganese (Mn)			
	Manganese (Mn)	0.30	mg/l	0.2
④NU0SJ	Molybdenum (Mo)			
	Molybdenum (Mo)	<0.005	mg/l	0.005
④VQ068	Selenium (Se)			
	Selenium (Se)	<0.001	mg/l	0.001
④NU0LE	Silver (Ag)			
	Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763	Soil Preparation - Metals Digestion			
	Sample Preparation	completed		-
④NU0K0	Tin (Sn)			
	Tin (Sn)	<0.005	mg/l	0.001
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	1.0	mg/l	0.1
②NW159	Total Copper			
	Copper (Cu)	0.004	mg/l	0.002
②NW163	Total Magnesium			
	Magnesium (Mg)	1.4	mg/l	0.1
②NW167	Total Nickel			
	Nickel (Ni)	0.004	mg/l	0.001
②NW168	Total Potassium			
	Potassium (K)	8.2	mg/l	0.1
②NW143	Total Silicon			
	Silicon (Si)	23.4	mg/l	0.03
②NW171	Total Sodium			
	Sodium (Na)	1.8	mg/l	0.1
②NW174	Total Titanium			
	Titanium (Ti)	0.332	mg/l	0.001
②NW177	Total Zinc			
	Zinc (Zn)	0.088	mg/l	0.005
④NU0M0	Vanadium (V)			
	Vanadium (V)	<0.005	mg/l	0.005

LIST OF METHODS

NU0K0	Tin (Sn): US EPA 6020	NU0LB	Beryllium (Be): US EPA 6020
NU0LE	Silver (Ag): US EPA 6020	NU0M0	Vanadium (V): US EPA 6020
NU0PF	Barium (Ba): US EPA 6020	NU0Q1	Boron (B) - Low Level: US EPA 6020
NU0SJ	Molybdenum (Mo): US EPA 6020	NU0YE	Cobalt (Co): US EPA 6020
NU0ZC	Antimony (Sb): US EPA 6020	NW143	Total Silicon: APHA Online Edition 3120 B mod.
NW154	Total Cadmium: APHA Online Edition 3125 B mod.	NW156	Total Calcium: APHA Online Edition 3125 B mod.
NW159	Total Copper: APHA Online Edition 3125 B mod.	NW163	Total Magnesium: APHA Online Edition 3125 B mod.
NW167	Total Nickel: APHA Online Edition 3125 B mod.	NW168	Total Potassium: APHA Online Edition 3125 B mod.

Food & Water Testing

NW171 **Total Sodium:** APHA Online Edition 3125 B mod.

NW174 **Total Titanium:** APHA Online Edition 3125 B mod.

NW177 **Total Zinc:** APHA Online Edition 3125 B mod.

VQ050 **Aluminium (Al):** US EPA 6020

VQ058 **Chromium (Cr):** US EPA 6020

VQ068 **Selenium (Se):** US EPA 6020

VQ107 **Iron (Fe):** US EPA 6020

VQ364 **Arsenic (As):** US EPA 6020

VQ368 **Lead (Pb):** US EPA 6020

VQ395 **Manganese (Mn):** US EPA 6020

VQ763 **Soil Preparation - Metals Digestion:**

Signature



Leroy Swale
Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

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- ③ Test is subcontracted within Eurofins group and is not accredited
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- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

Eurofins may subcontract the performance of part or all of the Services to a third party and the Customer authorises the release of all information necessary to the third party for the provision of the Services.

All samples become the property of Eurofins to the extent necessary for the performance of the Services.

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If the Customer pays for storage of the samples Eurofins will take commercially reasonable steps to store the samples for the agreed period in terms of industry practice.

The Eurofins water sampling service follows methodology based on AS/NZS 5667 and / or best practice to collect and transport samples that are fit for the purpose of analytical testing. The laboratory is not responsible for sampling activities unless explicitly indicated by the statement "Sampled by Eurofins" on the report for water samples.

The Customer acknowledges that the Services are provided using the current state of technology and methods developed and generally applied by Eurofins and involve analysis, interpretations, consulting work and conclusions. Eurofins shall use commercially reasonable degree of care in providing the Services.

This report is produced and issued on the basis of information, documents and/or samples provided by, or on behalf of, the Customer and solely for the benefit of the Customer who is responsible for acting as it sees fit on the basis of this report. Neither Eurofins nor any of its officers, employees, agents or subcontractors shall be liable to the Customer nor any third party for any actions taken or not taken on the basis of this report nor for any incorrect results arising from unclear, erroneous, incomplete, misleading or false information provided to Eurofins.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE **AR-24-NC-007599-02 #** REPORT DATE **13/03/2024**

This amended report supersedes Analytical Report number AR-24-NC-007599-01, dated 12/03/2024.

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders: James Thornton
Contract: Matakanui Gold Water Monitoring

Order code: EUNZCH-00166903

Purchase Order Number: NA

Comments: sample refs amended

SAMPLE CODE **817-2024-00018180**

Sample Reference MG41400

Reception Date & Time: 12/02/2024 10:55

Analysis Started on: 12/02/2024

Analysis Ending Date: 08/03/2024

Sampler(s) Hamish

Sampled Date & Time 20/12/2023 00:00

RESULTS			LOQ
④VQ050	Aluminium (Al)		
	Aluminium	0.33 mg/l	0.02
④NU0ZC	Antimony (Sb)		
	Antimony (Sb)	<0.005 mg/l	0.005
④VQ364	Arsenic (As)		
	Arsenic (As)	0.33 mg/l	0.0001
④NU0PF	Barium (Ba)		
	Barium (Ba)	0.090 mg/l	0.001
④NU0LB	Beryllium (Be)		
	Beryllium (Be)	<0.001 mg/l	0.005
④NU0Q1	Boron (B) - Low Level		
	Boron (B)	<0.05 mg/l	0.005
④VQ058	Chromium (Cr)		
	Chromium (Cr)	<0.001 mg/l	0.001
④NU0YE	Cobalt (Co)		
	Cobalt (Co)	0.0040 mg/l	0.001
④VQ107	Iron (Fe)		
	Iron (Fe)	0.55 mg/l	0.001
④VQ368	Lead (Pb)		
	Lead (Pb)	<0.01 mg/l	0.001
④VQ395	Manganese (Mn)		
	Manganese (Mn)	0.31 mg/l	0.2
④NU0SJ	Molybdenum (Mo)		
	Molybdenum (Mo)	<0.005 mg/l	0.005
④VQ068	Selenium (Se)		
	Selenium (Se)	<0.001 mg/l	0.001

Food & Water Testing

RESULTS			LOQ
④NU0LE	Silver (Ag)		
	Silver (Ag)	<0.005	mg/l
			0.0005
⑤VQ763	Soil Preparation - Metals Digestion		
	Sample Preparation	complete	-
④NU0K0	Tin (Sn)		
	Tin (Sn)	0.0060	mg/l
			0.001
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001	mg/l
			0.001
②NW156	Total Calcium		
	Calcium (Ca)	1.4	mg/l
			0.1
②NW159	Total Copper		
	Copper (Cu)	0.012	mg/l
			0.002
②NW163	Total Magnesium		
	Magnesium (Mg)	1.0	mg/l
			0.1
②NW167	Total Nickel		
	Nickel (Ni)	0.004	mg/l
			0.001
②NW168	Total Potassium		
	Potassium (K)	7.8	mg/l
			0.1
②NW143	Total Silicon		
	Silicon (Si)	13.6	mg/l
			0.03
②NW171	Total Sodium		
	Sodium (Na)	2.5	mg/l
			0.1
②NW174	Total Titanium		
	Titanium (Ti)	0.154	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.080	mg/l
			0.005
④NU0M0	Vanadium (V)		
	Vanadium (V)	<0.005	mg/l
			0.005

SAMPLE CODE 817-2024-00018181

Sample Reference MG41405

Reception Date & Time: 12/02/2024 10:55

Analysis Started on: 12/02/2024

Sampler(s) Hamish

Analysis Ending Date: 08/03/2024

Sampled Date & Time 20/12/2023 00:00

RESULTS			LOQ
④VQ050	Aluminium (Al)		
	Aluminium	<0.05	mg/l
			0.02
④NU0ZC	Antimony (Sb)		
	Antimony (Sb)	<0.005	mg/l
			0.005
④VQ364	Arsenic (As)		
	Arsenic (As)	0.040	mg/l
			0.0001
④NU0PF	Barium (Ba)		
	Barium (Ba)	0.090	mg/l
			0.001
④NU0LB	Beryllium (Be)		
	Beryllium (Be)	<0.001	mg/l
			0.005
④NU0Q1	Boron (B) - Low Level		
	Boron (B)	<0.05	mg/l
			0.005

Food & Water Testing

		RESULTS		LOQ
④VQ058	Chromium (Cr)			
	Chromium (Cr)	<0.001	mg/l	0.001
④NU0YE	Cobalt (Co)			
	Cobalt (Co)	0.0020	mg/l	0.001
④VQ107	Iron (Fe)			
	Iron (Fe)	0.49	mg/l	0.001
④VQ368	Lead (Pb)			
	Lead (Pb)	<0.01	mg/l	0.001
④VQ395	Manganese (Mn)			
	Manganese (Mn)	<0.2	mg/l	0.2
④NU0SJ	Molybdenum (Mo)			
	Molybdenum (Mo)	<0.005	mg/l	0.005
④VQ068	Selenium (Se)			
	Selenium (Se)	<0.001	mg/l	0.001
④NU0LE	Silver (Ag)			
	Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763	Soil Preparation - Metals Digestion			
	Sample Preparation	complete		-
④NU0K0	Tin (Sn)			
	Tin (Sn)	<0.005	mg/l	0.001
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	1.1	mg/l	0.1
②NW159	Total Copper			
	Copper (Cu)	0.007	mg/l	0.002
②NW163	Total Magnesium			
	Magnesium (Mg)	0.8	mg/l	0.1
②NW167	Total Nickel			
	Nickel (Ni)	0.003	mg/l	0.001
②NW168	Total Potassium			
	Potassium (K)	3.7	mg/l	0.1
②NW143	Total Silicon			
	Silicon (Si)	9.15	mg/l	0.03
②NW171	Total Sodium			
	Sodium (Na)	1.8	mg/l	0.1
②NW174	Total Titanium			
	Titanium (Ti)	0.122	mg/l	0.001
②NW177	Total Zinc			
	Zinc (Zn)	0.058	mg/l	0.005
④NU0M0	Vanadium (V)			
	Vanadium (V)	<0.005	mg/l	0.005

SAMPLE CODE	817-2024-00018182		
Sample Reference	MG41409		
Reception Date & Time:	12/02/2024 10:55		
Analysis Started on:	12/02/2024	Analysis Ending Date:	08/03/2024
Sampler(s)	Hamish	Sampled Date & Time	20/12/2023 00:00

Food & Water Testing

		RESULTS		LOQ
④VQ050	Aluminium (Al)			
	Aluminium	0.24	mg/l	0.02
④NU0ZC	Antimony (Sb)			
	Antimony (Sb)	<0.005	mg/l	0.005
④VQ364	Arsenic (As)			
	Arsenic (As)	0.10	mg/l	0.0001
④NU0PF	Barium (Ba)			
	Barium (Ba)	0.11	mg/l	0.001
④NU0LB	Beryllium (Be)			
	Beryllium (Be)	<0.001	mg/l	0.005
④NU0Q1	Boron (B) - Low Level			
	Boron (B)	<0.05	mg/l	0.005
④VQ058	Chromium (Cr)			
	Chromium (Cr)	<0.001	mg/l	0.001
④NU0YE	Cobalt (Co)			
	Cobalt (Co)	0.0080	mg/l	0.001
④VQ107	Iron (Fe)			
	Iron (Fe)	1.1	mg/l	0.001
④VQ368	Lead (Pb)			
	Lead (Pb)	<0.01	mg/l	0.001
④VQ395	Manganese (Mn)			
	Manganese (Mn)	0.36	mg/l	0.2
④NU0SJ	Molybdenum (Mo)			
	Molybdenum (Mo)	<0.005	mg/l	0.005
④VQ068	Selenium (Se)			
	Selenium (Se)	<0.001	mg/l	0.001
④NU0LE	Silver (Ag)			
	Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763	Soil Preparation - Metals Digestion			
	Sample Preparation	complete		-
④NU0K0	Tin (Sn)			
	Tin (Sn)	0.0070	mg/l	0.001
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	1.1	mg/l	0.1
②NW159	Total Copper			
	Copper (Cu)	0.012	mg/l	0.002
②NW163	Total Magnesium			
	Magnesium (Mg)	1.0	mg/l	0.1
②NW167	Total Nickel			
	Nickel (Ni)	0.007	mg/l	0.001
②NW168	Total Potassium			
	Potassium (K)	4.5	mg/l	0.1
②NW143	Total Silicon			
	Silicon (Si)	13.8	mg/l	0.03
②NW171	Total Sodium			

Food & Water Testing

		RESULTS		LOQ
②NW171	Total Sodium Sodium (Na)	1.5	mg/l	0.1
②NW174	Total Titanium Titanium (Ti)	0.225	mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	0.080	mg/l	0.005
④NU0M0	Vanadium (V) Vanadium (V)	<0.005	mg/l	0.005

SAMPLE CODE	817-2024-00018183		
Sample Reference	MG41410		
Reception Date & Time:	12/02/2024 10:55		
Analysis Started on:	12/02/2024	Analysis Ending Date:	08/03/2024
Sampler(s)	Hamish	Sampled Date & Time	20/12/2023 00:00

		RESULTS		LOQ
④VQ050	Aluminium (Al)	0.59	mg/l	0.02
④NU0ZC	Antimony (Sb)	<0.005	mg/l	0.005
④VQ364	Arsenic (As)	0.10	mg/l	0.0001
④NU0PF	Barium (Ba)	0.090	mg/l	0.001
④NU0LB	Beryllium (Be)	<0.001	mg/l	0.005
④NU0Q1	Boron (B) - Low Level	<0.05	mg/l	0.005
④VQ058	Chromium (Cr)	<0.001	mg/l	0.001
④NU0YE	Cobalt (Co)	0.0030	mg/l	0.001
④VQ107	Iron (Fe)	0.60	mg/l	0.001
④VQ368	Lead (Pb)	<0.01	mg/l	0.001
④VQ395	Manganese (Mn)	0.22	mg/l	0.2
④NU0SJ	Molybdenum (Mo)	<0.005	mg/l	0.005
④VQ068	Selenium (Se)	<0.001	mg/l	0.001
④NU0LE	Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763	Soil Preparation - Metals Digestion	completed		-
④NU0K0	Tin (Sn)	0.0050	mg/l	0.001

Food & Water Testing

RESULTS			LOQ
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001	mg/l
			0.001
②NW156	Total Calcium		
	Calcium (Ca)	0.9	mg/l
			0.1
②NW159	Total Copper		
	Copper (Cu)	0.005	mg/l
			0.002
②NW163	Total Magnesium		
	Magnesium (Mg)	1.3	mg/l
			0.1
②NW167	Total Nickel		
	Nickel (Ni)	0.004	mg/l
			0.001
②NW168	Total Potassium		
	Potassium (K)	5.3	mg/l
			0.1
②NW143	Total Silicon		
	Silicon (Si)	16.7	mg/l
			0.03
②NW171	Total Sodium		
	Sodium (Na)	1.7	mg/l
			0.1
②NW174	Total Titanium		
	Titanium (Ti)	0.220	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.081	mg/l
			0.005
④NU0M0	Vanadium (V)		
	Vanadium (V)	<0.005	mg/l
			0.005

SAMPLE CODE	817-2024-00018184		
Sample Reference	MG41414		
Reception Date & Time:	12/02/2024 10:55		
Analysis Started on:	12/02/2024	Analysis Ending Date:	08/03/2024
Sampler(s)	Hamish	Sampled Date & Time	20/12/2023 00:00

RESULTS			LOQ
④VQ050	Aluminium (Al)		
	Aluminium	1.1	mg/l
			0.02
④NU0ZC	Antimony (Sb)		
	Antimony (Sb)	<0.005	mg/l
			0.005
④VQ364	Arsenic (As)		
	Arsenic (As)	0.020	mg/l
			0.0001
④NU0PF	Barium (Ba)		
	Barium (Ba)	0.10	mg/l
			0.001
④NU0LB	Beryllium (Be)		
	Beryllium (Be)	<0.001	mg/l
			0.005
④NU0Q1	Boron (B) - Low Level		
	Boron (B)	<0.05	mg/l
			0.005
④VQ058	Chromium (Cr)		
	Chromium (Cr)	<0.001	mg/l
			0.001
④NU0YE	Cobalt (Co)		
	Cobalt (Co)	0.0020	mg/l
			0.001
④VQ107	Iron (Fe)		
	Iron (Fe)	0.61	mg/l
			0.001

Food & Water Testing

		RESULTS		LOQ
④VQ368	Lead (Pb)			
	Lead (Pb)	<0.01	mg/l	0.001
④VQ395	Manganese (Mn)			
	Manganese (Mn)	0.30	mg/l	0.2
④NU0SJ	Molybdenum (Mo)			
	Molybdenum (Mo)	<0.005	mg/l	0.005
④VQ068	Selenium (Se)			
	Selenium (Se)	<0.001	mg/l	0.001
④NU0LE	Silver (Ag)			
	Silver (Ag)	<0.005	mg/l	0.0005
⑤VQ763	Soil Preparation - Metals Digestion			
	Sample Preparation	completed		-
④NU0K0	Tin (Sn)			
	Tin (Sn)	<0.005	mg/l	0.001
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	1.0	mg/l	0.1
②NW159	Total Copper			
	Copper (Cu)	0.004	mg/l	0.002
②NW163	Total Magnesium			
	Magnesium (Mg)	1.4	mg/l	0.1
②NW167	Total Nickel			
	Nickel (Ni)	0.004	mg/l	0.001
②NW168	Total Potassium			
	Potassium (K)	8.2	mg/l	0.1
②NW143	Total Silicon			
	Silicon (Si)	23.4	mg/l	0.03
②NW171	Total Sodium			
	Sodium (Na)	1.8	mg/l	0.1
②NW174	Total Titanium			
	Titanium (Ti)	0.332	mg/l	0.001
②NW177	Total Zinc			
	Zinc (Zn)	0.088	mg/l	0.005
④NU0M0	Vanadium (V)			
	Vanadium (V)	<0.005	mg/l	0.005

LIST OF METHODS

NU0K0	Tin (Sn): US EPA 6020	NU0LB	Beryllium (Be): US EPA 6020
NU0LE	Silver (Ag): US EPA 6020	NU0M0	Vanadium (V): US EPA 6020
NU0PF	Barium (Ba): US EPA 6020	NU0Q1	Boron (B) - Low Level: US EPA 6020
NU0SJ	Molybdenum (Mo): US EPA 6020	NU0YE	Cobalt (Co): US EPA 6020
NU0ZC	Antimony (Sb): US EPA 6020	NW143	Total Silicon: APHA Online Edition 3120 B mod.
NW154	Total Cadmium: APHA Online Edition 3125 B mod.	NW156	Total Calcium: APHA Online Edition 3125 B mod.
NW159	Total Copper: APHA Online Edition 3125 B mod.	NW163	Total Magnesium: APHA Online Edition 3125 B mod.
NW167	Total Nickel: APHA Online Edition 3125 B mod.	NW168	Total Potassium: APHA Online Edition 3125 B mod.

Food & Water Testing

NW171 **Total Sodium:** APHA Online Edition 3125 B mod.

NW174 **Total Titanium:** APHA Online Edition 3125 B mod.

NW177 **Total Zinc:** APHA Online Edition 3125 B mod.

VQ050 **Aluminium (Al):** US EPA 6020

VQ058 **Chromium (Cr):** US EPA 6020

VQ068 **Selenium (Se):** US EPA 6020

VQ107 **Iron (Fe):** US EPA 6020

VQ364 **Arsenic (As):** US EPA 6020

VQ368 **Lead (Pb):** US EPA 6020

VQ395 **Manganese (Mn):** US EPA 6020

VQ763 **Soil Preparation - Metals Digestion:**

Signature



Leroy Swale
Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE	AR-24-NC-008972-01	REPORT DATE	22/03/2024
Attention	Matakanui Gold Hamish McLauchlan 1460 Bendigo Station RD3 9383 Cromwell NEW ZEALAND		
Phone	0064275886631		
Email	hamish.mclauchlan@matakanuigold.co.nz		

Contact for your orders:	James Thornton	Order code:	EUNZCH-00169980
Contract:	Matakanui Gold Water Monitoring		
Submission Reference:	5/3/2024	Purchase Order Number:	NA

SAMPLE CODE	817-2024-00029411		
Sample Name	RS01		
Sample Reference	Rise and shine stream 1		
Reception Date & Time:	07/03/2024 8:30	Reception temperature:	12.6 °C
Analysis Started on:	07/03/2024	Analysis Ending Date:	22/03/2024
Product Type	Water	Sampled Date & Time	06/03/2024 00:00

		RESULTS	LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l 1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l 1
②NW345	Acidity to pH 8.3		
	Acidity	6	mg CaCO3/l 1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.02	mg/l 0.01
②NW009	Bromide		
	Bromide	0.02	mg/l 0.02
②NW007	Chloride		
	Chloride (Cl)	3.32	mg/l 0.02
②NW023	Conductivity		
	Conductivity	26.1	mS/m 0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l 0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	3.3	mg/l 0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.002	mg/l 0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l 0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.024	mg/l 0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.013	mg/l 0.002
②NW101	Dissolved Beryllium		

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	35.8	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.11	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	6.53	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0470	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	0.0008	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	1.25	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	9.91	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	7.27	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.458	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

		RESULTS		LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.004	mg/l	0.002
②NW006	Fluoride Fluoride	0.14	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.7		0.1
②NW011	Sulphate Sulphate	10.8	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<3	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	117	mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.017	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.031	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.012	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	29.2	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			

Food & Water Testing

RESULTS		LOQ	
②NW158	Total Cobalt Cobalt (Co)	<0.002 mg/l	0.002
②NW159	Total Copper Copper (Cu)	<0.002 mg/l	0.002
③NW339	Total Dissolved Solids Total dissolved Solids	128 mg/l	1
②NW030	Total Hardness Hardness	94 mg CaCO3/l	1
②NW160	Total Iron Iron (Fe)	0.4 mg/l	0.1
②NW161	Total Lead Lead (Pb)	<0.001 mg/l	0.001
②NW162	Total Lithium Lithium (Li)	0.003 mg/l	0.001
②NW163	Total Magnesium Magnesium (Mg)	5.1 mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.068 mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001 mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.220 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	3.3 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.005 mg/l	0.005
②NW168	Total Potassium Potassium (K)	1.0 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	3.60 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	5.7 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.369 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	<0.001 mg/l	0.001
②NW176	Total Vanadium		

Food & Water Testing

RESULTS			LOQ
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	1.21 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE	817-2024-00029412		
Sample Name	SC01		
Sample Reference	Shepherds Creek by irrigation take		
Reception Date & Time:	07/03/2024 8:30	Reception temperature:	12.6 °C
Analysis Started on:	07/03/2024	Analysis Ending Date:	22/03/2024
Product Type	Water	Sampled Date & Time	06/03/2024 00:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3 Acidity	11 mg CaCO3/l	1
②NW676	Ammonia Nitrogen Ammonia nitrogen	0.04 mg/l	0.01
②NW009	Bromide Bromide	0.08 mg/l	0.02
②NW007	Chloride Chloride (Cl)	8.65 mg/l	0.02
②NW023	Conductivity Conductivity	57.8 mS/m	0.1
②NW679	Cyanide Cyanide	<0.005 mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon Carbon	3.6 mg/l	0.1
②NW098	Dissolved Aluminium Aluminium	<0.002 mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001 mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	0.003 mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.046 mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001 mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001 mg/l	0.001
②NW103	Dissolved Boron		

Food & Water Testing

		RESULTS		LOQ
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	55.4	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.007	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	24.6	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0011	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	2.89	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.0	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	13.4	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	1.03	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			

Food & Water Testing

		RESULTS		LOQ
②NW585	Dissolved Uranium Uranium (U)	0.0052	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.003	mg/l	0.002
②NW006	Fluoride Fluoride	0.13	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.1		0.1
②NW011	Sulphate Sulphate	56.4	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<5	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	244	mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.035	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.003	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.045	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	59.8	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			

Food & Water Testing

RESULTS			LOQ
③NW339	Total Dissolved Solids		
	Total dissolved Solids	283	mg/l
			1
②NW030	Total Hardness		
	Hardness	240	mg CaCO3/l
			1
②NW160	Total Iron		
	Iron (Fe)	<0.1	mg/l
			0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001	mg/l
			0.001
②NW162	Total Lithium		
	Lithium (Li)	0.011	mg/l
			0.001
②NW163	Total Magnesium		
	Magnesium (Mg)	23.8	mg/l
			0.1
②NW164	Total Manganese		
	Manganese (Mn)	0.002	mg/l
			0.001
②NW165	Total Mercury		
	Mercury (Hg)	<0.001	mg/l
			0.001
②NW166	Total Molybdenum		
	Molybdenum (Mo)	<0.001	mg/l
			0.001
②NW167	Total Nickel		
	Nickel (Ni)	<0.001	mg/l
			0.001
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.250	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	3.6	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.014	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	2.6	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.89	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	13.9	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.919	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		

Food & Water Testing

RESULTS			LOQ
②NW212	Turbidity		
	Turbidity	0.49	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.005	mg/l
			0.001

SAMPLE CODE	817-2024-00029413		
Sample Name	SC03		
Sample Reference	Shepherds Creek 3		
Reception Date & Time:	07/03/2024 8:30	Reception temperature:	12.6 °C
Analysis Started on:	07/03/2024	Analysis Ending Date:	22/03/2024
Product Type	Water	Sampled Date & Time	06/03/2024 00:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	4	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.04	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	3.55	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	32.7	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	2.3	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.005	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	<0.001	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.029	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		

Food & Water Testing

		RESULTS		LOQ
②NW105	Dissolved Calcium Calcium (Ca)	40.3	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0011	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.004	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	9.71	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0026	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	0.0008	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.98	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	6.79	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	134	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.619	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0020	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			

Food & Water Testing

		RESULTS		LOQ
②NW125	Dissolved Zinc			
	Zinc (Zn)	0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.16	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.05	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.0		0.1
②NW011	Sulphate			
	Sulphate	16.8	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	149	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.238	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.045	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	54.4	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	160	mg/l	1
②NW030	Total Hardness			
	Hardness	195	mg CaCO3/l	1
②NW160	Total Iron			

Food & Water Testing

		RESULTS		LOQ
②NW160	Total Iron Iron (Fe)	0.3	mg/l	0.1
②NW161	Total Lead Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium Lithium (Li)	0.005	mg/l	0.001
②NW163	Total Magnesium Magnesium (Mg)	14.2	mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.018	mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.280	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	3.8	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.008	mg/l	0.005
②NW168	Total Potassium Potassium (K)	2.2	mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon Silicon (Si)	4.59	mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium Sodium (Na)	165	mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.919	mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.004	mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001	mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005	mg/l	0.005
②NW212	Turbidity Turbidity	1.96	NTU	0.01
②NW581	Uranium - Total Uranium (U)	0.003	mg/l	0.001

Food & Water Testing

SAMPLE CODE		817-2024-00029414	
Sample Name	RS02		
Sample Reference	Rise and shine stream 2 at Shreks		
Reception Date & Time:	07/03/2024 8:30	Reception temperature:	12.6 °C
Analysis Started on:	07/03/2024	Analysis Ending Date:	20/03/2024
Product Type	Water	Sampled Date & Time	06/03/2024 00:00

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	6	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.98	mg/l	0.02
②NW023	Conductivity			
	Conductivity	13.7	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.2	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.006	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.004	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.010	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	14.9	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			

Food & Water Testing

		RESULTS		LOQ
②NW108	Dissolved Copper Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	3.30	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0013	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.06	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.2	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	3.94	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.229	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.006	mg/l	0.002
②NW006	Fluoride Fluoride	0.11	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.23	mg/l	0.01
②NW008	Nitrite-N			

Food & Water Testing

RESULTS			LOQ
②NW008	Nitrite-N		
	Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)		
	pH	7.7	0.1
②NW011	Sulphate		
	Sulphate	7.31 mg/l	0.02
②NW206	Suspended Solids		
	Suspended Solids	7 mg/l	3
②NW580	Thallium - Total		
	Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		
	Alkalinity total	60 mg CaCO ₃ /l	1
②NW147	Total Aluminium		
	Aluminium	0.144 mg/l	0.005
②NW148	Total Antimony		
	Antimony (Sb)	<0.002 mg/l	0.002
②NW149	Total Arsenic		
	Arsenic (As)	0.005 mg/l	0.002
②NW150	Total Barium		
	Barium (Ba)	0.012 mg/l	0.005
②NW151	Total Beryllium		
	Beryllium (Be)	<0.005 mg/l	0.005
②NW152	Total Bismuth		
	Bismuth (Bi)	<0.005 mg/l	0.005
②NW153	Total Boron		
	Boron (B)	<0.05 mg/l	0.05
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001 mg/l	0.001
②NW156	Total Calcium		
	Calcium (Ca)	16.1 mg/l	0.1
②NW157	Total Chromium		
	Chromium (Cr)	0.001 mg/l	0.001
②NW158	Total Cobalt		
	Cobalt (Co)	<0.002 mg/l	0.002
②NW159	Total Copper		
	Copper (Cu)	<0.002 mg/l	0.002
③NW339	Total Dissolved Solids		
	Total dissolved Solids	67 mg/l	1
②NW030	Total Hardness		
	Hardness	51 mg CaCO ₃ /l	1
②NW160	Total Iron		
	Iron (Fe)	0.3 mg/l	0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001 mg/l	0.001
②NW162	Total Lithium		
	Lithium (Li)	0.003 mg/l	0.001
②NW163	Total Magnesium		

Food & Water Testing

RESULTS			LOQ
②NW163	Total Magnesium Magnesium (Mg)	3.3 mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.008 mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001 mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.150 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	2.2 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.008 mg/l	0.005
②NW168	Total Potassium Potassium (K)	1.0 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	4.37 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	4.3 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.239 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.005 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	2.33 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE		817-2024-00029415	
Sample Name	RSA1		
Sample Reference	Rise and shine Adit		
Reception Date & Time:	07/03/2024 8:30	Reception temperature:	12.6 °C
Analysis Started on:	07/03/2024	Analysis Ending Date:	22/03/2024
Product Type	Water	Sampled Date & Time	06/03/2024 00:00

Food & Water Testing

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO ₃ /l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO ₃ /l	1
②NW345	Acidity to pH 8.3			
	Acidity	37	mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.05	mg/l	0.01
②NW009	Bromide			
	Bromide	0.03	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.54	mg/l	0.02
②NW023	Conductivity			
	Conductivity	24.2	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	3.2	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.043	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.033	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	34.4	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.37	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	6.04	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.169	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.55	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	12.3	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.48	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.398	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.15	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.04	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	6.9		0.1
②NW011	Sulphate Sulphate	0.85	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

		RESULTS		LOQ
②NW206	Suspended Solids			
	Suspended Solids	37	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	119	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.453	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.812	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.056	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	33.9	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	118	mg/l	1
②NW030	Total Hardness			
	Hardness	110	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	11.3	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	6.2	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.593	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.280 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	5.0 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.009 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.6 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	6.01 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	6.9 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.495 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.010 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	0.005 mg/l	0.005
②NW212	Turbidity Turbidity	26.4 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE	817-2024-00029416		
Sample Name	RS03		
Sample Reference	Rise and shine stream 3 at Alta crossing		
Reception Date & Time:	07/03/2024 8:30	Reception temperature:	12.6 °C
Analysis Started on:	07/03/2024	Analysis Ending Date:	20/03/2024
Product Type	Water	Sampled Date & Time	06/03/2024 00:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		

Food & Water Testing

		RESULTS		LOQ
②NW345	Acidity to pH 8.3			
	Acidity	3	mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.03	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.28	mg/l	0.02
②NW023	Conductivity			
	Conductivity	10.8	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.1	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.014	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.006	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	10.2	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.08	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	2.45	mg/l	0.01
②NW113	Dissolved Manganese			

Food & Water Testing

RESULTS			LOQ
②NW113	Dissolved Manganese Manganese (Mn)	0.0230 mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005 mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.48 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.91 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	3.28 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.157 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.09 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.02 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.5	0.1
②NW011	Sulphate Sulphate	4.05 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<4 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		

Food & Water Testing

		RESULTS		LOQ
②NW003	Total Alkalinity			
	Alkalinity total	44	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.043	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.019	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.007	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	10.8	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	53	mg/l	1
②NW030	Total Hardness			
	Hardness	36	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	0.4	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	2.2	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.057	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			

Food & Water Testing

RESULTS			LOQ
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.100	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.2	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.010	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.4	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.63	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	3.4	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.149	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.57	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE 817-2024-00029417

Sample Name CC01

Sample Reference Clearwater creek above DOC

Reception Date & Time: 07/03/2024 8:30

Analysis Started on: 07/03/2024

Product Type Water

Reception temperature: 12.6 °C

Analysis Ending Date: 22/03/2024

Sampled Date & Time 06/03/2024 00:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	1	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.03	mg/l
			0.01
②NW009	Bromide		

Food & Water Testing

		RESULTS		LOQ
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.61	mg/l	0.02
②NW023	Conductivity			
	Conductivity	4.3	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.0	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.006	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.001	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.005	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	3.6	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.01	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	0.93	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0009	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			

Food & Water Testing

RESULTS		LOQ	
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.40 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.19 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	2.75 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.0435 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.08 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.3	0.1
②NW011	Sulphate Sulphate	4.00 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<3 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	17 mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.018 mg/l	0.005
②NW148	Total Antimony		

Food & Water Testing

		RESULTS		LOQ
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.005	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	4.1	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	21	mg/l	1
②NW030	Total Hardness			
	Hardness	13	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	<0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	0.9	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.002	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.140	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	2.1	mg/l	0.1
②NW194	Total Phosphorus			

Food & Water Testing

	RESULTS		LOQ
②NW194 Total Phosphorus			
Total phosphorus	0.014	mg/l	0.005
②NW168 Total Potassium			
Potassium (K)	0.3	mg/l	0.1
②NW169 Total Selenium			
Selenium (Se)	<0.005	mg/l	0.005
②NW143 Total Silicon			
Silicon (Si)	3.33	mg/l	0.03
②NW170 Total Silver			
Silver (Ag)	<0.001	mg/l	0.001
②NW171 Total Sodium			
Sodium (Na)	2.2	mg/l	0.1
②NW172 Total Strontium			
Strontium (Sr)	0.049	mg/l	0.002
②NW173 Total Tin			
Tin (Sn)	<0.001	mg/l	0.001
②NW174 Total Titanium			
Titanium (Ti)	<0.001	mg/l	0.001
②NW176 Total Vanadium			
Vanadium (V)	<0.001	mg/l	0.001
②NW177 Total Zinc			
Zinc (Zn)	<0.005	mg/l	0.005
②NW212 Turbidity			
Turbidity	0.23	NTU	0.01
②NW581 Uranium - Total			
Uranium (U)	<0.001	mg/l	0.001

LIST OF METHODS

NW003 Total Alkalinity: APHA Online Edition 2320 B	NW006 Fluoride: APHA Online Edition 4110 B
NW007 Chloride: APHA Online Edition 4110 B	NW008 Nitrite-N: APHA Online Edition 4110 B
NW009 Bromide: APHA Online Edition 4110 B	NW010 Nitrate-N: APHA Online Edition 4110 B
NW011 Sulphate: APHA Online Edition 4110 B	NW023 Conductivity: APHA 24th Edition 2510 B
NW030 Total Hardness: APHA Online Edition 2340 B	NW098 Dissolved Aluminium: APHA Online Edition 3125 B mod.
NW099 Dissolved Antimony: APHA Online Edition 3125 B mod.	NW100 Dissolved Barium: APHA Online Edition 3125 B mod.
NW101 Dissolved Beryllium: APHA Online Edition 3125 B mod.	NW102 Dissolved Bismuth: APHA Online Edition 3125 B mod.
NW103 Dissolved Boron: APHA Online Edition 3125 B mod.	NW104 Dissolved Cadmium: APHA Online Edition 3125 B mod.
NW105 Dissolved Calcium: APHA Online Edition 3125 B mod.	NW106 Dissolved Chromium: APHA Online Edition 3125 B mod.
NW107 Dissolved Cobalt: APHA Online Edition 3125 B mod.	NW108 Dissolved Copper: APHA Online Edition 3125 B mod.
NW109 Dissolved Iron: APHA Online Edition 3125 B mod.	NW110 Dissolved Lead: APHA Online Edition 3125 B mod.
NW111 Dissolved Lithium: APHA Online Edition 3125 B mod.	NW112 Dissolved Magnesium: APHA Online Edition 3125 B mod.
NW113 Dissolved Manganese: APHA Online Edition 3125 B mod.	NW114 Dissolved Mercury: APHA Online Edition 3125 B mod.
NW115 Dissolved Molybdenum: APHA Online Edition 3125 B mod.	NW116 Dissolved Nickel: APHA Online Edition 3125 B mod.
NW117 Dissolved Potassium: APHA Online Edition 3125 B mod.	NW118 Dissolved Selenium: APHA Online Edition 3125 B mod.
NW119 Dissolved Silver: APHA Online Edition 3125 B mod.	NW120 Dissolved Sodium: APHA Online Edition 3125 B mod.
NW121 Dissolved Strontium: APHA Online Edition 3125 B mod.	NW122 Dissolved Tin: APHA Online Edition 3125 B mod.

Food & Water Testing

NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.	NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.
NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.	NW143	Total Silicon: APHA Online Edition 3120 B mod.
NW147	Total Aluminium: APHA Online Edition 3125 B mod.	NW148	Total Antimony: APHA Online Edition 3125 B mod.
NW149	Total Arsenic: APHA Online Edition 3125 B mod.	NW150	Total Barium: APHA Online Edition 3125 B mod.
NW151	Total Beryllium: APHA Online Edition 3125 B mod.	NW152	Total Bismuth: APHA Online Edition 3125 B mod.
NW153	Total Boron: APHA Online Edition 3125 B mod.	NW154	Total Cadmium: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW157	Total Chromium: APHA Online Edition 3125 B mod.
NW158	Total Cobalt: APHA Online Edition 3125 B mod.	NW159	Total Copper: APHA Online Edition 3125 B mod.
NW160	Total Iron: APHA Online Edition 3125 B mod.	NW161	Total Lead: APHA Online Edition 3125 B mod.
NW162	Total Lithium: APHA Online Edition 3125 B mod.	NW163	Total Magnesium: APHA Online Edition 3125 B mod.
NW164	Total Manganese: APHA Online Edition 3125 B mod.	NW165	Total Mercury: APHA Online Edition 3125 B mod.
NW166	Total Molybdenum: APHA Online Edition 3125 B mod.	NW167	Total Nickel: APHA Online Edition 3125 B mod.
NW168	Total Potassium: APHA Online Edition 3125 B mod.	NW169	Total Selenium: APHA Online Edition 3125 B mod.
NW170	Total Silver: APHA Online Edition 3125 B mod.	NW171	Total Sodium: APHA Online Edition 3125 B mod.
NW172	Total Strontium: APHA Online Edition 3125 B mod.	NW173	Total Tin: APHA Online Edition 3125 B mod.
NW174	Total Titanium: APHA Online Edition 3125 B mod.	NW176	Total Vanadium: APHA Online Edition 3125 B mod.
NW177	Total Zinc: APHA Online Edition 3125 B mod.	NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I
NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B	NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B
NW206	Suspended Solids: APHA Online Edition 2540 D	NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B
NW212	Turbidity: APHA 24th Edition 2130 B	NW339	Total Dissolved Solids: Internal Method, Gravimetry
NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)	NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)
NW410	Acidity to pH 7.0: Internal Method, Titrimetry	NW472	Dissolved Silica: APHA Online Edition 3120 B mod.
NW580	Thallium - Total: APHA Online Edition 3125 B mod.	NW581	Uranium - Total: APHA Online Edition 3125 B mod.
NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.	NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.
NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.	NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C
NW676	Ammonia Nitrogen: Internal Method, Spectrophotometry (DA)	NW679	Cyanide: APHA Online Edition 4500-CN C & E

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

Food & Water Testing

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE	AR-24-NC-010966-01	REPORT DATE	09/04/2024

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders:	James Thornton	Order code:	EUNZCH-00171594
Contract:	Matakanui Gold Water Monitoring		
Submission Reference:	20/03/24	Purchase Order Number:	NA

SAMPLE CODE	817-2024-00035194

Sample Name RS01

Sample Reference Rise and shine stream 1

Reception Date & Time: 21/03/2024 9:00

Analysis Started on: 21/03/2024

Product Type Water

Reception temperature: 15.3 °C

Analysis Ending Date: 05/04/2024

RESULTS

LOQ

②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	8	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.03	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.15	mg/l	0.02
②NW023	Conductivity			
	Conductivity	21.4	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.3	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.018	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.010	mg/l	0.002
②NW101	Dissolved Beryllium			

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	29.1	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.11	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.001	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	5.73	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0451	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	0.0011	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.27	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.44	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	6.70	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.444	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

		RESULTS		LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.09	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.7		0.1
②NW011	Sulphate Sulphate	1.14	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<4	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	104	mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.010	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.031	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.011	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	22.5	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			

Food & Water Testing

		RESULTS		LOQ
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	105	mg/l	1
②NW030	Total Hardness			
	Hardness	74	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.4	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	4.4	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.077	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.140	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	2.3	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	<0.005	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	0.4	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	3.57	mg/l	0.03
②NW170	Total Silver			
	Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium			
	Sodium (Na)	5.1	mg/l	0.1
②NW172	Total Strontium			
	Strontium (Sr)	0.345	mg/l	0.002
②NW173	Total Tin			
	Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium			
	Titanium (Ti)	<0.001	mg/l	0.001
②NW176	Total Vanadium			

Food & Water Testing

	RESULTS		LOQ
②NW176 Total Vanadium			
Vanadium (V)	<0.001	mg/l	0.001
②NW177 Total Zinc			
Zinc (Zn)	<0.005	mg/l	0.005
②NW212 Turbidity			
Turbidity	1.23	NTU	0.01
②NW581 Uranium - Total			
Uranium (U)	<0.001	mg/l	0.001

SAMPLE CODE	817-2024-00035195		
Sample Name	SC01		
Sample Reference	Shepherds Creek by irrigation take		
Reception Date & Time:	21/03/2024 9:00	Reception temperature:	15.3 °C
Analysis Started on:	21/03/2024	Analysis Ending Date:	09/04/2024
Product Type	Water		

	RESULTS		LOQ
②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO3/l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO3/l	1
②NW345 Acidity to pH 8.3			
Acidity	11	mg CaCO3/l	1
②NW676 Ammonia Nitrogen			
Ammonia nitrogen	<0.01	mg/l	0.01
②NW009 Bromide			
Bromide	0.08	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	8.73	mg/l	0.02
②NW023 Conductivity			
Conductivity	62.9	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	1.8	mg/l	0.1
②NW098 Dissolved Aluminium			
Aluminium	0.002	mg/l	0.002
②NW099 Dissolved Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW583 Dissolved Arsenic			
Arsenic (As)	0.002	mg/l	0.001
②NW100 Dissolved Barium			
Barium (Ba)	0.047	mg/l	0.002
②NW101 Dissolved Beryllium			
Beryllium (Be)	<0.001	mg/l	0.001
②NW102 Dissolved Bismuth			
Bismuth (Bi)	<0.001	mg/l	0.001
②NW103 Dissolved Boron			

Food & Water Testing

		RESULTS		LOQ
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	70.8	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.008	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	30.0	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0007	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.77	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.4	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	16.4	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	1.25	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			

Food & Water Testing

		RESULTS		LOQ
②NW585	Dissolved Uranium Uranium (U)	0.0060	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.0		0.1
②NW011	Sulphate Sulphate	63.5	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<4	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	264	mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.015	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.050	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	64.1	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			

Food & Water Testing

RESULTS		LOQ	
③NW339	Total Dissolved Solids		
	Total dissolved Solids	308	mg/l
			1
②NW030	Total Hardness		
	Hardness	264	mg CaCO3/l
			1
②NW160	Total Iron		
	Iron (Fe)	<0.1	mg/l
			0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001	mg/l
			0.001
②NW162	Total Lithium		
	Lithium (Li)	0.009	mg/l
			0.001
②NW163	Total Magnesium		
	Magnesium (Mg)	25.1	mg/l
			0.1
②NW164	Total Manganese		
	Manganese (Mn)	0.001	mg/l
			0.001
②NW165	Total Mercury		
	Mercury (Hg)	<0.001	mg/l
			0.001
②NW166	Total Molybdenum		
	Molybdenum (Mo)	0.037	mg/l
			0.001
②NW167	Total Nickel		
	Nickel (Ni)	<0.001	mg/l
			0.001
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.134	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	1.9	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.005	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	1.1	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.96	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	12.7	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	1.19	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		

Food & Water Testing

RESULTS			LOQ
②NW212	Turbidity		
	Turbidity	0.39	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.006	mg/l
			0.001

SAMPLE CODE	817-2024-00035196		
Sample Name	SC03		
Sample Reference	Shepherds Creek 3		
Reception Date & Time:	21/03/2024 9:00	Reception temperature:	15.3 °C
Analysis Started on:	21/03/2024	Analysis Ending Date:	05/04/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	7	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.03	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	2.95	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	33.2	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.8	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.007	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	<0.001	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.031	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		

Food & Water Testing

		RESULTS		LOQ
②NW105	Dissolved Calcium Calcium (Ca)	44.1	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0007	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.004	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	12.1	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0026	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.45	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	7.98	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	8.36	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.782	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0021	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			

Food & Water Testing

		RESULTS		LOQ
②NW125	Dissolved Zinc			
	Zinc (Zn)	0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.13	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.14	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.0		0.1
②NW011	Sulphate			
	Sulphate	16.6	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	4	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	151	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.135	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.036	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	37.8	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	163	mg/l	1
②NW030	Total Hardness			
	Hardness	135	mg CaCO3/l	1
②NW160	Total Iron			

Food & Water Testing

		RESULTS		LOQ
②NW160	Total Iron Iron (Fe)	0.2	mg/l	0.1
②NW161	Total Lead Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium Lithium (Li)	0.004	mg/l	0.001
②NW163	Total Magnesium Magnesium (Mg)	9.8	mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.010	mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	0.038	mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.215	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.8	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.007	mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.9	mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon Silicon (Si)	3.27	mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium Sodium (Na)	6.2	mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.760	mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.005	mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001	mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005	mg/l	0.005
②NW212	Turbidity Turbidity	1.33	NTU	0.01
②NW581	Uranium - Total Uranium (U)	0.002	mg/l	0.001

Food & Water Testing

SAMPLE CODE		817-2024-00035197	
Sample Name	RS02		
Sample Reference	Rise and shine stream 2 at Shreks		
Reception Date & Time:	21/03/2024 9:00	Reception temperature:	15.3 °C
Analysis Started on:	21/03/2024	Analysis Ending Date:	05/04/2024
Product Type	Water		

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	6	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.02	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.65	mg/l	0.02
②NW023	Conductivity			
	Conductivity	12.4	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.2	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.006	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.003	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.009	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	15.6	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			

Food & Water Testing

		RESULTS		LOQ
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	3.35	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0007	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.62	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.7	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.58	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.234	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			

Food & Water Testing

RESULTS			LOQ
②NW008	Nitrite-N		
	Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)		
	pH	7.6	0.1
②NW011	Sulphate		
	Sulphate	2.32 mg/l	0.02
②NW206	Suspended Solids		
	Suspended Solids	7 mg/l	3
②NW580	Thallium - Total		
	Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		
	Alkalinity total	56 mg CaCO ₃ /l	1
②NW147	Total Aluminium		
	Aluminium	0.219 mg/l	0.005
②NW148	Total Antimony		
	Antimony (Sb)	<0.002 mg/l	0.002
②NW149	Total Arsenic		
	Arsenic (As)	0.004 mg/l	0.002
②NW150	Total Barium		
	Barium (Ba)	0.012 mg/l	0.005
②NW151	Total Beryllium		
	Beryllium (Be)	<0.005 mg/l	0.005
②NW152	Total Bismuth		
	Bismuth (Bi)	<0.005 mg/l	0.005
②NW153	Total Boron		
	Boron (B)	<0.05 mg/l	0.05
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001 mg/l	0.001
②NW156	Total Calcium		
	Calcium (Ca)	13.5 mg/l	0.1
②NW157	Total Chromium		
	Chromium (Cr)	<0.001 mg/l	0.001
②NW158	Total Cobalt		
	Cobalt (Co)	<0.002 mg/l	0.002
②NW159	Total Copper		
	Copper (Cu)	<0.002 mg/l	0.002
③NW339	Total Dissolved Solids		
	Total dissolved Solids	61 mg/l	1
②NW030	Total Hardness		
	Hardness	46 mg CaCO ₃ /l	1
②NW160	Total Iron		
	Iron (Fe)	0.3 mg/l	0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001 mg/l	0.001
②NW162	Total Lithium		
	Lithium (Li)	0.002 mg/l	0.001
②NW163	Total Magnesium		

Food & Water Testing

RESULTS			LOQ
②NW163	Total Magnesium Magnesium (Mg)	2.9 mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.008 mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001 mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	0.040 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.095 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.3 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.007 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.4 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	4.61 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	3.5 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.196 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.008 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	2.00 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE		817-2024-00035198	
Sample Name	RSA1		
Sample Reference	Rise and shine Adit		
Reception Date & Time:	21/03/2024 9:00	Reception temperature:	15.3 °C
Analysis Started on:	21/03/2024	Analysis Ending Date:	04/04/2024
Product Type	Water		

Food & Water Testing

RESULTS		LOQ	
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO ₃ /l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO ₃ /l	1
②NW345	Acidity to pH 8.3 Acidity	49 mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen Ammonia nitrogen	0.02 mg/l	0.01
②NW009	Bromide Bromide	<0.02 mg/l	0.02
②NW007	Chloride Chloride (Cl)	0.85 mg/l	0.02
②NW023	Conductivity Conductivity	21.9 mS/m	0.1
②NW679	Cyanide Cyanide	<0.005 mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon Carbon	2.0 mg/l	0.1
②NW098	Dissolved Aluminium Aluminium	<0.002 mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001 mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	0.055 mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.028 mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001 mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001 mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03 mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002 mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	35.9 mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001 mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	0.0007 mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005 mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.86 mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005 mg/l	0.0005
②NW111	Dissolved Lithium		

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	6.31	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.426	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.18	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	12.2	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.56	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.371	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.12	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	6.8		0.1
②NW011	Sulphate Sulphate	0.72	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

		RESULTS		LOQ
②NW206	Suspended Solids			
	Suspended Solids	22	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	106	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.022	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.476	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.035	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	26.6	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	107	mg/l	1
②NW030	Total Hardness			
	Hardness	88	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	9.4	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	5.1	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.457	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.161 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	2.1 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.009 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.1 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	5.29 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	6.3 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.401 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	<0.001 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	29.9 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE 817-2024-00035199

Sample Name RS03

Sample Reference Rise and shine stream 3 at Alta crossing

Reception Date & Time: 21/03/2024 9:00

Reception temperature: 15.3 °C

Analysis Started on: 21/03/2024

Analysis Ending Date: 05/04/2024

Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		

Food & Water Testing

		RESULTS		LOQ
②NW345	Acidity to pH 8.3			
	Acidity	5	mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.02	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.29	mg/l	0.02
②NW023	Conductivity			
	Conductivity	9.3	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.2	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.011	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.005	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	10.3	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.06	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	2.26	mg/l	0.01
②NW113	Dissolved Manganese			

Food & Water Testing

RESULTS			LOQ
②NW113	Dissolved Manganese Manganese (Mn)	0.0246 mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005 mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.22 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.43 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	3.84 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.143 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.07 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.05 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.4	0.1
②NW011	Sulphate Sulphate	1.13 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<4 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		

Food & Water Testing

		RESULTS		LOQ
②NW003	Total Alkalinity			
	Alkalinity total	42	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.005	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.012	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.006	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	9.4	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	45	mg/l	1
②NW030	Total Hardness			
	Hardness	31	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	0.2	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	1.9	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.035	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	0.033	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			

Food & Water Testing

RESULTS			LOQ
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.078	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	1.3	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.009	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.1	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.60	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	2.9	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.130	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.43	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE		817-2024-00035200	
Sample Name	CC01		
Sample Reference	Clearwater creek above DOC		
Reception Date & Time:	21/03/2024 9:00	Reception temperature:	15.3 °C
Analysis Started on:	21/03/2024	Analysis Ending Date:	05/04/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	3	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.01	mg/l
			0.01
②NW009	Bromide		

Food & Water Testing

RESULTS			LOQ
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	0.90	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	4.3	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	0.9	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.004	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	<0.001	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.004	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	5.3	mg/l
			0.1
②NW106	Dissolved Chromium		
	Chromium (Cr)	<0.001	mg/l
			0.001
②NW107	Dissolved Cobalt		
	Cobalt (Co)	<0.0005	mg/l
			0.0005
②NW108	Dissolved Copper		
	Copper (Cu)	<0.0005	mg/l
			0.0005
②NW109	Dissolved Iron		
	Iron (Fe)	<0.01	mg/l
			0.01
②NW110	Dissolved Lead		
	Lead (Pb)	<0.0005	mg/l
			0.0005
②NW111	Dissolved Lithium		
	Lithium (Li)	0.001	mg/l
			0.001
②NW112	Dissolved Magnesium		
	Magnesium (Mg)	1.12	mg/l
			0.01
②NW113	Dissolved Manganese		
	Manganese (Mn)	0.0006	mg/l
			0.0005
②NW114	Dissolved Mercury		
	Mercury (Hg)	<0.0005	mg/l
			0.0005
②NW115	Dissolved Molybdenum		

Food & Water Testing

RESULTS			LOQ
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.31 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.65 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	2.92 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.0433 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.08 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.3	0.1
②NW011	Sulphate Sulphate	0.67 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<4 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	18 mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.012 mg/l	0.005
②NW148	Total Antimony		

Food & Water Testing

		RESULTS		LOQ
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	<0.005	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	4.0	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	21	mg/l	1
②NW030	Total Hardness			
	Hardness	14	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	<0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	0.9	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	<0.001	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.064	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.0	mg/l	0.1
②NW194	Total Phosphorus			

Food & Water Testing

RESULTS			LOQ
②NW194	Total Phosphorus Total phosphorus	0.012 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.2 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	3.42 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	2.3 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.052 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.001 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	0.20 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

LIST OF METHODS

NW003	Total Alkalinity: APHA Online Edition 2320 B	NW006	Fluoride: APHA Online Edition 4110 B
NW007	Chloride: APHA Online Edition 4110 B	NW008	Nitrite-N: APHA Online Edition 4110 B
NW009	Bromide: APHA Online Edition 4110 B	NW010	Nitrate-N: APHA Online Edition 4110 B
NW011	Sulphate: APHA Online Edition 4110 B	NW023	Conductivity: APHA 24th Edition 2510 B
NW030	Total Hardness: APHA Online Edition 2340 B	NW098	Dissolved Aluminium: APHA Online Edition 3125 B mod.
NW099	Dissolved Antimony: APHA Online Edition 3125 B mod.	NW100	Dissolved Barium: APHA Online Edition 3125 B mod.
NW101	Dissolved Beryllium: APHA Online Edition 3125 B mod.	NW102	Dissolved Bismuth: APHA Online Edition 3125 B mod.
NW103	Dissolved Boron: APHA Online Edition 3125 B mod.	NW104	Dissolved Cadmium: APHA Online Edition 3125 B mod.
NW105	Dissolved Calcium: APHA Online Edition 3125 B mod.	NW106	Dissolved Chromium: APHA Online Edition 3125 B mod.
NW107	Dissolved Cobalt: APHA Online Edition 3125 B mod.	NW108	Dissolved Copper: APHA Online Edition 3125 B mod.
NW109	Dissolved Iron: APHA Online Edition 3125 B mod.	NW110	Dissolved Lead: APHA Online Edition 3125 B mod.
NW111	Dissolved Lithium: APHA Online Edition 3125 B mod.	NW112	Dissolved Magnesium: APHA Online Edition 3125 B mod.
NW113	Dissolved Manganese: APHA Online Edition 3125 B mod.	NW114	Dissolved Mercury: APHA Online Edition 3125 B mod.
NW115	Dissolved Molybdenum: APHA Online Edition 3125 B mod.	NW116	Dissolved Nickel: APHA Online Edition 3125 B mod.
NW117	Dissolved Potassium: APHA Online Edition 3125 B mod.	NW118	Dissolved Selenium: APHA Online Edition 3125 B mod.
NW119	Dissolved Silver: APHA Online Edition 3125 B mod.	NW120	Dissolved Sodium: APHA Online Edition 3125 B mod.
NW121	Dissolved Strontium: APHA Online Edition 3125 B mod.	NW122	Dissolved Tin: APHA Online Edition 3125 B mod.

Food & Water Testing

NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.	NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.
NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.	NW143	Total Silicon: APHA Online Edition 3120 B mod.
NW147	Total Aluminium: APHA Online Edition 3125 B mod.	NW148	Total Antimony: APHA Online Edition 3125 B mod.
NW149	Total Arsenic: APHA Online Edition 3125 B mod.	NW150	Total Barium: APHA Online Edition 3125 B mod.
NW151	Total Beryllium: APHA Online Edition 3125 B mod.	NW152	Total Bismuth: APHA Online Edition 3125 B mod.
NW153	Total Boron: APHA Online Edition 3125 B mod.	NW154	Total Cadmium: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW157	Total Chromium: APHA Online Edition 3125 B mod.
NW158	Total Cobalt: APHA Online Edition 3125 B mod.	NW159	Total Copper: APHA Online Edition 3125 B mod.
NW160	Total Iron: APHA Online Edition 3125 B mod.	NW161	Total Lead: APHA Online Edition 3125 B mod.
NW162	Total Lithium: APHA Online Edition 3125 B mod.	NW163	Total Magnesium: APHA Online Edition 3125 B mod.
NW164	Total Manganese: APHA Online Edition 3125 B mod.	NW165	Total Mercury: APHA Online Edition 3125 B mod.
NW166	Total Molybdenum: APHA Online Edition 3125 B mod.	NW167	Total Nickel: APHA Online Edition 3125 B mod.
NW168	Total Potassium: APHA Online Edition 3125 B mod.	NW169	Total Selenium: APHA Online Edition 3125 B mod.
NW170	Total Silver: APHA Online Edition 3125 B mod.	NW171	Total Sodium: APHA Online Edition 3125 B mod.
NW172	Total Strontium: APHA Online Edition 3125 B mod.	NW173	Total Tin: APHA Online Edition 3125 B mod.
NW174	Total Titanium: APHA Online Edition 3125 B mod.	NW176	Total Vanadium: APHA Online Edition 3125 B mod.
NW177	Total Zinc: APHA Online Edition 3125 B mod.	NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I
NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B	NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B
NW206	Suspended Solids: APHA Online Edition 2540 D	NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B
NW212	Turbidity: APHA 24th Edition 2130 B	NW339	Total Dissolved Solids: Internal Method, Gravimetry
NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)	NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)
NW410	Acidity to pH 7.0: Internal Method, Titrimetry	NW472	Dissolved Silica: APHA Online Edition 3120 B mod.
NW580	Thallium - Total: APHA Online Edition 3125 B mod.	NW581	Uranium - Total: APHA Online Edition 3125 B mod.
NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.	NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.
NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.	NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C
NW676	Ammonia Nitrogen: Internal Method, Spectrophotometry (DA)	NW679	Cyanide: APHA Online Edition 4500-CN C & E

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

Food & Water Testing

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE **AR-24-NC-011976-01** REPORT DATE **18/04/2024**

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3

9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders: James Thornton **Order code:** EUNZCH-00173192
Contract: Matakanui Gold Water Monitoring
Submission Reference: 2024-March 04 **Purchase Order Number:** NA

SAMPLE CODE **817-2024-00041158**

Sample Name RS01

Sample Reference Rise and shine stream downstream RAS

Reception Date & Time: 05/04/2024 8:30

Reception temperature: 13.2 °C

Analysis Started on: 05/04/2024

Analysis Ending Date: 15/04/2024

Product Type Water

RESULTS

LOQ

②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO3/l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO3/l	1
②NW345 Acidity to pH 8.3			
Acidity	13	mg CaCO3/l	1
②NW676 Ammonia Nitrogen			
Ammonia nitrogen	<0.01	mg/l	0.01
②NW009 Bromide			
Bromide	<0.02	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	1.42	mg/l	0.02
②NW023 Conductivity			
Conductivity	23.4	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	2.0	mg/l	0.1
②NW098 Dissolved Aluminium			
Aluminium	<0.002	mg/l	0.002
②NW099 Dissolved Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW583 Dissolved Arsenic			
Arsenic (As)	0.018	mg/l	0.001
②NW100 Dissolved Barium			
Barium (Ba)	0.013	mg/l	0.002
②NW101 Dissolved Beryllium			

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	28.5	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	0.002	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.09	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	6.61	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0517	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.34	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	7.38	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	7.72	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.408	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

		RESULTS		LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.08	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.7		0.1
②NW011	Sulphate Sulphate	14.9	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	101	mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.018	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.034	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.014	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	31.3	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			

Food & Water Testing

		RESULTS		LOQ
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	115	mg/l	1
②NW030	Total Hardness			
	Hardness	103	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.5	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	6.0	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.087	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.143	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	2.2	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.005	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	0.4	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	4.13	mg/l	0.03
②NW170	Total Silver			
	Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium			
	Sodium (Na)	6.8	mg/l	0.1
②NW172	Total Strontium			
	Strontium (Sr)	0.514	mg/l	0.002
②NW173	Total Tin			
	Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium			
	Titanium (Ti)	<0.001	mg/l	0.001
②NW176	Total Vanadium			

Food & Water Testing

RESULTS			LOQ
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	1.20	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE	817-2024-00041159		
Sample Name	SC01		
Sample Reference	Shepherds Creek by irrigation take		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	18/04/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	12	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.10	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	9.30	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	63.9	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	2.1	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.005	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.004	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.049	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		

Food & Water Testing

		RESULTS		LOQ
②NW103	Dissolved Boron Boron (B)	0.05	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	72.6	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.016	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	25.9	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0041	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	0.0008	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	3.40	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.2	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	12.7	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	1.11	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			

Food & Water Testing

	RESULTS		LOQ
②NW585	Dissolved Uranium		
	Uranium (U)	0.0069 mg/l	0.0002
②NW124	Dissolved Vanadium		
	Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc		
	Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride		
	Fluoride	0.09 mg/l	0.02
②NW010	Nitrate-N		
	Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N		
	Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)		
	pH	8.1	0.1
②NW011	Sulphate		
	Sulphate	59.3 mg/l	0.02
②NW206	Suspended Solids		
	Suspended Solids	<6 mg/l	3
②NW580	Thallium - Total		
	Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		
	Alkalinity total	273 mg CaCO ₃ /l	1
②NW147	Total Aluminium		
	Aluminium	0.182 mg/l	0.005
②NW148	Total Antimony		
	Antimony (Sb)	<0.002 mg/l	0.002
②NW149	Total Arsenic		
	Arsenic (As)	0.004 mg/l	0.002
②NW150	Total Barium		
	Barium (Ba)	0.055 mg/l	0.005
②NW151	Total Beryllium		
	Beryllium (Be)	<0.005 mg/l	0.005
②NW152	Total Bismuth		
	Bismuth (Bi)	<0.005 mg/l	0.005
②NW153	Total Boron		
	Boron (B)	<0.05 mg/l	0.05
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001 mg/l	0.001
②NW156	Total Calcium		
	Calcium (Ca)	82.3 mg/l	0.1
②NW157	Total Chromium		
	Chromium (Cr)	<0.001 mg/l	0.001
②NW158	Total Cobalt		
	Cobalt (Co)	<0.002 mg/l	0.002
②NW159	Total Copper		
	Copper (Cu)	<0.002 mg/l	0.002
③NW339	Total Dissolved Solids		

Food & Water Testing

RESULTS			LOQ
③NW339	Total Dissolved Solids		
	Total dissolved Solids	313	mg/l
			1
②NW030	Total Hardness		
	Hardness	332	mg CaCO3/l
			1
②NW160	Total Iron		
	Iron (Fe)	0.2	mg/l
			0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001	mg/l
			0.001
②NW162	Total Lithium		
	Lithium (Li)	0.012	mg/l
			0.001
②NW163	Total Magnesium		
	Magnesium (Mg)	30.6	mg/l
			0.1
②NW164	Total Manganese		
	Manganese (Mn)	0.012	mg/l
			0.001
②NW165	Total Mercury		
	Mercury (Hg)	<0.001	mg/l
			0.001
②NW166	Total Molybdenum		
	Molybdenum (Mo)	<0.001	mg/l
			0.001
②NW167	Total Nickel		
	Nickel (Ni)	<0.001	mg/l
			0.001
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.170	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.1	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.013	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	3.9	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	4.66	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	16.8	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	1.30	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.005	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		

Food & Water Testing

RESULTS			LOQ
②NW212	Turbidity		
	Turbidity	2.72	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.007	mg/l
			0.001

SAMPLE CODE	817-2024-00041160		
Sample Name	SC03		
Sample Reference	Shepherds Creek 3		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	15/04/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	10	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	2.84	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	33.1	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.6	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.009	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	<0.001	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.030	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	0.04	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		

Food & Water Testing

		RESULTS		LOQ
②NW105	Dissolved Calcium Calcium (Ca)	39.3	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	0.002	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0007	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.007	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	11.9	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0014	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	0.0006	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.21	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.4	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	8.53	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.592	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0020	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			

Food & Water Testing

		RESULTS		LOQ
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.11	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.04	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.1		0.1
②NW011	Sulphate			
	Sulphate	15.1	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	152	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.163	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.034	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	43.0	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	162	mg/l	1
②NW030	Total Hardness			
	Hardness	156	mg CaCO ₃ /l	1
②NW160	Total Iron			

Food & Water Testing

		RESULTS		LOQ
②NW160	Total Iron Iron (Fe)	0.2	mg/l	0.1
②NW161	Total Lead Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium Lithium (Li)	0.005	mg/l	0.001
②NW163	Total Magnesium Magnesium (Mg)	11.7	mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.011	mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.182	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.8	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.009	mg/l	0.005
②NW168	Total Potassium Potassium (K)	1.4	mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon Silicon (Si)	3.48	mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium Sodium (Na)	8.0	mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.741	mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.005	mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001	mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005	mg/l	0.005
②NW212	Turbidity Turbidity	2.39	NTU	0.01
②NW581	Uranium - Total Uranium (U)	0.002	mg/l	0.001

Food & Water Testing

SAMPLE CODE		817-2024-00041161	
Sample Name	RS02		
Sample Reference	Rise and shine stream 2 at Shreks		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	13/04/2024
Product Type	Water		

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	4	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.04	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.91	mg/l	0.02
②NW023	Conductivity			
	Conductivity	14.2	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.5	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.007	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.004	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.011	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	19.9	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			

Food & Water Testing

		RESULTS		LOQ
②NW108	Dissolved Copper Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	4.09	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.11	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.18	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.93	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.249	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.05	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			

Food & Water Testing

RESULTS			LOQ
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.7	0.1
②NW011	Sulphate Sulphate	4.46 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	65 mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.103 mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002 mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.004 mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.013 mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005 mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005 mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05 mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001 mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	17.9 mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001 mg/l	0.001
②NW158	Total Cobalt Cobalt (Co)	<0.002 mg/l	0.002
②NW159	Total Copper Copper (Cu)	<0.002 mg/l	0.002
③NW339	Total Dissolved Solids Total dissolved Solids	70 mg/l	1
②NW030	Total Hardness Hardness	60 mg CaCO ₃ /l	1
②NW160	Total Iron Iron (Fe)	0.1 mg/l	0.1
②NW161	Total Lead Lead (Pb)	<0.001 mg/l	0.001
②NW162	Total Lithium Lithium (Li)	0.003 mg/l	0.001
②NW163	Total Magnesium		

Food & Water Testing

RESULTS			LOQ
②NW163	Total Magnesium Magnesium (Mg)	3.8 mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.004 mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001 mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.134 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.5 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.009 mg/l	0.005
②NW168	Total Potassium Potassium (K)	1.1 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	4.65 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	4.5 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.259 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.002 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	1.95 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE		817-2024-00041162	
Sample Name	RSA1		
Sample Reference	Rise and shine Adit		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	13/04/2024
Product Type	Water		

Food & Water Testing

RESULTS		LOQ	
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO ₃ /l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO ₃ /l
			1
②NW345	Acidity to pH 8.3		
	Acidity	44	mg CaCO ₃ /l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	0.96	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	21.0	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.8	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	<0.002	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.061	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.026	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	29.6	mg/l
			0.1
②NW106	Dissolved Chromium		
	Chromium (Cr)	0.002	mg/l
			0.001
②NW107	Dissolved Cobalt		
	Cobalt (Co)	0.0006	mg/l
			0.0005
②NW108	Dissolved Copper		
	Copper (Cu)	0.0005	mg/l
			0.0005
②NW109	Dissolved Iron		
	Iron (Fe)	0.73	mg/l
			0.01
②NW110	Dissolved Lead		
	Lead (Pb)	<0.0005	mg/l
			0.0005
②NW111	Dissolved Lithium		

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.004	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	5.76	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.205	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	0.0006	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.23	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.08	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.51	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.365	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.0		0.1
②NW011	Sulphate Sulphate	1.00	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

		RESULTS		LOQ
②NW206	Suspended Solids			
	Suspended Solids	17	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	103	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.049	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.337	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.029	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	27.3	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	103	mg/l	1
②NW030	Total Hardness			
	Hardness	89	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	5.7	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	5.2	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.243	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.065 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.9 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.012 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.3 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	4.98 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	6.4 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.361 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.002 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	21.2 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE	817-2024-00041163		
Sample Name	RS03		
Sample Reference	Rise and shine stream 3 at Alta crossing		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	13/04/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		

Food & Water Testing

		RESULTS		LOQ
②NW345	Acidity to pH 8.3			
	Acidity	4	mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.37	mg/l	0.02
②NW023	Conductivity			
	Conductivity	9.6	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.3	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.003	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.013	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.007	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	12.4	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	0.002	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.10	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	2.53	mg/l	0.01
②NW113	Dissolved Manganese			

Food & Water Testing

RESULTS			LOQ
②NW113	Dissolved Manganese Manganese (Mn)	0.0143 mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005 mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.42 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	14.8 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.29 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.137 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.07 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.5	0.1
②NW011	Sulphate Sulphate	0.79 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		

Food & Water Testing

		RESULTS		LOQ
②NW003	Total Alkalinity			
	Alkalinity total	43	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.055	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.026	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.009	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	11.6	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	47	mg/l	1
②NW030	Total Hardness			
	Hardness	39	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	0.8	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	2.4	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.081	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			

Food & Water Testing

RESULTS			LOQ
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.152	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	1.3	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.006	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.5	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.98	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	4.0	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.155	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.82	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE 817-2024-00041164

Sample Name CC01

Sample Reference Clearwater creek above DOC

Reception Date & Time: 05/04/2024 8:30

Reception temperature: 13.2 °C

Analysis Started on: 05/04/2024

Analysis Ending Date: 13/04/2024

Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	4	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		

Food & Water Testing

		RESULTS		LOQ
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	0.91	mg/l	0.02
②NW023	Conductivity			
	Conductivity	4.3	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	0.9	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.007	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	<0.001	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.005	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	4.7	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	0.002	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	1.05	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			

Food & Water Testing

RESULTS		LOQ	
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.30 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	11.2 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	2.64 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.0502 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.06 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.4	0.1
②NW011	Sulphate Sulphate	0.68 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	18 mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.019 mg/l	0.005
②NW148	Total Antimony		

Food & Water Testing

		RESULTS		LOQ
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.005	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	4.3	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	21	mg/l	1
②NW030	Total Hardness			
	Hardness	15	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	<0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	1.0	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.002	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.047	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.0	mg/l	0.1
②NW194	Total Phosphorus			

Food & Water Testing

RESULTS			LOQ
②NW194	Total Phosphorus		
	Total phosphorus	0.010	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.3	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.42	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	2.5	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.051	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.45	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE 817-2024-00041165

Sample Name LBA
Sample Reference Lower Bendigo Addit
Reception Date & Time: 05/04/2024 8:30 **Reception temperature:** 13.2 °C
Analysis Started on: 05/04/2024 **Analysis Ending Date:** 18/04/2024
Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	4	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.08	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	8.06	mg/l
			0.02
②NW023	Conductivity		

Food & Water Testing

		RESULTS		LOQ
②NW023	Conductivity			
	Conductivity	43.0	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.7	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.910	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.004	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	50.7	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	0.002	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.15	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.019	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	16.6	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0111	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	0.0011	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			

Food & Water Testing

		RESULTS		LOQ
②NW117	Dissolved Potassium			
	Potassium (K)	1.93	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	17.8	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	23.1	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.422	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	0.0021	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.27	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.18	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.2		0.1
②NW011	Sulphate			
	Sulphate	30.4	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	181	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.017	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	1.05	mg/l	0.002
②NW150	Total Barium			

Food & Water Testing

		RESULTS		LOQ
②NW150	Total Barium			
	Barium (Ba)	0.005	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	48.4	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	211	mg/l	1
②NW030	Total Hardness			
	Hardness	184	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.4	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.013	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	15.4	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.037	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.275	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.7	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.030	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	2.1	mg/l	0.1
②NW169	Total Selenium			

Food & Water Testing

RESULTS			LOQ
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	6.66	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	19.8	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.447	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	1.26	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.002	mg/l
			0.001

SAMPLE CODE		817-2024-00041166	
Sample Name	MDD015		
Sample Reference	MDD015 drillhole discharge		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	18/04/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	6	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.11	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.11	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	10.5	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	43.1	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		

Food & Water Testing

RESULTS			LOQ
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	0.2	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.018	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.020	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.188	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	0.06	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	22.1	mg/l
			0.1
②NW106	Dissolved Chromium		
	Chromium (Cr)	<0.001	mg/l
			0.001
②NW107	Dissolved Cobalt		
	Cobalt (Co)	<0.0005	mg/l
			0.0005
②NW108	Dissolved Copper		
	Copper (Cu)	<0.0005	mg/l
			0.0005
②NW109	Dissolved Iron		
	Iron (Fe)	0.04	mg/l
			0.01
②NW110	Dissolved Lead		
	Lead (Pb)	<0.0005	mg/l
			0.0005
②NW111	Dissolved Lithium		
	Lithium (Li)	0.090	mg/l
			0.001
②NW112	Dissolved Magnesium		
	Magnesium (Mg)	21.5	mg/l
			0.01
②NW113	Dissolved Manganese		
	Manganese (Mn)	0.0085	mg/l
			0.0005
②NW114	Dissolved Mercury		
	Mercury (Hg)	<0.0005	mg/l
			0.0005
②NW115	Dissolved Molybdenum		
	Molybdenum (Mo)	<0.0005	mg/l
			0.0005
②NW116	Dissolved Nickel		
	Nickel (Ni)	<0.0005	mg/l
			0.0005
②NW117	Dissolved Potassium		
	Potassium (K)	1.27	mg/l
			0.01
②NW118	Dissolved Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW472	Dissolved Silica		

Food & Water Testing

		RESULTS		LOQ
②NW472	Dissolved Silica Sand/silica	18.4	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	59.6	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	10.2	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0009	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.15	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.1		0.1
②NW011	Sulphate Sulphate	9.29	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	201	mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.336	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.019	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.190	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			

Food & Water Testing

		RESULTS		LOQ
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	21.9	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	211	mg/l	1
②NW030	Total Hardness			
	Hardness	120	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.3	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.051	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	16.0	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.011	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.122	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	0.2	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.005	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.7	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	8.38	mg/l	0.03
②NW170	Total Silver			

Food & Water Testing

RESULTS			LOQ
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	42.2 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	8.98 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.009 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	1.46 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

LIST OF METHODS

NW003	Total Alkalinity: APHA Online Edition 2320 B	NW006	Fluoride: APHA Online Edition 4110 B
NW007	Chloride: APHA Online Edition 4110 B	NW008	Nitrite-N: APHA Online Edition 4110 B
NW009	Bromide: APHA Online Edition 4110 B	NW010	Nitrate-N: APHA Online Edition 4110 B
NW011	Sulphate: APHA Online Edition 4110 B	NW023	Conductivity: APHA 24th Edition 2510 B
NW030	Total Hardness: APHA Online Edition 2340 B	NW098	Dissolved Aluminium: APHA Online Edition 3125 B mod.
NW099	Dissolved Antimony: APHA Online Edition 3125 B mod.	NW100	Dissolved Barium: APHA Online Edition 3125 B mod.
NW101	Dissolved Beryllium: APHA Online Edition 3125 B mod.	NW102	Dissolved Bismuth: APHA Online Edition 3125 B mod.
NW103	Dissolved Boron: APHA Online Edition 3125 B mod.	NW104	Dissolved Cadmium: APHA Online Edition 3125 B mod.
NW105	Dissolved Calcium: APHA Online Edition 3125 B mod.	NW106	Dissolved Chromium: APHA Online Edition 3125 B mod.
NW107	Dissolved Cobalt: APHA Online Edition 3125 B mod.	NW108	Dissolved Copper: APHA Online Edition 3125 B mod.
NW109	Dissolved Iron: APHA Online Edition 3125 B mod.	NW110	Dissolved Lead: APHA Online Edition 3125 B mod.
NW111	Dissolved Lithium: APHA Online Edition 3125 B mod.	NW112	Dissolved Magnesium: APHA Online Edition 3125 B mod.
NW113	Dissolved Manganese: APHA Online Edition 3125 B mod.	NW114	Dissolved Mercury: APHA Online Edition 3125 B mod.
NW115	Dissolved Molybdenum: APHA Online Edition 3125 B mod.	NW116	Dissolved Nickel: APHA Online Edition 3125 B mod.
NW117	Dissolved Potassium: APHA Online Edition 3125 B mod.	NW118	Dissolved Selenium: APHA Online Edition 3125 B mod.
NW119	Dissolved Silver: APHA Online Edition 3125 B mod.	NW120	Dissolved Sodium: APHA Online Edition 3125 B mod.
NW121	Dissolved Strontium: APHA Online Edition 3125 B mod.	NW122	Dissolved Tin: APHA Online Edition 3125 B mod.
NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.	NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.
NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.	NW143	Total Silicon: APHA Online Edition 3120 B mod.
NW147	Total Aluminium: APHA Online Edition 3125 B mod.	NW148	Total Antimony: APHA Online Edition 3125 B mod.
NW149	Total Arsenic: APHA Online Edition 3125 B mod.	NW150	Total Barium: APHA Online Edition 3125 B mod.
NW151	Total Beryllium: APHA Online Edition 3125 B mod.	NW152	Total Bismuth: APHA Online Edition 3125 B mod.
NW153	Total Boron: APHA Online Edition 3125 B mod.	NW154	Total Cadmium: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW157	Total Chromium: APHA Online Edition 3125 B mod.
		NW158	Total Cobalt: APHA Online Edition 3125 B mod.

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NW159	Total Copper: APHA Online Edition 3125 B mod.	NW160	Total Iron: APHA Online Edition 3125 B mod.
NW161	Total Lead: APHA Online Edition 3125 B mod.	NW162	Total Lithium: APHA Online Edition 3125 B mod.
NW163	Total Magnesium: APHA Online Edition 3125 B mod.	NW164	Total Manganese: APHA Online Edition 3125 B mod.
NW165	Total Mercury: APHA Online Edition 3125 B mod.	NW166	Total Molybdenum: APHA Online Edition 3125 B mod.
NW167	Total Nickel: APHA Online Edition 3125 B mod.	NW168	Total Potassium: APHA Online Edition 3125 B mod.
NW169	Total Selenium: APHA Online Edition 3125 B mod.	NW170	Total Silver: APHA Online Edition 3125 B mod.
NW171	Total Sodium: APHA Online Edition 3125 B mod.	NW172	Total Strontium: APHA Online Edition 3125 B mod.
NW173	Total Tin: APHA Online Edition 3125 B mod.	NW174	Total Titanium: APHA Online Edition 3125 B mod.
NW176	Total Vanadium: APHA Online Edition 3125 B mod.	NW177	Total Zinc: APHA Online Edition 3125 B mod.
NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I	NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B
NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B	NW206	Suspended Solids: APHA Online Edition 2540 D
NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B	NW212	Turbidity: APHA 24th Edition 2130 B
NW339	Total Dissolved Solids: Internal Method, Gravimetry	NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)
NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)	NW410	Acidity to pH 7.0: Internal Method, Titrimetry
NW472	Dissolved Silica: APHA Online Edition 3120 B mod.	NW580	Thallium - Total: APHA Online Edition 3125 B mod.
NW581	Uranium - Total: APHA Online Edition 3125 B mod.	NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.
NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.	NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.
NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C	NW676	Ammonia Nitrogen: Internal Method, Spectrophotometry (DA)
NW679	Cyanide: APHA Online Edition 4500-CN C & E		

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✘ (Unsatisfactory) means does not meet the specification

✔ (Satisfactory) means meets the specification

Food & Water Testing

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

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END OF REPORT

Food & Water Testing ANALYTICAL REPORT

REPORT CODE	AR-24-NC-011976-02 #	REPORT DATE	22/05/2024

This amended report supersedes Analytical Report number AR-24-NC-011976-01, dated 18/04/2024.

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders:	James Thornton	Order code:	EUNZCH-00173192
Contract:	Matakanui Gold Water Monitoring		
Submission Reference:	2024-March 04	Purchase Order Number:	NA
Comments:	Dissolved Chromium retested and result amended on samples 817-2024-00041158 817-2024-00041160 817-2024-00041162 817-2024-00041164		

SAMPLE CODE	817-2024-00041158

Sample Name	RS01		
Sample Reference	Rise and shine stream downstream RAS		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	22/05/2024
Product Type	Water		

		RESULTS	LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l 1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l 1
②NW345	Acidity to pH 8.3		
	Acidity	13	mg CaCO3/l 1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l 0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l 0.02
②NW007	Chloride		
	Chloride (Cl)	1.42	mg/l 0.02
②NW023	Conductivity		
	Conductivity	23.4	mS/m 0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l 0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	2.0	mg/l 0.1
②NW098	Dissolved Aluminium		
	Aluminium	<0.002	mg/l 0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l 0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.018	mg/l 0.001
②NW100	Dissolved Barium		

Food & Water Testing

		RESULTS		LOQ
②NW100	Dissolved Barium			
	Barium (Ba)	0.013	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	28.5	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.09	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	6.61	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0517	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.34	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	7.38	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	7.72	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.408	mg/l	0.0005
②NW584	Dissolved Thallium			

Food & Water Testing

		RESULTS		LOQ
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.08	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.7		0.1
②NW011	Sulphate Sulphate	14.9	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	101	mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.018	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.034	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.014	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	31.3	mg/l	0.1
②NW157	Total Chromium			

Food & Water Testing

	RESULTS		LOQ
②NW157 Total Chromium			
Chromium (Cr)	<0.001	mg/l	0.001
②NW158 Total Cobalt			
Cobalt (Co)	<0.002	mg/l	0.002
②NW159 Total Copper			
Copper (Cu)	<0.002	mg/l	0.002
③NW339 Total Dissolved Solids			
Total dissolved Solids	115	mg/l	1
②NW030 Total Hardness			
Hardness	103	mg CaCO3/l	1
②NW160 Total Iron			
Iron (Fe)	0.5	mg/l	0.1
②NW161 Total Lead			
Lead (Pb)	<0.001	mg/l	0.001
②NW162 Total Lithium			
Lithium (Li)	0.003	mg/l	0.001
②NW163 Total Magnesium			
Magnesium (Mg)	6.0	mg/l	0.1
②NW164 Total Manganese			
Manganese (Mn)	0.087	mg/l	0.001
②NW165 Total Mercury			
Mercury (Hg)	<0.001	mg/l	0.001
②NW166 Total Molybdenum			
Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167 Total Nickel			
Nickel (Ni)	<0.001	mg/l	0.001
②NW189 Total Nitrogen			
Total Nitrogen (N)	0.143	mg/l	0.002
②NW210 Total Non-Purgeable Organic Carbon			
Total Organic Carbon	2.2	mg/l	0.1
②NW194 Total Phosphorus			
Total phosphorus	0.005	mg/l	0.005
②NW168 Total Potassium			
Potassium (K)	0.4	mg/l	0.1
②NW169 Total Selenium			
Selenium (Se)	<0.005	mg/l	0.005
②NW143 Total Silicon			
Silicon (Si)	4.13	mg/l	0.03
②NW170 Total Silver			
Silver (Ag)	<0.001	mg/l	0.001
②NW171 Total Sodium			
Sodium (Na)	6.8	mg/l	0.1
②NW172 Total Strontium			
Strontium (Sr)	0.514	mg/l	0.002
②NW173 Total Tin			
Tin (Sn)	<0.001	mg/l	0.001
②NW174 Total Titanium			

Food & Water Testing

RESULTS			LOQ
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	1.20	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE	817-2024-00041159		
Sample Name	SC01		
Sample Reference	Shepherds Creek by irrigation take		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	18/04/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	12	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.10	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	9.30	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	63.9	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	2.1	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.005	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.004	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.049	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		

Food & Water Testing

		RESULTS		LOQ
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	0.05	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	72.6	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.016	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	25.9	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0041	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	0.0008	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	3.40	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.2	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	12.7	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	1.11	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			

Food & Water Testing

		RESULTS		LOQ
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0069	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.09	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.1		0.1
②NW011	Sulphate Sulphate	59.3	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	273	mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.182	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.004	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.055	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	82.3	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			

Food & Water Testing

		RESULTS		LOQ
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	313	mg/l	1
②NW030	Total Hardness			
	Hardness	332	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.2	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.012	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	30.6	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.012	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.170	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	2.1	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.013	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	3.9	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	4.66	mg/l	0.03
②NW170	Total Silver			
	Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium			
	Sodium (Na)	16.8	mg/l	0.1
②NW172	Total Strontium			
	Strontium (Sr)	1.30	mg/l	0.002
②NW173	Total Tin			
	Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium			
	Titanium (Ti)	0.005	mg/l	0.001
②NW176	Total Vanadium			
	Vanadium (V)	<0.001	mg/l	0.001
②NW177	Total Zinc			

Food & Water Testing

RESULTS			LOQ
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	2.72	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.007	mg/l
			0.001

SAMPLE CODE	817-2024-00041160		
Sample Name	SC03		
Sample Reference	Shepherds Creek 3		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	22/05/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	10	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	2.84	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	33.1	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.6	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.009	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	<0.001	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.030	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	0.04	mg/l
			0.03
②NW104	Dissolved Cadmium		

Food & Water Testing

		RESULTS		LOQ
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	39.3	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0007	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.007	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	11.9	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0014	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	0.0006	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.21	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.4	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	8.53	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.592	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0020	mg/l	0.0002
②NW124	Dissolved Vanadium			

Food & Water Testing

		RESULTS		LOQ
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.11	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.04	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.1		0.1
②NW011	Sulphate			
	Sulphate	15.1	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	152	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.163	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.034	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	43.0	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	162	mg/l	1
②NW030	Total Hardness			

Food & Water Testing

RESULTS			LOQ
②NW030	Total Hardness		
	Hardness	156	mg CaCO ₃ /l
			1
②NW160	Total Iron		
	Iron (Fe)	0.2	mg/l
			0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001	mg/l
			0.001
②NW162	Total Lithium		
	Lithium (Li)	0.005	mg/l
			0.001
②NW163	Total Magnesium		
	Magnesium (Mg)	11.7	mg/l
			0.1
②NW164	Total Manganese		
	Manganese (Mn)	0.011	mg/l
			0.001
②NW165	Total Mercury		
	Mercury (Hg)	<0.001	mg/l
			0.001
②NW166	Total Molybdenum		
	Molybdenum (Mo)	<0.001	mg/l
			0.001
②NW167	Total Nickel		
	Nickel (Ni)	<0.001	mg/l
			0.001
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.182	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	1.8	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.009	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	1.4	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.48	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	8.0	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.741	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.005	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	2.39	NTU
			0.01
②NW581	Uranium - Total		

Food & Water Testing

RESULTS			LOQ
②NW581	Uranium - Total Uranium (U)	0.002 mg/l	0.001
SAMPLE CODE 817-2024-00041161			
Sample Name		RS02	
Sample Reference		Rise and shine stream 2 at Shreks	
Reception Date & Time:		05/04/2024 8:30	Reception temperature: 13.2 °C
Analysis Started on:		05/04/2024	Analysis Ending Date: 13/04/2024
Product Type		Water	
RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3 Acidity	4 mg CaCO3/l	1
②NW676	Ammonia Nitrogen Ammonia nitrogen	0.04 mg/l	0.01
②NW009	Bromide Bromide	<0.02 mg/l	0.02
②NW007	Chloride Chloride (Cl)	1.91 mg/l	0.02
②NW023	Conductivity Conductivity	14.2 mS/m	0.1
②NW679	Cyanide Cyanide	<0.005 mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon Carbon	1.5 mg/l	0.1
②NW098	Dissolved Aluminium Aluminium	0.007 mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001 mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	0.004 mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.011 mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001 mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001 mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03 mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002 mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	19.9 mg/l	0.1
②NW106	Dissolved Chromium		

Food & Water Testing

		RESULTS		LOQ
②NW106	Dissolved Chromium Chromium (Cr)	0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	4.09	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.11	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.18	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.93	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.249	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			

Food & Water Testing

		RESULTS		LOQ
②NW006	Fluoride			
	Fluoride	0.05	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	7.7		0.1
②NW011	Sulphate			
	Sulphate	4.46	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	65	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.103	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.004	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.013	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	17.9	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	70	mg/l	1
②NW030	Total Hardness			
	Hardness	60	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	0.1	mg/l	0.1
②NW161	Total Lead			

Food & Water Testing

		RESULTS		LOQ
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	3.8	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.004	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.134	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.5	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.009	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.1	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	4.65	mg/l	0.03
②NW170	Total Silver			
	Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium			
	Sodium (Na)	4.5	mg/l	0.1
②NW172	Total Strontium			
	Strontium (Sr)	0.259	mg/l	0.002
②NW173	Total Tin			
	Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium			
	Titanium (Ti)	0.002	mg/l	0.001
②NW176	Total Vanadium			
	Vanadium (V)	<0.001	mg/l	0.001
②NW177	Total Zinc			
	Zinc (Zn)	<0.005	mg/l	0.005
②NW212	Turbidity			
	Turbidity	1.95	NTU	0.01
②NW581	Uranium - Total			
	Uranium (U)	<0.001	mg/l	0.001

Food & Water Testing

SAMPLE CODE	817-2024-00041162

Sample Name	RSA1		
Sample Reference	Rise and shine Adit		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	22/05/2024
Product Type	Water		

	RESULTS	LOQ

②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	44	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	0.96	mg/l	0.02
②NW023	Conductivity			
	Conductivity	21.0	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.8	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.061	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.026	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	29.6	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	0.0006	mg/l	0.0005
②NW108	Dissolved Copper			

Food & Water Testing

		RESULTS		LOQ
②NW108	Dissolved Copper Copper (Cu)	0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.73	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.004	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	5.76	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.205	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	0.0006	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.23	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.08	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.51	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.365	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			

Food & Water Testing

RESULTS			LOQ
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.0	0.1
②NW011	Sulphate Sulphate	1.00 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	17 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	103 mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.049 mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002 mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.337 mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.029 mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005 mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005 mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05 mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001 mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	27.3 mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001 mg/l	0.001
②NW158	Total Cobalt Cobalt (Co)	<0.002 mg/l	0.002
②NW159	Total Copper Copper (Cu)	<0.002 mg/l	0.002
③NW339	Total Dissolved Solids Total dissolved Solids	103 mg/l	1
②NW030	Total Hardness Hardness	89 mg CaCO ₃ /l	1
②NW160	Total Iron Iron (Fe)	5.7 mg/l	0.1
②NW161	Total Lead Lead (Pb)	<0.001 mg/l	0.001
②NW162	Total Lithium Lithium (Li)	0.002 mg/l	0.001
②NW163	Total Magnesium		

Food & Water Testing

RESULTS			LOQ
②NW163	Total Magnesium Magnesium (Mg)	5.2 mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.243 mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001 mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.065 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.9 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.012 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.3 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	4.98 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	6.4 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.361 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.002 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	21.2 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE		817-2024-00041163	
Sample Name	RS03		
Sample Reference	Rise and shine stream 3 at Alta crossing		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	13/04/2024
Product Type	Water		

Food & Water Testing

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	4	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.37	mg/l	0.02
②NW023	Conductivity			
	Conductivity	9.6	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.3	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.003	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.013	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.007	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	12.4	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	0.002	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.10	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	2.53	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0143	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.42	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	14.8	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.29	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.137	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.07	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.5		0.1
②NW011	Sulphate Sulphate	0.79	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

		RESULTS		LOQ
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	43	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.055	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.026	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.009	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	11.6	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	47	mg/l	1
②NW030	Total Hardness			
	Hardness	39	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.8	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	2.4	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.081	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.152 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.3 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.006 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.5 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	3.98 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	4.0 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.155 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	<0.001 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	0.82 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE	817-2024-00041164		
Sample Name	CC01		
Sample Reference	Clearwater creek above DOC		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	22/05/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		

Food & Water Testing

		RESULTS		LOQ
②NW345	Acidity to pH 8.3			
	Acidity	4	mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	0.91	mg/l	0.02
②NW023	Conductivity			
	Conductivity	4.3	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	0.9	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.007	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	<0.001	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.005	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	4.7	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	1.05	mg/l	0.01
②NW113	Dissolved Manganese			

Food & Water Testing

		RESULTS		LOQ
②NW113	Dissolved Manganese			
	Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.30	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	11.2	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	2.64	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.0502	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.06	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	7.4		0.1
②NW011	Sulphate			
	Sulphate	0.68	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			

Food & Water Testing

		RESULTS		LOQ
②NW003	Total Alkalinity			
	Alkalinity total	18	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.019	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.005	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	4.3	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	21	mg/l	1
②NW030	Total Hardness			
	Hardness	15	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	<0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	1.0	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.002	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			

Food & Water Testing

RESULTS			LOQ
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.047	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	1.0	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.010	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.3	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.42	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	2.5	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.051	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.45	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE		817-2024-00041165	
Sample Name	LBA		
Sample Reference	Lower Bendigo Addit		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	18/04/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	4	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		

Food & Water Testing

		RESULTS		LOQ
②NW009	Bromide			
	Bromide	0.08	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	8.06	mg/l	0.02
②NW023	Conductivity			
	Conductivity	43.0	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.7	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.910	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.004	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	50.7	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	0.002	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.15	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.019	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	16.6	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0111	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			

Food & Water Testing

		RESULTS		LOQ
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	0.0011	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	1.93	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	17.8	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	23.1	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.422	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	0.0021	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.27	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.18	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.2		0.1
②NW011	Sulphate			
	Sulphate	30.4	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	181	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.017	mg/l	0.005
②NW148	Total Antimony			

Food & Water Testing

		RESULTS		LOQ
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	1.05	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.005	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	48.4	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	211	mg/l	1
②NW030	Total Hardness			
	Hardness	184	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.4	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.013	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	15.4	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.037	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.275	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.7	mg/l	0.1
②NW194	Total Phosphorus			

Food & Water Testing

RESULTS			LOQ
②NW194	Total Phosphorus		
	Total phosphorus	0.030	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	2.1	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	6.66	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	19.8	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.447	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	1.26	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.002	mg/l
			0.001

SAMPLE CODE	817-2024-00041166		
Sample Name	MDD015		
Sample Reference	MDD015 drillhole discharge		
Reception Date & Time:	05/04/2024 8:30	Reception temperature:	13.2 °C
Analysis Started on:	05/04/2024	Analysis Ending Date:	18/04/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	6	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.11	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.11	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	10.5	mg/l
			0.02
②NW023	Conductivity		

Food & Water Testing

		RESULTS		LOQ
②NW023	Conductivity			
	Conductivity	43.1	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	0.2	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.018	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.020	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.188	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	0.06	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	22.1	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.04	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.090	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	21.5	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0085	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			

Food & Water Testing

		RESULTS		LOQ
②NW117	Dissolved Potassium			
	Potassium (K)	1.27	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	18.4	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	59.6	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	10.2	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	0.0009	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.15	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.1		0.1
②NW011	Sulphate			
	Sulphate	9.29	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	201	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.336	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.019	mg/l	0.002
②NW150	Total Barium			

Food & Water Testing

		RESULTS		LOQ
②NW150	Total Barium			
	Barium (Ba)	0.190	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	21.9	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	211	mg/l	1
②NW030	Total Hardness			
	Hardness	120	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.3	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.051	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	16.0	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.011	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.122	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	0.2	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.005	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.7	mg/l	0.1
②NW169	Total Selenium			

Food & Water Testing

RESULTS			LOQ
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	8.38 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	42.2 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	8.98 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.009 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	1.46 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

LIST OF METHODS

NW003	Total Alkalinity: APHA Online Edition 2320 B	NW006	Fluoride: APHA Online Edition 4110 B
NW007	Chloride: APHA Online Edition 4110 B	NW008	Nitrite-N: APHA Online Edition 4110 B
NW009	Bromide: APHA Online Edition 4110 B	NW010	Nitrate-N: APHA Online Edition 4110 B
NW011	Sulphate: APHA Online Edition 4110 B	NW023	Conductivity: APHA 24th Edition 2510 B
NW030	Total Hardness: APHA Online Edition 2340 B	NW098	Dissolved Aluminium: APHA Online Edition 3125 B mod.
NW099	Dissolved Antimony: APHA Online Edition 3125 B mod.	NW100	Dissolved Barium: APHA Online Edition 3125 B mod.
NW101	Dissolved Beryllium: APHA Online Edition 3125 B mod.	NW102	Dissolved Bismuth: APHA Online Edition 3125 B mod.
NW103	Dissolved Boron: APHA Online Edition 3125 B mod.	NW104	Dissolved Cadmium: APHA Online Edition 3125 B mod.
NW105	Dissolved Calcium: APHA Online Edition 3125 B mod.	NW106	Dissolved Chromium: APHA Online Edition 3125 B mod.
NW107	Dissolved Cobalt: APHA Online Edition 3125 B mod.	NW108	Dissolved Copper: APHA Online Edition 3125 B mod.
NW109	Dissolved Iron: APHA Online Edition 3125 B mod.	NW110	Dissolved Lead: APHA Online Edition 3125 B mod.
NW111	Dissolved Lithium: APHA Online Edition 3125 B mod.	NW112	Dissolved Magnesium: APHA Online Edition 3125 B mod.
NW113	Dissolved Manganese: APHA Online Edition 3125 B mod.	NW114	Dissolved Mercury: APHA Online Edition 3125 B mod.
NW115	Dissolved Molybdenum: APHA Online Edition 3125 B mod.	NW116	Dissolved Nickel: APHA Online Edition 3125 B mod.
NW117	Dissolved Potassium: APHA Online Edition 3125 B mod.	NW118	Dissolved Selenium: APHA Online Edition 3125 B mod.
NW119	Dissolved Silver: APHA Online Edition 3125 B mod.	NW120	Dissolved Sodium: APHA Online Edition 3125 B mod.
NW121	Dissolved Strontium: APHA Online Edition 3125 B mod.	NW122	Dissolved Tin: APHA Online Edition 3125 B mod.
NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.	NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.
NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.	NW143	Total Silicon: APHA Online Edition 3120 B mod.
NW147	Total Aluminium: APHA Online Edition 3125 B mod.	NW148	Total Antimony: APHA Online Edition 3125 B mod.
NW149	Total Arsenic: APHA Online Edition 3125 B mod.	NW150	Total Barium: APHA Online Edition 3125 B mod.

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NW151	Total Beryllium: APHA Online Edition 3125 B mod.	NW152	Total Bismuth: APHA Online Edition 3125 B mod.
NW153	Total Boron: APHA Online Edition 3125 B mod.	NW154	Total Cadmium: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW157	Total Chromium: APHA Online Edition 3125 B mod.
NW158	Total Cobalt: APHA Online Edition 3125 B mod.	NW159	Total Copper: APHA Online Edition 3125 B mod.
NW160	Total Iron: APHA Online Edition 3125 B mod.	NW161	Total Lead: APHA Online Edition 3125 B mod.
NW162	Total Lithium: APHA Online Edition 3125 B mod.	NW163	Total Magnesium: APHA Online Edition 3125 B mod.
NW164	Total Manganese: APHA Online Edition 3125 B mod.	NW165	Total Mercury: APHA Online Edition 3125 B mod.
NW166	Total Molybdenum: APHA Online Edition 3125 B mod.	NW167	Total Nickel: APHA Online Edition 3125 B mod.
NW168	Total Potassium: APHA Online Edition 3125 B mod.	NW169	Total Selenium: APHA Online Edition 3125 B mod.
NW170	Total Silver: APHA Online Edition 3125 B mod.	NW171	Total Sodium: APHA Online Edition 3125 B mod.
NW172	Total Strontium: APHA Online Edition 3125 B mod.	NW173	Total Tin: APHA Online Edition 3125 B mod.
NW174	Total Titanium: APHA Online Edition 3125 B mod.	NW176	Total Vanadium: APHA Online Edition 3125 B mod.
NW177	Total Zinc: APHA Online Edition 3125 B mod.	NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I
NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B	NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B
NW206	Suspended Solids: APHA Online Edition 2540 D	NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B
NW212	Turbidity: APHA 24th Edition 2130 B	NW339	Total Dissolved Solids: Internal Method, Gravimetry
NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)	NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)
NW410	Acidity to pH 7.0: Internal Method, Titrimetry	NW472	Dissolved Silica: APHA Online Edition 3120 B mod.
NW580	Thallium - Total: APHA Online Edition 3125 B mod.	NW581	Uranium - Total: APHA Online Edition 3125 B mod.
NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.	NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.
NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.	NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C
NW676	Ammonia Nitrogen: Internal Method, Spectrophotometry (DA)	NW679	Cyanide: APHA Online Edition 4500-CN C & E

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✘ (Unsatisfactory) means does not meet the specification

✔ (Satisfactory) means meets the specification

Food & Water Testing

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

Eurofins may subcontract the performance of part or all of the Services to a third party and the Customer authorises the release of all information necessary to the third party for the provision of the Services.

All samples become the property of Eurofins to the extent necessary for the performance of the Services.

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END OF REPORT

Food & Water Testing
ANALYTICAL REPORT

REPORT CODE	AR-24-NC-013497-01	REPORT DATE	02/05/2024
Attention	Matakanui Gold Hamish McLauchlan 1460 Bendigo Station RD3 9383 Cromwell NEW ZEALAND		
Phone	0064275886631		
Email	hamish.mclauchlan@matakanuigold.co.nz		

Contact for your orders:	James Thornton	Order code:	EUNZCH-00174859
Contract:	Matakanui Gold Water Monitoring		
Submission Reference:	17/04/2024	Purchase Order Number:	NA

SAMPLE CODE	817-2024-00047510		
Sample Name	RS01		
Sample Reference	Rise and shine stream 1		
Reception Date & Time:	18/04/2024 8:30	Reception temperature:	12.8 °C
Analysis Started on:	18/04/2024	Analysis Ending Date:	01/05/2024
Product Type	Water	Sampled Date & Time	17/04/2024 12:00

RESULTS		LOQ	
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l 1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l 1
②NW345	Acidity to pH 8.3		
	Acidity	7	mg CaCO3/l 1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l 0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l 0.02
②NW007	Chloride		
	Chloride (Cl)	3.90	mg/l 0.02
②NW023	Conductivity		
	Conductivity	21.4	mS/m 0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l 0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	2.2	mg/l 0.1
②NW098	Dissolved Aluminium		
	Aluminium	<0.002	mg/l 0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l 0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.020	mg/l 0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.013	mg/l 0.002
②NW101	Dissolved Beryllium		

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	33.3	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0015	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.06	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.004	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	5.85	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0201	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	2.00	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.70	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	8.01	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.394	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

		RESULTS		LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.6		0.1
②NW011	Sulphate Sulphate	7.92	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	93	mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.014	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.026	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.014	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	25.3	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			

Food & Water Testing

		RESULTS		LOQ
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	105	mg/l	1
②NW030	Total Hardness			
	Hardness	107	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.2	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	5.2	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.037	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.141	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	2.2	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.006	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.6	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	3.87	mg/l	0.03
②NW170	Total Silver			
	Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium			
	Sodium (Na)	6.4	mg/l	0.1
②NW172	Total Strontium			
	Strontium (Sr)	0.402	mg/l	0.002
②NW173	Total Tin			
	Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium			
	Titanium (Ti)	<0.001	mg/l	0.001
②NW176	Total Vanadium			

Food & Water Testing

RESULTS			LOQ
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	1.01 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE	817-2024-00047511		
Sample Name	SC01		
Sample Reference	Shepherds Creek by irrigation take		
Reception Date & Time:	18/04/2024 8:30	Reception temperature:	12.8 °C
Analysis Started on:	18/04/2024	Analysis Ending Date:	01/05/2024
Product Type	Water	Sampled Date & Time	17/04/2024 12:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3 Acidity	6 mg CaCO3/l	1
②NW676	Ammonia Nitrogen Ammonia nitrogen	<0.01 mg/l	0.01
②NW009	Bromide Bromide	0.08 mg/l	0.02
②NW007	Chloride Chloride (Cl)	7.85 mg/l	0.02
②NW023	Conductivity Conductivity	58.1 mS/m	0.1
②NW679	Cyanide Cyanide	<0.005 mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon Carbon	2.1 mg/l	0.1
②NW098	Dissolved Aluminium Aluminium	<0.002 mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001 mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	0.003 mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.037 mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001 mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001 mg/l	0.001
②NW103	Dissolved Boron		

Food & Water Testing

		RESULTS		LOQ
②NW103	Dissolved Boron Boron (B)	0.04	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	59.7	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.010	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	25.3	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0028	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	2.37	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.70	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	14.9	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.752	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			

Food & Water Testing

		RESULTS		LOQ
②NW585	Dissolved Uranium Uranium (U)	0.0052	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.11	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.1		0.1
②NW011	Sulphate Sulphate	52.0	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	251	mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.067	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.004	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.047	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	64.7	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			

Food & Water Testing

RESULTS			LOQ
③NW339	Total Dissolved Solids		
	Total dissolved Solids	284	mg/l
			1
②NW030	Total Hardness		
	Hardness	254	mg CaCO3/l
			1
②NW160	Total Iron		
	Iron (Fe)	<0.1	mg/l
			0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001	mg/l
			0.001
②NW162	Total Lithium		
	Lithium (Li)	0.009	mg/l
			0.001
②NW163	Total Magnesium		
	Magnesium (Mg)	26.9	mg/l
			0.1
②NW164	Total Manganese		
	Manganese (Mn)	0.006	mg/l
			0.001
②NW165	Total Mercury		
	Mercury (Hg)	<0.001	mg/l
			0.001
②NW166	Total Molybdenum		
	Molybdenum (Mo)	<0.001	mg/l
			0.001
②NW167	Total Nickel		
	Nickel (Ni)	<0.001	mg/l
			0.001
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.164	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.1	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.015	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	2.5	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.77	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	15.4	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	1.16	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.002	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		

Food & Water Testing

RESULTS			LOQ
②NW212	Turbidity		
	Turbidity	0.92	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.006	mg/l
			0.001

SAMPLE CODE	817-2024-00047512		
Sample Name	SC03		
Sample Reference	Shepherds Creek 3		
Reception Date & Time:	18/04/2024 8:30	Reception temperature:	12.8 °C
Analysis Started on:	18/04/2024	Analysis Ending Date:	02/05/2024
Product Type	Water	Sampled Date & Time	17/04/2024 12:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	4	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	3.00	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	34.0	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.9	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.005	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	<0.001	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.026	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		

Food & Water Testing

		RESULTS		LOQ
②NW105	Dissolved Calcium Calcium (Ca)	37.7	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.004	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	11.0	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0032	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.25	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	7.93	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.51	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.705	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0019	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			

Food & Water Testing

		RESULTS		LOQ
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.12	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.08	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	5.4		0.1
②NW011	Sulphate			
	Sulphate	14.6	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	2	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.148	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.036	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	41.8	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	167	mg/l	1
②NW030	Total Hardness			
	Hardness	140	mg CaCO3/l	1
②NW160	Total Iron			

Food & Water Testing

		RESULTS		LOQ
②NW160	Total Iron Iron (Fe)	0.2	mg/l	0.1
②NW161	Total Lead Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium Lithium (Li)	0.004	mg/l	0.001
②NW163	Total Magnesium Magnesium (Mg)	11.7	mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.011	mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.205	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.9	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.009	mg/l	0.005
②NW168	Total Potassium Potassium (K)	1.3	mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon Silicon (Si)	3.54	mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium Sodium (Na)	7.9	mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.814	mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.002	mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001	mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005	mg/l	0.005
②NW212	Turbidity Turbidity	2.03	NTU	0.01
②NW581	Uranium - Total Uranium (U)	0.002	mg/l	0.001

Food & Water Testing

SAMPLE CODE		817-2024-00047513	
Sample Name	RS02		
Sample Reference	Rise and shine stream 2 at Shreks		
Reception Date & Time:	18/04/2024 8:30	Reception temperature:	12.8 °C
Analysis Started on:	18/04/2024	Analysis Ending Date:	01/05/2024
Product Type	Water	Sampled Date & Time	17/04/2024 12:00

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	4	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.85	mg/l	0.02
②NW023	Conductivity			
	Conductivity	15.7	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.9	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.006	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.004	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.011	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	18.2	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			

Food & Water Testing

		RESULTS		LOQ
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	3.96	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0007	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.34	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.5	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.89	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.253	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0003	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.09	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			

Food & Water Testing

RESULTS			LOQ
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.6	0.1
②NW011	Sulphate Sulphate	2.77 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	72 mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.067 mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002 mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.005 mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.013 mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005 mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005 mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05 mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001 mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	20.3 mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001 mg/l	0.001
②NW158	Total Cobalt Cobalt (Co)	<0.002 mg/l	0.002
②NW159	Total Copper Copper (Cu)	0.004 mg/l	0.002
③NW339	Total Dissolved Solids Total dissolved Solids	77 mg/l	1
②NW030	Total Hardness Hardness	62 mg CaCO ₃ /l	1
②NW160	Total Iron Iron (Fe)	0.1 mg/l	0.1
②NW161	Total Lead Lead (Pb)	<0.001 mg/l	0.001
②NW162	Total Lithium Lithium (Li)	0.003 mg/l	0.001
②NW163	Total Magnesium		

Food & Water Testing

RESULTS			LOQ
②NW163	Total Magnesium Magnesium (Mg)	4.2 mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.005 mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001 mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.128 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.9 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.009 mg/l	0.005
②NW168	Total Potassium Potassium (K)	1.4 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	4.37 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	5.2 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.272 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.003 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	1.81 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE 817-2024-00047514

Sample Name RSA1

Sample Reference Rise and shine Adit

Reception Date & Time: 18/04/2024 8:30

Analysis Started on: 18/04/2024

Product Type Water

Reception temperature: 12.8 °C

Analysis Ending Date: 02/05/2024

Sampled Date & Time 17/04/2024 12:00

Food & Water Testing

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	36	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.02	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.72	mg/l	0.02
②NW023	Conductivity			
	Conductivity	22.1	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.5	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.053	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.025	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	27.9	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.32	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	5.96	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.102	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.99	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	12.7	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	8.20	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.356	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.003	mg/l	0.002
②NW006	Fluoride Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	6.9		0.1
②NW011	Sulphate Sulphate	2.80	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

		RESULTS		LOQ
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	104	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.007	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.128	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.027	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	26.5	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	108	mg/l	1
②NW030	Total Hardness			
	Hardness	94	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	1.6	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	5.4	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.094	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.210 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	2.7 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.011 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.7 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	5.15 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	6.8 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.411 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	<0.001 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	3.05 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE 817-2024-00047515

Sample Name RS03

Sample Reference Rise and shine stream 3 at Alta crossing

Reception Date & Time: 18/04/2024 8:30

Analysis Started on: 18/04/2024

Product Type Water

Reception temperature: 12.8 °C

Analysis Ending Date: 01/05/2024

Sampled Date & Time 17/04/2024 12:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		

Food & Water Testing

		RESULTS		LOQ
②NW345	Acidity to pH 8.3			
	Acidity	6	mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.44	mg/l	0.02
②NW023	Conductivity			
	Conductivity	11.2	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.0	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.010	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.006	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	11.4	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.04	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.001	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	2.60	mg/l	0.01
②NW113	Dissolved Manganese			

Food & Water Testing

RESULTS			LOQ
②NW113	Dissolved Manganese Manganese (Mn)	0.0172 mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005 mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.68 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.85 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.06 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.157 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.07 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.4	0.1
②NW011	Sulphate Sulphate	3.03 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		

Food & Water Testing

		RESULTS		LOQ
②NW003	Total Alkalinity			
	Alkalinity total	48	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	<0.005	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.012	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.008	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	13.5	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	55	mg/l	1
②NW030	Total Hardness			
	Hardness	39	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	2.9	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.029	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			

Food & Water Testing

RESULTS			LOQ
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.101	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.0	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.014	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.8	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.75	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	4.7	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.182	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.33	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE 817-2024-00047516

Sample Name CC01

Sample Reference Clearwater creek above DOC

Reception Date & Time: 18/04/2024 8:30

Analysis Started on: 18/04/2024

Product Type Water

Reception temperature: 12.8 °C

Analysis Ending Date: 01/05/2024

Sampled Date & Time 17/04/2024 12:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	3	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		

Food & Water Testing

		RESULTS		LOQ
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.33	mg/l	0.02
②NW023	Conductivity			
	Conductivity	4.4	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.7	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.006	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.001	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.004	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	3.9	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	0.95	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.46 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.77 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	2.51 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.0481 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.06 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.2	0.1
②NW011	Sulphate Sulphate	0.96 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	18 mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	<0.005 mg/l	0.005
②NW148	Total Antimony		

Food & Water Testing

		RESULTS		LOQ
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	<0.005	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	4.7	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	21	mg/l	1
②NW030	Total Hardness			
	Hardness	14	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	<0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	1.0	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.001	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.077	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.8	mg/l	0.1
②NW194	Total Phosphorus			

Food & Water Testing

RESULTS			LOQ
②NW194	Total Phosphorus		
	Total phosphorus	0.014	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.4	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.54	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	2.6	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.050	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.28	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE	817-2024-00047517		
Sample Name	LBA		
Sample Reference	Lower Bendigo Addit		
Reception Date & Time:	18/04/2024 8:30	Reception temperature:	12.8 °C
Analysis Started on:	18/04/2024	Analysis Ending Date:	01/05/2024
Product Type	Water	Sampled Date & Time	17/04/2024 12:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	<1	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.08	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	7.85	mg/l
			0.02
②NW023	Conductivity		

Food & Water Testing

		RESULTS		LOQ
②NW023	Conductivity			
	Conductivity	43.7	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.7	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.873	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.004	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	41.7	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.07	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.009	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	14.5	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0200	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	0.0009	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			

Food & Water Testing

		RESULTS		LOQ
②NW117	Dissolved Potassium	1.83	mg/l	0.01
	Potassium (K)			
②NW118	Dissolved Selenium	<0.005	mg/l	0.005
	Selenium (Se)			
②NW472	Dissolved Silica	14.7	mg/l	0.02
	Sand/silica			
②NW119	Dissolved Silver	<0.0005	mg/l	0.0005
	Silver (Ag)			
②NW120	Dissolved Sodium	18.9	mg/l	0.01
	Sodium (Na)			
②NW121	Dissolved Strontium	0.403	mg/l	0.0005
	Strontium (Sr)			
②NW584	Dissolved Thallium	<0.0005	mg/l	0.0005
	Thallium (Tl)			
②NW122	Dissolved Tin	<0.0005	mg/l	0.0005
	Tin (Sn)			
②NW123	Dissolved Titanium	<0.0005	mg/l	0.0005
	Titanium (Ti)			
②NW585	Dissolved Uranium	0.0019	mg/l	0.0002
	Uranium (U)			
②NW124	Dissolved Vanadium	<0.0005	mg/l	0.0005
	Vanadium (V)			
②NW125	Dissolved Zinc	<0.002	mg/l	0.002
	Zinc (Zn)			
②NW006	Fluoride	0.32	mg/l	0.02
	Fluoride			
②NW010	Nitrate-N	0.26	mg/l	0.01
	Nitrate-N			
②NW008	Nitrite-N	<0.01	mg/l	0.01
	Nitrite Nitrogen as N			
②NW195	pH (Tested beyond 15 minute APHA holding time)	8.2		0.1
	pH			
②NW011	Sulphate	34.1	mg/l	0.02
	Sulphate			
②NW206	Suspended Solids	<6	mg/l	3
	Suspended Solids			
②NW580	Thallium - Total	<0.001	mg/l	0.001
	Thallium (Tl)			
②NW003	Total Alkalinity	183	mg CaCO3/l	1
	Alkalinity total			
②NW147	Total Aluminium	<0.005	mg/l	0.005
	Aluminium			
②NW148	Total Antimony	<0.002	mg/l	0.002
	Antimony (Sb)			
②NW149	Total Arsenic	1.00	mg/l	0.002
	Arsenic (As)			
②NW150	Total Barium			

Food & Water Testing

	RESULTS		LOQ
②NW150 Total Barium			
Barium (Ba)	<0.005	mg/l	0.005
②NW151 Total Beryllium			
Beryllium (Be)	<0.005	mg/l	0.005
②NW152 Total Bismuth			
Bismuth (Bi)	<0.005	mg/l	0.005
②NW153 Total Boron			
Boron (B)	<0.05	mg/l	0.05
②NW154 Total Cadmium			
Cadmium (Cd)	<0.001	mg/l	0.001
②NW156 Total Calcium			
Calcium (Ca)	42.8	mg/l	0.1
②NW157 Total Chromium			
Chromium (Cr)	<0.001	mg/l	0.001
②NW158 Total Cobalt			
Cobalt (Co)	<0.002	mg/l	0.002
②NW159 Total Copper			
Copper (Cu)	<0.002	mg/l	0.002
③NW339 Total Dissolved Solids			
Total dissolved Solids	214	mg/l	1
②NW030 Total Hardness			
Hardness	164	mg CaCO3/l	1
②NW160 Total Iron			
Iron (Fe)	0.2	mg/l	0.1
②NW161 Total Lead			
Lead (Pb)	<0.001	mg/l	0.001
②NW162 Total Lithium			
Lithium (Li)	0.012	mg/l	0.001
②NW163 Total Magnesium			
Magnesium (Mg)	15.6	mg/l	0.1
②NW164 Total Manganese			
Manganese (Mn)	0.026	mg/l	0.001
②NW165 Total Mercury			
Mercury (Hg)	<0.001	mg/l	0.001
②NW166 Total Molybdenum			
Molybdenum (Mo)	0.001	mg/l	0.001
②NW167 Total Nickel			
Nickel (Ni)	<0.001	mg/l	0.001
②NW189 Total Nitrogen			
Total Nitrogen (N)	0.270	mg/l	0.002
②NW210 Total Non-Purgeable Organic Carbon			
Total Organic Carbon	1.7	mg/l	0.1
②NW194 Total Phosphorus			
Total phosphorus	0.027	mg/l	0.005
②NW168 Total Potassium			
Potassium (K)	1.8	mg/l	0.1
②NW169 Total Selenium			

Food & Water Testing

RESULTS			LOQ
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	6.16	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	20.6	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.449	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	1.28	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.002	mg/l
			0.001

SAMPLE CODE		817-2024-00047518	
Sample Name	MDD015		
Sample Reference	MDD015 drillhole discharge		
Reception Date & Time:	18/04/2024 8:30	Reception temperature:	12.8 °C
Analysis Started on:	18/04/2024	Analysis Ending Date:	01/05/2024
Product Type	Water	Sampled Date & Time	17/04/2024 12:00

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	6	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.13	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.10	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	10.2	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	43.7	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		

Food & Water Testing

RESULTS			LOQ
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	0.2	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.003	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.018	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.185	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	25.3	mg/l
			0.1
②NW106	Dissolved Chromium		
	Chromium (Cr)	<0.001	mg/l
			0.001
②NW107	Dissolved Cobalt		
	Cobalt (Co)	<0.0005	mg/l
			0.0005
②NW108	Dissolved Copper		
	Copper (Cu)	<0.0005	mg/l
			0.0005
②NW109	Dissolved Iron		
	Iron (Fe)	0.03	mg/l
			0.01
②NW110	Dissolved Lead		
	Lead (Pb)	<0.0005	mg/l
			0.0005
②NW111	Dissolved Lithium		
	Lithium (Li)	0.037	mg/l
			0.001
②NW112	Dissolved Magnesium		
	Magnesium (Mg)	15.8	mg/l
			0.01
②NW113	Dissolved Manganese		
	Manganese (Mn)	0.0067	mg/l
			0.0005
②NW114	Dissolved Mercury		
	Mercury (Hg)	<0.0005	mg/l
			0.0005
②NW115	Dissolved Molybdenum		
	Molybdenum (Mo)	<0.0005	mg/l
			0.0005
②NW116	Dissolved Nickel		
	Nickel (Ni)	<0.0005	mg/l
			0.0005
②NW117	Dissolved Potassium		
	Potassium (K)	1.39	mg/l
			0.01
②NW118	Dissolved Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW472	Dissolved Silica		

Food & Water Testing

		RESULTS		LOQ
②NW472	Dissolved Silica Sand/silica	17.9	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	39.6	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	10.5	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	0.0033	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0009	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.18	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.0		0.1
②NW011	Sulphate Sulphate	11.6	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	201	mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	<0.005	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.018	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.192	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			

Food & Water Testing

		RESULTS		LOQ
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	23.6	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	214	mg/l	1
②NW030	Total Hardness			
	Hardness	128	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	<0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.046	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	15.9	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.007	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.120	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	0.2	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.008	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.3	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	7.37	mg/l	0.03
②NW170	Total Silver			

Food & Water Testing

	RESULTS		LOQ
②NW170 Total Silver			
Silver (Ag)	<0.001	mg/l	0.001
②NW171 Total Sodium			
Sodium (Na)	43.5	mg/l	0.1
②NW172 Total Strontium			
Strontium (Sr)	9.54	mg/l	0.002
②NW173 Total Tin			
Tin (Sn)	<0.001	mg/l	0.001
②NW174 Total Titanium			
Titanium (Ti)	<0.001	mg/l	0.001
②NW176 Total Vanadium			
Vanadium (V)	<0.001	mg/l	0.001
②NW177 Total Zinc			
Zinc (Zn)	<0.005	mg/l	0.005
②NW212 Turbidity			
Turbidity	0.17	NTU	0.01
②NW581 Uranium - Total			
Uranium (U)	<0.001	mg/l	0.001

LIST OF METHODS

NW003 Total Alkalinity: APHA Online Edition 2320 B	NW006 Fluoride: APHA Online Edition 4110 B
NW007 Chloride: APHA Online Edition 4110 B	NW008 Nitrite-N: APHA Online Edition 4110 B
NW009 Bromide: APHA Online Edition 4110 B	NW010 Nitrate-N: APHA Online Edition 4110 B
NW011 Sulphate: APHA Online Edition 4110 B	NW023 Conductivity: APHA 24th Edition 2510 B
NW030 Total Hardness: APHA Online Edition 2340 B	NW098 Dissolved Aluminium: APHA Online Edition 3125 B mod.
NW099 Dissolved Antimony: APHA Online Edition 3125 B mod.	NW100 Dissolved Barium: APHA Online Edition 3125 B mod.
NW101 Dissolved Beryllium: APHA Online Edition 3125 B mod.	NW102 Dissolved Bismuth: APHA Online Edition 3125 B mod.
NW103 Dissolved Boron: APHA Online Edition 3125 B mod.	NW104 Dissolved Cadmium: APHA Online Edition 3125 B mod.
NW105 Dissolved Calcium: APHA Online Edition 3125 B mod.	NW106 Dissolved Chromium: APHA Online Edition 3125 B mod.
NW107 Dissolved Cobalt: APHA Online Edition 3125 B mod.	NW108 Dissolved Copper: APHA Online Edition 3125 B mod.
NW109 Dissolved Iron: APHA Online Edition 3125 B mod.	NW110 Dissolved Lead: APHA Online Edition 3125 B mod.
NW111 Dissolved Lithium: APHA Online Edition 3125 B mod.	NW112 Dissolved Magnesium: APHA Online Edition 3125 B mod.
NW113 Dissolved Manganese: APHA Online Edition 3125 B mod.	NW114 Dissolved Mercury: APHA Online Edition 3125 B mod.
NW115 Dissolved Molybdenum: APHA Online Edition 3125 B mod.	NW116 Dissolved Nickel: APHA Online Edition 3125 B mod.
NW117 Dissolved Potassium: APHA Online Edition 3125 B mod.	NW118 Dissolved Selenium: APHA Online Edition 3125 B mod.
NW119 Dissolved Silver: APHA Online Edition 3125 B mod.	NW120 Dissolved Sodium: APHA Online Edition 3125 B mod.
NW121 Dissolved Strontium: APHA Online Edition 3125 B mod.	NW122 Dissolved Tin: APHA Online Edition 3125 B mod.
NW123 Dissolved Titanium: APHA Online Edition 3125 B mod.	NW124 Dissolved Vanadium: APHA Online Edition 3125 B mod.
NW125 Dissolved Zinc: APHA Online Edition 3125 B mod.	NW143 Total Silicon: APHA Online Edition 3120 B mod.
NW147 Total Aluminium: APHA Online Edition 3125 B mod.	NW148 Total Antimony: APHA Online Edition 3125 B mod.
NW149 Total Arsenic: APHA Online Edition 3125 B mod.	NW150 Total Barium: APHA Online Edition 3125 B mod.
NW151 Total Beryllium: APHA Online Edition 3125 B mod.	NW152 Total Bismuth: APHA Online Edition 3125 B mod.
NW153 Total Boron: APHA Online Edition 3125 B mod.	NW154 Total Cadmium: APHA Online Edition 3125 B mod.
NW156 Total Calcium: APHA Online Edition 3125 B mod.	NW157 Total Chromium: APHA Online Edition 3125 B mod.
	NW158 Total Cobalt: APHA Online Edition 3125 B mod.

Food & Water Testing

NW159	Total Copper: APHA Online Edition 3125 B mod.	NW160	Total Iron: APHA Online Edition 3125 B mod.
NW161	Total Lead: APHA Online Edition 3125 B mod.	NW162	Total Lithium: APHA Online Edition 3125 B mod.
NW163	Total Magnesium: APHA Online Edition 3125 B mod.	NW164	Total Manganese: APHA Online Edition 3125 B mod.
NW165	Total Mercury: APHA Online Edition 3125 B mod.	NW166	Total Molybdenum: APHA Online Edition 3125 B mod.
NW167	Total Nickel: APHA Online Edition 3125 B mod.	NW168	Total Potassium: APHA Online Edition 3125 B mod.
NW169	Total Selenium: APHA Online Edition 3125 B mod.	NW170	Total Silver: APHA Online Edition 3125 B mod.
NW171	Total Sodium: APHA Online Edition 3125 B mod.	NW172	Total Strontium: APHA Online Edition 3125 B mod.
NW173	Total Tin: APHA Online Edition 3125 B mod.	NW174	Total Titanium: APHA Online Edition 3125 B mod.
NW176	Total Vanadium: APHA Online Edition 3125 B mod.	NW177	Total Zinc: APHA Online Edition 3125 B mod.
NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I	NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B
NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B	NW206	Suspended Solids: APHA Online Edition 2540 D
NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B	NW212	Turbidity: APHA 24th Edition 2130 B
NW339	Total Dissolved Solids: Internal Method, Gravimetry	NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)
NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)	NW410	Acidity to pH 7.0: Internal Method, Titrimetry
NW472	Dissolved Silica: APHA Online Edition 3120 B mod.	NW580	Thallium - Total: APHA Online Edition 3125 B mod.
NW581	Uranium - Total: APHA Online Edition 3125 B mod.	NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.
NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.	NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.
NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C	NW676	Ammonia Nitrogen: Internal Method, Spectrophotometry (DA)
NW679	Cyanide: APHA Online Edition 4500-CN C & E		

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

Food & Water Testing

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE **AR-24-NC-015251-01** REPORT DATE **16/05/2024**

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders: James Thornton **Order code:** EUNZCH-00176359
Contract: Matakanui Gold Water Monitoring
Submission Reference: 20230501_sampling **Purchase Order Number:** NA

SAMPLE CODE **817-2024-00052692**

Sample Name RS01
Sample Reference Rise and shine stream 1
Reception Date & Time: 03/05/2024 8:30 **Reception temperature:** 10.6 °C
Analysis Started on: 03/05/2024 **Analysis Ending Date:** 13/05/2024
Product Type Water

	RESULTS		LOQ
②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO3/l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO3/l	1
②NW345 Acidity to pH 8.3			
Acidity	4	mg CaCO3/l	1
②NW676 Ammonia Nitrogen			
Ammonia nitrogen	0.01	mg/l	0.01
②NW009 Bromide			
Bromide	<0.02	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	4.18	mg/l	0.02
②NW023 Conductivity			
Conductivity	19.5	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	1.7	mg/l	0.1
②NW098 Dissolved Aluminium			
Aluminium	<0.002	mg/l	0.002
②NW099 Dissolved Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW583 Dissolved Arsenic			
Arsenic (As)	0.019	mg/l	0.001
②NW100 Dissolved Barium			
Barium (Ba)	0.011	mg/l	0.002
②NW101 Dissolved Beryllium			

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	22.2	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.07	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	4.86	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0188	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.59	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.92	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	6.29	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.340	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

		RESULTS		LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.11	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.6		0.1
②NW011	Sulphate Sulphate	5.71	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<4	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	86	mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	0.010	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.029	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.015	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	21.2	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			

Food & Water Testing

		RESULTS		LOQ
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	96	mg/l	1
②NW030	Total Hardness			
	Hardness	70	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	0.3	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	4.0	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.040	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.120	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.7	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.007	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.2	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	3.72	mg/l	0.03
②NW170	Total Silver			
	Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium			
	Sodium (Na)	4.7	mg/l	0.1
②NW172	Total Strontium			
	Strontium (Sr)	0.348	mg/l	0.002
②NW173	Total Tin			
	Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium			
	Titanium (Ti)	<0.001	mg/l	0.001
②NW176	Total Vanadium			

Food & Water Testing

	RESULTS		LOQ
②NW176 Total Vanadium			
Vanadium (V)	<0.001	mg/l	0.001
②NW177 Total Zinc			
Zinc (Zn)	<0.005	mg/l	0.005
②NW212 Turbidity			
Turbidity	1.16	NTU	0.01
②NW581 Uranium - Total			
Uranium (U)	<0.001	mg/l	0.001

SAMPLE CODE	817-2024-00052693		
Sample Name	SC01		
Sample Reference	Shepherds Creek by irrigation take		
Reception Date & Time:	03/05/2024 8:30	Reception temperature:	10.6 °C
Analysis Started on:	03/05/2024	Analysis Ending Date:	16/05/2024
Product Type	Water		

	RESULTS		LOQ
②NW409 Acidity to pH 3.7			
Acidity	<1	mg CaCO3/l	1
③NW410 Acidity to pH 7.0			
Acidity	<1	mg CaCO3/l	1
②NW345 Acidity to pH 8.3			
Acidity	4	mg CaCO3/l	1
②NW676 Ammonia Nitrogen			
Ammonia nitrogen	0.01	mg/l	0.01
②NW009 Bromide			
Bromide	0.08	mg/l	0.02
②NW007 Chloride			
Chloride (Cl)	7.40	mg/l	0.02
②NW023 Conductivity			
Conductivity	57.1	mS/m	0.1
②NW679 Cyanide			
Cyanide	<0.005	mg/l	0.005
③NW671 Dissolved (NP) Organic Carbon			
Carbon	1.7	mg/l	0.1
②NW098 Dissolved Aluminium			
Aluminium	0.003	mg/l	0.002
②NW099 Dissolved Antimony			
Antimony (Sb)	<0.001	mg/l	0.001
②NW583 Dissolved Arsenic			
Arsenic (As)	0.003	mg/l	0.001
②NW100 Dissolved Barium			
Barium (Ba)	0.042	mg/l	0.002
②NW101 Dissolved Beryllium			
Beryllium (Be)	<0.001	mg/l	0.001
②NW102 Dissolved Bismuth			
Bismuth (Bi)	<0.001	mg/l	0.001
②NW103 Dissolved Boron			

Food & Water Testing

		RESULTS		LOQ
②NW103	Dissolved Boron Boron (B)	0.04	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	66.5	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.010	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	25.1	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0016	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.85	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	7.97	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	14.2	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	1.01	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			

Food & Water Testing

		RESULTS		LOQ
②NW585	Dissolved Uranium Uranium (U)	0.0061	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.008	mg/l	0.002
②NW006	Fluoride Fluoride	0.13	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.2		0.1
②NW011	Sulphate Sulphate	53.7	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<4	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	243	mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	0.040	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.003	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.048	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium Calcium (Ca)	62.2	mg/l	0.1
②NW157	Total Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			

Food & Water Testing

RESULTS			LOQ
③NW339	Total Dissolved Solids		
	Total dissolved Solids	280	mg/l
			1
②NW030	Total Hardness		
	Hardness	270	mg CaCO3/l
			1
②NW160	Total Iron		
	Iron (Fe)	<0.1	mg/l
			0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001	mg/l
			0.001
②NW162	Total Lithium		
	Lithium (Li)	0.008	mg/l
			0.001
②NW163	Total Magnesium		
	Magnesium (Mg)	24.0	mg/l
			0.1
②NW164	Total Manganese		
	Manganese (Mn)	0.003	mg/l
			0.001
②NW165	Total Mercury		
	Mercury (Hg)	<0.001	mg/l
			0.001
②NW166	Total Molybdenum		
	Molybdenum (Mo)	<0.001	mg/l
			0.001
②NW167	Total Nickel		
	Nickel (Ni)	<0.001	mg/l
			0.001
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.296	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	1.7	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.012	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	1.7	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.56	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	12.7	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.965	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.002	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		

Food & Water Testing

RESULTS			LOQ
②NW212	Turbidity		
	Turbidity	1.02	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.006	mg/l
			0.001

SAMPLE CODE	817-2024-00052694		
Sample Name	SC03		
Sample Reference	Shepherds Creek 3		
Reception Date & Time:	03/05/2024 8:30	Reception temperature:	10.6 °C
Analysis Started on:	03/05/2024	Analysis Ending Date:	16/05/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	4	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	2.85	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	33.1	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.5	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	<0.002	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	<0.001	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.027	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		

Food & Water Testing

		RESULTS		LOQ
②NW105	Dissolved Calcium Calcium (Ca)	39.1	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	11.7	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0038	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.22	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.43	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.98	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.695	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0019	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			

Food & Water Testing

		RESULTS		LOQ
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.15	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.07	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.0		0.1
②NW011	Sulphate			
	Sulphate	15.0	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	5	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	152	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.138	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.035	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	37.2	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	162	mg/l	1
②NW030	Total Hardness			
	Hardness	133	mg CaCO3/l	1
②NW160	Total Iron			

Food & Water Testing

		RESULTS		LOQ
②NW160	Total Iron Iron (Fe)	0.2	mg/l	0.1
②NW161	Total Lead Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium Lithium (Li)	0.003	mg/l	0.001
②NW163	Total Magnesium Magnesium (Mg)	9.7	mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.010	mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.195	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.6	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.010	mg/l	0.005
②NW168	Total Potassium Potassium (K)	1.0	mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon Silicon (Si)	3.27	mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001	mg/l	0.001
②NW171	Total Sodium Sodium (Na)	6.1	mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.654	mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001	mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.003	mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001	mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005	mg/l	0.005
②NW212	Turbidity Turbidity	1.92	NTU	0.01
②NW581	Uranium - Total Uranium (U)	0.002	mg/l	0.001

Food & Water Testing

SAMPLE CODE		817-2024-00052695	
Sample Name	RS02		
Sample Reference	Rise and shine stream 2 at Shreks		
Reception Date & Time:	03/05/2024 8:30	Reception temperature:	10.6 °C
Analysis Started on:	03/05/2024	Analysis Ending Date:	16/05/2024
Product Type	Water		

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	2	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	3.35	mg/l	0.02
②NW023	Conductivity			
	Conductivity	15.4	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.2	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.007	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.005	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.011	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	19.3	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			

Food & Water Testing

		RESULTS		LOQ
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	3.49	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.40	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	10.1	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.69	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.253	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0003	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.11	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			

Food & Water Testing

RESULTS			LOQ
②NW008	Nitrite-N		
	Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)		
	pH	7.8	0.1
②NW011	Sulphate		
	Sulphate	3.24 mg/l	0.02
②NW206	Suspended Solids		
	Suspended Solids	10 mg/l	3
②NW580	Thallium - Total		
	Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		
	Alkalinity total	67 mg CaCO ₃ /l	1
②NW147	Total Aluminium		
	Aluminium	0.299 mg/l	0.005
②NW148	Total Antimony		
	Antimony (Sb)	<0.002 mg/l	0.002
②NW149	Total Arsenic		
	Arsenic (As)	0.007 mg/l	0.002
②NW150	Total Barium		
	Barium (Ba)	0.017 mg/l	0.005
②NW151	Total Beryllium		
	Beryllium (Be)	<0.005 mg/l	0.005
②NW152	Total Bismuth		
	Bismuth (Bi)	<0.005 mg/l	0.005
②NW153	Total Boron		
	Boron (B)	<0.05 mg/l	0.05
②NW154	Total Cadmium		
	Cadmium (Cd)	<0.001 mg/l	0.001
②NW156	Total Calcium		
	Calcium (Ca)	16.2 mg/l	0.1
②NW157	Total Chromium		
	Chromium (Cr)	<0.001 mg/l	0.001
②NW158	Total Cobalt		
	Cobalt (Co)	<0.002 mg/l	0.002
②NW159	Total Copper		
	Copper (Cu)	<0.002 mg/l	0.002
③NW339	Total Dissolved Solids		
	Total dissolved Solids	75 mg/l	1
②NW030	Total Hardness		
	Hardness	63 mg CaCO ₃ /l	1
②NW160	Total Iron		
	Iron (Fe)	0.4 mg/l	0.1
②NW161	Total Lead		
	Lead (Pb)	<0.001 mg/l	0.001
②NW162	Total Lithium		
	Lithium (Li)	0.002 mg/l	0.001
②NW163	Total Magnesium		

Food & Water Testing

RESULTS			LOQ
②NW163	Total Magnesium Magnesium (Mg)	3.3 mg/l	0.1
②NW164	Total Manganese Manganese (Mn)	0.010 mg/l	0.001
②NW165	Total Mercury Mercury (Hg)	<0.001 mg/l	0.001
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.131 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	2.4 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.012 mg/l	0.005
②NW168	Total Potassium Potassium (K)	1.4 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	4.65 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	3.9 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.275 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	0.009 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	5.92 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE		817-2024-00052696	
Sample Name	RSA1		
Sample Reference	Rise and shine Adit		
Reception Date & Time:	03/05/2024 8:30	Reception temperature:	10.6 °C
Analysis Started on:	03/05/2024	Analysis Ending Date:	16/05/2024
Product Type	Water		

Food & Water Testing

		RESULTS	LOQ	
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg CaCO3/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg CaCO3/l	1
②NW345	Acidity to pH 8.3			
	Acidity	27	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.02	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	3.41	mg/l	0.02
②NW023	Conductivity			
	Conductivity	20.0	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.8	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.005	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.130	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.027	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	37.0	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	0.0018	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0341	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.17	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	4.65	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.273	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	0.0026	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	2.79	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	11.3	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	9.27	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.274	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.072	mg/l	0.002
②NW006	Fluoride Fluoride	0.11	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	6.8		0.1
②NW011	Sulphate Sulphate	4.09	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

		RESULTS		LOQ
②NW206	Suspended Solids			
	Suspended Solids	20	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	90	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	<0.005	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.454	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.030	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	22.0	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	98	mg/l	1
②NW030	Total Hardness			
	Hardness	72	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	6.9	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	4.1	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.205	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW166	Total Molybdenum Molybdenum (Mo)	<0.001 mg/l	0.001
②NW167	Total Nickel Nickel (Ni)	<0.001 mg/l	0.001
②NW189	Total Nitrogen Total Nitrogen (N)	0.144 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	2.6 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.005 mg/l	0.005
②NW168	Total Potassium Potassium (K)	0.7 mg/l	0.1
②NW169	Total Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW143	Total Silicon Silicon (Si)	4.66 mg/l	0.03
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	4.9 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	0.341 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	<0.001 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	13.8 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

SAMPLE CODE	817-2024-00052697		
Sample Name	RS03		
Sample Reference	Rise and shine stream 3 at Alta crossing		
Reception Date & Time:	03/05/2024 8:30	Reception temperature:	10.6 °C
Analysis Started on:	03/05/2024	Analysis Ending Date:	16/05/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7 Acidity	<1 mg CaCO3/l	1
③NW410	Acidity to pH 7.0 Acidity	<1 mg CaCO3/l	1
②NW345	Acidity to pH 8.3		

Food & Water Testing

		RESULTS		LOQ
②NW345	Acidity to pH 8.3			
	Acidity	3	mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.91	mg/l	0.02
②NW023	Conductivity			
	Conductivity	10.1	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.3	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.010	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.006	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	10.3	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.03	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	2.55	mg/l	0.01
②NW113	Dissolved Manganese			

Food & Water Testing

RESULTS			LOQ
②NW113	Dissolved Manganese Manganese (Mn)	0.0155 mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005 mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.69 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.33 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.09 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.154 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.09 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.4	0.1
②NW011	Sulphate Sulphate	2.08 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	8 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity		

Food & Water Testing

		RESULTS		LOQ
②NW003	Total Alkalinity			
	Alkalinity total	43	mg CaCO ₃ /l	1
②NW147	Total Aluminium			
	Aluminium	0.030	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	0.012	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.008	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	10.5	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	49	mg/l	1
②NW030	Total Hardness			
	Hardness	35	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	0.2	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	2.2	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.025	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			

Food & Water Testing

RESULTS			LOQ
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.071	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	1.4	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.011	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.5	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.54	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	3.1	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.162	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.002	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	1.42	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE		817-2024-00052698	
Sample Name	CC01		
Sample Reference	Clearwater creek above DOC		
Reception Date & Time:	03/05/2024 8:30	Reception temperature:	10.6 °C
Analysis Started on:	03/05/2024	Analysis Ending Date:	16/05/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	1	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		

Food & Water Testing

RESULTS			LOQ	
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	1.01	mg/l	0.02
②NW023	Conductivity			
	Conductivity	4.2	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.1	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.005	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.001	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.005	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	4.5	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	<0.01	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	0.87	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.34 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	8.53 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	2.30 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.0446 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.07 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.3	0.1
②NW011	Sulphate Sulphate	0.95 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<5 mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001 mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	17 mg CaCO3/l	1
②NW147	Total Aluminium Aluminium	<0.005 mg/l	0.005
②NW148	Total Antimony		

Food & Water Testing

		RESULTS		LOQ
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	<0.002	mg/l	0.002
②NW150	Total Barium			
	Barium (Ba)	0.005	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	3.7	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	21	mg/l	1
②NW030	Total Hardness			
	Hardness	15	mg CaCO ₃ /l	1
②NW160	Total Iron			
	Iron (Fe)	<0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	0.8	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.001	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.053	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.1	mg/l	0.1
②NW194	Total Phosphorus			

Food & Water Testing

RESULTS			LOQ
②NW194	Total Phosphorus		
	Total phosphorus	0.012	mg/l
			0.005
②NW168	Total Potassium		
	Potassium (K)	0.3	mg/l
			0.1
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	3.29	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	1.9	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.052	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	<0.001	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	<0.005	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	0.20	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	<0.001	mg/l
			0.001

SAMPLE CODE 817-2024-00052699

Sample Name LBA
Sample Reference Lower Bendigo Addit
Reception Date & Time: 03/05/2024 8:30 **Reception temperature:** 10.6 °C
Analysis Started on: 03/05/2024 **Analysis Ending Date:** 16/05/2024
Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	1	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.08	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	7.72	mg/l
			0.02
②NW023	Conductivity		

Food & Water Testing

		RESULTS		LOQ
②NW023	Conductivity			
	Conductivity	44.0	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.5	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.950	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.004	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	42.8	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.10	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.013	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	14.9	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0334	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	0.0008	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			

Food & Water Testing

		RESULTS		LOQ
②NW117	Dissolved Potassium			
	Potassium (K)	1.93	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	15.3	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	19.5	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.413	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	0.0018	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.33	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	0.20	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	8.1		0.1
②NW011	Sulphate			
	Sulphate	30.9	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	9	mg/l	3
②NW580	Thallium - Total			
	Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity			
	Alkalinity total	182	mg CaCO3/l	1
②NW147	Total Aluminium			
	Aluminium	0.106	mg/l	0.005
②NW148	Total Antimony			
	Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic			
	Arsenic (As)	1.24	mg/l	0.002
②NW150	Total Barium			

Food & Water Testing

		RESULTS		LOQ
②NW150	Total Barium			
	Barium (Ba)	0.008	mg/l	0.005
②NW151	Total Beryllium			
	Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	45.0	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	216	mg/l	1
②NW030	Total Hardness			
	Hardness	167	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	1.0	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.009	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	13.2	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.121	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.302	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.6	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.014	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.6	mg/l	0.1
②NW169	Total Selenium			

Food & Water Testing

RESULTS			LOQ
②NW169	Total Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW143	Total Silicon		
	Silicon (Si)	5.99	mg/l
			0.03
②NW170	Total Silver		
	Silver (Ag)	<0.001	mg/l
			0.001
②NW171	Total Sodium		
	Sodium (Na)	15.8	mg/l
			0.1
②NW172	Total Strontium		
	Strontium (Sr)	0.419	mg/l
			0.002
②NW173	Total Tin		
	Tin (Sn)	<0.001	mg/l
			0.001
②NW174	Total Titanium		
	Titanium (Ti)	0.004	mg/l
			0.001
②NW176	Total Vanadium		
	Vanadium (V)	<0.001	mg/l
			0.001
②NW177	Total Zinc		
	Zinc (Zn)	0.007	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	3.72	NTU
			0.01
②NW581	Uranium - Total		
	Uranium (U)	0.002	mg/l
			0.001

SAMPLE CODE 817-2024-00052700

Sample Name MDD015

Sample Reference MDD015

Reception Date & Time: 03/05/2024 8:30

Reception temperature: 10.6 °C

Analysis Started on: 03/05/2024

Analysis Ending Date: 16/05/2024

Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg CaCO3/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg CaCO3/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	3	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.07	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.11	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	10.2	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	43.5	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		

Food & Water Testing

RESULTS			LOQ
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	0.1	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	<0.002	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.017	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.180	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	24.8	mg/l
			0.1
②NW106	Dissolved Chromium		
	Chromium (Cr)	<0.001	mg/l
			0.001
②NW107	Dissolved Cobalt		
	Cobalt (Co)	<0.0005	mg/l
			0.0005
②NW108	Dissolved Copper		
	Copper (Cu)	<0.0005	mg/l
			0.0005
②NW109	Dissolved Iron		
	Iron (Fe)	0.02	mg/l
			0.01
②NW110	Dissolved Lead		
	Lead (Pb)	<0.0005	mg/l
			0.0005
②NW111	Dissolved Lithium		
	Lithium (Li)	0.051	mg/l
			0.001
②NW112	Dissolved Magnesium		
	Magnesium (Mg)	16.3	mg/l
			0.01
②NW113	Dissolved Manganese		
	Manganese (Mn)	0.0064	mg/l
			0.0005
②NW114	Dissolved Mercury		
	Mercury (Hg)	<0.0005	mg/l
			0.0005
②NW115	Dissolved Molybdenum		
	Molybdenum (Mo)	<0.0005	mg/l
			0.0005
②NW116	Dissolved Nickel		
	Nickel (Ni)	<0.0005	mg/l
			0.0005
②NW117	Dissolved Potassium		
	Potassium (K)	1.44	mg/l
			0.01
②NW118	Dissolved Selenium		
	Selenium (Se)	<0.005	mg/l
			0.005
②NW472	Dissolved Silica		

Food & Water Testing

		RESULTS		LOQ
②NW472	Dissolved Silica Sand/silica	18.9	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	44.2	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	8.93	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0008	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.22	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.1		0.1
②NW011	Sulphate Sulphate	11.7	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<4	mg/l	3
②NW580	Thallium - Total Thallium (Tl)	<0.001	mg/l	0.001
②NW003	Total Alkalinity Alkalinity total	202	mg CaCO ₃ /l	1
②NW147	Total Aluminium Aluminium	<0.005	mg/l	0.005
②NW148	Total Antimony Antimony (Sb)	<0.002	mg/l	0.002
②NW149	Total Arsenic Arsenic (As)	0.018	mg/l	0.002
②NW150	Total Barium Barium (Ba)	0.210	mg/l	0.005
②NW151	Total Beryllium Beryllium (Be)	<0.005	mg/l	0.005
②NW152	Total Bismuth			

Food & Water Testing

		RESULTS		LOQ
②NW152	Total Bismuth			
	Bismuth (Bi)	<0.005	mg/l	0.005
②NW153	Total Boron			
	Boron (B)	<0.05	mg/l	0.05
②NW154	Total Cadmium			
	Cadmium (Cd)	<0.001	mg/l	0.001
②NW156	Total Calcium			
	Calcium (Ca)	16.2	mg/l	0.1
②NW157	Total Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW158	Total Cobalt			
	Cobalt (Co)	<0.002	mg/l	0.002
②NW159	Total Copper			
	Copper (Cu)	<0.002	mg/l	0.002
③NW339	Total Dissolved Solids			
	Total dissolved Solids	213	mg/l	1
②NW030	Total Hardness			
	Hardness	97	mg CaCO3/l	1
②NW160	Total Iron			
	Iron (Fe)	<0.1	mg/l	0.1
②NW161	Total Lead			
	Lead (Pb)	<0.001	mg/l	0.001
②NW162	Total Lithium			
	Lithium (Li)	0.036	mg/l	0.001
②NW163	Total Magnesium			
	Magnesium (Mg)	13.8	mg/l	0.1
②NW164	Total Manganese			
	Manganese (Mn)	0.006	mg/l	0.001
②NW165	Total Mercury			
	Mercury (Hg)	<0.001	mg/l	0.001
②NW166	Total Molybdenum			
	Molybdenum (Mo)	<0.001	mg/l	0.001
②NW167	Total Nickel			
	Nickel (Ni)	<0.001	mg/l	0.001
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.110	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	0.2	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	<0.005	mg/l	0.005
②NW168	Total Potassium			
	Potassium (K)	1.1	mg/l	0.1
②NW169	Total Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW143	Total Silicon			
	Silicon (Si)	6.91	mg/l	0.03
②NW170	Total Silver			

Food & Water Testing

RESULTS			LOQ
②NW170	Total Silver Silver (Ag)	<0.001 mg/l	0.001
②NW171	Total Sodium Sodium (Na)	35.3 mg/l	0.1
②NW172	Total Strontium Strontium (Sr)	8.93 mg/l	0.002
②NW173	Total Tin Tin (Sn)	<0.001 mg/l	0.001
②NW174	Total Titanium Titanium (Ti)	<0.001 mg/l	0.001
②NW176	Total Vanadium Vanadium (V)	<0.001 mg/l	0.001
②NW177	Total Zinc Zinc (Zn)	<0.005 mg/l	0.005
②NW212	Turbidity Turbidity	0.18 NTU	0.01
②NW581	Uranium - Total Uranium (U)	<0.001 mg/l	0.001

LIST OF METHODS

NW003	Total Alkalinity: APHA Online Edition 2320 B	NW006	Fluoride: APHA Online Edition 4110 B
NW007	Chloride: APHA Online Edition 4110 B	NW008	Nitrite-N: APHA Online Edition 4110 B
NW009	Bromide: APHA Online Edition 4110 B	NW010	Nitrate-N: APHA Online Edition 4110 B
NW011	Sulphate: APHA Online Edition 4110 B	NW023	Conductivity: APHA 24th Edition 2510 B
NW030	Total Hardness: APHA Online Edition 2340 B	NW098	Dissolved Aluminium: APHA Online Edition 3125 B mod.
NW099	Dissolved Antimony: APHA Online Edition 3125 B mod.	NW100	Dissolved Barium: APHA Online Edition 3125 B mod.
NW101	Dissolved Beryllium: APHA Online Edition 3125 B mod.	NW102	Dissolved Bismuth: APHA Online Edition 3125 B mod.
NW103	Dissolved Boron: APHA Online Edition 3125 B mod.	NW104	Dissolved Cadmium: APHA Online Edition 3125 B mod.
NW105	Dissolved Calcium: APHA Online Edition 3125 B mod.	NW106	Dissolved Chromium: APHA Online Edition 3125 B mod.
NW107	Dissolved Cobalt: APHA Online Edition 3125 B mod.	NW108	Dissolved Copper: APHA Online Edition 3125 B mod.
NW109	Dissolved Iron: APHA Online Edition 3125 B mod.	NW110	Dissolved Lead: APHA Online Edition 3125 B mod.
NW111	Dissolved Lithium: APHA Online Edition 3125 B mod.	NW112	Dissolved Magnesium: APHA Online Edition 3125 B mod.
NW113	Dissolved Manganese: APHA Online Edition 3125 B mod.	NW114	Dissolved Mercury: APHA Online Edition 3125 B mod.
NW115	Dissolved Molybdenum: APHA Online Edition 3125 B mod.	NW116	Dissolved Nickel: APHA Online Edition 3125 B mod.
NW117	Dissolved Potassium: APHA Online Edition 3125 B mod.	NW118	Dissolved Selenium: APHA Online Edition 3125 B mod.
NW119	Dissolved Silver: APHA Online Edition 3125 B mod.	NW120	Dissolved Sodium: APHA Online Edition 3125 B mod.
NW121	Dissolved Strontium: APHA Online Edition 3125 B mod.	NW122	Dissolved Tin: APHA Online Edition 3125 B mod.
NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.	NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.
NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.	NW143	Total Silicon: APHA Online Edition 3120 B mod.
NW147	Total Aluminium: APHA Online Edition 3125 B mod.	NW148	Total Antimony: APHA Online Edition 3125 B mod.
NW149	Total Arsenic: APHA Online Edition 3125 B mod.	NW150	Total Barium: APHA Online Edition 3125 B mod.
NW151	Total Beryllium: APHA Online Edition 3125 B mod.	NW152	Total Bismuth: APHA Online Edition 3125 B mod.
NW153	Total Boron: APHA Online Edition 3125 B mod.	NW154	Total Cadmium: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW157	Total Chromium: APHA Online Edition 3125 B mod.
		NW158	Total Cobalt: APHA Online Edition 3125 B mod.

Food & Water Testing

NW159	Total Copper: APHA Online Edition 3125 B mod.	NW160	Total Iron: APHA Online Edition 3125 B mod.
NW161	Total Lead: APHA Online Edition 3125 B mod.	NW162	Total Lithium: APHA Online Edition 3125 B mod.
NW163	Total Magnesium: APHA Online Edition 3125 B mod.	NW164	Total Manganese: APHA Online Edition 3125 B mod.
NW165	Total Mercury: APHA Online Edition 3125 B mod.	NW166	Total Molybdenum: APHA Online Edition 3125 B mod.
NW167	Total Nickel: APHA Online Edition 3125 B mod.	NW168	Total Potassium: APHA Online Edition 3125 B mod.
NW169	Total Selenium: APHA Online Edition 3125 B mod.	NW170	Total Silver: APHA Online Edition 3125 B mod.
NW171	Total Sodium: APHA Online Edition 3125 B mod.	NW172	Total Strontium: APHA Online Edition 3125 B mod.
NW173	Total Tin: APHA Online Edition 3125 B mod.	NW174	Total Titanium: APHA Online Edition 3125 B mod.
NW176	Total Vanadium: APHA Online Edition 3125 B mod.	NW177	Total Zinc: APHA Online Edition 3125 B mod.
NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I	NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B
NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B	NW206	Suspended Solids: APHA Online Edition 2540 D
NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B	NW212	Turbidity: APHA 24th Edition 2130 B
NW339	Total Dissolved Solids: Internal Method, Gravimetry	NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)
NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)	NW410	Acidity to pH 7.0: Internal Method, Titrimetry
NW472	Dissolved Silica: APHA Online Edition 3120 B mod.	NW580	Thallium - Total: APHA Online Edition 3125 B mod.
NW581	Uranium - Total: APHA Online Edition 3125 B mod.	NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.
NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.	NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.
NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C	NW676	Ammonia Nitrogen: Internal Method, Spectrophotometry (DA)
NW679	Cyanide: APHA Online Edition 4500-CN C & E		

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

Food & Water Testing

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Accreditation does not apply to comments or graphical representations.

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END OF REPORT

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE	AR-24-NC-016767-01	REPORT DATE	30/05/2024

Attention Matakanui Gold
Hamish McLauchlan
1460 Bendigo Station
RD3
9383 Cromwell
NEW ZEALAND

Phone 0064275886631

Email hamish.mclauchlan@matakanuigold.co.nz

Contact for your orders:	James Thornton	Order code:	EUNZCH-00178122
Contract:	Matakanui Gold Water Monitoring		
Submission Reference:	2024-05-16_sampling	Purchase Order Number:	NA

SAMPLE CODE	817-2024-00059261

Sample Name RS01

Sample Reference Rise and shine stream 1

Reception Date & Time: 17/05/2024 8:30

Analysis Started on: 17/05/2024

Product Type Water

Reception temperature:	12.4 °C
Analysis Ending Date:	29/05/2024

RESULTS

LOQ

②NW409	Acidity to pH 3.7			
	Acidity	<1	mg/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg/l	1
②NW345	Acidity to pH 8.3			
	Acidity	6	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	<0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.84	mg/l	0.02
②NW023	Conductivity			
	Conductivity	19.1	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.8	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.018	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.012	mg/l	0.002
②NW101	Dissolved Beryllium			

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	27.2	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.09	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	5.10	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0285	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.28	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	18.4	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	6.68	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.358	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

		RESULTS		LOQ
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			
	Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N			
	Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N			
	Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)			
	pH	7.5		0.1
②NW011	Sulphate			
	Sulphate	11.2	mg/l	0.02
②NW206	Suspended Solids			
	Suspended Solids	7	mg/l	3
②NW003	Total Alkalinity			
	Alkalinity total	78	mg CaCO3/l	1
②NW156	Total Calcium			
	Calcium (Ca)	23.4	mg/l	0.1
③NW339	Total Dissolved Solids			
	Total dissolved Solids	94	mg/l	1
②NW030	Total Hardness			
	Hardness	89	mg CaCO3/l	1
②NW163	Total Magnesium			
	Magnesium (Mg)	4.3	mg/l	0.1
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.106	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.8	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.005	mg/l	0.005
②NW212	Turbidity			
	Turbidity	3.55	NTU	0.01

SAMPLE CODE		817-2024-00059262	
Sample Name	SC01		
Sample Reference	Shepherds Creek by irrigation take		
Reception Date & Time:	17/05/2024 8:30	Reception temperature:	12.4 °C
Analysis Started on:	17/05/2024	Analysis Ending Date:	29/05/2024
Product Type	Water		

Food & Water Testing

RESULTS		LOQ	
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	<1	mg CaCO ₃ /l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.08	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	7.38	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	56.2	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.5	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.008	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.002	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.046	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	0.04	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	74.7	mg/l
			0.1
②NW106	Dissolved Chromium		
	Chromium (Cr)	<0.001	mg/l
			0.001
②NW107	Dissolved Cobalt		
	Cobalt (Co)	<0.0005	mg/l
			0.0005
②NW108	Dissolved Copper		
	Copper (Cu)	<0.0005	mg/l
			0.0005
②NW109	Dissolved Iron		
	Iron (Fe)	<0.01	mg/l
			0.01
②NW110	Dissolved Lead		
	Lead (Pb)	<0.0005	mg/l
			0.0005
②NW111	Dissolved Lithium		

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.011	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	28.6	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0007	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	2.36	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.46	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	16.3	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	1.07	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0069	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.14	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.3		0.1
②NW011	Sulphate Sulphate	<0.02	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

		RESULTS		LOQ
②NW206	Suspended Solids			
	Suspended Solids	<6	mg/l	3
②NW003	Total Alkalinity			
	Alkalinity total	236	mg CaCO3/l	1
②NW156	Total Calcium			
	Calcium (Ca)	67.5	mg/l	0.1
③NW339	Total Dissolved Solids			
	Total dissolved Solids	275	mg/l	1
②NW030	Total Hardness			
	Hardness	304	mg CaCO3/l	1
②NW163	Total Magnesium			
	Magnesium (Mg)	24.2	mg/l	0.1
②NW189	Total Nitrogen			
	Total Nitrogen (N)	0.100	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon			
	Total Organic Carbon	1.5	mg/l	0.1
②NW194	Total Phosphorus			
	Total phosphorus	0.009	mg/l	0.005
②NW212	Turbidity			
	Turbidity	0.58	NTU	0.01

SAMPLE CODE 817-2024-00059263

Sample Name SC03

Sample Reference Shepherds Creek 3

Reception Date & Time: 17/05/2024 8:30

Analysis Started on: 17/05/2024

Product Type Water

Reception temperature: 12.4 °C

Analysis Ending Date: 29/05/2024

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg/l	1
②NW345	Acidity to pH 8.3			
	Acidity	4	mg CaCO3/l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.01	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.77	mg/l	0.02
②NW023	Conductivity			
	Conductivity	32.3	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.5	mg/l	0.1
②NW098	Dissolved Aluminium			

Food & Water Testing

		RESULTS		LOQ
②NW098	Dissolved Aluminium Aluminium	0.006	mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	<0.001	mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.032	mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	45.6	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.005	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	12.1	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0024	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.40	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	7.79	mg/l	0.02
②NW119	Dissolved Silver			

Food & Water Testing

		RESULTS		LOQ
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	8.32	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.709	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0024	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.15	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	0.06	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.1		0.1
②NW011	Sulphate Sulphate	16.7	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	8	mg/l	3
②NW003	Total Alkalinity Alkalinity total	146	mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	41.7	mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	158	mg/l	1
②NW030	Total Hardness Hardness	164	mg CaCO3/l	1
②NW163	Total Magnesium Magnesium (Mg)	10.2	mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.171	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.7	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.009	mg/l	0.005
②NW212	Turbidity			

Food & Water Testing

RESULTS			LOQ
②NW212	Turbidity		
	Turbidity	3.46	NTU
			0.01

SAMPLE CODE		817-2024-00059264	
Sample Name		RS02	
Sample Reference		Rise and shine stream 2 at Shreks	
Reception Date & Time:		17/05/2024 8:30	Reception temperature: 12.4 °C
Analysis Started on:		17/05/2024	Analysis Ending Date: 29/05/2024
Product Type		Water	

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	2	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	3.08	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	14.1	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	2.5	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.007	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.004	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.010	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	18.5	mg/l
			0.1
②NW106	Dissolved Chromium		

Food & Water Testing

		RESULTS		LOQ
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0006	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.01	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	3.79	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	<0.0005	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	1.54	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	10.8	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	5.29	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.243	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride			

Food & Water Testing

RESULTS			LOQ
②NW006	Fluoride		
	Fluoride	0.11	mg/l
			0.02
②NW010	Nitrate-N		
	Nitrate-N	<0.01	mg/l
			0.01
②NW008	Nitrite-N		
	Nitrite Nitrogen as N	<0.01	mg/l
			0.01
②NW195	pH (Tested beyond 15 minute APHA holding time)		
	pH	7.7	
			0.1
②NW011	Sulphate		
	Sulphate	4.44	mg/l
			0.02
②NW206	Suspended Solids		
	Suspended Solids	<6	mg/l
			3
②NW003	Total Alkalinity		
	Alkalinity total	60	mg CaCO3/l
			1
②NW156	Total Calcium		
	Calcium (Ca)	17.6	mg/l
			0.1
③NW339	Total Dissolved Solids		
	Total dissolved Solids	69	mg/l
			1
②NW030	Total Hardness		
	Hardness	62	mg CaCO3/l
			1
②NW163	Total Magnesium		
	Magnesium (Mg)	3.4	mg/l
			0.1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.164	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	2.6	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.011	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	1.00	NTU
			0.01

SAMPLE CODE 817-2024-00059265

Sample Name RSA1

Sample Reference Rise and shine Adit

Reception Date & Time: 17/05/2024 8:30

Reception temperature: 12.4 °C

Analysis Started on: 17/05/2024

Analysis Ending Date: 29/05/2024

Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	3	mg/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	33	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.01	mg/l
			0.01
②NW009	Bromide		

Food & Water Testing

		RESULTS		LOQ
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.35	mg/l	0.02
②NW023	Conductivity			
	Conductivity	17.7	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	1.7	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	<0.002	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.040	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.021	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	25.1	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	0.0008	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.20	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	0.003	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	4.82	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.253	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			

Food & Water Testing

RESULTS			LOQ
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005 mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005 mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.65 mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005 mg/l	0.005
②NW472	Dissolved Silica Sand/silica	7.84 mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005 mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	6.62 mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.297 mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005 mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	0.005 mg/l	0.002
②NW006	Fluoride Fluoride	0.10 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	6.7	0.1
②NW011	Sulphate Sulphate	6.77 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	16 mg/l	3
②NW003	Total Alkalinity Alkalinity total	78 mg CaCO ₃ /l	1
②NW156	Total Calcium Calcium (Ca)	23.0 mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	87 mg/l	1
②NW030	Total Hardness		

Food & Water Testing

RESULTS			LOQ
②NW030	Total Hardness		
	Hardness	82	mg CaCO ₃ /l
			1
②NW163	Total Magnesium		
	Magnesium (Mg)	4.2	mg/l
			0.1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	0.187	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	3.2	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.014	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	14.7	NTU
			0.01

SAMPLE CODE	817-2024-00059266		
Sample Name	RS03		
Sample Reference	Rise and shine stream 3 at Alta crossing		
Reception Date & Time:	17/05/2024 8:30	Reception temperature:	12.4 °C
Analysis Started on:	17/05/2024	Analysis Ending Date:	29/05/2024
Product Type	Water		

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	2	mg CaCO ₃ /l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	1.59	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	9.4	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	1.1	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	<0.002	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.008	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.006	mg/l
			0.002
②NW101	Dissolved Beryllium		

Food & Water Testing

		RESULTS		LOQ
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	12.1	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	2.58	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0151	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	0.52	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	9.42	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	4.29	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.143	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			

Food & Water Testing

RESULTS			LOQ
②NW122	Dissolved Tin Tin (Sn)	<0.0005 mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005 mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002 mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005 mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002 mg/l	0.002
②NW006	Fluoride Fluoride	0.09 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.4	0.1
②NW011	Sulphate Sulphate	2.92 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW003	Total Alkalinity Alkalinity total	40 mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	11.1 mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	46 mg/l	1
②NW030	Total Hardness Hardness	41 mg CaCO3/l	1
②NW163	Total Magnesium Magnesium (Mg)	2.2 mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.053 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.2 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.007 mg/l	0.005
②NW212	Turbidity Turbidity	0.27 NTU	0.01

SAMPLE CODE	817-2024-00059267		
Sample Name	RS04		
Sample Reference	Rise and shine stream upstream of Shreks		
Reception Date & Time:	17/05/2024 8:30	Reception temperature:	12.4 °C
Analysis Started on:	17/05/2024	Analysis Ending Date:	29/05/2024
Product Type	Water		

Food & Water Testing

		RESULTS		LOQ
②NW409	Acidity to pH 3.7			
	Acidity	<1	mg/l	1
③NW410	Acidity to pH 7.0			
	Acidity	<1	mg/l	1
②NW345	Acidity to pH 8.3			
	Acidity	9	mg CaCO ₃ /l	1
②NW676	Ammonia Nitrogen			
	Ammonia nitrogen	0.11	mg/l	0.01
②NW009	Bromide			
	Bromide	<0.02	mg/l	0.02
②NW007	Chloride			
	Chloride (Cl)	2.77	mg/l	0.02
②NW023	Conductivity			
	Conductivity	17.6	mS/m	0.1
②NW679	Cyanide			
	Cyanide	<0.005	mg/l	0.005
③NW671	Dissolved (NP) Organic Carbon			
	Carbon	2.7	mg/l	0.1
②NW098	Dissolved Aluminium			
	Aluminium	0.003	mg/l	0.002
②NW099	Dissolved Antimony			
	Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic			
	Arsenic (As)	0.001	mg/l	0.001
②NW100	Dissolved Barium			
	Barium (Ba)	0.015	mg/l	0.002
②NW101	Dissolved Beryllium			
	Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth			
	Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron			
	Boron (B)	<0.03	mg/l	0.03
②NW104	Dissolved Cadmium			
	Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium			
	Calcium (Ca)	23.1	mg/l	0.1
②NW106	Dissolved Chromium			
	Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0005	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.20	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			

Food & Water Testing

		RESULTS		LOQ
②NW111	Dissolved Lithium Lithium (Li)	0.002	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	4.74	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0082	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.59	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	<0.02	mg/l	0.02
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	7.72	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	0.309	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.10	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.4		0.1
②NW011	Sulphate Sulphate	6.44	mg/l	0.02
②NW206	Suspended Solids			

Food & Water Testing

RESULTS			LOQ
②NW206	Suspended Solids		
	Suspended Solids	25	mg/l
			3
②NW003	Total Alkalinity		
	Alkalinity total	76	mg CaCO3/l
			1
②NW156	Total Calcium		
	Calcium (Ca)	20.9	mg/l
			0.1
③NW339	Total Dissolved Solids		
	Total dissolved Solids	86	mg/l
			1
②NW030	Total Hardness		
	Hardness	77	mg CaCO3/l
			1
②NW163	Total Magnesium		
	Magnesium (Mg)	4.3	mg/l
			0.1
②NW189	Total Nitrogen		
	Total Nitrogen (N)	1.47	mg/l
			0.002
②NW210	Total Non-Purgeable Organic Carbon		
	Total Organic Carbon	3.1	mg/l
			0.1
②NW194	Total Phosphorus		
	Total phosphorus	0.063	mg/l
			0.005
②NW212	Turbidity		
	Turbidity	6.64	NTU
			0.01

SAMPLE CODE 817-2024-00059268

Sample Name MDD015

Sample Reference groundwater from MDD15 collar

Reception Date & Time: 17/05/2024 8:30

Reception temperature: 12.4 °C

Analysis Started on: 17/05/2024

Analysis Ending Date: 30/05/2024

Product Type Water

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	6	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	0.11	mg/l
			0.01
②NW009	Bromide		
	Bromide	0.12	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	10.6	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	43.7	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	<0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	0.2	mg/l
			0.1
②NW098	Dissolved Aluminium		

Food & Water Testing

		RESULTS		LOQ
②NW098	Dissolved Aluminium Aluminium	0.007	mg/l	0.002
②NW099	Dissolved Antimony Antimony (Sb)	<0.001	mg/l	0.001
②NW583	Dissolved Arsenic Arsenic (As)	0.019	mg/l	0.001
②NW100	Dissolved Barium Barium (Ba)	0.215	mg/l	0.002
②NW101	Dissolved Beryllium Beryllium (Be)	<0.001	mg/l	0.001
②NW102	Dissolved Bismuth Bismuth (Bi)	<0.001	mg/l	0.001
②NW103	Dissolved Boron Boron (B)	0.04	mg/l	0.03
②NW104	Dissolved Cadmium Cadmium (Cd)	<0.0002	mg/l	0.0002
②NW105	Dissolved Calcium Calcium (Ca)	23.4	mg/l	0.1
②NW106	Dissolved Chromium Chromium (Cr)	<0.001	mg/l	0.001
②NW107	Dissolved Cobalt Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper Copper (Cu)	<0.0005	mg/l	0.0005
②NW109	Dissolved Iron Iron (Fe)	0.02	mg/l	0.01
②NW110	Dissolved Lead Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium Lithium (Li)	0.059	mg/l	0.001
②NW112	Dissolved Magnesium Magnesium (Mg)	18.4	mg/l	0.01
②NW113	Dissolved Manganese Manganese (Mn)	0.0080	mg/l	0.0005
②NW114	Dissolved Mercury Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel Nickel (Ni)	<0.0005	mg/l	0.0005
②NW117	Dissolved Potassium Potassium (K)	1.88	mg/l	0.01
②NW118	Dissolved Selenium Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica Sand/silica	11.9	mg/l	0.02
②NW119	Dissolved Silver			

Food & Water Testing

		RESULTS		LOQ
②NW119	Dissolved Silver Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium Sodium (Na)	47.8	mg/l	0.01
②NW121	Dissolved Strontium Strontium (Sr)	8.38	mg/l	0.0005
②NW584	Dissolved Thallium Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium Uranium (U)	0.0010	mg/l	0.0002
②NW124	Dissolved Vanadium Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc Zinc (Zn)	<0.002	mg/l	0.002
②NW006	Fluoride Fluoride	0.23	mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01	mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01	mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	8.0		0.1
②NW011	Sulphate Sulphate	11.5	mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6	mg/l	3
②NW003	Total Alkalinity Alkalinity total	201	mg CaCO ₃ /l	1
②NW156	Total Calcium Calcium (Ca)	15.5	mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	214	mg/l	1
②NW030	Total Hardness Hardness	134	mg CaCO ₃ /l	1
②NW163	Total Magnesium Magnesium (Mg)	14.7	mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.107	mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	0.2	mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.006	mg/l	0.005
②NW212	Turbidity			

Food & Water Testing

RESULTS			LOQ
②NW212	Turbidity		
	Turbidity	0.26	NTU
			0.01

SAMPLE CODE		817-2024-00059269	
Sample Name		CC01	
Sample Reference		Clear water ck US DOC boundary	
Reception Date & Time:		17/05/2024 8:30	Reception temperature: 12.4 °C
Analysis Started on:		17/05/2024	Analysis Ending Date: 30/05/2024
Product Type		Water	

RESULTS			LOQ
②NW409	Acidity to pH 3.7		
	Acidity	<1	mg/l
			1
③NW410	Acidity to pH 7.0		
	Acidity	<1	mg/l
			1
②NW345	Acidity to pH 8.3		
	Acidity	2	mg CaCO3/l
			1
②NW676	Ammonia Nitrogen		
	Ammonia nitrogen	<0.01	mg/l
			0.01
②NW009	Bromide		
	Bromide	<0.02	mg/l
			0.02
②NW007	Chloride		
	Chloride (Cl)	0.89	mg/l
			0.02
②NW023	Conductivity		
	Conductivity	4.2	mS/m
			0.1
②NW679	Cyanide		
	Cyanide	0.005	mg/l
			0.005
③NW671	Dissolved (NP) Organic Carbon		
	Carbon	0.9	mg/l
			0.1
②NW098	Dissolved Aluminium		
	Aluminium	0.007	mg/l
			0.002
②NW099	Dissolved Antimony		
	Antimony (Sb)	<0.001	mg/l
			0.001
②NW583	Dissolved Arsenic		
	Arsenic (As)	0.001	mg/l
			0.001
②NW100	Dissolved Barium		
	Barium (Ba)	0.005	mg/l
			0.002
②NW101	Dissolved Beryllium		
	Beryllium (Be)	<0.001	mg/l
			0.001
②NW102	Dissolved Bismuth		
	Bismuth (Bi)	<0.001	mg/l
			0.001
②NW103	Dissolved Boron		
	Boron (B)	<0.03	mg/l
			0.03
②NW104	Dissolved Cadmium		
	Cadmium (Cd)	<0.0002	mg/l
			0.0002
②NW105	Dissolved Calcium		
	Calcium (Ca)	4.9	mg/l
			0.1
②NW106	Dissolved Chromium		

Food & Water Testing

		RESULTS		LOQ
②NW106	Dissolved Chromium			
	Chromium (Cr)	0.002	mg/l	0.001
②NW107	Dissolved Cobalt			
	Cobalt (Co)	<0.0005	mg/l	0.0005
②NW108	Dissolved Copper			
	Copper (Cu)	0.0009	mg/l	0.0005
②NW109	Dissolved Iron			
	Iron (Fe)	0.24	mg/l	0.01
②NW110	Dissolved Lead			
	Lead (Pb)	<0.0005	mg/l	0.0005
②NW111	Dissolved Lithium			
	Lithium (Li)	<0.001	mg/l	0.001
②NW112	Dissolved Magnesium			
	Magnesium (Mg)	1.06	mg/l	0.01
②NW113	Dissolved Manganese			
	Manganese (Mn)	0.0045	mg/l	0.0005
②NW114	Dissolved Mercury			
	Mercury (Hg)	<0.0005	mg/l	0.0005
②NW115	Dissolved Molybdenum			
	Molybdenum (Mo)	<0.0005	mg/l	0.0005
②NW116	Dissolved Nickel			
	Nickel (Ni)	0.0044	mg/l	0.0005
②NW117	Dissolved Potassium			
	Potassium (K)	0.44	mg/l	0.01
②NW118	Dissolved Selenium			
	Selenium (Se)	<0.005	mg/l	0.005
②NW472	Dissolved Silica			
	Sand/silica	8.62	mg/l	0.02
②NW119	Dissolved Silver			
	Silver (Ag)	<0.0005	mg/l	0.0005
②NW120	Dissolved Sodium			
	Sodium (Na)	2.64	mg/l	0.01
②NW121	Dissolved Strontium			
	Strontium (Sr)	0.0537	mg/l	0.0005
②NW584	Dissolved Thallium			
	Thallium (Tl)	<0.0005	mg/l	0.0005
②NW122	Dissolved Tin			
	Tin (Sn)	<0.0005	mg/l	0.0005
②NW123	Dissolved Titanium			
	Titanium (Ti)	<0.0005	mg/l	0.0005
②NW585	Dissolved Uranium			
	Uranium (U)	<0.0002	mg/l	0.0002
②NW124	Dissolved Vanadium			
	Vanadium (V)	<0.0005	mg/l	0.0005
②NW125	Dissolved Zinc			
	Zinc (Zn)	0.003	mg/l	0.002
②NW006	Fluoride			

Food & Water Testing

RESULTS			LOQ
②NW006	Fluoride Fluoride	0.07 mg/l	0.02
②NW010	Nitrate-N Nitrate-N	<0.01 mg/l	0.01
②NW008	Nitrite-N Nitrite Nitrogen as N	<0.01 mg/l	0.01
②NW195	pH (Tested beyond 15 minute APHA holding time) pH	7.3	0.1
②NW011	Sulphate Sulphate	1.04 mg/l	0.02
②NW206	Suspended Solids Suspended Solids	<6 mg/l	3
②NW003	Total Alkalinity Alkalinity total	16 mg CaCO3/l	1
②NW156	Total Calcium Calcium (Ca)	4.3 mg/l	0.1
③NW339	Total Dissolved Solids Total dissolved Solids	21 mg/l	1
②NW030	Total Hardness Hardness	17 mg CaCO3/l	1
②NW163	Total Magnesium Magnesium (Mg)	0.9 mg/l	0.1
②NW189	Total Nitrogen Total Nitrogen (N)	0.073 mg/l	0.002
②NW210	Total Non-Purgeable Organic Carbon Total Organic Carbon	1.0 mg/l	0.1
②NW194	Total Phosphorus Total phosphorus	0.010 mg/l	0.005
②NW212	Turbidity Turbidity	0.28 NTU	0.01

LIST OF METHODS

NW003	Total Alkalinity: APHA Online Edition 2320 B	NW006	Fluoride: APHA Online Edition 4110 B
NW007	Chloride: APHA Online Edition 4110 B	NW008	Nitrite-N: APHA Online Edition 4110 B
NW009	Bromide: APHA Online Edition 4110 B	NW010	Nitrate-N: APHA Online Edition 4110 B
NW011	Sulphate: APHA Online Edition 4110 B	NW023	Conductivity: APHA 24th Edition 2510 B
NW030	Total Hardness: APHA Online Edition 2340 B	NW098	Dissolved Aluminium: APHA Online Edition 3125 B mod.
NW099	Dissolved Antimony: APHA Online Edition 3125 B mod.	NW100	Dissolved Barium: APHA Online Edition 3125 B mod.
NW101	Dissolved Beryllium: APHA Online Edition 3125 B mod.	NW102	Dissolved Bismuth: APHA Online Edition 3125 B mod.
NW103	Dissolved Boron: APHA Online Edition 3125 B mod.	NW104	Dissolved Cadmium: APHA Online Edition 3125 B mod.
NW105	Dissolved Calcium: APHA Online Edition 3125 B mod.	NW106	Dissolved Chromium: APHA Online Edition 3125 B mod.
NW107	Dissolved Cobalt: APHA Online Edition 3125 B mod.	NW108	Dissolved Copper: APHA Online Edition 3125 B mod.
NW109	Dissolved Iron: APHA Online Edition 3125 B mod.	NW110	Dissolved Lead: APHA Online Edition 3125 B mod.
NW111	Dissolved Lithium: APHA Online Edition 3125 B mod.	NW112	Dissolved Magnesium: APHA Online Edition 3125 B mod.
NW113	Dissolved Manganese: APHA Online Edition 3125 B mod.	NW114	Dissolved Mercury: APHA Online Edition 3125 B mod.
NW115	Dissolved Molybdenum: APHA Online Edition 3125 B mod.		

Food & Water Testing

NW116	Dissolved Nickel: APHA Online Edition 3125 B mod.	NW117	Dissolved Potassium: APHA Online Edition 3125 B mod.
NW118	Dissolved Selenium: APHA Online Edition 3125 B mod.	NW119	Dissolved Silver: APHA Online Edition 3125 B mod.
NW120	Dissolved Sodium: APHA Online Edition 3125 B mod.	NW121	Dissolved Strontium: APHA Online Edition 3125 B mod.
NW122	Dissolved Tin: APHA Online Edition 3125 B mod.	NW123	Dissolved Titanium: APHA Online Edition 3125 B mod.
NW124	Dissolved Vanadium: APHA Online Edition 3125 B mod.	NW125	Dissolved Zinc: APHA Online Edition 3125 B mod.
NW156	Total Calcium: APHA Online Edition 3125 B mod.	NW163	Total Magnesium: APHA Online Edition 3125 B mod.
NW189	Total Nitrogen: APHA Online Edition 4500-NO3- I	NW194	Total Phosphorus: APHA Online Edition 4500-P G / 4500-P B
NW195	pH (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B	NW206	Suspended Solids: APHA Online Edition 2540 D
NW210	Total Non-Purgeable Organic Carbon: APHA Online Edition 5310 B	NW212	Turbidity: APHA 24th Edition 2130 B
NW339	Total Dissolved Solids: Internal Method, Gravimetry	NW345	Acidity to pH 8.3: APHA Online Edition 2310 B (Free CO2)
NW409	Acidity to pH 3.7: APHA Online Edition 2310 B (Mineral Acidity)	NW410	Acidity to pH 7.0: Internal Method, Titrimetry
NW472	Dissolved Silica: APHA Online Edition 3120 B mod.	NW583	Dissolved Arsenic: APHA Online Edition 3125 B mod.
NW584	Dissolved Thallium: APHA Online Edition 3125 B mod.	NW585	Dissolved Uranium: APHA Online Edition 3125 B mod.
NW671	Dissolved (NP) Organic Carbon: APHA Online Edition 5310 B,C	NW676	Ammonia Nitrogen: Internal Method, Spectrophotometry (DA)
NW679	Cyanide: APHA Online Edition 4500-CN C & E		

Signature



Leroy Swale Supervisor - Sampling
Services - KTP

EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

Food & Water Testing

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

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The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

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END OF REPORT

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3550388	SPv1
Contact:	Hamish Mclauchlan	Date Received:	19-Apr-2024	
	C/- Matakanui Gold Limited	Date Reported:	01-May-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		RS01 17-Apr-2024
Lab Number:		3550388.1
Individual Tests		
Turbidity	NTU	0.56
pH	pH Units	8.0
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	94
Electrical Conductivity (EC)	mS/m	20.7
Total Suspended Solids	g/m³	< 3
Total Dissolved Solids (TDS)	g/m³	127
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	< 0.00021
Dissolved Strontium	g/m³	0.39
Total Strontium	g/m³	0.41
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	3.6
Fluoride	g/m³	0.09
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	< 0.002
Nitrate-N + Nitrite-N	g/m³	< 0.002
Total Phosphorus	g/m³	0.004
Reactive Silica	g/m³ as SiO₂	9.8
Silicon	g/m³	4.6
Sulphate	g/m³	7.0
Dissolved Organic Carbon (DOC)	g/m³	< 0.5
Total Organic Carbon (TOC)	g/m³	3.7
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	98
Dissolved Aluminium	g/m³	< 0.003
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0183
Dissolved Barium	g/m³	0.013
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	0.005 #1



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Aqueous		
Sample Name:		RS01 17-Apr-2024
Lab Number:		3550388.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	31 ^{#1}
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	< 0.0005
Dissolved Iron	g/m ³	0.06
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0028 ^{#1}
Dissolved Magnesium	g/m ³	5.2 ^{#1}
Dissolved Manganese	g/m ³	0.0171
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.63 ^{#1}
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	6.4 ^{#1}
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00006
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.0044
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.027
Total Barium	g/m ³	0.0134
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	< 0.0053 ^{#1}
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	27 ^{#1}
Total Chromium	g/m ³	< 0.00053
Total Copper	g/m ³	< 0.00053
Total Iron	g/m ³	0.21
Total Lead	g/m ³	< 0.00011
Total Lithium	g/m ³	0.0025 ^{#1}
Total Magnesium	g/m ³	4.4 ^{#1}
Total Manganese	g/m ³	0.035
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.58 ^{#1}
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	6.3 ^{#1}
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000068
Total Zinc	g/m ³	< 0.0011
Analyst's Comments		
^{#1} It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods. Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (up to 100-200% at the 95% confidence level).		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 22-Apr-2024 and 01-May-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3568945	SPv1
Contact:	Hamish Mclauchlan	Date Received:	03-May-2024	
	C/- Matakanui Gold Limited	Date Reported:	10-May-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:	RS 01 01-May-2024
Lab Number:	3568945.1

Individual Tests		
Turbidity	NTU	1.13
pH	pH Units	8.0
Acidity (pH 3.7)	g/m ³ as CaCO ₃	< 1.0
Total Alkalinity	g/m ³ as CaCO ₃	88
Electrical Conductivity (EC)	mS/m	19.1
Total Suspended Solids	g/m ³	< 3
Total Dissolved Solids (TDS)	g/m ³	111
Total Bismuth	g/m ³	< 0.00011
Dissolved Cobalt	g/m ³	< 0.0002
Total Cobalt	g/m ³	< 0.00021
Dissolved Strontium	g/m ³	0.40 #1
Total Strontium	g/m ³	0.39 #1
Dissolved Thallium	g/m ³	< 0.00005
Total Thallium	g/m ³	< 0.000053
Dissolved Titanium*	g/m ³	< 0.02
Total Titanium*	g/m ³	< 0.011
Bromide	g/m ³	< 0.05
Total Cyanide	g/m ³	0.004
Chloride	g/m ³	3.7
Fluoride	g/m ³	0.10
Total Ammoniacal-N	g/m ³	< 0.010
Nitrite-N	g/m ³	< 0.002
Nitrate-N	g/m ³	< 0.002
Nitrate-N + Nitrite-N	g/m ³	< 0.002
Total Phosphorus	g/m ³	0.006
Reactive Silica	g/m ³ as SiO ₂	9.5
Silicon	g/m ³	4.5
Sulphate	g/m ³	4.8
Dissolved Organic Carbon (DOC)	g/m ³	1.0
Total Organic Carbon (TOC)	g/m ³	2.0
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m ³ as CaCO ₃	89
Dissolved Aluminium	g/m ³	< 0.003
Dissolved Antimony	g/m ³	< 0.0002
Dissolved Arsenic	g/m ³	0.0187
Dissolved Barium	g/m ³	0.013
Dissolved Beryllium	g/m ³	< 0.00010
Dissolved Boron	g/m ³	0.006 #1

Sample Type: Aqueous		
Sample Name:		RS 01 01-May-2024
Lab Number:		3568945.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	28 #1
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	< 0.0005
Dissolved Iron	g/m ³	0.06
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0026
Dissolved Magnesium	g/m ³	4.9 #1
Dissolved Manganese	g/m ³	0.0169
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.63 #1
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	6.2 #1
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00005
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.0067
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.028
Total Barium	g/m ³	0.0138
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	0.0055 #1
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	26 #1
Total Chromium	g/m ³	< 0.00053
Total Copper	g/m ³	< 0.00053
Total Iron	g/m ³	0.25
Total Lead	g/m ³	< 0.00011
Total Lithium	g/m ³	0.0026
Total Magnesium	g/m ³	4.7 #1
Total Manganese	g/m ³	0.045
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.53 #1
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	6.0 #1
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000057
Total Zinc	g/m ³	< 0.0011
Analyst's Comments		
#1 It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods.		
Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (up to 200-300% at the 95% confidence level).		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 04-May-2024 and 10-May-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3583767	SPv1
Contact:	Hamish Mclauchlan	Date Received:	17-May-2024	
	C/- Matakanui Gold Limited	Date Reported:	27-May-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		RS01 16-May-2024
Lab Number:		3583767.1
Individual Tests		
Turbidity	NTU	3.0
pH	pH Units	8.0
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	82
Electrical Conductivity (EC)	mS/m	18.8
Total Suspended Solids	g/m³	4
Total Dissolved Solids (TDS)	g/m³	113
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	< 0.00021
Dissolved Strontium	g/m³	0.35
Total Strontium	g/m³	0.36
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	2.6
Fluoride	g/m³	0.09
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	< 0.002
Nitrate-N + Nitrite-N	g/m³	< 0.002
Total Phosphorus	g/m³	0.012
Reactive Silica	g/m³ as SiO₂	9.8
Silicon	g/m³	4.6
Sulphate	g/m³	10.1
Dissolved Organic Carbon (DOC)	g/m³	1.5
Total Organic Carbon (TOC)	g/m³	1.8
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	92
Dissolved Aluminium	g/m³	< 0.003
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0161
Dissolved Barium	g/m³	0.012
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	< 0.005

Sample Type: Aqueous		
Sample Name:		RS01 16-May-2024
Lab Number:		3583767.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	28
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	< 0.0005
Dissolved Iron	g/m ³	0.06
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0026
Dissolved Magnesium	g/m ³	5.5
Dissolved Manganese	g/m ³	0.0190
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.05
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	6.7
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00004
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.032
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.047
Total Barium	g/m ³	0.0145
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	< 0.0053
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	26
Total Chromium	g/m ³	< 0.00053
Total Copper	g/m ³	< 0.00053
Total Iron	g/m ³	0.83
Total Lead	g/m ³	< 0.00011
Total Lithium	g/m ³	0.0023
Total Magnesium	g/m ³	4.8
Total Manganese	g/m ³	0.127
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.00
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	6.0
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000047
Total Zinc	g/m ³	< 0.0011
Analyst's Comments		
Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (up to 200-300% at the 95% confidence level).		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 18-May-2024 and 27-May-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Martin Cowell - BSc
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3596507	SPv1
Contact:	Hamish Mclauchlan	Date Received:	31-May-2024	
	C/- Matakanui Gold Limited	Date Reported:	11-Jun-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		MGL RS01 29-May-2024
Lab Number:		3596507.1
Individual Tests		
Turbidity	NTU	2.1
pH	pH Units	7.4
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	82
Electrical Conductivity (EC)	mS/m	18.7
Total Suspended Solids	g/m³	< 3
Total Dissolved Solids (TDS)	g/m³	112
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	< 0.00021
Dissolved Strontium	g/m³	0.36 ^{#1}
Total Strontium	g/m³	0.35 ^{#1}
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	2.9
Fluoride	g/m³	0.08
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	< 0.002
Nitrate-N + Nitrite-N	g/m³	< 0.002
Total Phosphorus	g/m³	0.017
Reactive Silica	g/m³ as SiO₂	10.0
Silicon	g/m³	4.7
Sulphate	g/m³	7.5
Dissolved Organic Carbon (DOC)	g/m³	1.6
Total Organic Carbon (TOC)	g/m³	1.7
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	82
Dissolved Aluminium	g/m³	< 0.003
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0161
Dissolved Barium	g/m³	0.012
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	0.005 ^{#1}



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Sample Type: Aqueous		
Sample Name:		MGL RS01 29-May-2024
Lab Number:		3596507.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	26 #1
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	< 0.0005
Dissolved Iron	g/m ³	0.05
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0025 #1
Dissolved Magnesium	g/m ³	4.6 #1
Dissolved Manganese	g/m ³	0.0143
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.10 #1
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	5.9 #1
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00005
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.0168
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.032
Total Barium	g/m ³	0.0130
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	< 0.0053 #1
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	25 #1
Total Chromium	g/m ³	< 0.00053
Total Copper	g/m ³	< 0.00053
Total Iron	g/m ³	0.40
Total Lead	g/m ³	< 0.00011
Total Lithium	g/m ³	0.0024 #1
Total Magnesium	g/m ³	4.4 #1
Total Manganese	g/m ³	0.068
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.04 #1
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	5.8 #1
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000066
Total Zinc	g/m ³	< 0.0011
Analyst's Comments		
#1 It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods.		
Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (up to 200-300% at the 95% confidence level).		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 31-May-2024 and 11-Jun-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3607374	SPv1
Contact:	Hamish Mclauchlan	Date Received:	15-Jun-2024	
	C/- Matakanui Gold Limited	Date Reported:	24-Jun-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		MGL RS01 13-Jun-2024
Lab Number:		3607374.1
Individual Tests		
Turbidity	NTU	1.20
pH	pH Units	7.6
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	78
Electrical Conductivity (EC)	mS/m	18.1
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	< 0.00021
Dissolved Strontium	g/m³	0.34
Total Strontium	g/m³	0.34
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	3.2
Fluoride	g/m³	0.08
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	< 0.002
Nitrate-N + Nitrite-N	g/m³	< 0.002
Total Phosphorus	g/m³	0.009
Reactive Silica	g/m³ as SiO₂	9.9
Silicon	g/m³	4.6
Sulphate	g/m³	7.9
Dissolved Organic Carbon (DOC)	g/m³	2.2 ^{#2}
Total Organic Carbon (TOC)	g/m³	1.4 ^{#2}
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	85
Dissolved Aluminium	g/m³	< 0.003
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0166
Dissolved Barium	g/m³	0.012
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	0.005
Dissolved Cadmium	g/m³	< 0.00005
Dissolved Calcium	g/m³	26 ^{#1}



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Sample Type: Aqueous		
Sample Name:		MGL RS01 13-Jun-2024
Lab Number:		3607374.1
Drinking water metals suite, dissolved, trace		
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	< 0.0005
Dissolved Iron	g/m ³	0.05
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0023
Dissolved Magnesium	g/m ³	4.9 #1
Dissolved Manganese	g/m ³	0.0105
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.10 #1
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	6.1 #1
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00006
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.027
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.039
Total Barium	g/m ³	0.0136
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	0.0062
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	26 #1
Total Chromium	g/m ³	< 0.00053
Total Copper	g/m ³	< 0.00053
Total Iron	g/m ³	0.55
Total Lead	g/m ³	< 0.00011
Total Lithium	g/m ³	0.0025
Total Magnesium	g/m ³	4.8 #1
Total Manganese	g/m ³	0.094
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.07 #1
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	5.6 #1
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000066
Total Zinc	g/m ³	< 0.0011

Analyst's Comments

#1 It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods.

#2 It has been noted that in some cases the results for Dissolved Organic Carbon (DOC) were greater than those for Total Organic Carbon (TOC), but within analytical variation for this method. The level of Uncertainty of Measurement (UOM) for the DOC and TOC analyses is significant due to the similar level of Inorganic Carbon relative to Total Carbon present in these samples. TOC is determined by subtracting a result obtained for Total Inorganic Carbon (TIC) from a result obtained for Total Carbon (TC). There may be an uncertainty of measurement of up to $\pm 10\%$ in each of these measurements (at the 95% confidence level). The uncertainty of these measurements is combined in the calculation of the TOC result, leading to a higher uncertainty than would normally be achieved for samples that contain less Inorganic Carbon relative to Total Carbon. For this reason, the TOC and DOC results reported should be treated with caution.

Sample 1 Comment:

Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (up to 200-300% at the 95% confidence level).

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous

Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 μm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Filtration for dissolved metals analysis	Sample filtration through 0.45 μm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45 μm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₂ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 15-Jun-2024 and 24-Jun-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3616089	SPv1
Contact:	Hamish Mclauchlan	Date Received:	29-Jun-2024	
	C/- Matakanui Gold Limited	Date Reported:	08-Jul-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		MGL RS01 27-Jun-2024
Lab Number:		3616089.1
Individual Tests		
Turbidity	NTU	2.4
pH	pH Units	7.7
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	80
Electrical Conductivity (EC)	mS/m	17.2
Total Suspended Solids	g/m³	< 3
Total Dissolved Solids (TDS)	g/m³	99
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	< 0.00021
Dissolved Strontium	g/m³	0.31
Total Strontium	g/m³	0.33
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	3.1
Fluoride	g/m³	0.08
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	0.003
Nitrate-N + Nitrite-N	g/m³	0.003
Total Phosphorus	g/m³	0.010
Reactive Silica	g/m³ as SiO₂	9.9
Silicon	g/m³	4.6
Sulphate	g/m³	6.8
Dissolved Organic Carbon (DOC)	g/m³	1.9
Total Organic Carbon (TOC)	g/m³	3.3
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	82
Dissolved Aluminium	g/m³	< 0.003
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0161
Dissolved Barium	g/m³	0.011
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	< 0.005

Sample Type: Aqueous		
Sample Name:		MGL RS01 27-Jun-2024
Lab Number:		3616089.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	24 #1
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	< 0.0005
Dissolved Iron	g/m ³	0.04
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0025 #1
Dissolved Magnesium	g/m ³	5.1 #1
Dissolved Manganese	g/m ³	0.0053
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.25 #1
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	5.5
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00006
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.036
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.042
Total Barium	g/m ³	0.0142
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	< 0.0053
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	23 #1
Total Chromium	g/m ³	< 0.00053
Total Copper	g/m ³	< 0.00053
Total Iron	g/m ³	0.60
Total Lead	g/m ³	< 0.00011
Total Lithium	g/m ³	0.0023 #1
Total Magnesium	g/m ³	4.5 #1
Total Manganese	g/m ³	0.087
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.19 #1
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	5.6
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000084
Total Zinc	g/m ³	< 0.0011
Analyst's Comments		
#1 It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods.		
Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (up to 100-200% at the 95% confidence level).		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 01-Jul-2024 and 08-Jul-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3625993	SPv1
Contact:	Hamish Mclauchlan	Date Received:	12-Jul-2024	
	C/- Matakanui Gold Limited	Date Reported:	19-Jul-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		RS01 11-Jul-2024
Lab Number:		3625993.1
Individual Tests		
Turbidity	NTU	3.2
pH	pH Units	7.8
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	77
Electrical Conductivity (EC)	mS/m	17.9
Total Suspended Solids	g/m³	4
Total Dissolved Solids (TDS)	g/m³	112
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	< 0.00021
Dissolved Strontium	g/m³	0.32
Total Strontium	g/m³	0.33
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	3.9
Fluoride	g/m³	0.08
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	0.004
Nitrate-N + Nitrite-N	g/m³	0.004
Total Phosphorus	g/m³	0.010
Reactive Silica	g/m³ as SiO₂	10.0
Silicon	g/m³	4.7
Sulphate	g/m³	7.1
Dissolved Organic Carbon (DOC)	g/m³	2.4
Total Organic Carbon (TOC)	g/m³	2.4
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	79
Dissolved Aluminium	g/m³	< 0.003
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0129
Dissolved Barium	g/m³	0.013
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	0.005



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Aqueous		
Sample Name:		RS01 11-Jul-2024
Lab Number:		3625993.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	24
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	< 0.0005
Dissolved Iron	g/m ³	0.05
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0024
Dissolved Magnesium	g/m ³	4.7
Dissolved Manganese	g/m ³	0.0064
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.32
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	5.6
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00006
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.047
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.039
Total Barium	g/m ³	0.0157
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	< 0.0053
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	24
Total Chromium	g/m ³	< 0.00053
Total Copper	g/m ³	< 0.00053
Total Iron	g/m ³	0.63
Total Lead	g/m ³	< 0.00011
Total Lithium	g/m ³	0.0024
Total Magnesium	g/m ³	4.7
Total Manganese	g/m ³	0.089
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.33
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	5.4
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000075
Total Zinc	g/m ³	< 0.0011
Analyst's Comments		
Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (up to 100-200% at the 95% confidence level). Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the DOC result is significantly greater than that usually reported for this analyte (up to 100-200% at the 95% confidence level).		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 12-Jul-2024 and 19-Jul-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Martin Cowell - BSc
Client Services Manager - Environmental

Certificate of Analysis

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Client:	Matakanui Gold Limited	Lab No:	3636094	SPv1
Contact:	Hamish Mclauchlan	Date Received:	26-Jul-2024	
	C/- Matakanui Gold Limited	Date Reported:	02-Aug-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		RS01 25-Jul-2024
Lab Number:		3636094.1
Individual Tests		
Turbidity	NTU	3.9
pH	pH Units	7.9
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	73
Electrical Conductivity (EC)	mS/m	16.7
Total Suspended Solids	g/m³	7
Total Dissolved Solids (TDS)	g/m³	98
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	< 0.00021
Dissolved Strontium	g/m³	0.30
Total Strontium	g/m³	0.31
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	2.9
Fluoride	g/m³	0.08
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	0.002
Nitrate-N + Nitrite-N	g/m³	0.003
Total Phosphorus	g/m³	0.019
Reactive Silica	g/m³ as SiO₂	10.0
Silicon	g/m³	4.7
Sulphate	g/m³	6.4
Dissolved Organic Carbon (DOC)	g/m³	2.0
Total Organic Carbon (TOC)	g/m³	3.2
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	71
Dissolved Aluminium	g/m³	< 0.003
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0133
Dissolved Barium	g/m³	0.011
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	< 0.005



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Aqueous		
Sample Name:		RS01 25-Jul-2024
Lab Number:		3636094.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	22
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	< 0.0005
Dissolved Iron	g/m ³	0.04
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0021
Dissolved Magnesium	g/m ³	4.0
Dissolved Manganese	g/m ³	0.0091
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.01
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	5.4 #1
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00005
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.060
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.056
Total Barium	g/m ³	0.0150
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	< 0.0053
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	22
Total Chromium	g/m ³	0.00068
Total Copper	g/m ³	< 0.00053
Total Iron	g/m ³	1.01
Total Lead	g/m ³	0.00013
Total Lithium	g/m ³	0.0022
Total Magnesium	g/m ³	4.5
Total Manganese	g/m ³	0.145
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.04
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	5.3 #1
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000066
Total Zinc	g/m ³	0.0016
Analyst's Comments		
#1 It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods.		
Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (up to 100-200% at the 95% confidence level).		
Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the DOC result is significantly greater than that usually reported for this analyte (up to 200-300% at the 95% confidence level).		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 27-Jul-2024 and 02-Aug-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3646501	SPv1
Contact:	Hamish Mclauchlan	Date Received:	10-Aug-2024	
	C/- Matakanui Gold Limited	Date Reported:	19-Aug-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		MGL RS01 08-Aug-2024
Lab Number:		3646501.1
Individual Tests		
Turbidity	NTU	62
pH	pH Units	7.9
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	72
Electrical Conductivity (EC)	mS/m	16.9
Total Suspended Solids	g/m³	30
Total Dissolved Solids (TDS)	g/m³	111
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	0.00120
Dissolved Strontium	g/m³	0.31
Total Strontium	g/m³	0.31
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	0.037
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	3.4
Fluoride	g/m³	0.07
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	0.002
Nitrate-N	g/m³	0.038
Nitrate-N + Nitrite-N	g/m³	0.040
Total Phosphorus	g/m³	0.101
Reactive Silica	g/m³ as SiO₂	9.2
Silicon	g/m³	4.3
Sulphate	g/m³	6.0
Dissolved Organic Carbon (DOC)	g/m³	2.2
Total Organic Carbon (TOC)	g/m³	4.9
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	74
Dissolved Aluminium	g/m³	0.078
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0138
Dissolved Barium	g/m³	0.012
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	< 0.005



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Sample Type: Aqueous		
Sample Name:		MGL RS01 08-Aug-2024
Lab Number:		3646501.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	22
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	0.0006
Dissolved Iron	g/m ³	0.11
Dissolved Lead	g/m ³	0.00012
Dissolved Lithium	g/m ³	0.0022
Dissolved Magnesium	g/m ³	4.5
Dissolved Manganese	g/m ³	0.0043
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.57
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	5.3
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00008
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	1.93
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.046
Total Barium	g/m ³	0.035
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	0.0056
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	23
Total Chromium	g/m ³	0.0022
Total Copper	g/m ³	0.0027
Total Iron	g/m ³	2.7
Total Lead	g/m ³	0.0027
Total Lithium	g/m ³	0.0054
Total Magnesium	g/m ³	4.5
Total Manganese	g/m ³	0.123
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	0.00173
Total Potassium	g/m ³	2.2
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	5.3
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000153
Total Zinc	g/m ³	0.0079
Analyst's Comments		
Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the DOC result is significantly greater than that usually reported for this analyte (up to 100-200% at the 95% confidence level).		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 10-Aug-2024 and 19-Aug-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3655938	SPv1
Contact:	Hamish Mclauchlan	Date Received:	23-Aug-2024	
	C/- Matakanui Gold Limited	Date Reported:	30-Aug-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		MGL RS01 22-Aug-2024
Lab Number:		3655938.1
Individual Tests		
Turbidity	NTU	1.21
pH	pH Units	7.9
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	73
Electrical Conductivity (EC)	mS/m	16.5
Total Suspended Solids	g/m³	< 3
Total Dissolved Solids (TDS)	g/m³	103
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	< 0.00021
Dissolved Strontium	g/m³	0.30
Total Strontium	g/m³	0.30
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	3.1
Fluoride	g/m³	0.07
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	0.002
Nitrate-N + Nitrite-N	g/m³	0.003
Total Phosphorus	g/m³	0.006
Reactive Silica	g/m³ as SiO₂	9.2
Silicon	g/m³	4.3
Sulphate	g/m³	5.5
Dissolved Organic Carbon (DOC)	g/m³	1.5
Total Organic Carbon (TOC)	g/m³	3.9
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	74
Dissolved Aluminium	g/m³	< 0.003
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0156
Dissolved Barium	g/m³	0.012
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	< 0.005



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Sample Type: Aqueous		
Sample Name:		MGL RS01 22-Aug-2024
Lab Number:		3655938.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	23 ^{#1}
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	< 0.0005
Dissolved Iron	g/m ³	0.04
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0021
Dissolved Magnesium	g/m ³	4.3
Dissolved Manganese	g/m ³	0.0053
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.14
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	5.4
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00007
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.031
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.031
Total Barium	g/m ³	0.0126
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	< 0.0053
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	22 ^{#1}
Total Chromium	g/m ³	0.00054
Total Copper	g/m ³	< 0.00053
Total Iron	g/m ³	0.37
Total Lead	g/m ³	< 0.00011
Total Lithium	g/m ³	0.0021
Total Magnesium	g/m ³	4.4
Total Manganese	g/m ³	0.048
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.15
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	5.5
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000075
Total Zinc	g/m ³	< 0.0011
Analyst's Comments		
^{#1} It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods. Sample 1 Comment: Please note that the level of Uncertainty of Measurement (UOM) for the DOC result is significantly greater than that usually reported for this analyte (up to 200-300% at the 95% confidence level).		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 26-Aug-2024 and 30-Aug-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Martin Cowell - BSc
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3666512	SPv1
Contact:	Hamish Mclauchlan	Date Received:	06-Sep-2024	
	C/- Matakanui Gold Limited	Date Reported:	13-Sep-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		MGL RS01 05-Sep-2024
Lab Number:		3666512.1
Individual Tests		
Turbidity	NTU	6.8
pH	pH Units	7.9
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	76
Electrical Conductivity (EC)	mS/m	17.0
Total Suspended Solids	g/m³	5
Total Dissolved Solids (TDS)	g/m³	103
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	0.00022
Dissolved Strontium	g/m³	0.31 ^{#1}
Total Strontium	g/m³	0.31 ^{#1}
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	2.9
Fluoride	g/m³	0.09
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	< 0.002
Nitrate-N + Nitrite-N	g/m³	< 0.002
Total Phosphorus	g/m³	0.013
Reactive Silica	g/m³ as SiO₂	9.4
Silicon	g/m³	4.4
Sulphate	g/m³	4.6
Dissolved Organic Carbon (DOC)	g/m³	6.7
Total Organic Carbon (TOC)	g/m³	7.2
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	82
Dissolved Aluminium	g/m³	0.008
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.021
Dissolved Barium	g/m³	0.012
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	0.006 ^{#1}

Sample Type: Aqueous		
Sample Name:		MGL RS01 05-Sep-2024
Lab Number:		3666512.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	25 #1
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	0.0006
Dissolved Iron	g/m ³	0.05
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0023 #1
Dissolved Magnesium	g/m ³	4.7 #1
Dissolved Manganese	g/m ³	0.0050
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	2.1 #1
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	6.0
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00009
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.076
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.047
Total Barium	g/m ³	0.0143
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	< 0.0053 #1
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	23 #1
Total Chromium	g/m ³	0.00072
Total Copper	g/m ³	0.00086
Total Iron	g/m ³	0.68
Total Lead	g/m ³	0.00016
Total Lithium	g/m ³	0.0022 #1
Total Magnesium	g/m ³	4.5 #1
Total Manganese	g/m ³	0.085
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	2.0 #1
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	5.4
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000117
Total Zinc	g/m ³	< 0.0011
Analyst's Comments		
#1 It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods.		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 06-Sep-2024 and 13-Sep-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 6

Client:	Matakanui Gold Limited	Lab No:	3676901	SPv1
Contact:	Hamish Mclauchlan	Date Received:	21-Sep-2024	
	C/- Matakanui Gold Limited	Date Reported:	27-Sep-2024	
	305 Bendigo Loop Road	Quote No:	123215	
	Bendigo	Order No:		
	Cromwell 9383	Client Reference:		
		Submitted By:	Hamish Mclauchlan	

Sample Type: Aqueous

Sample Name:		RS01 19-Sep-2024
Lab Number:		3676901.1
Individual Tests		
Turbidity	NTU	2.3
pH	pH Units	7.8
Acidity (pH 3.7)	g/m³ as CaCO₃	< 1.0
Total Alkalinity	g/m³ as CaCO₃	69
Electrical Conductivity (EC)	mS/m	15.5
Total Suspended Solids	g/m³	< 3
Total Dissolved Solids (TDS)	g/m³	94
Total Bismuth	g/m³	< 0.00011
Dissolved Cobalt	g/m³	< 0.0002
Total Cobalt	g/m³	< 0.00021
Dissolved Strontium	g/m³	0.28 #1
Total Strontium	g/m³	0.27 #1
Dissolved Thallium	g/m³	< 0.00005
Total Thallium	g/m³	< 0.000053
Dissolved Titanium*	g/m³	< 0.02
Total Titanium*	g/m³	< 0.011
Bromide	g/m³	< 0.05
Total Cyanide	g/m³	< 0.002
Chloride	g/m³	2.9
Fluoride	g/m³	0.10
Total Ammoniacal-N	g/m³	< 0.010
Nitrite-N	g/m³	< 0.002
Nitrate-N	g/m³	0.019
Nitrate-N + Nitrite-N	g/m³	0.020
Total Phosphorus	g/m³	0.010
Reactive Silica	g/m³ as SiO₂	8.7
Silicon	g/m³	4.0
Sulphate	g/m³	4.3
Dissolved Organic Carbon (DOC)	g/m³	5.0
Total Organic Carbon (TOC)	g/m³	5.3
Drinking water metals suite, dissolved, trace		
Total Hardness	g/m³ as CaCO₃	72
Dissolved Aluminium	g/m³	0.008
Dissolved Antimony	g/m³	< 0.0002
Dissolved Arsenic	g/m³	0.0161
Dissolved Barium	g/m³	0.010
Dissolved Beryllium	g/m³	< 0.00010
Dissolved Boron	g/m³	0.006 #1

Sample Type: Aqueous		
Sample Name:		RS01 19-Sep-2024
Lab Number:		3676901.1
Drinking water metals suite, dissolved, trace		
Dissolved Cadmium	g/m ³	< 0.00005
Dissolved Calcium	g/m ³	22 ^{#1}
Dissolved Chromium	g/m ³	< 0.0005
Dissolved Copper	g/m ³	0.0010
Dissolved Iron	g/m ³	0.08
Dissolved Lead	g/m ³	< 0.00010
Dissolved Lithium	g/m ³	0.0021 ^{#1}
Dissolved Magnesium	g/m ³	4.2 ^{#1}
Dissolved Manganese	g/m ³	0.0048
Dissolved Mercury	g/m ³	< 0.00008
Dissolved Molybdenum	g/m ³	< 0.0002
Dissolved Nickel	g/m ³	< 0.0005
Dissolved Potassium	g/m ³	1.65 ^{#1}
Dissolved Selenium	g/m ³	< 0.0010
Dissolved Silver	g/m ³	< 0.00010
Dissolved Sodium	g/m ³	5.2 ^{#1}
Dissolved Tin	g/m ³	< 0.0005
Dissolved Uranium	g/m ³	0.00008
Dissolved Zinc	g/m ³	< 0.0010
Drinking water metals suite, totals, trace		
Total Aluminium	g/m ³	0.045
Total Antimony	g/m ³	< 0.00021
Total Arsenic	g/m ³	0.029
Total Barium	g/m ³	0.0120
Total Beryllium	g/m ³	< 0.00011
Total Boron	g/m ³	0.0057 ^{#1}
Total Cadmium	g/m ³	< 0.000053
Total Calcium	g/m ³	21 ^{#1}
Total Chromium	g/m ³	< 0.00053
Total Copper	g/m ³	0.00125
Total Iron	g/m ³	0.37
Total Lead	g/m ³	< 0.00011
Total Lithium	g/m ³	0.00196 ^{#1}
Total Magnesium	g/m ³	3.8 ^{#1}
Total Manganese	g/m ³	0.041
Total Mercury	g/m ³	< 0.00008
Total Molybdenum	g/m ³	< 0.00021
Total Nickel	g/m ³	< 0.00053
Total Potassium	g/m ³	1.62 ^{#1}
Total Selenium	g/m ³	< 0.0011
Total Silver	g/m ³	< 0.00011
Total Sodium	g/m ³	5.1 ^{#1}
Total Tin	g/m ³	< 0.00053
Total Uranium	g/m ³	0.000097
Total Zinc	g/m ³	0.0031
Analyst's Comments		
^{#1} It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods.		

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total Digestion	Boiling nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1
Turbidity	Analysis by Turbidity meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2130 B (modified) : Online Edition.	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 4500-H ⁺ B (modified) : Online Edition. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Acidity (pH 3.7)	Titration to pH 3.7 with standard sodium hydroxide solution, bromophenol blue indicator. APHA 2310 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2510 B : Online Edition.	0.1 mS/m	1
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5 µm), gravimetric determination. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1
Total Dissolved Solids (TDS)	Filtration through GF/C (1.2 µm), gravimetric. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2540 C (modified; drying temperature of 103 - 105°C used rather than 180 ± 2°C) : Online Edition.	10 g/m ³	1
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Filtration for dissolved metals analysis - Misc	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1
Total Bismuth	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Dissolved Cobalt	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Total Cobalt	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Dissolved Strontium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Total Strontium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Dissolved Thallium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Total Thallium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Dissolved Titanium*	Filtered sample, ICP-OES. APHA 3120 B : Online Edition.	0.02 g/m ³	1
Total Titanium*	Boiling nitric acid digestion, ICP-OES. APHA 3120 B : Online Edition.	0.005 g/m ³	1
Bromide	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F ⁻ C : Online Edition.	0.05 g/m ³	1
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	1
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1
Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) : Online Edition.	0.002 g/m ³	1
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Flow Injection Analyser APHA 4500-SiO ₂ F (modified) : Online Edition.	0.10 g/m ³ as SiO ₂	1
Silicon	Calculation: from Reactive Silica.	0.05 g/m ³	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m ³	1
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1
Drinking water metals suite, dissolved, trace			
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1
Dissolved Aluminium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.003 g/m ³	1
Dissolved Antimony	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Arsenic	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Barium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Beryllium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Boron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.005 g/m ³	1
Dissolved Cadmium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00005 g/m ³	1
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Chromium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Iron	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Lead	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Lithium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Manganese	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Mercury	0.45µm filtration, bromine oxidation followed by atomic fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Molybdenum	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0002 g/m ³	1
Dissolved Nickel	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Potassium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1
Dissolved Selenium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Dissolved Silver	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00010 g/m ³	1
Dissolved Sodium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1
Dissolved Tin	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1
Dissolved Uranium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00002 g/m ³	1
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 21-Sep-2024 and 27-Sep-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 2

Client:	Analytica Laboratories Limited	Lab No:	3647614	SPv1
Contact:	Environmental Sample Reception C/- Analytica Laboratories Limited PO Box 3345 Hamilton 3240	Date Received:	13-Aug-2024	
		Date Reported:	15-Aug-2024	
		Quote No:	24-25063	
		Order No:	24-25063	
		Client Reference:	24-25063	
		Submitted By:	Environmental Sample Reception	

Sample Type: Aqueous

Sample Name:	24-25063-1 LBA 08-Aug-2024	24-25063-2 RS01 08-Aug-2024	24-25063-3 RS02 08-Aug-2024	24-25063-4 RS03 08-Aug-2024	24-25063-5 RSA01 08-Aug-2024
Lab Number:	3647614.1	3647614.2	3647614.3	3647614.4	3647614.5
Bromide	g/m ³	0.10	< 0.05	< 0.05	< 0.05
Dissolved Organic Carbon (DOC)	g/m ³	1.3	1.6	3.2	3.6
Total Organic Carbon (TOC)	g/m ³	1.3	5.5	6.0	4.5

Sample Name:	24-25063-6 SC01 08-Aug-2024	24-25063-7 RS04 08-Aug-2024	24-25063-8 MDD302 08-Aug-2024
Lab Number:	3647614.6	3647614.7	3647614.8
Bromide	g/m ³	< 0.05	< 0.05
Dissolved Organic Carbon (DOC)	g/m ³	1.5	3.0
Total Organic Carbon (TOC)	g/m ³	2.3	5.4

Analyst's Comments

Samples 1, 6 Comment:

Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (>300% at the 95% confidence level).

Samples 1, 6 Comment:

Please note that the level of Uncertainty of Measurement (UOM) for the DOC result is significantly greater than that usually reported for this analyte (>300% at the 95% confidence level).

Sample 2 Comment:

Please note that the level of Uncertainty of Measurement (UOM) for the DOC result is significantly greater than that usually reported for this analyte (up to 200-300% at the 95% confidence level).

Samples 3, 5, 7 Comment:

Please note that the level of Uncertainty of Measurement (UOM) for the DOC result is significantly greater than that usually reported for this analyte (up to 100-200% at the 95% confidence level).

Sample 5 Comment:

Please note that the level of Uncertainty of Measurement (UOM) for the TOC result is significantly greater than that usually reported for this analyte (up to 100-200% at the 95% confidence level).

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Filtration, Unpreserved	Sample filtration through 0.45µm membrane filter.	-	1-8
Bromide	Filtered sample. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.05 g/m ³	1-8
Dissolved Organic Carbon (DOC)	Filtered sample, Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1-8



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Organic Carbon (TOC)	Supercritical persulphate oxidation, IR detection, for Total C. Acidification, purging for Total Inorganic C. TOC = TC -TIC.The uncertainty of the calculated result is a combination of the uncertainties of the two analytical determinands in the subtraction calculation. Where both determinands are similar in magnitude, the calculated result has a significantly higher uncertainty than would normally be achieved if one of the results was significantly less than the other. In such cases, the elevated uncertainty should be kept in mind when interpreting the data. APHA 5310 C (modified) : Online Edition.	0.5 g/m ³	1-8

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 14-Aug-2024 and 15-Aug-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Ara Heron BSc (Tech)
Client Services Manager - Environmental



Certificate of Analysis

Matakanui Gold/Cuffs Limited
Level 2 Como House, 51 Tancred Street
Hokitika 7810

Attention: Hamish McLauchlan
Phone: 0275886631
Email: hmclauchlan@santanaminerals.com

Lab Reference: 24-19336
Submitted by:
Date Received: 18/06/2024
Testing Initiated: 18/06/2024
Date Completed: 4/07/2024
Order Number:
Reference:

Sampling Site: Bendigo Ophir Project

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Please note the inorganic carbon content is high relative to organic carbon, which may impact the accuracy of TOC measurements.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Total Phosphorus	g/m ³	0.005	<0.0050	0.39	0.10	0.015	0.0078

Total Phosphorus in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Total Phosphorus	g/m ³	0.005	<0.0050	0.0071	<0.0050	0.013	0.055

Total Phosphorus in Water

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Total Phosphorus	g/m ³	0.005	0.0090	2.75

Water Aggregate Properties

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	1.67	<	1.67	3.33	<1.00

Water Aggregate Properties

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	5.67	2.33	<5	4.33	<1.00

Water Aggregate Properties

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	5.60	<9

Turbidity

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Turbidity	NTU	0.05	0.2	4.5	110	2.9	1.7

Turbidity

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Turbidity	NTU	0.05	0.2	0.9	1.5	3.5	15

Turbidity

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Turbidity	NTU	0.05	4.3	5469.000

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Nitrite-N	g/m³	0.001	<0.0010	0.0012

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Total Kjeldahl Nitrogen	g/m³	0.1	<0.10	<0.10	0.24	0.10	<0.10
Total Nitrogen	g/m³	0.1	<0.10	0.20	0.24	0.11	<0.10

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Total Kjeldahl Nitrogen	g/m³	0.1	<0.10	<0.10	<0.10	0.75	0.46
Total Nitrogen	g/m³	0.1	<0.10	<0.10	<0.10	0.90	0.46

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Total Kjeldahl Nitrogen	g/m³	0.1	<0.10	0.75
Total Nitrogen	g/m³	0.1	<0.10	1.3

Carbon in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Total Organic Carbon	g/m³	0.5	<0.50	<0.50	<0.50	1.6	1.2
Dissolved Organic Carbon*	g/m³	0.5	1.1	<0.50	<0.50	1.0	0.55

Carbon in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Total Organic Carbon	g/m³	0.5	1.4	0.96	<0.50	<0.50	3.5
Dissolved Organic Carbon*	g/m³	0.5	1.0	<0.50	<0.50	<0.50	1.9

Carbon in Water

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Total Organic Carbon	g/m³	0.5	<0.50	2.2
Dissolved Organic Carbon*	g/m³	0.5	<0.50	<0.50

Fluoride in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Fluoride	g/m³	0.04	0.079	0.29	0.15	0.065	0.064

Fluoride in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Fluoride	g/m³	0.04	0.048	0.066	0.088	0.090	0.055

Fluoride in Water

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Fluoride	g/m³	0.04	0.14	0.10

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Bromide	g/m³	0.005	<0.05	0.070	0.10	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Bromide	g/m³	0.005	<0.05	<0.05	0.060	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Bromide	g/m³	0.005	<0.05	<0.05

Water Hardness

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Total Hardness	g eqv. CaCO ₃ /m³	0.05	16	210	190	81	68

Water Hardness

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Total Hardness	g eqv. CaCO ₃ /m³	0.05	42	76	280	160	83

Water Hardness

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Total Hardness	g eqv. CaCO ₃ /m³	0.05	260	210

Cyanide in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Total Cyanide	g/m³	0.001	<0.001	<0.001

Solids in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Total Suspended Solids	g/m³	3	<3	9	160	4	<3
Total Dissolved Solids	g/m³	3	35	250	213	110	82

Solids in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Total Suspended Solids	g/m³	3	<3	<3	4	7	30
Total Dissolved Solids	g/m³	3	57	98	318	171	113

Solids in Water

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Total Suspended Solids	g/m³	3	<3	2,196
Total Dissolved Solids	g/m³	3	265	83

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Arsenic	g/m³	0.0005	0.0011	1.46	0.019	0.042	0.0053
Aluminium	g/m³	0.003	0.0084	0.037	2.04	0.031	0.041
Barium	g/m³	0.0001	0.0051	0.0081	0.253	0.0148	0.0126
Beryllium	g/m³	0.00001	<0.000010	<0.000010	0.00015	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	0.017	0.036	<0.0050	<0.0050
Calcium	g/m³	0.05	4.6	56.0	46.7	25.1	20.7
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000024	0.00025	0.00060	0.00015	0.000086
Chromium	g/m³	0.0002	0.00029	0.00028	0.0029	0.00021	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00017	0.00104	<0.000010	<0.000010
Copper	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00026	0.00034
Iron	g/m³	0.005	0.0098	0.963	3.54	0.559	0.099
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00066	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.34	2.0	2.3	1.1	1.1
Lanthanum	g/m³	0.00001	0.000034	0.000085	0.00276	0.000031	0.000059
Lithium	g/m³	0.00001	0.00084	0.0137	0.0577	0.00249	0.00269
Magnesium	g/m³	0.01	1.01	15.9	16.9	4.56	4.00
Manganese	g/m³	0.0005	0.00050	0.186	0.0581	0.0863	0.0042
Molybdenum	g/m³	0.0002	<0.00020	0.0012	0.00033	<0.00020	<0.00020
Sodium	g/m³	0.01	2.44	20.5	43.7	5.79	5.05
Nickel	g/m³	0.0002	<0.00020	0.00038	0.0026	<0.00020	0.00025
Phosphorus	g/m³	0.04	<0.040	<0.040	0.088	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	0.00027	0.00061	0.000055	0.000083
Rubidium	g/m³	0.00005	0.00026	0.0015	0.00683	0.00033	0.00040
Sulfur*	g/m³	10	<10	12	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.0540	0.502	7.19	0.355	0.289
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	0.00239	0.0012	0.000046	0.00033
Vanadium	g/m³	0.0005	0.00083	<0.00050	0.0029	<0.00050	<0.00050
Yttrium	g/m³	0.00005	<0.000050	0.00025	0.0026	<0.000050	0.000055
Zinc	g/m³	0.003	<0.0030	<0.0030	0.0056	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Arsenic	g/m³	0.0005	0.0079	0.019	0.0017	0.00050	0.0058
Aluminium	g/m³	0.003	0.0058	0.011	0.030	0.077	0.12
Barium	g/m³	0.0001	0.0071	0.0162	0.0495	0.0382	0.0260
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	<0.0050	0.038	0.027	<0.0050
Calcium	g/m³	0.05	12.7	23.2	72.1	46.9	25.2
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000052	0.00011	0.000088	0.00017	0.00061

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Chromium	g/m³	0.0002	<0.00020	<0.00020	0.00026	0.00033	0.00032
Caesium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.000018
Copper	g/m³	0.0002	<0.00020	0.00024	0.00034	0.00040	0.0011
Iron	g/m³	0.005	0.060	0.29	0.056	0.22	1.88
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.54	0.69	1.9	1.3	1.5
Lanthanum	g/m³	0.00001	<0.000010	<0.000010	0.000045	0.00010	0.00038
Lithium	g/m³	0.00001	0.00139	0.00216	0.00965	0.00455	0.00245
Magnesium	g/m³	0.01	2.57	4.33	25.1	11.3	4.73
Manganese	g/m³	0.0005	0.013	0.023	0.0030	0.022	0.123
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00051	0.00032	<0.00020
Sodium	g/m³	0.01	3.99	5.91	14.5	7.62	6.53
Nickel	g/m³	0.0002	0.00020	<0.00020	0.00024	0.00024	0.00093
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	0.057
Lead	g/m³	0.00005	<0.000050	<0.000050	0.000078	0.00019	0.00047
Rubidium	g/m³	0.00005	0.00018	0.00034	0.00027	0.00042	0.00073
Sulfur*	g/m³	10	<10	<10	21	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00017	<0.00010	0.00012
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.162	0.293	1.15	0.757	0.363
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.000032	<0.000030	0.00683	0.00240	0.00031
Vanadium	g/m³	0.0005	0.00073	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	<0.000050	<0.000050	0.000065	0.000094	0.00030
Zinc	g/m³	0.003	<0.0030	0.0031	<0.0030	<0.0030	0.0045

Elements in Water (Total Recoverable)

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Arsenic	g/m³	0.0005	0.0510	3.65
Aluminium	g/m³	0.003	0.0044	22.9
Barium	g/m³	0.0001	0.148	0.324
Beryllium	g/m³	0.00001	0.000026	0.00220
Bismuth	g/m³	0.0001	<0.00010	0.00046
Boron	g/m³	0.005	0.0063	0.019
Calcium	g/m³	0.05	64.6	52.1
Cadmium	g/m³	0.00002	<0.000020	0.00012
Cobalt	g/m³	0.00001	<0.000010	0.768
Chromium	g/m³	0.0002	<0.00020	0.017
Caesium	g/m³	0.00001	0.00016	0.00226
Copper	g/m³	0.0002	<0.00020	1.95
Iron	g/m³	0.005	0.38	62.5
Germanium	g/m³	0.00005	0.00013	0.0026
Mercury	g/m³	0.0001	<0.00010	<0.00010
Potassium	g/m³	0.05	1.4	16.2
Lanthanum	g/m³	0.00001	0.000013	0.0410
Lithium	g/m³	0.00001	0.00870	0.0304
Magnesium	g/m³	0.01	23.0	18.7
Manganese	g/m³	0.0005	0.0053	1.12

Elements in Water (Total Recoverable)

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Molybdenum	g/m³	0.0002	0.00031	0.0021
Sodium	g/m³	0.01	8.59	12.2
Nickel	g/m³	0.0002	<0.00020	0.0270
Phosphorus	g/m³	0.04	<0.040	1.2
Lead	g/m³	0.00005	<0.000050	0.0402
Rubidium	g/m³	0.00005	0.0020	0.0559
Sulfur*	g/m³	10	<10	<10
Antimony	g/m³	0.0001	0.00015	0.0011
Selenium	g/m³	0.001	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	0.0800
Strontium	g/m³	0.0001	1.07	0.788
Thallium	g/m³	0.0001	<0.00010	0.00033
Uranium	g/m³	0.00003	0.00517	0.00566
Vanadium	g/m³	0.0005	<0.00050	0.044
Yttrium	g/m³	0.00005	0.00043	0.0167
Zinc	g/m³	0.003	<0.0030	0.197

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
Silica	g/m³	0.1	14.2	26.8	34.1	17.8	19.2
Aluminium	g/m³	0.003	0.0043	<0.0030	0.019	<0.0030	0.0040
Arsenic	g/m³	0.0005	0.00096	1.12	0.018	0.017	0.0049
Barium	g/m³	0.0002	0.0052	0.0056	0.222	0.0124	0.0116
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.017	0.038	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000023	0.000050	0.00015	0.000028	0.000035
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.00020
Caesium	g/m³	0.00001	<0.000010	0.00013	0.00020	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00028	<0.00020	<0.00020	0.00022	0.00032
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00097	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000014	<0.000010	0.000012	<0.000010	<0.000010
Lithium	g/m³	0.00001	0.00082	0.0136	0.0518	0.00239	0.00260
Molybdenum	g/m³	0.0002	<0.00020	0.00094	0.00050	<0.00020	0.00025
Nickel	g/m³	0.0002	<0.00020	<0.00020	0.00035	0.00021	0.00030
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00021	0.00139	0.00199	0.00023	0.00035
Sulfur*	g/m³	10	<10	13	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00011	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	0.00097	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0509	0.470	9.80	0.341	0.278
Thallium	g/m³	0.00001	<0.000010	<0.000010	0.000020	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.00225	0.00098	0.000061	0.00031
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000024	0.000024	0.00033	<0.000010	0.000016

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
Silica	g/m³	0.1	17.1	17.8	15.8	16.4	19.7
Aluminium	g/m³	0.003	<0.0030	<0.0030	<0.0030	0.0038	<0.0030
Arsenic	g/m³	0.0005	0.0077	0.012	0.0019	<0.00050	0.00091
Barium	g/m³	0.0002	0.0070	0.0149	0.0499	0.0352	0.0181
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010	0.040	0.030	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	0.000030	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000038	0.000051	0.000053	0.000014	0.000085
Chromium	g/m³	0.0002	<0.00020	<0.00020	0.00028	0.00021	0.00025
Caesium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m³	0.0002	<0.00020	<0.00020	0.00028	0.00024	0.00042
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Lithium	g/m³	0.00001	0.00141	0.00223	0.00983	0.00466	0.00240
Molybdenum	g/m³	0.0002	<0.00020	0.00023	0.00043	0.00029	<0.00020
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.00029
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00017	0.00028	0.00018	0.00021	0.00044
Sulfur*	g/m³	10	<10	<10	21	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00017	0.00015	0.00014
Selenium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.159	0.287	1.12	0.746	0.361
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.000065	<0.000030	0.00640	0.00232	0.00032
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000011	<0.000010	0.000038	0.000014	0.000019

Elements in Water (Soluble)

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
Silica	g/m³	0.1	39.3	18.4
Aluminium	g/m³	0.003	<0.0030	0.089
Arsenic	g/m³	0.0005	0.044	0.234
Barium	g/m³	0.0002	0.143	0.0072
Beryllium	g/m³	0.00001	0.000025	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.013
Cadmium	g/m³	0.00002	<0.000020	<0.000020
Cobalt	g/m³	0.00001	<0.000010	0.0242
Chromium	g/m³	0.0002	<0.00020	0.00033
Caesium	g/m³	0.00001	0.00013	0.000041
Copper	g/m³	0.0002	0.00073	0.0064
Germanium	g/m³	0.00005	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	<0.000010	<0.000010

Elements in Water (Soluble)

Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Lithium	g/m³	0.00001	0.00877	0.00704
Molybdenum	g/m³	0.0002	0.00040	<0.00020
Nickel	g/m³	0.0002	<0.00020	0.00029
Phosphorus	g/m³	0.04	<0.040	<0.040
Lead	g/m³	0.00005	0.000052	<0.000050
Rubidium	g/m³	0.00002	0.00218	0.00473
Sulfur*	g/m³	10	<10	<10
Antimony	g/m³	0.0001	0.00019	0.0013
Selenium	g/m³	0.0005	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	0.00022
Strontium	g/m³	0.0001	1.16	0.257
Thallium	g/m³	0.00001	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.00467	0.00061
Vanadium	g/m³	0.0005	<0.00050	0.0020
Yttrium	g/m³	0.00001	0.00016	0.000012

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-1	24-19336-2	24-19336-3	24-19336-4	24-19336-5
pH	pH	1	6.6	8.2	8.0	7.5	7.4
Electrical Conductivity	µS/cm	0.2	40.0	459	451	188	152
Total Alkalinity (CaCO3)	g CaCO3/m³	1	16.3	191	204	77.8	67.9
Chloride	g/m³	0.5	<0.50	6.45	8.66	2.32	1.68
Sulfate	g/m³	0.15	0.71	27.0	9.00	7.17	2.91
Nitrate-N	g/m³	0.002	0.0293	0.196	<0.0020	0.0021	0.0068
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.004	0.019	<0.002	<0.002	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	0.11	<0.005	<0.005
Sodium	g/m³	0.01	2.44	20.2	43.0	5.80	4.95
Potassium	g/m³	0.05	0.33	2.0	1.5	1.1	1.1
Calcium	g/m³	0.05	4.9	56.2	46.5	26.2	20.5
Magnesium	g/m³	0.01	0.99	15.8	16.0	4.76	3.99
Iron	g/m³	0.005	<0.0050	<0.0050	<0.0050	0.032	0.0055
Zinc	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m³	0.0005	<0.00050	0.016	0.0081	0.0090	<0.00050
Sum of Anions*	meq/L	0.01	0.34	4.66	4.58	1.78	1.47
Sum of Cations*	meq/L	0.01	0.44	5.03	5.55	1.98	1.59
EC/10*	(mS/m)/10	0.002	0.40	4.59	4.51	1.88	1.52

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-6	24-19336-7	24-19336-8	24-19336-9	24-19336-10
pH	pH	1	7.9	7.2	8.1	7.9	7.4
Electrical Conductivity	µS/cm	0.2	108	176	577	342	194
Total Alkalinity (CaCO3)	g CaCO3/m³	1	47.1	73.3	232	159	82.9
Chloride	g/m³	0.5	0.96	1.94	5.35	1.73	2.36

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			13/06/2024	13/06/2024	13/06/2024	13/06/2024	13/06/2024
Sulfate	g/m ³	0.15	2.22	5.89	48.2	13.3	4.20
Nitrate-N	g/m ³	0.002	<0.0020	0.0037	0.0839	0.145	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.002	<0.002	0.002	<0.002	<0.002
Ammonia as N	g/m ³	0.005	<0.005	0.01	<0.005	<0.005	<0.005
Sodium	g/m ³	0.01	3.89	5.25	14.5	7.63	6.83
Potassium	g/m ³	0.05	0.53	0.67	1.9	1.3	1.5
Calcium	g/m ³	0.05	12.9	23.5	73.5	48.7	27.0
Magnesium	g/m ³	0.01	2.53	4.26	25.9	11.5	4.95
Iron	g/m ³	0.005	0.012	0.018	<0.0050	0.0052	0.087
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0098	0.0056	<0.00050	0.00071	0.0025
Sum of Anions*	meq/L	0.01	1.03	1.65	5.87	3.55	1.82
Sum of Cations*	meq/L	0.01	1.03	1.77	6.48	3.74	2.10
EC/10*	(mS/m)/10	0.002	1.08	1.76	5.77	3.42	1.94

Anion/Cation Suite

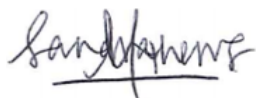
Client Sample ID			MDD302	Base_dis
Date Sampled			13/06/2024	13/06/2024
Analyte	Unit	Reporting Limit	24-19336-11	24-19336-12
pH	pH	1	7.9	8.0
Electrical Conductivity	µS/cm	0.2	500	149
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	239	81.4
Chloride	g/m ³	0.5	2.32	2.19
Sulfate	g/m ³	0.15	8.91	3.99
Nitrate-N	g/m ³	0.002	<0.0020	0.555
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002	0.005
Ammonia as N	g/m ³	0.005	0.05	0.03
Sodium	g/m ³	0.01	8.92	6.97
Potassium	g/m ³	0.05	1.7	4.6
Calcium	g/m ³	0.05	66.7	15.3
Magnesium	g/m ³	0.01	23.3	4.05
Iron	g/m ³	0.005	<0.0050	<0.0050
Zinc	g/m ³	0.001	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0056	0.020
Sum of Anions*	meq/L	0.01	5.08	1.84
Sum of Cations*	meq/L	0.01	5.68	1.52
EC/10*	(mS/m)/10	0.002	5.00	1.49

Method Summary

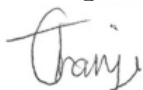
Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).

Method Summary

NO₂-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Total Organic Carbon	Samples analysed as received by combustion analysis at 850°C. Organic carbon is calculated through subtraction of inorganic carbon from total carbon (APHA 5310 B - Online edition)
Dissolved Organic Carbon	Samples analysed as received by combustion analysis at 850°C following a filtration step.(APHA 5310 B - Online edition)
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories.Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourmetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.



Sandra Mathews, B.Eng.
Technologist



Tamaryn Cronje
Customer Service



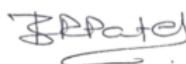
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Sample Reception Technician



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Certificate of Analysis

Matakanui Gold/Cuffs Limited
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Attention: Hamish McLauchlan
Phone: 0275886631
Email: hmclauchlan@santanaminerals.com

Lab Reference: 24-20566
Submitted by:
Date Received: 1/07/2024
Testing Initiated: 1/07/2024
Date Completed: 10/07/2024
Order Number:
Reference:

Sampling Site: Bendigo Ophir Project

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Total Phosphorus	g/m ³	0.005	0.0083	0.32	<0.0050	0.012	<0.0050

Total Phosphorus in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Total Phosphorus	g/m ³	0.005	<0.0050	0.11	<0.0050	<0.0050	<0.0050

Total Phosphorus in Water

Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
Total Phosphorus	g/m ³	0.005	<0.0050

Water Aggregate Properties

Client Sample ID			CC01	LBA	MDDO15	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	1.67	<1.00	1.67	1.67	<1.00

Water Aggregate Properties

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	1.67	11.67	<1.00	<1.00	1.67

Water Aggregate Properties

Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	6.67

Bromine in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS01	RSA01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-4	24-20566-7	24-20566-9	24-20566-10
Bromine*	g/m³	0.11	<0.11	<0.11	<0.11	<0.11

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDDO15	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Nitrite-N	g/m³	0.001	<0.0010	0.0010	<0.0010	<0.0010	0.0012

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Nitrite-N	g/m³	0.001	0.0025	<0.0010	0.0034	0.0016	0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID		MDD302	
Date Sampled		27/06/2024	
Analyte	Unit	Reporting Limit	24-20566-11
Nitrite-N	g/m³	0.001	<0.0010

Turbidity

Client Sample ID		CC01		LBA	MDDO15	RS01	RS02
Date Sampled		27/06/2024		27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Turbidity	NTU	0.05	0.3	1	2.4	4.2	1.1

Turbidity

Client Sample ID		RS03		RSA01	SC01	SC03	RS04
Date Sampled		27/06/2024		27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Turbidity	NTU	0.05	0.3	17	0.8	5.7	1.1

Turbidity

Client Sample ID		MDD302	
Date Sampled		27/06/2024	
Analyte	Unit	Reporting Limit	24-20566-11
Turbidity	NTU	0.05	4.0

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID		CC01		LBA	MDDO15	RS01	RS02
Date Sampled		27/06/2024		27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Total Kjeldahl Nitrogen	g/m³	0.1	0.13	0.24	0.32	0.16	0.25
Total Nitrogen	g/m³	0.1	0.13	0.43	0.32	0.16	0.26

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID		RS03		RSA01	SC01	SC03	RS04
Date Sampled		27/06/2024		27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Total Kjeldahl Nitrogen	g/m³	0.1	0.13	0.25	0.16	0.27	0.46
Total Nitrogen	g/m³	0.1	0.13	0.25	0.20	0.41	0.46

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
Total Kjeldahl Nitrogen	g/m³	0.1	<0.10
Total Nitrogen	g/m³	0.1	<0.10

Carbon in Water

Client Sample ID			CC01	LBA	MDDO15	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Total Organic Carbon	g/m³	0.5	2.1	<0.50	<0.50	0.60	<0.50
Dissolved Organic Carbon*	g/m³	0.5	1.7	<0.50	<0.50	1.2	1.3

Carbon in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Total Organic Carbon	g/m³	0.5	1.2	2.4	<0.50	<0.50	2.0
Dissolved Organic Carbon*	g/m³	0.5	1.3	1.3	<0.50	0.67	3.9

Carbon in Water

Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
Total Organic Carbon	g/m³	0.5	<0.50
Dissolved Organic Carbon*	g/m³	0.5	<0.50

Fluoride in Water

Client Sample ID			CC01	LBA	MDDO15	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Fluoride	g/m³	0.04	0.044	0.27	0.15	0.059	0.063

Fluoride in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Fluoride	g/m³	0.04	0.047	0.056	0.082	0.085	0.058

Fluoride in Water

Client Sample ID		MDD302	
Date Sampled		27/06/2024	
Analyte	Unit	Reporting Limit	24-20566-11
Fluoride	g/m ³	0.04	0.14

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDDO15	RS02	RS03
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-5	24-20566-6
Bromide	g/m³	0.005	<0.05	0.070	0.10	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			SC01	MDD302
Date Sampled			27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-8	24-20566-11
Bromide	g/m³	0.005	0.050	<0.05

Water Hardness

Client Sample ID			CC01	LBA	MDDO15	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	15	200	170	76	70

Water Hardness

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	41	95	280	160	85

Water Hardness

Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	240

Cyanide in Water

Client Sample ID			CC01	LBA	MDDO15	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
Total Cyanide	g/m³	0.001	<0.001

Solids in Water

Client Sample ID			CC01	LBA	MDDO15	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Total Suspended Solids	g/m³	3	<3	<3	4	6	4
Total Dissolved Solids	g/m³	3	38	256	220	119	90

Solids in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Total Suspended Solids	g/m³	3	<3	25	4	10	<3
Total Dissolved Solids	g/m³	3	53	112	307	178	153

Solids in Water

Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
Total Suspended Solids	g/m³	3	<3
Total Dissolved Solids	g/m³	3	282

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDDO15	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Silver*	g/m³	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Arsenic	g/m³	0.0005	0.0013	1.19	0.019	0.046	0.0056
Aluminium	g/m³	0.003	0.011	<0.0030	0.037	0.041	0.043
Barium	g/m³	0.0001	0.0050	0.0055	0.239	0.0147	0.0141
Beryllium	g/m³	0.00001	<0.000010	<0.000010	0.000027	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	0.0061	0.017	0.052	0.0086	0.0088
Calcium	g/m³	0.05	4.4	54.4	40.4	23.0	21.1
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000017	0.000079	<0.000010	0.00015	0.000083
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00017	0.00019	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00037	<0.00020	<0.00020	0.00022	0.00053
Iron	g/m³	0.005	0.014	0.13	0.12	0.639	0.12
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00081	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.33	2.0	1.4	1.2	1.2
Lanthanum	g/m³	0.00001	0.000039	<0.000010	0.00013	0.000039	0.000065
Lithium	g/m³	0.00001	0.00083	0.0132	0.0499	0.00244	0.00260
Magnesium	g/m³	0.01	0.90	15.6	15.6	4.35	4.25
Manganese	g/m³	0.0005	0.00087	0.039	0.0077	0.0930	0.0043
Molybdenum	g/m³	0.0002	<0.00020	0.0011	0.00037	<0.00020	<0.00020
Sodium	g/m³	0.01	2.64	29.6	44.2	5.98	5.90
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00023	0.00025
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	0.00010	0.000063	0.00013
Rubidium	g/m³	0.00005	0.00024	0.0014	0.0021	0.00036	0.00043
Sulfur*	g/m³	10	<10	12	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.0528	0.637	10.4	0.347	0.340
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	0.00237	0.0010	0.000054	0.00043
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	<0.000050	0.000057	0.00034	<0.000050	0.000056
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	0.0047

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Silver*	g/m³	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Arsenic	g/m³	0.0005	0.0086	0.291	0.0019	0.00053	0.0048
Aluminium	g/m³	0.003	0.0049	0.0069	0.021	0.13	0.087
Barium	g/m³	0.0001	0.0071	0.0392	0.0552	0.0383	0.0235
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	0.000012	0.000015
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	<0.0050	0.035	0.031	<0.0050
Calcium	g/m³	0.05	12.3	27.2	69.4	45.3	26.0

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000039	0.00091	0.000072	0.00018	0.00031
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00026	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	0.000010	0.000025	0.000011
Copper	g/m³	0.0002	0.00030	0.00021	0.00040	0.00058	0.0014
Iron	g/m³	0.005	0.079	5.40	0.039	0.30	1.35
Germanium	g/m³	0.00005	<0.000050	0.00013	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.63	1.0	1.8	1.2	1.7
Lanthanum	g/m³	0.00001	<0.000010	0.000017	0.000032	0.00012	0.00021
Lithium	g/m³	0.00001	0.00150	0.00236	0.0102	0.00482	0.00252
Magnesium	g/m³	0.01	2.45	6.51	25.0	10.9	4.77
Manganese	g/m³	0.0005	0.014	0.265	0.0031	0.027	0.0509
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00066	0.00046	<0.00020
Sodium	g/m³	0.01	3.89	5.72	13.5	8.13	6.50
Nickel	g/m³	0.0002	0.00035	0.00036	0.00028	0.00027	0.00045
Phosphorus	g/m³	0.04	<0.040	0.041	<0.040	<0.040	0.042
Lead	g/m³	0.00005	0.000069	<0.000050	0.000057	0.00027	0.00040
Rubidium	g/m³	0.00005	0.00020	0.00029	0.00030	0.00058	0.00065
Sulfur*	g/m³	10	<10	<10	20	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00016	<0.00010	0.00012
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.169	0.317	1.33	0.828	0.407
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.000055	0.000044	0.00673	0.00249	0.00033
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	0.00011	0.00019
Zinc	g/m³	0.003	0.0046	<0.0030	<0.0030	0.0054	0.0037

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
Silver*	g/m³	0.002	<0.0020
Arsenic	g/m³	0.0005	0.0539
Aluminium	g/m³	0.003	0.0037
Barium	g/m³	0.0001	0.142
Beryllium	g/m³	0.00001	0.000023
Bismuth	g/m³	0.0001	<0.00010
Boron	g/m³	0.005	0.025
Calcium	g/m³	0.05	61.5
Cadmium	g/m³	0.00002	<0.000020
Cobalt	g/m³	0.00001	<0.000010
Chromium	g/m³	0.0002	<0.00020
Caesium	g/m³	0.00001	0.00016
Copper	g/m³	0.0002	<0.00020
Iron	g/m³	0.005	0.39
Germanium	g/m³	0.00005	0.000054
Mercury	g/m³	0.0001	<0.00010
Potassium	g/m³	0.05	1.4
Lanthanum	g/m³	0.00001	0.000011

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			27/06/2024
Lithium	g/m³	0.00001	0.00833
Magnesium	g/m³	0.01	22.1
Manganese	g/m³	0.0005	0.0056
Molybdenum	g/m³	0.0002	0.00038
Sodium	g/m³	0.01	10.3
Nickel	g/m³	0.0002	<0.00020
Phosphorus	g/m³	0.04	<0.040
Lead	g/m³	0.00005	0.000072
Rubidium	g/m³	0.00005	0.0019
Sulfur*	g/m³	10	<10
Antimony	g/m³	0.0001	0.00015
Selenium	g/m³	0.001	<0.0010
Tin	g/m³	0.0005	<0.00050
Strontium	g/m³	0.0001	1.20
Thallium	g/m³	0.0001	<0.00010
Uranium	g/m³	0.00003	0.00524
Vanadium	g/m³	0.0005	<0.00050
Yttrium	g/m³	0.00005	0.00044
Zinc	g/m³	0.003	<0.0030

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
Silver*	g/m³	0.00008	<0.000080	<0.000080	<0.000080	0.00011	<0.000080
Silica	g/m³	0.1	13.3	29.2	36.2	19.0	21.1
Aluminium	g/m³	0.003	0.0057	0.0030	0.0032	<0.0030	<0.0030
Arsenic	g/m³	0.0005	0.0010	1.14	0.018	0.018	0.0045
Barium	g/m³	0.0002	0.0048	0.0052	0.233	0.0122	0.0126
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.014	0.034	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000041	0.000034	<0.000010	0.000027	0.000031
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00013	0.00016	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00032	<0.00020	<0.00020	0.00031	0.00034
Germanium	g/m³	0.00005	<0.000050	0.000065	0.00088	<0.000050	<0.000050
Lanthanum	g/m³	0.00001	0.000029	<0.000010	<0.000010	<0.000010	<0.000010
Lithium	g/m³	0.00001	0.00075	0.0124	0.0485	0.00229	0.00233
Molybdenum	g/m³	0.0002	<0.00020	0.00098	0.00046	<0.00020	<0.00020
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00023	0.00138	0.00206	0.00025	0.00029
Sulfur*	g/m³	10	<10	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0454	0.448	9.25	0.298	0.287
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.00208	0.0010	0.000063	0.00036

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDDO15	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000028	0.000020	0.00020	<0.000010	0.000017
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
Silver*	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Silica	g/m ³	0.1	17.1	21.8	15.1	16.6	20.2
Aluminium	g/m ³	0.003	<0.0030	<0.0030	<0.0030	0.0032	<0.0030
Arsenic	g/m ³	0.0005	0.0073	0.016	0.0020	<0.00050	0.0014
Barium	g/m ³	0.0002	0.0071	0.0223	0.0476	0.0345	0.0191
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.01	<0.010	<0.010	0.029	0.024	<0.010
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	<0.000010	0.00068	0.000060	0.000037	0.000074
Chromium	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m ³	0.0002	0.00023	<0.00020	0.00049	0.00027	0.00052
Germanium	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lanthanum	g/m ³	0.00001	<0.000010	<0.000010	0.000011	<0.000010	<0.000010
Lithium	g/m ³	0.00001	0.00126	0.00245	0.00897	0.00414	0.00217
Molybdenum	g/m ³	0.0002	<0.00020	<0.00020	0.00055	0.00029	<0.00020
Nickel	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Phosphorus	g/m ³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00021	0.00027	0.00019	0.00020	0.00047
Sulfur*	g/m ³	10	<10	<10	19	<10	<10
Antimony	g/m ³	0.0001	<0.00010	<0.00010	0.00016	<0.00010	0.00011
Selenium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.151	0.299	1.04	0.702	0.343
Thallium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.000080	0.000047	0.00629	0.00227	0.00039
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	<0.000010	<0.000010	0.000029	0.000015	0.000017
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080

Elements in Water (Soluble)

Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
Silver*	g/m ³	0.00008	<0.000080
Silica	g/m ³	0.1	43.6
Aluminium	g/m ³	0.003	<0.0030
Arsenic	g/m ³	0.0005	0.048
Barium	g/m ³	0.0002	0.141

Elements in Water (Soluble)

Client Sample ID			MDD302
Date Sampled			27/06/2024
Beryllium	g/m³	0.00001	0.000019
Bismuth	g/m³	0.0001	<0.00010
Boron	g/m³	0.01	<0.010
Cadmium	g/m³	0.00002	<0.000020
Cobalt	g/m³	0.00001	<0.000010
Chromium	g/m³	0.0002	<0.00020
Caesium	g/m³	0.00001	0.00014
Copper	g/m³	0.0002	<0.00020
Germanium	g/m³	0.00005	0.00011
Lanthanum	g/m³	0.00001	<0.000010
Lithium	g/m³	0.00001	0.00836
Molybdenum	g/m³	0.0002	0.00030
Nickel	g/m³	0.0002	<0.00020
Phosphorus	g/m³	0.04	<0.040
Lead	g/m³	0.00005	<0.000050
Rubidium	g/m³	0.00002	0.00198
Sulfur*	g/m³	10	<10
Antimony	g/m³	0.0001	0.00016
Selenium	g/m³	0.0005	<0.00050
Tin	g/m³	0.0002	<0.00020
Strontium	g/m³	0.0001	1.06
Thallium	g/m³	0.00001	<0.000010
Uranium	g/m³	0.00003	0.00479
Vanadium	g/m³	0.0005	<0.00050
Yttrium	g/m³	0.00001	0.00015
Mercury	g/m³	0.00008	<0.000080

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-1	24-20566-2	24-20566-3	24-20566-4	24-20566-5
pH	pH	1	7.0	8.2	8.0	7.5	7.5
Electrical Conductivity	µS/cm	0.2	40.0	444	419	169	157
Total Alkalinity (CaCO3)	g CaCO ₃ /m³	1	18.1	195	204	73.4	71.4
Chloride	g/m³	0.5	0.75	6.95	9.14	2.59	1.95
Sulfate	g/m³	0.15	0.62	26.8	9.28	6.03	3.13
Nitrate-N	g/m³	0.002	0.0062	0.197	0.0026	0.0029	0.0111
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.009	0.016	<0.002	<0.002	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	0.10	<0.005	<0.005
Sodium	g/m³	0.01	2.21	18.6	40.2	5.16	4.68
Potassium	g/m³	0.05	0.32	1.9	1.4	1.2	1.1
Calcium	g/m³	0.05	4.3	53.2	39.2	23.0	21.7
Magnesium	g/m³	0.01	0.86	14.7	14.9	4.10	3.96
Iron	g/m³	0.005	0.0066	<0.0050	<0.0050	0.027	<0.0050
Zinc	g/m³	0.001	0.0017	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m³	0.0005	<0.00050	0.033	0.0038	0.0093	<0.00050
Sum of Anions*	meq/L	0.01	0.40	4.75	4.59	1.67	1.56
Sum of Cations*	meq/L	0.01	0.39	4.72	4.98	1.74	1.64
EC/10*	(mS/m)/10	0.002	0.40	4.44	4.19	1.69	1.57

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
Analyte	Unit	Reporting Limit	24-20566-6	24-20566-7	24-20566-8	24-20566-9	24-20566-10
pH	pH	1	7.2	7.3	8.1	7.9	7.6
Electrical Conductivity	µS/cm	0.2	98.3	201	534	324	186
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	42.7	81.6	233	146	85.5
Chloride	g/m ³	0.5	1.37	2.55	6.19	2.39	1.85
Sulfate	g/m ³	0.15	2.36	6.36	50.6	14.2	5.38
Nitrate-N	g/m ³	0.002	<0.0020	<0.0020	0.0370	0.144	0.0062
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.002	<0.002	0.003	<0.002	<0.002
Ammonia as N	g/m ³	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium	g/m ³	0.01	3.62	5.36	13.1	6.93	5.74
Potassium	g/m ³	0.05	0.60	0.83	1.7	1.2	1.6
Calcium	g/m ³	0.05	12.2	24.9	70.1	46.0	26.5
Magnesium	g/m ³	0.01	2.35	4.33	23.4	10.5	4.52
Iron	g/m ³	0.005	0.016	0.0098	<0.0050	<0.0050	0.21
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.0012
Manganese	g/m ³	0.0005	0.0083	0.264	<0.00050	0.0029	0.0089
Sum of Anions*	meq/L	0.01	0.94	1.84	5.98	3.33	1.88
Sum of Cations*	meq/L	0.01	0.98	1.86	6.04	3.49	1.99
EC/10*	(mS/m)/10	0.002	0.98	2.01	5.34	3.24	1.86

Anion/Cation Suite

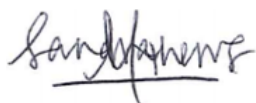
Client Sample ID			MDD302
Date Sampled			27/06/2024
Analyte	Unit	Reporting Limit	24-20566-11
pH	pH	1	7.8
Electrical Conductivity	µS/cm	0.2	470
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	251
Chloride	g/m ³	0.5	2.81
Sulfate	g/m ³	0.15	9.71
Nitrate-N	g/m ³	0.002	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002
Ammonia as N	g/m ³	0.005	0.05
Sodium	g/m ³	0.01	7.60
Potassium	g/m ³	0.05	1.4
Calcium	g/m ³	0.05	60.7
Magnesium	g/m ³	0.01	20.6
Iron	g/m ³	0.005	<0.0050
Zinc	g/m ³	0.001	<0.0010
Manganese	g/m ³	0.0005	0.0049
Sum of Anions*	meq/L	0.01	5.34
Sum of Cations*	meq/L	0.01	5.09
EC/10*	(mS/m)/10	0.002	4.70

Method Summary

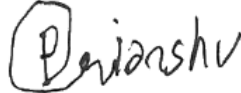
Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Bromine	Subcontracted to Hill Laboratories. Nitric acid digestion, ICP-MS, screen level. APHA 3125 B 23rd ed. 2017
NO₂-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Total Organic Carbon	Samples analysed as received by combustion analysis at 850°C. Organic carbon is calculated through subtraction of inorganic carbon from total carbon (APHA 5310 B - Online edition)
Dissolved Organic Carbon	Samples analysed as received by combustion analysis at 850°C following a filtration step.(APHA 5310 B - Online edition)
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories.Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourmetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).

Method Summary

Sum of Anions Sum of milliequivalents/Litre of measured Anions.
Sum of Cations Sum of milliequivalents/Litre of measured Cations.



Sandra Mathews, B.Eng.
Technologist



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Technologist



Sharelle Frank, B.Sc. (Tech)
Technologist



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Certificate of Analysis

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Attention: Hamish McLauchlan
Phone: 0275886631
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Lab Reference: 24-22094
Submitted by:
Date Received: 12/07/2024
Testing Initiated: 12/07/2024
Date Completed: 22/07/2024
Order Number:
Reference:

Sampling Site: Bendigo Ophir Project

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Total Phosphorus	g/m ³	0.005	0.0076	0.36	0.013	0.016	0.0083

Total Phosphorus in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Total Phosphorus	g/m ³	0.005	<0.0050	0.13	0.0052	0.012	0.011

Total Phosphorus in Water

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Total Phosphorus	g/m ³	0.005	0.010

Water Aggregate Properties

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	1.67	<1.00	<1.00	3.33	1.67

Water Aggregate Properties

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	5.00	1.67	<1.00	5.00	1.67

Water Aggregate Properties

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	6.67

Turbidity

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Turbidity	NTU	0.05	0.2	1.2	2.4	4.0	2.5

Turbidity

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Turbidity	NTU	0.05	0.3	14	0.8	3.5	1.8

Turbidity

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Turbidity	NTU	0.05	3.9

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Nitrite-N	g/m ³	0.001	0.0018	<0.0010	0.0016	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010	0.0013	0.0013	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Nitrite-N	g/m ³	0.001	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Total Kjeldahl Nitrogen	g/m ³	0.1	0.10	<0.10	0.17	0.23	0.29
Total Nitrogen	g/m ³	0.1	0.13	0.22	0.17	0.23	0.35

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Total Kjeldahl Nitrogen	g/m ³	0.1	0.13	0.35	0.15	0.20	0.29
Total Nitrogen	g/m ³	0.1	0.14	0.36	0.32	0.43	0.29

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Total Kjeldahl Nitrogen	g/m ³	0.1	<0.10
Total Nitrogen	g/m ³	0.1	<0.10

Custom Job

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Custom Job			Complete

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Bromide	g/m³	0.005	<0.05	0.080	0.10	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Bromide	g/m³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Bromide	g/m³	0.005	<0.05

Fluoride in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Fluoride	g/m ³	0.04	<0.040	0.32	0.17	0.066	0.071

Fluoride in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Fluoride	g/m ³	0.04	0.049	0.061	0.093	0.095	0.065

Fluoride in Water

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Fluoride	g/m ³	0.04	0.16

Water Hardness

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	13	180	160	73	75

Water Hardness

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	36	71	240	150	80

Water Hardness

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	220

Solids in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Total Suspended Solids	g/m³	3	<3	<3	<3	5	4
Total Dissolved Solids	g/m³	3	22	250	220	89	88

Solids in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Total Suspended Solids	g/m³	3	<3	19	<3	6	4
Total Dissolved Solids	g/m³	3	60	101	315	156	116

Solids in Water

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Total Suspended Solids	g/m³	3	<3
Total Dissolved Solids	g/m³	3	283

Cyanide in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Total Cyanide	g/m³	0.001	<0.001

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
pH	pH	1	6.8	8.1	8.0	7.4	7.5
Electrical Conductivity	µS/cm	0.2	39.5	505	482	202	204
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	14.1	194	201	74.2	96.3
Chloride	g/m ³	0.5	<0.50	6.52	8.53	2.96	1.81
Sulfate	g/m ³	0.15	0.57	26.3	8.63	6.41	3.90
Nitrate-N	g/m ³	0.002	0.0285	0.216	0.0052	0.0024	0.0589
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.005	0.016	<0.002	<0.002	<0.002
Ammonia as N	g/m ³	0.005	0.01	<0.005	0.11	<0.005	<0.005
Sodium	g/m ³	0.01	2.30	20.7	45.7	5.46	5.80
Potassium	g/m ³	0.05	0.32	2.0	1.4	1.2	2.5
Calcium	g/m ³	0.05	3.9	56.0	47.9	23.9	26.3
Magnesium	g/m ³	0.01	0.83	15.6	16.0	4.44	4.79
Iron	g/m ³	0.005	0.014	<0.0050	0.0058	0.038	0.033
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.013
Manganese	g/m ³	0.0005	<0.00050	0.037	0.0079	0.011	0.0043
Sum of Anions*	meq/L	0.01	0.30	4.70	4.49	1.71	2.07
Sum of Cations*	meq/L	0.01	0.37	5.03	5.74	1.83	2.03
EC/10*	(mS/m)/10	0.002	0.39	5.05	4.82	2.02	2.04

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
pH	pH	1	7.2	7.3	8.2	7.9	7.4
Electrical Conductivity	µS/cm	0.2	106	199	608	359	214
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	39.9	72.9	225	144	84.9
Chloride	g/m ³	0.5	1.26	2.94	5.63	2.05	1.90
Sulfate	g/m ³	0.15	2.40	5.90	48.4	14.6	5.30
Nitrate-N	g/m ³	0.002	0.0146	0.0130	0.171	0.233	0.0023
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002	0.002	0.004	<0.002	<0.002
Ammonia as N	g/m ³	0.005	0.006	<0.005	0.006	<0.005	<0.005
Sodium	g/m ³	0.01	3.86	5.58	14.4	7.39	6.23
Potassium	g/m ³	0.05	0.73	1.1	1.8	1.2	1.5
Calcium	g/m ³	0.05	12.4	23.9	71.0	45.1	28.5
Magnesium	g/m ³	0.01	2.45	4.40	24.2	10.7	5.01
Iron	g/m ³	0.005	0.022	0.19	0.0082	0.012	0.0080
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.0014
Manganese	g/m ³	0.0005	0.0091	0.049	0.0022	0.0062	0.0026
Sum of Anions*	meq/L	0.01	0.89	1.67	5.76	3.30	1.87
Sum of Cations*	meq/L	0.01	1.01	1.83	6.21	3.49	2.14
EC/10*	(mS/m)/10	0.002	1.06	1.99	6.08	3.59	2.14

Anion/Cation Suite

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
pH	pH	1	7.8
Electrical Conductivity	µS/cm	0.2	542
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	233
Chloride	g/m ³	0.5	2.39
Sulfate	g/m ³	0.15	9.03
Nitrate-N	g/m ³	0.002	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002
Ammonia as N	g/m ³	0.005	0.05
Sodium	g/m ³	0.01	8.48
Potassium	g/m ³	0.05	1.4
Calcium	g/m ³	0.05	61.3
Magnesium	g/m ³	0.01	21.9
Iron	g/m ³	0.005	<0.0050
Zinc	g/m ³	0.001	<0.0010
Manganese	g/m ³	0.0005	0.0050
Sum of Anions*	meq/L	0.01	4.96
Sum of Cations*	meq/L	0.01	5.27
EC/10*	(mS/m)/10	0.002	5.42

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Arsenic	g/m ³	0.0005	0.00089	1.17	0.018	0.042	0.0066
Aluminium	g/m ³	0.003	0.021	0.0038	0.016	0.053	0.062
Barium	g/m ³	0.0001	0.0051	0.0056	0.245	0.0167	0.0161
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	0.000013	0.000013	0.000017
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.005	<0.0050	0.014	0.036	<0.0050	<0.0050
Calcium	g/m ³	0.05	3.8	49.2	40.8	22.2	23.2
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.000048	0.000073	<0.000010	0.00016	0.00013
Chromium	g/m ³	0.0002	0.00027	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	0.00016	0.00019	0.000016	0.000012
Copper	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	0.00025	0.00048
Iron	g/m ³	0.005	0.025	0.12	0.060	0.669	0.16
Germanium	g/m ³	0.00005	<0.000050	<0.000050	0.00087	<0.000050	<0.000050
Mercury	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m ³	0.05	0.31	1.8	1.3	1.2	1.1
Lanthanum	g/m ³	0.00001	0.000065	0.000015	0.000044	0.000068	0.000088
Lithium	g/m ³	0.00001	0.00121	0.0140	0.0557	0.00256	0.00291
Magnesium	g/m ³	0.01	0.81	14.1	14.2	4.19	4.12
Manganese	g/m ³	0.0005	0.00093	0.039	0.0071	0.0921	0.0061
Molybdenum	g/m ³	0.0002	<0.00020	0.0011	0.00028	<0.00020	<0.00020
Sodium	g/m ³	0.01	2.10	17.7	38.5	4.88	4.63
Nickel	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.00024
Phosphorus	g/m ³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	0.000059	<0.000050	0.00010	0.00013

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Rubidium	g/m³	0.00005	0.00028	0.0014	0.0022	0.00038	0.00054
Sulfur*	g/m³	10	<10	11	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.0511	0.514	10.5	0.365	0.373
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	0.00229	0.00099	0.000030	0.00044
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.000059	0.000067	0.00031	0.000055	0.000076
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Arsenic	g/m³	0.0005	0.0071	0.377	0.0018	0.00051	0.0022
Aluminium	g/m³	0.003	0.0096	0.066	0.013	0.062	0.042
Barium	g/m³	0.0001	0.0072	0.0245	0.0477	0.0401	0.0236
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	<0.0050	0.029	0.023	<0.0050
Calcium	g/m³	0.05	10.9	21.8	62.8	41.8	25.0
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000075	0.00038	0.000054	0.00025	0.00020
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00049	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00064	0.00045	0.00033	0.0031	0.00062
Iron	g/m³	0.005	0.069	5.39	0.024	1.61	0.47
Germanium	g/m³	0.00005	<0.000050	0.000086	<0.000050	0.00011	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.61	1.0	1.6	1.1	1.4
Lanthanum	g/m³	0.00001	0.000025	0.000097	0.000026	0.000098	0.000092
Lithium	g/m³	0.00001	0.00152	0.00249	0.00952	0.00465	0.00257
Magnesium	g/m³	0.01	2.13	4.09	21.2	9.89	4.22
Manganese	g/m³	0.0005	0.011	0.165	0.0018	0.040	0.029
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00049	0.00048	<0.00020
Sodium	g/m³	0.01	3.28	4.86	11.9	6.51	5.15
Nickel	g/m³	0.0002	<0.00020	0.00030	0.00021	0.0015	0.00034
Phosphorus	g/m³	0.04	<0.040	0.063	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	0.00020	<0.000050	0.0049	0.00010
Rubidium	g/m³	0.00005	0.00022	0.00041	0.00022	0.00034	0.00050
Sulfur*	g/m³	10	<10	<10	19	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00016	0.00025	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.163	0.332	1.14	0.796	0.416
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	<0.000030	0.00682	0.00281	0.00013
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	<0.000050	0.000097	<0.000050	0.000091	0.000094
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Arsenic	g/m³	0.0005	0.0573
Aluminium	g/m³	0.003	<0.0030
Barium	g/m³	0.0001	0.148
Beryllium	g/m³	0.00001	0.000026
Bismuth	g/m³	0.0001	<0.00010
Boron	g/m³	0.005	<0.0050
Calcium	g/m³	0.05	56.5
Cadmium	g/m³	0.00002	<0.000020
Cobalt	g/m³	0.00001	<0.000010
Chromium	g/m³	0.0002	<0.00020
Caesium	g/m³	0.00001	0.00016
Copper	g/m³	0.0002	<0.00020
Iron	g/m³	0.005	0.36
Germanium	g/m³	0.00005	0.000052
Mercury	g/m³	0.0001	<0.00010
Potassium	g/m³	0.05	1.2
Lanthanum	g/m³	0.00001	0.000012
Lithium	g/m³	0.00001	0.00919
Magnesium	g/m³	0.01	19.9
Manganese	g/m³	0.0005	0.0045
Molybdenum	g/m³	0.0002	0.00039
Sodium	g/m³	0.01	7.27
Nickel	g/m³	0.0002	<0.00020
Phosphorus	g/m³	0.04	<0.040
Lead	g/m³	0.00005	<0.000050
Rubidium	g/m³	0.00005	0.0021
Sulfur*	g/m³	10	<10
Antimony	g/m³	0.0001	0.00016
Selenium	g/m³	0.001	<0.0010
Tin	g/m³	0.0005	<0.00050
Strontium	g/m³	0.0001	1.18
Thallium	g/m³	0.0001	<0.00010
Uranium	g/m³	0.00003	0.00528
Vanadium	g/m³	0.0005	<0.00050
Yttrium	g/m³	0.00005	0.00046
Zinc	g/m³	0.003	<0.0030

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-1	24-22094-2	24-22094-3	24-22094-4	24-22094-5
Aluminium	g/m³	0.003	0.0095	<0.0030	<0.0030	<0.0030	0.033
Arsenic	g/m³	0.0005	0.00093	1.16	0.0547	0.014	0.0061
Barium	g/m³	0.0002	0.0039	0.0049	0.206	0.0124	0.0141
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.015	0.041	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000044	0.000063	<0.000010	0.000048	0.000094

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.00032
Caesium	g/m³	0.00001	<0.000010	0.00015	0.00020	<0.000010	0.000011
Copper	g/m³	0.0002	0.00034	<0.00020	<0.00020	0.00029	0.0012
Germanium	g/m³	0.00005	<0.000050	0.000058	0.00096	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000043	<0.000010	0.000011	<0.000010	0.00011
Lithium	g/m³	0.00001	0.00074	0.0130	0.0508	0.00237	0.00263
Molybdenum	g/m³	0.0002	<0.00020	0.0012	0.00039	<0.00020	0.00025
Nickel	g/m³	0.0002	<0.00020	0.00023	<0.00020	<0.00020	0.00042
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	0.53
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00021	0.00143	0.00213	0.00025	0.00237
Sulfur*	g/m³	10	<10	12	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	0.00085	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0472	0.523	10.6	0.380	0.394
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.0017	0.00087	<0.000030	0.00033
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000052	0.000033	0.00027	0.000010	0.000057

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Analyte	Unit	Reporting Limit	24-22094-6	24-22094-7	24-22094-8	24-22094-9	24-22094-10
Aluminium	g/m³	0.003	0.0051	0.0044	<0.0030	0.0060	<0.0030
Arsenic	g/m³	0.0005	0.0063	0.030	0.0027	0.00052	0.00074
Barium	g/m³	0.0002	0.0069	0.0155	0.0413	0.0329	0.0212
Beryllium	g/m³	0.00001	<0.000010	0.000028	<0.000010	0.000030	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010	0.039	0.031	<0.010
Cadmium	g/m³	0.00002	<0.000020	0.000028	<0.000020	0.000031	<0.000020
Cobalt	g/m³	0.00001	0.000024	0.00016	0.000078	0.000077	0.000079
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.000033	<0.000010	0.000027	<0.000010
Copper	g/m³	0.0002	0.00030	0.00052	0.00044	0.00045	0.00067
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.000089	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000014	0.000056	0.000014	0.000039	0.000013
Lithium	g/m³	0.00001	0.00155	0.00238	0.00921	0.00454	0.00264
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00048	0.00041	<0.00020
Nickel	g/m³	0.0002	0.00020	0.00039	0.00024	<0.00020	0.00022
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	0.00018	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00034	0.00029	0.00020	0.00022	0.00041
Sulfur*	g/m³	10	<10	<10	18	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00012	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	<0.00050	0.00075	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.191	0.333	1.17	0.795	0.462
Thallium	g/m³	0.00001	<0.000010	0.000014	<0.000010	<0.000010	<0.000010

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			11/07/2024	11/07/2024	11/07/2024	11/07/2024	11/07/2024
Uranium	g/m ³	0.00003	0.000051	0.000036	0.00531	0.00223	0.00028
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000017	0.000049	0.000047	0.000050	0.000028

Elements in Water (Soluble)

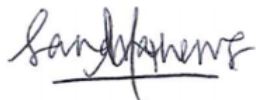
Client Sample ID			MDD302
Date Sampled			11/07/2024
Analyte	Unit	Reporting Limit	24-22094-11
Aluminium	g/m ³	0.003	<0.0030
Arsenic	g/m ³	0.0005	0.050
Barium	g/m ³	0.0002	0.129
Beryllium	g/m ³	0.00001	0.000022
Bismuth	g/m ³	0.0001	<0.00010
Boron	g/m ³	0.01	<0.010
Cadmium	g/m ³	0.00002	<0.000020
Cobalt	g/m ³	0.00001	<0.000010
Chromium	g/m ³	0.0002	<0.00020
Caesium	g/m ³	0.00001	0.00018
Copper	g/m ³	0.0002	<0.00020
Germanium	g/m ³	0.00005	0.000061
Mercury	g/m ³	0.00008	<0.000080
Lanthanum	g/m ³	0.00001	0.000011
Lithium	g/m ³	0.00001	0.00862
Molybdenum	g/m ³	0.0002	0.00036
Nickel	g/m ³	0.0002	<0.00020
Phosphorus	g/m ³	0.04	<0.040
Lead	g/m ³	0.00005	<0.000050
Rubidium	g/m ³	0.00002	0.00202
Sulfur*	g/m ³	10	<10
Antimony	g/m ³	0.0001	0.00016
Selenium	g/m ³	0.0005	<0.00050
Tin	g/m ³	0.0002	<0.00020
Strontium	g/m ³	0.0001	1.20
Thallium	g/m ³	0.00001	<0.000010
Uranium	g/m ³	0.00003	0.00420
Vanadium	g/m ³	0.0005	<0.00050
Yttrium	g/m ³	0.00001	0.00018

Method Summary

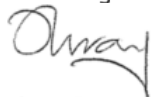
Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).

Method Summary

TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Total Cyanide (Trace)	On-line distillation and colourimetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.



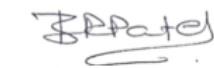
Sandra Mathews, B.Eng.
Technologist



Thara Samarasinghe, B.Sc.
Technician



Sharelle Frank, B.Sc. (Tech)
Technologist



Bhumika Patel
Sample Reception Technician



Louise Coombridge, B.Sc.
Laboratory Technician



Amaria Reweti
Trace & Inorganics Team Leader



Certificate of Analysis

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Hokitika 7810

Attention: Hamish McLauchlan
Phone: 0275886631
Email: hmclauchlan@santanaminerals.com

Lab Reference: 24-23696
Submitted by:
Date Received: 29/07/2024
Testing Initiated: 29/07/2024
Date Completed: 7/08/2024
Order Number:
Reference:

Sampling Site: Bendigo Ophir Project

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Total Phosphorus	g/m ³	0.005	0.0063	0.33	0.0064	0.025	0.049

Total Phosphorus in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Total Phosphorus	g/m ³	0.005	<0.0050	0.062	<0.0050	<0.0050	0.024

Total Phosphorus in Water

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Total Phosphorus	g/m ³	0.005	0.0052

Water Aggregate Properties

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	<1.00	<1.00	3.33	3.33

Water Aggregate Properties

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	6.67	10.00	10.00	3.33

Water Aggregate Properties

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	10.00

Turbidity

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Turbidity	NTU	0.05	0.3	0.6	3.2	4.8	22

Turbidity

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Turbidity	NTU	0.05	0.4	12	0.9	2.3	6.0

Turbidity

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Turbidity	NTU	0.05	3.4

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010	<0.0010	0.0011	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Nitrite-N	g/m ³	0.001	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Total Kjeldahl Nitrogen	g/m ³	0.1	<0.10	0.11	0.18	0.20	0.59
Total Nitrogen	g/m ³	0.1	<0.10	0.32	0.18	0.20	0.65

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Total Kjeldahl Nitrogen	g/m ³	0.1	0.29	0.38	0.10	0.13	0.29
Total Nitrogen	g/m ³	0.1	0.29	0.38	0.23	0.35	0.29

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Total Kjeldahl Nitrogen	g/m ³	0.1	<0.10
Total Nitrogen	g/m ³	0.1	<0.10

Custom Job

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Custom Job			Complete

Fluoride in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Fluoride	g/m³	0.04	0.050	0.32	0.17	0.059	0.076

Fluoride in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Fluoride	g/m³	0.04	0.054	0.065	0.079	0.083	0.057

Fluoride in Water

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Fluoride	g/m³	0.04	0.14

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Bromide	g/m³	0.005	<0.05	<0.05	0.10	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Bromide	g/m³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Bromide	g/m³	0.005	<0.05

Water Hardness

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Total Hardness	g eqv. CaCO ₃ /m³	0.05	15	200	180	74	75

Water Hardness

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Total Hardness	g eqv. CaCO ₃ /m³	0.05	40	75	280	160	92

Water Hardness

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Total Hardness	g eqv. CaCO ₃ /m³	0.05	240

Cyanide in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Total Cyanide	g/m³	0.001	<0.001

Solids in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Total Suspended Solids	g/m³	3	<3	4	8	11	75
Total Dissolved Solids	g/m³	3	17	249	226	92	83

Solids in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Total Suspended Solids	g/m³	3	<3	19	<3	4	13
Total Dissolved Solids	g/m³	3	43	84	310	163	95

Solids in Water

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Total Suspended Solids	g/m³	3	<3
Total Dissolved Solids	g/m³	3	248

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Arsenic	g/m³	0.0005	0.00095	1.12	0.019	0.0582	0.015
Aluminium	g/m³	0.003	0.012	0.0033	0.049	0.070	0.520
Barium	g/m³	0.0001	0.0048	0.0057	0.246	0.0166	0.0249
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.000049
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	0.0059	0.029	<0.0050	<0.0050
Calcium	g/m³	0.05	4.3	54.4	45.0	22.5	22.8
Cadmium	g/m³	0.00002	<0.000020	<0.000020	0.000023	<0.000020	0.000033

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Cobalt	g/m³	0.00001	0.000036	0.000071	0.000017	0.00019	0.00069
Chromium	g/m³	0.0002	<0.00020	0.00030	0.00020	<0.00020	0.00064
Caesium	g/m³	0.00001	<0.000010	0.00014	0.00021	<0.000010	0.00010
Copper	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00029	0.0018
Iron	g/m³	0.005	0.013	0.11	0.084	0.987	1.22
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00099	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.33	2.0	1.4	1.0	1.2
Lanthanum	g/m³	0.00001	0.000039	0.000013	0.000075	0.000068	0.00073
Lithium	g/m³	0.00001	0.00082	0.0136	0.0544	0.00240	0.00329
Magnesium	g/m³	0.01	0.93	15.9	15.8	4.38	4.40
Manganese	g/m³	0.0005	0.00077	0.039	0.0077	0.150	0.049
Molybdenum	g/m³	0.0002	<0.00020	0.0011	0.00032	<0.00020	<0.00020
Sodium	g/m³	0.01	2.47	20.2	44.4	5.35	4.91
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00022	0.00091
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	0.064
Lead	g/m³	0.00005	<0.000050	<0.000050	0.000050	0.00013	0.0014
Rubidium	g/m³	0.00005	0.00021	0.0014	0.0021	0.00036	0.0017
Sulfur*	g/m³	10	<10	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.0491	0.497	10.1	0.314	0.323
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	0.00216	0.00095	0.000064	0.00063
Vanadium	g/m³	0.0005	0.0010	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	<0.000050	0.000059	0.00032	0.000053	0.00056
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	0.0033

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Arsenic	g/m³	0.0005	0.0064	0.132	0.0016	<0.00050	0.0026
Aluminium	g/m³	0.003	0.0052	0.075	0.028	0.076	0.037
Barium	g/m³	0.0001	0.0072	0.0265	0.0514	0.0374	0.0251
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	<0.0050	0.028	0.017	<0.0050
Calcium	g/m³	0.05	12.1	22.9	71.7	45.2	28.8
Cadmium	g/m³	0.00002	0.000026	<0.000020	<0.000020	<0.000020	0.000027
Cobalt	g/m³	0.00001	0.000038	0.00038	0.00014	0.000089	0.00027
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00026	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.000010	<0.000010	0.000010	<0.000010
Copper	g/m³	0.0002	<0.00020	0.00057	0.00040	0.00036	0.00059
Iron	g/m³	0.005	0.066	4.29	0.082	0.17	0.644
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00010	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.58	0.86	1.8	1.2	1.4
Lanthanum	g/m³	0.00001	0.000011	0.00015	0.000062	0.000064	0.00012
Lithium	g/m³	0.00001	0.00147	0.00221	0.0100	0.00451	0.00240
Magnesium	g/m³	0.01	2.41	4.34	25.4	11.0	4.81

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Manganese	g/m ³	0.0005	0.011	0.343	0.034	0.017	0.0520
Molybdenum	g/m ³	0.0002	<0.00020	<0.00020	0.00061	0.00044	<0.00020
Sodium	g/m ³	0.01	3.80	5.35	14.3	7.33	5.92
Nickel	g/m ³	0.0002	<0.00020	0.00036	0.00021	<0.00020	0.00029
Phosphorus	g/m ³	0.04	<0.040	0.043	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	0.00029	0.00011	0.00012	0.00015
Rubidium	g/m ³	0.00005	0.00018	0.00034	0.00021	0.00037	0.00044
Sulfur*	g/m ³	10	<10	<10	21	<10	<10
Antimony	g/m ³	0.0001	<0.00010	<0.00010	0.00014	<0.00010	<0.00010
Selenium	g/m ³	0.001	<0.0010	<0.0010	0.0011	<0.0010	<0.0010
Tin	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m ³	0.0001	0.159	0.294	1.18	0.754	0.390
Thallium	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m ³	0.00003	0.000054	0.000093	0.00696	0.00284	0.00020
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00005	<0.000050	0.00014	0.000078	0.000068	0.00013
Zinc	g/m ³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Arsenic	g/m ³	0.0005	0.0560
Aluminium	g/m ³	0.003	<0.0030
Barium	g/m ³	0.0001	0.142
Beryllium	g/m ³	0.00001	0.000022
Bismuth	g/m ³	0.0001	<0.00010
Boron	g/m ³	0.005	<0.0050
Calcium	g/m ³	0.05	61.5
Cadmium	g/m ³	0.00002	<0.000020
Cobalt	g/m ³	0.00001	<0.000010
Chromium	g/m ³	0.0002	<0.00020
Caesium	g/m ³	0.00001	0.00015
Copper	g/m ³	0.0002	<0.00020
Iron	g/m ³	0.005	0.34
Germanium	g/m ³	0.00005	0.00020
Mercury	g/m ³	0.0001	<0.00010
Potassium	g/m ³	0.05	1.4
Lanthanum	g/m ³	0.00001	0.000013
Lithium	g/m ³	0.00001	0.00875
Magnesium	g/m ³	0.01	22.0
Manganese	g/m ³	0.0005	0.0045
Molybdenum	g/m ³	0.0002	0.00044
Sodium	g/m ³	0.01	8.17
Nickel	g/m ³	0.0002	<0.00020
Phosphorus	g/m ³	0.04	<0.040
Lead	g/m ³	0.00005	<0.000050
Rubidium	g/m ³	0.00005	0.0019
Sulfur*	g/m ³	10	<10
Antimony	g/m ³	0.0001	0.00016
Selenium	g/m ³	0.001	<0.0010
Tin	g/m ³	0.0005	<0.00050

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			25/07/2024
Strontium	g/m³	0.0001	1.13
Thallium	g/m³	0.0001	<0.00010
Uranium	g/m³	0.00003	0.00499
Vanadium	g/m³	0.0005	<0.00050
Yttrium	g/m³	0.00005	0.00044
Zinc	g/m³	0.003	<0.0030

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
Silica	g/m³	0.1	9.06	15.4	19.2	9.48	10.7
Arsenic	g/m³	0.0005	0.00098	1.12	0.019	0.015	0.0045
Aluminium	g/m³	0.003	0.0065	<0.0030	0.0036	<0.0030	0.0035
Barium	g/m³	0.0002	0.0046	0.0056	0.237	0.0122	0.0128
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010	0.028	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000026	0.000065	<0.000010	0.000027	0.000046
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00014	0.00018	0.000013	<0.000010
Copper	g/m³	0.0002	0.00021	<0.00020	<0.00020	0.00021	0.00030
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00078	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000023	<0.000010	0.000011	<0.000010	<0.000010
Lithium	g/m³	0.00001	0.00080	0.0139	0.0543	0.00210	0.00256
Molybdenum	g/m³	0.0002	<0.00020	0.00099	0.00030	<0.00020	0.00021
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00020	0.00133	0.00198	0.00022	0.00026
Sulfur*	g/m³	10	<10	12	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	0.00071	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0489	0.496	10.2	0.321	0.317
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.0019	0.00083	0.00013	0.00040
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000032	0.000024	0.00022	<0.000010	0.000015

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
Silica	g/m³	0.1	9.61	9.56	7.78	8.17	10.0
Arsenic	g/m³	0.0005	0.0060	0.0085	0.0015	<0.00050	0.00058
Aluminium	g/m³	0.003	<0.0030	<0.0030	<0.0030	0.0032	<0.0030

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Barium	g/m ³	0.0002	0.0067	0.0149	0.0480	0.0344	0.0217
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.01	<0.010	<0.010	0.030	0.018	<0.010
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.000024	0.000015	0.000047	0.000027	0.000078
Chromium	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m ³	0.0002	<0.00020	<0.00020	0.00033	0.00030	0.00051
Germanium	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010	<0.000010	0.000012	<0.000010	<0.000010
Lithium	g/m ³	0.00001	0.00135	0.00212	0.0101	0.00452	0.00224
Molybdenum	g/m ³	0.0002	<0.00020	<0.00020	0.00056	0.00045	<0.00020
Nickel	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.00021
Phosphorus	g/m ³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	0.000053	<0.000050
Rubidium	g/m ³	0.00002	0.00016	0.00013	0.00017	0.00017	0.00036
Sulfur*	g/m ³	10	<10	<10	22	<10	<10
Antimony	g/m ³	0.0001	<0.00010	<0.00010	0.00018	0.00011	0.00011
Selenium	g/m ³	0.0005	<0.00050	<0.00050	0.00091	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.160	0.291	1.16	0.754	0.390
Thallium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.000056	0.000065	0.00621	0.00306	0.00039
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000012	<0.000010	0.000036	0.000018	0.000022

Elements in Water (Soluble)

Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
Silica	g/m ³	0.1	23.3
Arsenic	g/m ³	0.0005	0.050
Aluminium	g/m ³	0.003	<0.0030
Barium	g/m ³	0.0002	0.145
Beryllium	g/m ³	0.00001	0.000010
Bismuth	g/m ³	0.0001	<0.00010
Boron	g/m ³	0.01	<0.010
Cadmium	g/m ³	0.00002	<0.000020
Cobalt	g/m ³	0.00001	<0.000010
Chromium	g/m ³	0.0002	<0.00020
Caesium	g/m ³	0.00001	0.00014
Copper	g/m ³	0.0002	<0.00020
Germanium	g/m ³	0.00005	0.00016
Mercury	g/m ³	0.00008	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010
Lithium	g/m ³	0.00001	0.00899
Molybdenum	g/m ³	0.0002	0.00037
Nickel	g/m ³	0.0002	<0.00020
Phosphorus	g/m ³	0.04	<0.040
Lead	g/m ³	0.00005	<0.000050

Elements in Water (Soluble)

Client Sample ID			MDD302
Date Sampled			25/07/2024
Rubidium	g/m ³	0.00002	0.00193
Sulfur*	g/m ³	10	<10
Antimony	g/m ³	0.0001	0.00016
Selenium	g/m ³	0.0005	<0.00050
Tin	g/m ³	0.0002	<0.00020
Strontium	g/m ³	0.0001	1.17
Thallium	g/m ³	0.00001	<0.000010
Uranium	g/m ³	0.00003	0.00429
Vanadium	g/m ³	0.0005	<0.00050
Yttrium	g/m ³	0.00001	0.00017

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-1	24-23696-2	24-23696-3	24-23696-4	24-23696-5
pH	pH	1	6.8	8.2	8.1	7.4	7.5
Electrical Conductivity	µS/cm	0.2	39.2	459	442	171	164
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	16.7	196	203	72.1	74.4
Chloride	g/m ³	0.5	<0.50	7.58	7.65	3.25	2.23
Sulfate	g/m ³	0.15	0.68	27.5	8.02	6.69	3.04
Nitrate-N	g/m ³	0.002	0.0026	0.210	0.0029	0.0028	0.0538
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.005	0.020	<0.002	<0.002	<0.002
Ammonia as N	g/m ³	0.005	<0.005	<0.005	0.1	<0.005	<0.005
Sodium	g/m ³	0.01	2.23	19.4	42.5	5.04	4.68
Potassium	g/m ³	0.05	0.31	1.9	1.4	0.97	0.95
Calcium	g/m ³	0.05	4.2	53.7	46.4	22.4	21.9
Magnesium	g/m ³	0.01	0.86	15.1	15.3	4.14	4.07
Iron	g/m ³	0.005	<0.0050	<0.0050	0.0064	0.025	<0.0050
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	<0.00050	0.031	0.0063	0.0059	<0.00050
Sum of Anions*	meq/L	0.01	0.35	4.82	4.51	1.68	1.62
Sum of Cations*	meq/L	0.01	0.39	4.82	5.46	1.70	1.65
EC/10*	(mS/m)/10	0.002	0.39	4.59	4.42	1.71	1.64

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Analyte	Unit	Reporting Limit	24-23696-6	24-23696-7	24-23696-8	24-23696-9	24-23696-10
pH	pH	1	7.2	7.5	8.1	8.0	7.4
Electrical Conductivity	µS/cm	0.2	95.8	167	567	325	193
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	40.3	71.0	234	143	86.7
Chloride	g/m ³	0.5	1.31	2.51	5.29	2.91	2.51
Sulfate	g/m ³	0.15	2.67	4.89	42.5	16.4	4.71
Nitrate-N	g/m ³	0.002	<0.0020	0.0038	0.130	0.223	0.0046
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002	<0.002	0.002	<0.002	<0.002
Ammonia as N	g/m ³	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium	g/m ³	0.01	3.62	4.99	13.6	6.95	5.69

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024
Potassium	g/m ³	0.05	0.57	0.76	1.7	1.1	1.3
Calcium	g/m ³	0.05	12.0	21.9	71.7	44.0	26.8
Magnesium	g/m ³	0.01	2.33	4.03	24.5	10.4	4.45
Iron	g/m ³	0.005	0.012	0.0091	<0.0050	<0.0050	0.0081
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0066	0.0024	<0.00050	0.0030	0.0031
Sum of Anions*	meq/L	0.01	0.90	1.60	5.81	3.34	1.91
Sum of Cations*	meq/L	0.01	0.96	1.66	6.23	3.38	1.98
EC/10*	(mS/m)/10	0.002	0.96	1.67	5.67	3.25	1.93

Anion/Cation Suite

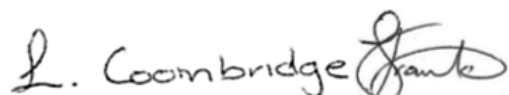
Client Sample ID			MDD302
Date Sampled			25/07/2024
Analyte	Unit	Reporting Limit	24-23696-11
pH	pH	1	7.8
Electrical Conductivity	µS/cm	0.2	480
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	239
Chloride	g/m ³	0.5	3.41
Sulfate	g/m ³	0.15	10.2
Nitrate-N	g/m ³	0.002	0.0026
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002
Ammonia as N	g/m ³	0.005	0.05
Sodium	g/m ³	0.01	7.93
Potassium	g/m ³	0.05	1.4
Calcium	g/m ³	0.05	62.1
Magnesium	g/m ³	0.01	21.5
Iron	g/m ³	0.005	<0.0050
Zinc	g/m ³	0.001	<0.0010
Manganese	g/m ³	0.0005	0.0047
Sum of Anions*	meq/L	0.01	5.13
Sum of Cations*	meq/L	0.01	5.25
EC/10*	(mS/m)/10	0.002	4.80

Method Summary

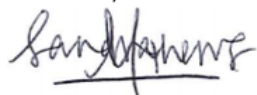
Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).

Method Summary

Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourmetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.



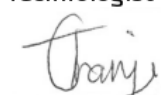
Louise Coombridge, B.Sc.
Laboratory Technician



Sandra Mathews, B.Eng.
Technologist



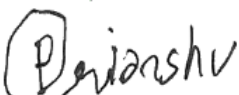
Sharelle Frank, B.Sc. (Tech)
Technologist



Tamaryn Cronje
Customer Service



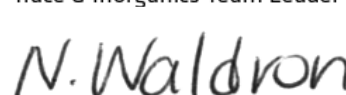
Rowin Angkico, B.Sc.
Laboratory Technician



Prianshu Chawla, B.Tech
Technologist



Amaria Reweti
Trace & Inorganics Team Leader



Neve Waldron, B.Sc.
Technician



Certificate of Analysis

Matakanui Gold/Cuffs Limited
Level 2 Como House, 51 Tancred Street
Hokitika 7810

Attention: Hamish McLauchlan
Phone: 0275886631
Email: hmclauchlan@santanaminerals.com

Lab Reference: 24-25063
Submitted by:
Date Received: 12/08/2024
Testing Initiated: 12/08/2024
Date Completed: 19/08/2024
Order Number:
Reference:

Sampling Site: Bendigo Ophir Project

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Phosphorus	g/m ³	0.005	0.27	0.15	0.032	0.011	0.012

Total Phosphorus in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Phosphorus	g/m ³	0.005	0.022	0.0088	0.020

Water Aggregate Properties

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Acidity to pH 8.3 (CaCO ₃)	g/m ³	1.0	<1.00	6.67	3.33	3.33	6.67

Water Aggregate Properties

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	<1.00	3.33	11.67

Turbidity

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Turbidity	NTU	0.05	0.9	73	6.8	1.2	3.4

Turbidity

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Turbidity	NTU	0.05	8.2	1.4	3.7

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Nitrite-N	g/m³	0.001	<0.0010	0.0015	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Nitrite-N	g/m³	0.001	0.0014	<0.0010	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Kjeldahl Nitrogen	g/m³	0.1	0.14	0.43	0.37	0.19	0.26
Total Nitrogen	g/m³	0.1	0.35	0.48	0.42	0.19	0.26

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Kjeldahl Nitrogen	g/m³	0.1	0.32	0.32	<0.10
Total Nitrogen	g/m³	0.1	0.44	0.32	<0.10

Custom Job

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Custom Job			Complete	Complete	Complete

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Bromide	g/m³	0.005	0.10	<0.05	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Bromide	g/m³	0.005	<0.05	<0.05	<0.05

Fluoride in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Fluoride	g/m³	0.04	0.26	0.043	0.042	<0.040	<0.040

Fluoride in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Fluoride	g/m³	0.04	0.057	<0.040	0.11

Water Hardness

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Hardness	g eqv. CaCO ₃ /m³	0.05	200	75	66	30	67

Water Hardness

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Hardness	g eqv. CaCO ₃ /m³	0.05	230	68	240

Cyanide in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001

Solids in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Suspended Solids	g/m³	3	<3	27	11	<3	<3
Total Dissolved Solids	g/m³	3	262	91	73	46	77

Solids in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Suspended Solids	g/m³	3	10	<3	<3
Total Dissolved Solids	g/m³	3	259	82	232

Elements in Water (Total Recoverable)

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Arsenic	g/m³	0.0005	1.18	0.039	0.0084	0.0091	0.038
Aluminium	g/m³	0.003	0.0032	0.860	0.16	0.019	0.015
Barium	g/m³	0.0001	0.0056	0.0309	0.0155	0.0060	0.0155
Beryllium	g/m³	0.00001	<0.000010	0.000058	0.000012	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	0.020	0.0070	0.0063	0.0051	0.0071
Calcium	g/m³	0.05	53.0	22.8	20.1	9.10	20.5
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000069	0.00102	0.00023	0.000065	0.00013
Chromium	g/m³	0.0002	<0.00020	0.00065	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	0.00014	0.00013	0.000024	<0.000010	<0.000010
Copper	g/m³	0.0002	<0.00020	0.0022	0.00084	0.0044	0.00035
Iron	g/m³	0.005	0.11	1.76	0.44	0.19	0.945
Germanium	g/m³	0.00005	<0.000050	0.00017	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	1.8	1.8	2.0	0.66	1.7
Lanthanum	g/m³	0.00001	<0.000010	0.00121	0.00019	0.000043	0.000038
Lithium	g/m³	0.00001	0.0148	0.00354	0.00261	0.00120	0.00212
Magnesium	g/m³	0.01	15.4	4.51	3.76	1.73	3.92
Manganese	g/m³	0.0005	0.040	0.112	0.017	0.016	0.0883
Molybdenum	g/m³	0.0002	0.0013	<0.00020	<0.00020	<0.00020	<0.00020
Sodium	g/m³	0.01	19.7	5.20	4.41	3.08	4.89
Nickel	g/m³	0.0002	<0.00020	0.0012	0.00048	<0.00020	0.00020
Phosphorus	g/m³	0.04	<0.040	0.054	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	0.0026	0.00037	0.00019	<0.000050
Rubidium	g/m³	0.00005	0.0014	0.0022	0.00099	0.00026	0.00038
Sulfur*	g/m³	10	11	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.474	0.299	0.273	0.112	0.262
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00228	0.00014	0.00031	<0.000030	0.000063
Vanadium	g/m³	0.0005	<0.00050	0.0012	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.000054	0.00069	0.00014	0.000050	<0.000050
Zinc	g/m³	0.003	<0.0030	0.0055	0.0041	0.0035	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Arsenic	g/m³	0.0005	0.0022	0.0011	0.0588
Aluminium	g/m³	0.003	0.16	0.0098	<0.0030
Barium	g/m³	0.0001	0.0439	0.0161	0.143
Beryllium	g/m³	0.00001	0.000015	<0.000010	0.000034
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	0.036	0.0056	0.010
Calcium	g/m³	0.05	58.7	21.4	60.5
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.00022	0.000072	<0.000010
Chromium	g/m³	0.0002	0.00021	<0.00020	<0.00020
Caesium	g/m³	0.00001	0.000025	<0.000010	0.00016
Copper	g/m³	0.0002	0.00082	0.00069	<0.00020
Iron	g/m³	0.005	0.29	0.11	0.34
Germanium	g/m³	0.00005	0.00014	<0.000050	0.00012
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	2.1	1.5	1.3
Lanthanum	g/m³	0.00001	0.00017	0.000028	0.000013
Lithium	g/m³	0.00001	0.00855	0.00202	0.00915
Magnesium	g/m³	0.01	20.4	3.54	21.4
Manganese	g/m³	0.0005	0.014	0.0068	0.0047
Molybdenum	g/m³	0.0002	0.00047	<0.00020	0.00059
Sodium	g/m³	0.01	11.9	4.78	7.85
Nickel	g/m³	0.0002	0.00047	0.00036	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	0.00032	<0.000050	<0.000050
Rubidium	g/m³	0.00005	0.00061	0.00038	0.0019
Sulfur*	g/m³	10	16	<10	<10
Antimony	g/m³	0.0001	0.00018	<0.00010	0.00016
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.901	0.285	1.09
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00572	0.00027	0.00513
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.00014	<0.000050	0.00045
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030

Elements in Water (Soluble)

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Silica	g/m³	0.1	18.4	10.7	10.4	10.6	10.5
Arsenic	g/m³	0.0005	1.10	0.015	0.0045	0.0064	0.0071
Aluminium	g/m³	0.003	<0.0030	0.026	0.0045	0.0083	<0.0030
Barium	g/m³	0.0002	0.0053	0.0119	0.0122	0.0055	0.0122
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	0.019	<0.010	<0.010	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000034	0.000080	0.000041	0.000046	0.000042

Elements in Water (Soluble)

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Chromium	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	0.00012	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m ³	0.0002	<0.00020	0.00063	0.00061	0.00036	0.00040
Germanium	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010	0.000033	0.000016	0.000018	<0.000010
Lithium	g/m ³	0.00001	0.0136	0.00224	0.00226	0.00117	0.00203
Molybdenum	g/m ³	0.0002	0.0011	<0.00020	<0.00020	<0.00020	<0.00020
Nickel	g/m ³	0.0002	0.00022	0.00021	0.00026	0.00023	0.00021
Phosphorus	g/m ³	0.04	0.067	<0.040	0.049	<0.040	<0.040
Lead	g/m ³	0.00005	0.000059	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00130	0.00033	0.00055	0.00023	0.00034
Sulfur*	g/m ³	10	12	<10	<10	<10	<10
Antimony	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.461	0.288	0.268	0.105	0.255
Thallium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.00219	0.00011	0.00029	0.000035	0.000068
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000024	0.000023	0.000023	0.000033	<0.000010

Elements in Water (Soluble)

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Silica	g/m ³	0.1	7.46	8.63	25.1
Arsenic	g/m ³	0.0005	0.0019	0.00082	0.050
Aluminium	g/m ³	0.003	0.0036	<0.0030	<0.0030
Barium	g/m ³	0.0002	0.0397	0.0154	0.140
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	0.000014
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.01	0.035	<0.010	<0.010
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.000050	0.00010	0.000013
Chromium	g/m ³	0.0002	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	<0.000010	0.00016
Copper	g/m ³	0.0002	0.00053	0.00065	<0.00020
Germanium	g/m ³	0.00005	<0.000050	<0.000050	0.000066
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	0.000016	<0.000010	<0.000010
Lithium	g/m ³	0.00001	0.00807	0.00201	0.00888
Molybdenum	g/m ³	0.0002	0.00045	<0.00020	0.00040
Nickel	g/m ³	0.0002	0.00025	0.00032	<0.00020
Phosphorus	g/m ³	0.04	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00020	0.00037	0.00184
Sulfur*	g/m ³	10	16	<10	<10
Antimony	g/m ³	0.0001	0.00018	<0.00010	0.00017
Selenium	g/m ³	0.0005	0.00075	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.871	0.279	1.03

Elements in Water (Soluble)

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.00553	0.00033	0.00501
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000035	0.000025	0.00017

Anion/Cation Suite

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
pH	pH	1	8.2	7.6	7.6	7.3	7.6
Electrical Conductivity	µS/cm	0.2	468	176	155	69.9	163
Total Alkalinity (CaCO3)	g CaCO3/m³	1	194	67.3	61.3	29.2	64.3
Chloride	g/m³	0.5	7.34	3.66	3.51	1.38	4.11
Sulfate	g/m³	0.15	28.0	6.22	3.26	1.47	4.86
Nitrate-N	g/m³	0.002	0.208	0.0461	0.0541	0.0044	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.019	0.003	0.003	0.004	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium	g/m³	0.01	19.8	4.98	4.29	2.93	4.93
Potassium	g/m³	0.05	1.9	1.4	2.0	0.64	1.8
Calcium	g/m³	0.05	53.4	21.7	19.1	8.45	20.4
Magnesium	g/m³	0.01	15.6	4.18	3.65	1.66	4.00
Iron	g/m³	0.005	<0.0050	0.032	0.018	0.031	0.018
Zinc	g/m³	0.001	<0.0010	<0.0010	<0.0010	0.0012	<0.0010
Manganese	g/m³	0.0005	0.028	0.0046	<0.00050	0.0038	0.0087
Sum of Anions*	meq/L	0.01	4.78	1.59	1.40	0.65	1.51
Sum of Cations*	meq/L	0.01	4.86	1.68	1.49	0.70	1.61
EC/10*	(mS/m)/10	0.002	4.68	1.76	1.55	0.70	1.63

Anion/Cation Suite

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
pH	pH	1	8.2	7.7	7.8
Electrical Conductivity	µS/cm	0.2	491	156	488
Total Alkalinity (CaCO3)	g CaCO3/m³	1	192	63.0	234
Chloride	g/m³	0.5	5.55	3.28	3.06
Sulfate	g/m³	0.15	40.2	4.04	9.73
Nitrate-N	g/m³	0.002	0.116	<0.0020	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.006	<0.002	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	0.05
Sodium	g/m³	0.01	11.4	4.56	7.97
Potassium	g/m³	0.05	2.0	1.5	1.4
Calcium	g/m³	0.05	56.8	20.4	61.2
Magnesium	g/m³	0.01	20.2	3.42	21.7
Iron	g/m³	0.005	0.0070	0.012	<0.0050
Zinc	g/m³	0.001	<0.0010	0.0017	<0.0010
Manganese	g/m³	0.0005	<0.00050	0.00072	0.0050

Anion/Cation Suite

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Sum of Anions*	meq/L	0.01	4.93	1.45	5.01
Sum of Cations*	meq/L	0.01	5.05	1.54	5.23
EC/10*	(mS/m)/10	0.002	4.91	1.56	4.88

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{Org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourimetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO ₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO3-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)

Method Summary

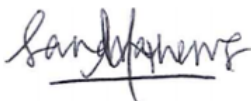
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.

 L. Coombridge

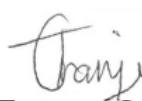
Louise Coombridge, B.Sc.
Laboratory Technician

 Sharelle Frank

Sharelle Frank, B.Sc. (Tech)
Technologist

 Sandra Mathews

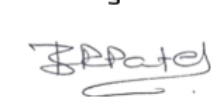
Sandra Mathews, B.Eng.
Technologist

 Tamaryn Cronje

Tamaryn Cronje
Customer Service

 Thara Samarasinghe

Thara Samarasinghe, B.Sc.
Technician

 Bhumika Patel

Bhumika Patel
Sample Reception Technician



Certificate of Analysis

Matakanui Gold/Cuffs Limited
Level 2 Como House, 51 Tancred Street
Hokitika 7810

Attention: Hamish McLauchlan
Phone: 0275886631
Email: hmclauchlan@santanaminerals.com

Lab Reference: 24-25681
Submitted by:
Date Received: 19/08/2024
Testing Initiated: 20/08/2024
Date Completed: 22/08/2024
Order Number:
Reference:

Sampling Site:

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Elements in Water (Soluble)

Client Sample ID			MG37922- WP24-13495.001	MG40061- WP24-13495.002	MG46045- WP24-13495.003	MG19875- WP24-14103.001	MG43524- WP24-14103.002
Date Sampled			20/03/2024	20/03/2024	20/03/2024	24/07/2024	24/07/2024
Analyte	Unit	Reporting Limit	24-25681-1	24-25681-2	24-25681-3	24-25681-4	24-25681-5
Arsenic	g/m ³	0.0005	0.033	0.160	0.222	0.384	0.450
Aluminium	g/m ³	0.003	0.429	0.708	0.333	0.264	0.487
Barium	g/m ³	0.0002	0.0060	0.0048	0.0071	0.0233	0.0172
Beryllium	g/m ³	0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	g/m ³	0.0001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	g/m ³	0.01	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium	g/m ³	0.05	14.3	11.3	12.2	12.8	13.8
Cadmium	g/m ³	0.00002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	g/m ³	0.00001	0.00029	<0.0001	0.00043	0.00074	0.00076
Chromium	g/m ³	0.0002	<0.002	<0.002	<0.002	<0.002	<0.002
Caesium	g/m ³	0.00001	<0.0001	0.00011	<0.0001	0.00011	<0.0001
Copper	g/m ³	0.0002	<0.002	<0.002	<0.002	0.0021	0.0042
Iron	g/m ³	0.005	<0.05	<0.05	<0.05	0.13	0.40
Germanium	g/m ³	0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Mercury	g/m ³	0.00008	<0.0008	<0.0008	<0.0008	<0.0008	0.0031
Potassium	g/m ³	0.05	6.92	7.15	6.24	11.3	10.5
Lanthanum	g/m ³	0.00001	<0.0001	<0.0001	<0.0001	0.00152	0.00162
Lithium	g/m ³	0.00001	0.00578	0.00397	0.00305	0.0359	0.0105
Magnesium	g/m ³	0.01	3.82	3.12	3.70	1.81	1.53
Manganese	g/m ³	0.0005	0.0821	0.040	0.0697	0.014	0.023
Molybdenum	g/m ³	0.0002	<0.002	<0.002	<0.002	0.010	0.0300
Sodium	g/m ³	0.01	1.56	1.63	1.37	28.8	43.8

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation with the exception of tests marked *, which are not accredited.
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Elements in Water (Soluble)

Client Sample ID			MG37922-WP24-13495.001	MG40061-WP24-13495.002	MG46045-WP24-13495.003	MG19875-WP24-14103.001	MG43524-WP24-14103.002
Date Sampled			20/03/2024	20/03/2024	20/03/2024	24/07/2024	24/07/2024
Nickel	g/m³	0.0002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus	g/m³	0.04	<0.4	<0.4	<0.4	<0.4	<0.4
Lead	g/m³	0.00005	<0.0005	<0.0005	<0.0005	0.00091	0.0021
Rubidium	g/m³	0.00002	0.00392	0.00374	0.00278	0.00631	0.00455
Sulfur*	g/m³	10	<100	<100	<100	<100	<100
Antimony	g/m³	0.0001	0.0029	0.0031	0.0026	0.0450	0.177
Selenium	g/m³	0.0005	<0.005	<0.005	<0.005	0.0060	0.012
Tin	g/m³	0.0002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	g/m³	0.0001	0.868	0.509	0.730	1.26	0.476
Thallium	g/m³	0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Uranium	g/m³	0.00003	0.00070	0.00078	0.00043	0.0120	0.0142
Vanadium	g/m³	0.0005	<0.005	<0.005	<0.005	<0.005	0.0094
Yttrium	g/m³	0.00001	<0.0001	<0.0001	<0.0001	0.00068	0.00094
Zinc	g/m³	0.001	<0.01	<0.01	<0.01	<0.01	<0.01

Elements in Water (Soluble)

Client Sample ID			MG19838-WP24-14183.001	MG46045-WP24-14183.002	MG40061-WP24-14183.003	MG37922-WP24-14183.004
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25681-6	24-25681-7	24-25681-8	24-25681-9
Arsenic	g/m³	0.0005	0.050	1.47	0.294	0.547
Aluminium	g/m³	0.003	0.055	0.035	0.038	0.037
Barium	g/m³	0.0002	0.0086	0.0308	0.0162	0.0179
Beryllium	g/m³	0.00001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	g/m³	0.0001	<0.001	<0.001	<0.001	<0.001
Boron	g/m³	0.01	<0.1	<0.1	<0.1	<0.1
Calcium	g/m³	0.05	19.7	20.6	17.8	14.8
Cadmium	g/m³	0.00002	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	g/m³	0.00001	0.00019	0.00112	0.00118	0.00050
Chromium	g/m³	0.0002	<0.002	<0.002	<0.002	<0.002
Caesium	g/m³	0.00001	<0.0001	0.00027	0.00037	0.00027
Copper	g/m³	0.0002	0.0055	<0.002	<0.002	<0.002
Iron	g/m³	0.005	1.67	<0.05	<0.05	<0.05
Germanium	g/m³	0.00005	<0.0005	<0.0005	<0.0005	<0.0005
Mercury	g/m³	0.00008	<0.0008	<0.0008	<0.0008	<0.0008
Potassium	g/m³	0.05	5.35	15.5	20.5	12.0
Lanthanum	g/m³	0.00001	0.00022	<0.0001	<0.0001	<0.0001
Lithium	g/m³	0.00001	0.0113	0.0108	0.0142	0.0174
Magnesium	g/m³	0.01	2.15	12.9	12.2	9.97
Manganese	g/m³	0.0005	0.022	<0.005	0.047	<0.005
Molybdenum	g/m³	0.0002	0.0040	0.0500	0.0400	0.0300
Sodium	g/m³	0.01	4.80	6.78	7.26	5.83
Nickel	g/m³	0.0002	0.0023	<0.002	<0.002	<0.002
Phosphorus	g/m³	0.04	<0.4	<0.4	<0.4	<0.4
Lead	g/m³	0.00005	0.00535	<0.0005	<0.0005	<0.0005
Rubidium	g/m³	0.00002	0.00128	0.0107	0.0141	0.00737
Sulfur*	g/m³	10	<100	<100	<100	<100
Antimony	g/m³	0.0001	0.0062	0.0053	0.0064	0.0075
Selenium	g/m³	0.0005	<0.005	<0.005	<0.005	<0.005
Tin	g/m³	0.0002	<0.002	<0.002	<0.002	<0.002
Strontium	g/m³	0.0001	0.115	2.12	1.19	1.82

Elements in Water (Soluble)

Client Sample ID			MG19838-WP24-14183.001	MG46045-WP24-14183.002	MG40061-WP24-14183.003	MG37922-WP24-14183.004
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024
Thallium	g/m ³	0.00001	<0.0001	<0.0001	<0.0001	<0.0001
Uranium	g/m ³	0.00003	0.00406	0.00091	0.00074	0.00209
Vanadium	g/m ³	0.0005	<0.005	<0.005	<0.005	<0.005
Yttrium	g/m ³	0.00001	0.00011	<0.0001	<0.0001	<0.0001
Zinc	g/m ³	0.001	<0.01	<0.01	<0.01	<0.01

Method Summary

Soluble Trace Elements

Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.



Prianshu Chawla, B.Tech
Technologist



Certificate of Analysis

Matakanui Gold/Cuffs Limited
Level 2 Como House, 51 Tancred Street
Hokitika 7810

Attention: Hamish McLauchlan
Phone: 0275886631
Email: hmclauchlan@santanaminerals.com

Lab Reference: 24-26351
Submitted by: 23/08/2024
Date Received: 23/08/2024
Testing Initiated: 23/08/2024
Date Completed: 6/09/2024
Order Number:
Reference:

Sampling Site: Bendigo Ophir Project

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Phosphorus	g/m ³	0.005	0.011	0.12	0.0090	0.0061	<0.0050

Total Phosphorus in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Phosphorus	g/m ³	0.005	<0.0050	0.030	0.0096	<0.0050	<0.0050

Total Phosphorus in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Phosphorus	g/m ³	0.005	0.0070

Water Aggregate Properties

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	<1.00	6.00	4.00	6.67

Water Aggregate Properties

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	5.33	1.33	6.00	2.00

Water Aggregate Properties

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	8.67

Turbidity

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Turbidity	NTU	0.05	0.8	1.2	1.3	2.6	2.1

Turbidity

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Turbidity	NTU	0.05	0.9	1.6	4.4	1.8	0.5

Turbidity

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Turbidity	NTU	0.05	2.4

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	0.0015	0.0013	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Nitrite-N	g/m³	0.001	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Kjeldahl Nitrogen	g/m³	0.1	0.25	0.21	0.19	1.53	2.35
Total Nitrogen	g/m³	0.1	0.25	0.43	0.20	1.5	2.4

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Kjeldahl Nitrogen	g/m³	0.1	0.17	0.42	0.21	0.19	0.29
Total Nitrogen	g/m³	0.1	0.17	0.42	0.37	0.39	0.29

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Kjeldahl Nitrogen	g/m³	0.1	0.13
Total Nitrogen	g/m³	0.1	0.13

Fluoride in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Fluoride	g/m³	0.04	<0.040	0.27	0.14	0.055	0.058

Fluoride in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Fluoride	g/m³	0.04	<0.040	0.051	0.075	0.079	0.054

Fluoride in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Fluoride	g/m³	0.04	0.14

Custom Job

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Custom Job			Complete

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Bromide	g/m³	0.005	<0.05	0.080	0.10	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Bromide	g/m³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Bromide	g/m³	0.005	<0.05

Water Hardness

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Hardness	g eqv. CaCO ₃ /m³	0.05	9.9	210	190	77	73

Water Hardness

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Hardness	g eqv. CaCO ₃ /m³	0.05	28	82	290	160	72

Water Hardness

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Hardness	g eqv. CaCO ₃ /m³	0.05	250

Cyanide in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Cyanide	g/m³	0.001	<0.001	0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Cyanide	g/m³	0.001	<0.002

Solids in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Suspended Solids	g/m³	3	<3	<3	<3	<3	<3
Total Dissolved Solids	g/m³	3	14	237	217	96	86

Solids in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Suspended Solids	g/m³	3	<3	6	11	5	<3
Total Dissolved Solids	g/m³	3	40	91	301	165	86

Solids in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Suspended Solids	g/m³	3	<3
Total Dissolved Solids	g/m³	3	260

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Arsenic	g/m³	0.0005	0.00093	1.17	0.018	0.032	0.0054
Aluminium	g/m³	0.003	0.036	<0.0030	0.021	0.044	0.045
Barium	g/m³	0.0001	0.0042	0.0058	0.248	0.0140	0.0130
Beryllium	g/m³	0.00001	<0.000010	<0.000010	0.000016	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	0.020	0.042	<0.0050	<0.0050
Calcium	g/m³	0.05	2.9	56.0	49.1	23.4	22.4
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Cobalt	g/m³	0.00001	0.000061	0.000065	<0.000010	0.00011	0.000080
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00015	0.00020	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00053	<0.00020	<0.00020	0.00042	0.00057
Iron	g/m³	0.005	0.052	0.11	0.082	0.38	0.11
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00091	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.35	2.0	1.5	1.2	1.1
Lanthanum	g/m³	0.00001	0.000097	<0.000010	0.000044	0.000033	0.000050
Lithium	g/m³	0.00001	0.00076	0.0145	0.0564	0.00233	0.00254
Magnesium	g/m³	0.01	0.63	16.2	16.2	4.46	4.06
Manganese	g/m³	0.0005	0.0026	0.037	0.0081	0.045	0.0043
Molybdenum	g/m³	0.0002	<0.00020	0.0011	0.00031	<0.00020	<0.00020
Sodium	g/m³	0.01	2.03	20.4	45.1	5.60	4.94
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00026	0.00026
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	0.000070	0.000075
Rubidium	g/m³	0.00005	0.00025	0.0014	0.0021	0.00036	0.00042
Sulfur*	g/m³	10	<10	11	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.0334	0.516	10.4	0.340	0.317
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	0.00232	0.0010	0.000074	0.00040
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.000097	0.000057	0.00031	<0.000050	<0.000050
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Arsenic	g/m³	0.0005	0.0065	0.235	0.0023	<0.00050	0.0012
Aluminium	g/m³	0.003	0.014	0.011	0.15	0.025	0.024
Barium	g/m³	0.0001	0.0056	0.0271	0.0521	0.0376	0.0172
Beryllium	g/m³	0.00001	<0.000010	<0.000010	0.000012	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	<0.0050	0.038	0.027	<0.0050
Calcium	g/m³	0.05	8.45	25.0	73.1	45.0	22.7
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000056	0.00177	0.00019	0.00010	0.00013
Chromium	g/m³	0.0002	<0.00020	<0.00020	0.00027	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	0.000025	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00040	0.00034	0.00072	0.00074	0.00076
Iron	g/m³	0.005	0.084	3.61	0.27	0.089	0.21
Germanium	g/m³	0.00005	<0.000050	0.00014	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.54	1.0	1.9	1.3	1.1
Lanthanum	g/m³	0.00001	0.000026	0.000032	0.00014	0.000045	0.000038
Lithium	g/m³	0.00001	0.00110	0.00224	0.0101	0.00439	0.00211
Magnesium	g/m³	0.01	1.66	4.83	26.0	10.8	3.61

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Manganese	g/m³	0.0005	0.0092	0.791	0.017	0.018	0.011
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00048	0.00041	<0.00020
Sodium	g/m³	0.01	2.98	5.78	14.4	7.23	4.98
Nickel	g/m³	0.0002	<0.00020	0.00046	0.00047	0.00023	0.00034
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	0.000084	0.00025	0.00010	<0.000050
Rubidium	g/m³	0.00005	0.00021	0.00021	0.00059	0.00023	0.00035
Sulfur*	g/m³	10	<10	<10	21	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00018	0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.106	0.330	1.17	0.742	0.314
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.000036	0.000091	0.00716	0.00279	0.00027
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	<0.000050	<0.000050	0.00014	0.000055	<0.000050
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Arsenic	g/m³	0.0005	0.0588
Aluminium	g/m³	0.003	0.0039
Barium	g/m³	0.0001	0.147
Beryllium	g/m³	0.00001	0.000029
Bismuth	g/m³	0.0001	<0.00010
Boron	g/m³	0.005	0.0086
Calcium	g/m³	0.05	64.5
Cadmium	g/m³	0.00002	<0.000020
Cobalt	g/m³	0.00001	<0.000010
Chromium	g/m³	0.0002	<0.00020
Caesium	g/m³	0.00001	0.00017
Copper	g/m³	0.0002	<0.00020
Iron	g/m³	0.005	0.34
Germanium	g/m³	0.00005	0.000088
Mercury	g/m³	0.0001	<0.00010
Potassium	g/m³	0.05	1.4
Lanthanum	g/m³	0.00001	0.000014
Lithium	g/m³	0.00001	0.00917
Magnesium	g/m³	0.01	22.8
Manganese	g/m³	0.0005	0.0048
Molybdenum	g/m³	0.0002	0.00031
Sodium	g/m³	0.01	8.38
Nickel	g/m³	0.0002	<0.00020
Phosphorus	g/m³	0.04	<0.040
Lead	g/m³	0.00005	<0.000050
Rubidium	g/m³	0.00005	0.0020
Sulfur*	g/m³	10	<10
Antimony	g/m³	0.0001	0.00018
Selenium	g/m³	0.001	<0.0010
Tin	g/m³	0.0005	<0.00050

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Strontium	g/m³	0.0001	1.19
Thallium	g/m³	0.0001	<0.00010
Uranium	g/m³	0.00003	0.00531
Vanadium	g/m³	0.0005	<0.00050
Yttrium	g/m³	0.00005	0.00048
Zinc	g/m³	0.003	<0.0030

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Silica	g/m³	0.1	8.51	15.4	18.9	8.81	9.04
Aluminium	g/m³	0.003	0.019	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic	g/m³	0.0005	0.00089	1.13	0.018	0.017	0.0043
Barium	g/m³	0.0002	0.0035	0.0053	0.235	0.0114	0.0119
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.017	0.039	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000035	0.000057	0.000011	0.000041	0.000062
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00014	0.00019	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00033	<0.00020	<0.00020	0.00057	0.00070
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.0010	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	0.00011	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000056	<0.000010	0.000012	<0.000010	<0.000010
Lithium	g/m³	0.00001	0.00071	0.0142	0.0541	0.00221	0.00236
Molybdenum	g/m³	0.0002	<0.00020	0.0011	0.00034	<0.00020	<0.00020
Nickel	g/m³	0.0002	<0.00020	<0.00020	0.00021	0.00049	0.00044
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	0.00030
Rubidium	g/m³	0.00002	0.00020	0.00139	0.00202	0.00022	0.00028
Sulfur*	g/m³	10	<10	10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0311	0.496	9.98	0.301	0.304
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.00219	0.00097	0.000069	0.00039
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000067	0.000024	0.00024	0.000010	0.000019

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Silica	g/m³	0.1	8.73	9.83	6.83	7.42	7.44
Aluminium	g/m³	0.003	0.0055	<0.0030	<0.0030	<0.0030	0.011
Arsenic	g/m³	0.0005	0.0057	0.0649	0.0016	<0.00050	0.00068

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Barium	g/m ³	0.0002	0.0053	0.0238	0.0467	0.0355	0.0163
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.01	<0.010	<0.010	0.036	0.026	<0.010
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.000040	0.00160	0.000052	0.000063	0.000094
Chromium	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m ³	0.0002	0.00039	0.00022	0.00029	0.00035	0.00076
Germanium	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	0.000014	<0.000010	<0.000010	<0.000010	<0.000010
Lithium	g/m ³	0.00001	0.00111	0.00233	0.00956	0.00430	0.00212
Molybdenum	g/m ³	0.0002	<0.00020	<0.00020	0.00041	0.00033	<0.00020
Nickel	g/m ³	0.0002	<0.00020	0.00040	<0.00020	<0.00020	0.0014
Phosphorus	g/m ³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00020	0.00019	0.00016	0.00017	0.00029
Sulfur*	g/m ³	10	<10	<10	21	<10	<10
Antimony	g/m ³	0.0001	<0.00010	<0.00010	0.00015	<0.00010	<0.00010
Selenium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.103	0.314	1.12	0.708	0.307
Thallium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.000045	0.000071	0.00693	0.00280	0.00026
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000028	<0.000010	0.000041	0.000017	0.000018

Elements in Water (Soluble)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Silica	g/m ³	0.1	22.5
Aluminium	g/m ³	0.003	<0.0030
Arsenic	g/m ³	0.0005	0.0508
Barium	g/m ³	0.0002	0.140
Beryllium	g/m ³	0.00001	<0.000010
Bismuth	g/m ³	0.0001	<0.00010
Boron	g/m ³	0.01	<0.010
Cadmium	g/m ³	0.00002	<0.000020
Cobalt	g/m ³	0.00001	<0.000010
Chromium	g/m ³	0.0002	<0.00020
Caesium	g/m ³	0.00001	0.00015
Copper	g/m ³	0.0002	<0.00020
Germanium	g/m ³	0.00005	0.000051
Mercury	g/m ³	0.00008	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010
Lithium	g/m ³	0.00001	0.00891
Molybdenum	g/m ³	0.0002	0.00038
Nickel	g/m ³	0.0002	<0.00020
Phosphorus	g/m ³	0.04	<0.040
Lead	g/m ³	0.00005	<0.000050

Elements in Water (Soluble)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Rubidium	g/m ³	0.00002	0.00192
Sulfur*	g/m ³	10	<10
Antimony	g/m ³	0.0001	0.00018
Selenium	g/m ³	0.0005	<0.00050
Tin	g/m ³	0.0002	<0.00020
Strontium	g/m ³	0.0001	1.13
Thallium	g/m ³	0.00001	<0.000010
Uranium	g/m ³	0.00003	0.00503
Vanadium	g/m ³	0.0005	<0.00050
Yttrium	g/m ³	0.00001	0.00018

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
pH	pH	1	6.9	8.2	8.0	7.6	7.6
Electrical Conductivity	µS/cm	0.2	30.4	526	498	191	178
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	9.5	193	204	71.9	68.3
Chloride	g/m ³	0.5	0.67	6.91	9.15	2.70	2.07
Sulfate	g/m ³	0.15	0.45	27.1	9.11	4.97	3.37
Nitrate-N	g/m ³	0.002	<0.0020	0.217	0.0051	<0.0020	0.0359
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.006	0.021	<0.002	<0.002	<0.002
Ammonia as N	g/m ³	0.005	<0.005	<0.005	0.1	<0.005	<0.005
Sodium	g/m ³	0.01	1.97	20.2	43.6	5.28	4.68
Potassium	g/m ³	0.05	0.31	2.0	1.4	1.1	1.1
Calcium	g/m ³	0.05	2.7	55.0	45.5	22.4	21.5
Magnesium	g/m ³	0.01	0.60	16.0	15.8	4.26	3.92
Iron	g/m ³	0.005	0.024	<0.0050	0.011	0.027	0.11
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	<0.00050	0.029	0.0068	0.0081	0.0015
Sum of Anions*	meq/L	0.01	0.22	4.72	4.58	1.63	1.51
Sum of Cations*	meq/L	0.01	0.28	4.99	5.51	1.73	1.63
EC/10*	(mS/m)/10	0.002	0.30	5.26	4.98	1.91	1.78

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
pH	pH	1	7.2	7.3	8.1	7.9	7.5
Electrical Conductivity	µS/cm	0.2	76.9	202	626	359	178
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	28.2	77.2	225	136	65.7
Chloride	g/m ³	0.5	1.07	2.73	5.88	2.49	2.03
Sulfate	g/m ³	0.15	1.34	4.85	50.7	14.6	3.86
Nitrate-N	g/m ³	0.002	<0.0020	0.0067	0.152	0.196	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.003	<0.002	0.002	<0.002	<0.002
Ammonia as N	g/m ³	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium	g/m ³	0.01	2.87	5.62	13.6	7.00	4.75

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Potassium	g/m ³	0.05	0.52	1.0	1.7	1.2	1.1
Calcium	g/m ³	0.05	8.04	24.3	69.1	43.4	21.9
Magnesium	g/m ³	0.01	1.60	4.64	24.8	10.5	3.46
Iron	g/m ³	0.005	0.029	0.11	<0.0050	0.0074	0.024
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0058	0.748	0.0012	0.0095	0.0016
Sum of Anions*	meq/L	0.01	0.62	1.73	5.81	3.13	1.46
Sum of Cations*	meq/L	0.01	0.67	1.90	6.13	3.36	1.61
EC/10*	(mS/m)/10	0.002	0.77	2.02	6.26	3.59	1.78

Anion/Cation Suite

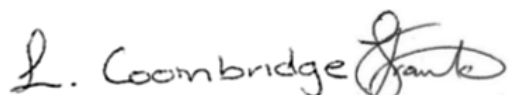
Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
pH	pH	1	7.7
Electrical Conductivity	µS/cm	0.2	550
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	235
Chloride	g/m ³	0.5	2.90
Sulfate	g/m ³	0.15	9.46
Nitrate-N	g/m ³	0.002	0.0045
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002
Ammonia as N	g/m ³	0.005	0.05
Sodium	g/m ³	0.01	8.09
Potassium	g/m ³	0.05	1.4
Calcium	g/m ³	0.05	62.0
Magnesium	g/m ³	0.01	21.7
Iron	g/m ³	0.005	<0.0050
Zinc	g/m ³	0.001	<0.0010
Manganese	g/m ³	0.0005	0.0046
Sum of Anions*	meq/L	0.01	5.01
Sum of Cations*	meq/L	0.01	5.27
EC/10*	(mS/m)/10	0.002	5.50

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).

Method Summary

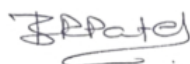
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourimetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ -I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.



Louise Coombridge, B.Sc.
Laboratory Technician



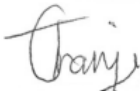
Charlene Mae Ragas
Customer Services Specialist



Bhumika Patel
Sample Reception Technician



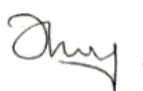
Sharelle Frank, B.Sc. (Tech)
Technologist



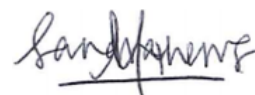
Tamaryn Cronje
Customer Service



Rowin Angkico, B.Sc.
Laboratory Technician



Thara Samarasinghe, B.Sci.
Senior Laboratory Technician



Sandra Mathews, B.Eng.
Technologist



Prianshu Chawla, B.Tech
Technologist



Certificate of Analysis

Matakanui Gold/Cuffs Limited
Level 2 Como House, 51 Tancred Street
Hokitika 7810

Attention: Hamish McLauchlan
Phone: 0275886631
Email: hmclauchlan@santanaminerals.com

Lab Reference: 24-25063
Submitted by:
Date Received: 12/08/2024
Testing Initiated: 12/08/2024
Date Completed: 19/08/2024
Order Number:
Reference:

Sampling Site: Bendigo Ophir Project

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Phosphorus	g/m ³	0.005	0.27	0.15	0.032	0.011	0.012

Total Phosphorus in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Phosphorus	g/m ³	0.005	0.022	0.0088	0.020

Water Aggregate Properties

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Acidity to pH 8.3 (CaCO ₃)	g/m ³	1.0	<1.00	6.67	3.33	3.33	6.67

Water Aggregate Properties

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	<1.00	3.33	11.67

Turbidity

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Turbidity	NTU	0.05	0.9	73	6.8	1.2	3.4

Turbidity

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Turbidity	NTU	0.05	8.2	1.4	3.7

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Nitrite-N	g/m³	0.001	<0.0010	0.0015	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Nitrite-N	g/m³	0.001	0.0014	<0.0010	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Kjeldahl Nitrogen	g/m³	0.1	0.14	0.43	0.37	0.19	0.26
Total Nitrogen	g/m³	0.1	0.35	0.48	0.42	0.19	0.26

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Kjeldahl Nitrogen	g/m³	0.1	0.32	0.32	<0.10
Total Nitrogen	g/m³	0.1	0.44	0.32	<0.10

Custom Job

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Custom Job			Complete	Complete	Complete

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Bromide	g/m³	0.005	0.10	<0.05	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Bromide	g/m³	0.005	<0.05	<0.05	<0.05

Fluoride in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Fluoride	g/m³	0.04	0.26	0.043	0.042	<0.040	<0.040

Fluoride in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Fluoride	g/m³	0.04	0.057	<0.040	0.11

Water Hardness

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Hardness	g eqv. CaCO ₃ /m³	0.05	200	75	66	30	67

Water Hardness

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Hardness	g eqv. CaCO ₃ /m³	0.05	230	68	240

Cyanide in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001

Solids in Water

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Total Suspended Solids	g/m³	3	<3	27	11	<3	<3
Total Dissolved Solids	g/m³	3	262	91	73	46	77

Solids in Water

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Total Suspended Solids	g/m³	3	10	<3	<3
Total Dissolved Solids	g/m³	3	259	82	232

Elements in Water (Total Recoverable)

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Arsenic	g/m³	0.0005	1.18	0.039	0.0084	0.0091	0.038
Aluminium	g/m³	0.003	0.0032	0.860	0.16	0.019	0.015
Barium	g/m³	0.0001	0.0056	0.0309	0.0155	0.0060	0.0155
Beryllium	g/m³	0.00001	<0.000010	0.000058	0.000012	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	0.020	0.0070	0.0063	0.0051	0.0071
Calcium	g/m³	0.05	53.0	22.8	20.1	9.10	20.5
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000069	0.00102	0.00023	0.000065	0.00013
Chromium	g/m³	0.0002	<0.00020	0.00065	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	0.00014	0.00013	0.000024	<0.000010	<0.000010
Copper	g/m³	0.0002	<0.00020	0.0022	0.00084	0.0044	0.00035
Iron	g/m³	0.005	0.11	1.76	0.44	0.19	0.945
Germanium	g/m³	0.00005	<0.000050	0.00017	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	1.8	1.8	2.0	0.66	1.7
Lanthanum	g/m³	0.00001	<0.000010	0.00121	0.00019	0.000043	0.000038
Lithium	g/m³	0.00001	0.0148	0.00354	0.00261	0.00120	0.00212
Magnesium	g/m³	0.01	15.4	4.51	3.76	1.73	3.92
Manganese	g/m³	0.0005	0.040	0.112	0.017	0.016	0.0883
Molybdenum	g/m³	0.0002	0.0013	<0.00020	<0.00020	<0.00020	<0.00020
Sodium	g/m³	0.01	19.7	5.20	4.41	3.08	4.89
Nickel	g/m³	0.0002	<0.00020	0.0012	0.00048	<0.00020	0.00020
Phosphorus	g/m³	0.04	<0.040	0.054	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	0.0026	0.00037	0.00019	<0.000050
Rubidium	g/m³	0.00005	0.0014	0.0022	0.00099	0.00026	0.00038
Sulfur*	g/m³	10	11	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.474	0.299	0.273	0.112	0.262
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00228	0.00014	0.00031	<0.000030	0.000063
Vanadium	g/m³	0.0005	<0.00050	0.0012	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.000054	0.00069	0.00014	0.000050	<0.000050
Zinc	g/m³	0.003	<0.0030	0.0055	0.0041	0.0035	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Arsenic	g/m³	0.0005	0.0022	0.0011	0.0588
Aluminium	g/m³	0.003	0.16	0.0098	<0.0030
Barium	g/m³	0.0001	0.0439	0.0161	0.143
Beryllium	g/m³	0.00001	0.000015	<0.000010	0.000034
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	0.036	0.0056	0.010
Calcium	g/m³	0.05	58.7	21.4	60.5
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.00022	0.000072	<0.000010
Chromium	g/m³	0.0002	0.00021	<0.00020	<0.00020
Caesium	g/m³	0.00001	0.000025	<0.000010	0.00016
Copper	g/m³	0.0002	0.00082	0.00069	<0.00020
Iron	g/m³	0.005	0.29	0.11	0.34
Germanium	g/m³	0.00005	0.00014	<0.000050	0.00012
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	2.1	1.5	1.3
Lanthanum	g/m³	0.00001	0.00017	0.000028	0.000013
Lithium	g/m³	0.00001	0.00855	0.00202	0.00915
Magnesium	g/m³	0.01	20.4	3.54	21.4
Manganese	g/m³	0.0005	0.014	0.0068	0.0047
Molybdenum	g/m³	0.0002	0.00047	<0.00020	0.00059
Sodium	g/m³	0.01	11.9	4.78	7.85
Nickel	g/m³	0.0002	0.00047	0.00036	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	0.00032	<0.000050	<0.000050
Rubidium	g/m³	0.00005	0.00061	0.00038	0.0019
Sulfur*	g/m³	10	16	<10	<10
Antimony	g/m³	0.0001	0.00018	<0.00010	0.00016
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.901	0.285	1.09
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00572	0.00027	0.00513
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.00014	<0.000050	0.00045
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030

Elements in Water (Soluble)

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
Silica	g/m³	0.1	18.4	10.7	10.4	10.6	10.5
Arsenic	g/m³	0.0005	1.10	0.015	0.0045	0.0064	0.0071
Aluminium	g/m³	0.003	<0.0030	0.026	0.0045	0.0083	<0.0030
Barium	g/m³	0.0002	0.0053	0.0119	0.0122	0.0055	0.0122
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	0.019	<0.010	<0.010	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000034	0.000080	0.000041	0.000046	0.000042

Elements in Water (Soluble)

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Chromium	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	0.00012	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m ³	0.0002	<0.00020	0.00063	0.00061	0.00036	0.00040
Germanium	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010	0.000033	0.000016	0.000018	<0.000010
Lithium	g/m ³	0.00001	0.0136	0.00224	0.00226	0.00117	0.00203
Molybdenum	g/m ³	0.0002	0.0011	<0.00020	<0.00020	<0.00020	<0.00020
Nickel	g/m ³	0.0002	0.00022	0.00021	0.00026	0.00023	0.00021
Phosphorus	g/m ³	0.04	0.067	<0.040	0.049	<0.040	<0.040
Lead	g/m ³	0.00005	0.000059	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00130	0.00033	0.00055	0.00023	0.00034
Sulfur*	g/m ³	10	12	<10	<10	<10	<10
Antimony	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.461	0.288	0.268	0.105	0.255
Thallium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.00219	0.00011	0.00029	0.000035	0.000068
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000024	0.000023	0.000023	0.000033	<0.000010

Elements in Water (Soluble)

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
Silica	g/m ³	0.1	7.46	8.63	25.1
Arsenic	g/m ³	0.0005	0.0019	0.00082	0.050
Aluminium	g/m ³	0.003	0.0036	<0.0030	<0.0030
Barium	g/m ³	0.0002	0.0397	0.0154	0.140
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	0.000014
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.01	0.035	<0.010	<0.010
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.000050	0.00010	0.000013
Chromium	g/m ³	0.0002	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	<0.000010	0.00016
Copper	g/m ³	0.0002	0.00053	0.00065	<0.00020
Germanium	g/m ³	0.00005	<0.000050	<0.000050	0.000066
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	0.000016	<0.000010	<0.000010
Lithium	g/m ³	0.00001	0.00807	0.00201	0.00888
Molybdenum	g/m ³	0.0002	0.00045	<0.00020	0.00040
Nickel	g/m ³	0.0002	0.00025	0.00032	<0.00020
Phosphorus	g/m ³	0.04	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00020	0.00037	0.00184
Sulfur*	g/m ³	10	16	<10	<10
Antimony	g/m ³	0.0001	0.00018	<0.00010	0.00017
Selenium	g/m ³	0.0005	0.00075	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.871	0.279	1.03

Elements in Water (Soluble)

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.00553	0.00033	0.00501
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000035	0.000025	0.00017

Anion/Cation Suite

Client Sample ID			LBA	RS01	RS02	RS03	RSA01
Date Sampled			8/08/2024	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-1	24-25063-2	24-25063-3	24-25063-4	24-25063-5
pH	pH	1	8.2	7.6	7.6	7.3	7.6
Electrical Conductivity	µS/cm	0.2	468	176	155	69.9	163
Total Alkalinity (CaCO3)	g CaCO3/m³	1	194	67.3	61.3	29.2	64.3
Chloride	g/m³	0.5	7.34	3.66	3.51	1.38	4.11
Sulfate	g/m³	0.15	28.0	6.22	3.26	1.47	4.86
Nitrate-N	g/m³	0.002	0.208	0.0461	0.0541	0.0044	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.019	0.003	0.003	0.004	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium	g/m³	0.01	19.8	4.98	4.29	2.93	4.93
Potassium	g/m³	0.05	1.9	1.4	2.0	0.64	1.8
Calcium	g/m³	0.05	53.4	21.7	19.1	8.45	20.4
Magnesium	g/m³	0.01	15.6	4.18	3.65	1.66	4.00
Iron	g/m³	0.005	<0.0050	0.032	0.018	0.031	0.018
Zinc	g/m³	0.001	<0.0010	<0.0010	<0.0010	0.0012	<0.0010
Manganese	g/m³	0.0005	0.028	0.0046	<0.00050	0.0038	0.0087
Sum of Anions*	meq/L	0.01	4.78	1.59	1.40	0.65	1.51
Sum of Cations*	meq/L	0.01	4.86	1.68	1.49	0.70	1.61
EC/10*	(mS/m)/10	0.002	4.68	1.76	1.55	0.70	1.63

Anion/Cation Suite

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Analyte	Unit	Reporting Limit	24-25063-6	24-25063-7	24-25063-8
pH	pH	1	8.2	7.7	7.8
Electrical Conductivity	µS/cm	0.2	491	156	488
Total Alkalinity (CaCO3)	g CaCO3/m³	1	192	63.0	234
Chloride	g/m³	0.5	5.55	3.28	3.06
Sulfate	g/m³	0.15	40.2	4.04	9.73
Nitrate-N	g/m³	0.002	0.116	<0.0020	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.006	<0.002	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	0.05
Sodium	g/m³	0.01	11.4	4.56	7.97
Potassium	g/m³	0.05	2.0	1.5	1.4
Calcium	g/m³	0.05	56.8	20.4	61.2
Magnesium	g/m³	0.01	20.2	3.42	21.7
Iron	g/m³	0.005	0.0070	0.012	<0.0050
Zinc	g/m³	0.001	<0.0010	0.0017	<0.0010
Manganese	g/m³	0.0005	<0.00050	0.00072	0.0050

Anion/Cation Suite

Client Sample ID			SC01	RS04	MDD302
Date Sampled			8/08/2024	8/08/2024	8/08/2024
Sum of Anions*	meq/L	0.01	4.93	1.45	5.01
Sum of Cations*	meq/L	0.01	5.05	1.54	5.23
EC/10*	(mS/m)/10	0.002	4.91	1.56	4.88

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{Org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourimetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO ₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO3-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)

Method Summary

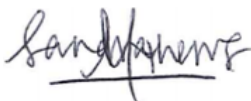
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.

 L. Coombridge

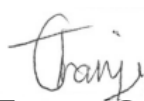
Louise Coombridge, B.Sc.
Laboratory Technician

 Sharelle Frank

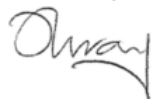
Sharelle Frank, B.Sc. (Tech)
Technologist

 Sandra Mathews

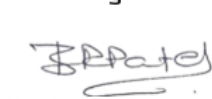
Sandra Mathews, B.Eng.
Technologist

 Tamaryn Cronje

Tamaryn Cronje
Customer Service

 Thara

Thara Samarasinghe, B.Sc.
Technician

 B. Patel

Bhumika Patel
Sample Reception Technician



Certificate of Analysis

Matakanui Gold/Cuffs Limited
Level 2 Como House, 51 Tancred Street
Hokitika 7810

Attention: Hamish McLauchlan
Phone: 0275886631
Email: hmclauchlan@santanaminerals.com

Lab Reference: 24-26351
Submitted by: 23/08/2024
Date Received: 23/08/2024
Testing Initiated: 23/08/2024
Date Completed: 6/09/2024
Order Number:
Reference:

Sampling Site: Bendigo Ophir Project

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Phosphorus	g/m ³	0.005	0.011	0.12	0.0090	0.0061	<0.0050

Total Phosphorus in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Phosphorus	g/m ³	0.005	<0.0050	0.030	0.0096	<0.0050	<0.0050

Total Phosphorus in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Phosphorus	g/m ³	0.005	0.0070

Water Aggregate Properties

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	<1.00	6.00	4.00	6.67

Water Aggregate Properties

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	5.33	1.33	6.00	2.00

Water Aggregate Properties

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	8.67

Turbidity

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Turbidity	NTU	0.05	0.8	1.2	1.3	2.6	2.1

Turbidity

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Turbidity	NTU	0.05	0.9	1.6	4.4	1.8	0.5

Turbidity

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Turbidity	NTU	0.05	2.4

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010	0.0015	0.0013	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Nitrite-N	g/m ³	0.001	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Kjeldahl Nitrogen	g/m ³	0.1	0.25	0.21	0.19	1.53	2.35
Total Nitrogen	g/m ³	0.1	0.25	0.43	0.20	1.5	2.4

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Kjeldahl Nitrogen	g/m ³	0.1	0.17	0.42	0.21	0.19	0.29
Total Nitrogen	g/m ³	0.1	0.17	0.42	0.37	0.39	0.29

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Kjeldahl Nitrogen	g/m ³	0.1	0.13
Total Nitrogen	g/m ³	0.1	0.13

Fluoride in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Fluoride	g/m³	0.04	<0.040	0.27	0.14	0.055	0.058

Fluoride in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Fluoride	g/m³	0.04	<0.040	0.051	0.075	0.079	0.054

Fluoride in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Fluoride	g/m³	0.04	0.14

Custom Job

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Custom Job			Complete

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Bromide	g/m³	0.005	<0.05	0.080	0.10	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Bromide	g/m³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Bromide	g/m³	0.005	<0.05

Water Hardness

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Hardness	g eqv. CaCO ₃ /m³	0.05	9.9	210	190	77	73

Water Hardness

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Hardness	g eqv. CaCO ₃ /m³	0.05	28	82	290	160	72

Water Hardness

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Hardness	g eqv. CaCO ₃ /m³	0.05	250

Cyanide in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Cyanide	g/m³	0.001	<0.001	0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Cyanide	g/m³	0.001	<0.002

Solids in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Total Suspended Solids	g/m³	3	<3	<3	<3	<3	<3
Total Dissolved Solids	g/m³	3	14	237	217	96	86

Solids in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Total Suspended Solids	g/m³	3	<3	6	11	5	<3
Total Dissolved Solids	g/m³	3	40	91	301	165	86

Solids in Water

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Total Suspended Solids	g/m³	3	<3
Total Dissolved Solids	g/m³	3	260

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Arsenic	g/m³	0.0005	0.00093	1.17	0.018	0.032	0.0054
Aluminium	g/m³	0.003	0.036	<0.0030	0.021	0.044	0.045
Barium	g/m³	0.0001	0.0042	0.0058	0.248	0.0140	0.0130
Beryllium	g/m³	0.00001	<0.000010	<0.000010	0.000016	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	0.020	0.042	<0.0050	<0.0050
Calcium	g/m³	0.05	2.9	56.0	49.1	23.4	22.4
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Cobalt	g/m³	0.00001	0.000061	0.000065	<0.000010	0.00011	0.000080
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00015	0.00020	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00053	<0.00020	<0.00020	0.00042	0.00057
Iron	g/m³	0.005	0.052	0.11	0.082	0.38	0.11
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00091	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.35	2.0	1.5	1.2	1.1
Lanthanum	g/m³	0.00001	0.000097	<0.000010	0.000044	0.000033	0.000050
Lithium	g/m³	0.00001	0.00076	0.0145	0.0564	0.00233	0.00254
Magnesium	g/m³	0.01	0.63	16.2	16.2	4.46	4.06
Manganese	g/m³	0.0005	0.0026	0.037	0.0081	0.045	0.0043
Molybdenum	g/m³	0.0002	<0.00020	0.0011	0.00031	<0.00020	<0.00020
Sodium	g/m³	0.01	2.03	20.4	45.1	5.60	4.94
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00026	0.00026
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	0.000070	0.000075
Rubidium	g/m³	0.00005	0.00025	0.0014	0.0021	0.00036	0.00042
Sulfur*	g/m³	10	<10	11	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.0334	0.516	10.4	0.340	0.317
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	0.00232	0.0010	0.000074	0.00040
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.000097	0.000057	0.00031	<0.000050	<0.000050
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Arsenic	g/m³	0.0005	0.0065	0.235	0.0023	<0.00050	0.0012
Aluminium	g/m³	0.003	0.014	0.011	0.15	0.025	0.024
Barium	g/m³	0.0001	0.0056	0.0271	0.0521	0.0376	0.0172
Beryllium	g/m³	0.00001	<0.000010	<0.000010	0.000012	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	<0.0050	0.038	0.027	<0.0050
Calcium	g/m³	0.05	8.45	25.0	73.1	45.0	22.7
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000056	0.00177	0.00019	0.00010	0.00013
Chromium	g/m³	0.0002	<0.00020	<0.00020	0.00027	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	0.000025	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00040	0.00034	0.00072	0.00074	0.00076
Iron	g/m³	0.005	0.084	3.61	0.27	0.089	0.21
Germanium	g/m³	0.00005	<0.000050	0.00014	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.54	1.0	1.9	1.3	1.1
Lanthanum	g/m³	0.00001	0.000026	0.000032	0.00014	0.000045	0.000038
Lithium	g/m³	0.00001	0.00110	0.00224	0.0101	0.00439	0.00211
Magnesium	g/m³	0.01	1.66	4.83	26.0	10.8	3.61

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Manganese	g/m³	0.0005	0.0092	0.791	0.017	0.018	0.011
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00048	0.00041	<0.00020
Sodium	g/m³	0.01	2.98	5.78	14.4	7.23	4.98
Nickel	g/m³	0.0002	<0.00020	0.00046	0.00047	0.00023	0.00034
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	0.000084	0.00025	0.00010	<0.000050
Rubidium	g/m³	0.00005	0.00021	0.00021	0.00059	0.00023	0.00035
Sulfur*	g/m³	10	<10	<10	21	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00018	0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.106	0.330	1.17	0.742	0.314
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.000036	0.000091	0.00716	0.00279	0.00027
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	<0.000050	<0.000050	0.00014	0.000055	<0.000050
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Arsenic	g/m³	0.0005	0.0588
Aluminium	g/m³	0.003	0.0039
Barium	g/m³	0.0001	0.147
Beryllium	g/m³	0.00001	0.000029
Bismuth	g/m³	0.0001	<0.00010
Boron	g/m³	0.005	0.0086
Calcium	g/m³	0.05	64.5
Cadmium	g/m³	0.00002	<0.000020
Cobalt	g/m³	0.00001	<0.000010
Chromium	g/m³	0.0002	<0.00020
Caesium	g/m³	0.00001	0.00017
Copper	g/m³	0.0002	<0.00020
Iron	g/m³	0.005	0.34
Germanium	g/m³	0.00005	0.000088
Mercury	g/m³	0.0001	<0.00010
Potassium	g/m³	0.05	1.4
Lanthanum	g/m³	0.00001	0.000014
Lithium	g/m³	0.00001	0.00917
Magnesium	g/m³	0.01	22.8
Manganese	g/m³	0.0005	0.0048
Molybdenum	g/m³	0.0002	0.00031
Sodium	g/m³	0.01	8.38
Nickel	g/m³	0.0002	<0.00020
Phosphorus	g/m³	0.04	<0.040
Lead	g/m³	0.00005	<0.000050
Rubidium	g/m³	0.00005	0.0020
Sulfur*	g/m³	10	<10
Antimony	g/m³	0.0001	0.00018
Selenium	g/m³	0.001	<0.0010
Tin	g/m³	0.0005	<0.00050

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Strontium	g/m³	0.0001	1.19
Thallium	g/m³	0.0001	<0.00010
Uranium	g/m³	0.00003	0.00531
Vanadium	g/m³	0.0005	<0.00050
Yttrium	g/m³	0.00005	0.00048
Zinc	g/m³	0.003	<0.0030

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
Silica	g/m³	0.1	8.51	15.4	18.9	8.81	9.04
Aluminium	g/m³	0.003	0.019	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic	g/m³	0.0005	0.00089	1.13	0.018	0.017	0.0043
Barium	g/m³	0.0002	0.0035	0.0053	0.235	0.0114	0.0119
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.017	0.039	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000035	0.000057	0.000011	0.000041	0.000062
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00014	0.00019	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00033	<0.00020	<0.00020	0.00057	0.00070
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.0010	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	0.00011	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000056	<0.000010	0.000012	<0.000010	<0.000010
Lithium	g/m³	0.00001	0.00071	0.0142	0.0541	0.00221	0.00236
Molybdenum	g/m³	0.0002	<0.00020	0.0011	0.00034	<0.00020	<0.00020
Nickel	g/m³	0.0002	<0.00020	<0.00020	0.00021	0.00049	0.00044
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	0.00030
Rubidium	g/m³	0.00002	0.00020	0.00139	0.00202	0.00022	0.00028
Sulfur*	g/m³	10	<10	10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0311	0.496	9.98	0.301	0.304
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.00219	0.00097	0.000069	0.00039
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000067	0.000024	0.00024	0.000010	0.000019

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
Silica	g/m³	0.1	8.73	9.83	6.83	7.42	7.44
Aluminium	g/m³	0.003	0.0055	<0.0030	<0.0030	<0.0030	0.011
Arsenic	g/m³	0.0005	0.0057	0.0649	0.0016	<0.00050	0.00068

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Barium	g/m ³	0.0002	0.0053	0.0238	0.0467	0.0355	0.0163
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.01	<0.010	<0.010	0.036	0.026	<0.010
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.000040	0.00160	0.000052	0.000063	0.000094
Chromium	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m ³	0.0002	0.00039	0.00022	0.00029	0.00035	0.00076
Germanium	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	0.000014	<0.000010	<0.000010	<0.000010	<0.000010
Lithium	g/m ³	0.00001	0.00111	0.00233	0.00956	0.00430	0.00212
Molybdenum	g/m ³	0.0002	<0.00020	<0.00020	0.00041	0.00033	<0.00020
Nickel	g/m ³	0.0002	<0.00020	0.00040	<0.00020	<0.00020	0.0014
Phosphorus	g/m ³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00020	0.00019	0.00016	0.00017	0.00029
Sulfur*	g/m ³	10	<10	<10	21	<10	<10
Antimony	g/m ³	0.0001	<0.00010	<0.00010	0.00015	<0.00010	<0.00010
Selenium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.103	0.314	1.12	0.708	0.307
Thallium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.000045	0.000071	0.00693	0.00280	0.00026
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000028	<0.000010	0.000041	0.000017	0.000018

Elements in Water (Soluble)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
Silica	g/m ³	0.1	22.5
Aluminium	g/m ³	0.003	<0.0030
Arsenic	g/m ³	0.0005	0.0508
Barium	g/m ³	0.0002	0.140
Beryllium	g/m ³	0.00001	<0.000010
Bismuth	g/m ³	0.0001	<0.00010
Boron	g/m ³	0.01	<0.010
Cadmium	g/m ³	0.00002	<0.000020
Cobalt	g/m ³	0.00001	<0.000010
Chromium	g/m ³	0.0002	<0.00020
Caesium	g/m ³	0.00001	0.00015
Copper	g/m ³	0.0002	<0.00020
Germanium	g/m ³	0.00005	0.000051
Mercury	g/m ³	0.00008	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010
Lithium	g/m ³	0.00001	0.00891
Molybdenum	g/m ³	0.0002	0.00038
Nickel	g/m ³	0.0002	<0.00020
Phosphorus	g/m ³	0.04	<0.040
Lead	g/m ³	0.00005	<0.000050

Elements in Water (Soluble)

Client Sample ID			MDD302
Date Sampled			22/08/2024
Rubidium	g/m³	0.00002	0.00192
Sulfur*	g/m³	10	<10
Antimony	g/m³	0.0001	0.00018
Selenium	g/m³	0.0005	<0.00050
Tin	g/m³	0.0002	<0.00020
Strontium	g/m³	0.0001	1.13
Thallium	g/m³	0.00001	<0.000010
Uranium	g/m³	0.00003	0.00503
Vanadium	g/m³	0.0005	<0.00050
Yttrium	g/m³	0.00001	0.00018

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-1	24-26351-2	24-26351-3	24-26351-4	24-26351-5
pH	pH	1	6.9	8.2	8.0	7.6	7.6
Electrical Conductivity	µS/cm	0.2	30.4	526	498	191	178
Total Alkalinity (CaCO3)	g CaCO ₃ /m³	1	9.5	193	204	71.9	68.3
Chloride	g/m³	0.5	0.67	6.91	9.15	2.70	2.07
Sulfate	g/m³	0.15	0.45	27.1	9.11	4.97	3.37
Nitrate-N	g/m³	0.002	<0.0020	0.217	0.0051	<0.0020	0.0359
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.006	0.021	<0.002	<0.002	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	0.1	<0.005	<0.005
Sodium	g/m³	0.01	1.97	20.2	43.6	5.28	4.68
Potassium	g/m³	0.05	0.31	2.0	1.4	1.1	1.1
Calcium	g/m³	0.05	2.7	55.0	45.5	22.4	21.5
Magnesium	g/m³	0.01	0.60	16.0	15.8	4.26	3.92
Iron	g/m³	0.005	0.024	<0.0050	0.011	0.027	0.11
Zinc	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m³	0.0005	<0.00050	0.029	0.0068	0.0081	0.0015
Sum of Anions*	meq/L	0.01	0.22	4.72	4.58	1.63	1.51
Sum of Cations*	meq/L	0.01	0.28	4.99	5.51	1.73	1.63
EC/10*	(mS/m)/10	0.002	0.30	5.26	4.98	1.91	1.78

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Analyte	Unit	Reporting Limit	24-26351-6	24-26351-7	24-26351-8	24-26351-9	24-26351-10
pH	pH	1	7.2	7.3	8.1	7.9	7.5
Electrical Conductivity	µS/cm	0.2	76.9	202	626	359	178
Total Alkalinity (CaCO3)	g CaCO ₃ /m³	1	28.2	77.2	225	136	65.7
Chloride	g/m³	0.5	1.07	2.73	5.88	2.49	2.03
Sulfate	g/m³	0.15	1.34	4.85	50.7	14.6	3.86
Nitrate-N	g/m³	0.002	<0.0020	0.0067	0.152	0.196	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.003	<0.002	0.002	<0.002	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium	g/m³	0.01	2.87	5.62	13.6	7.00	4.75

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			22/08/2024	22/08/2024	22/08/2024	22/08/2024	22/08/2024
Potassium	g/m ³	0.05	0.52	1.0	1.7	1.2	1.1
Calcium	g/m ³	0.05	8.04	24.3	69.1	43.4	21.9
Magnesium	g/m ³	0.01	1.60	4.64	24.8	10.5	3.46
Iron	g/m ³	0.005	0.029	0.11	<0.0050	0.0074	0.024
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0058	0.748	0.0012	0.0095	0.0016
Sum of Anions*	meq/L	0.01	0.62	1.73	5.81	3.13	1.46
Sum of Cations*	meq/L	0.01	0.67	1.90	6.13	3.36	1.61
EC/10*	(mS/m)/10	0.002	0.77	2.02	6.26	3.59	1.78

Anion/Cation Suite

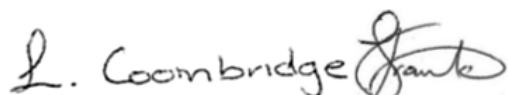
Client Sample ID			MDD302
Date Sampled			22/08/2024
Analyte	Unit	Reporting Limit	24-26351-11
pH	pH	1	7.7
Electrical Conductivity	µS/cm	0.2	550
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	235
Chloride	g/m ³	0.5	2.90
Sulfate	g/m ³	0.15	9.46
Nitrate-N	g/m ³	0.002	0.0045
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002
Ammonia as N	g/m ³	0.005	0.05
Sodium	g/m ³	0.01	8.09
Potassium	g/m ³	0.05	1.4
Calcium	g/m ³	0.05	62.0
Magnesium	g/m ³	0.01	21.7
Iron	g/m ³	0.005	<0.0050
Zinc	g/m ³	0.001	<0.0010
Manganese	g/m ³	0.0005	0.0046
Sum of Anions*	meq/L	0.01	5.01
Sum of Cations*	meq/L	0.01	5.27
EC/10*	(mS/m)/10	0.002	5.50

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).

Method Summary

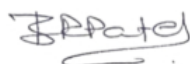
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourimetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ -I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.



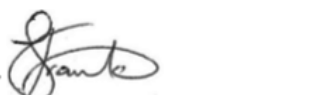
Louise Coombridge, B.Sc.
Laboratory Technician



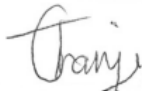
Charlene Mae Ragas
Customer Services Specialist



Bhumika Patel
Sample Reception Technician



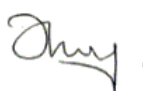
Sharelle Frank, B.Sc. (Tech)
Technologist



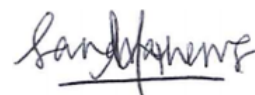
Tamaryn Cronje
Customer Service



Rowin Angkico, B.Sc.
Laboratory Technician



Thara Samarasinghe, B.Sci.
Senior Laboratory Technician



Sandra Mathews, B.Eng.
Technologist



Prianshu Chawla, B.Tech
Technologist



Certificate of Analysis

Matakanui Gold/Cuffs Limited
Level 2 Como House, 51 Tancred Street
Hokitika 7810

Attention: Hamish McLauchlan
Phone: 0275886631
Email: hmclauchlan@santanaminerals.com

Lab Reference: 24-27733
Submitted by:
Date Received: 6/09/2024
Testing Initiated: 6/09/2024
Date Completed: 17/09/2024
Order Number:
Reference:

Sampling Site: Bendigo Ophir Project

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Total Phosphorus	g/m ³	0.005	0.26	0.47	0.017	0.16	0.011

Total Phosphorus in Water

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Total Phosphorus	g/m ³	0.005	0.0073	0.50	0.040	0.012	0.15

Water Aggregate Properties

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Total Acidity to pH 8.3 (CaCO ₃)	g/m ³	1.0	<1.00	2.67	3.33	3.33	3.33

Water Aggregate Properties

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	3.33	3.33	4.67	7.33

Turbidity

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Turbidity	NTU	0.05	0.9	0.4	4.1	5.3	1.1

Turbidity

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Turbidity	NTU	0.05	0.7	6.5	9.0	0.7	3.2

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Nitrite-N	g/m³	0.001	<0.0010	0.0018	0.0014	<0.0010	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Total Kjeldahl Nitrogen	g/m³	0.1	<0.10	0.13	0.28	0.41	0.21
Total Nitrogen	g/m³	0.1	0.22	0.13	0.28	0.43	0.21

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Total Kjeldahl Nitrogen	g/m³	0.1	0.15	0.25	0.39	0.44	<0.10
Total Nitrogen	g/m³	0.1	0.17	0.34	0.58	0.44	<0.10

Fluoride in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Fluoride	g/m³	0.04	0.28	0.14	0.061	0.057	<0.040

Fluoride in Water

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Fluoride	g/m³	0.04	0.051	0.071	0.076	0.051	0.12

Custom Job

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Custom Job			Complete	Complete	Complete	Complete	Complete

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Bromide	g/m³	0.005	0.080	0.11	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Bromide	g/m³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Water Hardness

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Total Hardness	g eqv. CaCO ₃ /m³	0.05	200	170	73	67	23

Water Hardness

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Total Hardness	g eqv. CaCO ₃ /m³	0.05	80	210	130	57	240

Cyanide in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Solids in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Total Suspended Solids	g/m³	3	<3	<3	7	12	<3
Total Dissolved Solids	g/m³	3	245	246	87	80	34

Solids in Water

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Total Suspended Solids	g/m³	3	<3	14	21	<3	<3
Total Dissolved Solids	g/m³	3	102	203	158	77	251

Elements in Water (Total Recoverable)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Arsenic	g/m³	0.0005	1.15	0.018	0.045	0.0077	0.0078
Aluminium	g/m³	0.003	0.0045	0.0098	0.059	0.11	0.041
Barium	g/m³	0.0001	0.0060	0.237	0.0147	0.0157	0.0057
Beryllium	g/m³	0.00001	<0.000010	0.000014	<0.000010	0.000018	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	0.016	0.036	<0.0050	<0.0050	<0.0050
Calcium	g/m³	0.05	53.5	43.7	22.5	20.9	6.93
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000075	<0.000010	0.00018	0.00022	0.00010
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00025	0.00029
Caesium	g/m³	0.00001	0.00013	0.00019	<0.000010	0.000012	<0.000010
Copper	g/m³	0.0002	0.00023	<0.00020	0.00085	0.0013	0.00053
Iron	g/m³	0.005	0.12	0.059	0.586	0.32	0.15
Germanium	g/m³	0.00005	0.000065	0.00090	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	1.9	1.4	2.0	1.3	0.74
Lanthanum	g/m³	0.00001	0.000013	0.000028	0.000077	0.00014	0.00010
Lithium	g/m³	0.00001	0.0137	0.0545	0.00228	0.00191	0.00099
Magnesium	g/m³	0.01	14.9	15.5	4.16	3.57	1.36
Manganese	g/m³	0.0005	0.048	0.0076	0.0839	0.015	0.013
Molybdenum	g/m³	0.0002	0.0011	0.00026	<0.00020	<0.00020	<0.00020
Sodium	g/m³	0.01	19.0	43.2	5.25	4.44	2.66
Nickel	g/m³	0.0002	<0.00020	<0.00020	0.00043	0.00060	0.00028
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	0.00011	0.00024	<0.000050
Rubidium	g/m³	0.00005	0.0014	0.0020	0.00057	0.00065	0.00034
Sulfur*	g/m³	10	10	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.503	10.4	0.316	0.303	0.0890
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00221	0.00097	0.000094	0.00026	0.000037
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.000067	0.00027	0.000064	0.00013	0.00011
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Arsenic	g/m³	0.0005	0.021	0.0023	0.00077	0.0011	0.0567
Aluminium	g/m³	0.003	0.0044	0.16	0.090	0.011	<0.0030
Barium	g/m³	0.0001	0.0147	0.0423	0.0393	0.0164	0.140
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.000024
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	0.032	0.024	<0.0050	0.0052
Calcium	g/m³	0.05	24.6	55.1	37.7	18.4	60.5
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.00014	0.00021	0.00026	0.00012	<0.000010
Chromium	g/m³	0.0002	<0.00020	0.00030	0.00031	0.00053	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.000025	<0.000010	<0.000010	0.00016
Copper	g/m³	0.0002	0.00062	0.00088	0.00092	0.0013	<0.00020
Iron	g/m³	0.005	0.14	0.27	0.39	0.068	0.33
Germanium	g/m³	0.00005	<0.000050	0.000066	<0.000050	<0.000050	0.00010
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	1.9	1.8	1.4	1.0	1.3
Lanthanum	g/m³	0.00001	<0.000010	0.00018	0.00024	0.000024	0.000011
Lithium	g/m³	0.00001	0.00225	0.00718	0.00372	0.00130	0.00829
Magnesium	g/m³	0.01	4.53	17.1	8.51	2.67	21.5
Manganese	g/m³	0.0005	0.029	0.017	0.044	0.0031	0.0045
Molybdenum	g/m³	0.0002	<0.00020	0.00048	0.00021	<0.00020	0.00029
Sodium	g/m³	0.01	5.58	10.4	5.87	3.96	7.96
Nickel	g/m³	0.0002	0.00037	0.00039	0.00039	0.00063	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	0.00032	0.00047	<0.000050	<0.000050
Rubidium	g/m³	0.00005	0.00047	0.00064	0.00038	0.00030	0.0019
Sulfur*	g/m³	10	<10	14	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	0.00016	0.00010	0.00013	0.00016
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.337	0.882	0.633	0.271	1.16
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00010	0.00454	0.00215	0.00017	0.00507
Vanadium	g/m³	0.0005	<0.00050	0.00052	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	<0.000050	0.00015	0.00022	0.000053	0.00045
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Soluble)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
Silica	g/m³	0.1	38.9	47.7	25.2	22.8	21.3
Aluminium	g/m³	0.003	<0.0030	0.0033	<0.0030	0.0070	0.023
Arsenic	g/m³	0.0005	1.10	0.018	0.022	0.0048	0.0061
Barium	g/m³	0.0002	0.0057	0.239	0.0123	0.0125	0.0053
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	0.016	0.037	<0.010	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000050	0.000012	0.000081	0.000080	0.000062

Elements in Water (Soluble)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	0.00013	0.00019	<0.000010	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00025	<0.00020	0.00073	0.00099	0.00060
Germanium	g/m³	0.00005	0.000056	0.00082	0.00011	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	<0.000010	0.000011	<0.000010	0.000015	0.000055
Lithium	g/m³	0.00001	0.0132	0.0520	0.00216	0.00166	0.00090
Molybdenum	g/m³	0.0002	0.0011	0.00043	<0.00020	<0.00020	<0.00020
Nickel	g/m³	0.0002	0.00020	<0.00020	0.00036	0.00040	0.00025
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00133	0.00194	0.00041	0.00036	0.00028
Sulfur*	g/m³	10	13	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	0.00072	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.492	9.95	0.334	0.290	0.0870
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.00214	0.0010	0.00011	0.00025	0.000043
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000026	0.00023	0.000018	0.000038	0.000075

Elements in Water (Soluble)

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
Silica	g/m³	0.1	26.8	17.9	20.3	21.5	53.2
Aluminium	g/m³	0.003	<0.0030	0.0049	0.0072	0.0075	<0.0030
Arsenic	g/m³	0.0005	0.016	0.0044	0.00076	0.00094	0.0504
Barium	g/m³	0.0002	0.0145	0.0389	0.0356	0.0160	0.140
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.000021
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.032	0.023	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.00014	0.000072	0.000061	0.00011	<0.000010
Chromium	g/m³	0.0002	0.00022	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.00015
Copper	g/m³	0.0002	0.00074	0.00061	0.00070	0.0013	<0.00020
Germanium	g/m³	0.00005	0.000069	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	<0.000010	0.000013	0.000014	0.000015	<0.000010
Lithium	g/m³	0.00001	0.00218	0.00696	0.00372	0.00131	0.00848
Molybdenum	g/m³	0.0002	<0.00020	0.00041	0.00031	<0.00020	0.00033
Nickel	g/m³	0.0002	0.00034	0.00025	0.00021	0.00058	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00048	0.00021	0.00024	0.00028	0.00195
Sulfur*	g/m³	10	<10	20	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	0.00015	<0.00010	0.00011	0.00015
Selenium	g/m³	0.0005	<0.00050	0.00064	0.00066	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.333	0.863	0.632	0.255	1.13

Elements in Water (Soluble)

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.00012	0.00453	0.00229	0.00018	0.00494
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000018	0.000040	0.000029	0.000050	0.00018

Anion/Cation Suite

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-1	24-27733-2	24-27733-3	24-27733-4	24-27733-5
pH	pH	1	8.2	8.0	7.7	7.7	7.2
Electrical Conductivity	µS/cm	0.2	427	430	167	141	54.2
Total Alkalinity (CaCO3)	g CaCO ₃ /m³	1	194	200	73.9	66.7	23.0
Chloride	g/m³	0.5	7.13	9.16	3.13	2.27	1.35
Sulfate	g/m³	0.15	25.3	8.93	4.13	2.53	0.96
Nitrate-N	g/m³	0.002	0.223	<0.0020	<0.0020	0.0256	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.023	<0.002	<0.002	<0.002	0.006
Ammonia as N	g/m³	0.005	<0.005	0.11	<0.005	<0.005	<0.005
Sodium	g/m³	0.01	19.1	41.0	5.11	4.16	2.59
Potassium	g/m³	0.05	1.9	1.3	1.9	1.2	0.71
Calcium	g/m³	0.05	51.5	41.6	21.2	19.5	9.29
Magnesium	g/m³	0.01	15.0	14.8	3.99	3.35	1.30
Iron	g/m³	0.005	<0.0050	0.0077	0.029	0.018	0.046
Zinc	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m³	0.0005	0.025	0.0078	0.0047	<0.00050	0.0037
Sum of Anions*	meq/L	0.01	4.70	4.51	1.66	1.46	0.52
Sum of Cations*	meq/L	0.01	4.69	5.13	1.66	1.46	0.70
EC/10*	(mS/m)/10	0.002	4.27	4.30	1.67	1.41	0.54

Anion/Cation Suite

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Analyte	Unit	Reporting Limit	24-27733-6	24-27733-7	24-27733-8	24-27733-9	24-27733-10
pH	pH	1	7.6	8.1	7.9	7.7	7.8
Electrical Conductivity	µS/cm	0.2	183	426	270	127	458
Total Alkalinity (CaCO3)	g CaCO ₃ /m³	1	82.7	180	121	58.3	236
Chloride	g/m³	0.5	3.24	4.94	2.58	2.00	3.00
Sulfate	g/m³	0.15	3.80	31.7	11.3	1.90	9.24
Nitrate-N	g/m³	0.002	0.0171	0.0835	0.194	<0.0020	0.0022
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	<0.002	0.005	0.002	<0.002	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	<0.005	<0.005	0.05
Sodium	g/m³	0.01	5.42	9.91	5.82	3.83	7.70
Potassium	g/m³	0.05	1.8	1.7	1.3	1.0	1.3
Calcium	g/m³	0.05	23.9	51.8	36.4	17.7	60.2
Magnesium	g/m³	0.01	4.42	16.4	8.35	2.58	20.9
Iron	g/m³	0.005	0.038	0.0084	0.021	0.021	<0.0050
Zinc	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m³	0.0005	0.021	0.00083	0.0018	0.00063	0.0044

Anion/Cation Suite

Client Sample ID			RSA01	SC01	SC03	RS04	MDD302
Date Sampled			5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Sum of Anions*	meq/L	0.01	1.83	4.46	2.78	1.27	5.03
Sum of Cations*	meq/L	0.01	1.84	4.41	2.79	1.29	5.09
EC/10*	(mS/m)/10	0.002	1.83	4.26	2.70	1.27	4.58

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{Org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourimetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO ₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO3-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)

Method Summary

Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.

Louise Coombridge, B.Sc.
Laboratory Technician

Rowin Angkico, B.Sc.
Laboratory Technician

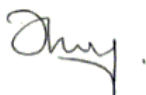
 

Matthew Counsell, B.Sc.
Inorganics Team Leader

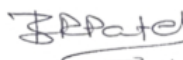
Sharelle Frank, B.Sc. (Tech)
Technologist



Tamaryn Cronje
Customer Service



Thara Samarasinghe, B.Sci.
Senior Laboratory Technician



Bhumika Patel
Sample Reception Technician



Certificate of Analysis

Matakanui Gold/Cuffs Limited
Level 2 Como House, 51 Tancred Street
Hokitika 7810

Attention: Alex Nichol
Phone:
Email: anichol@santanaminerals.com

Sampling Site: Bendigo Ophir Project

Lab Reference: 24-29331
Submitted by:
Date Received: 20/09/2024
Testing Initiated: 20/09/2024
Date Completed: 1/10/2024
Order Number:
Reference:

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Total Phosphorus	g/m ³	0.005	0.010	0.32	<0.0050	0.011	0.017

Total Phosphorus in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Total Phosphorus	g/m ³	0.005	0.0095	0.0091	0.013	0.059	<0.0050

Total Phosphorus in Water

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Total Phosphorus	g/m ³	0.005	0.0088	0.011

Water Aggregate Properties

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	6.67	1.33	3.33	3.33	3.33

Water Aggregate Properties

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	2.67	4.00	2.67	4.00

Water Aggregate Properties

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	6.67	<1.00

Turbidity

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Turbidity	NTU	0.05	1	1.6	0.6	2.2	4.5

Turbidity

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Turbidity	NTU	0.05	0.9	1.5	6.4	12	1

Turbidity

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Turbidity	NTU	0.05	3.1	2.3

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010	0.0019	0.0013	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Nitrite-N	g/m ³	0.001	<0.0010	0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Total Kjeldahl Nitrogen	g/m ³	0.1	0.23	0.11	0.15	0.43	0.59
Total Nitrogen	g/m ³	0.1	0.23	0.30	0.15	0.43	0.63

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Total Kjeldahl Nitrogen	g/m ³	0.1	0.29	0.40	0.34	0.52	0.34
Total Nitrogen	g/m ³	0.1	0.29	0.40	0.50	0.76	0.34

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Total Kjeldahl Nitrogen	g/m ³	0.1	0.11	0.50
Total Nitrogen	g/m ³	0.1	0.12	0.61

Custom Job

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Custom Job			Complete	Complete

Fluoride in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Fluoride	g/m³	0.04	<0.040	0.25	0.13	0.056	0.052

Fluoride in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Fluoride	g/m³	0.04	<0.040	0.055	0.072	0.076	0.049

Fluoride in Water

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Fluoride	g/m³	0.04	0.12	0.056

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Bromide	g/m³	0.005	<0.05	<0.05	0.11	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Bromide	g/m³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Bromide	g/m³	0.005	<0.05	<0.05

Water Hardness

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Total Hardness	g eqv. CaCO ₃ /m³	0.05	8.0	220	210	80	62

Water Hardness

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Total Hardness	g eqv. CaCO ₃ /m³	0.05	31	83	210	140	58

Water Hardness

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Total Hardness	g eqv. CaCO ₃ /m³	0.05	280	280

Cyanide in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Total Cyanide	g/m³	0.001	<0.001	<0.001

Solids in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Total Dissolved Solids	g/m³	3	27	257	250	91	62
Total Suspended Solids	g/m³	3	<3	<3	<3	<3	9

Solids in Water

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Total Dissolved Solids	g/m³	3	44	81	187	120	65
Total Suspended Solids	g/m³	3	<3	<3	15	31	<3

Solids in Water

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Total Dissolved Solids	g/m³	3	253	277
Total Suspended Solids	g/m³	3	<3	7

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Silver*	g/m³	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Aluminium	g/m³	0.003	0.075	0.0072	0.014	0.039	0.14
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	g/m³	0.0005	0.00078	1.22	0.017	0.028	0.0075
Barium	g/m³	0.0001	0.0039	0.0066	0.240	0.0128	0.0144
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Boron	g/m³	0.005	<0.0050	0.015	0.034	<0.0050	<0.0050
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Calcium	g/m³	0.05	2.3	62.3	56.8	25.0	19.9
Caesium	g/m³	0.00001	<0.000010	0.00013	0.00019	<0.000010	0.000019
Chromium	g/m³	0.0002	0.00031	<0.00020	<0.00020	0.00026	<0.00020
Cobalt	g/m³	0.00001	0.000084	0.000094	0.000016	0.00015	0.00022
Copper	g/m³	0.0002	0.00061	0.00023	0.00035	0.0012	0.0014
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00090	<0.000050	<0.000050
Iron	g/m³	0.005	0.079	0.21	0.076	0.33	0.35
Lanthanum	g/m³	0.00001	0.00020	0.000026	0.000030	0.000065	0.00016
Lead	g/m³	0.00005	<0.000050	<0.000050	0.00015	0.000073	0.00023
Lithium	g/m³	0.00001	0.00068	0.0133	0.0533	0.00212	0.00182
Magnesium	g/m³	0.01	0.52	16.1	16.6	4.22	2.98
Manganese	g/m³	0.0005	0.0036	0.0592	0.0078	0.039	0.014
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum	g/m³	0.0002	<0.00020	0.0011	0.00035	<0.00020	<0.00020
Nickel	g/m³	0.0002	0.00031	0.00024	<0.00020	0.00051	0.00066
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Potassium	g/m³	0.05	0.41	2.2	1.5	1.7	1.1
Rubidium	g/m³	0.00005	0.00028	0.0014	0.0021	0.00044	0.00068
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium	g/m³	0.01	2.01	20.9	45.7	5.46	4.29
Strontium	g/m³	0.0001	0.0230	0.516	10.6	0.314	0.256
Sulfur*	g/m³	10	<10	11	<10	<10	<10
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium	g/m³	0.002	0.0021	<0.0020	<0.0020	0.0023	0.0080
Tungsten	g/m³	0.0003	<0.00030	<0.00030	0.0894	<0.00030	<0.00030
Uranium	g/m³	0.00003	<0.000030	0.00221	0.0010	0.000086	0.00016
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.00019	0.000094	0.00030	0.000072	0.00014
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	0.0036	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Silver*	g/m³	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Aluminium	g/m³	0.003	0.055	0.0094	0.25	0.412	0.022
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00018	0.00013	<0.00010
Arsenic	g/m³	0.0005	0.0092	0.038	0.0020	0.00088	0.0015
Barium	g/m³	0.0001	0.0065	0.0141	0.0420	0.0454	0.0171
Beryllium	g/m³	0.00001	<0.000010	<0.000010	0.000019	0.000032	<0.000010
Boron	g/m³	0.005	<0.0050	<0.0050	0.027	0.023	<0.0050
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Calcium	g/m³	0.05	9.65	25.9	58.4	40.9	19.0
Caesium	g/m³	0.00001	<0.000010	<0.000010	0.000044	0.000083	<0.000010
Chromium	g/m³	0.0002	<0.00020	0.00020	0.00051	0.00057	<0.00020
Cobalt	g/m³	0.00001	0.00013	0.00026	0.00028	0.00046	0.00016
Copper	g/m³	0.0002	0.00067	0.0011	0.0011	0.0014	0.0014
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.000063	<0.000050	<0.000050
Iron	g/m³	0.005	0.18	0.38	0.41	0.900	0.12
Lanthanum	g/m³	0.00001	0.00012	0.000018	0.00022	0.00038	0.000044
Lead	g/m³	0.00005	0.000086	<0.000050	0.00039	0.00071	<0.000050

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Lithium	g/m³	0.00001	0.00109	0.00207	0.00668	0.00423	0.00131
Magnesium	g/m³	0.01	1.75	4.37	15.9	8.47	2.46
Manganese	g/m³	0.0005	0.016	0.0509	0.018	0.0501	0.0054
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00041	0.00021	<0.00020
Nickel	g/m³	0.0002	0.00035	0.00046	0.00055	0.00067	0.00050
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	0.046	<0.040
Potassium	g/m³	0.05	0.80	1.7	1.9	1.6	1.1
Rubidium	g/m³	0.00005	0.00033	0.00039	0.00088	0.0013	0.00032
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium	g/m³	0.01	3.17	5.47	10.0	5.75	3.97
Strontium	g/m³	0.0001	0.109	0.312	0.845	0.604	0.236
Sulfur*	g/m³	10	<10	<10	12	<10	<10
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium	g/m³	0.002	<0.0020	0.0027	0.0049	0.0085	0.0021
Tungsten	g/m³	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Uranium	g/m³	0.00003	0.000050	0.00012	0.00434	0.00205	0.00016
Vanadium	g/m³	0.0005	0.00063	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.00012	<0.000050	0.00017	0.00034	0.000084
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Silver*	g/m³	0.002	<0.0020	<0.0020
Aluminium	g/m³	0.003	0.0036	0.084
Antimony	g/m³	0.0001	0.00020	0.00055
Arsenic	g/m³	0.0005	0.0600	0.00068
Barium	g/m³	0.0001	0.141	0.0361
Beryllium	g/m³	0.00001	0.000023	<0.000010
Boron	g/m³	0.005	<0.0050	0.033
Cadmium	g/m³	0.00002	<0.000020	<0.000020
Calcium	g/m³	0.05	72.1	78.3
Caesium	g/m³	0.00001	0.00016	<0.000010
Chromium	g/m³	0.0002	<0.00020	0.00020
Cobalt	g/m³	0.00001	<0.000010	0.00022
Copper	g/m³	0.0002	<0.00020	0.0015
Germanium	g/m³	0.00005	0.00013	0.000064
Iron	g/m³	0.005	0.34	0.16
Lanthanum	g/m³	0.00001	0.000011	0.000065
Lead	g/m³	0.00005	<0.000050	0.00017
Lithium	g/m³	0.00001	0.00873	0.00917
Magnesium	g/m³	0.01	23.1	19.4
Manganese	g/m³	0.0005	0.0046	0.0061
Mercury	g/m³	0.0001	<0.00010	<0.00010
Molybdenum	g/m³	0.0002	0.00038	0.0012
Nickel	g/m³	0.0002	<0.00020	0.00045
Phosphorus	g/m³	0.04	<0.040	<0.040
Potassium	g/m³	0.05	1.5	2.2
Rubidium	g/m³	0.00005	0.0021	0.00037

Elements in Water (Total Recoverable)

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Selenium	g/m³	0.001	<0.0010	0.0011
Sodium	g/m³	0.01	8.49	20.8
Strontium	g/m³	0.0001	1.20	0.942
Sulfur*	g/m³	10	<10	10
Tin	g/m³	0.0005	<0.00050	<0.00050
Thallium	g/m³	0.0001	<0.00010	<0.00010
Titanium	g/m³	0.002	<0.0020	0.0036
Tungsten	g/m³	0.0003	0.0013	0.00049
Uranium	g/m³	0.00003	0.00545	0.00760
Vanadium	g/m³	0.0005	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.00048	0.000076
Zinc	g/m³	0.003	<0.0030	<0.0030

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
Silica	g/m³	0.1	9.09	16.2	20.6	8.80	8.52
Aluminium	g/m³	0.003	0.049	0.0054	0.0050	0.0095	0.010
Arsenic	g/m³	0.0005	0.00081	1.11	0.018	0.017	0.0044
Barium	g/m³	0.0002	0.0034	0.0057	0.229	0.0104	0.0112
Beryllium	g/m³	0.00001	0.000015	0.000014	<0.000010	0.000023	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.014	0.032	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000078	0.000085	0.000011	0.00014	0.00011
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	0.00019	0.00017	0.00019	0.000013	<0.000010
Copper	g/m³	0.0002	0.00057	0.00034	<0.00020	0.0012	0.0012
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00085	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.00015	0.000024	0.000011	0.000030	0.000024
Lithium	g/m³	0.00001	0.00079	0.0131	0.0524	0.00192	0.00158
Molybdenum	g/m³	0.0002	<0.00020	0.0011	0.00037	<0.00020	<0.00020
Nickel	g/m³	0.0002	0.00029	0.00026	<0.00020	0.00041	0.00041
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00035	0.00139	0.00202	0.00036	0.00030
Sulfur*	g/m³	10	<10	11	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	0.00066	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0221	0.502	10.3	0.285	0.249
Thallium	g/m³	0.00001	<0.000010	0.000015	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.00205	0.00093	0.000097	0.00013
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.00016	0.000050	0.00024	0.000050	0.000050

Elements in Water (Soluble)

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
Silica	g/m³	0.1	8.97	9.07	6.45	7.45	6.97
Aluminium	g/m³	0.003	0.023	0.0037	0.0075	0.0096	0.0074
Arsenic	g/m³	0.0005	0.0067	0.023	0.0017	<0.00050	0.0012
Barium	g/m³	0.0002	0.0056	0.0129	0.0361	0.0332	0.0160
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010	0.026	0.020	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000084	0.00020	0.000061	0.000092	0.00012
Chromium	g/m³	0.0002	0.00025	0.00023	<0.00020	0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00073	0.0012	0.00066	0.00075	0.0015
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000055	0.000012	0.000021	0.000017	0.000018
Lithium	g/m³	0.00001	0.0010	0.00203	0.00612	0.00362	0.00126
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00041	0.00025	<0.00020
Nickel	g/m³	0.0002	0.00031	0.00043	0.00023	0.00024	0.00061
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00026	0.00037	0.00020	0.00022	0.00029
Sulfur*	g/m³	10	<10	<10	11	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00015	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	<0.00050	0.00055	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.105	0.304	0.815	0.577	0.230
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.000049	0.00012	0.00389	0.0018	0.00017
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000075	0.000028	0.000047	0.000029	0.000062

Elements in Water (Soluble)

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
Silica	g/m³	0.1	23.4	6.99
Aluminium	g/m³	0.003	<0.0030	0.0032
Arsenic	g/m³	0.0005	0.0516	0.00066
Barium	g/m³	0.0002	0.134	0.0339
Beryllium	g/m³	0.00001	0.000021	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.031
Cadmium	g/m³	0.00002	<0.000020	<0.000020
Cobalt	g/m³	0.00001	<0.000010	0.00013
Chromium	g/m³	0.0002	<0.00020	<0.00020
Caesium	g/m³	0.00001	0.00015	<0.000010
Copper	g/m³	0.0002	<0.00020	0.0014
Germanium	g/m³	0.00005	0.000085	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	<0.000010	<0.000010

Elements in Water (Soluble)

Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Lithium	g/m ³	0.00001	0.00836	0.00876
Molybdenum	g/m ³	0.0002	0.00039	0.0011
Nickel	g/m ³	0.0002	<0.00020	0.00026
Phosphorus	g/m ³	0.04	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00201	0.00021
Sulfur*	g/m ³	10	<10	<10
Antimony	g/m ³	0.0001	0.00019	0.00052
Selenium	g/m ³	0.0005	<0.00050	0.00085
Tin	g/m ³	0.0002	<0.00020	<0.00020
Strontium	g/m ³	0.0001	1.17	0.914
Thallium	g/m ³	0.00001	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.00488	0.00679
Vanadium	g/m ³	0.0005	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.00019	0.000029

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-1	24-29331-2	24-29331-3	24-29331-4	24-29331-5
pH	pH	1	7.0	6.0	8.1	7.6	7.6
Electrical Conductivity	µS/cm	0.2	22.6	449	441	159	128
Total Alkalinity (CaCO ₃)	g CaCO ₃ /m ³	1	7.4	198	202	65.4	53.8
Chloride	g/m ³	0.5	0.71	7.00	9.05	2.40	2.03
Sulfate	g/m ³	0.15	0.23	26.0	8.73	3.57	1.67
Nitrate-N	g/m ³	0.002	0.0046	0.196	<0.0020	<0.0020	0.0340
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.008	0.029	<0.002	<0.002	<0.002
Ammonia as N	g/m ³	0.005	0.005	<0.005	0.11	<0.005	<0.005
Sodium	g/m ³	0.01	1.91	19.2	43.0	5.09	4.11
Potassium	g/m ³	0.05	0.38	2.2	1.5	1.7	1.0
Calcium	g/m ³	0.05	2.3	60.9	57.7	23.9	19.4
Magnesium	g/m ³	0.01	0.49	15.3	15.7	4.01	2.87
Iron	g/m ³	0.005	0.042	0.0098	0.016	0.062	0.031
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.00086	0.025	0.0073	0.0095	0.00084
Sum of Anions*	meq/L	0.01	0.17	4.71	4.56	1.46	1.18
Sum of Cations*	meq/L	0.01	0.25	5.19	6.09	1.79	1.41
EC/10*	(mS/m)/10	0.002	0.23	4.49	4.41	1.59	1.28

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-6	24-29331-7	24-29331-8	24-29331-9	24-29331-10
pH	pH	1	7.3	7.6	8.1	8.0	7.5
Electrical Conductivity	µS/cm	0.2	69.0	175	403	253	117
Total Alkalinity (CaCO ₃)	g CaCO ₃ /m ³	1	28.0	74.2	162	124	51.7
Chloride	g/m ³	0.5	1.28	2.28	4.34	2.70	2.15

Anion/Cation Suite

Client Sample ID			RS03	RSA01	SC01	SC03	RS04
Date Sampled			19/09/2024	19/09/2024	19/09/2024	19/09/2024	19/09/2024
Sulfate	g/m ³	0.15	1.18	2.87	27.3	9.84	1.06
Nitrate-N	g/m ³	0.002	<0.0020	<0.0020	0.165	0.240	0.0043
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.005	<0.002	0.003	0.002	<0.002
Ammonia as N	g/m ³	0.005	<0.005	<0.005	<0.005	<0.005	0.006
Sodium	g/m ³	0.01	2.94	5.09	9.30	5.41	3.84
Potassium	g/m ³	0.05	0.79	1.6	1.7	1.4	1.1
Calcium	g/m ³	0.05	9.38	25.3	57.2	38.2	18.8
Magnesium	g/m ³	0.01	1.64	4.12	15.0	7.90	2.39
Iron	g/m ³	0.005	0.047	0.14	0.016	0.025	0.029
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0044	0.043	0.0033	0.0044	0.00090
Sum of Anions*	meq/L	0.01	0.62	1.62	3.99	2.81	1.12
Sum of Cations*	meq/L	0.01	0.75	1.87	4.54	2.83	1.33
EC/10*	(mS/m)/10	0.002	0.69	1.75	4.03	2.53	1.17

Anion/Cation Suite

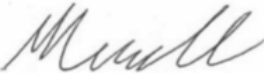
Client Sample ID			MDD302	JC01
Date Sampled			19/09/2024	19/09/2024
Analyte	Unit	Reporting Limit	24-29331-11	24-29331-12
pH	pH	1	7.8	8.3
Electrical Conductivity	µS/cm	0.2	482	530
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	237	241
Chloride	g/m ³	0.5	2.95	5.64
Sulfate	g/m ³	0.15	8.14	22.2
Nitrate-N	g/m ³	0.002	0.0030	0.107
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002	0.007
Ammonia as N	g/m ³	0.005	0.05	<0.005
Sodium	g/m ³	0.01	8.05	19.3
Potassium	g/m ³	0.05	1.5	2.1
Calcium	g/m ³	0.05	71.2	75.3
Magnesium	g/m ³	0.01	22.1	17.9
Iron	g/m ³	0.005	<0.0050	<0.0050
Zinc	g/m ³	0.001	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0041	0.00068
Sum of Anions*	meq/L	0.01	5.03	5.57
Sum of Cations*	meq/L	0.01	5.77	6.12
EC/10*	(mS/m)/10	0.002	4.82	5.30

Method Summary

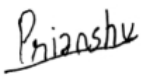
Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).

Method Summary

NO₂-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourmetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ . I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.


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Certificate of Analysis

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Sampling Site: Bendigo Ophir Project

Lab Reference: 24-30758
Submitted by:
Date Received: 4/10/2024
Testing Initiated: 4/10/2024
Date Completed: 10/10/2024
Order Number:
Reference:

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Total Phosphorus	g/m ³	0.005	0.20	0.0057	0.060	0.12	0.020

Total Phosphorus in Water

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Total Phosphorus	g/m ³	0.005	0.027	0.15	0.070	0.0059

Water Aggregate Properties

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Total Acidity to pH 8.3 (CaCO ₃)	g/m ³	1.0	<1.00	3.33	3.33	3.33	2.00

Water Aggregate Properties

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	1.33	3.33	6.67

Turbidity

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Turbidity	NTU	0.05	0.7	1.5	16	47	3.1

Turbidity

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Turbidity	NTU	0.05	7.6	57	16	3.2

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Nitrite-N	g/m³	0.001	0.0010	<0.0010	<0.0010	0.0019	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Nitrite-N	g/m³	0.001	0.0010	0.0018	0.0018	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Total Kjeldahl Nitrogen	g/m³	0.1	0.12	0.13	0.45	1.01	0.39
Total Nitrogen	g/m³	0.1	0.33	0.13	0.46	1.1	0.39

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Total Kjeldahl Nitrogen	g/m³	0.1	0.50	1.10	0.97	<0.10
Total Nitrogen	g/m³	0.1	0.53	1.3	0.97	<0.10

Custom Job

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Custom Job			Complete	Complete	Complete	Complete	Complete

Custom Job

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Custom Job			Complete	Complete	Complete	Complete

Fluoride in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Fluoride	g/m³	0.04	0.31	0.15	0.064	0.049	<0.040

Fluoride in Water

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Fluoride	g/m³	0.04	0.055	0.077	0.052	0.14

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Bromide	g/m³	0.005	0.050	0.060	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Bromide	g/m³	0.005	<0.05	<0.05	<0.05	<0.05

Water Hardness

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Total Hardness	g eqv. CaCO ₃ /m³	0.05	200	190	70	48	32

Water Hardness

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Total Hardness	g eqv. CaCO ₃ /m³	0.05	68	180	42	250

Cyanide in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Total Cyanide	g/m³	0.001	<0.001	<0.001	<0.001	<0.001

Solids in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Total Suspended Solids	g/m³	3	<3	<3	18	52	6
Total Dissolved Solids	g/m³	3	260	226	86	68	54

Solids in Water

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Total Suspended Solids	g/m³	3	7	122	24	<3
Total Dissolved Solids	g/m³	3	87	186	75	262

Elements in Water (Soluble)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Silica	g/m³	0.1	16.2	19.3	8.68	6.72	8.47
Arsenic	g/m³	0.0005	1.09	0.016	0.016	0.0052	0.0082
Aluminium	g/m³	0.003	<0.0030	0.0044	0.0085	0.027	0.028
Barium	g/m³	0.0002	0.0054	0.218	0.0120	0.0099	0.0066
Beryllium	g/m³	0.00001	<0.000010	0.000011	<0.000010	<0.000010	0.000014
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.027	<0.010	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	0.000021
Cobalt	g/m³	0.00001	0.000064	0.000018	0.00017	0.00017	0.000086
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	0.00013	0.00018	<0.000010	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00022	<0.00020	0.0011	0.0016	0.00070
Germanium	g/m³	0.00005	<0.000050	0.00091	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	<0.000010	0.000011	0.000037	0.000067	0.000079
Lithium	g/m³	0.00001	0.0134	0.0500	0.00186	0.00117	0.00111
Molybdenum	g/m³	0.0002	0.00097	0.00033	<0.00020	<0.00020	<0.00020
Nickel	g/m³	0.0002	<0.00020	<0.00020	0.00054	0.00058	0.00027
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	0.000069	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00134	0.00184	0.00043	0.00050	0.00038
Sulfur*	g/m³	10	<10	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	0.00075	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.492	9.48	0.274	0.180	0.122
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.00208	0.00092	0.000089	0.000098	0.000079
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000019	0.00020	0.000039	0.000095	0.00010

Elements in Water (Soluble)

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Silica	g/m³	0.1	8.58	6.82	6.10	22.8
Arsenic	g/m³	0.0005	0.018	0.0019	0.0019	0.0518
Aluminium	g/m³	0.003	0.0052	0.0072	0.031	<0.0030
Barium	g/m³	0.0002	0.0116	0.0324	0.0123	0.133
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	0.000014
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010

Elements in Water (Soluble)

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Boron	g/m³	0.01	<0.010	0.023	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.00013	0.00011	0.00017	<0.000010
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	0.00016
Copper	g/m³	0.0002	0.0011	0.00067	0.0017	<0.00020
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	0.000070
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000018	0.000021	0.00010	<0.000010
Lithium	g/m³	0.00001	0.00181	0.00553	0.00086	0.00854
Molybdenum	g/m³	0.0002	<0.00020	0.00040	<0.00020	0.00037
Nickel	g/m³	0.0002	0.00048	0.00024	0.00063	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	0.000063	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00053	0.00021	0.00037	0.00194
Sulfur*	g/m³	10	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	0.00014	<0.00010	0.00019
Selenium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.265	0.679	0.162	1.13
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.00011	0.00338	0.00012	0.00489
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000032	0.000036	0.00015	0.00019

Elements in Water (Total Recoverable)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
Arsenic	g/m³	0.0005	1.13	0.020	0.0695	0.017	0.013
Aluminium	g/m³	0.003	0.0050	0.031	0.325	0.978	0.083
Barium	g/m³	0.0001	0.0057	0.225	0.0198	0.0256	0.0081
Beryllium	g/m³	0.00001	<0.000010	0.000021	0.000024	0.000048	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	0.010	0.028	<0.0050	<0.0050	<0.0050
Calcium	g/m³	0.05	53.7	50.3	21.3	14.6	9.61
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000075	0.000028	0.00049	0.00087	0.00017
Chromium	g/m³	0.0002	0.00025	<0.00020	0.00067	0.00079	0.00024
Caesium	g/m³	0.00001	0.00015	0.00019	0.000045	0.00016	<0.000010
Copper	g/m³	0.0002	<0.00020	<0.00020	0.0014	0.0027	0.00087
Iron	g/m³	0.005	0.18	0.085	1.60	1.78	0.30
Germanium	g/m³	0.00005	<0.000050	0.0010	0.000076	0.00013	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	2.0	1.4	2.1	2.0	1.0
Lanthanum	g/m³	0.00001	0.000015	0.000064	0.00033	0.00077	0.00021
Lithium	g/m³	0.00001	0.0138	0.0522	0.00244	0.00229	0.00117
Magnesium	g/m³	0.01	15.4	15.0	4.09	2.73	1.90
Manganese	g/m³	0.0005	0.042	0.0077	0.177	0.0617	0.029
Molybdenum	g/m³	0.0002	0.0011	0.00037	<0.00020	<0.00020	<0.00020
Sodium	g/m³	0.01	18.8	38.5	4.64	3.07	3.01
Nickel	g/m³	0.0002	0.00026	<0.00020	0.00066	0.0014	0.00032

Elements in Water (Total Recoverable)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Phosphorus	g/m³	0.04	<0.040	<0.040	0.045	0.089	<0.040
Lead	g/m³	0.00005	0.00018	0.000066	0.00065	0.0018	0.00014
Rubidium	g/m³	0.00005	0.0014	0.0019	0.0012	0.0029	0.00047
Sulfur*	g/m³	10	11	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.493	9.66	0.310	0.196	0.123
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00218	0.00096	0.00012	0.00023	0.000092
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	0.0013	<0.00050
Yttrium	g/m³	0.00005	0.000059	0.00029	0.00022	0.00060	0.00018
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	0.0061	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
Arsenic	g/m³	0.0005	0.045	0.0050	0.0052	0.0588
Aluminium	g/m³	0.003	0.10	1.34	0.475	0.0098
Barium	g/m³	0.0001	0.0142	0.0607	0.0203	0.138
Beryllium	g/m³	0.00001	<0.000010	0.000077	0.000028	0.000029
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	0.060	<0.0050	<0.0050
Calcium	g/m³	0.05	20.4	47.6	13.3	63.3
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.00021	0.00176	0.00053	<0.000010
Chromium	g/m³	0.0002	0.00027	0.0015	0.00059	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00024	0.000078	0.00015
Copper	g/m³	0.0002	0.0012	0.0037	0.0025	<0.00020
Iron	g/m³	0.005	0.891	2.45	1.15	0.33
Germanium	g/m³	0.00005	<0.000050	0.00020	0.000051	0.000091
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	2.1	3.2	1.8	1.4
Lanthanum	g/m³	0.00001	0.00013	0.00136	0.00047	0.000016
Lithium	g/m³	0.00001	0.00192	0.00789	0.00147	0.00857
Magnesium	g/m³	0.01	4.10	13.8	2.09	21.8
Manganese	g/m³	0.0005	0.049	0.234	0.043	0.0047
Molybdenum	g/m³	0.0002	<0.00020	0.00026	<0.00020	0.00040
Sodium	g/m³	0.01	4.48	8.03	2.85	7.62
Nickel	g/m³	0.0002	0.00052	0.0021	0.0011	<0.00020
Phosphorus	g/m³	0.04	<0.040	0.21	0.078	<0.040
Lead	g/m³	0.00005	0.00020	0.0028	0.00082	<0.000050
Rubidium	g/m³	0.00005	0.00075	0.0033	0.0014	0.0020
Sulfur*	g/m³	10	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	0.00018	0.00011	0.00018
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.270	0.724	0.177	1.15
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00012	0.00316	0.00023	0.00511
Vanadium	g/m³	0.0005	<0.00050	0.0019	0.00053	<0.00050

Elements in Water (Total Recoverable)

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Yttrium	g/m ³	0.00005	0.00012	0.00097	0.00047	0.00048
Zinc	g/m ³	0.003	<0.0030	0.0083	<0.0030	<0.0030

Anion/Cation Suite

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-1	24-30758-2	24-30758-3	24-30758-4	24-30758-5
pH	pH	1	8.2	8.1	7.7	7.5	7.3
Electrical Conductivity	µS/cm	0.2	458	422	156	103	76.5
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	194	198	68.9	44.2	35.3
Chloride	g/m ³	0.5	7.45	9.02	2.41	1.58	1.58
Sulfate	g/m ³	0.15	28.7	8.97	2.39	0.78	1.08
Nitrate-N	g/m ³	0.002	0.211	0.0045	0.0098	0.0437	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.020	<0.002	<0.002	0.003	0.007
Ammonia as N	g/m ³	0.005	<0.005	0.09	<0.005	<0.005	<0.005
Sodium	g/m ³	0.01	19.6	40.1	4.78	3.15	3.21
Potassium	g/m ³	0.05	2.0	1.4	2.1	1.7	1.1
Calcium	g/m ³	0.05	56.1	48.3	21.7	14.3	9.96
Magnesium	g/m ³	0.01	15.5	14.8	3.99	2.50	1.94
Iron	g/m ³	0.005	0.012	0.0088	0.096	0.093	0.061
Zinc	g/m ³	0.001	<0.0010	<0.0010	0.0013	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.036	0.0066	0.033	0.0054	0.0044
Sum of Anions*	meq/L	0.01	4.79	4.47	1.51	0.95	0.78
Sum of Cations*	meq/L	0.01	4.98	5.41	1.68	1.10	0.83
EC/10*	(mS/m)/10	0.002	4.58	4.22	1.56	1.03	0.76

Anion/Cation Suite

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
Analyte	Unit	Reporting Limit	24-30758-6	24-30758-7	24-30758-8	24-30758-9
pH	pH	1	7.6	8.0	7.4	7.7
Electrical Conductivity	µS/cm	0.2	149	342	90.4	471
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	67.6	145	41.9	235
Chloride	g/m ³	0.5	2.24	3.63	1.45	3.10
Sulfate	g/m ³	0.15	2.00	21.8	0.43	9.50
Nitrate-N	g/m ³	0.002	0.0329	0.149	<0.0020	0.0085
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002	0.003	0.004	<0.002
Ammonia as N	g/m ³	0.005	<0.005	<0.005	<0.005	0.05
Sodium	g/m ³	0.01	4.59	8.16	2.87	7.86
Potassium	g/m ³	0.05	2.1	1.9	1.7	1.4
Calcium	g/m ³	0.05	20.6	45.7	13.3	64.1
Magnesium	g/m ³	0.01	4.03	12.9	1.95	21.6
Iron	g/m ³	0.005	0.10	0.027	0.12	<0.0050
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.022	0.0035	0.0036	0.0047
Sum of Anions*	meq/L	0.01	1.47	3.50	0.89	5.03
Sum of Cations*	meq/L	0.01	1.62	3.75	1.00	5.35

Anion/Cation Suite

Client Sample ID			RSA01	SC01	RS04	MDD302
Date Sampled			3/10/2024	3/10/2024	3/10/2024	3/10/2024
EC/10*	(mS/m)/10	0.002	1.49	3.42	0.90	4.71

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO₂-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourimetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ . I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.

Method Summary

Sum of Cations

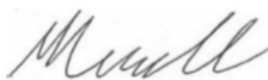
Sum of milliequivalents/Litre of measured Cations.



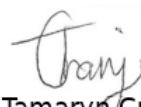
Louise Coombridge, B.Sc.
Chemist



Prianshu Chawla, B.Sc.
Chemist



Matthew Counsell, B.Sc.
Environmental Lab Manager



Tamaryn Cronje
Customer Service



CERTIFICATE OF ANALYSIS

Matakanui Gold/Cuffs Limited
Cuffs Limited, Level 2, Como House, 51 Tancred Street
Hokitika 7810

Attention: Alex Nichol
Phone: 0275886631
Email: anichol@santanaminerals.com

Sampling Site: Bendigo Ophir Project

Lab Reference: 24-32269
Submitted by:
Date Received: 18/10/2024
Testing Initiated: 18/10/2024
Date Completed: 25/10/2024
Order Number:
Reference:

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at ALS NZ (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Total Phosphorus	g/m ³	0.005	0.014	0.28	0.0071	0.0089	0.0059

Total Phosphorus in Water

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Total Phosphorus	g/m ³	0.005	0.0093	0.0092	0.013	<0.0050	0.010

Water Aggregate Properties

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Total Acidity to pH 8.3 (CaCO ₃)	g/m ³	1.0	3.33	<1.00	4.00	2.67	2.67



Water Aggregate Properties

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	3.33	2.67	2.67	5.33

Turbidity

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Turbidity	NTU	0.05	0.4	1	0.3	1.3	2.3

Turbidity

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Turbidity	NTU	0.05	2.8	0.8	2.2	0.4	4.2

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	0.0028	<0.0010	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Total Kjeldahl Nitrogen	g/m³	0.1	0.12	0.45	0.17	0.47	0.41
Total Nitrogen	g/m³	0.1	0.12	0.70	0.17	0.47	0.43

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Total Kjeldahl Nitrogen	g/m ³	0.1	0.24	0.41	1.29	0.39	0.12
Total Nitrogen	g/m ³	0.1	0.24	0.42	1.4	0.39	0.12

Fluoride in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Fluoride	g/m ³	0.04	<0.040	0.28	0.15	0.078	0.053

Fluoride in Water

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Fluoride	g/m ³	0.04	<0.040	0.072	0.090	0.062	0.14

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Bromide	g/m ³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Bromide	g/m ³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Water Hardness

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	7.1	210	190	75	61

Water Hardness

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	30	76	210	67	250

Cyanide in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Total Cyanide	g/m ³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Total Cyanide	g/m ³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Solids in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Total Suspended Solids	g/m ³	3	<3	<3	4	<3	5
Total Dissolved Solids	g/m ³	3	19	250	247	66	65

Solids in Water

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Total Suspended Solids	g/m ³	3	5	<3	7	<3	<3
Total Dissolved Solids	g/m ³	3	45	95	226	87	252

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Arsenic	g/m ³	0.0005	0.00072	1.10	0.020	0.024	0.0070
Aluminium	g/m ³	0.003	0.043	<0.0030	0.0098	0.013	0.066
Barium	g/m ³	0.0001	0.0035	0.0056	0.231	0.0127	0.0125
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	0.000011	<0.000010	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.005	<0.0050	<0.0050	0.021	<0.0050	<0.0050
Calcium	g/m ³	0.05	2.1	57.6	49.7	23.3	19.1
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Cobalt	g/m³	0.00001	0.000041	0.000039	<0.000010	0.00011	0.00012
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00013	0.00020	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00031	<0.00020	<0.00020	0.00080	0.00099
Iron	g/m³	0.005	0.042	0.16	0.063	0.15	0.14
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00081	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.29	2.0	1.4	1.2	0.91
Lanthanum	g/m³	0.00001	0.00012	0.000011	0.000026	0.000019	0.000084
Lithium	g/m³	0.00001	0.00053	0.0144	0.0542	0.00218	0.00212
Magnesium	g/m³	0.01	0.47	16.2	15.9	4.18	3.24
Manganese	g/m³	0.0005	0.0019	0.037	0.0070	0.024	0.0059
Molybdenum	g/m³	0.0002	<0.00020	0.0010	0.00021	<0.00020	<0.00020
Sodium	g/m³	0.01	1.75	20.4	42.7	5.21	4.53
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00035	0.00041
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	0.000090
Rubidium	g/m³	0.00005	0.00022	0.0013	0.0019	0.00029	0.00040
Sulfur*	g/m³	10	<10	11	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.0212	0.494	9.71	0.312	0.250
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	0.00215	0.00096	0.00010	0.00025
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.00011	0.000066	0.00027	<0.000050	0.000080
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Arsenic	g/m³	0.0005	0.0078	0.032	0.0023	0.0010	0.0606
Aluminium	g/m³	0.003	0.027	0.0052	0.11	0.012	0.0068
Barium	g/m³	0.0001	0.0062	0.0139	0.0441	0.0176	0.135
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.000030
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	<0.0050	0.020	<0.0050	<0.0050
Calcium	g/m³	0.05	9.25	23.6	56.9	21.7	65.7
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000088	0.00017	0.00020	0.00013	0.000011
Chromium	g/m³	0.0002	<0.00020	<0.00020	0.00023	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	0.000016	<0.000010	0.00015
Copper	g/m³	0.0002	0.00060	0.00079	0.00087	0.00098	<0.00020
Iron	g/m³	0.005	0.17	0.37	0.19	0.037	0.32
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	0.00013
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.59	1.2	1.9	0.86	1.4
Lanthanum	g/m³	0.00001	0.000062	<0.000010	0.00012	0.000023	0.000022
Lithium	g/m³	0.00001	0.00106	0.00209	0.00734	0.00169	0.00880
Magnesium	g/m³	0.01	1.70	4.23	16.8	3.13	22.0

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Manganese	g/m³	0.0005	0.012	0.0551	0.016	0.0035	0.0053
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00023	<0.00020	0.00029
Sodium	g/m³	0.01	3.03	5.22	10.1	4.31	8.31
Nickel	g/m³	0.0002	0.00034	0.00034	0.00040	0.00048	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	0.00025	<0.000050	0.00019	<0.000050	<0.000050
Rubidium	g/m³	0.00005	0.00023	0.00025	0.00047	0.00022	0.0020
Sulfur*	g/m³	10	<10	<10	12	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00017	<0.00010	0.00019
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.107	0.298	0.857	0.275	1.11
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.000043	0.000099	0.00442	0.00030	0.00488
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.000069	<0.000050	0.00011	<0.000050	0.00048
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	0.0035

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
Silica	g/m³	0.1	7.83	16.1	19.6	8.59	8.57
Aluminium	g/m³	0.003	0.028	<0.0030	0.0032	<0.0030	0.0073
Arsenic	g/m³	0.0005	0.00062	1.02	0.018	0.020	0.0062
Barium	g/m³	0.0002	0.0032	0.0052	0.230	0.0127	0.0116
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010	0.022	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000034	0.000053	<0.000010	0.000092	0.000070
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00014	0.00020	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00036	<0.00020	<0.00020	0.00088	0.00073
Germanium	g/m³	0.00005	0.000067	0.000098	0.00081	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000082	<0.000010	<0.000010	<0.000010	0.000014
Lithium	g/m³	0.00001	0.00054	0.0137	0.0521	0.00218	0.00199
Molybdenum	g/m³	0.0002	<0.00020	0.00089	0.00028	<0.00020	<0.00020
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00075	0.00032
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00018	0.00132	0.00187	0.00028	0.00021
Sulfur*	g/m³	10	<10	12	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	0.00076	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0204	0.480	9.55	0.321	0.245
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.00213	0.00095	0.00012	0.00023
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000082	0.000019	0.00022	0.000019	0.000032

Elements in Water (Soluble)

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
Silica	g/m³	0.1	8.12	8.71	6.29	6.29	22.9
Aluminium	g/m³	0.003	0.015	<0.0030	0.0075	0.0051	<0.0030
Arsenic	g/m³	0.0005	0.0065	0.028	0.0020	0.00094	0.0523
Barium	g/m³	0.0002	0.0057	0.0138	0.0418	0.0174	0.134
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.000027
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010	0.018	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000077	0.00015	0.000070	0.00010	<0.000010
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.00015
Copper	g/m³	0.0002	0.00055	0.00077	0.00063	0.0011	<0.00020
Germanium	g/m³	0.00005	<0.000050	0.00011	<0.000050	<0.000050	0.000064
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000036	<0.000010	0.000014	0.000014	<0.000010
Lithium	g/m³	0.00001	0.00098	0.00208	0.00677	0.00153	0.00816
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00036	<0.00020	<0.00020
Nickel	g/m³	0.0002	<0.00020	0.00032	0.00023	0.00041	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00019	0.00025	0.00022	0.00021	0.00189
Sulfur*	g/m³	10	<10	<10	12	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00020	<0.00010	0.00020
Selenium	g/m³	0.0005	<0.00050	<0.00050	0.00068	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.104	0.295	0.844	0.278	1.11
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.000052	0.00010	0.00437	0.00033	0.00486
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000055	0.000024	0.000043	0.000041	0.00018

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-1	24-32269-2	24-32269-3	24-32269-4	24-32269-5
pH	pH	1	6.8	8.3	8.2	7.6	7.5
Electrical Conductivity	µS/cm	0.2	21.8	510	486	179	146
Total Alkalinity (CaCO3)	g CaCO ₃ /m³	1	7.4	197	202	73.6	60.9
Chloride	g/m³	0.5	0.67	7.46	9.27	2.00	2.02
Sulfate	g/m³	0.15	0.26	28.8	9.10	2.22	1.33
Nitrate-N	g/m³	0.002	0.0031	0.242	0.0033	0.0066	0.0228
Dissolved Reactive Phosphorus (FIA)	g/m³	0.002	0.008	0.018	<0.002	<0.002	<0.002
Ammonia as N	g/m³	0.005	<0.005	<0.005	0.10	<0.005	<0.005
Sodium	g/m³	0.01	1.76	20.2	43.1	5.12	4.29
Potassium	g/m³	0.05	0.28	2.0	1.4	1.2	0.86
Calcium	g/m³	0.05	2.0	58.0	50.8	23.1	19.2
Magnesium	g/m³	0.01	0.46	15.8	15.8	3.99	3.15
Iron	g/m³	0.005	0.025	<0.0050	0.0061	0.042	0.015

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.00055	0.011	0.0066	0.0093	0.00081
Sum of Anions*	meq/L	0.01	0.17	4.88	4.58	1.58	1.31
Sum of Cations*	meq/L	0.01	0.22	5.13	5.75	1.74	1.43
EC/10*	(mS/m)/10	0.002	0.22	5.10	4.86	1.79	1.46

Anion/Cation Suite

Client Sample ID			RS03	RSA1	SC01	RS04	MDD302
Date Sampled			16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
Analyte	Unit	Reporting Limit	24-32269-6	24-32269-7	24-32269-8	24-32269-9	24-32269-10
pH	pH	1	7.2	7.6	8.2	7.5	7.8
Electrical Conductivity	µS/cm	0.2	73.8	180	456	156	529
Total Alkalinity (CaCO ₃)	g CaCO ₃ /m ³	1	29.2	74.9	185	66.1	236
Chloride	g/m ³	0.5	1.10	2.07	4.42	2.00	2.96
Sulfate	g/m ³	0.15	0.89	1.89	30.1	0.90	9.49
Nitrate-N	g/m ³	0.002	<0.0020	0.0037	0.148	0.0024	0.0046
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.005	<0.002	<0.002	<0.002	<0.002
Ammonia as N	g/m ³	0.005	<0.005	<0.005	0.008	<0.005	0.05
Sodium	g/m ³	0.01	2.90	5.07	10.1	4.39	7.92
Potassium	g/m ³	0.05	0.60	1.1	1.8	0.89	1.4
Calcium	g/m ³	0.05	9.08	23.8	56.6	22.0	65.2
Magnesium	g/m ³	0.01	1.67	4.03	16.3	3.11	21.6
Iron	g/m ³	0.005	0.042	0.27	0.0083	0.016	<0.0050
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0067	0.0509	0.0051	0.0021	0.0041
Sum of Anions*	meq/L	0.01	0.63	1.61	4.53	1.40	5.03
Sum of Cations*	meq/L	0.01	0.73	1.78	4.65	1.57	5.41
EC/10*	(mS/m)/10	0.002	0.74	1.80	4.56	1.56	5.29

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)

Method Summary

Total Cyanide (Trace)	On-line distillation and colourmetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ -I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.



Louise Coombridge, B.Sc.
Chemist



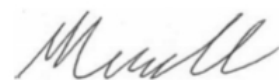
Rowin Angkico, B.Sc.
Laboratory Technician



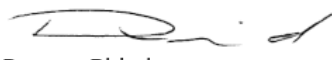
Tamaryn Cronje
Customer Service



Prianshu Chawla, B.Sc.
Chemist



Matthew Counsell, B.Sc.
Environmental Lab Manager



Deanna Rhind
Technician



CERTIFICATE OF ANALYSIS

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Attention: Alex Nichol
Phone: 0275886631
Email: geolists@santanaminerals.com

Sampling Site: Bendigo Ophir Project

Lab Reference: 24-33929
Submitted by:
Date Received: 4/11/2024
Testing Initiated: 4/11/2024
Date Completed: 7/11/2024
Order Number:
Reference: CW

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at ALS NZ (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Total Phosphorus	g/m ³	0.005	0.24	<0.0050	0.0082	0.012	0.092

Total Phosphorus in Water

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Total Phosphorus	g/m ³	0.005	0.011	0.012	<0.0050	0.0099	<0.0050

Water Aggregate Properties

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Total Acidity to pH 8.3 (CaCO ₃)	g/m ³	1.0	<1.00	3.33	3.33	3.33	2.67

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation with the exception of tests marked *, which are not accredited.
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Water Aggregate Properties

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	4.00	<1.00	3.33	6.67	6.67

Turbidity

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Turbidity	NTU	0.05	1.3	1.2	1.4	4.9	0.8

Turbidity

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Turbidity	NTU	0.05	1.7	6.8	1.5	3.3	0.9

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Nitrite-N	g/m³	0.001	<0.0010	0.0041	<0.0010	<0.0010	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Total Kjeldahl Nitrogen	g/m³	0.1	<0.10	0.21	0.32	0.35	0.22
Total Nitrogen	g/m³	0.1	0.22	0.21	0.32	0.36	0.22

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Total Kjeldahl Nitrogen	g/m ³	0.1	0.40	0.39	0.38	<0.10	<0.10
Total Nitrogen	g/m ³	0.1	0.40	0.48	0.38	<0.10	0.51

Fluoride in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Fluoride	g/m ³	0.04	0.31	0.16	0.070	0.074	0.043

Fluoride in Water

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Fluoride	g/m ³	0.04	0.081	0.095	0.058	0.15	0.054

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Bromide	g/m ³	0.005	0.080	0.10	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Bromide	g/m ³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Water Hardness

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	200	190	85	69	31

Water Hardness

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	82	200	71	250	39

Cyanide in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Total Cyanide	g/m ³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Total Cyanide	g/m ³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Solids in Water

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Total Suspended Solids	g/m ³	3	<3	5	<3	9	<3
Total Dissolved Solids	g/m ³	3	252	216	82	76	13

Solids in Water

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
Total Suspended Solids	g/m ³	3	<3	17	<3	<3	<3
Total Dissolved Solids	g/m ³	3	96	206	47	260	71

Elements in Water (Total Recoverable)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Arsenic	g/m ³	0.0005	1.15	0.019	0.030	0.0083	0.0088
Aluminium	g/m ³	0.003	0.0032	0.014	0.021	0.088	0.035
Barium	g/m ³	0.0001	0.0056	0.230	0.0131	0.0133	0.0062
Beryllium	g/m ³	0.00001	<0.000010	0.000015	<0.000010	<0.000010	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.005	<0.0050	0.016	<0.0050	<0.0050	<0.0050
Calcium	g/m ³	0.05	56.4	47.6	26.4	21.8	9.52
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020

Elements in Water (Total Recoverable)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Cobalt	g/m³	0.00001	0.000034	0.000013	0.00013	0.00017	0.000081
Chromium	g/m³	0.0002	0.00021	<0.00020	0.00024	0.00030	0.00034
Caesium	g/m³	0.00001	0.00014	0.00021	<0.000010	0.000015	<0.000010
Copper	g/m³	0.0002	0.00021	<0.00020	0.00072	0.00099	0.00051
Iron	g/m³	0.005	0.28	0.079	0.23	0.17	0.11
Germanium	g/m³	0.00005	<0.000050	0.00094	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	2.0	1.5	1.2	0.87	0.55
Lanthanum	g/m³	0.00001	0.000013	0.000038	0.000024	0.000073	0.000081
Lithium	g/m³	0.00001	0.0141	0.0551	0.00231	0.00206	0.00108
Magnesium	g/m³	0.01	15.5	16.5	4.63	3.49	1.76
Manganese	g/m³	0.0005	0.032	0.0067	0.039	0.0058	0.0099
Molybdenum	g/m³	0.0002	0.0010	0.00023	<0.00020	<0.00020	<0.00020
Sodium	g/m³	0.01	20.7	46.4	5.47	4.59	3.00
Nickel	g/m³	0.0002	<0.00020	<0.00020	0.00042	0.00056	0.00033
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	0.00011	<0.000050
Rubidium	g/m³	0.00005	0.0015	0.0022	0.00035	0.00049	0.00026
Sulfur*	g/m³	10	11	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.531	10.7	0.398	0.311	0.120
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.00227	0.00099	0.00014	0.00027	0.000057
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.000097	0.00029	<0.000050	0.000089	0.00010
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RSA1	SC01	RS04	MDD302	RSB
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-10
Arsenic	g/m³	0.0005	0.024	0.0028	0.0017	0.0633	0.164
Aluminium	g/m³	0.003	0.0063	0.20	0.020	0.0054	0.021
Barium	g/m³	0.0001	0.0138	0.0421	0.0165	0.132	0.0261
Beryllium	g/m³	0.00001	<0.000010	0.000013	<0.000010	0.000013	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	0.013	<0.0050	<0.0050	<0.0050
Calcium	g/m³	0.05	25.6	54.4	23.0	64.7	29.6
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.00012	0.00030	0.00016	<0.000010	0.00131
Chromium	g/m³	0.0002	<0.00020	0.00030	0.00021	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.000034	<0.000010	0.00016	<0.000010
Copper	g/m³	0.0002	0.00074	0.0011	0.0011	<0.00020	0.00059
Iron	g/m³	0.005	0.17	0.32	0.10	0.32	2.10
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	1.2	1.8	0.75	1.4	1.4
Lanthanum	g/m³	0.00001	<0.000010	0.00018	0.000032	0.000012	0.000035
Lithium	g/m³	0.00001	0.00218	0.00720	0.00156	0.00873	0.00227
Magnesium	g/m³	0.01	4.41	15.7	3.20	21.8	5.15

Elements in Water (Total Recoverable)

Client Sample ID			RSA1	SC01	RS04	MDD302	RSB
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Manganese	g/m ³	0.0005	0.024	0.020	0.0085	0.0043	0.670
Molybdenum	g/m ³	0.0002	<0.00020	0.00039	<0.00020	0.00031	<0.00020
Sodium	g/m ³	0.01	5.25	9.78	4.50	8.21	5.49
Nickel	g/m ³	0.0002	0.00043	0.00051	0.00062	<0.00020	0.0011
Phosphorus	g/m ³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	0.00035	<0.000050	<0.000050	0.00026
Rubidium	g/m ³	0.00005	0.00032	0.00079	0.00025	0.0021	0.00041
Sulfur*	g/m ³	10	<10	12	<10	<10	<10
Antimony	g/m ³	0.0001	<0.00010	0.00018	<0.00010	0.00017	<0.00010
Selenium	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m ³	0.0001	0.363	0.877	0.326	1.18	0.417
Thallium	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m ³	0.00003	0.00013	0.00416	0.00034	0.00494	0.00012
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00005	<0.000050	0.00016	0.000059	0.00050	<0.000050
Zinc	g/m ³	0.003	0.0035	<0.0030	<0.0030	<0.0030	0.0046

Elements in Water (Total Recoverable)

Client Sample ID			Base
Date Sampled			31/10/2024
Analyte	Unit	Reporting Limit	24-33929-11
Arsenic	g/m ³	0.0005	<0.00050
Aluminium	g/m ³	0.003	<0.0030
Barium	g/m ³	0.0001	0.0080
Beryllium	g/m ³	0.00001	<0.000010
Bismuth	g/m ³	0.0001	<0.00010
Boron	g/m ³	0.005	<0.0050
Calcium	g/m ³	0.05	11.3
Cadmium	g/m ³	0.00002	0.000048
Cobalt	g/m ³	0.00001	0.000036
Chromium	g/m ³	0.0002	0.00023
Caesium	g/m ³	0.00001	<0.000010
Copper	g/m ³	0.0002	0.151
Iron	g/m ³	0.005	<0.0050
Germanium	g/m ³	0.00005	<0.000050
Mercury	g/m ³	0.0001	<0.00010
Potassium	g/m ³	0.05	0.89
Lanthanum	g/m ³	0.00001	0.000012
Lithium	g/m ³	0.00001	0.00033
Magnesium	g/m ³	0.01	2.64
Manganese	g/m ³	0.0005	<0.00050
Molybdenum	g/m ³	0.0002	<0.00020
Sodium	g/m ³	0.01	5.34
Nickel	g/m ³	0.0002	0.0017
Phosphorus	g/m ³	0.04	<0.040
Lead	g/m ³	0.00005	0.00807
Rubidium	g/m ³	0.00005	<0.000050
Sulfur*	g/m ³	10	<10
Antimony	g/m ³	0.0001	<0.00010
Selenium	g/m ³	0.001	<0.0010
Tin	g/m ³	0.0005	<0.00050

Elements in Water (Total Recoverable)

Client Sample ID			Base
Date Sampled			31/10/2024
Strontium	g/m³	0.0001	0.112
Thallium	g/m³	0.0001	<0.00010
Uranium	g/m³	0.00003	<0.000030
Vanadium	g/m³	0.0005	<0.00050
Yttrium	g/m³	0.00005	<0.000050
Zinc	g/m³	0.003	1.00

Elements in Water (Soluble)

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
Silica	g/m³	0.1	20.3	25.5	11.9	10.9	10.9
Aluminium	g/m³	0.003	<0.0030	0.0033	<0.0030	0.0069	0.020
Arsenic	g/m³	0.0005	0.995	0.017	0.022	0.0071	0.0078
Barium	g/m³	0.0002	0.0051	0.235	0.0129	0.0120	0.0057
Beryllium	g/m³	0.00001	<0.000010	0.000012	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.017	<0.010	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000045	<0.000010	0.000080	0.000080	0.000064
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	0.00013	0.00021	<0.000010	<0.000010	<0.000010
Copper	g/m³	0.0002	<0.00020	<0.00020	0.00058	0.00072	0.00049
Germanium	g/m³	0.00005	<0.000050	0.00097	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	<0.000010	<0.000010	<0.000010	0.000017	0.000047
Lithium	g/m³	0.00001	0.0152	0.0578	0.00255	0.00210	0.00116
Molybdenum	g/m³	0.0002	0.0011	0.00040	<0.00020	<0.00020	<0.00020
Nickel	g/m³	0.0002	<0.00020	<0.00020	0.00048	0.00048	0.00026
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00137	0.00203	0.00029	0.00024	0.00021
Sulfur*	g/m³	10	12	<10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	0.00097	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.512	10.5	0.388	0.289	0.117
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.00229	0.00098	0.00014	0.00027	0.000057
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000019	0.00020	0.000019	0.000041	0.000078

Elements in Water (Soluble)

Client Sample ID			RSA1	SC01	RS04	MDD302	RSB
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-10
Silica	g/m³	0.1	12.1	9.69	8.91	29.3	13.3
Aluminium	g/m³	0.003	<0.0030	0.0099	0.0053	0.012	<0.0030
Arsenic	g/m³	0.0005	0.018	0.0022	0.0013	0.0555	0.034

Elements in Water (Soluble)

Client Sample ID			RSA1	SC01	RS04	MDD302	RSB
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Barium	g/m ³	0.0002	0.0138	0.0386	0.0166	0.135	0.0198
Beryllium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	0.000025	<0.000010
Bismuth	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m ³	0.01	<0.010	0.012	<0.010	<0.010	<0.010
Cadmium	g/m ³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.00011	0.00013	0.00011	<0.000010	0.00011
Chromium	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	0.00016	<0.000010
Copper	g/m ³	0.0002	0.00068	0.00073	0.00099	<0.00020	0.00045
Germanium	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	0.000059	<0.000050
Mercury	g/m ³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010	0.000024	0.000015	0.000015	<0.000010
Lithium	g/m ³	0.00001	0.00237	0.00721	0.00180	0.00948	0.00243
Molybdenum	g/m ³	0.0002	<0.00020	0.00064	<0.00020	0.00030	<0.00020
Nickel	g/m ³	0.0002	0.00042	0.00036	0.00055	<0.00020	0.00068
Phosphorus	g/m ³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00030	0.00022	0.00020	0.00199	0.00030
Sulfur*	g/m ³	10	<10	<10	<10	<10	<10
Antimony	g/m ³	0.0001	<0.00010	0.00019	<0.00010	0.00021	<0.00010
Selenium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.352	0.837	0.306	1.20	0.389
Thallium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.00013	0.00400	0.00035	0.00486	0.00014
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000018	0.000041	0.000046	0.00019	0.000022

Elements in Water (Soluble)

Client Sample ID			Base
Date Sampled			31/10/2024
Analyte	Unit	Reporting Limit	24-33929-11
Silica	g/m ³	0.1	15.6
Aluminium	g/m ³	0.003	<0.0030
Arsenic	g/m ³	0.0005	0.00083
Barium	g/m ³	0.0002	0.0082
Beryllium	g/m ³	0.00001	<0.000010
Bismuth	g/m ³	0.0001	<0.00010
Boron	g/m ³	0.01	<0.010
Cadmium	g/m ³	0.00002	0.00010
Cobalt	g/m ³	0.00001	0.000030
Chromium	g/m ³	0.0002	<0.00020
Caesium	g/m ³	0.00001	<0.000010
Copper	g/m ³	0.0002	0.154
Germanium	g/m ³	0.00005	<0.000050
Mercury	g/m ³	0.00008	<0.000080
Lanthanum	g/m ³	0.00001	0.000014
Lithium	g/m ³	0.00001	0.00040
Molybdenum	g/m ³	0.0002	<0.00020
Nickel	g/m ³	0.0002	0.0013
Phosphorus	g/m ³	0.04	<0.040
Lead	g/m ³	0.00005	0.0180

Elements in Water (Soluble)

Client Sample ID			Base
Date Sampled			31/10/2024
Rubidium	g/m ³	0.00002	0.000053
Sulfur*	g/m ³	10	<10
Antimony	g/m ³	0.0001	<0.00010
Selenium	g/m ³	0.0005	<0.00050
Tin	g/m ³	0.0002	<0.00020
Strontium	g/m ³	0.0001	0.109
Thallium	g/m ³	0.00001	<0.000010
Uranium	g/m ³	0.00003	<0.000030
Vanadium	g/m ³	0.0005	<0.00050
Yttrium	g/m ³	0.00001	0.000011

Anion/Cation Suite

Client Sample ID			LBA	MDD015	RS01	RS02	RS03
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-1	24-33929-2	24-33929-3	24-33929-4	24-33929-5
pH	pH	1	8.1	8.0	7.5	7.4	7.0
Electrical Conductivity	µS/cm	0.2	464	439	175	146	80.7
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	194	202	83.6	67.2	32.1
Chloride	g/m ³	0.5	7.70	9.59	1.60	1.50	0.90
Sulfate	g/m ³	0.15	27.8	9.29	1.34	1.03	0.53
Nitrate-N	g/m ³	0.002	0.225	<0.0020	<0.0020	0.0045	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.017	<0.002	<0.002	<0.002	0.005
Ammonia as N	g/m ³	0.005	0.005	0.1	<0.005	<0.005	<0.005
Sodium	g/m ³	0.01	19.7	43.6	5.23	4.31	2.81
Potassium	g/m ³	0.05	1.9	1.4	1.1	0.77	0.52
Calcium	g/m ³	0.05	55.2	43.6	25.7	21.0	9.05
Magnesium	g/m ³	0.01	15.2	15.6	4.47	3.34	1.66
Iron	g/m ³	0.005	<0.0050	0.013	0.040	0.016	0.050
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0048	0.0059	0.013	<0.00050	0.0051
Sum of Anions*	meq/L	0.01	4.77	4.57	1.75	1.41	0.68
Sum of Cations*	meq/L	0.01	4.91	5.40	1.91	1.53	0.73
EC/10*	(mS/m)/10	0.002	4.64	4.39	1.75	1.46	0.81

Anion/Cation Suite

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Analyte	Unit	Reporting Limit	24-33929-6	24-33929-7	24-33929-8	24-33929-9	24-33929-11
pH	pH	1	7.2	8.0	7.4	7.7	6.8
Electrical Conductivity	µS/cm	0.2	196	388	147	481	106
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	91.5	168	69.4	234	36.0
Chloride	g/m ³	0.5	1.73	3.76	1.20	3.18	2.45
Sulfate	g/m ³	0.15	1.42	24.5	0.54	10.1	4.10
Nitrate-N	g/m ³	0.002	0.0023	0.0887	<0.0020	0.0023	0.508
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002	0.004	<0.002	<0.002	0.005
Ammonia as N	g/m ³	0.005	0.02	0.01	<0.005	0.05	<0.005
Sodium	g/m ³	0.01	5.13	9.04	4.29	7.93	5.07

Anion/Cation Suite

Client Sample ID			RSA1	SC01	RS04	MDD302	Base
Date Sampled			31/10/2024	31/10/2024	31/10/2024	31/10/2024	31/10/2024
Potassium	g/m ³	0.05	1.2	1.6	0.69	1.4	0.88
Calcium	g/m ³	0.05	25.3	50.7	22.4	63.5	11.0
Magnesium	g/m ³	0.01	4.36	14.4	3.06	21.6	2.57
Iron	g/m ³	0.005	0.055	0.019	0.023	<0.0050	<0.0050
Zinc	g/m ³	0.001	0.0025	<0.0010	<0.0010	<0.0010	0.468
Manganese	g/m ³	0.0005	0.017	0.0014	0.0026	0.0040	<0.00050
Sum of Anions*	meq/L	0.01	1.91	4.04	1.44	5.00	0.91
Sum of Cations*	meq/L	0.01	1.88	4.15	1.58	5.33	1.02
EC/10*	(mS/m)/10	0.002	1.96	3.88	1.47	4.81	1.06

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{Org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourmetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO ₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).

Method Summary

NO3-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammonia-N	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.



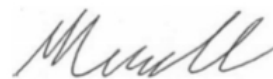
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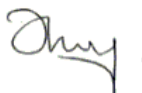
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Matthew Counsell, B.Sc.
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Senior Laboratory Technician



Deanna Rhind
Technician



CERTIFICATE OF ANALYSIS

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Attention: Alex Nichol
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Sampling Site: Bendigo Ophir Project

Lab Reference: 24-35305
Submitted by:
Date Received: 15/11/2024
Testing Initiated: 15/11/2024
Date Completed: 26/11/2024
Order Number:
Reference: MGL_2024_WD02

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at ALS NZ (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Total Phosphorus	g/m ³	0.005	0.016	0.30	0.0077	0.0095	0.015

Total Phosphorus in Water

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Total Phosphorus	g/m ³	0.005	0.013	0.011	0.022	0.038	0.052

Total Phosphorus in Water

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Total Phosphorus	g/m ³	0.005	0.0099	0.010



Water Aggregate Properties

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	<1.00	<1.00	3.33	3.33

Water Aggregate Properties

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	2.67	<1.00	<1.00	<1.00

Water Aggregate Properties

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	4.67

Turbidity

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Turbidity	NTU	0.05	0.7	1.4	0.9	1.4	4.8

Turbidity

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Turbidity	NTU	0.05	0.4	1.8	3.6	11	7.8

Turbidity

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Turbidity	NTU	0.05	1.6	2.9

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010	0.0028	0.0040	0.0011

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Nitrite-N	g/m ³	0.001	<0.0010	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Total Kjeldahl Nitrogen	g/m ³	0.1	0.16	<0.10	0.12	0.28	0.23
Total Nitrogen	g/m ³	0.1	0.16	0.23	0.12	0.28	0.23

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Total Kjeldahl Nitrogen	g/m ³	0.1	0.14	0.24	0.27	0.72	0.37
Total Nitrogen	g/m ³	0.1	0.16	0.24	0.30	0.82	0.38

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Total Kjeldahl Nitrogen	g/m ³	0.1	0.29	<0.10
Total Nitrogen	g/m ³	0.1	0.29	<0.10

Fluoride in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Fluoride	g/m ³	0.04	<0.040	0.22	0.12	0.065	0.051

Fluoride in Water

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Fluoride	g/m ³	0.04	<0.040	0.062	0.073	0.077	0.055

Fluoride in Water

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Fluoride	g/m ³	0.04	0.046	0.12

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Bromide	g/m ³	0.005	<0.05	0.090	0.11	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Bromide	g/m ³	0.005	<0.05	<0.05	<0.05	<0.05	0.070

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Bromide	g/m ³	0.005	<0.05	<0.05

Water Hardness

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	10	210	180	98	73

Water Hardness

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	45	100	230	150	260

Water Hardness

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	85	240

Cyanide in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Total Cyanide	g/m ³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Total Cyanide	g/m ³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Total Cyanide	g/m ³	0.001	<0.001	<0.001

Solids in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Total Suspended Solids	g/m³	3	<3	<3	<3	<3	12
Total Dissolved Solids	g/m³	3	15	254	234	90	77

Solids in Water

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Total Suspended Solids	g/m³	3	<3	<3	9	42	9
Total Dissolved Solids	g/m³	3	42	111	236	152	278

Solids in Water

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Total Suspended Solids	g/m³	3	<3	<3
Total Dissolved Solids	g/m³	3	92	260

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Silica	g/m³	0.1	8.86	16.3	20.4	9.52	10.0
Aluminium	g/m³	0.003	0.023	<0.0030	0.0060	0.0038	0.0070
Arsenic	g/m³	0.0005	0.0011	1.05	0.018	0.022	0.0070
Barium	g/m³	0.0002	0.0043	0.0051	0.228	0.0142	0.0116
Beryllium	g/m³	0.00001	0.000014	0.000047	0.000046	<0.000010	0.000023
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	0.000025	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000028	0.000043	0.000014	0.000094	0.000073
Chromium	g/m³	0.0002	0.00023	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00012	0.00021	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00036	<0.00020	<0.00020	0.00035	0.00042
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00068	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000068	<0.000010	<0.000010	<0.000010	0.000013
Lithium	g/m³	0.00001	0.00080	0.0135	0.0530	0.00244	0.00250
Molybdenum	g/m³	0.0002	<0.00020	0.0012	0.00035	<0.00020	<0.00020
Nickel	g/m³	0.0002	0.00020	<0.00020	<0.00020	0.00037	0.00032
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00020	0.00132	0.00198	0.00027	0.00018
Sulfur*	g/m³	10	<10	10	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	0.0014	<0.00050	<0.00050	<0.00050

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0331	0.503	10.3	0.447	0.319
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.00221	0.0010	0.00015	0.00031
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000075	0.000023	0.00022	0.000015	0.000025

Elements in Water (Soluble)

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Silica	g/m³	0.1	9.36	10.0	6.41	6.74	7.78
Aluminium	g/m³	0.003	0.0092	<0.0030	0.0068	0.012	0.010
Arsenic	g/m³	0.0005	0.011	0.016	0.0026	0.00063	0.00074
Barium	g/m³	0.0002	0.0076	0.0163	0.0403	0.0380	0.0339
Beryllium	g/m³	0.00001	<0.000010	0.000023	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010	<0.010	<0.010	0.017
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000046	0.00011	0.00010	0.000064	0.000092
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00022	0.00031	0.00056	0.00040	0.0012
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000017	<0.000010	0.000016	0.000015	0.000013
Lithium	g/m³	0.00001	0.00140	0.00245	0.00820	0.00461	0.0115
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00044	0.00035	0.0013
Nickel	g/m³	0.0002	0.00022	0.00045	0.00027	<0.00020	0.00029
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00022	0.00023	0.00021	0.00030	0.00019
Sulfur*	g/m³	10	<10	<10	12	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00017	0.00012	0.00050
Selenium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.164	0.413	0.964	0.710	0.979
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.000087	0.00014	0.00473	0.00260	0.00691
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000027	0.000015	0.000043	0.000030	0.000037

Elements in Water (Soluble)

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Silica	g/m³	0.1	8.70	24.1
Aluminium	g/m³	0.003	0.0044	0.0037
Arsenic	g/m³	0.0005	0.0011	0.0584

Elements in Water (Soluble)

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Barium	g/m³	0.0002	0.0185	0.132
Beryllium	g/m³	0.00001	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000099	<0.000010
Chromium	g/m³	0.0002	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00015
Copper	g/m³	0.0002	0.00059	<0.00020
Germanium	g/m³	0.00005	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000010	<0.000010
Lithium	g/m³	0.00001	0.00231	0.00884
Molybdenum	g/m³	0.0002	<0.00020	0.00032
Nickel	g/m³	0.0002	0.00042	<0.00020
Phosphorus	g/m³	0.04	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00013	0.00201
Sulfur*	g/m³	10	<10	<10
Antimony	g/m³	0.0001	<0.00010	0.00019
Selenium	g/m³	0.0005	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.395	1.18
Thallium	g/m³	0.00001	<0.000010	<0.000010
Uranium	g/m³	0.00003	0.00043	0.00495
Vanadium	g/m³	0.0005	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000034	0.00021

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
Arsenic	g/m³	0.0005	0.0012	1.14	0.018	0.027	0.0096
Aluminium	g/m³	0.003	0.036	<0.0030	0.0086	0.011	0.15
Barium	g/m³	0.0001	0.0044	0.0055	0.234	0.0148	0.0148
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	<0.0050	0.011	<0.0050	<0.0050
Calcium	g/m³	0.05	3.0	56.5	47.0	30.4	22.8
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000065	0.000031	<0.000010	0.00011	0.00020
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00013	0.00021	<0.000010	0.000024
Copper	g/m³	0.0002	0.00026	<0.00020	<0.00020	0.00040	0.00052
Iron	g/m³	0.005	0.059	0.20	0.070	0.16	0.33
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00062	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	0.00012	<0.00010	<0.00010
Potassium	g/m³	0.05	0.27	2.0	1.5	1.0	0.61
Lanthanum	g/m³	0.00001	0.00011	<0.000010	0.000022	0.000010	0.00012
Lithium	g/m³	0.00001	0.00072	0.0130	0.0525	0.00239	0.00264
Magnesium	g/m³	0.01	0.68	15.9	16.3	5.29	3.91
Manganese	g/m³	0.0005	0.0030	0.024	0.0068	0.0525	0.015

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Molybdenum	g/m³	0.0002	<0.00020	0.0012	0.00029	<0.00020	<0.00020
Sodium	g/m³	0.01	2.14	20.5	46.1	5.80	4.55
Nickel	g/m³	0.0002	0.00021	<0.00020	<0.00020	0.00037	0.00045
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	0.00021
Rubidium	g/m³	0.00005	0.00026	0.0014	0.0020	0.00028	0.00067
Sulfur*	g/m³	10	<10	11	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	0.0012	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.0343	0.508	10.3	0.442	0.312
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	0.00222	0.0010	0.00013	0.00032
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.00010	0.000067	0.00026	<0.000050	0.00011
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
Arsenic	g/m³	0.0005	0.011	0.023	0.0028	0.0010	0.00068
Aluminium	g/m³	0.003	0.013	0.0079	0.087	0.387	0.031
Barium	g/m³	0.0001	0.0082	0.0170	0.0444	0.0476	0.0350
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	0.000014	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	<0.0050	0.011	<0.0050	0.024
Calcium	g/m³	0.05	13.8	32.3	60.1	43.4	72.7
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000089	0.00014	0.00020	0.00041	0.00013
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00065	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	0.000011	0.000070	<0.000010
Copper	g/m³	0.0002	0.0013	0.00060	0.00083	0.0012	0.0011
Iron	g/m³	0.005	0.079	0.25	0.16	0.893	0.041
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.57	1.1	1.5	1.9	1.8
Lanthanum	g/m³	0.00001	0.000032	0.000014	0.00010	0.00037	0.000036
Lithium	g/m³	0.00001	0.00131	0.00231	0.00779	0.00498	0.0110
Magnesium	g/m³	0.01	2.51	5.36	18.6	9.93	19.4
Manganese	g/m³	0.0005	0.014	0.0737	0.016	0.046	0.0021
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00050	0.00038	0.0012
Sodium	g/m³	0.01	3.65	6.05	11.5	6.42	20.3
Nickel	g/m³	0.0002	0.00029	0.00047	0.00042	0.00061	0.00028
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	0.051	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	0.00019	0.00071	<0.000050
Rubidium	g/m³	0.00005	0.00025	0.00027	0.00044	0.0012	0.00025
Sulfur*	g/m³	10	<10	<10	12	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00016	0.00011	0.00048
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.166	0.408	0.946	0.703	0.956

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Thallium	g/m ³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m ³	0.00003	0.000089	0.00013	0.00472	0.00263	0.00701
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00005	<0.000050	<0.000050	0.000096	0.00030	0.000055
Zinc	g/m ³	0.003	0.0040	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
Arsenic	g/m ³	0.0005	0.0012	0.0662
Aluminium	g/m ³	0.003	0.0059	0.0032
Barium	g/m ³	0.0001	0.0189	0.132
Beryllium	g/m ³	0.00001	<0.000010	0.000031
Bismuth	g/m ³	0.0001	<0.00010	<0.00010
Boron	g/m ³	0.005	<0.0050	<0.0050
Calcium	g/m ³	0.05	27.5	61.5
Cadmium	g/m ³	0.00002	<0.000020	<0.000020
Cobalt	g/m ³	0.00001	0.00015	<0.000010
Chromium	g/m ³	0.0002	<0.00020	<0.00020
Caesium	g/m ³	0.00001	<0.000010	0.00015
Copper	g/m ³	0.0002	0.00051	<0.00020
Iron	g/m ³	0.005	0.091	0.31
Germanium	g/m ³	0.00005	<0.000050	<0.000050
Mercury	g/m ³	0.0001	<0.00010	<0.00010
Potassium	g/m ³	0.05	0.40	1.4
Lanthanum	g/m ³	0.00001	0.000011	0.000013
Lithium	g/m ³	0.00001	0.00211	0.00792
Magnesium	g/m ³	0.01	4.03	21.2
Manganese	g/m ³	0.0005	0.019	0.0041
Molybdenum	g/m ³	0.0002	<0.00020	0.00039
Sodium	g/m ³	0.01	4.94	7.74
Nickel	g/m ³	0.0002	0.00050	<0.00020
Phosphorus	g/m ³	0.04	<0.040	<0.040
Lead	g/m ³	0.00005	<0.000050	<0.000050
Rubidium	g/m ³	0.00005	0.00013	0.0019
Sulfur*	g/m ³	10	<10	<10
Antimony	g/m ³	0.0001	<0.00010	0.00018
Selenium	g/m ³	0.001	<0.0010	<0.0010
Tin	g/m ³	0.0005	<0.00050	<0.00050
Strontium	g/m ³	0.0001	0.375	1.12
Thallium	g/m ³	0.0001	<0.00010	<0.00010
Uranium	g/m ³	0.00003	0.00034	0.00504
Vanadium	g/m ³	0.0005	<0.00050	<0.00050
Yttrium	g/m ³	0.00005	<0.000050	0.00047
Zinc	g/m ³	0.003	<0.0030	<0.0030

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-1	24-35305-2	24-35305-3	24-35305-4	24-35305-5
pH	pH	1	6.8	8.1	8.0	7.6	7.4
Electrical Conductivity	µS/cm	0.2	28.6	442	428	197	151
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	10.8	196	205	101	74.0
Chloride	g/m ³	0.5	<0.50	7.50	9.34	1.10	1.19
Sulfate	g/m ³	0.15	0.34	29.1	9.52	0.58	0.94
Nitrate-N	g/m ³	0.002	0.0030	0.229	<0.0020	<0.0020	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.008	0.017	<0.002	<0.002	0.002
Ammoniacal-N	g/m ³	0.005	<0.005	<0.005	0.10	<0.005	<0.005
Sodium	g/m ³	0.01	2.07	20.0	43.1	5.39	4.34
Potassium	g/m ³	0.05	0.26	1.9	1.4	0.99	0.51
Calcium	g/m ³	0.05	2.9	55.6	45.3	29.0	22.1
Magnesium	g/m ³	0.01	0.64	15.4	15.4	4.95	3.68
Iron	g/m ³	0.005	0.030	<0.0050	0.015	0.030	0.0097
Zinc	g/m ³	0.001	0.0031	<0.0010	0.0032	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.00079	0.014	0.0064	0.038	0.0016
Sum of Anions*	meq/L	0.01	0.22	4.81	4.62	2.07	1.54
Sum of Cations*	meq/L	0.01	0.30	4.96	5.44	2.12	1.61
EC/10*	(mS/m)/10	0.002	0.29	4.42	4.28	1.97	1.51

Anion/Cation Suite

Client Sample ID			RS03	RSA1	SC01	SC03	JC01
Date Sampled			14/11/2024	14/11/2024	14/11/2024	14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-6	24-35305-7	24-35305-8	24-35305-9	24-35305-10
pH	pH	1	7.3	7.5	8.0	7.9	8.2
Electrical Conductivity	µS/cm	0.2	93.0	223	471	310	560
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	43.8	102	193	132	261
Chloride	g/m ³	0.5	0.77	1.17	3.92	2.03	4.05
Sulfate	g/m ³	0.15	0.52	0.54	30.1	9.53	12.8
Nitrate-N	g/m ³	0.002	0.0197	0.0055	0.0272	0.0946	0.0110
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.004	<0.002	0.004	0.002	0.008
Ammoniacal-N	g/m ³	0.005	<0.005	<0.005	0.01	0.03	<0.005
Sodium	g/m ³	0.01	3.36	5.41	10.8	5.98	19.5
Potassium	g/m ³	0.05	0.52	1.0	1.4	1.6	1.8
Calcium	g/m ³	0.05	12.6	29.6	57.5	40.9	70.9
Magnesium	g/m ³	0.01	2.30	5.04	17.6	9.13	18.6
Iron	g/m ³	0.005	0.031	0.088	0.014	0.037	<0.0050
Zinc	g/m ³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.0018
Manganese	g/m ³	0.0005	0.010	0.0696	0.0050	0.0076	0.0010
Sum of Anions*	meq/L	0.01	0.91	2.09	4.66	2.94	5.73
Sum of Cations*	meq/L	0.01	0.98	2.16	4.82	3.10	5.96
EC/10*	(mS/m)/10	0.002	0.93	2.23	4.71	3.10	5.60

Anion/Cation Suite

Client Sample ID			RS04	MDD302
Date Sampled			14/11/2024	14/11/2024
Analyte	Unit	Reporting Limit	24-35305-11	24-35305-12
pH	pH	1	7.5	7.7
Electrical Conductivity	µS/cm	0.2	190	506
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	86.8	232
Chloride	g/m ³	0.5	0.87	2.93
Sulfate	g/m ³	0.15	0.54	10.3
Nitrate-N	g/m ³	0.002	<0.0020	0.0039
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002	<0.002
Ammoniacal-N	g/m ³	0.005	<0.005	0.05
Sodium	g/m ³	0.01	4.94	7.85
Potassium	g/m ³	0.05	0.40	1.4
Calcium	g/m ³	0.05	27.7	63.6
Magnesium	g/m ³	0.01	3.93	21.4
Iron	g/m ³	0.005	0.043	<0.0050
Zinc	g/m ³	0.001	0.0016	<0.0010
Manganese	g/m ³	0.0005	0.018	0.0044
Sum of Anions*	meq/L	0.01	1.78	4.98
Sum of Cations*	meq/L	0.01	1.93	5.32
EC/10*	(mS/m)/10	0.002	1.90	5.06

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Fluoride in Water	Determined by Ion-Selective Electrode. APHA 4500-F-C - Modified - online edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourmetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.

Method Summary

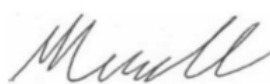
Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ - I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammoniacal-N	Samples are filtered and measured colourimetrically by flow injection analysis. Results represent total ammoniacal nitrogen (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.



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CERTIFICATE OF ANALYSIS

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Sampling Site: Bendigo Ophir Project

Lab Reference: 24-36747
Submitted by:
Date Received: 29/11/2024
Testing Initiated: 29/11/2024
Date Completed: 9/12/2024
Order Number:
Reference: MGL_2024_WD03

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at ALS NZ (or at the subcontracted laboratories, when applicable). Samples were in acceptable condition unless otherwise noted on this report. Specific testing dates are available on request.

Total Phosphorus in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Total Phosphorus	g/m ³	0.005	0.015	0.16	0.0076	0.0086	0.017

Total Phosphorus in Water

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Total Phosphorus	g/m ³	0.005	0.0079	0.011	0.026	0.10	0.031

Total Phosphorus in Water

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Total Phosphorus	g/m ³	0.005	0.0077



Water Aggregate Properties

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	3.33	<1.00	<1.00	1.67	1.67

Water Aggregate Properties

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	1.67	1.67	1.67	1.67	6.67

Water Aggregate Properties

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Total Acidity to pH 8.3 (CaCO3)	g/m³	1.0	16.67

Turbidity

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Turbidity	NTU	0.05	0.4	1.2	4.6	1.3	4.3

Turbidity

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Turbidity	NTU	0.05	0.4	2.7	4.4	32	11

Turbidity

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Turbidity	NTU	0.05	3.3

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Nitrite-N	g/m³	0.001	<0.0010	<0.0010	0.00525	0.0014	<0.0010

Inorganic Nutrients and Nutrient Species in Water

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Nitrite-N	g/m³	0.001	<0.0010

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Total Kjeldahl Nitrogen	g/m³	0.1	0.10	<0.10	0.13	0.25	0.27
Total Nitrogen	g/m³	0.1	0.11	0.23	0.13	0.25	0.27

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Total Kjeldahl Nitrogen	g/m³	0.1	0.18	0.24	0.28	0.65	0.46
Total Nitrogen	g/m³	0.1	0.18	0.25	0.36	0.75	0.46

Total Nitrogen / Kjeldahl Nitrogen in Water

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Total Kjeldahl Nitrogen	g/m³	0.1	<0.10
Total Nitrogen	g/m³	0.1	<0.10

Fluoride in Water (Hill Labs)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Fluoride in Water (Hill Labs)	g/m³	0.05	<0.05	0.33	0.18	0.11	0.09

Fluoride in Water (Hill Labs)

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Fluoride in Water (Hill Labs)	g/m³	0.05	0.07	0.11	0.12	0.13	0.09

Fluoride in Water (Hill Labs)

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Fluoride in Water (Hill Labs)	g/m³	0.05	0.18

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Bromide	g/m³	0.005	<0.05	0.080	0.10	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Bromide	g/m³	0.005	<0.05	<0.05	<0.05	<0.05	<0.05

Bromide in Water (Subcontracted - Hill Laboratories)

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Bromide	g/m³	0.005	<0.05

Water Hardness

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	11	210	200	100	75

Water Hardness

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	46	100	240	160	98

Water Hardness

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Total Hardness	g eqv. CaCO ₃ /m ³	0.05	250

Cyanide in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Total Cyanide	g/m ³	0.001	<0.001	<0.001	<0.001	0.002	<0.001

Cyanide in Water

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Total Cyanide	g/m ³	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Cyanide in Water

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Total Cyanide	g/m ³	0.001	<0.001

Solids in Water

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Total Suspended Solids	g/m³	3	<3	<3	9	4	12
Total Dissolved Solids	g/m³	3	23	263	241	111	93

Solids in Water

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Total Suspended Solids	g/m³	3	<3	4	8	54	23
Total Dissolved Solids	g/m³	3	61	119	265	168	113

Solids in Water

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Total Suspended Solids	g/m³	3	<3
Total Dissolved Solids	g/m³	3	264

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Arsenic	g/m³	0.0005	0.0012	1.13	0.019	0.033	0.0099
Aluminium	g/m³	0.003	0.025	<0.0030	0.059	0.016	0.14
Barium	g/m³	0.0001	0.0047	0.0056	0.235	0.0146	0.0155
Beryllium	g/m³	0.00001	<0.000010	<0.000010	0.000022	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	0.019	0.037	0.0057	<0.0050
Calcium	g/m³	0.05	3.3	56.1	51.6	31.7	23.5
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000053	0.000044	0.000036	0.00011	0.00021
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00021	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00013	0.00024	<0.000010	0.000026
Copper	g/m³	0.0002	0.00023	<0.00020	<0.00020	0.00046	0.00063
Iron	g/m³	0.005	0.040	0.21	0.18	0.28	0.34
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00089	<0.000050	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.26	2.0	1.5	0.76	0.72
Lanthanum	g/m³	0.00001	0.000078	<0.000010	0.00016	0.000017	0.00013
Lithium	g/m³	0.00001	0.00087	0.0137	0.0533	0.00254	0.00295
Magnesium	g/m³	0.01	0.72	15.8	16.1	5.39	4.02
Manganese	g/m³	0.0005	0.0021	0.028	0.0081	0.0662	0.015
Molybdenum	g/m³	0.0002	<0.00020	0.0012	0.00021	<0.00020	<0.00020
Sodium	g/m³	0.01	2.14	20.7	43.5	5.62	4.56
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00039	0.00047
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	<0.040	<0.040

Elements in Water (Total Recoverable)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Lead	g/m³	0.00005	<0.000050	<0.000050	0.000098	<0.000050	0.00024
Rubidium	g/m³	0.00005	0.00028	0.0014	0.0021	0.00024	0.00068
Sulfur*	g/m³	10	<10	11	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.0374	0.487	10.0	0.438	0.311
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	<0.000030	0.00212	0.00097	0.00012	0.00032
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00005	0.000078	0.000074	0.00034	<0.000050	0.00011
Zinc	g/m³	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Arsenic	g/m³	0.0005	0.012	0.0629	0.0035	0.0017	0.0034
Aluminium	g/m³	0.003	0.012	0.013	0.12	1.12	0.092
Barium	g/m³	0.0001	0.0086	0.0199	0.0476	0.0630	0.0270
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	0.000066	0.000015
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.005	<0.0050	0.0065	0.044	0.034	<0.0050
Calcium	g/m³	0.05	14.1	32.4	63.2	45.4	31.7
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	0.000026	<0.000020
Cobalt	g/m³	0.00001	0.000067	0.00026	0.00024	0.00103	0.00042
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.0015	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	0.000018	0.00024	0.000013
Copper	g/m³	0.0002	0.00050	0.00036	0.00086	0.0024	0.00076
Iron	g/m³	0.005	0.079	1.17	0.23	2.14	0.744
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	0.00011	<0.000050
Mercury	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Potassium	g/m³	0.05	0.55	0.74	1.7	1.6	1.0
Lanthanum	g/m³	0.00001	0.000032	0.000016	0.00015	0.00086	0.00015
Lithium	g/m³	0.00001	0.00153	0.00240	0.00919	0.00671	0.00265
Magnesium	g/m³	0.01	2.54	5.42	20.2	10.5	4.65
Manganese	g/m³	0.0005	0.013	0.165	0.020	0.107	0.0828
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00054	0.00028	<0.00020
Sodium	g/m³	0.01	3.65	5.46	12.0	6.59	5.33
Nickel	g/m³	0.0002	0.00028	0.00035	0.00049	0.0014	0.00067
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	0.094	<0.040
Lead	g/m³	0.00005	0.000097	<0.000050	0.00027	0.0016	0.00019
Rubidium	g/m³	0.00005	0.00028	0.00023	0.00056	0.0034	0.00052
Sulfur*	g/m³	10	<10	<10	13	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	0.00018	0.00013	<0.00010
Selenium	g/m³	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium	g/m³	0.0001	0.177	0.406	1.01	0.732	0.418
Thallium	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	g/m³	0.00003	0.000087	0.00011	0.00501	0.00248	0.00051
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	0.0013	<0.00050
Yttrium	g/m³	0.00005	<0.000050	<0.000050	0.00012	0.00067	0.00015

Elements in Water (Total Recoverable)

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Zinc	g/m ³	0.003	0.0051	<0.0030	<0.0030	0.0051	<0.0030

Elements in Water (Total Recoverable)

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Arsenic	g/m ³	0.0005	0.0668
Aluminium	g/m ³	0.003	0.0040
Barium	g/m ³	0.0001	0.131
Beryllium	g/m ³	0.00001	0.000038
Bismuth	g/m ³	0.0001	<0.00010
Boron	g/m ³	0.005	0.0084
Calcium	g/m ³	0.05	64.5
Cadmium	g/m ³	0.00002	<0.000020
Cobalt	g/m ³	0.00001	<0.000010
Chromium	g/m ³	0.0002	<0.00020
Caesium	g/m ³	0.00001	0.00015
Copper	g/m ³	0.0002	<0.00020
Iron	g/m ³	0.005	0.32
Germanium	g/m ³	0.00005	<0.000050
Mercury	g/m ³	0.0001	<0.00010
Potassium	g/m ³	0.05	1.4
Lanthanum	g/m ³	0.00001	0.000012
Lithium	g/m ³	0.00001	0.00832
Magnesium	g/m ³	0.01	21.8
Manganese	g/m ³	0.0005	0.0045
Molybdenum	g/m ³	0.0002	0.00035
Sodium	g/m ³	0.01	7.89
Nickel	g/m ³	0.0002	<0.00020
Phosphorus	g/m ³	0.04	<0.040
Lead	g/m ³	0.00005	<0.000050
Rubidium	g/m ³	0.00005	0.0019
Sulfur*	g/m ³	10	<10
Antimony	g/m ³	0.0001	0.00018
Selenium	g/m ³	0.001	<0.0010
Tin	g/m ³	0.0005	<0.00050
Strontium	g/m ³	0.0001	1.10
Thallium	g/m ³	0.0001	<0.00010
Uranium	g/m ³	0.00003	0.00485
Vanadium	g/m ³	0.0005	<0.00050
Yttrium	g/m ³	0.00005	0.00046
Zinc	g/m ³	0.003	<0.0030

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
Silica	g/m ³	0.1	8.50	15.3	18.8	9.08	9.34
Arsenic	g/m ³	0.0005	0.0011	1.01	0.017	0.021	0.0068

Elements in Water (Soluble)

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Aluminium	g/m³	0.003	0.012	<0.0030	0.0048	<0.0030	0.0033
Barium	g/m³	0.0002	0.0045	0.0050	0.228	0.0138	0.0122
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	0.014	0.030	<0.010	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000043	0.000044	<0.000010	0.000084	0.000066
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	0.00012	0.00021	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00030	<0.00020	0.00020	0.00039	0.00042
Germanium	g/m³	0.00005	<0.000050	<0.000050	0.00079	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	0.000087	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000053	<0.000010	0.000016	<0.000010	0.000012
Lithium	g/m³	0.00001	0.00083	0.0125	0.0484	0.00233	0.00244
Molybdenum	g/m³	0.0002	0.00049	0.0011	0.00039	<0.00020	<0.00020
Nickel	g/m³	0.0002	<0.00020	<0.00020	<0.00020	0.00025	0.00021
Phosphorus	g/m³	0.04	<0.040	<0.040	0.53	<0.040	<0.040
Lead	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m³	0.00002	0.00023	0.00131	0.00281	0.00022	0.00021
Sulfur*	g/m³	10	<10	12	<10	<10	<10
Antimony	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	g/m³	0.0005	<0.00050	0.0010	<0.00050	<0.00050	<0.00050
Tin	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m³	0.0001	0.0368	0.478	9.96	0.445	0.308
Thallium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m³	0.00003	<0.000030	0.0020	0.00094	0.00014	0.00029
Vanadium	g/m³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m³	0.00001	0.000063	0.000021	0.00020	0.000014	0.000023

Elements in Water (Soluble)

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
Silica	g/m³	0.1	9.02	9.64	6.80	6.89	8.64
Arsenic	g/m³	0.0005	0.011	0.028	0.0030	0.00078	0.0013
Aluminium	g/m³	0.003	0.0068	<0.0030	0.0051	0.011	0.0064
Barium	g/m³	0.0002	0.0088	0.0172	0.0429	0.0374	0.0226
Beryllium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth	g/m³	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron	g/m³	0.01	<0.010	<0.010	0.032	0.025	<0.010
Cadmium	g/m³	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cobalt	g/m³	0.00001	0.000062	0.00021	0.00011	0.000062	0.00019
Chromium	g/m³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Caesium	g/m³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Copper	g/m³	0.0002	0.00074	0.00030	0.00068	0.00060	0.00066
Germanium	g/m³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury	g/m³	0.00008	<0.000080	<0.000080	<0.000080	<0.000080	<0.000080
Lanthanum	g/m³	0.00001	0.000020	<0.000010	0.000021	0.000019	0.000020
Lithium	g/m³	0.00001	0.00141	0.00224	0.00806	0.00433	0.00236
Molybdenum	g/m³	0.0002	<0.00020	<0.00020	0.00061	0.00041	<0.00020
Nickel	g/m³	0.0002	0.00027	0.00023	0.00023	<0.00020	0.00051
Phosphorus	g/m³	0.04	<0.040	<0.040	<0.040	0.11	<0.040

Elements in Water (Soluble)

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Lead	g/m ³	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Rubidium	g/m ³	0.00002	0.00039	0.00019	0.00024	0.00035	0.00029
Sulfur*	g/m ³	10	<10	<10	14	<10	<10
Antimony	g/m ³	0.0001	<0.00010	<0.00010	0.00018	<0.00010	<0.00010
Selenium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin	g/m ³	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Strontium	g/m ³	0.0001	0.179	0.411	0.968	0.716	0.406
Thallium	g/m ³	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium	g/m ³	0.00003	0.000082	0.00011	0.00466	0.00225	0.00042
Vanadium	g/m ³	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Yttrium	g/m ³	0.00001	0.000028	0.000015	0.000039	0.000028	0.000039

Elements in Water (Soluble)

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
Silica	g/m ³	0.1	21.7
Arsenic	g/m ³	0.0005	0.0575
Aluminium	g/m ³	0.003	<0.0030
Barium	g/m ³	0.0002	0.128
Beryllium	g/m ³	0.00001	0.000013
Bismuth	g/m ³	0.0001	<0.00010
Boron	g/m ³	0.01	<0.010
Cadmium	g/m ³	0.00002	<0.000020
Cobalt	g/m ³	0.00001	<0.000010
Chromium	g/m ³	0.0002	<0.00020
Caesium	g/m ³	0.00001	0.00015
Copper	g/m ³	0.0002	<0.00020
Germanium	g/m ³	0.00005	0.000055
Mercury	g/m ³	0.00008	<0.000080
Lanthanum	g/m ³	0.00001	<0.000010
Lithium	g/m ³	0.00001	0.00776
Molybdenum	g/m ³	0.0002	0.00036
Nickel	g/m ³	0.0002	<0.00020
Phosphorus	g/m ³	0.04	<0.040
Lead	g/m ³	0.00005	<0.000050
Rubidium	g/m ³	0.00002	0.00182
Sulfur*	g/m ³	10	<10
Antimony	g/m ³	0.0001	0.00018
Selenium	g/m ³	0.0005	<0.00050
Tin	g/m ³	0.0002	<0.00020
Strontium	g/m ³	0.0001	1.05
Thallium	g/m ³	0.00001	<0.000010
Uranium	g/m ³	0.00003	0.00461
Vanadium	g/m ³	0.0005	<0.00050
Yttrium	g/m ³	0.00001	0.00018

Anion/Cation Suite

Client Sample ID			CC01	LBA	MDD015	RS01	RS02
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-1	24-36747-2	24-36747-3	24-36747-4	24-36747-5
pH	pH	1	6.9	8.1	8.1	7.6	7.5
Electrical Conductivity	µS/cm	0.2	35.3	476	466	212	167
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	13.3	193	208	105	78.1
Chloride	g/m ³	0.5	0.56	7.54	9.46	0.83	1.12
Sulfate	g/m ³	0.15	0.43	28.8	9.56	0.45	0.86
Nitrate-N	g/m ³	0.002	0.0099	0.225	0.0028	<0.0020	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.007	0.018	<0.002	<0.002	<0.002
Ammoniacal-N	g/m ³	0.005	<0.005	<0.005	0.1	<0.005	<0.005
Sodium	g/m ³	0.01	2.42	20.9	44.9	5.83	4.67
Potassium	g/m ³	0.05	0.26	1.9	2.4	0.71	0.61
Calcium	g/m ³	0.05	3.3	52.9	49.5	30.9	22.7
Magnesium	g/m ³	0.01	0.80	15.9	16.3	5.43	4.00
Iron	g/m ³	0.005	0.022	<0.0050	0.0058	0.028	0.013
Zinc	g/m ³	0.001	<0.0010	<0.0010	0.0020	<0.0010	<0.0010
Manganese	g/m ³	0.0005	0.0011	0.013	0.0066	0.040	0.0014
Sum of Anions*	meq/L	0.01	0.29	4.75	4.70	2.15	1.62
Sum of Cations*	meq/L	0.01	0.34	4.91	5.83	2.26	1.68
EC/10*	(mS/m)/10	0.002	0.35	4.76	4.66	2.12	1.67

Anion/Cation Suite

Client Sample ID			RS03	RSA1	SC01	SC03	RS04
Date Sampled			28/11/2024	28/11/2024	28/11/2024	28/11/2024	28/11/2024
Analyte	Unit	Reporting Limit	24-36747-6	24-36747-7	24-36747-8	24-36747-9	24-36747-10
pH	pH	1	7.2	7.5	8.1	8.1	7.5
Electrical Conductivity	µS/cm	0.2	105	223	498	321	213
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	47.9	106	205	145	99.6
Chloride	g/m ³	0.5	0.70	0.84	4.28	1.87	0.96
Sulfate	g/m ³	0.15	0.49	0.38	33.5	9.83	0.50
Nitrate-N	g/m ³	0.002	<0.0020	0.0102	0.0745	0.0944	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	0.003	<0.002	0.007	0.003	<0.002
Ammoniacal-N	g/m ³	0.005	<0.005	<0.005	0.01	<0.005	<0.005
Sodium	g/m ³	0.01	3.92	5.64	12.1	6.86	5.89
Potassium	g/m ³	0.05	0.66	0.69	1.6	1.2	0.98
Calcium	g/m ³	0.05	14.5	30.6	60.1	42.4	32.5
Magnesium	g/m ³	0.01	2.57	5.44	19.9	9.95	4.64
Iron	g/m ³	0.005	0.033	0.30	0.014	0.034	0.063
Zinc	g/m ³	0.001	0.013	<0.0010	<0.0010	<0.0010	0.0044
Manganese	g/m ³	0.0005	0.011	0.120	0.0065	0.0049	0.030
Sum of Anions*	meq/L	0.01	0.99	2.17	5.00	3.20	2.04
Sum of Cations*	meq/L	0.01	1.12	2.25	5.20	3.27	2.29
EC/10*	(mS/m)/10	0.002	1.05	2.23	4.98	3.21	2.13

Anion/Cation Suite

Client Sample ID			MDD302
Date Sampled			28/11/2024
Analyte	Unit	Reporting Limit	24-36747-11
pH	pH	1	7.8
Electrical Conductivity	µS/cm	0.2	504
Total Alkalinity (CaCO3)	g CaCO ₃ /m ³	1	236
Chloride	g/m ³	0.5	2.91
Sulfate	g/m ³	0.15	10.3
Nitrate-N	g/m ³	0.002	<0.0020
Dissolved Reactive Phosphorus (FIA)	g/m ³	0.002	<0.002
Ammoniacal-N	g/m ³	0.005	0.05
Sodium	g/m ³	0.01	7.89
Potassium	g/m ³	0.05	1.3
Calcium	g/m ³	0.05	59.5
Magnesium	g/m ³	0.01	20.9
Iron	g/m ³	0.005	<0.0050
Zinc	g/m ³	0.001	<0.0010
Manganese	g/m ³	0.0005	0.0040
Sum of Anions*	meq/L	0.01	5.06
Sum of Cations*	meq/L	0.01	5.07
EC/10*	(mS/m)/10	0.002	5.04

Method Summary

Total Phosphorus	Samples analysed colourimetrically following an acid digestion. (APHA 4500 P H - Modified - Discrete Analyser - Online edition)
Acidity to pH 8.3	Samples analysed as received by manual titration to pH endpoint 8.3. (APHA 2310 B - Online edition).
Turbidity	Samples analysed as received using a conventional turbidimeter. (APHA 2130 B Online edition - Modified).
NO2-N	Samples analysed colourimetrically by flow injection analysis following filtration. (APHA 4500-NO ₃ I. Online edition).
TKN	Samples analysed colourimetrically following an acid digestion. (APHA 4500-N _{Org} D - Modified - Discrete Analyser - Online edition).
TN	Sum of Total Kjeldahl Nitrogen (APHA 4500 N _{Org} - Modified - Online edition), Nitrate-N and Nitrite-N (APHA 4500 NO ₃ I - Online edition). (APHA 4500-N A - Online Edition).
Fluoride	Subcontracted to Hill Laboratories Limited - Direct measurement, ion selective electrode. APHA 4500-F- C : Online Edition.
Bromide in Water	Subcontracted to Hill Laboratories. Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).
Total Hardness	Result calculated from Total Magnesium and Calcium. (APHA 2340B - Online edition)
Total Cyanide (Trace)	On-line distillation and colourmetric determination using Segmented Flow Analysis. In-house based on Skalar Method I295-004 and ISO Method ISO 14403:2012(E) (modified).
Total Suspended Solids	Measured gravimetrically following filtration through glass micro-fibre filters. (APHA 2540 D - Modified - Online edition).
Total Dissolved Solids	Filtration followed by complete drying at 180°C. (APHA 2540 C - Online edition).

Method Summary

Recoverable Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following an acid digestion. In house procedure based on US EPA method 200.8.
Soluble Trace Elements	Samples were analysed as received by the laboratory using ICP-MS following a 0.45µm membrane filtration (except when field filtered). In house procedure based on US EPA 200.8.
pH	Samples measured as received using a conventional pH electrode. (APHA 4500 H ⁺ B. Online edition).
Electrical Conductivity	Samples analysed as received using a conventional conductivity electrode. (APHA 2510 B - Modified - Auto-titrator - Online edition).
Total Alkalinity (CaCO₃)	Samples analysed as received by potentiometric titration. (APHA 2320 B Online edition).
Chloride	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110 B - Online edition).
Sulfate	Analysis by Ion exchange chromatography following sample filtration. (APHA 4110B - Online edition).
NO₃-N	Calculated from oxidised nitrogen and Nitrite-N, measured colourimetrically by flow injection analysis. (APHA NO ₃ -I. Online edition)
Dissolved Reactive Phosphorus	Samples filtered and measured colourimetrically by flow injection analysis. (APHA 4500-P G - Modified - Online edition)
Ammoniacal-N	Samples are filtered and measured colourimetrically by flow injection analysis. Results represent total ammoniacal nitrogen (APHA 4500-NH ₃ H - Modified - Online edition).
Sum of Anions	Sum of milliequivalents/Litre of measured Anions.
Sum of Cations	Sum of milliequivalents/Litre of measured Cations.



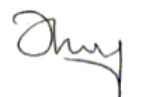
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Environmental Lab Manager



Deanna Rhind
Technician

APPENDIX D DATA ANALYSES

Baseline Water Quality Report: Shepherds Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_SC01_31-Oct-2024	W_SC01_14-Nov-2024	W_SC01_28-Nov-2024
LABJOBNO	24-33929-7	24-35305-8	24-36747-8
WaterLabID	Analytica	Analytica	Analytica
WaterSiteID	SC01	SC01	SC01
LabSampleID	24-33929-7	24-35305-8	24-36747-8
WaterSampDate	2024-10-31	2024-11-14	2024-11-28
SampBy	MB/GM	MB	MB
W_Acidity4_mgl			
W_Acidity5_mgl			
W_Acidity7_mgl			
W_Acidity8_mgl	1	1	1.67
W_Alkalinity_mgl	168	193	205
W_AmmoniaN_mgl	0.01	0.01	0.01
W_An_Bromide_mgl	0.05	0.05	0.05
W_An_Chloride_mgl	3.76	3.92	4.28
W_An_Fluoride_mgl	0.095	0.073	0.12
W_An_Nitrate-N_mgl	0.0887	0.0272	0.0745
W_An_Nitrite-N_mgl	0.0041	0.0028	0.00525
W_An_Sulphate_mgl	24.5	30.1	33.5
W_BiCarbAlk_mgl			
W_CarbAlk_mgl			
W_Density_gcm3			
W_DOC_mgl			
W_DRP_mgl	0.004	0.004	0.007
W_DSi_mgl			
W_EC_mSm			
W_EC_uScm	388	471	498
W_EColi_cfuml			
W_pH	8	8	8.1
W_pH_1311_hcl			
W_pH_1311_initial			
W_pH_1311_leachate			
W_pH_1311_off			
W_Total_Ag_mgl			
W_Total_Al_mgl	0.2	0.087	0.12
W_Total_As_mgl	0.0028	0.0028	0.0035
W_Total_B_mgl	0.013	0.011	0.044
W_Total_Ba_mgl	0.0421	0.0444	0.0476
W_Total_Be_mgl	0.000013	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001
W_Total_Ca_mgl	54.4	60.1	63.2
W_Total_Cd_mgl	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.0003	0.0002	0.00024
W_Total_Cr_mgl	0.0003	0.0002	0.0002
W_Total-Cs_mgl	0.000034	0.000011	0.000018
W_Total_Cu_mgl	0.0011	0.00083	0.00086
W_Total_Fe_mgl	0.32	0.16	0.23
W_Total_Ge_mgl	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001
W_Total_K_mgl	1.8	1.5	1.7
W_Total_La_mgl	0.00018	0.0001	0.00015
W_Total_Li_mgl	0.0072	0.00779	0.00919
W_Total_Mg_mgl	15.7	18.6	20.2
W_Total_Mn_mgl	0.02	0.016	0.02
W_Total_Mo_mgl	0.00039	0.0005	0.00054
W_Total_Na_mgl	9.78	11.5	12
W_Total_Ni_mgl	0.00051	0.00042	0.00049
W_Total_P_mgl	0.04	0.04	0.04
W_Total_Pb_mgl	0.00035	0.00019	0.00027
W_Total_Rb_mgl	0.00079	0.00044	0.00056
W_Total_S_mgl	12	12	13
W_Total_Sb_mgl	0.00018	0.00016	0.00018
W_Total_Se_mgl	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.877	0.946	1.01
W_Total_Ti_mgl			
W_Total_Tl_mgl	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00416	0.00472	0.00501
W_Total_V_mgl	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.00016	0.000096	0.00012
W_Total_Zn_mgl	0.003	0.003	0.003
W_Dissolved_Ag_mgl			
W_Dissolved_Al_mgl	0.0099	0.0068	0.0051
W_Dissolved_As_mgl	0.0022	0.0026	0.003
W_Dissolved_B_mgl	0.012	0.01	0.032
W_Dissolved_Ba_mgl	0.0386	0.0403	0.0429
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	50.7	57.5	60.1
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.00013	0.0001	0.00011
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002
W_Dissolved_Cs_mgl	0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.00073	0.00056	0.00068
W_Dissolved_Fe_mgl	0.019	0.014	0.014
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	1.6	1.4	1.6
W_Dissolved_La_mgl	0.000024	0.000016	0.000021
W_Dissolved_Li_mgl	0.00721	0.0082	0.00806
W_Dissolved_Mg_mgl	14.4	17.6	19.9
W_Dissolved_Mn_mgl	0.0014	0.005	0.0065
W_Dissolved_Mo_mgl	0.00064	0.00044	0.00061
W_Dissolved_Na_mgl	9.04	10.8	12.1
W_Dissolved_Ni_mgl	0.00036	0.00027	0.00023
W_Dissolved_P_mgl	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00022	0.00021	0.00024
W_Dissolved_S_mgl	10	12	14
W_Dissolved_Sb_mgl	0.00019	0.00017	0.00018
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.837	0.964	0.968
W_Dissolved_Ti_mgl			
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.004	0.00473	0.00466
W_Dissolved_V_mgl	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000041	0.000043	0.000039
W_Dissolved_Zn_mgl	0.001	0.001	0.001
W_SumAnions_meql	4.04	4.66	5
W_SumCations_meql	4.15	4.82	5.2
W_TCN_mgl	0.001	0.001	0.001
W_TColi_cfuml			
W_TDS_mgl	206	236	265
W_TDSalts_gm3	206	236	265
W_Thard_gCaCO3m3	200	230	240
W_TKN_mgl	0.39	0.27	0.28
W_TN_mgl	0.48	0.3	0.36
W_TOC_mgl			
W_TP_mgl	0.012	0.022	0.026
W_TSi_mgl			
W_TSS_BDC_mgl			
W_TSS_mgl	17	9	8
W_Turbidity_NTU	6.8	3.6	4.4
W_Volume_ml			
WF_DO_mgl	10.17	10.41	9.48
WF_DO_pct	110	108.8	101.9
WF_EC_mScm	373.5	415.2	455
WF_ORP_mV	-0.7	98.2	55.3
WF_pH	8.4	8.31	8.16
WF_temp_degC	16.6	14.9	16.2
WF_turbidity_NTU			
WF_colour	clear	clear	clear
WF_iveauel	low	low	low
WF_odour	nil	nil	nil
Blanks cells infer no available data			

Baseline Water Quality Report: Shepherds Creek

OLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_SC03_20-Mar-2024	W_SC03_4-Apr-2024	W_SC03_17-Apr-2024	W_SC03_1-May-2024	W_SC03_13-May-2024	W_SC03_16-May-2024	W_SC03_29-May-2024	W_SC03_27-Jun-2024
LABJOBNO	AR-24-NC-010966-01	AR-24-NC-011976-01	AR-24-NC-013497-01	AR-24-NC-015251-01				
WaterLabID	Eurofins	Eurofins	Eurofins	Eurofins	Eurofins	Eurofins	Analytica	Analytica
WaterSiteID	SC03	SC03	SC03	SC03	SC03	SC03	SC03	SC03
LabSampleID	817-2024-00035196	817-2024-00041160	817-2024-00047512	817-2024-00052694				
WaterSampDate	2024-03-20	2024-04-04	2024-04-17	2024-05-02				
SampBy	HM	MB	MB	MB	MB	MB	MB	MB
W_Acidity4_mgl	1	1	1	1	1			
W_Acidity5_mgl								
W_Acidity7_mgl	1	1	1	1	1			
W_Acidity8_mgl	7	10	4	4	4		5	4.33
W_Alkalinity_mgl	151	152	2	152	146		148	146
W_AmmoniaN_mgl	0.03	0.01	0.01	0.01	0.01		0.005	0.005
W_An_Bromide_mgl	0.02	0.02	0.02	0.02	0.02		0.05	0.05
W_An_Chloride_mgl	2.95	2.84	3	2.85	2.77		2.4	1.73
W_An_Fluoride_mgl	0.13	0.11	0.12	0.15	0.15		0.085	0.085
W_An_Nitrate-N_mgl	0.14	0.04	0.08	0.07	0.06		0.0961	0.145
W_An_Nitrite-N_mgl	0.01	0.01	0.01	0.01	0.01		0.001	0.001
W_An_Sulphate_mgl	16.6	15.1	14.6	15	16.7		14.5	13.3
W_BiCarbAlk_mgl								
W_CarbAlk_mgl								
W_Density_gcm3								
W_DOC_mgl	1.8	1.6	1.9	1.5	1.5		1.2	0.5
W_DRP_mgl							0.002	0.002
W_DSi_mgl	7.98	10.4	7.93	8.43	7.79			
W_EC_mSm	33.2	33.1	34	33.1	32.3		33.8	
W_EC_uScm							338	
W_EColi_cfumt								342
W_pH	8	8.1	5.4	8	8.1		8.1	7.9
W_pH_1311_hcl								
W_pH_1311_initial								
W_pH_1311_leachate								
W_pH_1311_off								
W_Total_Ag_mgl	0.001	0.001	0.001	0.001				0.002
W_Total_Al_mgl	0.135	0.163	0.148	0.138			0.21	0.13
W_Total_As_mgl	0.002	0.002	0.002	0.002			0.0016	0.0005
W_Total_B_mgl	0.05	0.05	0.05	0.05			0.035	0.027
W_Total_Ba_mgl	0.036	0.034	0.036	0.035			0.0408	0.0382
W_Total_Be_mgl	0.005	0.005	0.005	0.005			0.00001	0.00001
W_Total_Bi_mgl	0.005	0.005	0.005	0.005			0.0001	0.0001
W_Total_Ca_mgl	37.8	43	41.8	37.2	41.7		43.4	46.9
W_Total_Cd_mgl	0.001	0.001	0.001	0.001			0.00002	0.00002
W_Total_Co_mgl	0.002	0.002	0.002	0.002			0.00026	0.00017
W_Total_Cr_mgl	0.001	0.001	0.001	0.001			0.00028	0.00033
W_Total-Cs_mgl							0.000012	0.00001
W_Total_Cu_mgl	0.002	0.002	0.002	0.002			0.00061	0.0004
W_Total_Fe_mgl	0.2	0.2	0.2	0.2			0.46	0.22
W_Total_Ge_mgl							0.00005	0.00005
W_Total_Hg_mgl	0.001	0.001	0.001	0.001			0.0001	0.0001
W_Total_K_mgl	0.9	1.4	1.3	1			1.1	1.3
W_Total_La_mgl							0.00018	0.0001
W_Total_Li_mgl	0.004	0.005	0.004	0.003			0.00519	0.00455
W_Total_Mg_mgl	9.8	11.7	11.7	9.7	10.2		10.2	11.3
W_Total_Mn_mgl	0.01	0.011	0.011	0.01			0.039	0.022
W_Total_Mo_mgl	0.038	0.001	0.001	0.001			0.00041	0.00032
W_Total_Na_mgl	6.2	8	7.9	6.1			7.01	7.62
W_Total_Ni_mgl	0.001	0.001	0.001	0.001			0.0003	0.00024
W_Total_P_mgl							0.04	0.04
W_Total_Pb_mgl	0.001	0.001	0.001	0.001			0.00027	0.00019
W_Total_Rb_mgl							0.00076	0.00042
W_Total_S_mgl							10	10
W_Total_Sb_mgl	0.002	0.002	0.002	0.002			0.0001	0.0001
W_Total_Se_mgl	0.005	0.005	0.005	0.005			0.001	0.001
W_Total_Sn_mgl	0.001	0.001	0.001	0.001			0.0005	0.0005
W_Total_Sr_mgl	0.76	0.741	0.814	0.854			0.8	0.757
W_Total_Tl_mgl	0.005	0.005	0.002	0.003			0.0053	
W_Total_Tl_mgl	0.001	0.001	0.001	0.001			0.0001	0.0001
W_Total_U_mgl	0.002	0.002	0.002	0.002			0.00226	0.0024
W_Total_V_mgl	0.001	0.001	0.001	0.001			0.0005	0.0005
W_Total_Y_mgl							0.00014	0.000094
W_Total_Zn_mgl	0.005	0.005	0.005	0.005			0.003	0.003
W_Dissolved_Ag_mgl	0.0005	0.0005	0.0005	0.0005		0.0005		0.00008
W_Dissolved_Al_mgl	0.007	0.009	0.005	0.002		0.006	0.0032	0.0038
W_Dissolved_As_mgl	0.001	0.001	0.001	0.001		0.001	0.0005	0.0005
W_Dissolved_B_mgl	0.03	0.04	0.03	0.03		0.03	0.029	0.03
W_Dissolved_Ba_mgl	0.031	0.03	0.026	0.027		0.032	0.034	0.0352
W_Dissolved_Be_mgl	0.001	0.001	0.001	0.001		0.001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.001	0.001	0.001	0.001		0.001	0.0001	0.0001
W_Dissolved_Ca_mgl	44.1	39.3	37.7	39.1		45.6	45.1	48.7
W_Dissolved_Cd_mgl	0.0002	0.0002	0.0002	0.0002		0.0002	0.00002	0.00002
W_Dissolved_Co_mgl	0.0005	0.0005	0.0005	0.0005		0.0005	0.000036	0.000014
W_Dissolved_Cr_mgl	0.001	0.001	0.001	0.001		0.001	0.0002	0.0002
W_Dissolved-Cs_mgl								0.00001
W_Dissolved_Cu_mgl	0.0007	0.0007	0.0005	0.0005		0.0005	0.00037	0.00024
W_Dissolved_Fe_mgl	0.03	0.03	0.02	0.02		0.02	0.005	0.0052
W_Dissolved_Ge_mgl							0.00005	0.00005
W_Dissolved_Hg_mgl	0.0005	0.0005	0.0005	0.0005		0.0005	0.00008	0.00008
W_Dissolved_K_mgl	1.45	1.21	1.25	1.22		1.4	1.1	1.3
W_Dissolved_La_mgl							0.00001	0.00001
W_Dissolved_Li_mgl	0.004	0.007	0.004	0.005		0.005	0.00448	0.00466
W_Dissolved_Mg_mgl	12.1	11.9	11	11.7		12.1	10.8	11.5
W_Dissolved_Mn_mgl	0.0026	0.0014	0.0032	0.0038		0.0024	0.001	0.00071
W_Dissolved_Mo_mgl	0.0005	0.0006	0.0005	0.0005		0.0005	0.00026	0.00029
W_Dissolved_Na_mgl	8.36	8.53	7.51	7.98		8.32	7.18	7.63
W_Dissolved_Ni_mgl	0.0005	0.0005	0.0005	0.0005		0.0005	0.0002	0.0002
W_Dissolved_P_mgl							0.04	0.04
W_Dissolved_Pb_mgl	0.0005	0.0005	0.0005	0.0005		0.0005	0.00005	0.00005
W_Dissolved_Rb_mgl							0.0002	0.00021
W_Dissolved_S_mgl							10	10
W_Dissolved_Sb_mgl	0.001	0.001	0.001	0.001		0.001	0.00011	0.00015
W_Dissolved_Se_mgl	0.005	0.005	0.005	0.005		0.005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0005	0.0005	0.0005	0.0005		0.0005	0.0002	0.0002
W_Dissolved_Sr_mgl	0.782	0.592	0.705	0.895		0.709	0.796	0.746
W_Dissolved_Tl_mgl	0.0005	0.0005	0.0005	0.0005		0.0005	0.002	
W_Dissolved_Tl_mgl	0.0005	0.0005	0.0005	0.0005		0.0005	0.00001	0.00001
W_Dissolved_U_mgl	0.0021	0.002	0.0019	0.0019		0.0024	0.00232	0.00227
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005		0.0005	0.0005	0.0005
W_Dissolved_Y_mgl							0.000017	0.000014
W_Dissolved_Zn_mgl	0.002	0.002	0.002	0.002		0.002	0.001	0.001
W_SumAnions_meql							3.39	3.55
W_SumCations_meql							3.48	3.74
W_TCN_mgl	0.005	0.005	0.005	0.005		0.005		0.001
W_TCoil_cfumt								
W_TDS_mgl	163	162	167	162		158	192	171
W_TDSalts_gm3								
W_Thard_gCaCO3m3	135	156	140	133		164	150	160
W_TKN_mgl							0.23	0.75
W_TN_mgl	0.215	0.182	0.205	0.195		0.171	0.33	0.9
W_TOC_mgl	1.8	1.8	1.9	1.6		1.7	0.98	0.5
W_TP_mgl	0.007	0.009	0.009	0.01		0.009	0.021	0.013
W_TSi_mgl	3.27	3.48	3.54	3.27				
W_TSS_BDC_mgl								
W_TSS_mgl	4	6	6	5		8	11	7
W_Turbidity_NTU	1.33	2.39	2.03	1.92		3.46	4.6	3.5
W_Volume_ml								
WF_DO_mgl	14.51	11.87	14.01	14.67		10.83		13.25
WF_DO_pct	125.5	110.3	121.4	120.9		92.3		102.8
WF_EC_mScm	328	328.4	325.8	303.8		312.4		320
WF_ORP_mV	180.8	313.4	209.6	105		14.1		122.7
WF_pH	7.97	8.05	8.03	8.1		8.11		7.92
WF_temp_degC	6.3	9.7	5.9	4.2		5.7		2.6
WF_turbidity_NTU						2.55		3.5
WF_colour			clear	clear		clear		clear
WF_level			low	low		low		low
WF_ouour			odourless	odourless		nil		nil
Blanks cells infer no available data								

Baseline Water Quality Report: Shepherds Creek

SAMPLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
LABJOBNO	W_SC03_25-Jul-2024	W_SC03_22-Aug-2024	W_SC03_4-Sep-2024	W_SC03_19-Sep-2024	W_SC03_14-Nov-2024	W_SC03_28-Nov-2024
WaterLabID	24-23696	24-26351	24-27733-8	24-29331-9	24-35305-9	24-36747-9
WaterSiteID	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica
LabSampleID	SC03	SC03	SC03	SC03	SC03	SC03
WaterSampDate	2024-07-25	22-08-2024	2024-09-04	2024-09-19	2024-11-14	2024-11-28
SampBy	MB	MB	MB	MB	MB	MB
W_Acidity4_mgl						
W_Acidity5_mgl						
W_Acidity7_mgl						
W_Acidity8_mgl	10	6	3.33	2.67	1	1.67
W_Alkalinity_mgl	143	136	121	124	132	145
W_AmmoniaN_mgl	0.005	0.005	0.005	0.005	0.03	0.005
W_An_Bromide_mgl	0.05	0.05	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	2.91	2.49	2.58	2.7	2.03	1.87
W_An_Fluoride_mgl	0.083	0.079	0.076	0.076	0.077	0.13
W_An_Nitrate-N_mgl	0.223	0.196	0.194	0.24	0.0946	0.0944
W_An_Nitrite-N_mgl	0.0011	0.001	0.0014	0.0013	0.004	0.0014
W_An_Sulphate_mgl	16.4	14.6	11.3	9.84	9.53	9.83
W_BiCarbAlk_mgl						
W_CarbAlk_mgl						
W_Density_gcm3						
W_DOC_mgl						
W_DRP_mgl	0.002	0.002	0.002	0.002	0.002	0.003
W_DSi_mgl						
W_EC_mSm						
W_EC_uScm	325	359	270	253	310	321
W_EColi_cfumt						
W_pH	8	7.9	7.9	8	7.9	8.1
W_pH_1311_hcl						
W_pH_1311_initial						
W_pH_1311_leachate						
W_pH_1311_off						
W_Total_Ag_mgl				0.002		
W_Total_Al_mgl	0.076	0.025	0.09	0.412	0.387	1.12
W_Total_As_mgl	0.0005	0.0005	0.00077	0.00088	0.001	0.0017
W_Total_B_mgl	0.017	0.027	0.024	0.023	0.005	0.034
W_Total_Ba_mgl	0.0374	0.0376	0.0393	0.0454	0.0476	0.063
W_Total_Be_mgl	0.00001	0.00001	0.00001	0.000032	0.000014	0.000066
W_Total_Bi_mgl	0.0001	0.0001	0.0001		0.0001	0.0001
W_Total_Ca_mgl	45.2	45	37.7	40.9	43.4	45.4
W_Total_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.000026
W_Total_Co_mgl	0.000089	0.0001	0.00026	0.00046	0.00041	0.00103
W_Total_Cr_mgl	0.00026	0.0002	0.00031	0.00057	0.00065	0.0015
W_Total-Cs_mgl	0.00001	0.00001	0.00001	0.000083	0.00007	0.00024
W_Total_Cu_mgl	0.00036	0.00074	0.00092	0.0014	0.0012	0.0024
W_Total_Fe_mgl	0.17	0.089	0.39	0.9	0.893	2.14
W_Total_Ge_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	1.2	1.3	1.4	1.6	1.9	1.6
W_Total_La_mgl	0.000064	0.000045	0.00024	0.00038	0.00037	0.00086
W_Total_Li_mgl	0.00451	0.00439	0.00372	0.00423	0.00498	0.00671
W_Total_Mg_mgl	11	10.8	8.51	8.47	9.93	10.5
W_Total_Mn_mgl	0.017	0.018	0.044	0.0501	0.046	0.107
W_Total_Mo_mgl	0.00044	0.00041	0.00021	0.00021	0.00038	0.00028
W_Total_Na_mgl	7.33	7.23	5.87	5.75	6.42	6.59
W_Total_Ni_mgl	0.0002	0.00023	0.00039	0.00067	0.00061	0.0014
W_Total_P_mgl	0.04	0.04	0.04	0.046	0.051	0.094
W_Total_Pb_mgl	0.00012	0.0001	0.00047	0.00071	0.00071	0.0016
W_Total_Rb_mgl	0.00037	0.00023	0.00038	0.0013	0.0012	0.0034
W_Total_S_mgl	10	10	10	10	10	10
W_Total_Sb_mgl	0.0001	0.0001	0.0001	0.00013	0.00011	0.00013
W_Total_Se_mgl	0.001	0.001	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.754	0.742	0.633	0.604	0.703	0.732
W_Total_Ti_mgl				0.0085		
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00284	0.00279	0.00215	0.00205	0.00263	0.00248
W_Total_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0013
W_Total_Y_mgl	0.000068	0.000055	0.00022	0.00034	0.0003	0.00067
W_Total_Zn_mgl	0.003	0.003	0.003	0.003	0.003	0.0051
W_Dissolved_Ag_mgl						
W_Dissolved_Al_mgl	0.0032	0.003	0.0072	0.0096	0.012	0.011
W_Dissolved_As_mgl	0.0005	0.0005	0.00076	0.0005	0.00063	0.00078
W_Dissolved_B_mgl	0.018	0.026	0.023	0.02	0.01	0.025
W_Dissolved_Ba_mgl	0.0344	0.0355	0.0356	0.0332	0.038	0.0374
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.00001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	44	43.4	36.4	38.2	40.9	42.4
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.000027	0.000063	0.000061	0.000092	0.000064	0.000062
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.0003	0.00035	0.0007	0.00075	0.0004	0.0006
W_Dissolved_Fe_mgl	0.005	0.0074	0.021	0.025	0.037	0.034
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	1.1	1.2	1.3	1.4	1.6	1.2
W_Dissolved_La_mgl	0.00001	0.00001	0.000014	0.000017	0.000015	0.000019
W_Dissolved_Li_mgl	0.00452	0.0043	0.00372	0.00362	0.00461	0.00433
W_Dissolved_Mg_mgl	10.4	10.5	8.35	7.9	9.13	9.95
W_Dissolved_Min_mgl	0.003	0.0095	0.0018	0.0044	0.0076	0.0049
W_Dissolved_Mo_mgl	0.00045	0.00033	0.00031	0.00025	0.00035	0.00041
W_Dissolved_Na_mgl	6.95	7	5.82	5.41	5.98	6.86
W_Dissolved_Ni_mgl	0.0002	0.0002	0.00021	0.00024	0.0002	0.0002
W_Dissolved_P_mgl	0.04	0.04	0.04	0.04	0.04	0.11
W_Dissolved_Pb_mgl	0.000053	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00017	0.00017	0.00024	0.00022	0.0003	0.00035
W_Dissolved_S_mgl	10	10	10	10	10	10
W_Dissolved_Sb_mgl	0.00011	0.0001	0.0001	0.0001	0.00012	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005	0.00066	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.754	0.708	0.632	0.577	0.71	0.716
W_Dissolved_Ti_mgl						
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.00306	0.0028	0.00229	0.0018	0.0026	0.00225
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000018	0.000017	0.000029	0.000029	0.00003	0.000028
W_Dissolved_Zn_mgl	0.001	0.001	0.001	0.001	0.001	0.001
W_SumAnions_meql	3.34	3.13	2.78	2.81	2.94	3.2
W_SumCations_meql	3.38	3.36	2.79	2.83	3.1	3.27
W_TCN_mgl	0.001	0.001	0.001	0.001	0.001	0.001
W_TCoil_cfumt						
W_TDS_mgl	163	165	158	120	152	168
W_TDSalts_gm3			158	120	152	168
W_Thard_gCaCO3m3	160	160	130	140	150	160
W_TKN_mgl	0.13	0.19	0.39	0.52	0.72	0.65
W_TN_mgl	0.35	0.39	0.58	0.76	0.82	0.75
W_TOC_mgl						
W_TP_mgl	0.005	0.005	0.04	0.059	0.038	0.1
W_TSi_mgl						
W_TSS_BDC_mgl						
W_TSS_mgl	4	5	21	31	42	54
W_Turbidity_NTU	2.3	1.8	9	12	11	32
W_Volume_ml						
WF_DO_mgl	15.15		12.9	15.33	10.32	9.62
WF_DO_pct	113.3		118.2	130.4	105.5	103.2
WF_EC_mScm	311.2		269.2	66.5	276.8	295.3
WF_ORP_mV	129.1		44.4	123	84.2	18
WF_pH	8.13		8.18	7.53	8.12	8.18
WF_temp_degC	0.5		8.6	4.5	13.2	15.2
WF_turbidity_NTU						
WF_colour	clear		clear	clear	clear	clear
WF_level	low		high	high	low	low
WF_odor	nil		nil	nil	nil	nil
Blanks cells infer no available data						

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RSA1_22-Sep-2022	W_RSA1_23-Mar-2023	W_RSA1_5-Jul-2023	W_RSA1_10-Oct-2023	W_RSA1_20-Dec-2023	W_RSA1_4-Feb-2024	W_RSA1_5-Mar-2024
LABJOBNO	22-35194	WP23-11797	AR-23-NC-017979-01	AR-23-NC-028806-01	AR-24-NC-000295-01	AR-24-NC-003109-01	AR-24-NC-008972-01
WaterLabID	Analytica	SGS	Eurofins	Eurofins	Eurofins	Eurofins	Eurofins
WaterSiteID	RSA1	RSA1	RSA1	RSA1	RSA1	RSA1	RSA1
LabSampleID	22-35194-3	WP23-11797.006	817-2023-00068118	817-2023-00110965	817-2023-00141596	817-2024-00015365	817-2024-00029415
WaterSampDate	2022-09-22	2023-03-23	2023-07-05	2023-10-10	2023-12-20	2024-02-04	2024-03-05
SampBy	Van Walt/ E3	HM	HM	HM	HM	HM	HM
W_Acidity4_mgl		5	1	1	1	1	1
W_Acidity5_mgl		5					
W_Acidity7_mgl		5	26	1	1	1	1
W_Acidity8_mgl	6		1	28	53	48	37
W_Alkalinity_mgl	235	140	186	242	112	134	119
W_AmmoniaN_mgl	0.005	0.01	0.01	0.05	0.13	0.13	0.05
W_An_Bromide_mgl		0.01	0.02	0.02	0.02	0.02	0.03
W_An_Chloride_mgl	7.91	2.6	4.19	6.09	0.43	0.44	2.54
W_An_Fluoride_mgl		0.24	0.11	0.2	0.12	0.13	0.15
W_An_Nitrate-N_mgl	0.002	0.004516129	0.01	0.14	0.01	0.03	0.04
W_An_Nitrite-N_mgl		0.003043478	0.01	0.01		0.01	0.01
W_An_Sulphate_mgl	17.5	4.3	7.71	18.4	0.06	1.15	0.85
W_BiCarbAlk_mgl							
W_CarbAlk_mgl							
W_Density_gcm3							
W_DOC_mgl	7.1	4.1	3.3	5	3.2	4	3.2
W_DRP_mgl	0.002						
W_DSi_mgl		5.75	8.57	9.94	16.4	15.4	12.3
W_EC_mSm	48		38.7	49.5	22.8	27	24.2
W_EC_uScm	481	270					
W_EColi_cfuml							
W_pH	8	7.4	7.8	7.3	6.7	7.6	6.9
W_pH_1311_hcl							
W_pH_1311_initial							
W_pH_1311_leachate							
W_pH_1311_off							
W_Total_Ag_mgl		0.001	0.001	0.001			0.001
W_Total_Al_mgl	0.0074	0.046	0.023	0.1			0.453
W_Total_As_mgl	0.243	0.122	0.233	0.113			0.812
W_Total_B_mgl	0.01	0.05	0.05	0.05			0.05
W_Total_Ba_mgl	0.0263	0.022	0.019	0.03			0.056
W_Total_Be_mgl	0.00001	0.005	0.005	0.005			0.005
W_Total_Bi_mgl	0.0001	0.005	0.005	0.005			0.005
W_Total_Ca_mgl	71.2	41.4	60.6	59.5		33.7	33.9
W_Total_Cd_mgl	0.00002	0.001	0.001	0.001			0.001
W_Total_Co_mgl	0.00024	0.002	0.002	0.002			0.002
W_Total_Cr_mgl	0.0002	0.001	0.001	0.002			0.001
W_Total-Cs_mgl	0.00001						
W_Total_Cu_mgl	0.00035	0.002	0.006	0.002			0.002
W_Total_Fe_mgl	0.913	0.8	1.2	0.8			11.3
W_Total_Ge_mgl	0.00005						
W_Total_Hg_mgl	0.0001	0.001	0.001	0.001			0.001
W_Total_K_mgl	1.3	1.3	0.7	1.4			0.6
W_Total_La_mgl	0.000012						
W_Total_Li_mgl	0.00592	0.003	0.003	0.009			0.003
W_Total_Mg_mgl	18.8	6.3	7.8	15.5		5.9	6.2
W_Total_Mn_mgl	0.051	0.05	0.033	0.161			0.593
W_Total_Mo_mgl	0.0003	0.001	0.001	0.001			0.001
W_Total_Na_mgl	15.8	6.4	73	895			6.9
W_Total_Ni_mgl	0.00028	0.001	0.002	0.004			0.001
W_Total_P_mgl	0.084						
W_Total_Pb_mgl	0.00005	0.001	0.001	0.001			0.001
W_Total_Rb_mgl	0.00056						
W_Total_S_mgl	10						
W_Total_Sb_mgl	0.00014	0.002	0.002	0.002			0.002
W_Total_Se_mgl	0.001	0.005	0.005	0.005			0.005
W_Total_Sn_mgl	0.0005	0.001	0.001	0.001			0.001
W_Total_Sr_mgl	1.38	0.619	0.535	0.873			0.495
W_Total_Ti_mgl		0.003	0.002	0.004			0.01
W_Total_Tl_mgl	0.0001	0.001	0.001	0.001			0.001
W_Total_U_mgl	0.0014	0.001	0.002	0.003			0.001
W_Total_V_mgl	0.0005	0.001	0.001	0.002			0.001
W_Total_Y_mgl	0.00005						
W_Total_Zn_mgl	0.003	0.005	0.005	0.005			0.005
W_Dissolved_Ag_mgl		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Al_mgl	0.0042	0.002	0.002	0.002	0.002	0.003	0.002
W_Dissolved_As_mgl	0.0761	0.047	0.065	0.035	0.06	0.038	0.043
W_Dissolved_B_mgl	0.01	0.03	0.03	0.03	0.03	0.03	0.03
W_Dissolved_Ba_mgl	0.0189	0.017	0.004	0.003	0.036	0.03	0.033
W_Dissolved_Be_mgl	0.00001	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved_Bi_mgl	0.0001	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved_Ca_mgl	69.6	45	15.1	5	31.9	39.9	34.4
W_Dissolved_Cd_mgl	0.00002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Co_mgl	0.00019	0.0005	0.0005	0.0005	0.0014	0.0005	0.0005
W_Dissolved_Cr_mgl	0.00073	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved-Cs_mgl	0.00001						
W_Dissolved_Cu_mgl	0.0002	0.0005	0.0005	0.0007	0.0005	0.0005	0.0005
W_Dissolved_Fe_mgl	0.08	0.06	0.01	0.01	1.07	0.07	0.37
W_Dissolved_Ge_mgl	0.000082						
W_Dissolved_Hg_mgl	0.00008	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_K_mgl	1.3	1.23	1.45	1.12	0.14	0.34	0.55
W_Dissolved_La_mgl	0.00001						
W_Dissolved_Li_mgl	0.00646	0.004	0.005	0.005	0.003	0.003	0.003
W_Dissolved_Mg_mgl	18.6	7.49	0.17	0.18	5.68	7.64	6.04
W_Dissolved_Mn_mgl	0.035	0.0325	0.0006	0.002	0.69	0.0115	0.169
W_Dissolved_Mo_mgl	0.00031	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Na_mgl	15.5	7.72	648	512	7.75	7.43	7.48
W_Dissolved_Ni_mgl	0.00041	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_P_mgl	0.13						
W_Dissolved_Pb_mgl	0.00005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Rb_mgl	0.00047						
W_Dissolved_S_mgl	10						
W_Dissolved_Sb_mgl	0.0001	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved_Se_mgl	0.0005	0.005	0.005	0.005	0.005	0.005	0.005
W_Dissolved_Sn_mgl	0.0002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sr_mgl	1.34	0.503	0.211	0.145	0.563	0.536	0.398
W_Dissolved_Ti_mgl		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Tl_mgl	0.00001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_U_mgl	0.00219	0.0002	0.0002	0.0008	0.0002	0.0002	0.0002
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000014		0.002	0.002	0.003	0.005	
W_Dissolved_Zn_mgl	0.0012	0.002	0.002	0.002	0.003	0.005	0.002
W_SumAnions_meql	5.35						
W_SumCations_meql	5.71						
W_TCN_mgl	0.001	0.005	0.005	0.005	0.005	0.005	0.005
W_TColi_cfuml							
W_TDS_mgl	310	200	190	243	112	133	118
W_TDSalts_gm3							
W_Thard_gCaCO3m3	260	140	7	13	103	108	110
W_TKN_mgl	2.33						
W_TN_mgl		0.34	0.25	0.41	0.48	1.83	0.28
W_TOC_mgl	7.1	4.3	4.4	5.1	6.6	10.4	5
W_TP_mgl	0.42	0.017	0.024	0.014	0.016	0.188	0.009
W_TSi_mgl		4.94	4.34	5.83			6.01
W_TSS_BDC_mgl		87					
W_TSS_mgl		87	31	7	87	69	37
W_Turbidity_NTU		10	10.3	5.71	60.5	30.5	26.4
W_Volume_ml							
WF_DO_mgl	2.69			1.33			6.13
WF_DO_pct	27.4		70.2	13			59.3
WF_EC_mScm	505		411.9	795			
WF_ORP_mV	-75.3		172.9	-133.7			27.9
WF_pH	7.15		6.76	7.53			7.01
WF_temp_degC	12.7		1.8	9.8			10.3
WF_turbidity_NTU			7.55				
WF_colour	red- orange						
WF_level	medium baseflow						
WF_odor	odorless						

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

SAMPLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
LABJOBN0	AR-24-NC-010966-01	AR-24-NC-011976-01	AR-24-NC-013497-01	AR-24-NC-015251-01	W_RSA1_16-May-2024	W_RSA1_29-May-2024	W_RSA1_13-Jun-2024	W_RSA1_27-Jun-2024
WaterLabID	Eurofins	Eurofins	Eurofins	Eurofins	Eurofins	Analytica	Analytica	Analytica
WaterSiteID	RSA1	RSA1	RSA1	RSA1	RSA1	RSA1	RSA1	RSA1
LabSampleID	817-2024-00035198	817-2024-00041162	817-2024-00047514	817-2024-00052696		24-17710-7	24-19336-7	24-20566-7
WaterSampDate	2024-03-20	2024-04-04	2024-04-17	2024-05-01		2024-05-29	2024-06-13	2024-06-27
SampBy	HM	MB	MB	MB	MB		MB	MB
W_Acidity4_mgl	1	1	1	1	1			
W_Acidity5_mgl								
W_Acidity7_mgl	1	1	1	1	3			
W_Acidity8_mgl	49	44	36	27	33	16.67	2.33	11.67
W_Alkalinity_mgl	106	103	104	90	78	80.1	73.3	81.6
W_AmmoniaN_mgl	0.02	0.01			0.01	0.005	0.01	0.005
W_An_Bromide_mgl	0.02	0.02	0.02	0.02	0.02	0.05	0.05	
W_An_Chloride_mgl	0.85	0.96	2.72	3.41	2.35	1.96	1.94	2.55
W_An_Fluoride_mgl	0.12	0.1	0.1	0.11	0.1	0.048	0.066	0.056
W_An_Nitrate-N_mgl	0.01	0.01	0.01	0.01	0.01	0.0038	0.0037	0.002
W_An_Nitrite-N_mgl	0.01	0.01	0.01	0.01	0.01	0.001	0.001	0.001
W_An_Sulphate_mgl	0.72	1	2.8	4.09	6.77	7.79	5.89	6.36
W_BiCarbAlk_mgl								
W_CarbAlk_mgl								
W_Density_gcm3								
W_DOC_mgl	2	1.8	2.5	1.8	1.7	1.6	0.5	1.3
W_DRP_mgl						0.002	0.002	0.002
W_DSi_mgl	12.2	9.08	12.7	11.3	7.84			
W_EC_mSm	21.9	21	22.1	20	17.7	18.7		
W_EC_uScm						187	176	201
W_EColi_cfumt								
W_pH	6.8	7	6.9	6.8	6.7	7.6	7.2	7.3
W_pH_1311_hcl								
W_pH_1311_initial								
W_pH_1311_leachate								
W_pH_1311_off								
W_Total_Ag_mgl	0.001	0.001	0.001	0.001				0.002
W_Total_Al_mgl	0.022	0.049	0.007	0.005		0.15	0.011	0.0069
W_Total_As_mgl	0.476	0.337	0.128	0.454		1.05	0.019	0.291
W_Total_B_mgl	0.05	0.05	0.05	0.05		0.008	0.005	0.005
W_Total_Ba_mgl	0.035	0.029	0.027	0.03		0.0492	0.0162	0.0392
W_Total_Be_mgl	0.005	0.005	0.005	0.005		0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.005	0.005	0.005	0.005		0.0001	0.0001	0.0001
W_Total_Ca_mgl	26.6	27.3	26.5	22	23	26	23.2	27.2
W_Total_Cd_mgl	0.001	0.001	0.001	0.001		0.00002	0.00002	0.00002
W_Total_Co_mgl	0.002	0.002	0.002	0.002		0.00283	0.00011	0.00091
W_Total_Cr_mgl	0.001	0.001	0.001	0.001		0.0002	0.0002	0.0002
W_Total-Cs_mgl						0.00001	0.00001	0.00001
W_Total_Cu_mgl	0.002	0.002	0.002	0.002		0.00089	0.00024	0.00021
W_Total_Fe_mgl	9.4	5.7	1.6	6.9		15.4	0.29	5.4
W_Total_Ge_mgl						0.00021	0.00005	0.00013
W_Total_Hg_mgl	0.001	0.001	0.001	0.001		0.0001	0.0001	0.0001
W_Total_K_mgl	0.1	0.3	0.7	0.7		0.57	0.69	1
W_Total_La_mgl						0.00015	0.00001	0.000017
W_Total_Li_mgl	0.002	0.002	0.002	0.002		0.00274	0.00216	0.00236
W_Total_Mg_mgl	5.1	5.2	5.4	4.1		4.53	4.33	6.51
W_Total_Mn_mgl	0.457	0.243	0.094	0.205		0.768	0.023	0.265
W_Total_Mo_mgl	0.001	0.001	0.001	0.001		0.0002	0.0002	0.0002
W_Total_Na_mgl	6.3	6.4	6.8	4.9		5.6	5.91	5.72
W_Total_Ni_mgl	0.001	0.001	0.001	0.001		0.00074	0.0002	0.00036
W_Total_P_mgl						0.15	0.04	0.041
W_Total_Pb_mgl	0.001	0.001	0.001	0.001		0.00034	0.00005	0.00005
W_Total_Rb_mgl						0.00079	0.00034	0.00029
W_Total_S_mgl						10	10	10
W_Total_Sb_mgl	0.002	0.002	0.002	0.002		0.0001	0.0001	0.0001
W_Total_Se_mgl	0.005	0.005	0.005	0.005		0.001	0.001	0.001
W_Total_Sn_mgl	0.001	0.001	0.001	0.001		0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.401	0.361	0.411	0.379		0.293		0.317
W_Total_Ti_mgl	0.001	0.002	0.001	0.001		0.0044		
W_Total_Tl_mgl	0.001	0.001	0.001	0.001		0.0001	0.0001	0.0001
W_Total_U_mgl	0.001	0.001	0.001	0.001		0.000047	0.00003	0.000044
W_Total_V_mgl	0.001	0.001	0.001	0.001		0.0005	0.0005	0.0005
W_Total_Y_mgl						0.00014	0.00005	0.00005
W_Total_Zn_mgl	0.005	0.005	0.005	0.005		0.0051	0.0031	0.003
W_Dissolved_Ag_mgl	0.0005	0.0005	0.0005	0.0005	0.0005			0.00008
W_Dissolved_Al_mgl	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003
W_Dissolved_As_mgl	0.055	0.061	0.053	0.13	0.04	0.0056	0.012	0.016
W_Dissolved_B_mgl	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.028	0.026	0.025	0.027	0.021	0.0307	0.0149	0.0223
W_Dissolved_Be_mgl	0.001	0.001	0.001	0.001	0.001	0.00001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.001	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	35.9	29.6	27.9	37	25.1	26.1	23.5	24.9
W_Dissolved_Cd_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.0007	0.0006	0.0005	0.0018	0.0008	0.00131	0.000051	0.00068
W_Dissolved_Cr_mgl	0.001	0.001	0.001	0.001	0.001	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl						0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.0005	0.0005	0.0006	0.0341	0.0005	0.00023	0.0002	0.0002
W_Dissolved_Fe_mgl	0.86	0.73	0.32	0.17	0.2	0.013	0.018	0.0098
W_Dissolved_Ge_mgl						0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	0.18	0.23	0.99	2.79	0.65	0.41	0.67	0.83
W_Dissolved_La_mgl						0.00001	0.00001	0.00001
W_Dissolved_Li_mgl	0.003	0.004	0.003	0.003	0.003	0.00245	0.00223	0.00245
W_Dissolved_Mg_mgl	6.31	5.76	5.96	4.65	4.82	4.51	4.26	4.33
W_Dissolved_Mn_mgl	0.426	0.205	0.102	0.273	0.253	0.464	0.0056	0.264
W_Dissolved_Mo_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0002	0.00023	0.0002
W_Dissolved_Na_mgl	7.56	7.51	8.2	9.27	6.62	5.5	5.25	5.36
W_Dissolved_Ni_mgl	0.0005	0.0006	0.0005	0.0026	0.0005	0.0002	0.0002	0.0002
W_Dissolved_P_mgl						0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl						0.0002	0.00028	0.00027
W_Dissolved_S_mgl						10	10	10
W_Dissolved_Sb_mgl	0.001	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.005	0.005	0.005	0.005	0.005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.371	0.365	0.356	0.274	0.297	0.34	0.287	0.299
W_Dissolved_Ti_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.002		
W_Dissolved_Tl_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.00003	0.00003	0.000047
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl						0.00001	0.00001	0.00001
W_Dissolved_Zn_mgl	0.002	0.002	0.003	0.072	0.005	0.0017	0.001	0.001
W_SumAnions_meql						1.83	1.65	1.84
W_SumCations_meql						1.94	1.77	1.86
W_TCN_mgl	0.005	0.005	0.005	0.005	0.005		0.001	0.001
W_TColi_cfumt								
W_TDS_mgl	107	103	108	98	87	124	98	112
W_TDSalts_gm3								
W_Thard_gCaCO3m3	88	89	94	72	82	84	76	95
W_TKN_mgl						0.62	0.1	0.25
W_TN_mgl	0.161	0.065	0.21	0.144	0.187	0.62	0.1	0.25
W_TOC_mgl	2.1	1.9	2.7	2.6	3.2	1.9	0.96	2.4
W_TP_mgl	0.009	0.012	0.011	0.005	0.014	0.25	0.0071	0.11
W_TSi_mgl	5.29	4.98	5.15	4.66				
W_TSS_BDC_mgl								
W_TSS_mgl	22	17	6	20	16	32	3	25
W_Turbidity_NTU	29.9	21.2	3.05	13.8	14.7	35	0.9	17
W_Volume_ml								
WF_DO_mgl	3	4.58	5.28	8.63	8.75		7.45	9.74
WF_DO_pct	29.5	87.3	50.1	79.6	70.4		59.4	79.9
WF_EC_mScm	241.2	0.2	231.6	217.3	185.1		185.2	211.5
WF_ORP_mv	-16.1	37.5	7.1	62.1	11.6		-8.1	31
WF_pH	6.75	7.01	6.59	6.82	6.72		6.45	6.62
WF_temp_degC	8.5	10.4	8.9	8	2.8		1.8	3.4
WF_turbidity_NTU					73.65		52.2	
WF_colour								
WF_level								
WF_odor								

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HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RSA1_25-Jul-2024	W_RSA1_8-Aug-2024	W_RSA1_22-Aug-2024	W_RSA1_4-Sep-2024	W_RSA1_19-Sep-2024	W_RSA1_3-Oct-2024	W_RSA1_16-Oct-2024	W_RSA1_31-Oct-2024
LAB/OBNO	24-23696	24-25063	24-26351					
WaterLabID	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica
WaterSiteID	RSA1	RSA1	RSA1	RSA1	RSA1	RSA1	RSA1	RSA1
LabSampleID	24-23696-7	24-25063-5	24-26351-7	24-27733-6	24-29331-7	24-30758-6	24-32269-7-7	24-33929-6
WaterSampDate	2024-07-25	2024-08-08	2024-08-22	2024-09-04	2024-09-19	2024-10-03	2024-10-16	2024-10-31
SampBy	MB	MB		MB	MB	MB	MB	MB
W_Acidity4_mgl								
W_Acidity5_mgl								
W_Acidity7_mgl								
W_Acidity8_mgl	6.67	6.67	5.33	3.33	3	3	3	4
W_Alkalinity_mgl	71	64.3	77.2	82.7	74	68	75	92
W_AmmoniaN_mgl	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.020
W_An_Bromide_mgl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	2.51	4.11	2.73	3.24	2.28	2.24	2.07	1.73
W_An_Fluoride_mgl	0.065	0.04	0.051	0.051	0.06	0.06	0.07	0.08
W_An_Nitrate-N_mgl	0.0038	0.002	0.0067	0.0171	0.002	0.033	0.004	0.002
W_An_Nitrite-N_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	4.89	4.86	4.85	3.8	2.87	2	1.89	1.42
W_BiCarbAlk_mgl								
W_CarbAlk_mgl								
W_Density_gcm3								
W_DOC_mgl								
W_DRP_mgl	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
W_DSi_mgl								
W_EC_mSm								
W_EC_uScm	167	163	202	183	175	149	180	196
W_EColi_cfumlt								
W_pH	7.5	7.6	7.3	7.6	7.6	7.6	7.6	7.2
W_pH_1311_hcl								
W_pH_1311_initial								
W_pH_1311_leachate								
W_pH_1311_off								
W_Total_Ag_mgl					0.002			
W_Total_Al_mgl	0.075	0.015	0.011	0.0044	0.0094	0.1	0.0052	0.0063
W_Total_As_mgl	0.132	0.038	0.235	0.021	0.038	0.045	0.032	0.024
W_Total_B_mgl	0.005	0.0071	0.005	0.005	0.005	0.005	0.005	0.005
W_Total_Ba_mgl	0.0265	0.0155	0.0271	0.0147	0.0141	0.0142	0.0139	0.0138
W_Total_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Ca_mgl	22.9	20.5	25	24.6	25.9	20.4	23.6	25.6
W_Total_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.00038	0.00013	0.00177	0.00014	0.00026	0.00021	0.00017	0.00012
W_Total_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.00027	0.0002	0.0002
W_Total-Cs_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Total_Cu_mgl	0.00057	0.00035	0.00034	0.00062	0.0011	0.0012	0.00079	0.00074
W_Total_Fe_mgl	4.29	0.945	3.61	0.14	0.4	0.9	0.4	0.2
W_Total_Ge_mgl	0.00005	0.00005	0.00014	0.00005	0.00005	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	0.86	1.7	1	1.9	1.7	2.1	1.2	1.2
W_Total_La_mgl	0.00015	0.000038	0.000032	0.00001	0.000018	0.000130	0.000010	0.000010
W_Total_Li_mgl	0.00221	0.00212	0.00224	0.00225	0.00207	0.00192	0.00209	0.00218
W_Total_Mg_mgl	4.34	3.92	4.53	4.37	4.1	4.23	4.23	4.41
W_Total_Mn_mgl	0.343	0.0883	0.791	0.029	0.051	0.049	0.055	0.024
W_Total_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_Na_mgl	5.35	4.89	5.78	5.58	5.47	4.48	5.22	5.25
W_Total_Ni_mgl	0.00036	0.0002	0.00046	0.00037	0.00046	0.00052	0.00034	0.00043
W_Total_P_mgl	0.043	0.04	0.04	0.04	0.040	0.040	0.040	0.040
W_Total_Pb_mgl	0.00029	0.00005	0.000084	0.00005	0.00005	0.00020	0.00005	0.00005
W_Total_Rb_mgl	0.00034	0.00038	0.00021	0.00047	0.00039	0.00075	0.00025	0.00032
W_Total_S_mgl	10	10	10	10	10	10	10	10
W_Total_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.294	0.262	0.33	0.337	0.312	0.270	0.298	0.363
W_Total_Ti_mgl					0.0027			
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.000093	0.000063	0.000091	0.0001	0.000120	0.000120	0.000099	0.000130
W_Total_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.00014	0.00005	0.00005	0.00005	0.00005	0.00012	0.00005	0.00005
W_Total_Zn_mgl	0.003	0.003	0.003	0.003	0.0030	0.0030	0.0030	0.0035
W_Dissolved_Ag_mgl								
W_Dissolved_Al_mgl	0.003	0.003	0.003	0.003	0.0037	0.0052	0.003	0.003
W_Dissolved_As_mgl	0.0085	0.0071	0.0649	0.016	0.0230	0.0180	0.0280	0.0180
W_Dissolved_B_mgl	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.0149	0.0122	0.0238	0.0145	0.0129	0.0116	0.0138	0.0138
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	21.9	20.4	24.3	23.9	25.3	20.6	23.8	25.3
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.000015	0.000042	0.00016	0.00014	0.0002	0.00013	0.00015	0.00011
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.00022	0.00023	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.0002	0.0004	0.00022	0.00074	0.00120	0.00110	0.00077	0.00068
W_Dissolved_Fe_mgl	0.0091	0.018	0.11	0.038	0.1400	0.1000	0.2700	0.0550
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005	0.000069	0.00005	0.00005	0.00011	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	0.76	1.8	1	1.8	1.60	2.10	1.10	1.20
W_Dissolved_La_mgl	0.00001	0.00001	0.00001	0.00001	0.000012	0.000018	0.00001	0.00001
W_Dissolved_Li_mgl	0.00212	0.00203	0.00233	0.00218	0.00203	0.00181	0.00208	0.00237
W_Dissolved_Mg_mgl	4.03	4	4.64	4.42	4.03	4.03	4.03	4.36
W_Dissolved_Mn_mgl	0.0024	0.0087	0.748	0.021	0.0430	0.0220	0.0509	0.0170
W_Dissolved_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.00020	0.00020	0.00020	0.00020
W_Dissolved_Na_mgl	4.99	4.93	5.62	5.42	5.09	4.59	5.07	5.13
W_Dissolved_Ni_mgl	0.0002	0.00021	0.0004	0.00034	0.00043	0.00048	0.00032	0.00042
W_Dissolved_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.000063	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00013	0.00034	0.00019	0.00048	0.00037	0.00053	0.00025	0.00030
W_Dissolved_S_mgl	10	10	10	10	10	10	10	10
W_Dissolved_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.291	0.255	0.314	0.333	0.304	0.265	0.295	0.352
W_Dissolved_Ti_mgl								
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.000065	0.000068	0.000071	0.00012	0.000120	0.000110	0.000100	0.000130
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.00001	0.00001	0.00001	0.000018	0.000028	0.000032	0.000024	0.000018
W_Dissolved_Zn_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0025
W_SumAnions_meqt	1.6	1.51	1.73	1.83	1.62	1.47	1.61	1.91
W_SumCations_meqt	1.66	1.61	1.9	1.84	1.87	1.62	1.78	1.88
W_TCN_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_TColi_cfumlt								
W_TDS_mgt	84	77	91	102	81	87	95	96
W_TDSalts_gm3								
W_Thard_gCaCO3m3	75	67	82	80	83	68	76	82
W_TKN_mgl	0.38	0.26	0.42	0.15	0.40	0.50	0.41	0.40
W_TN_mgl	0.38	0.26	0.42	0.17	0.40	0.53	0.42	0.40
W_TOC_mgl								
W_TP_mgl	0.062	0.012	0.03	0.0073	0.009	0.027	0.009	0.011
W_TSi_mgl								
W_TSS_BDC_mgl								
W_TSS_mgl	19	3	6	3	3	7	3	3
W_Turbidity_NTU	12	3.4	1.6	0.7	1.5	7.6	0.8	1.7
W_Volume_ml								
WF_DO_mgl	7.37	8.97		12.58	8.15	11.68	10.25	7.81
WF_DO_pct	56.6	70.5		114.4	75.9	100	97.9	79.7
WF_EC_mScm	208.7	298.3		252.4	207.5	164.5	157.7	173.7
WF_ORP_mv	44.1	5.7		72.4	-2.9	38.7	28.7	15.7
WF_pH	6.9	7.04		7.34	7.08	7.38	7.53	7.6
WF_temp_degC	1.1	1.8		7.1	7.3	5.1	10.1	11.40
WF_turbidity_NTU							-0.45	
WF_colour				low	low	low		low
WF_iveauel				high	high	high	low	low
WF_ouduor				nil	nil	nil	nil	nil

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RSA1_14-Nov-2024	W_RSA1_28-Nov-2024
LAB/OBNO		
WaterLabID	Analytica	Analytica
WaterSiteID	RSA1	RSA1
LabSampleID	24-35305-7	24-36747-7
WaterSampDate	2024-11-14	2024-11-28
SampBy	MB	MB
W_Acidity4_mgl		
W_Acidity5_mgl		
W_Acidity7_mgl		
W_Acidity8_mgl	3	2
W_Alkalinity_mgl	102	106
W_AmmoniaN_mgl	0.005	0.005
W_An_Bromide_mgl	0.05	0.05
W_An_Chloride_mgl	1.17	0.84
W_An_Fluoride_mgl	0.06	0.11
W_An_Nitrate-N_mgl	0.006	0.010
W_An_Nitrite-N_mgl	0.001	0.001
W_An_Sulphate_mgl	0.54	0.38
W_BiCarbAlk_mgl		
W_CarbAlk_mgl		
W_Density_gcm3		
W_DOC_mgl		
W_DRP_mgl	0.002	0.002
W_DSi_mgl		
W_EC_mSm		
W_EC_uScm	223	223
W_EColi_cfuml		
W_pH	7.5	7.5
W_pH_1311_hcl		
W_pH_1311_initial		
W_pH_1311_leachate		
W_pH_1311_off		
W_Total_Ag_mgl		
W_Total_Al_mgl	0.0079	0.013
W_Total_As_mgl	0.023	0.0629
W_Total_B_mgl	0.005	0.0065
W_Total_Ba_mgl	0.017	0.0199
W_Total_Be_mgl	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001
W_Total_Ca_mgl	32.3	32.4
W_Total_Cd_mgl	0.00002	0.00002
W_Total_Co_mgl	0.00014	0.00026
W_Total_Cr_mgl	0.0002	0.0002
W_Total-Cs_mgl	0.00001	0.00001
W_Total_Cu_mgl	0.0006	0.00036
W_Total_Fe_mgl	0.3	1.2
W_Total_Ge_mgl	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001
W_Total_K_mgl	1.1	0.7
W_Total_La_mgl	0.000014	0.000016
W_Total_Li_mgl	0.00231	0.0024
W_Total_Mg_mgl	5.36	5.42
W_Total_Mn_mgl	0.074	0.165
W_Total_Mo_mgl	0.0002	0.0002
W_Total_Na_mgl	6.05	5.46
W_Total_Ni_mgl	0.00047	0.00035
W_Total_P_mgl	0.040	0.040
W_Total_Pb_mgl	0.00005	0.00005
W_Total_Rb_mgl	0.00027	0.00023
W_Total_S_mgl	10	10
W_Total_Sb_mgl	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005
W_Total_Sr_mgl	0.408	0.406
W_Total_Ti_mgl		
W_Total_Tl_mgl	0.0001	0.0001
W_Total_U_mgl	0.000130	0.000110
W_Total_V_mgl	0.0005	0.0005
W_Total_Y_mgl	0.00005	0.00005
W_Total_Zn_mgl	0.0030	0.0030
W_Dissolved_Ag_mgl		
W_Dissolved_Al_mgl	0.003	0.003
W_Dissolved_As_mgl	0.0160	0.0280
W_Dissolved_B_mgl	0.01	0.01
W_Dissolved_Ba_mgl	0.0163	0.0172
W_Dissolved_Be_mgl	0.000023	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001
W_Dissolved_Ca_mgl	29.6	30.6
W_Dissolved_Cd_mgl	0.00002	0.00002
W_Dissolved_Co_mgl	0.00011	0.00021
W_Dissolved_Cr_mgl	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00001	0.00001
W_Dissolved_Cu_mgl	0.00031	0.00030
W_Dissolved_Fe_mgl	0.0880	0.3000
W_Dissolved_Ge_mgl	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008
W_Dissolved_K_mgl	1.00	0.69
W_Dissolved_La_mgl	0.00001	0.00001
W_Dissolved_Li_mgl	0.00245	0.00224
W_Dissolved_Mg_mgl	5.04	5.44
W_Dissolved_Mn_mgl	0.0696	0.1200
W_Dissolved_Mo_mgl	0.00020	0.00020
W_Dissolved_Na_mgl	5.41	5.64
W_Dissolved_Ni_mgl	0.00045	0.00023
W_Dissolved_P_mgl	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00023	0.00019
W_Dissolved_S_mgl	10	10
W_Dissolved_Sb_mgl	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002
W_Dissolved_Sr_mgl	0.413	0.411
W_Dissolved_Ti_mgl		
W_Dissolved_Tl_mgl	0.00001	0.00001
W_Dissolved_U_mgl	0.000140	0.000110
W_Dissolved_V_mgl	0.0005	0.0005
W_Dissolved_Y_mgl	0.000015	0.000015
W_Dissolved_Zn_mgl	0.001	0.001
W_SumAnions_meql	2.09	2.17
W_SumCations_meql	2.16	2.25
W_TCN_mgl	0.001	0.001
W_TColi_cfuml		
W_TDS_mgl	111	119
W_TDSalts_gm3		
W_Thard_gCaCO3m3	100	100
W_TKN_mgl	0.24	0.24
W_TN_mgl	0.24	0.25
W_TOC_mgl		
W_TP_mgl	0.011	0.011
W_TSi_mgl		
W_TSS_BDC_mgl		
W_TSS_mgl	3	4
W_Turbidity_NTU	1.8	2.7
W_Volume_ml		
WF_DO_mgl	3.22	3.1
WF_DO_pct	33.2	32.7
WF_EC_mScm	460.5	515.3
WF_ORP_mV	-41.1	-50
WF_pH	6.8	6.7
WF_temp_degC	12.10	13.00
WF_turbidity_NTU		
WF_colour	low	low
WF_level	low	low
WF_our	nil	nil

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RS01_22-Sep-2022	W_RS01_23-Mar-2023	W_RS01_5-Jul-2023	W_RS01_10-Oct-2023	W_RS01_20-Dec-2023	W_RS01_4-Feb-2024	W_RS01_5-Mar-2024
LABJOBNO	22-35194	WP23-11797	AR-23-NC-017979-01	AR-23-NC-028806-01	AR-24-NC-000295-01	AR-24-NC-003109-01	AR-24-NC-008972-01
WaterLabID	Analytica	SGS	Eurofins	Eurofins	Eurofins	Eurofins	Eurofins
WaterSiteID	RS01	RS01	RS01	RS01	RS01	RS01	RS01
LabSampleID	22-35194-1	WP23-11797.001	817-2023-00068113	817-2023-00110960	817-2023-00141591	817-2024-00015361	817-2024-00029411
WaterSampDate	2022-09-22	2023-03-23	2023-07-05	2023-10-10	2023-12-20	2024-02-04	2024-03-05
SampBy	Van Walt/ E3	HM	HM	HM	HM	HM	HM
W_Acidity4_mgl		5	1	1	1	1	1
W_Acidity5_mgl		5					
W_Acidity7_mgl		5	1	1	1	1	1
W_Acidity8_mgl	4		2	1	3	4	6
W_Alkalinity_mgl	99.4	110	71	81	125	124	117
W_AmmoniaN_mgl	0.005	0.01	0.01	0.01	0.01	0.05	0.02
W_An_Bromide_mgl		0.01	0.02	0.02	0.02	0.02	0.02
W_An_Chloride_mgl	3.14	2.4	2.18	1.42	1	1.05	3.32
W_An_Fluoride_mgl		0.19	0.1	0.1	0.11	0.12	0.14
W_An_Nitrate-N_mgl	0.002	0.029354839	0.05	0.13	0.01	0.07	0.01
W_An_Nitrite-N_mgl		0.003043478	0.01	0.01	0.01	0.01	0.01
W_An_Sulphate_mgl	2.74	11	4.33	2.64	0.36	0.7	10.8
W_BiCarbAlk_mgl							
W_CarbAlk_mgl							
W_Density_gcm3							
W_DOC_mgl	3.6	3.1	3.5	3.4	3.5	3.4	3.3
W_DRP_mgl	0.002						
W_DSI_mgl		4.68	7.85	7.37	8.88	9.55	9.91
W_EC_mSm	16		14.9	17.1	24.4	24.9	26.1
W_EC_uScm	160	210					
W_EColi_cfuml							
W_pH	7.8	7.1	7.6	7.9	7.7	7.9	7.7
W_pH_1311_hcl							
W_pH_1311_initial							
W_pH_1311_leachate							
W_pH_1311_off							
W_Total_Ag_mgl		0.001	0.001	0.001			0.001
W_Total_Al_mgl	0.037	5.69	0.042	0.084			0.017
W_Total_As_mgl	0.038	3.19	0.028	0.046			0.031
W_Total_B_mgl	0.005	0.05	0.05	0.05			0.05
W_Total_Ba_mgl	0.0131	0.245	0.01	0.013			0.012
W_Total_Be_mgl	0.00001	0.005	0.005	0.005			0.005
W_Total_Bi_mgl	0.0001	0.005	0.005	0.005			0.005
W_Total_Ca_mgl	23.4	33.9	16.7	19.3		31.2	29.2
W_Total_Cd_mgl	0.00002	0.001	0.001	0.001			0.001
W_Total_Co_mgl	0.00015	0.009	0.002	0.002			0.002
W_Total_Cr_mgl	0.0002	0.005	0.001	0.001			0.001
W_Total-Cs_mgl	0.00001						
W_Total_Cu_mgl	0.00055	0.008	0.003	0.002			0.002
W_Total_Fe_mgl	0.543	76.9	0.4	0.7			0.4
W_Total_Ge_mgl	0.00005						
W_Total_Hg_mgl	0.0001	0.001	0.001	0.001			0.001
W_Total_K_mgl	1.3	3.7	0.6	0.6			1
W_Total_La_mgl	0.000047						
W_Total_Li_mgl	0.00219	0.01	0.001	0.002			0.003
W_Total_Mg_mgl	4.45	6.2	3.2	3.7		5.4	5.1
W_Total_Mn_mgl	0.0538	8.15	0.042	0.071			0.068
W_Total_Mo_mgl	0.0002	0.001	0.001	0.001			0.001
W_Total_Na_mgl	5.48	5.6	4	38.6			5.7
W_Total_Ni_mgl	0.00036	0.006	0.001	0.001			0.001
W_Total_P_mgl	0.04						
W_Total_Pb_mgl	0.000095	0.006	0.001	0.001			0.001
W_Total_Rb_mgl	0.0004						
W_Total_S_mgl	10						
W_Total_Sb_mgl	0.0001	0.002	0.002	0.002			0.002
W_Total_Se_mgl	0.001	0.005	0.005	0.005			0.005
W_Total_Sn_mgl	0.0005	0.001	0.001	0.001			0.001
W_Total_Sr_mgl	0.349	0.569	0.216	0.276			0.369
W_Total_Ti_mgl		0.115	0.002	0.003			0.001
W_Total_Tl_mgl	0.0001	0.001	0.001	0.001			0.001
W_Total_U_mgl	0.0001	0.001	0.001	0.001			0.001
W_Total_V_mgl	0.0005	0.008	0.001	0.001			0.001
W_Total_Y_mgl	0.00005						
W_Total_Zn_mgl	0.003	0.022	0.005	0.005			0.005
W_Dissolved_Ag_mgl		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Al_mgl	0.003	0.004	0.005	0.002	0.002	0.002	0.002
W_Dissolved_As_mgl	0.028	0.035	0.011	0.015	0.021	0.024	0.024
W_Dissolved_B_mgl	0.01	0.03	0.03	0.03	0.03	0.03	0.03
W_Dissolved_Ba_mgl	0.0106	0.011	0.007	0.011	0.014	0.013	0.013
W_Dissolved_Be_mgl	0.00001	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved_Bi_mgl	0.0001	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved_Ca_mgl	23.8	31.4	19.5	22.1	35.2	35.3	35.8
W_Dissolved_Cd_mgl	0.00002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Co_mgl	0.000094	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Cr_mgl	0.0002	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved-Cs_mgl	0.00001						
W_Dissolved_Cu_mgl	0.0002	0.0005	0.0006	0.0005	0.0005	0.0005	0.0006
W_Dissolved_Fe_mgl	0.066	0.23	0.07	0.01	0.05	0.09	0.11
W_Dissolved_Ge_mgl	0.00014						
W_Dissolved_Hg_mgl	0.00008	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_K_mgl	1.3	1.17	1.13	0.74	0.1	0.57	1.25
W_Dissolved_La_mgl	0.00001						
W_Dissolved_Li_mgl	0.00228	0.003	0.003	0.002	0.002	0.002	0.003
W_Dissolved_Mg_mgl	4.61	5.4	4.8	1.23	6.74	6.46	6.53
W_Dissolved_Mn_mgl	0.0059	0.0146	0.0067	0.0005	0.0357	0.0613	0.047
W_Dissolved_Mo_mgl	0.0002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0008
W_Dissolved_Na_mgl	5.57	6.46	6.48	122	6.37	7.08	7.27
W_Dissolved_Ni_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_P_mgl	0.04						
W_Dissolved_Pb_mgl	0.00005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Rb_mgl	0.00026						
W_Dissolved_S_mgl	10						
W_Dissolved_Sb_mgl	0.0001	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved_Se_mgl	0.0005	0.005	0.005	0.005	0.005	0.005	0.005
W_Dissolved_Sn_mgl	0.0002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sr_mgl	0.302	0.347	0.193	0.244	0.516	0.511	0.458
W_Dissolved_Ti_mgl		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Tl_mgl	0.00001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_U_mgl	0.00011	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000016		0.002	0.002	0.002	0.007	
W_Dissolved_Zn_mgl	0.001	0.002	0.002	0.002	0.002	0.007	0.004
W_SumAnions_meql	2.15						
W_SumCations_meql	1.85						
W_TCN_mgl	0.001	0.005	0.005	0.005	0.005	0.005	0.005
W_TColi_cfuml							
W_TDS_mgl	116	130	73	84	120	122	128
W_TDSalts_gm3							
W_Thard_gCaCO3m3	77	100	7	60	116	100	94
W_TKN_mgl	0.24						
W_TN_mgl		1.71	0.25	0.26	0.27	0.24	0.22
W_TOC_mgl	3.1	7.8	3.7	3.5	3.1	3.9	3.3
W_TP_mgl	0.008	0.861	0.011	0.011	0.007	0.012	0.005
W_TSI_mgl		13.8	3.26	3.19			3.6
W_TSS_BDC_mgl		1200					
W_TSS_mgl		1200	5	5	6	9	3
W_Turbidity_NTU		750	1.49	4.59	0.68	8.93	1.21
W_Volume_ml							
WF_DO_mgl	9.85						15.61
WF_DO_pct	95.4		96.2				153.4
WF_EC_mScm	164.4		124				
WF_ORP_mV	121.3		181.6				15.8
WF_pH	7.57		7.5				7.6
WF_temp_degC	10.8		0.06				10.5
WF_turbidity_NTU			3.36				
WF_colour	clear				clear		
WF_level	medium baseflow				low		
WF_ouodur	odourless				nilt		

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

SAMPLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
LAB/OBNO	W_RS01_11-Jul-2024	W_RS01_25-Jul-2024	W_RS01_8-Aug-2024	W_RS01_22-Aug-2024	W_RS01_4-Sep-2024	W_RS01_19-Sep-2024	W_RS01_3-Oct-2024	W_RS01_16-Oct-2024
WaterLabID	24-22094	24-23696	24-25063	24-26351				
WaterSiteID	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica
LabSampleID	RS01	RS01	RS01	RS01	RS01	RS01	RS01	RS01
WaterSampDate	24-22094-4	24-23696-4	24-25063-2	24-26351-4	24-27733-3	24-29331-4	24-30758-3	24-32269-4-4
WaterSampDate	2024-07-11	2024-07-25	2024-08-08	22-Aug-24	2024-09-04	19-Sep-24	03-Oct-24	16-Oct-24
SampBy		MB	MB		MB	MB	MB	MB
W_Acidity4_mgl								
W_Acidity5_mgl								
W_Acidity7_mgl								
W_Acidity8_mgl	3.33	3.33	6.67	4	3.33	3.33	3.33	2.67
W_Alkalinity_mgl	74.2	72.1	67.3	71.9	73.9	65.4	68.9	73.6
W_AmmoniaN_mgl	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
W_An_Bromide_mgl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	2.96	3.25	3.66	2.7	3.13	2.4	2.41	2
W_An_Fluoride_mgl	0.066	0.059	0.043	0.055	0.061	0.056	0.064	0.078
W_An_Nitrate-N_mgl	0.0024	0.0028	0.0461	0.002	0.002	0.002	0.0098	0.0066
W_An_Nitrite-N_mgl	0.001	0.001	0.0015	0.001	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	6.41	6.69	6.22	4.97	4.13	3.57	2.39	2.22
W_BiCarbAlk_mgl								
W_CarbAlk_mgl								
W_Density_gcm3								
W_DOC_mgl								
W_DRP_mgl	0.002	0.002	0.003	0.002	0.002	0.002	0.002	0.002
W_DSi_mgl								
W_EC_mSm								
W_EC_uScm	202	171	176	191	167	159	156	179
W_EColi_cfumt								
W_pH	7.4	7.4	7.6	7.6	7.7	7.6	7.7	7.6
W_pH_1311_hcl								
W_pH_1311_initial								
W_pH_1311_leachate								
W_pH_1311_off								
W_Total_Ag_mgl						0.002		
W_Total_Al_mgl	0.053	0.07	0.86	0.044	0.059	0.039	0.325	0.013
W_Total_As_mgl	0.042	0.0582	0.039	0.032	0.045	0.028	0.0695	0.024
W_Total_B_mgl	0.005	0.005	0.007	0.005	0.005	0.005	0.005	0.005
W_Total_Ba_mgl	0.0167	0.0166	0.0309	0.014	0.0147	0.0128	0.0198	0.0127
W_Total_Be_mgl	0.000013	0.00001	0.000058	0.00001	0.00001	0.00001	0.000024	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001		0.0001	0.0001
W_Total_Ca_mgl	22.2	22.5	22.8	23.4	22.5	25	21.3	23.3
W_Total_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.00016	0.00019	0.00102	0.00011	0.00018	0.00015	0.00049	0.00011
W_Total_Cr_mgl	0.0002	0.0002	0.00065	0.0002	0.0002	0.00026	0.00067	0.0002
W_Total-Cs_mgl	0.000016	0.00001	0.00013	0.00001	0.00001	0.00001	0.000045	0.00001
W_Total_Cu_mgl	0.00025	0.00029	0.0022	0.00042	0.00085	0.00012	0.00014	0.0008
W_Total_Fe_mgl	0.669	0.987	1.76	0.38	0.586	0.33	1.6	0.15
W_Total_Ge_mgl	0.00005	0.00005	0.00017	0.00005	0.00005	0.00005	0.000076	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	1.2	1	1.8	1.2	2	1.7	2.1	1.2
W_Total_La_mgl	0.000068	0.000068	0.00121	0.000033	0.000077	0.000065	0.00033	0.000019
W_Total_Li_mgl	0.00256	0.0024	0.00354	0.00233	0.00228	0.00212	0.00244	0.00218
W_Total_Mg_mgl	4.19	4.38	4.51	4.46	4.16	4.22	4.09	4.18
W_Total_Mn_mgl	0.0921	0.15	0.112	0.045	0.0839	0.039	0.177	0.024
W_Total_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_Na_mgl	4.88	5.35	5.2	5.6	5.25	5.46	5.21	5.21
W_Total_Ni_mgl	0.0002	0.00022	0.0012	0.00026	0.00043	0.00051	0.00066	0.00035
W_Total_P_mgl	0.04	0.04	0.054	0.04	0.04	0.04	0.045	0.04
W_Total_Pb_mgl	0.0001	0.00013	0.0026	0.00007	0.00011	0.000073	0.00065	0.00005
W_Total_Rb_mgl	0.00038	0.00036	0.0022	0.00036	0.00057	0.00044	0.0012	0.00029
W_Total_S_mgl	10	10	10	10	10	10	10	10
W_Total_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.365	0.314	0.299	0.34	0.316	0.314	0.31	0.312
W_Total_Ti_mgl						0.0023		
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00003	0.000064	0.00014	0.000074	0.000094	0.000086	0.00012	0.0001
W_Total_V_mgl	0.0005	0.0005	0.0012	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.000055	0.000053	0.00069	0.00005	0.000064	0.000072	0.00022	0.00005
W_Total_Zn_mgl	0.003	0.003	0.0055	0.003	0.003	0.0036	0.003	0.003
W_Dissolved_Ag_mgl								
W_Dissolved_Al_mgl	0.003	0.003	0.026	0.003	0.003	0.0095	0.0085	0.003
W_Dissolved_As_mgl	0.014	0.015	0.015	0.017	0.022	0.017	0.016	0.02
W_Dissolved_B_mgl	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.0124	0.0122	0.0119	0.0114	0.0123	0.0104	0.012	0.0127
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.000023	0.00001	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	23.9	22.4	21.7	22.4	21.2	23.9	21.7	23.1
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.000048	0.000027	0.00008	0.000041	0.000081	0.00014	0.00017	0.000092
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00001	0.000013	0.00001	0.00001	0.00001	0.000013	0.00001	0.00001
W_Dissolved_Cu_mgl	0.00029	0.00021	0.00063	0.00057	0.00073	0.0012	0.0011	0.00088
W_Dissolved_Fe_mgl	0.038	0.025	0.027	0.027	0.029	0.062	0.096	0.042
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005	0.00005	0.00011	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	1.2	0.97	1.4	1.1	1.9	1.7	2.1	1.2
W_Dissolved_La_mgl	0.00001	0.00001	0.000033	0.00001	0.00001	0.00003	0.000037	0.00001
W_Dissolved_Li_mgl	0.00237	0.0021	0.00224	0.00221	0.00216	0.00192	0.00186	0.00218
W_Dissolved_Mg_mgl	4.44	4.14	4.18	4.26	3.99	4.01	3.99	3.99
W_Dissolved_Mn_mgl	0.011	0.0059	0.0046	0.0081	0.0047	0.0095	0.033	0.0093
W_Dissolved_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Na_mgl	5.46	5.04	4.98	5.28	5.11	5.09	4.78	5.12
W_Dissolved_Ni_mgl	0.0002	0.0002	0.00021	0.00049	0.00036	0.00041	0.00054	0.00075
W_Dissolved_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.000069	0.00005
W_Dissolved_Rb_mgl	0.00025	0.00022	0.00033	0.00022	0.00041	0.00036	0.00043	0.00028
W_Dissolved_S_mgl	10	10	10	10	10	10	10	10
W_Dissolved_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.38	0.321	0.288	0.301	0.334	0.285	0.274	0.321
W_Dissolved_Tl_mgl								
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.00003	0.00013	0.00011	0.000069	0.00011	0.000097	0.000089	0.00012
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.00001	0.00001	0.000023	0.00001	0.000018	0.00005	0.000039	0.000019
W_Dissolved_Zn_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.0013	0.001
W_SumAnions_meql	1.71	1.68	1.59	1.63	1.66	1.46	1.51	1.58
W_SumCations_meql	1.83	1.7	1.68	1.73	1.66	1.79	1.68	1.74
W_TCN_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_TColi_cfumt								
W_TDS_mgl	89	92	91	96	87	91	86	66
W_TDSalts_gm3								
W_Thard_gCaCO3m3	73	74	75	77	73	80	70	75
W_TKN_mgl	0.23	0.2	0.43	1.53	0.28	0.43	0.45	0.47
W_TN_mgl	0.23	0.2	0.48	1.5	0.28	0.43	0.46	0.47
W_TOC_mgl								
W_TP_mgl	0.016	0.025	0.15	0.0061	0.017	0.011	0.06	0.0089
W_TSi_mgl								
W_TSS_BDC_mgl								
W_TSS_mgl	5	11	27	3	7	3	18	3
W_Turbidity_NTU	4	4.8	73	2.6	4.1	2.2	16	1.3
W_Volume_ml								
WF_DO_mgl		12.46	12.52		12.61	11.25	13.24	20.24
WF_DO_pct			99.3		117.7	101.7	114	98.3
WF_EC_mScm		159.9	162.5		170.6	151.5	154.6	157.1
WF_ORP_mv		41.4	17		57.7	46.9	78.6	37.4
WF_pH		7.47	7.63		7.7	7.71	7.77	7.62
WF_temp_degC		0.5	2.1		8.6	6.3	5	12.1
WF_turbidity_NTU								0.1
WF_colour					low	low	low	clear
WF_level					high	high	high	low
WF_odor					nil	nil	nil	nil

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RS01_31-Oct-2024	W_RS01_14-Nov-2024	W_RS01_28-Nov-2024
LAB/OBNO			
WaterLabID	Analytica	Analytica	Analytica
WaterSiteID	RS01	RS01	RS01
LabSampleID	24-33929-3	24-35305-4	24-36747-4
WaterSampDate	31-Oct-24	14-Nov-24	28-Nov-24
SampBy	MB	MB	MB
W_Acidity4_mgl			
W_Acidity5_mgl			
W_Acidity7_mgl			
W_Acidity8_mgl	3.33	3.33	1.67
W_Alkalinity_mgl	83.6	101	105
W_AmmoniaN_mgl	0.005	0.005	0.005
W_An_Bromide_mgl	0.05	0.05	0.05
W_An_Chloride_mgl	1.6	1.1	0.83
W_An_Fluoride_mgl	0.07	0.065	0.11
W_An_Nitrate-N_mgl	0.002	0.002	0.002
W_An_Nitrite-N_mgl	0.001	0.001	0.001
W_An_Sulphate_mgl	1.34	0.58	0.45
W_BiCarbAlk_mgl			
W_CarbAlk_mgl			
W_Density_gcm3			
W_DOC_mgl			
W_DRP_mgl	0.002	0.002	0.002
W_DSi_mgl			
W_EC_mSm			
W_EC_uScm	175	197	212
W_EColi_cfuml			
W_pH	7.5	7.6	7.6
W_pH_1311_hcl			
W_pH_1311_initial			
W_pH_1311_leachate			
W_pH_1311_off			
W_Total_Ag_mgl			
W_Total_Al_mgl	0.021	0.011	0.016
W_Total_As_mgl	0.03	0.027	0.033
W_Total_B_mgl	0.005	0.005	0.0057
W_Total_Ba_mgl	0.0131	0.0148	0.0146
W_Total_Be_mgl	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001
W_Total_Ca_mgl	26.4	30.4	31.7
W_Total_Cd_mgl	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.00013	0.00011	0.00011
W_Total_Cr_mgl	0.00024	0.0002	0.00021
W_Total-Cs_mgl	0.00001	0.00001	0.00001
W_Total_Cu_mgl	0.00072	0.0004	0.00046
W_Total_Fe_mgl	0.23	0.16	0.28
W_Total_Ge_mgl	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001
W_Total_K_mgl	1.2	1	0.76
W_Total_La_mgl	0.000024	0.00001	0.000017
W_Total_Li_mgl	0.00231	0.00239	0.00254
W_Total_Mg_mgl	4.63	5.29	5.39
W_Total_Mn_mgl	0.039	0.0525	0.0662
W_Total_Mo_mgl	0.0002	0.0002	0.0002
W_Total_Na_mgl	5.47	5.8	5.62
W_Total_Ni_mgl	0.00042	0.00037	0.00039
W_Total_P_mgl	0.04	0.04	0.04
W_Total_Pb_mgl	0.00005	0.00005	0.00005
W_Total_Rb_mgl	0.00035	0.00028	0.00024
W_Total_S_mgl	10	10	10
W_Total_Sb_mgl	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.398	0.442	0.438
W_Total_Ti_mgl			
W_Total_Tl_mgl	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00014	0.00013	0.00012
W_Total_V_mgl	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.00005	0.00005	0.00005
W_Total_Zn_mgl	0.003	0.003	0.003
W_Dissolved_Ag_mgl			
W_Dissolved_Al_mgl	0.003	0.0038	0.003
W_Dissolved_As_mgl	0.022	0.022	0.021
W_Dissolved_B_mgl	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.0129	0.0142	0.0138
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	25.7	29	30.9
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.00008	0.000094	0.000084
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002
W_Dissolved_Cs_mgl	0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.00058	0.00035	0.00039
W_Dissolved_Fe_mgl	0.04	0.03	0.028
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	1.1	0.99	0.71
W_Dissolved_La_mgl	0.00001	0.00001	0.00001
W_Dissolved_Li_mgl	0.00255	0.00244	0.00233
W_Dissolved_Mg_mgl	4.47	4.95	5.43
W_Dissolved_Mn_mgl	0.013	0.038	0.04
W_Dissolved_Mo_mgl	0.0002	0.0002	0.0002
W_Dissolved_Na_mgl	5.23	5.39	5.83
W_Dissolved_Ni_mgl	0.00048	0.00037	0.00025
W_Dissolved_P_mgl	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00029	0.00027	0.00022
W_Dissolved_S_mgl	10	10	10
W_Dissolved_Sb_mgl	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.388	0.447	0.445
W_Dissolved_Ti_mgl			
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.00014	0.00015	0.00014
W_Dissolved_V_mgl	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000019	0.000015	0.000014
W_Dissolved_Zn_mgl	0.001	0.001	0.001
W_SumAnions_meql	1.75	2.07	2.15
W_SumCations_meql	1.91	2.12	2.26
W_TCN_mgl	0.001	0.001	0.002
W_TColi_cfuml			
W_TDS_mgl	82	90	111
W_TDSalts_gm3			
W_Thard_gCaCO3m3	85	98	100
W_TKN_mgl	0.32	0.28	0.25
W_TN_mgl	0.32	0.28	0.25
W_TOC_mgl			
W_TP_mgl	0.0082	0.0095	0.0086
W_TSi_mgl			
W_TSS_BDC_mgl			
W_TSS_mgl	3	3	4
W_Turbidity_NTU	1.4	1.4	1.3
W_Volume_ml			
WF_DO_mgl	9.75	7.99	7.78
WF_DO_pct	103.3	83.4	83.8
WF_EC_mScm	172.1	193.3	203.4
WF_ORP_mV	4.8	8.8	-5.7
WF_pH	7.82	7.55	7.52
WF_temp_degC	13.5	13.7	14.6
WF_turbidity_NTU			
WF_colour	clear	clear	clear
WF_level	low	low	low
WF_ouour	nil	nil	nil

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RS02 22-Sep-2022	W_RS02 23-Mar-2023	W_RS02 5-Jul-2023	W_RS02 10-Oct-2023	W_RS02 20-Dec-2023	W_RS02 4-Feb-2024	W_RS02 5-Mar-2024
LABJOBN0	22-35194	WP23-11797	AR-23-NC-017979-01	AR-23-NC-028806-01	AR-24-NC-000295-01	AR-24-NC-003109-01	AR-24-NC-008972-01
WaterLabID	Analytica	SGS	Eurofins	Eurofins	Eurofins	Eurofins	Eurofins
WaterSiteID	RS02	RS02	RS02	RS02	RS02	RS02	RS02
LabSampleID	22-35194-2	WP23-11797.002	817-2023-00068117	817-2023-00110964	817-2023-00141595	817-2024-00015364	817-2024-00029414
WaterSampDate	2022-09-22	2023-03-23	2023-07-05	2023-10-10	2023-12-20	2024-02-04	2024-03-05
SampBy	Van Walt/ E3	HM	HM	HM	HM	HM	HM
W_Acidity4_mgl		5	1	1	1	1	1
W_Acidity5_mgl		5					
W_Acidity7_mgl		5	1	1	1	1	1
W_Acidity8_mgl	2		2	1	3	1	6
W_Alkalinity_mgl	68.8	68	62	61	67	58	60
W_AmmoniaN_mgl	0.005	0.01	0.01	0.01	0.01	0.1	0.01
W_An_Bromide_mgl		0.06	0.02	0.02	0.02	0.02	0.02
W_An_Chloride_mgl	2.17	2	2.08	1.68	1.32	1.52	2.98
W_An_Fluoride_mgl		0.25	0.09	0.09	0.1	0.09	0.11
W_An_Nitrate-N_mgl	0.0092	0.004516129	0.11	0.01	0.01	0.01	0.23
W_An_Nitrite-N_mgl		0.003043478	0.01	0.01	0.01	0.01	0.01
W_An_Sulphate_mgl	1.77	6.3	2.39	1.38	1	1.49	7.31
W_BiCarbAlk_mgl							
W_CarbAlk_mgl							
W_Density_gcm3							
W_DOC_mgl	2.5	2.7	3.6	2.7	2	1.8	2.2
W_DRP_mgl	0.002						
W_DSI_mgl		4.91	8.26	8.08	8.91	10.3	10.2
W_EC_mSm	13		12.6	13.2	14	13	13.7
W_EC_uScm	134	150					
W_EColi_cfuml							
W_pH	7.7	6.9	7.5	7.9	7.7	7.6	7.7
W_pH_1311_hcl							
W_pH_1311_initial							
W_pH_1311_leachate							
W_pH_1311_off							
W_Total_Ag_mgl		0.001	0.001	0.001			0.001
W_Total_Al_mgl	0.38	0.304	0.251	0.129			0.144
W_Total_As_mgl	0.012	0.006	0.006	0.007			0.005
W_Total_B_mgl	0.005	0.05	0.05	0.05			0.05
W_Total_Ba_mgl	0.0183	0.015	0.013	0.013			0.012
W_Total_Be_mgl	0.000024	0.005	0.005	0.005			0.005
W_Total_Bi_mgl	0.0001	0.005	0.005	0.005			0.005
W_Total_Ca_mgl	20.1	21.2	14.8	15.9		15	16.1
W_Total_Cd_mgl	0.00002	0.001	0.001	0.001			0.001
W_Total_Co_mgl	0.00032	0.002	0.002	0.002			0.002
W_Total_Cr_mgl	0.00029	0.002	0.001	0.001			0.001
W_Total-Cs_mgl	0.000068						
W_Total_Cu_mgl	0.0013	0.005	0.003	0.002			0.002
W_Total_Fe_mgl	0.78	0.4	0.4	0.2			0.3
W_Total_Ge_mgl	0.00005						
W_Total_Hg_mgl	0.0001	0.001	0.001	0.001			0.001
W_Total_K_mgl	1.2	0.9	0.6	0.5			1
W_Total_La_mgl	0.00034						
W_Total_Li_mgl	0.00286	0.01	0.002	0.003			0.003
W_Total_Mg_mgl	3.71	3.7	2.6	3		2.8	3.3
W_Total_Mn_mgl	0.028	0.012	0.01	0.006			0.008
W_Total_Mo_mgl	0.0002	0.001	0.001	0.001			0.001
W_Total_Na_mgl	4.76	4.9	3.5	44.5			4.3
W_Total_Ni_mgl	0.00061	0.001	0.001	0.001			0.001
W_Total_P_mgl	0.04						
W_Total_Pb_mgl	0.00064	0.001	0.001	0.001			0.001
W_Total_Rb_mgl	0.0016						
W_Total_S_mgl	10						
W_Total_Sb_mgl	0.00011	0.002	0.002	0.002			0.002
W_Total_Se_mgl	0.001	0.005	0.005	0.005			0.005
W_Total_Sn_mgl	0.0005	0.001	0.001	0.001			0.001
W_Total_Sr_mgl	0.306	0.26	0.198	0.246			0.239
W_Total_Ti_mgl		0.016	0.01	0.004			0.005
W_Total_Tl_mgl	0.0001	0.001	0.001	0.001			0.001
W_Total_U_mgl	0.00028	0.001	0.001	0.001			0.001
W_Total_V_mgl	0.0005	0.006	0.001	0.001			0.001
W_Total_Y_mgl	0.0002						
W_Total_Zn_mgl	0.0052	0.006	0.005	0.005			0.005
W_Dissolved_Ag_mgl		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Al_mgl	0.011	0.011	0.012	0.005	0.007	0.004	0.006
W_Dissolved_As_mgl	0.0059	0.004	0.003	0.005	0.006	0.004	0.004
W_Dissolved_B_mgl	0.01	0.03	0.03	0.03	0.03	0.03	0.03
W_Dissolved_Ba_mgl	0.0095	0.009	0.008	0.011	0.011	0.009	0.01
W_Dissolved_Be_mgl	0.00001	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved_Bi_mgl	0.0001	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved_Ca_mgl	19.9	20.6	22	17.3	19	17.2	14.9
W_Dissolved_Cd_mgl	0.00002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Co_mgl	0.000077	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Cr_mgl	0.0002	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved-Cs_mgl	0.00001						
W_Dissolved_Cu_mgl	0.0002	0.0005	0.0007	0.0007	0.0005	0.0005	0.0006
W_Dissolved_Fe_mgl	0.015	0.03	0.02	0.01	0.03	0.02	0.03
W_Dissolved_Ge_mgl	0.00005						
W_Dissolved_Hg_mgl	0.00008	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_K_mgl	1	0.65	0.93	0.55	0.49	0.5	1.06
W_Dissolved_La_mgl	0.00001						
W_Dissolved_Li_mgl	0.00275	0.003	0.002	0.002	0.003	0.003	0.002
W_Dissolved_Mg_mgl	3.68	3.83	3.78	2.72	3.52	3.23	3.3
W_Dissolved_Mn_mgl	0.00062	0.0009	0.0009	0.0005	0.0009	0.0006	0.0013
W_Dissolved_Mo_mgl	0.0002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Na_mgl	4.6	5.05	5.5	63.1	4.34	4.65	3.94
W_Dissolved_Ni_mgl	0.00029	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_P_mgl	0.04						
W_Dissolved_Pb_mgl	0.00005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Rb_mgl	0.00028						
W_Dissolved_S_mgl	10						
W_Dissolved_Sb_mgl	0.0001	0.001	0.001	0.001	0.001	0.001	0.001
W_Dissolved_Se_mgl	0.0005	0.005	0.005	0.005	0.005	0.005	0.005
W_Dissolved_Sn_mgl	0.0002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sr_mgl	0.304	0.247	0.182	0.19	0.277	0.238	0.229
W_Dissolved_Ti_mgl		0.0005	0.001	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Tl_mgl	0.00001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_U_mgl	0.00037	0.0002	0.0002	0.0003	0.0002	0.0002	0.0002
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.00002	0.002	0.002	0.002	0.002	0.002	
W_Dissolved_Zn_mgl	0.001	0.002	0.002	0.002	0.002	0.002	0.006
W_SumAnions_meql	1.48						
W_SumCations_meql	1.53						
W_TCN_mgl	0.001	0.005	0.005	0.005	0.005	0.005	0.005
W_TColi_cfuml							
W_TDS_mgl	102	120	62	65	68	64	67
W_TDSalts_gm3							
W_Thard_gCaCO3m3	66	67	7	54	62	49	51
W_TKN_mgl	0.35						
W_TN_mgl		0.26	0.3	0.21	0.16	0.18	0.15
W_TOC_mgl	2.5	3	3.6	2.7	1.8	2.3	2.2
W_TP_mgl	0.048	0.024	0.009	0.012	0.009	0.009	0.008
W_TSi_mgl		4.79	3.76	3.45			4.37
W_TSS_BDC_mgl		13					
W_TSS_mgl		13	6	6	6	6	7
W_Turbidity_NTU		5.9	3.3	2.4	1.5	3.56	2.33
W_Volume_ml							
WF_DO_mgl	9.42			10.56			9.26
WF_DO_pct	98.6		92.3	109.8			89.1
WF_EC_mScm	135.5		144.5	129.3			
WF_ORP_mV	124.5		159.9	172.7			27.3
WF_pH	7.77		7.72	7.85			7.69
WF_temp_degC	13.9		1.8	12.6			9.4
WF_turbidity_NTU			1.4				
WF_colour	clear				clear		
WF_level	medium baseflow				low		
WF_ouodur	odourless				nil		

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

SAMPLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
LAB/IBNO	AR-24-NC-010966-01	AR-24-NC-011976-01	AR-24-NC-013497-01	AR-24-NC-015251-01	W_RS02_16-May-2024	W_RS02_29-May-2024	W_RS02_13-Jun-2024	W_RS02_27-Jun-2024
WaterLabID	Eurofins	Eurofins	Eurofins	Eurofins	Eurofins	Analytica	Analytica	Analytica
WaterSiteID	RS02	RS02	RS02	RS02	RS02	RS02	RS02	RS02
LabSampleID	817-2024-00035197	817-2024-00041161	817-2024-00047513	817-2024-00052695		24-17710-5	24-19336-5	24-20566-5
WaterSampDate	2024-03-20	2024-04-04	2024-04-17	2024-05-01	2024-05-16	2024-05-29	2024-06-13	2024-06-27
SampBy	HM	MB	MB	MB	MB		MB	MB
W_Acidity4_mgl	1	1	1	1	1			
W_Acidity5_mgl								
W_Acidity7_mgl	1	1	1	1	1			
W_Acidity8_mgl	6	4	4	2	2	3.33	1	1
W_Alkalinity_mgl	56	65	72	67	60	60.8	67.9	71.4
W_AmmoniaN_mgl	0.02	0.04	0.01	0.01	0.01	0.005	0.005	0.005
W_An_Bromide_mgl	0.02	0.02	0.02	0.02	0.02	0.05	0.05	0.05
W_An_Chloride_mgl	1.65	1.91	2.85	3.35	3.08	2.28	1.68	1.95
W_An_Fluoride_mgl	0.1	0.05	0.09	0.11	0.11	0.061	0.064	0.063
W_An_Nitrate-N_mgl	0.01	0.01	0.01	0.01	0.01	0.0116	0.0068	0.0111
W_An_Nitrite-N_mgl	0.01	0.01	0.01	0.01	0.01	0.001	0.001	0.0012
W_An_Sulphate_mgl	2.32	4.46	2.77	3.24	4.44	3.18	2.91	3.13
W_BiCarbAlk_mgl								
W_CarbAlk_mgl								
W_Density_gcm3								
W_DOC_mgl	1.2	1.5	1.9	2.2	2.5	2.9	0.55	1.3
W_DRP_mgl						0.002	0.002	0.002
W_DSi_mgl	10.7	8.18	10.5	10.1	10.8			
W_EC_mSm	12.4	14.2	15.7	15.4	14.1	14.6		
W_EC_uScm						146	152	157
W_EColi_cfumt								
W_pH	7.6	7.7	7.6	7.8	7.7	7.6	7.4	7.5
W_pH_1311_hct								
W_pH_1311_initial								
W_pH_1311_leachate								
W_pH_1311_off								
W_Total_Ag_mgl	0.001	0.001	0.001	0.001				0.002
W_Total_Al_mgl	0.219	0.103	0.067	0.299		0.45	0.041	0.043
W_Total_As_mgl	0.004	0.004	0.005	0.007		0.012	0.0053	0.0056
W_Total_B_mgl	0.05	0.05	0.05	0.05		0.042	0.005	0.0088
W_Total_Ba_mgl	0.012	0.013	0.013	0.017		0.0247	0.0126	0.0141
W_Total_Be_mgl	0.005	0.005	0.005	0.005		0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.005	0.005	0.005	0.005		0.0001	0.0001	0.0001
W_Total_Ca_mgl	13.5	17.9	20.3	16.2	17.6	18.8	20.7	21.1
W_Total_Cd_mgl	0.001	0.001	0.001	0.001		0.00002	0.00002	0.00002
W_Total_Co_mgl	0.002	0.002	0.002	0.002		0.00058	0.000086	0.000083
W_Total_Cr_mgl	0.001	0.001	0.001	0.001		0.0003	0.0002	0.0002
W_Total_Cs_mgl						0.000054	0.00001	0.00001
W_Total_Cu_mgl	0.002	0.002	0.004	0.002		0.0014	0.00034	0.00053
W_Total_Fe_mgl	0.3	0.1	0.1	0.4		1.04	0.099	0.12
W_Total_Ge_mgl						0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.001	0.001	0.001	0.001		0.0001	0.0001	0.0001
W_Total_K_mgl	0.4	1.1	1.4	1.4		1.2	1.1	1.2
W_Total_La_mgl						0.00058	0.000059	0.000065
W_Total_Li_mgl	0.002	0.003	0.003	0.002		0.00433	0.00269	0.0026
W_Total_Mg_mgl	2.9	3.8	4.2	3.3	3.4	3.58	4	4.25
W_Total_Mn_mgl	0.008	0.004	0.005	0.01		0.049	0.0042	0.0043
W_Total_Mo_mgl	0.04	0.001	0.001	0.001		0.0002	0.0002	0.0002
W_Total_Na_mgl	3.5	4.5	5.2	3.9		6.51	5.05	5.9
W_Total_Ni_mgl	0.001	0.001	0.001	0.001		0.00071	0.00025	0.00025
W_Total_P_mgl						0.041	0.04	0.04
W_Total_Pb_mgl	0.001	0.001	0.001	0.001		0.00095	0.000083	0.00013
W_Total_Rb_mgl						0.0017	0.0004	0.00043
W_Total_S_mgl						10	10	10
W_Total_Sb_mgl	0.002	0.002	0.002	0.002		0.0001	0.0001	0.0001
W_Total_Se_mgl	0.005	0.005	0.005	0.005		0.001	0.001	0.001
W_Total_Sn_mgl	0.001	0.001	0.001	0.001		0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.196	0.259	0.272	0.275		0.308	0.289	0.34
W_Total_Ti_mgl	0.008	0.002	0.003	0.009		0.014		
W_Total_Tl_mgl	0.001	0.001	0.001	0.001		0.0001	0.0001	0.0001
W_Total_U_mgl	0.001	0.001	0.001	0.001		0.0005	0.00033	0.00043
W_Total_V_mgl	0.001	0.001	0.001	0.001		0.00066	0.0005	0.0005
W_Total_Y_mgl						0.00044	0.00055	0.00056
W_Total_Zn_mgl	0.005	0.005	0.005	0.005		0.003	0.003	0.0047
W_Dissolved_Ag_mgl	0.0005	0.0005	0.0005	0.0005	0.0005			0.00008
W_Dissolved_Al_mgl	0.006	0.007	0.006	0.007	0.007	0.0047	0.004	0.003
W_Dissolved_As_mgl	0.003	0.004	0.004	0.005	0.004	0.0044	0.0049	0.0045
W_Dissolved_B_mgl	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.009	0.011	0.011	0.011	0.01	0.0117	0.0116	0.0126
W_Dissolved_Be_mgl	0.001	0.001	0.001	0.001	0.001	0.00001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.001	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	15.6	19.9	18.2	19.3	18.5	19.4	20.5	21.7
W_Dissolved_Cd_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.000045	0.000035	0.000031
W_Dissolved_Cr_mgl	0.001	0.001	0.001	0.001	0.001	0.0002	0.0002	0.0002
W_Dissolved_Cs_mgl							0.00001	0.00001
W_Dissolved_Cu_mgl	0.0005	0.0006	0.0005	0.0005	0.0006	0.0005	0.00032	0.00034
W_Dissolved_Fe_mgl	0.03	0.02	0.02	0.02	0.01	0.0095	0.0055	0.005
W_Dissolved_Ge_mgl						0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	0.62	1.11	1.34	1.1	1.54	1.3	1.1	1.1
W_Dissolved_La_mgl						0.000017	0.00001	0.00001
W_Dissolved_Li_mgl	0.002	0.005	0.002	0.003	0.003	0.00243	0.0026	0.00233
W_Dissolved_Mg_mgl	3.35	4.09	3.96	3.49	3.79	3.79	3.99	3.96
W_Dissolved_Mn_mgl	0.0007	0.0005	0.0007	0.0005	0.0005	0.00074	0.0005	0.0005
W_Dissolved_Mo_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0002	0.00025	0.0002
W_Dissolved_Na_mgl	4.58	4.93	4.89	4.69	5.29	4.85	4.95	4.68
W_Dissolved_Ni_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.00021	0.0003	0.0002
W_Dissolved_P_mgl						0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl						0.00029	0.00035	0.00029
W_Dissolved_S_mgl						10	10	10
W_Dissolved_Sb_mgl	0.001	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.005	0.005	0.005	0.005	0.005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.234	0.249	0.253	0.243	0.277	0.278	0.278	0.287
W_Dissolved_Ti_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.002		
W_Dissolved_Tl_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.0002	0.0002	0.0003	0.0003	0.0002	0.00025	0.00031	0.00036
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl						0.000031	0.000016	0.000017
W_Dissolved_Zn_mgl	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.001
W_SumAnions_meql						1.35	1.47	1.56
W_SumCations_meql						1.52	1.59	1.64
W_TCN_mgl	0.005	0.005	0.005	0.005	0.005		0.001	0.001
W_TColi_cfumt								
W_TDS_mgl	61	70	77	75	69	101	82	90
W_TDSalts_gm3								
W_Thard_gCaCO3m3	46	60	62	63	62	62	68	70
W_TKN_mgl						0.41	0.1	0.25
W_TN_mgl	0.095	0.134	0.128	0.131	0.164	0.42	0.1	0.26
W_TOC_mgl	1.3	1.5	1.9	2.4	2.6	1.9	1.2	0.5
W_TP_mgl	0.007	0.009	0.009	0.012	0.011	0.01	0.0078	0.005
W_TSi_mgl	4.61	4.65	4.37	4.65				
W_TSS_BDC_mgl								
W_TSS_mgl	7	6	6	10	6	10	3	4
W_Turbidity_NTU	2	1.95	1.81	5.92	1	13	1.7	1.1
W_Volume_ml								
WF_DO_mgl	124.8	8.99	11.42	17.33	11.68		12.44	15.2
WF_DO_pct	111.3	84.1	98.8	160.3	91.9		97.7	114.8
WF_EC_mScm	68.4	39.6	149.9	149.8	138.1		146.9	156.3
WF_ORP_mv	88.2	198.5	241.2	235.5	110.6		-3.2	16.4
WF_pH	7.51	7.66	7.7	7.17	7.53		7.75	7.86
WF_temp_degC	6.8	8.6	5.4	7.4	1.8		1.4	0.2
WF_turbidity_NTU					0.77		1.2	
WF_colour				clear				
WF_level				low				
WF_ouour				odourless				

Baseline Water Quality Report: Bendigo Creek

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Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RS02_16-Oct-2024	W_RS02_31-Oct-2024	W_RS02_14-Nov-2024	W_RS02_28-Nov-2024
LABIDBNO				
WaterLabID	Analytica	Analytica	Analytica	Analytica
WaterSiteID	RS02	RS02	RS02	RS02
LabSampleID	24-32269-5-5	24-33929-4	24-35305-5	24-36747-5
WaterSampDate	16-Oct-24	31-Oct-24	14-Nov-24	28-Nov-24
SampBy	MB	MB/GM	MB	MB
W_Acidity4_mgl				
W_Acidity5_mgl				
W_Acidity7_mgl				
W_Acidity8_mgl	2.67	3.33	3.33	1.67
W_Alkalinity_mgl	60.9	67.2	74	78.1
W_AmmoniaN_mgl	0.005	0.005	0.005	0.005
W_An_Bromide_mgl	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	2.02	1.5	1.19	1.12
W_An_Fluoride_mgl	0.053	0.074	0.051	0.09
W_An_Nitrate-N_mgl	0.0228	0.0045	0.002	0.002
W_An_Nitrite-N_mgl	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	1.33	1.03	0.94	0.86
W_BiCarbAlk_mgl				
W_CarbAlk_mgl				
W_Density_gcm3				
W_DOC_mgl				
W_DRP_mgl	0.002	0.002	0.002	0.002
W_DSi_mgl				
W_EC_mSm				
W_EC_uScm	146	146	151	167
W_EColi_cfuml				
W_pH	7.5	7.4	7.4	7.5
W_pH_1311_hcl				
W_pH_1311_initial				
W_pH_1311_leachate				
W_pH_1311_off				
W_Total_Ag_mgl				
W_Total_Al_mgl	0.066	0.088	0.15	0.14
W_Total_As_mgl	0.007	0.0083	0.0096	0.0099
W_Total_B_mgl	0.005	0.005	0.005	0.005
W_Total_Ba_mgl	0.0125	0.0133	0.0148	0.0155
W_Total_Be_mgl	0.00001	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001	0.0001
W_Total_Ca_mgl	19.1	21.8	22.8	23.5
W_Total_Cd_mgl	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.00012	0.00017	0.0002	0.00021
W_Total_Cr_mgl	0.0002	0.0003	0.0002	0.0002
W_Total-Cs_mgl	0.00001	0.000015	0.000024	0.000026
W_Total_Cu_mgl	0.00099	0.00099	0.00052	0.00063
W_Total_Fe_mgl	0.14	0.17	0.33	0.34
W_Total_Ge_mgl	0.00005	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	0.91	0.87	0.61	0.72
W_Total_La_mgl	0.000084	0.000073	0.00012	0.00013
W_Total_Li_mgl	0.00212	0.00206	0.00264	0.00295
W_Total_Mg_mgl	3.24	3.49	3.91	4.02
W_Total_Mn_mgl	0.0059	0.0058	0.015	0.015
W_Total_Mo_mgl	0.0002	0.0002	0.0002	0.0002
W_Total_Na_mgl	4.53	4.59	4.55	4.56
W_Total_Ni_mgl	0.00041	0.00056	0.00045	0.00047
W_Total_P_mgl	0.04	0.04	0.04	0.04
W_Total_Pb_mgl	0.00009	0.00011	0.00021	0.00024
W_Total_Rb_mgl	0.0004	0.00049	0.00067	0.00068
W_Total_S_mgl	10	10	10	10
W_Total_Sb_mgl	0.0001	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.25	0.311	0.312	0.311
W_Total_Ti_mgl				
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00025	0.00027	0.00032	0.00032
W_Total_V_mgl	0.0005	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.00008	0.000089	0.00011	0.00011
W_Total_Zn_mgl	0.003	0.003	0.003	0.003
W_Dissolved_Ag_mgl				
W_Dissolved_Al_mgl	0.0073	0.0069	0.007	0.0033
W_Dissolved_As_mgl	0.0062	0.0071	0.007	0.0068
W_Dissolved_B_mgl	0.01	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.0116	0.012	0.0116	0.0122
W_Dissolved_Be_mgl	0.00001	0.00001	0.000023	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	19.2	21	22.1	22.7
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.00007	0.00008	0.000073	0.000066
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.00073	0.00072	0.00042	0.00042
W_Dissolved_Fe_mgl	0.015	0.016	0.0097	0.013
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	0.86	0.77	0.51	0.61
W_Dissolved_La_mgl	0.000014	0.000017	0.000013	0.000012
W_Dissolved_Li_mgl	0.00199	0.0021	0.0025	0.00244
W_Dissolved_Mg_mgl	3.15	3.34	3.68	4
W_Dissolved_Mn_mgl	0.00081	0.0005	0.0016	0.0014
W_Dissolved_Mo_mgl	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Na_mgl	4.29	4.31	4.34	4.67
W_Dissolved_Ni_mgl	0.00032	0.00048	0.00032	0.00021
W_Dissolved_P_mgl	0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00021	0.00024	0.00018	0.00021
W_Dissolved_S_mgl	10	10	10	10
W_Dissolved_Sb_mgl	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.245	0.289	0.319	0.308
W_Dissolved_Ti_mgl				
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.00023	0.00027	0.00031	0.00029
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000032	0.000041	0.000025	0.000023
W_Dissolved_Zn_mgl	0.001	0.001	0.001	0.001
W_SumAnions_meql	1.31	1.41	1.54	1.62
W_SumCations_meql	1.43	1.53	1.61	1.68
W_TCN_mgl	0.001	0.001	0.001	0.001
W_TColi_cfuml				
W_TDS_mgl	65	76	77	93
W_TDSalts_gm3				
W_Thard_gCaCO3m3	61	69	73	75
W_TKN_mgl	0.41	0.35	0.23	0.27
W_TN_mgl	0.43	0.36	0.23	0.27
W_TOC_mgl				
W_TP_mgl	0.0059	0.012	0.015	0.017
W_TSi_mgl				
W_TSS_BDC_mgl				
W_TSS_mgl	5	9	12	12
W_Turbidity_NTU	2.3	4.9	4.8	4.3
W_Volume_ml				
WF_DO_mgl	11.07	9.48	10.42	9.26
WF_DO_pct	100.8	98.7	101.2	94.7
WF_EC_mScm	128.8	140.3	148.1	154.6
WF_ORP_mV	140.6	25.8	21.7	-1.3
WF_pH	7.62	7.72	7.56	7.59
WF_temp_degC	8	12.3	10.2	12
WF_turbidity_NTU	1.77			
WF_colour	clear	clear	clear	clear
WF_level	low	low	low	low
WF_odour	nil	nil	nil	nil

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RS03_4-Apr-2024	W_RS03_17-Apr-2024	W_RS03_1-May-2024	W_RS03_16-May-2024	W_RS03_29-May-2024	W_RS03_13-Jun-2024	W_RS03_27-Jun-2024	W_RS03_11-Jul-2024
LABIDBNO	AR-24-NC-011976-01	AR-24-NC-013497-01	AR-24-NC-015251-01		24-17710	24-19336	24-20566	24-22094
WaterLabID	Eurofins	Eurofins	Eurofins	Eurofins	Analytica	Analytica	Analytica	Analytica
WaterSiteID	RS03	RS03	RS03	RS03	RS03	RS03	RS03	RS03
LabSampleID	817-2024-00041163	817-2024-00047515	817-2024-00052697		24-17710-6	24-19336-6	24-20566-6	24-22094-6
WaterSampDate	2024-04-04	2024-04-17	2024-05-01	2024-05-16	2024-05-29	2024-06-13	2024-06-27	2024-07-11
SampBy	MB	MB	MB	MB		MB	MB	
W_Acidity4_mgl	1	1	1	1				
W_Acidity5_mgl								
W_Acidity7_mgl	1	1	1	1				
W_Acidity8_mgl	4	6	3	2	3.33	5.67	1.67	5
W_Alkalinity_mgl	43	48	43	40	44.1	47.1	42.7	39.9
W_AmmoniaN_mgl	0.01	0.01	0.01	0.01	0.005	0.005	0.005	0.006
W_An_Bromide_mgl	0.02	0.02	0.02	0.02	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	1.37	2.44	1.91	1.59	1.47	0.96	1.37	1.26
W_An_Fluoride_mgl	0.07	0.07	0.09	0.09	0.043	0.048	0.047	0.049
W_An_Nitrate-N_mgl	0.01	0.01	0.01	0.01	0.002	0.002	0.002	0.0146
W_An_Nitrite-N_mgl	0.01	0.01	0.01	0.01	0.001	0.001	0.0025	0.001
W_An_Sulphate_mgl	0.79	3.03	2.08	2.92	2.68	2.22	2.36	2.4
W_BiCarbAlk_mgl								
W_CarbAlk_mgl								
W_Density_gcm3								
W_DOC_mgl	1.3	2	1.3	1.1	1.4	1	1.3	
W_DRP_mgl					0.003	0.002	0.002	0.002
W_DSi_mgl	14.8	8.85	9.33	9.42				
W_EC_mSm	9.6	11.2	10.1	9.4	10.3			
W_EC_uScm					103	108	98.3	106
W_EColi_cfumt								
W_pH	7.5	7.4	7.4	7.4	7.4	7.9	7.2	7.2
W_pH_1311_hcl								
W_pH_1311_initial								
W_pH_1311_leachate								
W_pH_1311_off								
W_Total_Ag_mgl	0.001	0.001	0.001				0.002	
W_Total_Al_mgl	0.055	0.005	0.03		0.003	0.0058	0.0049	0.0096
W_Total_As_mgl	0.026	0.012	0.012		0.0081	0.0079	0.0086	0.0071
W_Total_B_mgl	0.05	0.05	0.05		0.0065	0.005	0.005	0.005
W_Total_Ba_mgl	0.009	0.008	0.008		0.0262	0.0071	0.0071	0.0072
W_Total_Be_mgl	0.005	0.005	0.005		0.00016	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.005	0.005	0.005		0.0001	0.0001	0.0001	0.0001
W_Total_Ca_mgl	11.6	13.5	10.5	11.1	12.4	12.7	12.3	10.9
W_Total_Cd_mgl	0.001	0.001	0.001		0.000083	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.002	0.002	0.002		0.000029	0.000052	0.000039	0.000075
W_Total_Cr_mgl	0.002	0.001	0.001		0.0002	0.0002	0.0002	0.0002
W_Total-Cs_mgl					0.00011	0.00001	0.00001	0.00001
W_Total_Cu_mgl	0.002	0.002	0.002		0.0002	0.0002	0.0003	0.00064
W_Total_Fe_mgl	0.8	0.1	0.2		0.057	0.06	0.079	0.069
W_Total_Ge_mgl					0.00012	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.001	0.001	0.001		0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	0.5	0.8	0.5		0.52	0.54	0.63	0.61
W_Total_La_mgl					0.00014	0.00001	0.00001	0.000025
W_Total_Li_mgl	0.002	0.001	0.001		0.00596	0.00139	0.0015	0.00152
W_Total_Mg_mgl	2.4	2.9	2.2	2.2	2.7	2.57	2.45	2.13
W_Total_Mn_mgl	0.081	0.029	0.025		0.014	0.013	0.014	0.011
W_Total_Mo_mgl	0.001	0.001	0.001		0.0002	0.0002	0.0002	0.0002
W_Total_Na_mgl	4	4.7	3.1		4.7	3.99	3.89	3.28
W_Total_Ni_mgl	0.001	0.001	0.001		0.0002	0.0002	0.00035	0.0002
W_Total_P_mgl					0.04	0.04	0.04	0.04
W_Total_Pb_mgl	0.001	0.001	0.001		0.000097	0.00005	0.000069	0.00005
W_Total_Rb_mgl					0.00044	0.00018	0.0002	0.00022
W_Total_S_mgl					10	10	10	10
W_Total_Sb_mgl	0.002	0.002	0.002		0.0001	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.005	0.005	0.005		0.0012	0.001	0.001	0.001
W_Total_Sn_mgl	0.001	0.001	0.001		0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.155	0.182	0.162		1.03	0.162	0.169	0.163
W_Total_Ti_mgl	0.001	0.001	0.002		0.002			
W_Total_Tl_mgl	0.001	0.001	0.001		0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.001	0.001	0.001		0.00021	0.000032	0.000055	0.00003
W_Total_V_mgl	0.001	0.001	0.001		0.0005	0.00073	0.0005	0.0005
W_Total_Y_mgl					0.00016	0.00005	0.00005	0.00005
W_Total_Zn_mgl	0.005	0.005	0.005		0.003	0.003	0.0046	0.003
W_Dissolved_Ag_mgl	0.0005	0.0005	0.0005	0.0005			0.00008	
W_Dissolved_Al_mgl	0.003	0.002	0.002	0.002	0.003	0.003	0.003	0.0051
W_Dissolved_As_mgl	0.013	0.01	0.01	0.008	0.0069	0.0077	0.0073	0.0063
W_Dissolved_B_mgl	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.007	0.006	0.006	0.006	0.0075	0.007	0.0071	0.0069
W_Dissolved_Be_mgl	0.001	0.001	0.001	0.001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	12.4	11.4	10.3	12.1	12.9	12.9	12.2	12.4
W_Dissolved_Cd_mgl	0.0002	0.0002	0.0002	0.0002	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.0005	0.0005	0.0005	0.0005	0.000014	0.000038	0.00001	0.000024
W_Dissolved_Cr_mgl	0.002	0.001	0.001	0.001	0.0002	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl						0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.0006	0.0005	0.0005	0.0005	0.00022	0.0002	0.00023	0.0003
W_Dissolved_Fe_mgl	0.1	0.04	0.03	0.02	0.015	0.012	0.016	0.022
W_Dissolved_Ge_mgl					0.00005	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.0005	0.0005	0.0005	0.0005	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	0.42	0.88	0.69	0.52	0.5	0.53	0.6	0.73
W_Dissolved_La_mgl					0.00001	0.00001	0.00001	0.000014
W_Dissolved_Li_mgl	0.003	0.001	0.002	0.002	0.00144	0.00141	0.00126	0.00155
W_Dissolved_Mg_mgl	2.53	2.6	2.55	2.58	2.55	2.35	2.35	2.45
W_Dissolved_Mn_mgl	0.0143	0.0172	0.0155	0.0151	0.012	0.0098	0.0083	0.0091
W_Dissolved_Mo_mgl	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Na_mgl	4.29	4.06	4.09	4.29	3.9	3.89	3.62	3.86
W_Dissolved_Ni_mgl	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0002	0.0002
W_Dissolved_P_mgl					0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.0005	0.0005	0.0005	0.0005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl					0.00014	0.00017	0.00021	0.00034
W_Dissolved_S_mgl					10	10	10	10
W_Dissolved_Sb_mgl	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.005	0.005	0.005	0.005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.137	0.157	0.154	0.173	0.173	0.159	0.151	0.191
W_Dissolved_Ti_mgl	0.0005	0.0005	0.0005	0.0005	0.002			
W_Dissolved_Tl_mgl	0.0005	0.0005	0.0005	0.0005	0.00001		0.00001	0.00001
W_Dissolved_U_mgl	0.0002	0.0002	0.0002	0.0002	0.000035	0.000065	0.00008	0.000051
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl					0.00001	0.000011	0.00001	0.000017
W_Dissolved_Zn_mgl	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001
W_SumAnions_meql					0.98	1.03	0.94	0.89
W_SumCations_meql					1.04	1.03	0.98	1.01
W_TCN_mgl	0.005	0.005	0.005	0.005		0.001	0.001	0.001
W_TCOli_cfumt								
W_TDS_mgt	47	55	49	46	83	57	53	60
W_TDSalts_gm3								
W_Thard_gCaCO3m3	39	39	35	41	42	42	41	36
W_TKN_mgl					0.1	0.1	0.13	0.13
W_TN_mgl	0.152	0.101	0.071	0.053	0.1	0.1	0.13	0.14
W_TOC_mgl	1.3	2	1.4	1.2	0.89	1.4	1.2	
W_TP_mgl	0.006	0.014	0.011	0.007	0.0061	0.005	0.005	0.005
W_TSi_mgl	3.98	3.75	3.54					
W_TSS_BDC_mgl								
W_TSS_mgl	6	6	8	6	3	3	3	3
W_Turbidity_NTU	0.82	0.33	1.42	0.27	0.3	0.2	0.3	0.3
W_Volume_ml								
WF_DO_mgl	9.62	9.07	10.75	10.52		11.65	13.92	
WF_DO_pct	92.5	83.5	96.7	87.6		94.7	113.3	
WF_EC_mScm	94.7	107.4	96.5	91.8		67.2	96.2	
WF_ORP_mv	27.4	43.5	50.7	30.3		-20.4	38.2	
WF_pH	7.37	7.44	7.48	7.4		7.39	7.56	
WF_temp_degC	10.7	9.1	7.8	5		3.6	3.9	
WF_turbidity_NTU				-53		0.05		
WF_colour								
WF_level								
WF_ouduor								

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RS03_25-Jul-2024	W_RS03_8-Aug-2024	W_RS03_22-Aug-2024	W_RS03_22-Aug-2024	W_RS03_4-Sep-2024	W_RS03_19-Sep-2024	W_RS03_3-Oct-2024	W_RS03_16-Oct-2024
LABIDBNO	24-23696	24-25063	24-26351	24-26351				
WaterLabID	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica
WaterSiteID	RS03	RS03	RS03	RS03	RS03	RS03	RS03	RS03
LabSampleID	24-23696-6	24-25063-4	24-26351-6	24-26351-6	24-27733-5	24-29331-6	24-30758-5	24-32269-6-6
WaterSampDate	2024-07-25	2024-08-08	2024-08-22	22-Aug-24	2024-09-04	19-Sep-24	03-Oct-24	16-Oct-24
SampBy	MB	MB			MB	MB	MB	MB
W_Acidity4_mgl								
W_Acidity5_mgl								
W_Acidity7_mgl								
W_Acidity8_mgl	3.33	3.33	3.33	3.33	3.33	3.33	2	3.33
W_Alkalinity_mgl	40.3	29.2	28.2	28.2	23	28	35.3	29.2
W_AmmoniaN_mgl	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
W_An_Bromide_mgl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	1.31	1.38	1.07	1.07	1.35	1.28	1.58	1.1
W_An_Fluoride_mgl	0.054	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_An_Nitrate-N_mgl	0.002	0.0044	0.002	0.002	0.002	0.002	0.002	0.002
W_An_Nitrite-N_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	2.67	1.47	1.34	1.34	0.96	1.18	1.08	0.89
W_BiCarbAlk_mgl								
W_CarbAlk_mgl								
W_Density_gcm3								
W_DOC_mgl								
W_DRP_mgl	0.002	0.004	0.003	0.003	0.006	0.005	0.007	0.005
W_DSi_mgl								
W_EC_mSm								
W_EC_uScm	95.8	69.9	76.9	76.9	54.2	69	76.5	73.8
W_EColi_cfumlt								
W_pH	7.2	7.3	7.2	7.2	7.2	7.3	7.3	7.2
W_pH_1311_hcl								
W_pH_1311_initial								
W_pH_1311_leachate								
W_pH_1311_off								
W_Total_Ag_mgl						0.002		
W_Total_Al_mgl	0.0052	0.019	0.014	0.014		0.055	0.083	0.027
W_Total_As_mgl	0.0064	0.0091	0.0065	0.0065	0.0078	0.0092	0.013	0.0078
W_Total_B_mgl	0.005	0.0051	0.005	0.005	0.005	0.005	0.005	0.005
W_Total_Ba_mgl	0.0072	0.006	0.0056	0.0056	0.0057	0.0065	0.0081	0.0062
W_Total_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001		0.0001	0.0001
W_Total_Ca_mgl	12.1	9.1	8.45	8.45	6.93	9.65	9.61	9.25
W_Total_Cd_mgl	0.000026	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.000038	0.000065	0.000056	0.000056	0.0001	0.00013	0.00017	0.000088
W_Total_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.00029	0.0002	0.00024	0.0002
W_Total-Cs_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Total_Cu_mgl	0.0002	0.0004	0.0004	0.0004	0.00053	0.00067	0.00087	0.0006
W_Total_Fe_mgl	0.066	0.19	0.084	0.084	0.15	0.18	0.3	0.17
W_Total_Ge_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	0.58	0.66	0.54	0.54	0.74	0.8	1	0.59
W_Total_La_mgl	0.000011	0.000043	0.000026	0.000026	0.0001	0.00012	0.00021	0.000062
W_Total_Li_mgl	0.00147	0.0012	0.0011	0.0011	0.00099	0.00109	0.00117	0.00106
W_Total_Mg_mgl	2.41	1.73	1.66	1.66	1.36	1.75	1.69	1.7
W_Total_Mn_mgl	0.011	0.016	0.0092	0.0092	0.013	0.016	0.029	0.012
W_Total_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_Na_mgl	3.8	3.08	2.98	2.98	2.66	3.17	3.01	3.03
W_Total_Ni_mgl	0.0002	0.0002	0.0002	0.0002	0.00028	0.00035	0.00032	0.00034
W_Total_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Total_Pb_mgl	0.00005	0.00019	0.00005	0.00005	0.00005	0.000086	0.00014	0.00025
W_Total_Rb_mgl	0.00018	0.00026	0.00021	0.00021	0.00034	0.00033	0.00047	0.00023
W_Total_S_mgl	10	10	10	10	10	10	10	10
W_Total_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.159	0.112	0.106	0.106	0.089	0.109	0.123	0.107
W_Total_Ti_mgl						0.002		
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.000054	0.00003	0.000036	0.000036	0.000037	0.00005	0.000092	0.000043
W_Total_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.00063	0.0005	0.0005
W_Total_Y_mgl	0.00005	0.00005	0.00005	0.00005	0.00011	0.00012	0.00018	0.000069
W_Total_Zn_mgl	0.003	0.0035	0.003	0.003	0.003	0.003	0.003	0.003
W_Dissolved_Ag_mgl								
W_Dissolved_Al_mgl	0.003	0.0083	0.0055	0.0055	0.023	0.023	0.028	0.015
W_Dissolved_As_mgl	0.006	0.0064	0.0057	0.0057	0.0061	0.0067	0.0082	0.0065
W_Dissolved_B_mgl	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.0067	0.0055	0.0053	0.0053	0.0056	0.0056	0.0066	0.0057
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.000014	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	12	8.45	8.04	8.04	9.29	9.38	9.96	9.08
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.000021	0.00002
W_Dissolved_Co_mgl	0.000024	0.000046	0.00004	0.00004	0.000062	0.000084	0.000086	0.000077
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.00025	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.0002	0.00036	0.00039	0.00039	0.0006	0.00073	0.0007	0.00055
W_Dissolved_Fe_mgl	0.012	0.031	0.029	0.029	0.046	0.047	0.061	0.042
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	0.57	0.64	0.52	0.52	0.79	0.79	1.1	0.6
W_Dissolved_La_mgl	0.00001	0.000018	0.000014	0.000014	0.000055	0.000055	0.000079	0.000036
W_Dissolved_Li_mgl	0.00135	0.00117	0.00111	0.00111	0.0009	0.001	0.00111	0.00098
W_Dissolved_Mg_mgl	2.33	1.66	1.6	1.6	1.3	1.64	1.94	1.67
W_Dissolved_Mn_mgl	0.0066	0.0038	0.0058	0.0058	0.0037	0.0044	0.0044	0.0067
W_Dissolved_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Na_mgl	3.62	2.93	2.87	2.87	2.59	2.94	3.21	2.9
W_Dissolved_Ni_mgl	0.0002	0.00023	0.0002	0.0002	0.00025	0.00031	0.00027	0.0002
W_Dissolved_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00016	0.00023	0.0002	0.0002	0.00028	0.00026	0.00038	0.00019
W_Dissolved_S_mgl	10	10	10	10	10	10	10	10
W_Dissolved_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.16	0.105	0.103	0.103	0.087	0.105	0.122	0.104
W_Dissolved_Ti_mgl								
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.000056	0.000035	0.000045	0.000045	0.000043	0.000049	0.000079	0.000052
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000012	0.000033	0.000028	0.000028	0.000075	0.000075	0.0001	0.000055
W_Dissolved_Zn_mgl	0.001	0.0012	0.001	0.001	0.001	0.001	0.001	0.001
W_SumAnions_meqlt	0.9	0.65	0.62	0.62	0.52	0.62	0.78	0.63
W_SumCations_meqlt	0.96	0.7	0.67	0.67	0.7	0.75	0.83	0.73
W_TCN_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_TColi_cfumlt								
W_TDS_mgt	43	46	40	40	34	44	54	45
W_TDSalts_gm3								
W_Thard_gCaCO3m3	40	30	28	28	23	31	32	30
W_TKN_mgl	0.29	0.19	0.17	0.17	0.21	0.29	0.39	0.24
W_TN_mgl	0.29	0.19	0.17	0.17	0.21	0.29	0.39	0.24
W_TOC_mgl								
W_TP_mgl	0.005	0.011	0.005	0.005	0.011	0.0095	0.02	0.0093
W_TSi_mgl								
W_TSS_BDC_mgl								
W_TSS_mgl	3	3	3	3	3	3	6	5
W_Turbidity_NTU	0.4	1.2	0.9	0.9	1.1	0.9	3.1	2.8
W_Volume_ml								
WF_DO_mgl	12.42	25.87			16.38	11.51	15.85	12.19
WF_DO_pct	98.2	205.7			135.5	106.9	132.5	99.6
WF_EC_mScm	93.1	67.5			58.4	241.1	77.6	66.7
WF_ORP_mV	52	23.8			88.6	54.8	166.1	92.7
WF_pH	7.56	7.44			7.32	8.06	7.55	7.38
WF_temp_degC	3.3	2.8			4.6	7.9	4.6	4.7
WF_turbidity_NTU								-0.17
WF_colour					clear	low	low	clear
WF_level					high	high	high	low
WF_ouodur					nil	nil	nil	nil

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_RS03_31-Oct-2024	W_RS03_14-Nov-2024	W_RS03_28-Nov-2024
LAB/OBNO			
WaterLabID	Analytica	Analytica	Analytica
WaterSiteID	RS03	RS03	RS03
LabSampleID	24-33929-5	24-35305-6	24-36747-6
WaterSampDate	31-Oct-24	14-Nov-24	28-Nov-24
SampBy	MB	MB	MB
W_Acidity4_mgl			
W_Acidity5_mgl			
W_Acidity7_mgl			
W_Acidity8_mgl	2.67	3.33	1.67
W_Alkalinity_mgl	32.1	43.8	47.9
W_AmmoniaN_mgl	0.005	0.005	0.005
W_An_Bromide_mgl	0.05	0.05	0.05
W_An_Chloride_mgl	0.9	0.77	0.7
W_An_Fluoride_mgl	0.043	0.04	0.07
W_An_Nitrate-N_mgl	0.002	0.0197	0.002
W_An_Nitrite-N_mgl	0.001	0.001	0.001
W_An_Sulphate_mgl	0.53	0.52	0.49
W_BiCarbAlk_mgl			
W_CarbAlk_mgl			
W_Density_gcm3			
W_DOC_mgl			
W_DRP_mgl	0.005	0.004	0.003
W_DSi_mgl			
W_EC_mSm			
W_EC_uScm	80.7	93	105
W_EColi_cfuml			
W_pH	7	7.3	7.2
W_pH_1311_hcl			
W_pH_1311_initial			
W_pH_1311_leachate			
W_pH_1311_off			
W_Total_Ag_mgl			
W_Total_Al_mgl	0.035	0.013	0.012
W_Total_As_mgl	0.0088	0.011	0.012
W_Total_B_mgl	0.005	0.005	0.005
W_Total_Ba_mgl	0.0062	0.0082	0.0086
W_Total_Be_mgl	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001
W_Total_Ca_mgl	9.52	13.8	14.1
W_Total_Cd_mgl	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.000081	0.000089	0.000067
W_Total_Cr_mgl	0.00034	0.0002	0.0002
W_Total-Cs_mgl	0.00001	0.00001	0.00001
W_Total_Cu_mgl	0.00051	0.0013	0.0005
W_Total_Fe_mgl	0.11	0.079	0.079
W_Total_Ge_mgl	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001
W_Total_K_mgl	0.55	0.57	0.55
W_Total_La_mgl	0.000081	0.000032	0.000032
W_Total_Li_mgl	0.00108	0.00131	0.00153
W_Total_Mg_mgl	1.76	2.51	2.54
W_Total_Mn_mgl	0.0099	0.014	0.013
W_Total_Mo_mgl	0.0002	0.0002	0.0002
W_Total_Na_mgl	3	3.65	3.65
W_Total_Ni_mgl	0.00033	0.00029	0.00028
W_Total_P_mgl	0.04	0.04	0.04
W_Total_Pb_mgl	0.00005	0.00005	0.000097
W_Total_Rb_mgl	0.00026	0.00025	0.00028
W_Total_S_mgl	10	10	10
W_Total_Sb_mgl	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.12	0.166	0.177
W_Total_Ti_mgl			
W_Total_Tl_mgl	0.0001	0.0001	0.0001
W_Total_U_mgl	0.000057	0.000089	0.000087
W_Total_V_mgl	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.0001	0.00005	0.00005
W_Total_Zn_mgl	0.003	0.004	0.0051
W_Dissolved_Ag_mgl			
W_Dissolved_Al_mgl	0.02	0.0092	0.0068
W_Dissolved_As_mgl	0.0078	0.011	0.011
W_Dissolved_B_mgl	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.0057	0.0076	0.0088
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	9.05	12.6	14.5
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.000064	0.000046	0.000062
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.00049	0.00022	0.00074
W_Dissolved_Fe_mgl	0.05	0.031	0.033
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	0.52	0.52	0.66
W_Dissolved_La_mgl	0.000047	0.000017	0.00002
W_Dissolved_Li_mgl	0.00116	0.0014	0.00141
W_Dissolved_Mg_mgl	1.66	2.3	2.57
W_Dissolved_Mn_mgl	0.0051	0.01	0.011
W_Dissolved_Mo_mgl	0.0002	0.0002	0.0002
W_Dissolved_Na_mgl	2.81	3.36	3.92
W_Dissolved_Ni_mgl	0.00026	0.00022	0.00027
W_Dissolved_P_mgl	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00021	0.00022	0.00039
W_Dissolved_S_mgl	10	10	10
W_Dissolved_Sb_mgl	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.117	0.164	0.179
W_Dissolved_Ti_mgl			
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.000057	0.000087	0.000082
W_Dissolved_V_mgl	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000078	0.000027	0.000028
W_Dissolved_Zn_mgl	0.001	0.001	0.013
W_SumAnions_meql	0.68	0.91	0.99
W_SumCations_meql	0.73	0.98	1.12
W_TCN_mgl	0.001	0.001	0.001
W_TColi_cfuml			
W_TDS_mgl	13	42	61
W_TDSalts_gm3			
W_Thard_gCaCO3m3	31	45	46
W_TKN_mgl	0.22	0.14	0.18
W_TN_mgl	0.22	0.16	0.18
W_TOC_mgl			
W_TP_mgl	0.092	0.013	0.0079
W_TSi_mgl			
W_TSS_BDC_mgl			
W_TSS_mgl	3	3	3
W_Turbidity_NTU	0.8	0.4	0.4
W_Volume_ml			
WF_DO_mgl	11.53	13.53	10
WF_DO_pct	106.2	126.7	98.3
WF_EC_mScm	65.2	92.5	97.7
WF_ORP_mV	79.6	12.7	64.7
WF_pH	7.71	7.53	7.56
WF_temp_degC	8.4	9.6	11.8
WF_turbidity_NTU			
WF_colour	clear	clear	clear
WF_level	low	low	low
WF_odour	nil	nil	nil

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples
SAMPLEID	W_RS04_4-Sep-2024	W_RS04_19-Sep-2024	W_RS04_3-Oct-2024	W_RS04_16-Oct-2024	W_RS04_31-Oct-2024	W_RS04_14-Nov-2024	W_RS04_28-Nov-2024
LAB/OBNO							
WaterLabID	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica
WaterSiteID	RS04	RS04	RS04	RS04	RS04	RS04	RS04
LabSampleID	24-27733-9	24-29331-10	24-30758-8	24-32269-9-9	24-33929-8	24-35305-11	24-36747-10
WaterSampDate	2024-09-04	19-Sep-24	03-Oct-24	16-Oct-24	31-Oct-24	14-Nov-24	28-Nov-24
SampBy	MB	MB	MB	MB	MB/GM	MB	MB
W_Acidity4_mgl							
W_Acidity5_mgl							
W_Acidity7_mgl							
W_Acidity8_mgl	4.67	4	3.33	2.67	3.33	3.33	6.67
W_Alkalinity_mgl	58.3	51.7	41.9	66.1	69.4	86.8	99.6
W_AmmoniaN_mgl	0.005	0.006	0.005	0.005	0.005	0.005	0.005
W_An_Bromide_mgl	0.05	0.05	0.05	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	2	2.15	1.45	2	1.2	0.87	0.96
W_An_Fluoride_mgl	0.051	0.049	0.052	0.062	0.058	0.046	0.09
W_An_Nitrate-N_mgl	0.002	0.0043	0.002	0.0024	0.002	0.002	0.002
W_An_Nitrite-N_mgl	0.001	0.001	0.0018	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	1.9	1.06	0.43	0.9	0.54	0.54	0.5
W_BiCarbAlk_mgl							
W_CarbAlk_mgl							
W_Density_gcm3							
W_DOC_mgl							
W_DRP_mgl	0.002	0.002	0.004	0.002	0.002	0.002	0.002
W_DSi_mgl							
W_EC_mSm							
W_EC_uScm	127	117	90.4	156	147	190	213
W_EColi_cfumt							
W_pH	7.7	7.5	7.4	7.5	7.4	7.5	7.5
W_pH_1311_hcl							
W_pH_1311_initial							
W_pH_1311_leachate							
W_pH_1311_off							
W_Total_Ag_mgl		0.002					
W_Total_Al_mgl	0.011	0.022	0.475	0.012	0.02	0.0059	0.092
W_Total_As_mgl	0.0011	0.0015	0.0052	0.001	0.0017	0.0012	0.0034
W_Total_B_mgl	0.005	0.005	0.005	0.005	0.005	0.005	0.005
W_Total_Ba_mgl	0.0164	0.0171	0.0203	0.0176	0.0165	0.0189	0.027
W_Total_Be_mgl	0.00001	0.00001	0.000028	0.00001	0.00001	0.00001	0.000015
W_Total_Bi_mgl	0.0001		0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Ca_mgl	18.4	19	13.3	21.7	23	27.5	31.7
W_Total_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.00012	0.00016	0.00053	0.00013	0.00016	0.00015	0.00042
W_Total_Cr_mgl	0.00053	0.0002	0.00059	0.0002	0.00021	0.0002	0.0002
W_Total-Cs_mgl	0.00001	0.00001	0.000078	0.00001	0.00001	0.00001	0.000013
W_Total_Cu_mgl	0.0013	0.0014	0.0025	0.00098	0.0011	0.00051	0.00076
W_Total_Fe_mgl	0.068	0.12	1.15	0.037	0.1	0.091	0.744
W_Total_Ge_mgl	0.00005	0.00005	0.000051	0.00005	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	1	1.1	1.8	0.86	0.75	0.4	1
W_Total_La_mgl	0.000024	0.000044	0.00047	0.000023	0.000032	0.000011	0.00015
W_Total_Li_mgl	0.0013	0.00131	0.00147	0.00169	0.00156	0.00211	0.00265
W_Total_Mg_mgl	2.67	2.46	2.09	3.13	3.2	4.03	4.65
W_Total_Mn_mgl	0.0031	0.0054	0.043	0.0035	0.0085	0.019	0.0828
W_Total_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_Na_mgl	3.96	3.97	2.85	4.31	4.5	4.94	5.33
W_Total_Ni_mgl	0.00063	0.0005	0.0011	0.00048	0.00062	0.0005	0.00067
W_Total_P_mgl	0.04	0.04	0.078	0.04	0.04	0.04	0.04
W_Total_Pb_mgl	0.00005	0.00005	0.00082	0.00005	0.00005	0.00005	0.00019
W_Total_Rb_mgl	0.0003	0.00032	0.0014	0.00022	0.00025	0.00013	0.00052
W_Total_S_mgl	10	10	10	10	10	10	10
W_Total_Sb_mgl	0.00013	0.0001	0.00011	0.0001	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.271	0.236	0.177	0.275	0.326	0.375	0.418
W_Total_Ti_mgl		0.0021					
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00017	0.00016	0.00023	0.0003	0.00034	0.00034	0.00051
W_Total_V_mgl	0.0005	0.0005	0.00053	0.0005	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.000053	0.000084	0.00047	0.00005	0.000059	0.00005	0.00015
W_Total_Zn_mgl	0.003	0.003	0.003	0.003	0.003	0.003	0.003
W_Dissolved_Ag_mgl							
W_Dissolved_Al_mgl	0.0075	0.0074	0.031	0.0051	0.0053	0.0044	0.0064
W_Dissolved_As_mgl	0.00094	0.0012	0.0019	0.00094	0.0013	0.0011	0.0013
W_Dissolved_B_mgl	0.01	0.01	0.01	0.01	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.016	0.016	0.0123	0.0174	0.0166	0.0185	0.0226
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	17.7	18.8	13.3	22	22.4	27.7	32.5
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.00011	0.00012	0.00017	0.0001	0.00011	0.000099	0.00019
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Cu_mgl	0.0013	0.0015	0.0017	0.0011	0.00099	0.00059	0.00066
W_Dissolved_Fe_mgl	0.021	0.029	0.12	0.016	0.023	0.043	0.063
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	1	1.1	1.7	0.89	0.69	0.4	0.98
W_Dissolved_La_mgl	0.000015	0.000018	0.0001	0.000014	0.000015	0.00001	0.00002
W_Dissolved_Li_mgl	0.00131	0.00126	0.00086	0.00153	0.0018	0.00231	0.00236
W_Dissolved_Mg_mgl	2.58	2.39	1.95	3.11	3.06	3.93	4.64
W_Dissolved_Mn_mgl	0.00063	0.0009	0.0036	0.0021	0.0026	0.018	0.03
W_Dissolved_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Na_mgl	3.83	3.84	2.87	4.39	4.29	4.94	5.89
W_Dissolved_Ni_mgl	0.00058	0.00061	0.00063	0.00041	0.00055	0.00042	0.00051
W_Dissolved_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00028	0.00029	0.00037	0.00021	0.0002	0.00013	0.00029
W_Dissolved_S_mgl	10	10	10	10	10	10	10
W_Dissolved_Sb_mgl	0.00011	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.255	0.23	0.162	0.278	0.306	0.395	0.406
W_Dissolved_Ti_mgl							
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.00018	0.00017	0.00012	0.00033	0.00035	0.00043	0.00042
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.00005	0.000062	0.00015	0.000041	0.000046	0.000034	0.000039
W_Dissolved_Zn_mgl	0.001	0.001	0.001	0.001	0.001	0.0016	0.0044
W_SumAnions_meqt	1.27	1.12	0.89	1.4	1.44	1.78	2.04
W_SumCations_meqt	1.29	1.33	1	1.57	1.58	1.93	2.29
W_TCN_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_TColi_cfumt							
W_TDS_mgt	77	65	75	87	47	92	113
W_TDSalts_gm3							
W_Thard_gCaCO3m3	57	58	42	67	71	85	98
W_TKN_mgl	0.44	0.34	0.97	0.39	0.38	0.29	0.46
W_TN_mgl	0.44	0.34	0.97	0.39	0.38	0.29	0.46
W_TOC_mgl							
W_TP_mgl	0.012	0.005	0.07	0.005	0.005	0.0099	0.031
W_TSi_mgl							
W_TSS_BDC_mgl							
W_TSS_mgl	3	3	24	3	3	3	23
W_Turbidity_NTU	0.7	1	16	0.4	1.5	1.6	11
W_Volume_ml							
WF_DO_mgl	13	11.31	14.19	10.98	9.47	10.84	7.92
WF_DO_pct	122.8	109.8	119.6	101	101.7	105.9	81
WF_EC_mScm	131.6	113.6	75.8	136	143.3	170.5	195.7
WF_ORP_mv	78.6	117.5	115.4	91.7	53.6	54.2	62
WF_pH	7.72	7.59	7.55	7.41	7.73	7.39	7.38
WF_temp_degC	8.7	8.8	4.2	8.2	13.8	10.3	12.1
WF_turbidity_NTU				9.33			

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	817-2023-00038808	W_RSB_31-Oct-2024
LABJOBNO	BOGP	24-33929-10
WaterLabID	Eurofins	Analytica
WaterSiteID	RSB	RSB
LabSampleID		
WaterSampDate	2023-04-27	2024-10-31
SampBy	HM	
W_Total_Ag_mgl	0.001	
W_Total_Al_mgl	1.17	0.021
W_Total_As_mgl	5.29	0.164
W_Total_B_mgl	0.05	0.005
W_Total_Ba_mgl	0.13	0.0261
W_Total_Be_mgl	0.005	0.00001
W_Total_Bi_mgl	0.005	0.0001
W_Total_Ca_mgl	29.6	29.6
W_Total_Cd_mgl	0.001	0.00002
W_Total_Co_mgl	0.006	0.00131
W_Total_Cr_mgl	0.001	0.0002
W_Total_Cs_mgl		0.00001
W_Total_Cu_mgl	0.002	0.00059
W_Total_Fe_mgl	86.5	2.1
W_Total_Ge_mgl		0.00005
W_Total_Hg_mgl	0.001	0.0001
W_Total_K_mgl	2.7	1.4
W_Total_La_mgl		0.000035
W_Total_Li_mgl	0.003	0.00227
W_Total_Mg_mgl	5.3	5.15
W_Total_Mn_mgl	4.4	0.67
W_Total_Mo_mgl	0.001	0.0002
W_Total_Na_mgl	7	5.49
W_Total_Ni_mgl	0.004	0.0011
W_Total_P_mgl		0.04
W_Total_Pb_mgl	0.003	0.00026
W_Total_Rb_mgl		0.00041
W_Total_S_mgl		10
W_Total_Sb_mgl	0.002	0.0001
W_Total_Se_mgl	0.005	0.001
W_Total_Sn_mgl	0.001	0.0005
W_Total_Sr_mgl	0.414	0.417
W_Total_Ti_mgl	0.02	
W_Total_Tl_mgl	0.001	0.0001
W_Total_U_mgl	0.001	0.00012
W_Total_V_mgl	0.002	0.0005
W_Total_Y_mgl		0.00005
W_Total_Zn_mgl	0.079	0.0046
W_Dissolved_Ag_mgl		
W_Dissolved_Al_mgl		0.003
W_Dissolved_As_mgl		0.034
W_Dissolved_B_mgl		0.01
W_Dissolved_Ba_mgl		0.0198
W_Dissolved_Be_mgl		0.00001
W_Dissolved_Bi_mgl		0.0001
W_Dissolved_Ca_mgl		
W_Dissolved_Cd_mgl		0.00002
W_Dissolved_Co_mgl		0.00011
W_Dissolved_Cr_mgl		0.0002
W_Dissolved_Cs_mgl		0.00001
W_Dissolved_Cu_mgl		0.00045
W_Dissolved_Fe_mgl		
W_Dissolved_Ge_mgl		0.00005
W_Dissolved_Hg_mgl		0.00008
W_Dissolved_K_mgl		
W_Dissolved_La_mgl		0.00001
W_Dissolved_Li_mgl		0.00243
W_Dissolved_Mg_mgl		
W_Dissolved_Mn_mgl		
W_Dissolved_Mo_mgl		0.0002
W_Dissolved_Na_mgl		
W_Dissolved_Ni_mgl		0.00068
W_Dissolved_P_mgl		0.04
W_Dissolved_Pb_mgl		0.00005
W_Dissolved_Rb_mgl		0.0003
W_Dissolved_S_mgl		10
W_Dissolved_Sb_mgl		0.0001
W_Dissolved_Se_mgl		0.0005
W_Dissolved_Sn_mgl		0.0002
W_Dissolved_Sr_mgl		0.389
W_Dissolved_Ti_mgl		
W_Dissolved_Tl_mgl	0.0005	0.00001
W_Dissolved_U_mgl	0.0002	0.00014
W_Dissolved_V_mgl		0.0005
W_Dissolved_Y_mgl		0.000022
W_Dissolved_Zn_mgl	6.49	

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

LAB/ID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_CC01_5-Mar-2024	W_CC01_20-Mar-2024	W_CC01_4-Apr-2024	W_CC01_17-Apr-2024	W_CC01_1-May-2024	W_CC01_16-May-2024	W_CC01_29-May-2024
LAB/JOBN0	AR-24-NC-008972-01	AR-24-NC-010966-01	AR-24-NC-011976-01	AR-24-NC-013497-01	AR-24-NC-015251-01		24-17710
WaterLabID	Eurofins	Eurofins	Eurofins	Eurofins	Eurofins	Eurofins	Analytica
WaterSiteID	CC01	CC01	CC01	CC01	CC01	CC01	CC01
LabSampleID	817-2024-00029417	817-2024-00035200	817-2024-00041164	817-2024-00047516	817-2024-00052698	0	24-17710-1
WaterSampDate	2024-03-05	2024-03-20	2024-04-04	2024-04-17	2024-05-01	2024-05-16	2024-05-29
SampBy	HM	HM	MB	MB	MB	MB	
W_Acidity4_mgl	1	1	1	1	1	1	
W_Acidity5_mgl							
W_Acidity7_mgl	1	1	1	1	1	1	
W_Acidity8_mgl	1	3	4	3	1	2	3.33
W_Alkalinity_mgl	17	18	18	18	17	16	17.8
W_AmmoniaN_mgl	0.03	0.01	0.01	0.01	0.01	0.01	0.007
W_An_Bromide_mgl	0.02	0.02	0.02	0.02	0.02	0.02	0.05
W_An_Chloride_mgl	1.61	0.9	0.91	1.33	1.01	0.89	0.69
W_An_Fluoride_mgl	0.08	0.08	0.06	0.06	0.07	0.07	0.041
W_An_Nitrate-N_mgl	0.01	0.01	0.01	0.01	0.01	0.01	0.0042
W_An_Nitrite-N_mgl	0.01	0.01	0.01	0.01	0.01	0.01	0.001
W_An_Sulphate_mgl	4	0.67	0.68	0.96	0.95	1.04	0.89
W_BiCarbAlk_mgl							
W_CarbAlk_mgl							
W_Density_gcm3							
W_DOC_mgl	2	0.9	0.9	1.7	1.1	0.9	3.2
W_DRP_mgl							0.004
W_DSi_mgl	8.19	8.65	11.2	8.77	8.53	8.62	
W_EC_mSm	4.3	4.3	4.3	4.4	4.2	4.2	4.23
W_EC_uScm							42.3
W_EColi_cfumt							
W_pH	7.3	7.3	7.4	7.2	7.3	7.3	7
W_pH_1311_hcl							
W_pH_1311_initial							
W_pH_1311_leachate							
W_pH_1311_off							
W_Total_Ag_mgl	0.001	0.001	0.001	0.001	0.001		
W_Total_Al_mgl	0.018	0.012	0.019	0.005	0.005		0.0077
W_Total_As_mgl	0.002	0.002	0.002	0.002	0.002		0.00084
W_Total_B_mgl	0.05	0.05	0.05	0.05	0.05		0.005
W_Total_Ba_mgl	0.005	0.005	0.005	0.005	0.005		0.0064
W_Total_Be_mgl	0.005	0.005	0.005	0.005	0.005		0.00001
W_Total_Bi_mgl	0.005	0.005	0.005	0.005	0.005		0.0001
W_Total_Ca_mgl	4.1	4	4.3	4.7		4.3	4.9
W_Total_Cd_mgl	0.001	0.001	0.001	0.001	0.001		0.00002
W_Total_Co_mgl	0.002	0.002	0.002	0.002	0.002		0.00012
W_Total_Cr_mgl	0.001	0.001	0.001	0.001	0.001		0.0002
W_Total-Cs_mgl							0.00001
W_Total_Cu_mgl	0.002	0.002	0.002	0.002	0.002		0.00026
W_Total_Fe_mgl	0.1	0.1	0.1	0.1	0.1		0.0053
W_Total_Ge_mgl							0.00005
W_Total_Hg_mgl	0.001	0.001	0.001	0.001	0.001		0.0001
W_Total_K_mgl	0.3	0.2	0.3	0.4	0.3		0.35
W_Total_La_mgl							0.000067
W_Total_Li_mgl	0.001	0.001	0.001	0.001	0.001		0.00083
W_Total_Mg_mgl	0.9	0.9	1	1	0.8	0.9	1.1
W_Total_Mn_mgl	0.002	0.001	0.002	0.001	0.001		0.00068
W_Total_Mo_mgl	0.001	0.001	0.001	0.001	0.001		0.0002
W_Total_Na_mgl	2.2	2.3	2.5	2.6	1.9		2.85
W_Total_Ni_mgl	0.001	0.001	0.001	0.001	0.001		0.0002
W_Total_P_mgl							0.04
W_Total_Pb_mgl	0.001	0.001	0.001	0.001	0.001		0.00005
W_Total_Rb_mgl							0.00023
W_Total_S_mgl							10
W_Total_Sb_mgl	0.002	0.002	0.002	0.002	0.002		0.0001
W_Total_Se_mgl	0.005	0.005	0.005	0.005	0.005		0.001
W_Total_Sn_mgl	0.001	0.001	0.001	0.001	0.001		0.0005
W_Total_Sr_mgl	0.049	0.052	0.051	0.05	0.052		0.0624
W_Total_Ti_mgl	0.001	0.001	0.001	0.001	0.001		0.002
W_Total_Tl_mgl	0.001	0.001	0.001	0.001	0.001	0	0.0001
W_Total_U_mgl	0.001	0.001	0.001	0.001	0.001		0.00003
W_Total_V_mgl	0.001	0.001	0.001	0.001	0.001		0.0005
W_Total_Y_mgl							0.000083
W_Total_Zn_mgl	0.005	0.005	0.005	0.005	0.005		0.003
W_Dissolved_Ag_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
W_Dissolved_Al_mgl	0.006	0.004	0.007	0.006	0.005	0.007	0.0049
W_Dissolved_As_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.00091
W_Dissolved_B_mgl	0.03	0.03	0.03	0.03	0.03	0.03	0.01
W_Dissolved_Ba_mgl	0.005	0.004	0.005	0.004	0.005	0.005	0.005
W_Dissolved_Be_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.00001
W_Dissolved_Bi_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.0001
W_Dissolved_Ca_mgl	3.6	5.3	4.7	3.9	4.5	4.9	4.7
W_Dissolved_Cd_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00002
W_Dissolved_Co_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.000018
W_Dissolved_Cr_mgl	0.001	0.001	0.001	0.001	0.001	0.002	0.0002
W_Dissolved-Cs_mgl							
W_Dissolved_Cu_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0009	0.00033
W_Dissolved_Fe_mgl	0.01	0.01	0.01	0.01	0.01	0.24	0.005
W_Dissolved_Ge_mgl							0.00005
W_Dissolved_Hg_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00008
W_Dissolved_K_mgl	0.4	0.31	0.3	0.46	0.34	0.44	0.34
W_Dissolved_La_mgl							0.000016
W_Dissolved_Li_mgl	0.001	0.001	0.002	0.001	0.001	0.001	0.00079
W_Dissolved_Mg_mgl	0.93	1.12	1.05	0.95	0.87	1.06	1
W_Dissolved_Mn_mgl	0.0009	0.0006	0.0005	0.0005	0.0005	0.0045	0.0005
W_Dissolved_Mo_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0002
W_Dissolved_Na_mgl	2.75	2.92	2.64	2.51	2.3	2.64	2.45
W_Dissolved_Ni_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0044	0.0002
W_Dissolved_P_mgl							0.04
W_Dissolved_Pb_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00005
W_Dissolved_Rb_mgl							0.0002
W_Dissolved_S_mgl							10
W_Dissolved_Sb_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.0001
W_Dissolved_Se_mgl	0.005	0.005	0.005	0.005	0.005	0.005	0.0005
W_Dissolved_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0002
W_Dissolved_Sr_mgl	0.0435	0.0433	0.0502	0.0481	0.0446	0.0537	0.0507
W_Dissolved_Tl_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.002
W_Dissolved_Tl_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00001
W_Dissolved_U_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00003
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl							0.000017
W_Dissolved_Zn_mgl	0.002	0.002	0.002	0.002	0.002	0.003	0.001
W_SumAnions_meql							0.4
W_SumCations_meql							0.43
W_TCN_mgl	0.005	0.005	0.005	0.005	0.005	0.005	
W_TColi_cfumt							
W_TDS_mgl	21	21	21	21	21	21	45
W_TDSalts_gm3							
W_Thard_gCaCO3m3	13	14	15	14	15	17	17
W_TKN_mgl							0.1
W_TN_mgl	0.14	0.064	0.047	0.077	0.053	0.073	0.1
W_TOC_mgl	2.1	1	1	1.8	1.1	1	0.5
W_TP_mgl	0.014	0.012	0.01	0.014	0.012	0.01	0.005
W_TSi_mgl	3.33	3.42	3.42	3.54	3.29		
W_TSS_BDC_mgl							
W_TSS_mgl	3	4	6	6	5	6	3
W_Turbidity_NTU	0.23	0.2	0.45	0.28	0.2	0.28	0.3
W_Volume_ml							
WF_DO_mgl	17.2	12.62	10.01	9.62	14.21	11.35	
WF_DO_pct	162	114.3	95.3	127.1	94.5		
WF_EC_mScm		41.3	42.9	42.2	41.8	41.4	
WF_ORP_mV	105.1	30	205.9	241.8	199	146.5	
WF_pH	7.66	7.63	7.68	7.39	7.52	7.58	
WF_temp_degC	8.5	7.8	9	7.4	6.7	3.9	
WF_turbidity_NTU						0.61	

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLED	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_CC01_13-Jun-2024	W_CC01_27-Jun-2024	W_CC01_11-Jul-2024	W_CC01_25-Jul-2024	W_CC01_22-Aug-2024	W_CC01_22-Aug-2024	W_CC01_19-Sep-2024	W_CC01_16-Oct-2024
LABJOBNO	24-19336	24-20566	24-22094	24-23696	24-26351	24-26351	24-26351	24-26351
WaterLabID	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica
WaterSiteID	CC01	CC01	CC01	CC01	CC01	CC01	CC01	CC01
LabSampleID	24-19336-1	24-20566-1	24-22094-1	24-23696-1	24-26351-1	24-26351-1	24-29331-1	24-32269-1-1
WaterSampDate	2024-06-13	2024-06-27	2024-07-11	2024-07-25	2024-08-22	22-Aug-24	2024-09-19	16-Oct-24
SampBy	MB	MB		MB			MB	MB
W_Acidity4_mgl								
W_Acidity5_mgl								
W_Acidity7_mgl								
W_Acidity8_mgl	1.67	1.67	1.67	3.33	3.33	3.33	6.67	3.33
W_Alkalinity_mgl	16.3	18.1	14.1	16.7	9.5	9.5	7.4	7.4
W_AmmoniaN_mgl	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005
W_An_Bromide_mgl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	0.5	0.75	0.5	0.5	0.67	0.67	0.71	0.67
W_An_Fluoride_mgl	0.079	0.044	0.04	0.05	0.04	0.04	0.04	0.04
W_An_Nitrate-N_mgl	0.0293	0.0062	0.0285	0.0026	0.002	0.002	0.0046	0.003
W_An_Nitrite-N_mgl	0.001	0.001	0.0018	0.001	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	0.71	0.62	0.57	0.68	0.45	0.45	0.23	0.26
W_BiCarbAlk_mgl								
W_CarbAlk_mgl								
W_Density_gcm3								
W_DOC_mgl	1.1	1.7						
W_DRP_mgl	0.004	0.009	0.005	0.005	0.006	0.006	0.008	0.008
W_DSi_mgl								
W_EC_mSm								
W_EC_uScm	40	40	39.5	39.2	30.4	30.4	22.6	21.8
W_EColi_cfumt								
W_pH	6.6	7	6.8	6.8	6.9	6.9	7	6.8
W_pH_1311_hcl								
W_pH_1311_initial								
W_pH_1311_leachate								
W_pH_1311_off								
W_Total_Ag_mgl		0.002					0.002	
W_Total_Al_mgl	0.0084	0.011	0.021	0.012	0.036	0.036	0.075	0.043
W_Total_As_mgl	0.0011	0.0013	0.00089	0.00095	0.00093	0.00093	0.00078	0.00072
W_Total_B_mgl	0.005	0.0061	0.005	0.005	0.005	0.005	0.005	0.005
W_Total_Ba_mgl	0.0051	0.005	0.0051	0.0048	0.0042	0.0042	0.0039	0.0035
W_Total_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001		0.0001
W_Total_Ca_mgl	4.6	4.4	3.8	4.3	2.9	2.9	2.3	2.1
W_Total_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.000024	0.000017	0.000048	0.000036	0.000061	0.000061	0.000084	0.000041
W_Total_Cr_mgl	0.00029	0.0002	0.00027	0.0002	0.0002	0.0002	0.00031	0.0002
W_Total-Cs_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Total_Cu_mgl	0.0002	0.00037	0.0002	0.0002	0.00053	0.00053	0.00061	0.00031
W_Total_Fe_mgl	0.0098	0.014	0.025	0.013	0.052	0.052	0.079	0.042
W_Total_Ge_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	0.34	0.33	0.31	0.33	0.35	0.35	0.41	0.29
W_Total_La_mgl	0.000034	0.000039	0.000065	0.000039	0.000097	0.000097	0.0002	0.00012
W_Total_Li_mgl	0.00084	0.00083	0.00121	0.00082	0.00076	0.00076	0.00068	0.00053
W_Total_Mg_mgl	1.01	0.9	0.81	0.93	0.63	0.63	0.52	0.47
W_Total_Mn_mgl	0.0005	0.00087	0.00093	0.00077	0.0026	0.0026	0.0036	0.0019
W_Total_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_Na_mgl	2.44	2.64	2.1	2.47	2.03	2.03	2.01	1.75
W_Total_Ni_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00031	0.0002
W_Total_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Total_Pb_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Total_Rb_mgl	0.00026	0.00024	0.00028	0.00021	0.00025	0.00025	0.00028	0.00022
W_Total_S_mgl	10	10	10	10	10	10	10	10
W_Total_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.054	0.0528	0.0511	0.0491	0.0334	0.0334	0.023	0.0212
W_Total_Ti_mgl							0.0021	
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
W_Total_V_mgl	0.00083	0.0005	0.0005	0.001	0.0005	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.00005	0.00005	0.000059	0.00005	0.000097	0.000097	0.00019	0.00011
W_Total_Zn_mgl	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
W_Dissolved_Ag_mgl		0.00008						
W_Dissolved_Al_mgl	0.0043	0.0057	0.0095	0.0065	0.019	0.019	0.049	0.028
W_Dissolved_As_mgl	0.00096	0.001	0.00093	0.00098	0.00089	0.00089	0.00081	0.00062
W_Dissolved_B_mgl	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.0052	0.0048	0.0039	0.0046	0.0035	0.0035	0.0034	0.0032
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.000015	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	4.9	4.3	3.9	4.2	2.7	2.7	2.3	2
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.000023	0.000041	0.000044	0.000026	0.000035	0.000035	0.000078	0.000034
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00019	0.00001
W_Dissolved_Cu_mgl	0.00028	0.00032	0.00034	0.00021	0.00033	0.00033	0.00057	0.00036
W_Dissolved_Fe_mgl	0.005	0.0066	0.014	0.005	0.024	0.024	0.042	0.025
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.000067
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	0.33	0.32	0.32	0.31	0.31	0.31	0.38	0.28
W_Dissolved_La_mgl	0.000014	0.000029	0.000043	0.000023	0.000056	0.000056	0.00015	0.000082
W_Dissolved_Li_mgl	0.00082	0.00075	0.00074	0.0008	0.00071	0.00071	0.00079	0.00054
W_Dissolved_Mg_mgl	0.99	0.86	0.83	0.86	0.6	0.6	0.49	0.46
W_Dissolved_Mn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00086	0.00055
W_Dissolved_Mo_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Na_mgl	2.44	2.21	2.3	2.23	1.97	1.97	1.91	1.76
W_Dissolved_Ni_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00029	0.0002
W_Dissolved_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00021	0.00023	0.00021	0.0002	0.0002	0.0002	0.00035	0.00018
W_Dissolved_S_mgl	10	10	10	10	10	10	10	10
W_Dissolved_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.0509	0.0454	0.0472	0.0489	0.0311	0.0311	0.0221	0.0204
W_Dissolved_Ti_mgl								
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000024	0.000028	0.000052	0.000032	0.000067	0.000067	0.00016	0.000082
W_Dissolved_Zn_mgl	0.001	0.0017	0.001	0.001	0.001	0.001	0.001	0.001
W_SumAnions_meqt	0.34	0.4	0.3	0.35	0.22	0.22	0.17	0.17
W_SumCations_meqt	0.44	0.39	0.37	0.39	0.28	0.28	0.25	0.22
W_TCN_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_TColi_cfumt								
W_TDS_mgt	35	38	22	17	14	14	27	19
W_TDSalts_gm3								
W_Thard_gCaCO3m3	16	15	13	15	9.9	9.9	8	7.1
W_TKN_mgl	0.1	0.13	0.1	0.1	0.25	0.25	0.23	0.12
W_TN_mgl	0.1	0.13	0.13	0.1	0.25	0.25	0.23	0.12
W_TOC_mgl	0.5	2.1						
W_TP_mgl	0.005	0.0083	0.0076	0.0063	0.011	0.011	0.01	0.014
W_TSi_mgl								
W_TSS_BDC_mgl								
W_TSS_mgl	3	3	3	3	3	3	3	3
W_Turbidity_NTU	0.2	0.3	0.2	0.3	0.8	0.8	1	0.4
W_Volume_ml								
WF_DO_mgl	12.3	13.78		14.21			13.68	11.94
WF_DO_pct	100	110.7		112.7			117	100
WF_EC_mScm	42	38.3		38.5			22.2	21
WF_ORP_mv	-2.1	12.6		134			138.5	164
WF_pH	7.43	7.69		7.48			7	7.13
WF_temp_degC	2.7	2.8		2.1			3.9	4.6
WF_turbidity_NTU	0.12							-0.27

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_CC01_14-Nov-2024	W_CC01_28-Nov-2024
LABJOBNO		
WaterLabID	Analytica	Analytica
WaterSiteID	CC01	CC01
LabSampleID	24-35305-1	24-36747-1
WaterSampDate	14-Nov-24	28-Nov-24
SampBy	MB	MB
W_Acidity4_mgl		
W_Acidity5_mgl		
W_Acidity7_mgl		
W_Acidity8_mgl	3.33	3.33
W_Alkalinity_mgl	10.8	13.3
W_AmmoniaN_mgl	0.005	0.005
W_An_Bromide_mgl	0.05	0.05
W_An_Chloride_mgl	0.5	0.56
W_An_Fluoride_mgl	0.04	0.05
W_An_Nitrate-N_mgl	0.003	0.010
W_An_Nitrite-N_mgl	0.001	0.001
W_An_Sulphate_mgl	0.34	0.43
W_BiCarbAlk_mgl		
W_CarbAlk_mgl		
W_Density_gcm3		
W_DOC_mgl		
W_DRP_mgl	0.008	0.007
W_DSi_mgl		
W_EC_mSm		
W_EC_uScm	28.6	35.3
W_EColi_cfuml		
W_pH	6.8	6.9
W_pH_1311_hcl		
W_pH_1311_initial		
W_pH_1311_leachate		
W_pH_1311_off		
W_Total_Ag_mgl		
W_Total_Al_mgl	0.036	0.025
W_Total_As_mgl	0.0012	0.0012
W_Total_B_mgl	0.005	0.005
W_Total_Ba_mgl	0.0044	0.0047
W_Total_Be_mgl	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001
W_Total_Ca_mgl	3	3.3
W_Total_Cd_mgl	0.00002	0.00002
W_Total_Co_mgl	0.000065	0.000053
W_Total_Cr_mgl	0.0002	0.0002
W_Total-Cs_mgl	0.00001	0.00001
W_Total_Cu_mgl	0.00026	0.00023
W_Total_Fe_mgl	0.059	0.04
W_Total_Ge_mgl	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001
W_Total_K_mgl	0.27	0.26
W_Total_La_mgl	0.00011	0.000078
W_Total_Li_mgl	0.00072	0.00087
W_Total_Mg_mgl	0.68	0.72
W_Total_Mn_mgl	0.003	0.0021
W_Total_Mo_mgl	0.0002	0.0002
W_Total_Na_mgl	2.14	2.14
W_Total_Ni_mgl	0.00021	0.0002
W_Total_P_mgl	0.04	0.04
W_Total_Pb_mgl	0.00005	0.00005
W_Total_Rb_mgl	0.00026	0.00028
W_Total_S_mgl	10	10
W_Total_Sb_mgl	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005
W_Total_Sr_mgl	0.0343	0.0374
W_Total_Ti_mgl		
W_Total_Tl_mgl	0.0001	0.0001
W_Total_U_mgl	0.00003	0.00003
W_Total_V_mgl	0.0005	0.0005
W_Total_Y_mgl	0.0001	0.000078
W_Total_Zn_mgl	0.003	0.003
W_Dissolved_Ag_mgl		
W_Dissolved_Al_mgl	0.023	0.012
W_Dissolved_As_mgl	0.0011	0.0011
W_Dissolved_B_mgl	0.01	0.01
W_Dissolved_Ba_mgl	0.0043	0.0045
W_Dissolved_Be_mgl	0.000014	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001
W_Dissolved_Ca_mgl	2.9	3.3
W_Dissolved_Cd_mgl	0.00002	0.00002
W_Dissolved_Co_mgl	0.000028	0.000043
W_Dissolved_Cr_mgl	0.00023	0.0002
W_Dissolved-Cs_mgl	0.00001	0.00001
W_Dissolved_Cu_mgl	0.00036	0.0003
W_Dissolved_Fe_mgl	0.03	0.022
W_Dissolved_Ge_mgl	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008
W_Dissolved_K_mgl	0.26	0.26
W_Dissolved_La_mgl	0.000068	0.000053
W_Dissolved_Li_mgl	0.0008	0.00083
W_Dissolved_Mg_mgl	0.64	0.8
W_Dissolved_Mn_mgl	0.00079	0.0011
W_Dissolved_Mo_mgl	0.0002	0.00049
W_Dissolved_Na_mgl	2.07	2.42
W_Dissolved_Ni_mgl	0.0002	0.0002
W_Dissolved_P_mgl	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005
W_Dissolved_Rb_mgl	0.0002	0.00023
W_Dissolved_S_mgl	10	10
W_Dissolved_Sb_mgl	0.0001	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002
W_Dissolved_Sr_mgl	0.0331	0.0368
W_Dissolved_Ti_mgl		
W_Dissolved_Tl_mgl	0.00001	0.00001
W_Dissolved_U_mgl	0.00003	0.00003
W_Dissolved_V_mgl	0.0005	0.0005
W_Dissolved_Y_mgl	0.000075	0.000063
W_Dissolved_Zn_mgl	0.0031	0.001
W_SumAnions_meql	0.22	0.29
W_SumCations_meql	0.3	0.34
W_TCN_mgl	0.001	0.001
W_TColi_cfuml		
W_TDS_mgl	15	23
W_TDSalts_gm3		
W_Thard_gCaCO3m3	10	11
W_TKN_mgl	0.16	0.1
W_TN_mgl	0.16	0.11
W_TOC_mgl		
W_TP_mgl	0.016	0.015
W_TSi_mgl		
W_TSS_BDC_mgl		
W_TSS_mgl	3	3
W_Turbidity_NTU	0.7	0.4
W_Volume_ml		
WF_DO_mgl	11.79	10.68
WF_DO_pct	112	106.7
WF_EC_mScm	25.2	30.8
WF_ORP_mV	61	84.7
WF_pH	7.18	7.3
WF_temp_degC	9.2	11.1
WF_turbidity_NTU		

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_LBA_10-Oct-2023	W_LBA_4-Apr-2024	W_LBA_17-Apr-2024	W_LBA_1-May-2024	W_LBA_29-May-2024	W_LBA_13-Jun-2024	W_LBA_27-Jun-2024
LABJOBN0	AR-23-NC-028806-01	AR-24-NC-011976-01	AR-24-NC-013497-01	AR-24-NC-015251-01	24-17710	24-19336	24-20566
WaterLabID	Eurofins	Eurofins	Eurofins	Eurofins	Analytica	Analytica	Analytica
WaterSiteID	LBA	LBA	LBA	LBA	LBA	LBA	LBA
LabSampleID	817-2023-00111382	817-2024-00041165	817-2024-00047517	817-2024-00052699	24-17710-2	24-19336-2	24-20566-2
WaterSampDate	2023-10-10	2024-04-04	2024-04-17	2024-05-02	2024-05-29	2024-06-13	2024-06-27
SampBy	HM	MB	MB	MB		MB	MB
W_Acidity4_mgl	1	1	1	1			
W_Acidity6_mgl							
W_Acidity7_mgl	1	1	1	1			
W_Acidity8_mgl	1	4	1	1	1.67		1
W_Alkalinity_mgl	181	181	183	182	189	191	195
W_AmmoniaN_mgl	0.01	0.01	0.01	0.01	0.005	0.005	0.005
W_An_Bromide_mgl	0.08	0.08	0.08	0.08	0.08	0.07	0.07
W_An_Chloride_mgl	5.05	8.06	7.85	7.72	7.29	6.45	6.95
W_An_Fluoride_mgl	0.35	0.27	0.32	0.33	0.28	0.29	0.27
W_An_Nitrate-N_mgl	0.22	0.18	0.26	0.2	0.198	0.196	0.197
W_An_Nitrite-N_mgl	0.01	0.01	0.01	0.01	0.001	0.001	0.001
W_An_Sulphate_mgl	16.3	30.4	34.1	30.9	27.8	27	26.8
W_BiCarbAlk_mgl							
W_CarbAlk_mgl							
W_Density_gcm3							
W_DOC_mgl	2.2	1.7	1.7	1.5	3.1	0.5	0.5
W_DRP_mgl					0.024	0.019	0.016
W_DSI_mgl	15.6	17.8	14.7	15.3			
W_EC_mS/cm	42.6	43	43.7	44	46		
W_EC_uS/cm					460	459	444
W_EColi_cfum/L							
W_pH	8.2	8.2	8.2	8.1	8.2	8.2	8.2
W_pH_1311_hcl							
W_pH_1311_initial							
W_pH_1311_leachate							
W_pH_1311_off							
W_Total_Ag_mgl	0.001	0.001	0.001	0.001			0.002
W_Total_Al_mgl	0.073	0.017	0.005	0.106	0.003	0.037	0.003
W_Total_As_mgl	2.21	1.05	1	1.24	1.08	1.46	1.19
W_Total_B_mgl	0.05	0.05	0.05	0.05	0.018	0.017	0.017
W_Total_Ba_mgl	0.008	0.005	0.005	0.008	0.0053	0.0081	0.0055
W_Total_Be_mgl	0.005	0.005	0.005	0.005	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.005	0.005	0.005	0.005	0.0001	0.0001	0.0001
W_Total_Ca_mgl	53.5	48.4	42.8	45	47.1	56	54.4
W_Total_Cd_mgl	0.001	0.001	0.001	0.001	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.002	0.002	0.002	0.002	0.000064	0.00025	0.000079
W_Total_Cr_mgl	0.001	0.001	0.001	0.001	0.0002	0.00028	0.0002
W_Total_Cs_mgl					0.00011	0.00017	0.00017
W_Total_Cu_mgl	0.002	0.002	0.002	0.002	0.0002	0.0002	0.0002
W_Total_Fe_mgl	3.1	0.4	0.2	1	0.16	0.963	0.13
W_Total_Ge_mgl					0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001
W_Total_K_mgl	2	2.1	1.8	1.6	1.7	2	2
W_Total_La_mgl					0.000014	0.000085	0.00001
W_Total_Li_mgl	0.016	0.013	0.012	0.009	0.0129	0.0137	0.0132
W_Total_Mg_mgl	14.4	15.4	15.6	13.2	13.2	15.9	15.6
W_Total_Mn_mgl	0.115	0.037	0.026	0.121	0.027	0.186	0.039
W_Total_Mo_mgl	0.002	0.001	0.001	0.001	0.0011	0.0012	0.0011
W_Total_Na_mgl	19.1	19.8	20.6	15.8	17.4	20.5	29.6
W_Total_Ni_mgl	0.001	0.001	0.001	0.001	0.0002	0.00038	0.0002
W_Total_P_mgl					0.04	0.04	0.04
W_Total_Pb_mgl	0.001	0.001	0.001	0.001	0.00005	0.00027	0.00005
W_Total_Rb_mgl					0.0014	0.0015	0.0014
W_Total_S_mgl					10	12	12
W_Total_Sb_mgl	0.002	0.002	0.002	0.002	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.005	0.005	0.005	0.005	0.001	0.001	0.001
W_Total_Sn_mgl	0.001	0.001	0.001	0.001	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.467	0.447	0.449	0.419	0.467	0.502	0.637
W_Total_Ti_mgl	0.003	0.001	0.001	0.004	0.002		
W_Total_Tl_mgl	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.003	0.002	0.002	0.002	0.00215	0.00239	0.00237
W_Total_V_mgl	0.002	0.001	0.001	0.001	0.0005	0.0005	0.0005
W_Total_Y_mgl					0.000056	0.00025	0.000057
W_Total_Zn_mgl	0.005	0.005	0.005	0.007	0.003	0.003	0.003
W_Dissolved_Ag_mgl	0.0005	0.0005	0.0005	0.0005			0.00008
W_Dissolved_Al_mgl	0.005	0.002	0.002	0.002	0.0068	0.003	0.003
W_Dissolved_As_mgl	1.05	0.91	0.873	0.95	1.02	1.12	1.14
W_Dissolved_B_mgl	0.03	0.03	0.03	0.03	0.019	0.017	0.014
W_Dissolved_Ba_mgl	0.004	0.004	0.004	0.004	0.0054	0.0056	0.0052
W_Dissolved_Be_mgl	0.001	0.001	0.001	0.001	0.00028	0.00001	0.00001
W_Dissolved_Bi_mgl	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	49.2	50.7	41.7	42.8	53	56.2	53.2
W_Dissolved_Cd_mgl	0.0002	0.0002	0.0002	0.0002	0.00028	0.00002	0.00002
W_Dissolved_Co_mgl	0.0005	0.0005	0.0005	0.0005	0.00025	0.00005	0.000034
W_Dissolved_Cr_mgl	0.001	0.002	0.001	0.001	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl						0.00013	0.00013
W_Dissolved_Cu_mgl	0.0005	0.0005	0.0005	0.0005	0.00034	0.0002	0.0002
W_Dissolved_Fe_mgl	0.41	0.15	0.07	0.1	0.007	0.005	0.005
W_Dissolved_Ge_mgl					0.00005	0.00005	0.000065
W_Dissolved_Hg_mgl	0.0005	0.0005	0.0005	0.0005	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	1.66	1.93	1.83	1.93	2	2	1.9
W_Dissolved_La_mgl					0.00019	0.00001	0.00001
W_Dissolved_Li_mgl	0.01	0.019	0.009	0.013	0.0134	0.0136	0.0124
W_Dissolved_Mg_mgl	14.8	16.6	14.5	14.9	15.1	15.8	14.7
W_Dissolved_Mn_mgl	0.0281	0.0111	0.02	0.0334	0.024	0.016	0.033
W_Dissolved_Mo_mgl	0.0015	0.0011	0.0009	0.0008	0.0012	0.00094	0.00098
W_Dissolved_Na_mgl	19.1	23.1	18.9	19.5	19.2	20.2	18.6
W_Dissolved_Ni_mgl	0.0005	0.0005	0.0005	0.0005	0.00034	0.0002	0.0002
W_Dissolved_P_mgl					0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.0005	0.0005	0.0005	0.0005	0.00022	0.00005	0.00005
W_Dissolved_Rb_mgl					0.00154	0.00139	0.00138
W_Dissolved_S_mgl					10	13	10
W_Dissolved_Sb_mgl	0.001	0.001	0.001	0.001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.005	0.005	0.005	0.005	0.0012	0.00097	0.0005
W_Dissolved_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.358	0.422	0.403	0.413	0.473	0.47	0.448
W_Dissolved_Ti_mgl	0.0005	0.0005	0.0005	0.0005	0.002		
W_Dissolved_Tl_mgl	0.0005	0.0005	0.0005	0.0005	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.0027	0.0021	0.0019	0.0018	0.00232	0.00225	0.00208
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl					0.00021	0.000024	0.00002
W_Dissolved_Zn_mgl	0.002	0.002	0.002	0.002	0.0036	0.001	0.001
W_SumAnions_meq/L					4.68	4.66	4.75
W_SumCations_meq/L					4.77	5.03	4.72
W_TCN_mgl	0.005	0.005	0.005	0.005		0.001	0.001
W_TColi_cfum/L							
W_TDS_mgl	209	211	214	216	271	250	256
W_TDSalts_gm3							
W_Thard_gCaCO3m3	184	184	164	167	170	210	200
W_TKN_mgl					0.1	0.1	0.24
W_TN_mgl	0.57	0.275	0.27	0.302	0.2	0.2	0.43
W_TOC_mgl	2.3	1.7	1.7	1.6	1.5	0.5	0.5
W_TP_mgl	0.091	0.03	0.027	0.014	0.33	0.39	0.32
W_TSi_mgl	6.8	6.66	6.16	5.99			
W_TSS_BDC_mgl							
W_TSS_mgl	22	6	6	9	7	9	3
W_Turbidity_NTU	28.1	1.26	1.28	3.72	0.7	4.5	1
W_Volume_mL							
WF_DO_mgl	8.41	10.32	10.78	9.36		9.96	10.02
WF_DO_pct	82	102.4	104.1	89.4		93.7	93.9
WF_EC_mS/cm	392.5	431.4	418.4	408.1	434.2	434.2	422.9
WF_ORP_mV	66.1	281.9	214.3	52.5		20.3	61
WF_pH	8.36	8.12	8.23	8.39		8.28	8.36
WF_temp_degC	11.7	12.4	11.5	10.7		10.2	10.3
WF_turbidity_NTU						5.8	

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples	MGL WaterSamples
SAMPLEID	W_LBA_11-Jul-2024	W_LBA_25-Jul-2024	W_LBA_8-Aug-2024	W_LBA_22-Aug-2024	W_LBA_4-Sep-2024	W_LBA_19-Sep-2024	W_LBA_3-Oct-2024	W_LBA_16-Oct-2024
LABJOBNO	24-22094	24-23696	24-25063	24-26351				
WaterLabID	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica
WaterSiteID	LBA	LBA	LBA	LBA	LBA	LBA	LBA	LBA
LabSampleID	24-22094-2	24-23696-2	24-25063-1	24-26351-2	24-27733-1	24-29331-2	24-30758-1	24-32269-2-2
WaterSampDate	2024-07-11	2024-08-25	2024-08-08	2024-08-22	45539	19-Sep-24	03-Oct-24	16-Oct-24
SampBy		MB	MB		MB	MB	MB	MB
W_Acidity4_mgl								
W_Acidity5_mgl								
W_Acidity7_mgl								
W_Acidity8_mgl	1	1	1	1	1	1.33	1	1
W_Alkalinity_mgl	194	196	194	193	194	198	194	197
W_AmmoniaN_mgl	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
W_An_Bromide_mgl	0.08	0.05	0.1	0.08	0.08	0.05	0.05	0.05
W_An_Chloride_mgl	6.52	7.58	7.34	6.91	7.13	7	7.45	7.46
W_An_Fluoride_mgl	0.32	0.32	0.26	0.27	0.28	0.25	0.31	0.28
W_An_Nitrate-N_mgl	0.216	0.21	0.208	0.217	0.223	0.196	0.211	0.242
W_An_Nitrite-N_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	26.3	27.5	28	27.1	25.3	26	28.7	28.8
W_BiCarbAlk_mgl								
W_CarbAlk_mgl								
W_Density_gcm3								
W_DOC_mgl								
W_DRP_mgl	0.016	0.02	0.019	0.021	0.023	0.029	0.02	0.018
W_DSi_mgl								
W_EC_mSm								
W_EC_uScm	505	459	468	526	427	449	458	510
W_EColi_cfumt								
W_pH	8.1	8.2	8.2	8.2	8.2	6	8.2	8.3
W_pH_1311_hcl								
W_pH_1311_initial								
W_pH_1311_leachate								
W_pH_1311_off								
W_Total_Ag_mgl						0.002		
W_Total_Al_mgl	0.0038	0.0033	0.0032	0.003	0.0045	0.0072	0.005	0.003
W_Total_As_mgl	1.17	1.12	1.18	1.17	1.15	1.22	1.13	1.1
W_Total_B_mgl	0.014	0.0059	0.02	0.02	0.016	0.015	0.01	0.005
W_Total_Ba_mgl	0.0056	0.0057	0.0056	0.0058	0.006	0.0066	0.0057	0.0056
W_Total_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Ca_mgl	49.2	54.4	53	56	53.5	62.3	53.7	57.6
W_Total_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.000073	0.000071	0.000069	0.000065	0.000075	0.000094	0.000075	0.000039
W_Total_Cr_mgl	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002	0.00025	0.0002
W_Total_Cs_mgl	0.00016	0.00014	0.00014	0.00015	0.00013	0.00013	0.00015	0.00013
W_Total_Cu_mgl	0.0002	0.0002	0.0002	0.0002	0.00023	0.00023	0.0002	0.0002
W_Total_Fe_mgl	0.12	0.11	0.11	0.11	0.12	0.21	0.18	0.16
W_Total_Ge_mgl	0.00005	0.00005	0.00005	0.00005	0.000065	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	1.8	2	1.8	2	1.9	2.2	2	2
W_Total_La_mgl	0.000015	0.000013	0.00001	0.00001	0.000013	0.000026	0.000015	0.000011
W_Total_Li_mgl	0.014	0.0136	0.0148	0.0145	0.0137	0.0133	0.0138	0.0144
W_Total_Mg_mgl	14.1	15.9	15.4	16.2	14.9	16.1	15.4	16.2
W_Total_Mn_mgl	0.039	0.039	0.04	0.037	0.048	0.0592	0.042	0.037
W_Total_Mo_mgl	0.0011	0.0011	0.0013	0.0011	0.0011	0.0011	0.0011	0.001
W_Total_Na_mgl	17.7	20.2	19.7	20.4	19	20.9	18.8	20.4
W_Total_Ni_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.00024	0.00026	0.0002
W_Total_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Total_Pb_mgl	0.000059	0.00005	0.00005	0.00005	0.00005	0.00005	0.00018	0.00005
W_Total_Rb_mgl	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0013
W_Total_S_mgl	11	10	11	11	10	11	11	11
W_Total_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.514	0.497	0.474	0.516	0.503	0.516	0.493	0.494
W_Total_Ti_mgl						0.002		
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00229	0.00216	0.00228	0.00232	0.00221	0.00221	0.00218	0.00215
W_Total_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.000067	0.000059	0.000054	0.000057	0.000067	0.000094	0.000059	0.000066
W_Total_Zn_mgl	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
W_Dissolved_Ag_mgl								
W_Dissolved_Al_mgl	0.003	0.003	0.003	0.003	0.003	0.0054	0.003	0.003
W_Dissolved_As_mgl	1.16	1.12	1.1	1.13	1.1	1.11	1.09	1.02
W_Dissolved_B_mgl	0.015	0.01	0.019	0.017	0.016	0.014	0.01	0.01
W_Dissolved_Ba_mgl	0.0049	0.0056	0.0053	0.0053	0.0057	0.0057	0.0054	0.0052
W_Dissolved_Be_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.000014	0.00001	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	56	53.7	53.4	55	51.5	60.9	56.1	58
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.000063	0.000065	0.000034	0.000057	0.00005	0.000085	0.000064	0.000053
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Cs_mgl	0.00015	0.00014	0.00012	0.00014	0.00013	0.00017	0.00013	0.00014
W_Dissolved_Cu_mgl	0.0002	0.0002	0.0002	0.0002	0.00025	0.00034	0.00022	0.0002
W_Dissolved_Fe_mgl	0.005	0.005	0.005	0.005	0.005	0.0098	0.012	0.005
W_Dissolved_Ge_mgl	0.000058	0.00005	0.00005	0.00005	0.000056	0.00005	0.00005	0.000098
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	2	1.9	2	2	1.9	2.2	2	2
W_Dissolved_La_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.000024	0.00001	0.00001
W_Dissolved_Li_mgl	0.013	0.0139	0.0136	0.0142	0.0132	0.0131	0.0134	0.0137
W_Dissolved_Mg_mgl	15.6	15.1	15.6	16	15	15.3	15.5	15.8
W_Dissolved_Mn_mgl	0.037	0.031	0.028	0.029	0.025	0.025	0.036	0.011
W_Dissolved_Mo_mgl	0.0012	0.00099	0.0011	0.0011	0.0011	0.0011	0.00097	0.00089
W_Dissolved_Na_mgl	20.7	19.4	19.8	20.2	19.1	19.2	19.6	20.2
W_Dissolved_Ni_mgl	0.00023	0.0002	0.00022	0.0002	0.0002	0.00026	0.0002	0.0002
W_Dissolved_P_mgl	0.04	0.04	0.067	0.04	0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.000059	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00143	0.00133	0.0013	0.00139	0.00133	0.00139	0.00134	0.00132
W_Dissolved_S_mgl	12	12	12	10	13	11	10	12
W_Dissolved_Sb_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.00085	0.00071	0.0005	0.0005	0.00072	0.00066	0.00075	0.00078
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.523	0.496	0.461	0.496	0.492	0.502	0.492	0.48
W_Dissolved_Ti_mgl								
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.000015	0.00001	0.00001
W_Dissolved_U_mgl	0.0017	0.0019	0.00219	0.00219	0.00214	0.00205	0.00208	0.00213
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000033	0.000024	0.000024	0.000024	0.000026	0.00005	0.000019	0.000019
W_Dissolved_Zn_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_SumAnions_meql	4.7	4.82	4.78	4.72	4.7	4.71	4.79	4.88
W_SumCations_meql	5.03	4.82	4.86	4.99	4.69	5.19	4.98	5.13
W_TCN_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_TColi_cfumt								
W_TDS_mgl	250	249	262	237	245	257	260	250
W_TDSalts_gm3								
W_Thard_gCaCO3m3	180	200	200	210	200	220	200	210
W_TKN_mgl	0.1	0.11	0.14	0.21	0.1	0.11	0.12	0.45
W_TN_mgl	0.22	0.32	0.35	0.43	0.22	0.3	0.33	0.7
W_TOC_mgl								
W_TP_mgl	0.36	0.33	0.27	0.12	0.26	0.32	0.2	0.28
W_TSi_mgl								
W_TSS_BDC_mgl								
W_TSS_mgl	3	4	3	3	3	3	3	3
W_Turbidity_NTU	1.2	0.6	0.9	1.2	0.9	1.6	0.7	1
W_Volume_ml								
WF_DO_mgl		9.2	10.51		10.33	8.79	9.24	10.28
WF_DO_pct		85.3	97.8		98.6	85.6	87	96.1
WF_EC_mScm		428.5	422.8		383.3	130.8	434.9	437.8
WF_ORP_mV		68.9	73.7		102.2	74.4	-61.7	63.7
WF_pH		8.3	8.44		8.33	8.42	8.3	8.4
WF_temp_degC		10	10.2		10.9	10.8	10.5	10.8
WF_turbidity_NTU								-0.18

Blanks cells infer no available data

Baseline Water Quality Report: Bendigo Creek

HOLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_LBA_31-Oct-2024	W_LBA_14-Nov-2024	W_LBA_28-Nov-2024
LABJOBNO			
WaterLabID	Analytica	Analytica	Analytica
WaterSiteID	LBA	LBA	LBA
LabSampleID	24-33929-1	24-35305-2	24-36747-2
WaterSampDate	31-Oct-24	14-Nov-24	28-Nov-24
SampBy	MB	MB	MB
W_Acidity4_mgl			
W_Acidity5_mgl			
W_Acidity7_mgl			
W_Acidity8_mgl	1	1	1
W_Alkalinity_mgl	194	196	193
W_AmmoniaN_mgl	0.005	0.005	0.005
W_An_Bromide_mgl	0.08	0.09	0.08
W_An_Chloride_mgl	7.7	7.5	7.54
W_An_Fluoride_mgl	0.31	0.22	0.33
W_An_Nitrate-N_mgl	0.225	0.229	0.225
W_An_Nitrite-N_mgl	0.001	0.001	0.001
W_An_Sulphate_mgl	27.8	29.1	28.8
W_BiCarbAlk_mgl			
W_CarbAlk_mgl			
W_Density_gcm3			
W_DOC_mgl			
W_DRP_mgl	0.017	0.017	0.018
W_DSi_mgl			
W_EC_mSm			
W_EC_uScm	464	442	476
W_EColi_cfumt			
W_pH	8.1	8.1	8.1
W_pH_1311_hcl			
W_pH_1311_initial			
W_pH_1311_leachate			
W_pH_1311_off			
W_Total_Ag_mgl			
W_Total_Al_mgl	0.0032	0.003	0.003
W_Total_As_mgl	1.15	1.14	1.13
W_Total_B_mgl	0.005	0.005	0.019
W_Total_Ba_mgl	0.0056	0.0055	0.0056
W_Total_Be_mgl	0.00001	0.00001	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001
W_Total_Ca_mgl	56.4	56.5	56.1
W_Total_Cd_mgl	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.000034	0.000031	0.000044
W_Total_Cr_mgl	0.00021	0.0002	0.0002
W_Total_Cs_mgl	0.00014	0.00013	0.00013
W_Total_Cu_mgl	0.00021	0.0002	0.0002
W_Total_Fe_mgl	0.28	0.2	0.21
W_Total_Ge_mgl	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001
W_Total_K_mgl	2	2	2
W_Total_La_mgl	0.000013	0.00001	0.00001
W_Total_Li_mgl	0.0141	0.013	0.0137
W_Total_Mg_mgl	15.5	15.9	15.8
W_Total_Mn_mgl	0.032	0.024	0.028
W_Total_Mo_mgl	0.001	0.0012	0.0012
W_Total_Na_mgl	20.7	20.5	20.7
W_Total_Ni_mgl	0.0002	0.0002	0.0002
W_Total_P_mgl	0.04	0.04	0.04
W_Total_Pb_mgl	0.00005	0.00005	0.00005
W_Total_Rb_mgl	0.0015	0.0014	0.0014
W_Total_S_mgl	11	11	11
W_Total_Sb_mgl	0.0001	0.0001	0.0001
W_Total_Se_mgl	0.001	0.0012	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005
W_Total_Sr_mgl	0.531	0.508	0.487
W_Total_Ti_mgl			
W_Total_Tl_mgl	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00227	0.00222	0.00212
W_Total_V_mgl	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.000097	0.000067	0.000074
W_Total_Zn_mgl	0.003	0.003	0.003
W_Dissolved_Ag_mgl			
W_Dissolved_Al_mgl	0.003	0.003	0.003
W_Dissolved_As_mgl	0.995	1.05	1.01
W_Dissolved_B_mgl	0.01	0.01	0.014
W_Dissolved_Ba_mgl	0.0051	0.0051	0.005
W_Dissolved_Be_mgl	0.00001	0.000047	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	55.2	55.6	52.9
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.000045	0.000043	0.000044
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002
W_Dissolved_Cs_mgl	0.00013	0.00012	0.00012
W_Dissolved_Cu_mgl	0.0002	0.0002	0.0002
W_Dissolved_Fe_mgl	0.005	0.005	0.005
W_Dissolved_Ge_mgl	0.00005	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	1.9	1.9	1.9
W_Dissolved_La_mgl	0.00001	0.00001	0.00001
W_Dissolved_Li_mgl	0.0152	0.0135	0.0125
W_Dissolved_Mg_mgl	15.2	15.4	15.9
W_Dissolved_Mn_mgl	0.0048	0.014	0.013
W_Dissolved_Mo_mgl	0.0011	0.0012	0.0011
W_Dissolved_Na_mgl	19.7	20	20.9
W_Dissolved_Ni_mgl	0.0002	0.0002	0.0002
W_Dissolved_P_mgl	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00137	0.00132	0.00131
W_Dissolved_S_mgl	12	10	12
W_Dissolved_Sb_mgl	0.0001	0.0001	0.0001
W_Dissolved_Se_mgl	0.00097	0.0014	0.001
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	0.512	0.503	0.478
W_Dissolved_Ti_mgl			
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.00229	0.00221	0.002
W_Dissolved_V_mgl	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.000019	0.000023	0.000021
W_Dissolved_Zn_mgl	0.001	0.001	0.001
W_SumAnions_meql	4.77	4.81	4.75
W_SumCations_meql	4.91	4.96	4.91
W_TCN_mgl	0.001	0.001	0.001
W_TColi_cfumt			
W_TDS_mgl	252	254	263
W_TDSalts_gm3			
W_Thard_gCaCO3m3	200	210	210
W_TKN_mgl	0.1	0.1	0.1
W_TN_mgl	0.22	0.23	0.23
W_TOC_mgl			
W_TP_mgl	0.24	0.3	0.16
W_TSi_mgl			
W_TSS_BDC_mgl			
W_TSS_mgl	3	3	3
W_Turbidity_NTU	1.3	1.4	1.2
W_Volume_ml			
WF_DO_mgl	9.19	8.1	8.86
WF_DO_pct	91.7	80.3	87.7
WF_EC_mScm	437.6	429.8	445.4
WF_ORP_mV	36.1	105.6	76.3
WF_pH	8.37	8.23	8.22
WF_temp_degC	12.3	12.1	12.4
WF_turbidity_NTU			

Blanks cells infer no available data

Blanks cells infer no available data

Baseline Water Quality Report: Groundwater

SAMPLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
	W_MDD015_11-Jul-2024	W_MDD015_25-Jul-2024	W_MDD015_22-Aug-2024	W_MDD015_4-Sep-2024	W_MDD015_19-Sep-2024	W_MDD015_3-Oct-2024	W_MDD015_16-Oct-2024	W_MDD015_31-Oct-2024	W_MDD015_14-Nov-2024
LAB/OBNO	24-22094	24-23696	24-26351	24-27733-2	24-29331-3	24-30758-2	24-32269-3-3	24-33929-2	24-35305-3
WaterLabID	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica
WaterSiteID	MDD015	MDD015	MDD015	MDD015	MDD015	MDD015	MDD015	MDD015	MDD015
LabSampleID	24-22094-3	24-23696-3	24-26351-3	24-27733-2	24-29331-3	24-30758-2	24-32269-3-3	24-33929-2	24-35305-3
WaterSampDate	2024-07-11	2024-07-25	2024-08-22	2024-09-04	2024-09-19	2024-10-03	2024-10-16	2024-10-31	2024-11-14
SampBy		MB		MB	MB	MB	MB	MB	MB
W_Acidity4_mgl									
W_Acidity5_mgl									
W_Acidity7_mgl									
W_Acidity8_mgl	1	1	6	2.67	3.33	3.33	4	3.33	1
W_Alkalinity_mgl	201	203	204	200	202	198	202	202	205
W_AmmoniaN_mgl	0.11	0.1	0.1	0.11	0.11	0.09	0.1	0.1	0.1
W_An_Bromide_mgl	0.1	0.1	0.1	0.11	0.11	0.06	0.05	0.1	0.11
W_An_Chloride_mgl	8.53	7.65	9.15	9.16	9.05	9.02	9.27	9.59	9.34
W_An_Fluoride_mgl	0.17	0.17	0.14	0.14	0.13	0.15	0.15	0.16	0.12
W_An_Nitrate-N_mgl	0.0052	0.0029	0.0051	0.002	0.002	0.0045	0.0033	0.002	0.002
W_An_Nitrite-N_mgl	0.0016	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	8.63	8.02	9.11	8.93	8.73	8.97	9.1	9.29	9.52
W_BiCarbAlk_mgl									
W_CarbAlk_mgl									
W_Density_gcm3									
W_DOC_mgl									
W_DRP_mgl	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
W_DSi_mgl									
W_EC_mSm									
W_EC_uScm	482	442	498	430	441	422	486	439	428
W_EColi_cfuml									
W_pH	8	8.1	8	8	8.1	8.1	8.2	8	8
W_pH_1311_hcl									
W_pH_1311_initial									
W_pH_1311_leachate									
W_pH_1311_off									
W_Total_Ag_mgl					0.002				
W_Total_Al_mgl	0.016	0.049	0.021	0.0098	0.014	0.031	0.0098	0.014	0.0086
W_Total_As_mgl	0.018	0.019	0.018	0.018	0.017	0.02	0.02	0.019	0.018
W_Total_B_mgl	0.036	0.029	0.042	0.036	0.034	0.028	0.021	0.016	0.011
W_Total_Ba_mgl	0.245	0.246	0.248	0.237	0.24	0.225	0.231	0.23	0.234
W_Total_Be_mgl	0.000013	0.00001	0.000016	0.000014	0.00001	0.000021	0.000011	0.000015	0.00001
W_Total_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Ca_mgl	40.8	45	49.1	43.7	56.8	50.3	49.7	47.6	47
W_Total_Cd_mgl	0.00002	0.000023	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.00001	0.000017	0.00001	0.00001	0.000016	0.000028	0.00001	0.000013	0.00001
W_Total_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total-Cs_mgl	0.00019	0.00021	0.0002	0.00019	0.00019	0.00019	0.0002	0.00021	0.00

Blanks cells infer no available data

Baseline Water Quality Report: Groundwater

SAMPLEID	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
W_MDD302_13-Jun-2024	W_MDD302_13-Jun-2024	W_MDD302_25-Jul-2024	W_MDD302_25-Jul-2024	W_MDD302_8-Aug-2024	W_MDD302_22-Aug-2024	W_MDD302_4-Sep-2024	W_MDD302_19-Sep-2024
LAB/OBNO	24-19336	24-20566	24-23696	24-25063	24-26351	24-27733-10	24-29331-11
WaterLabID	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica	Analytica
WaterSiteID	MDD302	MDD302	MDD302	MDD302	MDD302	MDD302	MDD302
LabSampleID	24-19336-11	24-20566-11	24-23696-11	24-25063-8	24-26351-11	24-27733-10	24-29331-11
WaterSampDate	2024-06-13	2024-06-27	2024-07-25	2024-08-08	2024-08-22	2024-09-04	2024-09-19
SampBy	MB	MB	MB	MB		MB	MB
W_Acidity4_mgl							
W_Acidity5_mgl							
W_Acidity7_mgl							
W_Acidity8_mgl	5.6	6.67	10	11.67	8.67	7.33	6.67
W_Alkalinity_mgl	239	251	239	234	235	236	237
W_AmmoniaN_mgl	0.05	0.05	0.05	0.05	0.05	0.05	0.05
W_An_Bromide_mgl	0.05	0.05	0.05	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	2.32	2.81	3.41	3.06	2.9	3	2.95
W_An_Fluoride_mgl	0.14	0.14	0.14	0.11	0.14	0.12	0.12
W_An_Nitrate-N_mgl	0.002	0.002	0.0026	0.002	0.0045	0.0022	0.003
W_An_Nitrite-N_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	8.91	9.71	10.2	9.73	9.46	9.24	8.14
W_BiCarbAlk_mgl							
W_CarbAlk_mgl							
W_Density_gcm3							
W_DOC_mgl	0.5	0.5					
W_DRP_mgl	0.002	0.002	0.002	0.002	0.002	0.002	0.002
W_DSi_mgl							
W_EC_mSm							
W_EC_uScm	500	470	480	488	550	458	482
W_EColi_cfumil							
W_pH	7.9	7.8	7.8	7.8	7.7	7.8	7.8
W_pH_1311_hcl							
W_pH_1311_initial							
W_pH_1311_leachate							
W_pH_1311_off							
W_Total_Ag_mgl		0.002					0.002
W_Total_Al_mgl	0.0044	0.0037	0.003	0.003	0.0039	0.003	0.0036
W_Total_As_mgl	0.051	0.0539	0.056	0.0588	0.0588	0.0567	0.06
W_Total_B_mgl	0.0063	0.025	0.005	0.01	0.0086	0.0052	0.005
W_Total_Ba_mgl	0.148	0.142	0.142	0.143	0.147	0.14	0.141
W_Total_Be_mgl	0.000026	0.000023	0.000022	0.000034	0.000029	0.000024	0.000023
W_Total_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	
W_Total_Ca_mgl	64.6	61.5	61.5	60.5	64.5	60.5	72.1
W_Total_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Total_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_Cs_mgl	0.00016	0.00016	0.00015	0.00016	0.00017	0.00016	0.00016
W_Total_Cu_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_Fe_mgl	0.38	0.39	0.34	0.34	0.34	0.33	0.34
W_Total_Ge_mgl	0.00013	0.000054	0.0002	0.00012	0.000088	0.0001	0.00013
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	1.4	1.4	1.4	1.3	1.4	1.3	1.5
W_Total_La_mgl	0.000013	0.000011	0.000013	0.000013	0.000014	0.000011	0.000011
W_Total_Li_mgl	0.0087	0.00833	0.00875	0.00915	0.00917	0.00829	0.00873
W_Total_Mg_mgl	23	22.1	22	21.4	22.8	21.5	23.1
W_Total_Mn_mgl	0.0053	0.0056	0.0045	0.0047	0.0048	0.0045	0.0046
W_Total_Mo_mgl	0.00031	0.00038	0.00044	0.00059	0.00031	0.00029	0.00038
W_Total_Na_mgl	8.59	10.3	8.17	7.85	8.38	7.96	8.49
W_Total_Ni_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Total_Pb_mgl	0.00005	0.000072	0.00005	0.00005	0.00005	0.00005	0.00005
W_Total_Rb_mgl	0.002	0.0019	0.0019	0.0019	0.002	0.0019	0.0021
W_Total_S_mgl	10	10	10	10	10	10	10
W_Total_Sb_mgl	0.00015	0.00015	0.00016	0.00016	0.00018	0.00016	0.0002
W_Total_Se_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	1.07	1.2	1.13	1.09	1.19	1.16	1.2
W_Total_Ti_mgl							0.002
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00517	0.00524	0.00499	0.00513	0.00531	0.00507	0.00545
W_Total_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.00043	0.00044	0.00044	0.00045	0.00048	0.00045	0.00048
W_Total_Zn_mgl	0.003	0.003	0.003	0.003	0.003	0.003	0.003
W_Dissolved_Ag_mgl		0.00008					
W_Dissolved_Al_mgl	0.003	0.003	0.003	0.003	0.003	0.003	0.003
W_Dissolved_As_mgl	0.044	0.048	0.05	0.05	0.0508	0.0504	0.0516
W_Dissolved_B_mgl	0.01	0.01	0.01	0.01	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.143	0.141	0.145	0.14	0.14	0.14	0.134
W_Dissolved_Be_mgl	0.000025	0.000019	0.00001	0.000014	0.00001	0.000021	0.000021
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	66.7	60.7	62.1	61.2	62	60.2	71.2
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.00001	0.00001	0.00001	0.000013	0.00001	0.00001	0.00001
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Cs_mgl	0.00013	0.00014	0.00014	0.00016	0.00015	0.00015	0.00015
W_Dissolved_Cu_mgl	0.00073	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Fe_mgl	0.005	0.005	0.005	0.005	0.005	0.005	0.005
W_Dissolved_Ge_mgl	0.00005	0.00011	0.00016	0.000066	0.000051	0.00005	0.000085
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	1.7	1.4	1.4	1.4	1.4	1.3	1.5
W_Dissolved_La_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Li_mgl	0.00877	0.00836	0.00899	0.00888	0.00891	0.00848	0.00836
W_Dissolved_Mg_mgl	23.3	20.6	21.5	21.7	21.7	20.9	22.1
W_Dissolved_Mn_mgl	0.0056	0.0049	0.0047	0.005	0.0046	0.0044	0.0041
W_Dissolved_Mo_mgl	0.0004	0.0003	0.00037	0.0004	0.00038	0.00033	0.00039
W_Dissolved_Na_mgl	8.92	7.6	7.93	7.97	8.09	7.7	8.05
W_Dissolved_Ni_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_P_mgl	0.04	0.04	0.04	0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00052	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00218	0.00198	0.00193	0.00184	0.00192	0.00195	0.00201
W_Dissolved_S_mgl	10	10	10	10	10	10	10
W_Dissolved_Sb_mgl	0.00019	0.00016	0.00016	0.00017	0.00018	0.00015	0.00019
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	1.16	1.06	1.17	1.03	1.13	1.13	1.17
W_Dissolved_Ti_mgl							
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.00467	0.00479	0.00429	0.00501	0.00503	0.00494	0.00488
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.00016	0.00015	0.00017	0.00017	0.00018	0.00018	0.00019
W_Dissolved_Zn_mgl	0.001	0.001	0.001	0.001	0.001	0.001	0.001
W_SumAnions_meql	5.08	5.34	5.13	5.01	5.01	5.03	5.03
W_SumCations_meql	5.68	5.09	5.25	5.23	5.27	5.09	5.77
W_TCN_mgl	0.001	0.001	0.001	0.001	0.002	0.001	0.001
W_TColi_cfumil							
W_TDS_mgl	265	282	248	232	260	251	253
W_TDSalts_gm3							
W_Thard_gCaCO3m3	260	240	240	240	250	240	280
W_TKN_mgl	0.1	0.1	0.1	0.1	0.13	0.1	0.11
W_TN_mgl	0.1	0.1	0.1	0.1	0.13	0.1	0.12
W_TOC_mgl	0.5	0.5					
W_TP_mgl	0.009	0.005	0.0052	0.02	0.007	0.015	0.0088
W_TSi_mgl							
W_TSS_BDC_mgl							
W_TSS_mgl	3	3	3	3	3	3	3
W_Turbidity_NTU	4.3	4	3.4	3.7	2.4	3.2	3.1
W_Volume_ml							
WF_DO_mgl	3.75	4.64	3.52	8.27		7.16	3.34
WF_DO_pct	36.6	45.5	33.8	84.6		70	33.3
WF_EC_mScm	467.6	451.9	434.4	442.8		466.1	457.5
WF_ORP_mv	-2.4	5.8	-25.6	-17.7		-8	-9.3
WF_pH	7.42	7.5	7.51	7.49		7.64	7.49
WF_temp_degC	9.3	9.5	9.7	8.3		10	9.7

Blanks cells infer no available data

Baseline Water Quality Report: Groundwater

HOLED	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_MDD302_3-Oct-2024	W_MDD302_16-Oct-2024	W_MDD302_31-Oct-2024	W_MDD302_14-Nov-2024	W_MDD302_28-Nov-2024
LAB/ONO	24-30758-9	24-32269-10-10	24-33929-9	24-35305-12	24-36747-11
WaterLabID	Analytica	Analytica	Analytica	Analytica	Analytica
WaterSiteID	MDD302	MDD302	MDD302	MDD302	MDD302
LabSampleID	24-30758-9	24-32269-10-10	24-33929-9	24-35305-12	24-36747-11
WaterSampDate	2024-10-03	2024-10-16	2024-10-31	2024-11-14	2024-11-28
SampBy	MB	MB	MB	MB	MB
W_Acidity4_mgl					
W_Acidity5_mgl					
W_Acidity7_mgl					
W_Acidity8_mgl	6.67	5.33	6.67	4.67	16.67
W_Alkalinity_mgl	235	236	234	232	236
W_AmmoniaN_mgl	0.05	0.05	0.05	0.05	0.05
W_An_Bromide_mgl	0.05	0.05	0.05	0.05	0.05
W_An_Chloride_mgl	3.1	2.96	3.18	2.93	2.91
W_An_Fluoride_mgl	0.14	0.14	0.15	0.12	0.18
W_An_Nitrate-N_mgl	0.0085	0.0046	0.0023	0.0039	0.002
W_An_Nitrite-N_mgl	0.001	0.001	0.001	0.001	0.001
W_An_Sulphate_mgl	9.5	9.49	10.1	10.3	10.3
W_BiCarbAlk_mgl					
W_CarbAlk_mgl					
W_Density_gcm3					
W_DOC_mgl					
W_DRP_mgl	0.002	0.002	0.002	0.002	0.002
W_DSi_mgl					
W_EC_mSm					
W_EC_uScm	471	529	481	506	504
W_EColi_cfuml					
W_pH	7.7	7.8	7.7	7.7	7.8
W_pH_1311_hcl					
W_pH_1311_initial					
W_pH_1311_leachate					
W_pH_1311_off					
W_Total_Ag_mgl					
W_Total_Al_mgl	0.0098	0.0068	0.0054	0.0032	0.004
W_Total_As_mgl	0.0588	0.0606	0.0633	0.0662	0.0668
W_Total_B_mgl	0.005	0.005	0.005	0.005	0.0084
W_Total_Ba_mgl	0.138	0.135	0.132	0.132	0.131
W_Total_Be_mgl	0.000029	0.00003	0.000013	0.000031	0.000038
W_Total_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_Ca_mgl	63.3	65.7	64.7	61.5	64.5
W_Total_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002
W_Total_Co_mgl	0.00001	0.000011	0.00001	0.00001	0.00001
W_Total_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total-Cs_mgl	0.00015	0.00015	0.00016	0.00015	0.00015
W_Total_Cu_mgl	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_Fe_mgl	0.33	0.32	0.32	0.31	0.32
W_Total_Ge_mgl	0.000091	0.00013	0.00005	0.00005	0.00005
W_Total_Hg_mgl	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_K_mgl	1.4	1.4	1.4	1.4	1.4
W_Total_La_mgl	0.000016	0.000022	0.000012	0.000013	0.000012
W_Total_Li_mgl	0.00857	0.0088	0.00873	0.00792	0.00832
W_Total_Mg_mgl	21.8	22	21.8	21.2	21.8
W_Total_Mn_mgl	0.0047	0.0053	0.0043	0.0041	0.0045
W_Total_Mo_mgl	0.0004	0.00029	0.00031	0.00039	0.00035
W_Total_Na_mgl	7.62	8.31	8.21	7.74	7.89
W_Total_Ni_mgl	0.0002	0.0002	0.0002	0.0002	0.0002
W_Total_P_mgl	0.04	0.04	0.04	0.04	0.04
W_Total_Pb_mgl	0.00005	0.00005	0.00005	0.00005	0.00005
W_Total_Rb_mgl	0.002	0.002	0.0021	0.0019	0.0019
W_Total_S_mgl	10	10	10	10	10
W_Total_Sb_mgl	0.00018	0.00019	0.00017	0.00018	0.00018
W_Total_Se_mgl	0.001	0.001	0.001	0.001	0.001
W_Total_Sn_mgl	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Sr_mgl	1.15	1.11	1.18	1.12	1.1
W_Total_Ti_mgl					
W_Total_Tl_mgl	0.0001	0.0001	0.0001	0.0001	0.0001
W_Total_U_mgl	0.00511	0.00488	0.00494	0.00504	0.00485
W_Total_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005
W_Total_Y_mgl	0.00048	0.00048	0.0005	0.00047	0.00046
W_Total_Zn_mgl	0.003	0.0035	0.003	0.003	0.003
W_Dissolved_Ag_mgl					
W_Dissolved_Al_mgl	0.003	0.003	0.012	0.0037	0.003
W_Dissolved_As_mgl	0.0518	0.0523	0.0555	0.0584	0.0575
W_Dissolved_B_mgl	0.01	0.01	0.01	0.01	0.01
W_Dissolved_Ba_mgl	0.133	0.134	0.135	0.132	0.128
W_Dissolved_Be_mgl	0.000014	0.000027	0.000025	0.00001	0.000013
W_Dissolved_Bi_mgl	0.0001	0.0001	0.0001	0.0001	0.0001
W_Dissolved_Ca_mgl	64.1	65.2	63.5	63.6	59.5
W_Dissolved_Cd_mgl	0.00002	0.00002	0.00002	0.00002	0.00002
W_Dissolved_Co_mgl	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_Cr_mgl	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved-Cs_mgl	0.00016	0.00015	0.00016	0.00015	0.00015
W_Dissolved_Cu_mgl	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Fe_mgl	0.005	0.005	0.005	0.005	0.005
W_Dissolved_Ge_mgl	0.00007	0.000064	0.000059	0.00005	0.000055
W_Dissolved_Hg_mgl	0.00008	0.00008	0.00008	0.00008	0.00008
W_Dissolved_K_mgl	1.4	1.4	1.4	1.4	1.3
W_Dissolved_La_mgl	0.00001	0.00001	0.000015	0.00001	0.00001
W_Dissolved_Li_mgl	0.00854	0.00816	0.00948	0.00884	0.00776
W_Dissolved_Mg_mgl	21.6	21.6	21.6	21.4	20.9
W_Dissolved_Mn_mgl	0.0047	0.0041	0.004	0.0044	0.004
W_Dissolved_Mo_mgl	0.00037	0.0002	0.0003	0.00032	0.00036
W_Dissolved_Na_mgl	7.86	7.92	7.93	7.85	7.89
W_Dissolved_Ni_mgl	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_P_mgl	0.04	0.04	0.04	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.00005	0.00005	0.00005	0.00005
W_Dissolved_Rb_mgl	0.00194	0.00189	0.00199	0.00201	0.00182
W_Dissolved_S_mgl	10	10	10	10	10
W_Dissolved_Sb_mgl	0.00019	0.0002	0.00021	0.00019	0.00018
W_Dissolved_Se_mgl	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Sn_mgl	0.0002	0.0002	0.0002	0.0002	0.0002
W_Dissolved_Sr_mgl	1.13	1.11	1.2	1.18	1.05
W_Dissolved_Ti_mgl					
W_Dissolved_Tl_mgl	0.00001	0.00001	0.00001	0.00001	0.00001
W_Dissolved_U_mgl	0.00489	0.00486	0.00486	0.00495	0.00461
W_Dissolved_V_mgl	0.0005	0.0005	0.0005	0.0005	0.0005
W_Dissolved_Y_mgl	0.00019	0.00018	0.00019	0.00021	0.00018
W_Dissolved_Zn_mgl	0.001	0.001	0.001	0.001	0.001
W_SumAnions_meql	5.03	5.03	5	4.98	5.06
W_SumCations_meql	5.35	5.41	5.33	5.32	5.07
W_TCN_mgl	0.001	0.001	0.001	0.001	0.001
W_TColi_cfuml					
W_TDS_mgl	262	252	260	260	264
W_TDSalts_gm3					
W_Thard_gCaCO3m3	250	250	250	240	250
W_TKN_mgl	0.1	0.12	0.1	0.1	0.1
W_TN_mgl	0.1	0.12	0.1	0.1	0.1
W_TOC_mgl					
W_TP_mgl	0.0059	0.01	0.0099	0.01	0.0077
W_TSi_mgl					
W_TSS_BDC_mgl					
W_TSS_mgl	3	3	3	3	3
W_Turbidity_NTU	3.2	4.2	3.3	2.9	3.3
W_Volume_ml					
WF_DO_mgl	0	5.45	3.65	4.3	2.82
WF_DO_pct	112.5	53.3	37	42.2	28.3
WF_EC_mScm	421.3	452.2	455.4	434.2	462.7
WF_ORP_mV	21.1	-2.3	18.9	8.7	-9.5
WF_pH	7.53	7.39	7.57	7.5	7.52
WF_temp_degC	8.6	10.3	11	10.3	10.8
WF_turbidity_NTU		-0.21			

Blanks cells infer no available data

Baseline Water Quality Report: Groundwater	
HOLEID	MGL WaterSamples
SAMPLEID	WP22-11185.002
LABJOBNO	BOGP
WaterLabID	SGS
WaterSiteID	MRC002
LabSampleID	
WaterSampDate	2022-10-25
SampBy	HM
W_Acidity4_mgl	
W_Acidity5_mgl	
W_Acidity7_mgl	
W_Acidity8_mgl	
W_Alkalinity_mgl	110
W_AmmoniaN_mgl	
W_An_Bromide_mgl	
W_An_Chloride_mgl	3.5
W_An_Fluoride_mgl	
W_An_Nitrate-N_mgl	
W_An_Nitrite-N_mgl	
W_An_Sulphate_mgl	5.4
W_BiCarbAlk_mgl	130
W_CarbAlk_mgl	5
W_Density_gcm3	0.998
W_DOC_mgl	
W_DRP_mgl	
W_DSI_mgl	
W_EC_mSm	
W_EC_uScm	250
W_EColi_cfuml	
W_pH	8
W_pH_1311_hcl	
W_pH_1311_initial	
W_pH_1311_leachate	
W_pH_1311_off	
W_Total_Ag_mgl	0.001
W_Total_Al_mgl	0.545
W_Total_As_mgl	0.021
W_Total_B_mgl	
W_Total_Ba_mgl	0.308
W_Total_Be_mgl	
W_Total_Bi_mgl	0.005
W_Total_Ca_mgl	14.4
W_Total_Cd_mgl	0.001
W_Total_Co_mgl	0.002
W_Total_Cr_mgl	0.002
W_Total-Cs_mgl	
W_Total_Cu_mgl	0.004
W_Total_Fe_mgl	2
W_Total_Ge_mgl	
W_Total_Hg_mgl	0.001
W_Total_K_mgl	2.1
W_Total_La_mgl	
W_Total_Li_mgl	0.019
W_Total_Mg_mgl	6.7
W_Total_Mn_mgl	0.033
W_Total_Mo_mgl	0.001
W_Total_Na_mgl	27.9
W_Total_Ni_mgl	0.001
W_Total_P_mgl	0.07
W_Total_Pb_mgl	0.001
W_Total_Rb_mgl	
W_Total_S_mgl	
W_Total_Sb_mgl	
W_Total_Se_mgl	
W_Total_Sn_mgl	
W_Total_Sr_mgl	3.66
W_Total_Ti_mgl	0.016
W_Total_Tl_mgl	0.001
W_Total_U_mgl	
W_Total_V_mgl	0.001
W_Total_Y_mgl	
W_Total_Zn_mgl	0.135
W_Dissolved_Ag_mgl	0.0005
W_Dissolved_Al_mgl	0.006
W_Dissolved_As_mgl	0.011
W_Dissolved_B_mgl	
W_Dissolved_Ba_mgl	0.26
W_Dissolved_Be_mgl	
W_Dissolved_Bi_mgl	0.001
W_Dissolved_Ca_mgl	14.8
W_Dissolved_Cd_mgl	0.0002
W_Dissolved_Co_mgl	0.0005
W_Dissolved_Cr_mgl	0.001
W_Dissolved-Cs_mgl	
W_Dissolved_Cu_mgl	0.002
W_Dissolved_Fe_mgl	0.09
W_Dissolved_Ge_mgl	
W_Dissolved_Hg_mgl	0.0005
W_Dissolved_K_mgl	1.88
W_Dissolved_La_mgl	
W_Dissolved_Li_mgl	0.017
W_Dissolved_Mg_mgl	6.61
W_Dissolved_Mn_mgl	0.0034
W_Dissolved_Mo_mgl	0.0009
W_Dissolved_Na_mgl	27
W_Dissolved_Ni_mgl	0.0005
W_Dissolved_P_mgl	0.01
W_Dissolved_Pb_mgl	0.0005
W_Dissolved_Rb_mgl	
W_Dissolved_S_mgl	
W_Dissolved_Sb_mgl	
W_Dissolved_Se_mgl	
W_Dissolved_Sn_mgl	
W_Dissolved_Sr_mgl	3.57
W_Dissolved_Ti_mgl	0.0005
W_Dissolved_Tl_mgl	0.0005
W_Dissolved_U_mgl	
W_Dissolved_V_mgl	0.0005
W_Dissolved_Y_mgl	
W_Dissolved_Zn_mgl	0.094
W_SumAnions_meql	
W_SumCations_meql	
W_TCN_mgl	
W_TColi_cfuml	
W_TDS_mgl	170
W_TDSalts_gm3	170
W_Thard_gCaCO3m3	
W_TKN_mgl	
W_TN_mgl	
W_TOC_mgl	
W_TP_mgl	
W_TSi_mgl	
W_TSS_BDC_mgl	
W_TSS_mgl	
W_Turbidity_NTU	
W_Volume_ml	
WF_DO_mgl	
WF_DO_pct	
WF_EC_mScm	
WF_ORP_mV	
WF_pH	
WF_temp_degC	
WF_turbidity_NTU	
Blanks cells infer no available data	

Baseline Water Quality Report: Groundwater

HOLEID	MGL_WaterSamples	MGL_WaterSamples
SAMPLEID	W_Base_dis_13-Jun-2024	W_Base_31-Oct-2024
LABJOBNO	24-19336	
WaterLabID	Analytica	Analytica
WaterSiteID	Base_dis	Base
LabSampleID	24-19336-12	24-33929-11
WaterSampDate	2024-06-13	2024-10-31
SampBy	MB	MB
W_Acidity4_mgl		
W_Acidity5_mgl		
W_Acidity7_mgl		
W_Acidity8_mgl	9	6.67
W_Alkalinity_mgl	81.4	36
W_AmmoniaN_mgl	0.03	0.005
W_An_Bromide_mgl	0.05	0.05
W_An_Chloride_mgl	2.19	2.45
W_An_Fluoride_mgl	0.1	0.054
W_An_Nitrate-N_mgl	0.555	0.508
W_An_Nitrite-N_mgl	0.0012	0.001
W_An_Sulphate_mgl	3.99	4.1
W_BiCarbAlk_mgl		
W_CarbAlk_mgl		
W_Density_gcm3		
W_DOC_mgl	0.5	
W_DRP_mgl	0.005	0.005
W_DSI_mgl		
W_EC_mSm		
W_EC_uScm	149	106
W_EColi_cfuml		
W_pH	8	6.8
W_pH_1311_hcl		
W_pH_1311_initial		
W_pH_1311_leachate		
W_pH_1311_off		
W_Total_Ag_mgl		
W_Total_Al_mgl	22.9	0.003
W_Total_As_mgl	3.65	0.0005
W_Total_B_mgl	0.019	0.005
W_Total_Ba_mgl	0.324	0.008
W_Total_Be_mgl	0.0022	0.00001
W_Total_Bi_mgl	0.00046	0.0001
W_Total_Ca_mgl	52.1	11.3
W_Total_Cd_mgl	0.00012	0.000048
W_Total_Co_mgl	0.768	0.000036
W_Total_Cr_mgl	0.017	0.00023
W_Total-Cs_mgl	0.00226	0.00001
W_Total_Cu_mgl	1.95	0.151
W_Total_Fe_mgl	62.5	0.005
W_Total_Ge_mgl	0.0026	0.00005
W_Total_Hg_mgl	0.0001	0.0001
W_Total_K_mgl	16.2	0.89
W_Total_La_mgl	0.041	0.000012
W_Total_Li_mgl	0.0304	0.00033
W_Total_Mg_mgl	18.7	2.64
W_Total_Mn_mgl	1.12	0.0005
W_Total_Mo_mgl	0.0021	0.0002
W_Total_Na_mgl	12.2	5.34
W_Total_Ni_mgl	0.027	0.0017
W_Total_P_mgl	1.2	0.04
W_Total_Pb_mgl	0.0402	0.00807
W_Total_Rb_mgl	0.0559	0.00005
W_Total_S_mgl	10	10
W_Total_Sb_mgl	0.0011	0.0001
W_Total_Se_mgl	0.001	0.001
W_Total_Sn_mgl	0.08	0.0005
W_Total_Sr_mgl	0.788	0.112
W_Total_Ti_mgl		
W_Total_Tl_mgl	0.00033	0.0001
W_Total_U_mgl	0.00566	0.00003
W_Total_V_mgl	0.044	0.0005
W_Total_Y_mgl	0.0167	0.00005
W_Total_Zn_mgl	0.197	1
W_Dissolved_Ag_mgl		
W_Dissolved_Al_mgl	0.089	0.003
W_Dissolved_As_mgl	0.234	0.00083
W_Dissolved_B_mgl	0.013	0.01
W_Dissolved_Ba_mgl	0.0072	0.0082
W_Dissolved_Be_mgl	0.00001	0.00001
W_Dissolved_Bi_mgl	0.0001	0.0001
W_Dissolved_Ca_mgl	15.3	11
W_Dissolved_Cd_mgl	0.00002	0.0001
W_Dissolved_Co_mgl	0.0242	0.00003
W_Dissolved_Cr_mgl	0.00033	0.0002
W_Dissolved-Cs_mgl	0.000041	0.00001
W_Dissolved_Cu_mgl	0.0064	0.154
W_Dissolved_Fe_mgl	0.005	0.005
W_Dissolved_Ge_mgl	0.00005	0.00005
W_Dissolved_Hg_mgl	0.00008	0.00008
W_Dissolved_K_mgl	4.6	0.88
W_Dissolved_La_mgl	0.00001	0.000014
W_Dissolved_Li_mgl	0.00704	0.0004
W_Dissolved_Mg_mgl	4.05	2.57
W_Dissolved_Mn_mgl	0.02	0.0005
W_Dissolved_Mo_mgl	0.0002	0.0002
W_Dissolved_Na_mgl	6.97	5.07
W_Dissolved_Ni_mgl	0.00029	0.0013
W_Dissolved_P_mgl	0.04	0.04
W_Dissolved_Pb_mgl	0.00005	0.018
W_Dissolved_Rb_mgl	0.00473	0.000053
W_Dissolved_S_mgl	10	10
W_Dissolved_Sb_mgl	0.0013	0.0001
W_Dissolved_Se_mgl	0.0005	0.0005
W_Dissolved_Sn_mgl	0.00022	0.0002
W_Dissolved_Sr_mgl	0.257	0.109
W_Dissolved_Ti_mgl		
W_Dissolved_Tl_mgl	0.00001	0.00001
W_Dissolved_U_mgl	0.00061	0.00003
W_Dissolved_V_mgl	0.002	0.0005
W_Dissolved_Y_mgl	0.000012	0.000011
W_Dissolved_Zn_mgl	0.001	0.468
W_SumAnions_meql	1.84	0.91
W_SumCations_meql	1.52	1.02
W_TCN_mgl	0.001	0.001
W_TColi_cfuml		
W_TDS_mgl	83	71
W_TDSalts_gm3		
W_Thard_gCaCO3m3	210	39
W_TKN_mgl	0.75	0.1
W_TN_mgl	1.3	0.51
W_TOC_mgl	2.2	
W_TP_mgl	2.75	0.005
W_TSI_mgl		
W_TSS_BDC_mgl		
W_TSS_mgl	2196	3
W_Turbidity_NTU	5469	0.9
W_Volume_ml		
WF_DO_mgl	10.92	
WF_DO_pct	91.9	
WF_EC_mScm	126.2	
WF_ORP_mV	37	
WF_pH	8.85	
WF_temp_degC	6.4	
WF_turbidity_NTU		
Blanks cells infer no available data		

Baseline Water Quality Report: Groundwater	
HOLEID	MGL_WaterSamples
SAMPLEID	WP22-11185.001
PROJECTCODE	BOGP
WaterLabID	SGS
WaterSiteID	Office/Base supply
LabSampleID	
WaterSampDate	2022-10-25
WaterSampTime	
SampBy	HM
W_Acidity4_mgl	
W_Acidity5_mgl	
W_Acidity7_mgl	
W_Acidity8_mgl	
W_Alkalinity_mgl	150
W_AmmoniaN_mgl	
W_An_Bromide_mgl	
W_An_Chloride_mgl	6
W_An_Fluoride_mgl	
W_An_Nitrate-N_mgl	
W_An_Nitrite-N_mgl	
W_An_Sulphate_mgl	24
W_BiCarbAlk_mgl	180
W_CarbAlk_mgl	5
W_Density_gcm3	0.998
W_DOC_mgl	
W_DRP_mgl	
W_DSI_mgl	
W_EC_mSm	
W_EC_uScm	360
W_EColi_cfuml	
W_pH	8
W_pH_1311_hcl	
W_pH_1311_initial	
W_pH_1311_leachate	
W_pH_1311_off	
W_Total_Ag_mgl	0.001
W_Total_Al_mgl	0.007
W_Total_As_mgl	0.002
W_Total_B_mgl	
W_Total_Ba_mgl	0.016
W_Total_Be_mgl	
W_Total_Bi_mgl	0.005
W_Total_Ca_mgl	41.9
W_Total_Cd_mgl	0.001
W_Total_Co_mgl	0.002
W_Total_Cr_mgl	0.002
W_Total_Cs_mgl	
W_Total_Cu_mgl	0.004
W_Total_Fe_mgl	0.1
W_Total_Ge_mgl	
W_Total_Hg_mgl	0.001
W_Total_K_mgl	1.3
W_Total_La_mgl	
W_Total_Li_mgl	0.003
W_Total_Mg_mgl	11.4
W_Total_Mn_mgl	0.001
W_Total_Mo_mgl	0.001
W_Total_Na_mgl	16.3
W_Total_Ni_mgl	0.001
W_Total_P_mgl	0.025
W_Total_Pb_mgl	0.007
W_Total_Rb_mgl	
W_Total_S_mgl	
W_Total_Sb_mgl	
W_Total_Se_mgl	
W_Total_Sn_mgl	
W_Total_Sr_mgl	0.492
W_Total_Ti_mgl	0.001
W_Total_Tl_mgl	0.001
W_Total_U_mgl	
W_Total_V_mgl	0.001
W_Total_Y_mgl	
W_Total_Zn_mgl	0.06
W_Dissolved_Ag_mgl	0.0005
W_Dissolved_Al_mgl	0.002
W_Dissolved_As_mgl	0.001
W_Dissolved_B_mgl	
W_Dissolved_Ba_mgl	0.01
W_Dissolved_Be_mgl	
W_Dissolved_Bi_mgl	0.001
W_Dissolved_Ca_mgl	44.3
W_Dissolved_Cd_mgl	0.0002
W_Dissolved_Co_mgl	0.0005
W_Dissolved_Cr_mgl	0.001
W_Dissolved_Cs_mgl	
W_Dissolved_Cu_mgl	0.004
W_Dissolved_Fe_mgl	0.01
W_Dissolved_Ge_mgl	
W_Dissolved_Hg_mgl	0.0005
W_Dissolved_K_mgl	1.36
W_Dissolved_La_mgl	
W_Dissolved_Li_mgl	0.002
W_Dissolved_Mg_mgl	12.1
W_Dissolved_Mn_mgl	0.0005
W_Dissolved_Mo_mgl	0.0005
W_Dissolved_Na_mgl	16.7
W_Dissolved_Ni_mgl	0.0007
W_Dissolved_P_mgl	0.01
W_Dissolved_Pb_mgl	0.0005
W_Dissolved_Rb_mgl	
W_Dissolved_S_mgl	
W_Dissolved_Sb_mgl	
W_Dissolved_Se_mgl	
W_Dissolved_Sn_mgl	
W_Dissolved_Sr_mgl	0.443
W_Dissolved_Ti_mgl	0.0005
W_Dissolved_Tl_mgl	0.0005
W_Dissolved_U_mgl	
W_Dissolved_V_mgl	0.0005
W_Dissolved_Y_mgl	
W_Dissolved_Zn_mgl	0.057
W_SumAnions_meql	
W_SumCations_meql	
W_TCN_mgl	
W_TColi_cfuml	
W_TDS_mgl	200
W_TDSalts_gm3	240
W_Thard_gCaCO3m3	
W_TKN_mgl	
W_TN_mgl	
W_TOC_mgl	
W_TP_mgl	
W_TSi_mgl	
W_TSS_BDC_mgl	
W_TSS_mgl	
W_Turbidity_NTU	
W_Volume_ml	
WF_DO_mgl	
WF_DO_pct	
WF_EC_mScm	
WF_ORP_mV	
WF_pH	
WF_temp_degC	
WF_turbidity_NTU	
Blanks cells infer no available data	

APPENDIX E QUALITY ASSURANCE AND QUALITY CONTROL

Parameter	RS01 (July 2023)			RS01 (October 2023)			RS01 (Feb 2024)			RS01 (Mar 2024)			RS01 (April 2024)			RS01 (May 2024)		
	Eurofins	Hill	RPD	Eurofins	Hill	RPD	Eurofins	Hill	RPD	Eurofins	Hill	RPD	Eurofins	Hill	RPD	Eurofins	Hill	RPD
Acidity4 (mg CaCO ₃ /L)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Acidity7 (mg CaCO ₃ /L)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
Acidity8 (mg CaCO ₃ /L)	2.00	-	-	1.00	-	-	4.00	-	-	8.00	-	-	7.00	-	-	4.00	-	-
Alkalinity (mg CaCO ₃ /L)	71.0	67.0	5.80	81.0	82.0	1.23	124	129	3.95	104	109	4.69	93.0	94.0	1.07	86	88	2.30
Ammonia-N	0.010	0.010	0.00	0.010	0.010	0.00	0.050	0.010	133	0.030	0.010	100	0.010	0.010	0.00	0.010	0.01	0.00
Bromide	0.020	0.050	85.7	0.020	0.050	85.7	0.020	0.050	85.7	0.020	0.050	85.7	0.020	0.050	85.7	0.020	0.05	85.7
Chloride	2.18	1.90	13.7	1.42	1.20	16.8	1.05	1.00	4.88	1.15	1.30	12.2	3.90	3.60	8.00	4.18	3.70	12.2
Fluoride	0.100	0.100	0.000	0.100	0.100	0.000	0.120	0.110	8.70	0.090	0.100	10.5	0.100	0.090	10.5	0.110	0.100	9.52
Nitrate-N	0.05	0.007	151	0.130	0.002	194	0.070	0.002	189	0.01	0.002	133	0.01	0.002	133	0.010	0.002	133.3
Nitrite-N	0.01	0.002	133	0.010	0.002	133	0.010	0.002	133	0.01	0.002	133	0.01	0.002	133	0.010	0.002	133.3
Sulfate	4.33	4.30	0.695	2.64	2.80	5.88	0.700	0.700	-	1.14	1.40	20.5	7.92	7.00	12.3	5.71	4.80	17.3
DOC	3.50	3.50	0.00	3.40	4.40	25.6	3.40	4.00	16.2	2.30	1.20	62.9	2.20	0.500	126	1.70	1.00	51.9
DSi	7.85	3.80	69.5	7.37	3.70	66.3	9.55	4.70	68.1	9.44	4.40	72.8	8.70	4.60	61.7	9.92	4.50	75.2
EC mSm	14.9	14.5	2.72	17.1	16.9	1.18	24.9	24.8	0.402	21.4	21.1	1.41	21.4	20.7	3.33	19.5	19.1	2.07
pH	7.60	7.90	3.87	7.90	8.10	2.50	7.90	7.90	0.00	7.70	8.00	3.82	7.60	8.00	5.13	7.60	8.00	5.13
Ag (total)	0.001	0.00011	160	0.001	0.00011	160	-	0.00011	-	0.001	0.00011	160	0.001	0.00011	160	0.001	0.00011	160.4
Al (total)	0.042	0.027	43.5	0.084	0.039	73.2	-	0.012	-	0.01	0.0067	39.5	0.014	0.0044	104	0.010	0.0067	39.5
As (total)	0.028	0.028	-	0.046	0.039	16.5	-	0.049	-	0.031	0.029	6.67	0.026	0.027	3.77	0.029	0.028	3.51
B (total)	0.05	0.0053	162	0.05	0.0053	162	-	0.0053	-	0.050	0.0053	162	0.050	0.0053	162	0.050	0.0055	160
Ba (total)	0.01	0.0097	3.0	0.013	0.0121	7.2	-	0.015	-	0.011	0.011	0.00	0.014	0.0134	4.38	0.015	0.0138	8.33
Be (total)	0.005	0.00011	191	0.005	0.00011	191	-	0.00011	-	0.005	0.00011	191	0.005	0.00011	191	0.005	0.00011	191
Bi (total)	0.005	0.00011	191	0.005	0.00011	191	-	0.00011	-	0.005	0.00011	191	0.005	0.00011	191	0.005	0.00011	191
Ca (total)	16.7	19.5	15.5	19.3	24.0	21.7	-	37.0	-	22.5	31.0	31.8	25.3	27.0	6.50	21.2	26.0	20.3
Cd (total)	0.001	0.000053	180	0.001	0.000053	180	-	0.0001	-	0.001	0.000053	180	0.001	0.000053	180	0.001	0.000053	180
Co (total)	0.002	0.00021	162	0.002	0.00021	162	-	0.0002	-	0.002	0.00021	162	0.002	0.00021	162	0.002	0.00021	162
Cr (total)	0.001	0.00053	61.4	0.001	0.00053	61.4	-	0.0005	-	0.001	0.00053	61.4	0.001	0.00053	61.4	0.001	0.00053	61.4
Cu (total)	0.003	0.00075	120	0.002	0.00053	116	-	0.0005	-	0.002	0.00053	116	0.002	0.00053	116	0.002	0.00053	116
Fe (total)	0.400	0.410	2.47	0.700	0.520	29.5	-	0.560	-	0.400	0.370	7.79	0.200	0.210	4.88	0.300	0.250	18.2
Hg (total)	0.001	0.00008	170	0.001	0.00008	170	-	0.0001	-	0.001	0.00008	170	0.001	0.00008	170	0.001	0.00008	170
K (total)	0.600	0.900	40.0	0.600	0.770	24.8	-	0.560	-	0.400	0.280	35.3	1.60	1.58	1.26	1.20	1.53	24.2
Li (total)	0.001	0.00168	50.7	0.002	0.0021	4.9	-	0.0026	-	0.002	0.0023	14.0	0.002	0.0025	22.2	0.002	0.0026	26.1
Mg (total)	3.20	3.60	11.8	3.70	4.20	12.7	5.40	5.90	8.85	4.40	5.40	20.4	5.20	4.40	16.7	4.00	4.70	16.1
Mn (total)	0.042	0.048	13.3	0.071	0.053	29.0	-	0.118	-	0.077	0.068	12.4	0.037	0.035	5.56	0.040	0.045	11.8
Mo (total)	0.001	0.00021	131	0.001	0.00021	131	-	0.000	-	0.001	0.00021	131	0.001	0.00021	131	0.001	0.00021	131
Na (total)	4.00	4.70	16.1	38.6	5.10	153.3	-	6.500	-	5.10	6.70	27.1	6.40	6.30	1.57	4.70	6.00	24.3
Ni (total)	0.001	0.00053	61.4	0.001	0.00053	61.4	-	0.001	-	0.001	0.00053	61.4	0.001	0.00053	61.4	0.001	0.00053	61.4
P (total)	-	-	-	-	0.008	-	-	0.00	-	-	-	-	-	-	-	-	-	-
Pb (total)	0.001	0.00011	160	0.001	0.00011	160	-	0.0001	-	0.001	0.00011	160	0.001	0.00011	160	0.001	0.00011	160
Sb (total)	0.002	0.00021	162	0.002	0.00021	162	-	0.0002	-	0.002	0.00021	162	0.002	0.00021	162	0.002	0.00021	162
Se (total)	0.005	0.0011	128	0.005	0.0011	128	-	0.0011	-	0.005	0.0011	128	0.005	0.0011	128	0.005	0.0011	128
Sn (total)	0.001	0.00053	61.4	0.001	0.00053	61.4	-	0.0005	-	0.001	0.00053	61.4	0.001	0.00053	61.4	0.001	0.00053	61.4
Sr (total)	0.216	0.250	14.6	0.276	0.31	11.6	-	0.520	-	0.345	0.410	17.2	0.402	0.410	1.97	0.348	0.390	11.4
Ti (total)	0.002	0.011	138	0.003	0.011	114	-	0.0110	-	0.001	0.011	167	0.001	0.011	167	0.001	0.011	167
Tl (total)	0.001	0.000053	180	0.001	0.000053	180	-	0.00005	-	0.001	0.000053	180	0.001	0.000053	180	0.001	0.000053	180
U (total)	0.001	0.00009	167	0.001	0.000117	158	-	0.00012	-	0.001	0.000082	170	0.001	0.000068	175	0.001	0.000057	178
V (total)	0.001	-	-	0.001	-	-	-	-	-	0.001	-	-	0.001	0.000	200	0.001	0.00000	200
Zn (total)	0.005	0.0011	128	0.005	0.0011	128	-	0.0011	-	0.005	0.0011	128	0.005	0.0011	128	0.005	0.0011	128
Ag (dissolved)	0.0005	0.0001	133	0.0005	0.0001	133	0.0005	0.0001	133	0.0005	0.0001	133	0.0005	0.0001	133	0.0005	0.0001	133
Al (dissolved)	0.005	0.003	50.0	0.002	0.003	40.0	0.002	0.003	40.0	0.002	0.003	40.0	0.002	0.003	40.0	0.002	0.003	40.0
As (dissolved)	0.011	0.0116	5.3	0.015	0.021	33.3	0.024	0.024	0.00	0.018	0.0168	6.90	0.020	0.0183	8.88	0.019	0.0187	1.59
B (dissolved)	0.03	0.005	143	0.03	0.005	143	0.03	0.0050	143	0.030	0.005	143	0.030	0.005	143	0.030	0.006	133
Ba (dissolved)	0.007	0.009	25.0	0.011	0.011	0.0	0.013	0.014	7.41	0.010	0.011	9.52	0.013	0.013	0.00	0.011	0.013	16.7
Be (dissolved)	0.001	0.0001	164	0.001	0.0001	164	0.001	0.0001	164	0.001	0.0001	164	0.001	0.0001	164	0.001	0.0001	164
Bi (dissolved)	0.001	-	-	0.001	-	-	0.001	-	-	0.001	-	-	0.001	0.00	200	0.001	0	200
Ca (dissolved)	19.5	20.0	2.53	22.1	24	8.2	35.3	39.0	10.0	29.1	32.0	9.49	33.3	31.0	7.15	22.2	28.0	23.1
Cd (dissolved)	0.0002	0.00005	120	0.0002	0.00005	120	0.0002	0.00005	120	0.0002	0.00005	120	0.0002	0.00005	120	0.0002	0.00005	120
Co (dissolved)	0.0005	0.0002	85.7	0.0005	0.0002	85.7	0.0005	0.0002	85.7	0.0005	0.0002	85.7	0.0005	0.0002	85.7	0.0005	0.0002	85.7
Cr (dissolved)	0.001	0.0005	66.7	0.001	0.0005	66.7	0.001	0.0005	66.7	0.001	0.0005	66.7	0.001	0.0005	66.7	0.001	0.0005	66.7
Cu (dissolved)	0.0006	0.0006	-	0.0005	0.0005	0	0.0005	0.0005	0.00	0.0005	0.0005	0.00	0.0015	0.0005	100	0.0005	0.0005	0
Fe (dissolved)	0.070	0.060	15.4	0.010	0.070	150	0.090	0.060	40.0	0.110	0.080	31.6	0.060	0.060	0.00	0.070	0.060	15
Hg (dissolved)	0.0005	0.00008	145	0.0005	0.00008	145	0.0005	0.00008	145	0.0005	0.00008	145	0.0005	0.00008	145	0.0005	0.00008	145
K (dissolved)	1.13	0.900	22.7	0.740	0.800	7.79	0.570	0.570	0.00	0.270	0.280	3.64	2.00	1.63	20.4	1.59	1.63	2.5
Li (dissolved)	0.003	0.0018	50.0	0.002	0.0021	4.88	0.002	0.0028	33.3	0.001	0.0024	82.4	0.004	0.0028	35.3	0.003	0.0026	14.3
Mg (dissolved)	4.80	4.00	18.2	1.23	4.40	113	6.46	7.00	8.02	5.73	5.90	2.92	5.85	5.20	11.8	4.86	4.90	0.820
Mn (dissolved)	0.0067	0.0034	65.3	0.0005	0.0055	167	0.0613	0.082	28.9	0.0451	0.048	6.23	0.0201	0.0171	16.1	0.0188	0.0169	10.6
Mo (dissolved)	0.0005	0.0002	85.7	0.0005	0.0002	85.7	0.0005	0.0002	85.7	0.0005	0.0002	85.7	0.0005	0.0002	85.7	0.0005	0.0002	85.7
Na (dissolved)	6.48	4.90	27.8	122	5.50	183	7.08	6.60	7.02	6.70	6.90	2.94	8.01	6.40	22			

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MINE WASTE MANAGEMENT

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