REPORT

EPL 21266 – BI-ANNUAL MONITORING REPORT DECEMBER 2023 – MAY 2024

S2-FGJV-ENV-REP-0122

Rev A

JUNE 2024

ABSTRACT

This document provides a summary of surface- and ground-water quality and associated information for monitoring conducted as part the Snowy 2.0 project, across monitoring locations pertaining to Environmental Protection Licence (EPL) 21266.

Revision Record

A	23/06/2024	For issue to EPA	C. Pedraza		
Rev.	**Date**	**Reason for Issue**	**Responsible**	**Accountable**	**Endorsed**

Document Verification

RACIE Record

R esponsible:	Name: Carolina Pedraza Job Title: Environmental Approvals Advisor Signed: Date:
A ccountable:	Name: Job Title: Signed: Date:
C onsulted:	See distribution list on Page 3.
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1. INTRODUCTION

Snowy 2.0 was declared State Significant Infrastructure and Critical State Significant Infrastructure by the NSW Minister for Planning under the provisions of the NSW Environmental Planning and Assessment Act 1979 and is defined in Clause 9 of Schedule 5 of the State Environmental Planning Policy (State and Regional Development) 2011.

An Infrastructure Approval No. SSI 9208 based on the Environmental Impact Statement (EIS) submitted for the Snowy 2.0 Exploratory Works was received on February 7, 2019.

An Environment Protection Licence No. 21266 (EPL - 21266) under Section 55 of the Protection of the Environment Operations Act 1997 (NSW) was issued to Snowy Hydro Ltd (Snowy Hydro) on May 9, 2019, by the New South Wales Environment Protection Authority (NSW EPA) for land based extractive activities at Lobs Hole and Talbingo Reservoir in Kosciuszko National Park.

Webuild, Clough, and Lane have formed the Future Generation Joint Venture (Future Generation) and have been engaged by Snowy Hydro to deliver both Stage 2 of Exploratory Works and Snowy 2.0 Main Works. As required by EPL - 21266 Future Generation have undertaken a monthly monitoring program to assess the influence of the Snowy 2.0 Main Works project on groundwater and receiving surface water quality across the Project, specifically the work sites of Talbingo, Lobs Hole, Tantangara, Marica and Rock Forest.

This report has been prepared by Carolina Pedraza, Environmental Approvals Advisor for Future Generation. Carolina holds a Bachelor of Environmental Engineer, and has over 5 years' experience in environmental assessment, management and reporting across various construction and infrastructure projects.

This report has been reviewed by Dr Ellen Porter, Environmental Manager for Future Generation. Ellen holds a PhD in Organic Geochemistry, is a Certified Environmental Practitioner (no. 1080), and has 12 years' experience in the field of environmental assessment, monitoring and reporting. Therefore, this report has been prepared by and reviewed by suitably qualified and experienced persons fulfilling the requirement of condition R4.3 of EPL 21266.

1.1. Purpose

The purpose of this report is to provide a six (6) monthly update of surface water and groundwater monitoring undertaken for the Snowy 2.0 project in accordance with Condition R4.2 of EPL 21266.

Section 2, Condition P1.2 of EPL 21266 identifies the points required for monitoring, these points are presented on **Figures 1.1** – **1.5** of **Appendix A** and listed in Table 1-1 below.

Table 1-1: EPL21266 Location Names, Co-Ordinates, and Description

Name	X	Y	Location	Sample Type	Description
EPL1	148.413	-35.792	Lobs Hole	Groundwater	Wallace Creek Bridge
EPL2	148.413	-35.792	Lobs Hole	Groundwater	Wallace Creek Bridge
EPL4	148.415	-35.788	Lobs Hole	Groundwater	Lobs Hole Portal Access
EPL5	148.416	-35.785	Lobs Hole	Surface Water	Yarrangobilly River, upstream of the exploratory tunnel and construction pad
EPL6	148.412	-35.793	Lobs Hole	Surface Water	Wallaces Creek, upstream of the confluence of Yarrangobilly River and Wallaces Creek
EPL8	148.401	-35.789	Lobs Hole	Surface Water	Yarrangobilly River, downstream of Lick Hole Gully
EPL9	148.387	-35.782	Lobs Hole	Surface Water	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir
EPL10	148.38	-35.773	Lobs Hole	Reservoir Water	Talbingo Reservoir, upstream of Lobs Hole STP/PWTP diffuser outlet and water intake point
EPL11	148.375	-35.771	Lobs Hole	Reservoir Water	Talbingo Reservoir, downstream of Lobs Hole STP/PWTP diffuser outlet
EPL12	148.414	-35.789	Lobs Hole	Surface Water	Yarrangobilly River, immediately downstream of portal pad
EPL14	148.405	-35.794	Lobs Hole	Surface Water	Yarrangobilly River, downstream of road construction areas
EPL15	148.404	-35.792	Lobs Hole	Surface Water	Yarrangobilly River, downstream of road construction areas
EPL16	148.393	-35.785	Lobs Hole	Surface Water	Yarrangobilly River, downstream of road construction areas
EPL24	148.389	-35.78	Lobs Hole	Surface Water	Yarrangobilly River tributary (Watercourse 2), directly downstream of road
EPL25	148.415	-35.788	Lobs Hole	Groundwater	Portal Access
EPL26	148.488	-35.794	Marica	Surface Water	Eucumbene River, downstream of Marica Road
EPL27	148.488	-35.794	Marica	Surface Water	Eucumbene River, upstream of Marica Road

EPL28	148.654	-35.748	Tantangara	Reservoir Water	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River. Variable location dependent on tide and reservoir levels.
EPL29	148.661	-35.793	Tantangara	Reservoir Water	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River
EPL30	148.652	-35.801	Tantangara	Surface Water	Kellys Plain Creek, downstream of accommodation camp and laydown areas
EPL31	148.648	-35.806	Tantangara	Surface Water	Kellys Plain Creek, upstream of accommodation camp and laydown areas
EPL32	148.659	-35.79	Tantangara	Reservoir Water	Tantangara Reservoir, Tantangara Intake. Downstream of construction works
EPL33	148.664	-35.795	Tantangara	Surface Water	Murrumbidgee River, downstream of Tantangara reservoir outlet
EPL34	148.633	-35.865	Tantangara	Surface Water	Nungar Creek, upstream of Tantangara Road
EPL35	148.633	-35.865	Tantangara	Surface Water	Nungar Creek, downstream of Tantangara Road
EPL36	148.668	-35.952	Rock Forest	Surface Water	Camerons Creek, upstream of works in Rock Forest
EPL37	148.675	-35.948	Rock Forest	Surface Water	Camerons Creek, downstream of works in Rock Forest
EPL38	148.653	-35.769	Tantangara	Reservoir Water	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities
EPL39	148.639	-35.761	Tantangara	Reservoir Water	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works
EPL40	148.623	-35.755	Tantangara	Reservoir Water	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works
EPL41	148.381	-35.772	Talbingo	Reservoir Water	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir
EPL42*	148.375	-35.772	Talbingo	Discharge Point	Diffuser outlet discharging into Talbingo Reservoir from Lobs Hole STP/PWTP
EPL43*	148.381	-35.772	Talbingo	Volume Outflow	Lobs Hole STP/PWTP Final Volume Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.
EPL44*	148.417	-35.787	Lobs Hole	Volume Inflow – PWTP	Lobs Hole (MAT Portal) PWTP Inflow Volume Monitoring Point
EPL45*	148.393	-35.783	Talbingo	Volume Inflow – Ex-Camp STP	Lobs Hole Ex-Camp STP Inflow Volume Monitoring Point

EPL46*	148.657	-35.795	Tantangara	Discharge Point	Diffuser outlet discharging into Tantangara Reservoir from Tantangara STP / PWTP
EPL47	148.392	-35.783	Talbingo	Volume Inflow – Main Camp STP	Talbingo Main Camp STP Inflow Monitoring Point
EPL48	148.656	-35.802	Tantangara	Volume Inflow STP	Tantangara STP Inflow Volume Monitoring Point
EPL49	148.65	-35.791	Tantangara	Volume Inflow PWTP	Tantangara PWTP Inflow Volume Monitoring Point
EPL50	148.651	-35.791	Tantangara	Volume Outflow	Tantangara STP/PWTP final effluent quality and volume monitoring point
EPL51	148.66	-35.794	Tantangara	Surface Water	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet.
EPL52^	148.338	-35.778	Lobs Hole	Surface Water	Talbingo Reservoir, upstream of GF01 emplacement area
EPL53^	148.391	-35.774	Lobs Hole	Surface Water	Talbingo Reservoir upstream East of GF01 emplacement area
EPL54^	148.389	-35.775	Lobs Hole	Surface Water	Talbingo Reservoir Upstream West of GF01 emplacement area
EPL55^	148.387	-35.778	Lobs Hole	Surface Water	Yarrangobilly River, Surface Water Downstream of GF01 emplacement area
EPL56^	148.391	-35.774	Lobs Hole	Groundwater	Ground Water Upstream East from GF01 emplacement area
EPL57^	148.389	-35.775	Lobs Hole	Groundwater	Ground Water Upstream West from GF01 emplacement area
EPL58^	148.389	-35.777	Lobs Hole	Groundwater	Ground Water Downstream from GF01 emplacement area
EPL59^	148.644	-35.761	Tantangara	Surface Water	Tantangara Leachate Basin Tan-SW-SB1
EPL60^	148.644	-35.760	Tantangara	Surface Water	Tantangara Leachate Basin Tan-SW-SB2
EPL61^	148.648	-35.76	Tantangara	Surface Water	Tantangara Leachate Basin Tan-SW-SB3
EPL62^	148.649	-35.762	Tantangara	Surface Water	Tantangara Leachate Basin Tan-SW-SB4
EPL63^	148.649	-35.763	Tantangara	Surface Water	Tantangara Leachate Basin Tan-SW-SB5
EPL64^	148.64	-35.767	Tantangara	Surface Water	Tantangara Leachate Basin Tan-SW-SB6
EPL65^	148.648	-35.7641	Tantangara	Surface Water	Tantangara Leachate Basin Tan-SW-SB7
EPL66^	148.651	-35.763	Tantangara	Surface Water	Tantangara Leachate Basin Downstream East from Tantangara emplacement area Tan-SW-DSE
EPL67^	148.642	-35.760	Tantangara	Surface Water	Nungar Creek Surface Water Downstream West from Tantangara emplacement area Tan-SW-DSW

EPL68^	148.644	-35.760	Tantangara	Groundwater	Ground Water Downstream East from Tantangara emplacement area Tan-GW-DSE
EPL 69^	148.650	-35.763	Tantangara	Groundwater	Ground Water Downstream West from Tantangara emplacement area Tan-GW-DSW
EPL 70^	148.645	-35.770	Tantangara	Groundwater	Ground Water Upstream from Tantangara emplacement area Tan-GW-US
EPL71^	148.470	-35.788	Marica	Surface Water	Surface water downstream from Marica emplacement area MAR-SW-US
EPL72^	148.466	-35.788	Marica	Groundwater	Groundwater upstream from Marica emplacement area MAR-GW-US
EPL73^	148.453	-35.787	Marica	Groundwater	Groundwater downstream from Marica emplacement area MAR-GW-DS
EPL76^	148.667	-35.949	Rock Forest	Surface Water	Groundwater Sediment Basin 1 from Rock Forest emplacement area RF-SW-SB1
EPL77^	148.668	-35.950	Rock Forest	Surface Water	Groundwater Sediment Basin 2 from Rock Forest emplacement area RF-SW-SB2
EPL78^	148.668	-35.951	Rock Forest	Surface Water	Groundwater Sediment Basin 3 from Rock Forest emplacement area RF-SW-SB3
EPL79^	148.666	-35.952	Rock Forest	Surface Water	Groundwater Sediment Basin 4 from Rock Forest emplacement area RF-SW-SB4
EPL80^	148.399	-35.792	Lick Hole Gully	Groundwater	Lick Hole Gully groundwater monitoring upstream from Lick Hole Gully emplacement area
EPL81^	148.401	-35.790	Lick Hole Gully	Groundwater	Lick Hole Gully groundwater monitoring downstream from Lick Hole Gully emplacement area
EPL82^	148.396	-35.791	Main Yard	Groundwater	Main Yard groundwater monitoring upstream from Main Yard emplacement area
EPL83^	148.399	-35.787	Main Yard	Groundwater	Main Yard groundwater monitoring downstream from Main Yard emplacement area
EPL84^	148.398	-35.788	Main Yard	Surface Water	Leachate Basin from Main Yard spoil emplacement area labelled F8 Basin
EPL85^	148.401	-35.790	Main Yard	Surface Water	Main Yard leachate basin labelled MY07 Basin

EPL86^	148.402	-35.791	Lick Hole Gully	Surface Water	Lick Hole Gully leachate basin labelled LHG01
EPL87^	148.393	-35.784	Main Yard	Groundwater	Main Yard groundwater monitoring downstream from Main Yard emplacement area
EPL88^	148.396	-35.786	Main Yard	Groundwater	Main Yard groundwater monitoring downstream from Main Yard emplacement area
EPL89^	148.403	-35.791	Lick Hole Gully	Groundwater	Lick Hole Gully groundwater monitoring downstream from GF01 emplacement area
EPL90^	148.386	-35.778	GF01	Groundwater	GF01 groundwater monitoring downstream from GF01 emplacement area
EPL91^	148.386	-35.779	GF01	Groundwater	GF01 groundwater monitoring downstream from GF01 emplacement area
EPL92^	148.387	-35.777	GF01	Groundwater	GF01 groundwater monitoring downstream from GF01 emplacement area
EPL93^	148.387	-35.777	GF01	Groundwater	GF01 groundwater monitoring downstream from GF01 emplacement area
EPL94^	148.387	-35.777	GF01	Groundwater	GF01 groundwater monitoring downstream from GF01 emplacement area
EPL95^	148.388	-35.778	GF01	Groundwater	GF01 groundwater monitoring downstream from GF01 emplacement area
EPL96^	148.398	-35.778	GF01	Groundwater	GF01 groundwater monitoring downstream from GF01 emplacement area
EPL97^	148.390	-35.778	GF01	Groundwater	GF01 groundwater monitoring downstream from GF01 emplacement area

*These EPL points are not currently active monitoring locations of EPL21266
^ GPS Coordinates are a guide only, ground truthing is required and sampling locations will be determined based on conditions in field.

1.2. Conditions of Report

As per Section 6, Condition R4.3 of EPL 21266 this report must include the information listed in **Table 1.2**.

Table 1-2: EPL 21266 Environmental Monitoring Report Requirements

Environmental Monitoring Report requirement	Report Section
Results of all water quality monitoring undertaken in the preceding six (6) month period	Appendix B, Appendix C
Results of all weather monitoring undertaken in the preceding six (6) month period	Section 2
Assessment of historical trends in all water sampling data for each monitoring point inclusive of the current six (6) month period	Section 3
Identification of instances where the water quality objective triggers for each relevant pollutant were exceeded at receiving water locations and/or where the predicted discharge water quality was exceeded at sediment basin discharge points;	Section 3, Appendix C, Appendix D

Include details of any actions taken by the Licensee in response to exceedances identified including but not limited to: **i. additional monitoring** **ii. remedial actions; and** **iii. activation of trigger, action, response plans (TARPs);**	Sections 3 and 4
Recommendations for future actions in relation to monitoring and/or management	Section 4

1.3. EPL Variations in Reporting Period

During this reporting period of December 2023 to May 2024 there has been one variation to EPL 21266. An EPL variation was issued on 28 March 2024 which included:

- Additional monitoring points (Detailed in table 1.1);
- A new condition regarding the review of all process water treatment plants at the premises by a suitable and independent person;
- A new condition regarding the requirement to develop a Sampling Quality Assurance/Quality Control Program;
- lining and capping requierements for the Ravine Bay and Tantangara permanent Spoil Emplacement Areas (PSE); and
- new condition of rehabilitation stage for the Permanent Spoil Emplacement Areas (PSE).

1.4. Regulatory actions

A Clean-Up Notice was received in December 2023 relating to nutrients, and more specifically nitrogen and nitrate concentrations in ground water and surface water from the Project spoil emplacement areas exceeding the relevant WQOs, primarily at GF01. FGJV is actively addressing the ongoing high levels of nitrogen and nutrients, including:

- conducting spoil coring of emplacement areas including GF01, Main Yard, and Lick Hole Gully to identify hot spots;
- conducting additional water sampling with weekly in situ and comprehensive sampling in accordance with TARP 1;
- installation of additional groundwater bores;
- groundwater extraction with treatment of groundwater and leachate basin water at the construction water treatment plants;
- review of water and spoil by water experts and consultants; and
- investigation of options for improvements to the onsite treatment systems and processes.

The following actions are being carried out to manage, limit, and control the impacts in the area:

- The filter cake disposal and related materials at GF01 ceased on 1 December 2023.
- A Nitrogen Management Plan is under preparation in consultation with the EPA.
- Drill and blast activities are being assessed, and a quality procedure will be generated to improve the methodology.
- FGJV is conducting some trials to decrease spoil's nutrient load before placement.
- The water from the leachate basins is transported to the water treatment plants for treatment.

- The surface water from EPL 55, downstream from GF01, is pumped to the leachate basin at GF01 when there is a flow and is transported to the water treatment plants for treatment.

1.5. Project Updates

This bi-annual monitoring update includes December 2023 – May 2024 EPL sampling rounds. This period included significant progress of the Main Works package of the Snowy 2.0 Project. A summary of construction activities at each site is outlined below.

1.5.1. Talbingo – (Talbingo Adit Portal / Talbingo Intake / Main Camp / Ex Camp / GF01)

- Stage 2 excavation works ongoing.
- Excavation and ground support works are ongoing on EL.533-EL529.
- Guard rails installation works are ongoing EL.535.
- Line drilling and drilling for blasting for zone-2 completed, EL.535 to 525.
- TBM2.2 Tunnel, has installed 155 rings during the last month.
- Temporary works in preparation for D&B.

1.5.2. Lobs Hole – (Mat Portal / Main Yard / ECVT / Ravine Road)

- Ravine Bay clearing and grubbing completed (Stage 1).
- Ravine Bay subsurface drainage works are completed for (Stage 1).
- Ravine Bay spoil emplacement commenced.
- Main Yard fill and spoil processing are ongoing from D&B tunnels to GF01.
- 350mm tunnel dewatering pipeline works along the mine trail road works are ongoing.
- Utilities cable pulling works are ongoing for the precast shed.
- ECVT IPS installation of rings for LSTT (Large Scale Trail Test) is ongoing.
- TBM 1 has installed 3 IPS test rings.
- Grouting in LST rings and other testing works are ongoing.

1.5.3. Marica

- Marica HDD pad: BH2 drill and reaming are completed, casing installation is completed.
- BH3 surface hole pilot drilling is completed. Rimming is ongoing.
- Civil transitions between HDD substantially completed. Rectification of defects ongoing.

1.5.4. Tantangara

- Stage 2 excavation and ground support works completed up to elevation 1185.
- Stage 2 excavaion diffuser side elevation 1185-1181.5 rock bolting and surface treatment are ongoing.
- Stage 2 excavation diffuser side excavation works are ongoing at elevation 1183 -1180.5.

- HRT transition C1 excavation of 24m was completed in May-24, a cumulative top heading length of 34.08m was completed.

1.5.5. Trunk Services

- HDD work from Marica entry to Gooandra laydown completed.
- Cable pulling along the remainder of Gooandra Trail.
- Demobilisation and rehabilitation of completed HDD works.
- Ongoing monitoring and inspections completed for Gooandra Trail.

1.5.6. Rock Forest

- Storage of materials including delivery of segments 24/7

2. WEATHER MONITORING RESULTS

2.1. Weather Stations

There are several weather stations along the alignment of the Project that report real-time data. These include:

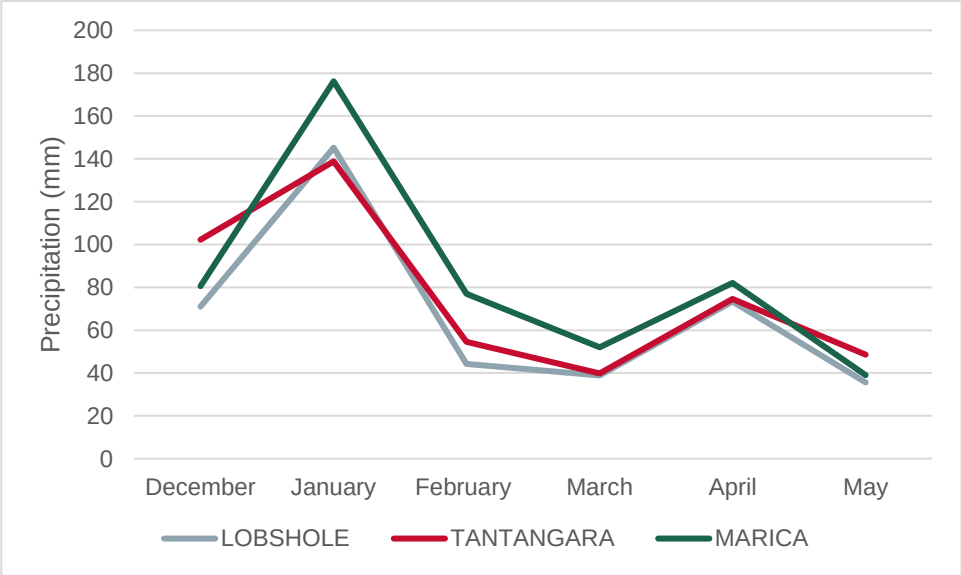
- "Lobs Hole" - an automatic weather station managed by Future Generation in Lobs Hole Main Yard.
- "Cabramurra" - an automatic weather station located near the lookout in the Cabramurra township managed by the Bureau of Meteorology (BoM)
- "Tantangara" - an automatic weather station managed by Future Generation in Tantangara construction site.

The Tantangara and Lobs Hole gauges are in sub-alpine environments, with elevations of approximately 1200 m and 600 m, respectively. Cabramurra records substantially higher annual rainfall amount than the lower-elevation gauges at Lobs Hole and Tantangara. Tantangara and Lobs Hole weather stations record actual onsite conditions at the respective construction sites, while Cabramurra weather station, at 1470 m is representative of conditions at Marica which has an elevation of 1480 m and is approximately 15 km north of the Cabramurra Station.

2.2. Rainfall Data

The cumulative rainfall between December 2023 to May 2024 is presented in **Figure 2-1.**

Figure 2-1: Cumulative Rainfall across Lobs Hole, Tantangara and Cabramurra



At each of the three rainfall recording sites (Tantangara, Lobs Hole, and Cabramurra), the highest volume of rain that fell in a single day are as follows:

- 47.4mm at Lobs Hole – 04 April 2024
- 60.0 mm at Cabramurra (Marica) – 18 January 2024
- 39.2 mm at Tantangara – 14 January 2024

On the five-day time scale, the heaviest precipitation events were as follows:

- Lobs Hole: 64.2 mm between the 6and 11 April 2024;
- Cabramurra (Marica): 76 mm between 06 and 11 January 2024; and
- Tantangara: 67.4 mm between 06 and 11 April 2024

Table 2-1: Recorded rainfall (mm) across Snowy 2.0 worksites. Long Term Average (LTA) rainfall data from BOM. Lobs Hole average rainfall taken from Tumbarumba total weather station. Tantangara taken from Adaminaby Alpine Tourist Park Weather Station

	Tantangara		Cabramurra (Marica)		Lobs Hole	
Month	Monthly (mm)	LTA	Monthly	LTA	Monthly	LTA
December	167.6	74.1	18.8	80.6	71	71.4
January	122	63.1	51	114	145.2	64.8
February	39	129	21	65	44.2	54.3
March	14.6	90.4	27	72	21.8	51.4
April	30.8	55.2	46	67.3	47.4	59
May	34.2	36.2	35	97.9	32.6	71.2

Tantangara experienced a significant increase in precipitation during December 2023 and January 2024, surpassing the Long-Term Average. Lobs Hole received greater than Long-Term Average rainfalls in January 2024 and Cabramurra, representing the conditions at Marica had less than Long-Term Average rainfalls throughout the reporting period.

Less rainfall was experienced in all locations for the same period in December 2022 to May 2023, with exception of Lobs Hole in February and Tantangara during December and February.

The lower-than-average rainfalls are congruent with the "El Niño" event declared by the World Meteorological Organization. It was predicted to be finished in April 2024. Despite the "El Niño" event, some heavy rain events were experienced at each site.

2.3. Temperature Data

Figure 2-2 to **igure 2-3**: Lobs Hole - Minimum and Maximum Temperatures

show temperature maximum and minimums across the project at Lobs Hole and Cabramurra weather stations.

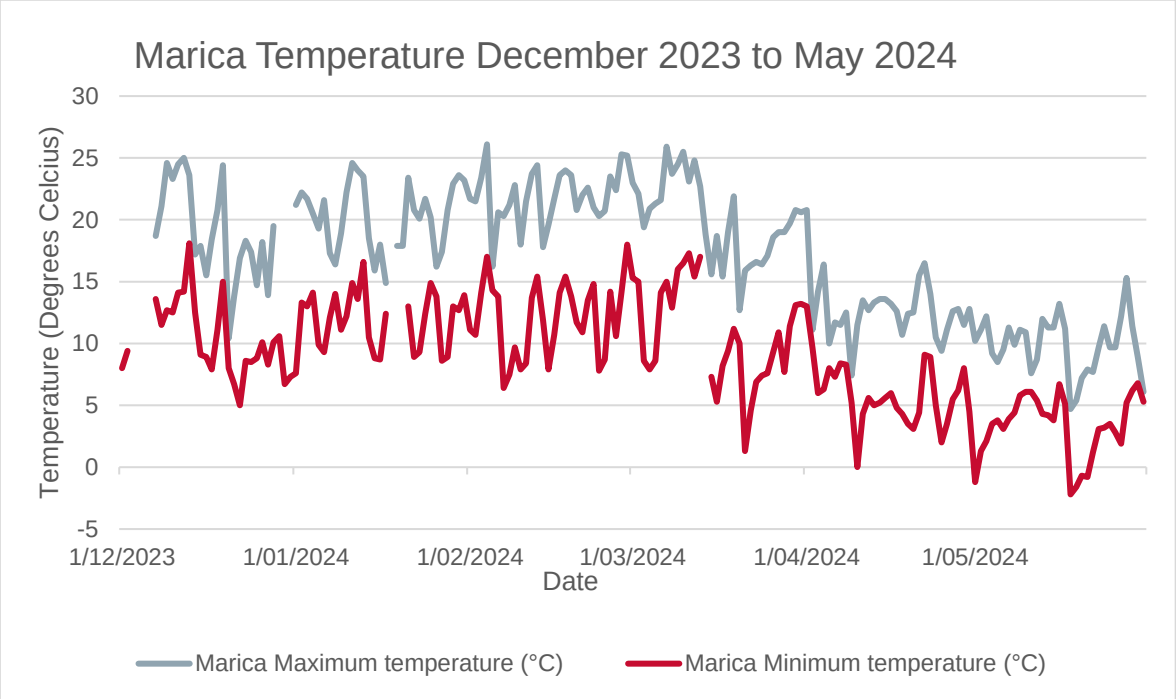


Figure 2-2: Cabramurra (Marica) - Minimum and Maximum Temperatures

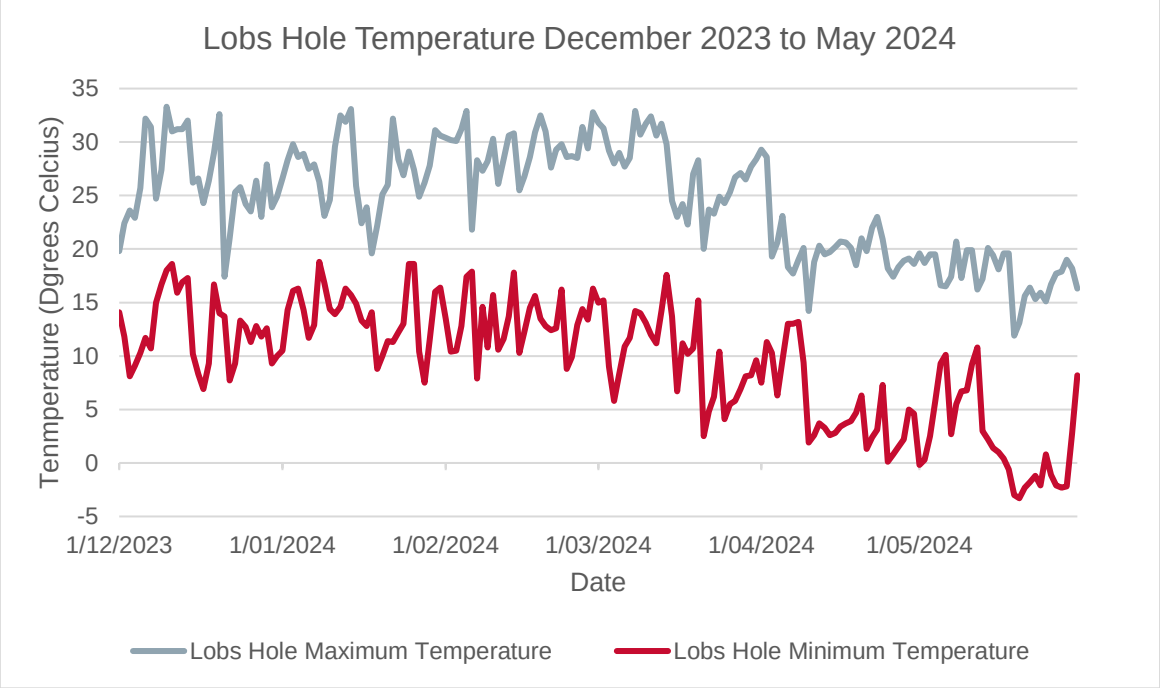


Figure 2-3: Lobs Hole - Minimum and Maximum Temperatures

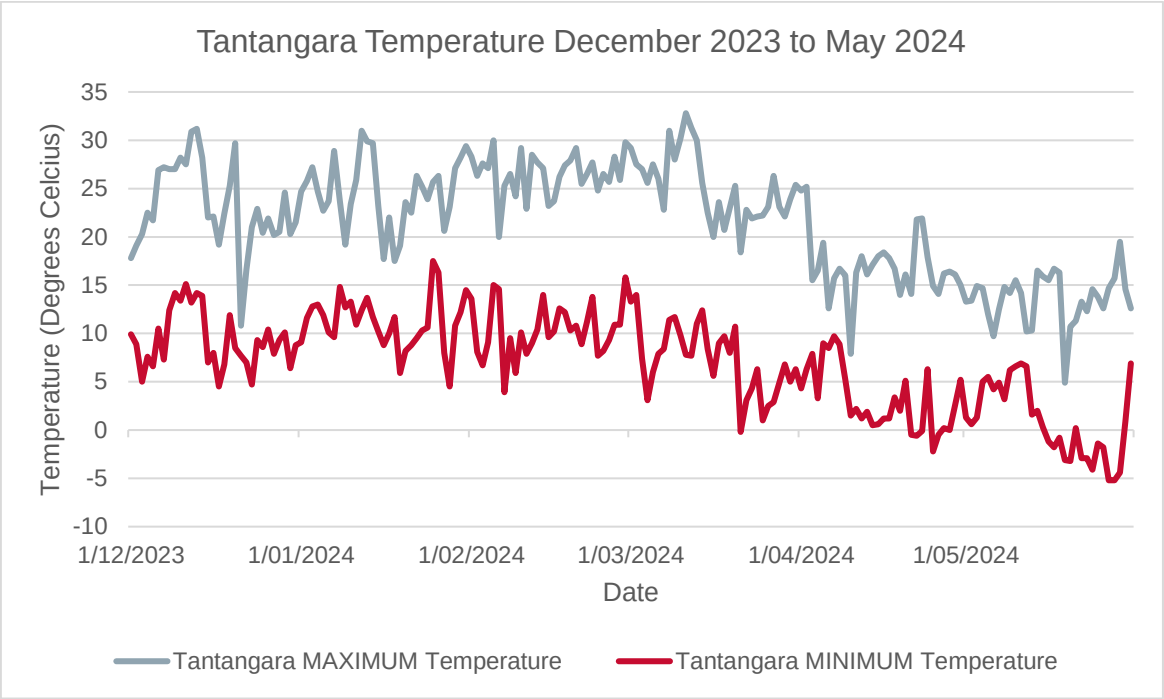


Figure 2-4: Tantangara - Minimum and Maximum Temperatures

The mean maximum temperature was generally higher in December 2023 to May 2024 than the same period in December 2022 to May 2023, but the mean minimum temperatures were lower in 2023/2024 than the same reporting period in 2022/2023.

The higher maximum temperatures, and lower minimum temperatures are congruent with the "El Niño" event declared by the World Meteorological Organization. It was predicted to be finished in April 2024.

3. MONITORING RESULTS

3.1. December 2023 – May 2024 Water Quality Monitoring

Water Quality Monitoring results are provided in **Appendix B** and **C** for monthly EPL monitoring rounds. The sampling work was performed in accordance with:

- S2-FGJV-ENV-PLN-0010 Water Management Plan – Snowy 2.0 Main Works
- AS 5667:1 - Water quality- Sampling: Guidance on the design of sampling programs and the preservation and handling of samples;
- AS 5667:4 - Water quality - Sampling: Guidance on the sampling of lakes, natural and man made;
- AS 5667:6 - Water quality - Sampling: Guidance on the sampling of rivers and streams; and
- AS 5667:11 - Water quality- Sampling: Guidance on the sampling of groundwater.

3.2. In situ Monitoring

Under Section 6 Condition R4.1, the EPA must be notified of any *in situ* pollution concentrations that exceed, or are outside the range of, relevant water quality trigger values within licenced premises (Condition R4.1 a) or at the designated EPL monitoring points (Condition R4.1 b).

Table 3-1: Number of Concentrations Exceeding or Outside the Range of Water Quality Objectives for Monthly EPL Monitoring

Water Quality Objectives	DO (%)	EC (µS/cm)	pH	Turbidity (NTU)	Comment
Range	90-110	>350 surface / groundwater >30 reservoirs	6.5-8	>25	
2023					
December	20	9	10	18	There were exceedances of DO and Turbidity for some EPLs which can result from rainfall events, temperature changes, and fluctuations of naturally occurring bacteria. There were only a few EC exceedances for the month. pH exceedances are minor and are unlikely to be the result of background impacts. Turbidity exceedances are congruent with rainfall events effecting runoff.
2024					
January	23	16	10	10	Some exceedances may be attributed to rain events, as it was the month with the highest rain on-site during the reporting period. There were exceedances in some parameters, such as pH, EC, DO, and turbidity. Variations and exceedances are considered reflective of natural historical changes.
February	37	14	21	1	As the rain decreased during February, there were limited turbidity exceedances. However, due to temperature fluctuations, pH, EC and DO are affected by the chemical interaction with natural minerals and nutrients from the soil. Exceedances are largely within historically recorded parameters for the Project.
March	11	20	20	17	The exceedances in pH, EC, DO, and Turbidity are attributed to natural variation and precipitation as the variations are observed at locations upstream of the construction works.

April	13	24	20	12	There were a few exceedances for DO and turbidity due to runoff from rainfall events. Generally, exceedances were minor and within historically recorded parameters for the Project.
May	11	26	17	9	Within the reported period, May is the month where there are fewer exceedances since the rains decreased. The current exceedances are generally consistent with historical patterns.

All *in situ* monitoring results are presented in **Appendix B** – Field Monitoring Data.

During the reported period, there were variations observed in the results obtained between DO, EC, pH and Turbidity. These variations are consistent with the climate behaviour and the variations between precipitation and temperature, further validating the accuracy of our data. After rainfall, it is expected that the waterbodies (rivers and reservoirs) within the project would see an increase in Electrical Conductivity concentrations, which is consistent with the in-situ monitoring results for the 6-month period. Turbidity is also known to vary significantly following a rain event, with sampling in December, January, February, March, April and May occurring during or directly following a significant rain event, which would account for the higher turbidity readings. pH is also variable within the project EPL sampling locations with exceedances generally marginally lower than the WQO.

Throughout the reporting period, rainfall events above the design criteria were experienced at all sites (Figure 2-1), including:

- 1-3 December 2023 (39 mm at Lobs Hole, 31.4 mm at Tantangara) – event continuation from 29 November 2023 notification.
- 6-10 January 2024 (49 mm at Lobs Hole, 76 mm at Marica)
- 13-17 January 2024 (37 mm at Lobs Hole, 48.8 mm at Tantangara)
- 18-22 January 2024 (44.4 mm at Lobs Hole, 60 mm at Marica)
- 6-10 April 2024 (46.6 mm at Lobshole)
- 30-31 May2024 (34.2 mm at Tantangara – 34 mm at Marica)

During high rainfall events which resulted in basin overtopping, water samples were collected for comprehensive water testing and the EPA were notified of the releases in accordance with R4.1 of EPL 21266.

3.3. Groundwater Monitoring

Groundwater quality monitoring is undertaken in accordance with EPL - 21266 to determine if the project is resulting in any impacts to groundwater. Groundwater quality trigger levels for the Project are outlined in Table C-1 of the Main Works – Groundwater Monitoring Program.

Groundwater level monitoring is undertaken in accordance with the Groundwater monitoring program to determine groundwater drawdown as a result from the Project.

Site specific groundwater level triggers as outlined in Attachment B of the Main Works – Groundwater Monitoring Program have been established to monitor whether observed drawdown is greater than construction related predicted drawdown. Groundwater piezometer data from the network of 120 boreholes is collected and assessed by SHL.

3.3.1. EPL 1, 2, 4, 25

Groundwater sampling was undertaken in February and May 2024 for EPL locations 1, 2, 4 and 25.

Analyte concentrations that exceed or are outside the range of relevant water quality trigger values are presented in **Appendix C**. Generally, Laboratory analytes in December 2023 to May 2024 were less than, or within, relevant water quality trigger values except for:

- Ammonia as N;
- Nitrite + Nitrate;
- Nitrogen (total);
- Reactive Phosphorus;
- Phosphorus (Total);
- Arsenic (Dissolved);
- Chorium (III+VI) (dissolved);
- Copper (dissolved);
- Nickel (dissolved) and;
- Zinc (dissolved).

The metals exceedances are representative of natural conditions as these metals occur naturally within the project area. The nutrient exceedances generally fall within standard variation for these wells. However, exceedances of nutrients are being investigated to assess if there is a connection to the ongoing works.

3.3.2. GF01

Groundwater sampling at GF01 was undertaken weekly between December 2023 to May 2024 in accordance with the TARP process as a result of elevated nitrogen concentrations in groundwater.

Analyte concentrations that exceed or are outside the range of relevant water quality trigger values are presented in **Appendix C**. Generally, Laboratory analytes were less than, or within, relevant water quality trigger values except for:

- Ammonia as N;
- Nitrogen (total);
- Nitrite + Nitrate
- Iron;
- Reactive and total phosphorus;
- Aluminium;
- Arsenic;
- Chromium;
- Copper;
- Lead;
- Nickel;

- Silver; and
- Zinc.

Exceedances of Nitrogen, Ammonia, and a number of metals were observed upstream and downstream from emplacement locations as well as nutrients. The highest levels of nutrients are located in EPL 84, 85 and 86, which correspond to the leachate sediment basin.

High levels of nutrients observed are currently under investigation with extraction and treatment of impacted water is in place to minimise migration of impacted water while appropriate treatment options are implemented.

3.3.3. Main Yard and Lick Hole Gully

Groundwater sampling at Main Yard and Lick Hole Gully was undertaken weekly d between December 2023 to May 2024 in accordance with the TARP process as a result of elevated nitrogen concentrations in groundwater.

Analyte concentrations that exceed or are outside the range of relevant water quality trigger values are presented in **Appendix C**. Generally, Laboratory analytes were less than, or within, relevant water quality trigger values except for:

- Nitrogen (total);
- Ammonia;
- Nitrite + Nitrate as N;
- Total phosphorus;
- Aluminium;
- Arsenic;
- Chromium;
- Copper;
- Iron;
- Lead;
- Nickel;
- Silver; and
- Zinc.

Main Yard (EPL82, EPL83, EPL87, and EPL88) and Lick Hole Gully (EPL80 and EPL81) sampling locations are monitored on a weekly basis for comprehensive parameters. Exceedances of Nitrogen, Phosphorous, and a number of metals were also observed in sediment basins and surface water locations within Main Yard and Lick Hole Gully with some similar exceedances noted. Comprehensive and in situ samples are collected on a weekly basis while an investigation is being undertaken to determine the source of elevated Nitrogen. Other analytes were within the WQO range.

Water extraction and treatment of impacted water is in place at Main Yard and Lick Hole Gully also to minimise migration of impacted water while appropriate treatment options are implemented.

3.4. Surface Water

Routine surface water quality monitoring is undertaken in accordance with CoA31 and the Environment Protection Licence No. 21266 (EPL - 21266) to determine if the project is resulting in any impacts to receiving water quality against the Water Quality Objectives (WQO). The WQOs are specified in Table 2-2 of the Main Works – Surface Water Monitoring Program.

Surface water monitoring has been split up into:

- Talbingo and Tantangara Reservoirs;
- Lobs Hole;
- Tantangara; and
- Marica and Rock Forest.

3.4.1. Talbingo and Tantangara Reservoirs

Analyte concentrations that exceed or are outside the range of relevant water quality trigger values are presented in **Appendix C**. Generally, laboratory analytes in June to November 2023 were less than, or within, relevant water quality trigger values except for:

- Total Phosphorus
- Nitrite + Nitrate as N;
- Ammonia;
- Nitrogen;
- Aluminium;
- Copper (dissolved);
- Chromium;
- Iron;
- Manganese; and
- Zinc (dissolved).

The reservoir results are generally within the range of the WQO for recorded Field parameters. Some exceedances in nutrients were observed. This was most likely due to runoff from natural processes, as there was minimal discharge for the reported period. Water that was discharged to the reservoir was not consistent with the exceedances observed in the reservoir. Due to the temperatures and algal blooms, faecal coliforms were present in December, January, and March.

3.4.2. Lobs Hole Surface Water

The predominant water body within the Lobs hole region is the Yarrangobilly River (**Appendix A**). It along with its tributaries constitute the EPL surface water sampling locations within the Lobs Hole area. Analyte concentrations that exceed or are outside the range of relevant water quality trigger values are presented in **Appendix C**. Generally, laboratory analytes between December 2023 to May 2024 were less than, or within, relevant water quality trigger values except for:

- Total Phosphorus
- Nitrite + Nitrate as N;
- Ammonia;

- Nitrogen (total);
- Arsenic (dissolved)
- Aluminium (dissolved);
- Chromium (dissolved);
- Iron (dissolved);
- Nickel (dissolved);
- Zinc (dissolved).

Exceedances are observed for some analytes in some points caused by rain events and runoff. However, the majority are within the WQO. During the reported period, there was a significant exceedance in nutrients which triggered the TARP1, mainly in EPL 24, 52, 55, 84, 85, and 86 located in the vicinity of spoil emplacements which remain under investigation with regular and frequent sampling to monitor the situation. Water is being collected in respective leachate basins and treated and reused where criteria is met. Regarding metals, some minor exceedances were observed within historical ranges and similar to background concentrations in the respective locations.

3.4.3. Marica Surface Water

The predominant water body within the Marica are the headwaters of the Eucumbene River (**Appendix A**). Two samples are taken up and downstream of the Snowy 2.0 disturbance areas to make up the EPL sampling locations. Analyte concentrations that exceed or are outside the range of relevant water quality trigger values are presented in **Appendix C**. Generally, sampling results between December 2024 to May 2024 were less than, or within, relevant water quality trigger values with the exception of:

- Ammonia as N;
- Phosphorus;
- Chromium;

The exceedances to the water quality objectives within the Marica surface waters are considered natural in origin and not caused or added to by the ongoing construction works of Snowy 2.0 as results were generally consistent with upstream results. These exceedances did not trigger the need for further sampling, remedial actions, or TARPs.

3.4.4. Tantangara Surface Water

The predominant water bodies within the Tantangara region are the Nungar and Kelly's Plain Creeks (**Appendix A**). They, along with the outflow of the Tantangara Reservoir (behind the dam wall), make up the EPL surface water sampling locations within the Tantangara area. Analyte concentrations that exceed or are outside the range of relevant water quality trigger values are presented in **Appendix C**. Generally, results from monthly EPL sampling between December 2023 to May 2024 were less than, or within, relevant water quality trigger values except for:

- Nitrite + Nitrate as N;
- Nitrogen;
- Total Phosphorus;
- Aluminium (dissolved);
- Ammonia; and

- Zinc (dissolved).

The majority of WQO analytes were within parameters. Similarly with the Lobs Hole and Marica surface water EPL sampling points, elevated concentrations above the WQO of metals and nutrients are all likely attributed to natural conditions. Exceedances were generally consistent between upstream and downstream results. Exceedance of ammonia is reflective of conditions following a rain event. The exceedances to the water quality objectives within the Tantangara surface waters are not considered to be caused or added to by the ongoing construction works of Snowy 2.0. These exceedances did not trigger the need for further sampling, remedial actions, or TARPs.

3.4.5. Rock Forest Surface Water

The predominant water body within Rock Forest is Cameron's Creek (**Appendix A**). Two samples are taken, up and downstream of the Snowy 2.0 disturbance areas to make up the EPL sampling locations. Analyte concentrations that exceed, or are outside the range of relevant water quality trigger values are presented in **Appendix C**. Generally, results from December 2023 to May 2024 were less than, or within, relevant water quality trigger values with the exception of:

- Ammonia as N;
- Phosphorus;
- Nitrite + Nitrate;
- Nitrogen (total);
- Aluminium (dissolved);
- Arsenic (dissolved);
- Chromium (dissolved);
- Iron (dissolved);
- Zinc (dissolved);

The monitoring results demonstrate that the water quality in the Rock Forest has consistency across multiple EPL monitoring events with the exceedances likely to be related to the decades of agricultural use. High nitrogens are likely caused by remanent cow excrement while increased metals can be attributed to standard natural/background concentrations in the surrounding soils. The accumulation of Iron was probably due to increasing rainfall and runoff.

The exceedances to the water quality objectives within the Rock Forest surface waters are not caused or added to by the ongoing construction works of Snowy 2.0. These exceedances did not trigger the need for further sampling, remedial actions or TARPs.

3.5. Trends

The Mann-Kendall statistical analysis test has been chosen to assess trends within surface water monitoring data. Mann-Kendall is non-parametric test that assesses monotonic trends over time; identified as increasing, decreasing, or showing no significant trend. This test has been selected because it does not assume a specific distribution of the data and is robust against outliers, making it suitable for environmental datasets that may exhibit non-normal behaviour.

In instances where the Mann-Kendall analysis has been inconclusive due to insufficient data, a comparison of key general statistics has been undertaken, including an evaluation of mean, standard deviation, minimum, and maximum values. This comparative analysis has allowed for an assessment of construction monitoring data and whether it falls within the ranges identified in pre-

project, baseline data. When calculating the mean value, non-detects have been considered as the detection limit value, rather than half the detection limit value, for a conservative output and thus the mean results in this Report are biased to a higher value.

Detailed Mann-Kendall trend analysis and metric summaries are provided in Appendix A. For each monitoring location, a summary of trends, mean, minimum, maximum and standard deviation is provided.

Surface water

- The following decreasing trends were identified:
- Aluminium – EPL 5, 6, 8, 9, 10, 11, 12, 14, 15, 16, 24, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 40, 51, 52, 55
- Arsenic – EPL 8, 12, 14, 15, 16, 24, 41, 50, 51, 55
- Chromium III + IV – 8, 14, 16, 41, 52, 50, 51, 55
- Copper – EPL 8, 9, 12, 14, 15, 16, 24, 33, 38, 40, 41, 50, 51, 52,
- Iron – EPL 5, 8, 9, 10, 11, 12, 14, 15, 16, 24, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 40, 50, 51, 52
- Manganese – EPL 5, 6, 8, 9, 10, 12, 14, 15, 16, 24, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 41, 52, 55,
- Nickel – EPL 8, 14, 24, 36, 37, 41, 50, 51, 52
- Lead – EPL 8, 12, 14, 16, 24, 41, 50, 51, 52
- Silver - EPL 8, 12, 14, 16, 24, 41, 50, 51, 52, 55
- Zinc – EPL 8, 14, 16, 24, 41, 50, 51, 52, 55,
- Ammonia – EPL 6, 8, 9, 10, 12, 14, 16, 24, 36, 37, 41, 52, 55,
- Cyanide – EPL 5, 6, 8, 9, 10, 11, 12, 14, 15, 16, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 50, 51, 52, 55
- Kjeldahl Nitrogen – EPL 8, 10, 14, 28, 29, 32, 38, 41, 52, 55
- Nitrate + Nitrite – EPL 5, 6, 8, 12, 14, 15, 16, 41, 46, 50, 51, 52, 55
- Nitrogen – EPL 8, 10, 14, 16, 26, 27, 28, 29, 32, 33, 38, 41, 50, 52, 55,
- Total Phosphorus – 8, 40, 51, 41, 54, 55,
- Reactive Phosphorus – EPL 5, 6, 8, 9, 10, 11, 12, 15, 24, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40
- Hardness – EPL 52
- Total suspended solids – EPL 5, 9, 10, 11, 12, 14, 15, 16, 30, 31
- Oil and Grease – EPL 5, 6, 8, 9, 11, 12, 14, 15, 16, 24, 26, 27, 30, 31, 33, 34, 35, 36, 37, 38, 40, 41, 50, 51, 55.

Groundwater

The following decreasing trends were identified:

- Aluminium – EPL 1, 56, 57, 58, 73
- Arsenic – EPL 56, 57, 58, 80, 81
- Chromium III + IV – EPL 56
- Copper – EPL 56, 57, 58, 80
- Iron – EPL 1, 56, 57, 58, 80
- Lead – EPL 56, 57, 58, 83
- Manganese – EPL 1, 2, 56, 57, 58, 72, 80, 83
- Nickel – EPL 4, 25, 56, 57, 58, 72, 80
- Silver – EPL 56, 57, 58, 83
- Zinc – EPL 56, 57, 58, 82
- Ammonia – EPL 56, 57, 58, 80, 81, 83
- Cyanide - EPL 56, 57, 58,
- Kjeldahl Nitrogen – EPL 56, 57, 58, 73, 83
- Nitrate + Nitrite – EPL 56, 57, 58, 80, 81, 83
- Nitrogen – EPL 1, 56, 57, 58, 73, 80, 83
- Total Phosphorus – EPL 56, 57, 58, 80
- Hardness – EPL 72
- Total Suspended solids – EPL 57, 78

The following increasing trends were identified:

<u>Surface water</u>

- Aluminium – EPL 46
- Iron – EPL 46
- Reactive Phosphorus – EPL 55
- Total Suspended solids – EPL 52

<u>Groundwater</u>

- Arsenic – EPL 1, 4, 25
- Chromium III + IV – EPL 1, 4, 25
- Ammonia – EPL 1, 4, 25
- Kjeldahl Nitrogen – EPL 1, 4, 25
- Nitrate + Nitrite - EPL 1, 4, 25
- Total Phosphorus - EPL 1, 2, 4, 25

- Reactive Phosphorus – EPL 69, 71, 72,
- Total Suspended solids – EPL 1

The results obtained from the trends show that the level of decreasing trends was greater than that of increase in both surface water and groundwater. During the reporting period, statistically significant decreases in trend are observed primarily in metals, some nutrients and oil & grease.

The work continues, demonstrating the effort taken by our team to maintain controls in place and mitigate and control the impacts generated. Regarding Groundwater, some decrease in metals and nutrients is observed, which is consistent with the previously reported period. The controls and monitoring carried out will continue, where sampling and inspections are the main sources of observations and early warnings if applicable. Generally, the nitrogen concentrations in groundwater and surface water had statistically significant decreasing trends.

A smaller number of increases are observed, especially in EPL 1, 4 and 25, where historically, at this time of year, this behaviour has been observed and is related to the area's natural variation.

4. DISCUSSION

EPL monitoring results that exceeded the WQO are generally consistent with natural events such as rainfall and changes in seasonal weather, except nutrients. Background monitoring in the previous quarter has similar readings that display exceedances of particular analytes.

The investigation relating to the Clean-up notice is ongoing through weekly and monthly sampling, and monitoring of the spoil emplacement areas. Laboratory results have been compiled and analysed to create a baseline and monitor the behaviour of water with regard to direction and flow rate according to the seasons and periods of rain in each location. Further actions are being carried out to minimise ongoing contamination of the area and reduce the impacts mentioned above.

Further actions have been carried out to minimise ongoing contamination of the area and reduce the impacts mentioned above. Likewise, research and testing have continued regarding different options to reduce the concentration of nutrients.

Due to the high levels of nutrients, discharge to the reservoir has been limited. The water is being reused treated and re-used on site as needed and where water re-use criteria are met.

Across the sites, water quality results display a general decreasing trends for analytes. Some other minor exceedances observed were consistent with the historical ranges and similar to background concentrations in the respective locations. The nitrogen concentrations in groundwater and surface water are generally decreasing across site.

4.1. EPA Notifiable Events

See below the EPA notified events that triggered TARPs to be enacted onsite.

Table 4-1: Events Triggering TARP Implementation and EPA Notification

Date	Location	Event ID	Event	Outcome
02/12/2023	Lobs Hole	S2-FGJV-ENV-INC-3534	Lick Hole Gully - Concrete water entering clean water drain reaching Yarrangobilly River.	Remove the installed mitre drains and redirect the runoff from the road into the dirty water drain as per the PESCP TARP was enacted and samples were collected.
08/01/2024	Lobs Hole	S2-FGJV-ENV-INC-3670	Lobs Hole - ENV - Sediment Laden Water Entering Yarrangobilly River from the GF01 Gully	Ensure the sumps/sediment traps are captured in pre-rainfall inspections and communicated to construction if de-silting is required. Install sediment basin as per ERSED plan Clean out sediment trap/sump at northern drain post basin works as the clean water drain will remain discharging at this point. TARP was enacted and samples were collected.
18/01/2024 - 23/01/2024	Lobs Hole	S2-FGJV-ENV-INC-3709	Basin Overtopping to Yarrangobilly River due to Rainfall	TARP was enacted and samples were collected.

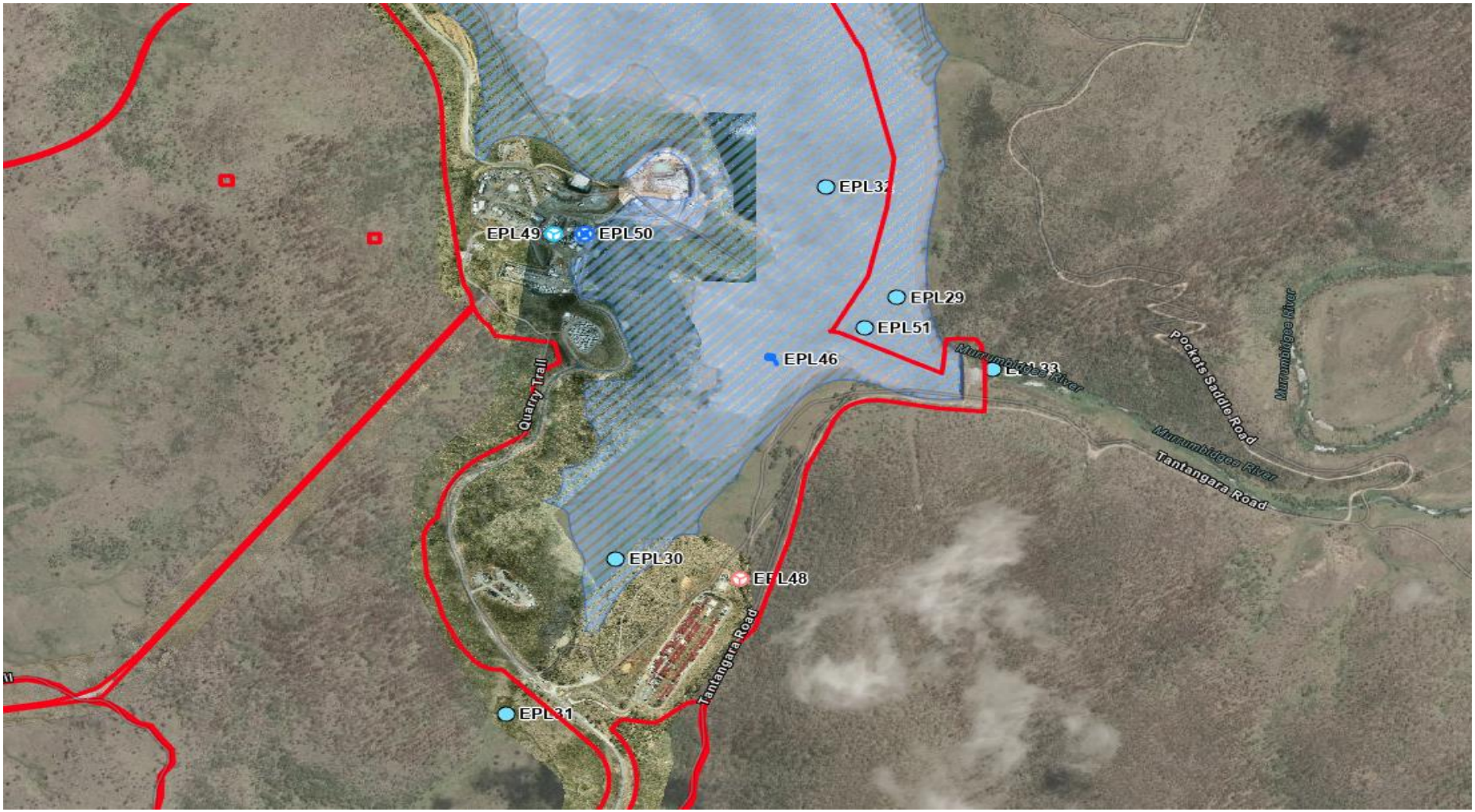
20/03/2024	Lobs Hole	S2-FGJV-ENV-INC-3974	Grey-coloured water observed flowing at EPL 24 surface water monitoring point	Conduct a full inspection of the existing ERSED controls near EPL 24 including section of Talbingo Haul Road and advise construction team for ERSED improvements/maintenance required Adhere to weekly sampling of EPL to help identifying potential trends Fix the ERSED controls before the next rain event Monitor the location during and after the next rain event Sampling was conducted upstream and downstream EPL24
02/04/2024	Lobs Hole	S2-FGJV-ENV-INC-4025	Sediment Laden Water reporting to the Yarrangobilly River at the Bridge	Reinstate controls on bridge to divert path of water runoff for short term protection Investigate engineering controls to permanently restrict water runoff from the bridge expansion joints TARP was enacted and samples were collected.
07/04/2024	Lobs Hole and Tantangara	S2-FGJV-ENV-INC-4057	Sediment Basin Overtopping Event due to rainfall	TARP was enacted and samples were collected.
17/04/2024	Lobs Hole	S2-FGJV-ENV-INC-4104	Nutrient exceedances in at EPL monitoring points 83 and 87.	Continue enacting TARP 1 procedures Extract and treat groundwater at EPL83 and EPL87 following exceedances of WQO.
29/04/2024	Lobs Hole	S2-FGJV-ENV-INC-4149	Nitrogen exceedances in GF01 Groundwater Monitoring for EPL90, 97, 57	Continue to monitor analyte concentrations and the relationship between rainfall and elevated results Extract and treat groundwater at the impacted bores following exceedances.
24/05/2024	Tantangara	S2-FGJV-ENV-INC-4247	Nutrient exceedances at RO Plant EPL 50.	Correct sample representation of RO discharge to be established for monthly sampling round. RO Discharge requires review of three consecutive lab results before the environmental team signs the discharge permit Communication to environmental team from dewatering supervisors when elevated analytes are found from comprehensive sampling.

4.2. Recommendations

Spoil emplacement areas that are still to be constructed (Ravine Bay, Rock Forest and Tantangara) are being designed and built based on the lessons learned from GF01 and Main Yard, with on-site controls (such as liners) are being implemented. These actions are based on the results of the monitoring that has been carried out, the observations obtained and the input from different experts in the area to address the current issues and avoid any other impact from the spoil emplacement

APPENDIX A – SNOWY 2.0 – EPL SAMPLING LOCATIONS

TANTANGARA




EPL28
EPL40
EPL67
EPL68
EPL60
EPL61
EPL39
EPL59
EPL62
EPL69
EPL63
EPL66
EPL64
EPL65
EPL38
EPL70

LOBSHOLE


EPL22
EPL9
EPL45
EPL13
EPL87
EPL16
EPL84
EPL88
EPL83
EPL85
EPL8
EPL86
EPL81
EPL89
EPL82
Ravine Road
EPL80
EPL15
EPL17
EPL14
EPL5
EPL44
EPL4
EPL25
EPL12
MAT01
EPL2
ECVT01
EPL7

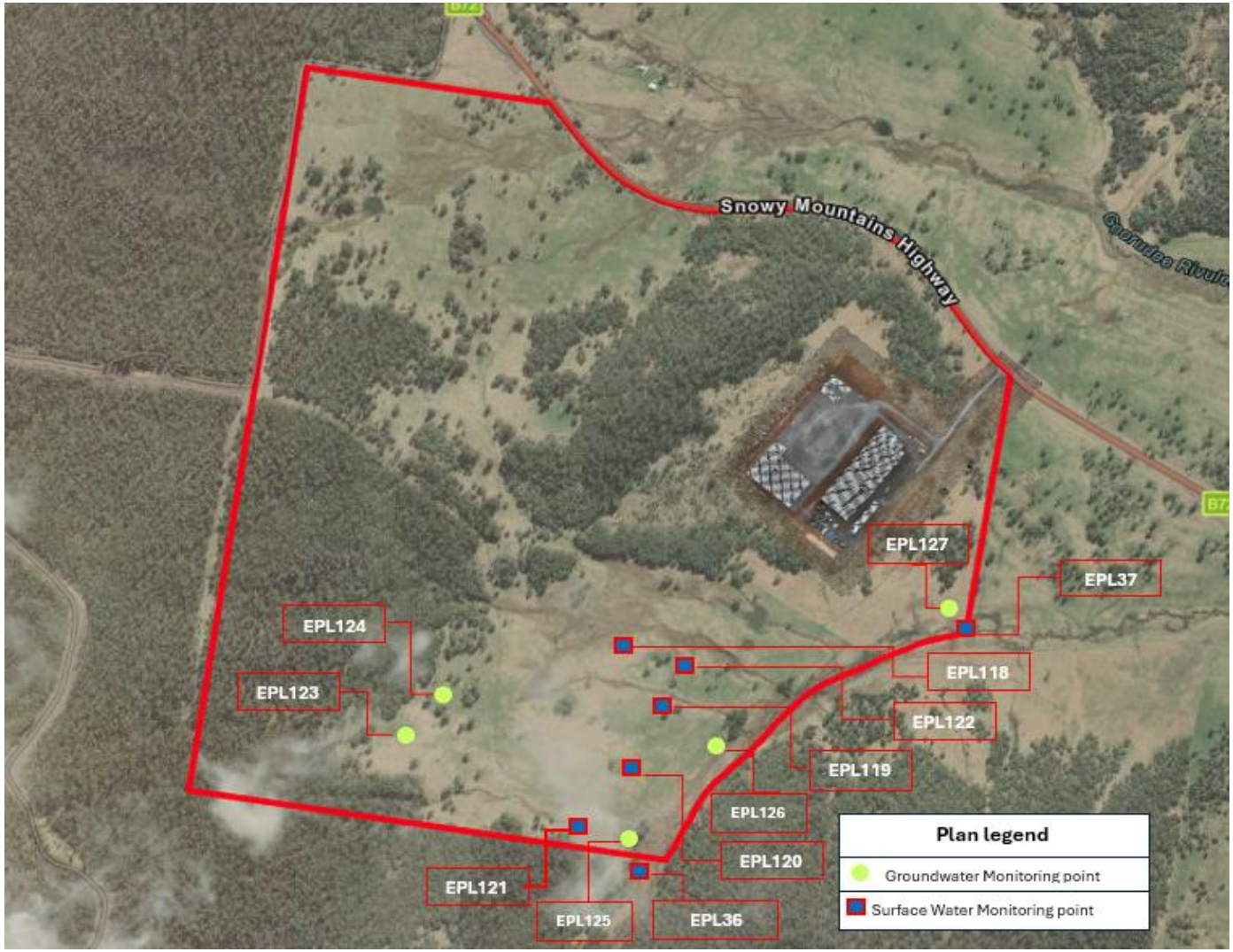

Toll Bar Firetrail
Toll Bar Firetrail
Lobs Hole Powerline Road
TRT02
TRT01
EPL11
EPL42
EPL41
EPL43
EPL10
EPL53
EPL54
EPL57
EPL92
EPL94
EPL96
EPL52
EPL90
EPL98
EPL95
EPL58
EPL97
EPL55A
EPL55_Confluence
EPL91
EPL24
EPL55B


EPL110
EPL113
EPL111
EPL119
EPL114
EPL115
EPL112
EPL118
EPL128
EPL116
EPL109
EPL106
EPL117
EPL107
EPL108
EPLRBRSW02_US
EPLRBRSW02_DS
EPLRBRSW01_DS
EPLRBRSW01_US
Middle Creek
Lobbs Hole Powerline Road

MARICA


EPL102
EPL99
EPL100
EPL101
EPL74
EPL73
EPL72

ROCK FOREST


Snowy Mountains Highway
EPL127
EPL37
EPL124
EPL123
EPL118
EPL122
EPL119
EPL126
EPL120
EPL121
EPL125
EPL36
Plan legend
Groundwater Monitoring point
Surface Water Monitoring point

APPENDIX B – IN SITU RESULTS TABLES

DECEMBER 2023

December 2023 EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring December 2023

Table 1 - Surface Water Quality Data
River and Minor Watercourses

	Water Quality Objectives (see note 1)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	90 - 110	-	30 - 350	-	6.5 - 8.0	-	2 - 25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
1/12/2023, 11:43 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	18.87	86	7.99	51	33	7.25	148	104	Cloudy day, rain overnight, high flow	This location is upstream of works and is therefore representative of background conditions.
8/12/2023, 12:35 pm	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	18.99	92.8	8.6	74	48	8.09	161	92.1	Cloudy, clear water, overnight rain, no odour, high flow	Elevated turbidity is consistent with background conditions for December 2023 and elevated pH is within historical range for this location.
14/12/2023, 10:44 am	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	22.6	123.4	10.66	122	80	7.13	233	0	Clear water, high flow, sunny, no odour	Low turbidity and elevated DO are within historical range for this location.
8/12/2023, 11:22 am	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	19.26	140.1	12.92	88	57	7.31	167	92.8	Cloudy, rained overnight, high flow	Elevated turbidity and DO are within historical range and are consistent with background conditions for December 2023.
1/12/2023, 11:13 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	19.4	82.4	7.58	60	39	8.2	173	94.9	High flow, cloudy day, rain overnight	Elevated turbidity, DO, and pH are generally consistent with background conditions for December 2023 and within historical ranges for this location.
8/12/2023, 12:15 pm	EPL14	Yarrangobilly River, downstream of road construction areas	20.17	105.5	9.56	91	59	8.32	148	101	High flow, cloudy, rained overnight, clear water	Elevated pH is within historical range for this location and elevated turbidity is consistent with background conditions for December 2023.
1/12/2023, 9:41 am	EPL15	Yarrangobilly River, downstream of road construction areas	16.8	97.1	9.43	54	35	7.5	165	114	Cloudy day, clear water, high flow	Elevated turbidity is consistent with background conditions for December 2023.
8/12/2023, 12:51 pm	EPL16	Yarrangobilly River, downstream of road construction areas	19.87	94.2	8.59	89	58	7.69	177	93.5	Clear water, rain overnight, high flow, no odour	Elevated turbidity is consistent with background conditions for December 2023.
8/12/2023, 11:56 am	EPL17	Lick Hole Gully upstream	18.34	105.2	9.88	541	346	7.77	178	102	Low flow, clear water, no odour	High EC is within historical range for this location and elevated turbidity is consistent with background conditions for December 2023.
8/12/2023, 11:05 am	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	18.73	177.1	16.51	222	144	6.42	189	98.4	Cloudy, low flow, rained overnight, no odour	Low pH and elevated DO are within historical range for this location and elevated turbidity is consistent with background conditions for December 2023.
6/12/2023, 10:41 am	EPL26	Eucumbene River downstream of Marica Road	16.27	94.5	9.27	24	16	7.92	177	121	Clear water, cloudy, low flow	Low EC and elevated turbidity are within historical range for this location and are consistent with background conditions for December 2023.
6/12/2023, 10:35 am	EPL27	Eucumbene River upstream of Marica Road	17.48	109.1	10.44	28	18	7.99	178	108	Sunny day, clear water, low flow, any smell detected	This location is upstream of works and is therefore representative of background conditions.
15/12/2023, 10:38 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	17.02	106.3	10.27	41	27	7.33	192	0	Clear water, no odour, sunny, low flow	Low turbidity is consistent with background conditions during sampling and within historical ranges.
15/12/2023, 10:23 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	17.8	105.8	10.05	105	69	6.66	225	0	Sunny, low flow, clear water, rained overnight	Low turbidity is consistent with background conditions during sampling and within historical ranges.
15/12/2023, 11:21 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	21.48	87.3	7.7	30	19	7.03	225	0	Sunny day, clear water, any smell, low flow	Low DO and turbidity are generally consistent with background conditions during sampling and within historical ranges.
15/12/2023, 11:50 am	EPL34	Nungar Creek, upstream of Tantangara Road	19.53	119.6	10.97	31	20	6.96	225	0	Sunny Day, clear water, animals around, low flow	This location is upstream of works and is therefore representative of background conditions.
15/12/2023, 11:57 am	EPL35	Nungar Creek, downstream of Tantangara Road	18.85	113.7	10.58	25	16	6.96	220	0	Sunny day, clear water, any smell detected, low flow	High DO and low EC and turbidity are within historical range for this location and are consistent with background conditions for December 2023.
15/12/2023, 12:37 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	19.19	98.5	9.1	62	40	6.72	210	0	Sunny day, a bit turbid water, animals around, small watercourse, any smell	This location is upstream of works and is therefore representative of background conditions.
15/12/2023, 12:49 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	22.37	96.1	8.34	69	45	7.08	187	1.8	Sunny day, low flow, small watercourse, a bit turbid, animals around	Low turbidity is consistent with background readings for December 2023.
16/12/2023, 9:17 am	EPL52	GF01 sediment basin	22.26	101.4	8.79	1270	811	7.97	217	1.2	Sunny day, green-yellow colour of water, no smell detected	High EC and low turbidity due to runoff accumulating in sediment basin. Water was taken for treatment at process water treatment plant.
N/A	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
N/A	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
16/12/2023, 9:47 am	EPL55	GF01 surface water downstream	19.18	102.1	9.41	820	525	7.48	233	0	Sunny day, flow was very low (almost stagnant), water was taken from receiving small watercourse, clean water, pungent smell detected	High EC and low turbidity is consistent with low flow conditions. Water is collected from downstream and treated with the leachate basin water during the ongoing investigation at GF01.
6/12/2023, 11:11 am	EPL71	Surface water downstream of Marica emplacement	17.7	82.5	8.89	31	20	7.79	183	228	Sunny day, a bit turbid water, any smell detected	Low DO and elevated turbidity are generally consistent with background conditions at Marica during sampling.

Table 2 - Reservoir Water Quality Data
Talbingo and Tantangara Reservoirs

	Water Quality Objectives (see note 2)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	90 - 110	-	20 - 30	-	6.5 - 8.0	-	1 - 20

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
10/12/2023, 8:14 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	22.58	85.2	7.36	81	53	7.82	140	85.1	Sunny, clear water, no odour	Low DO with elevated EC and turbidity are within historical ranges and background concentrations due to recent rainfall for this location for December 2023.
10/12/2023, 8:01 am	EPL11	Talbingo Reservoir, downstream of outlet	22.14	87.4	7.62	87	56	7.98	130	123	Sunny, clear water, no odour, construction work around	Low DO with elevated EC and turbidity are within historical ranges and background concentrations due to recent rainfall for this location for December 2023.
13/12/2023, 8:36 am	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	21	71.2	6.24	24.5	17.3	7.43	-22.5	4.37	-	This location is upstream of works and is therefore representative of background conditions.
13/12/2023, 9:15 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	22.1	71.2	6.18	25.3	17.4	7.56	-35.5	4.03	-	Low DO is within historical range for this location and is consistent with background ranges for December 2023.
13/12/2023, 9:00 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	21.8	71.8	6.27	24.4	16.9	7.6	-41.2	4.11	-	Low DO is within historical range for this location and is consistent with background ranges for December 2023.
13/12/2023, 8:13 am	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	20.7	73.6	6.3	27.6	19.5	7.67	-63.3	6.48	-	Low DO is within historical range for this location and is consistent with background ranges for December 2023.
13/12/2023, 8:47 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	21.1	80.9	6.84	24.7	17.3	7.52	-27.3	3.2	-	This location is upstream of works and is therefore representative of background conditions.
13/12/2023, 8:31 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	20.8	69.3	5.9	26.5	18.7	7.36	-57.3	7.45	-	Low DO is within historical range for this location and is consistent with background ranges for December 2023.
13/12/2023, 9:27 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	22.2	74	6.42	25	17.2	7.52	-32.2	4.13	-	Low DO is within historical range for this location and is consistent with background ranges for December 2023.

Table 3 - Treated Water Quality Data
Talbingo

	Water Quality Objectives (see note 3)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	-	-	700	-	6.5 - 8.0	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
10/12/2023, 6:22 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	21.59	80.9	7.13	93	60	8.11	182	81.4	Sunny, clear water, no odour	No discharge was occurring at the time of sample collection.

Table 4 - Treated Water Quality Data
Tantangara

	Water Quality Objectives (see note 3)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	-	-	200	-	6.5 - 8.0	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
15/12/2023, 10:59 am	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	21.49	109.8	9.7	13	8	7.23	194	0	Clear water, no odour, treated recently	All readings within WQO limits.

Table 5 - Groundwater Quality Data
GF01 Surface Water and Groundwater

	Water Quality Objectives (see note 1)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	-	-	30 - 350	-	6.5 - 8.0	-	-

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
16/12/2023, 10:58 am	EPL56	GF01 groundwater upstream east	22.09	118.5	10.34	286	186	7.92	182	242	Sunny day, turbid water, any smell detected, SWL- 10.558 m	This location is upgradient of works and is therefore representative of background conditions.
16/12/2023, 10:31 am	EPL57	GF01 groundwater upstream west	17.44	111.3	9.66	308	200	7.86	61	128	Sunny day, turbid water, smell pungent detected, SW- 18.179 m.	This location is upgradient of works and is therefore representative of background conditions.
16/12/2023, 10:06 am	EPL58	GF01 groundwater downstream	25.33	81.7	6.7	834	534	5.39	27	7.2	Sunny weather, Water looks clear. SWL- 7.995m.	Elevated EC with low pH and will be monitored.
3/12/2023, 10:28 am	EPL68	Tantangara groundwater downstream West	13.4	76.8	7.59	75.8	24.8	5.69	-47.8	36	-	Low pH is consistent with upgradient conditions in December 2023.
3/12/2023, 9:43 am	EPL69	Tantangara groundwater downstream East	13.3	56.4	5.88	40.3	33.7	5.71	-61.8	20.3	-	Low pH is consistent with upgradient conditions in December 2023.
3/12/2023, 10:54 am	EPL70	Tantangara groundwater upstream	14.2	72.6	7.46	77.3	63.4	6.25	-19.8	54.4	-	This location is upgradient of works and is therefore representative of background conditions.
13/12/2023, 11:02 am	EPL 72	Marica groundwater upstream	16.1	51.4	5.07	53.8	42.2	5.6	-22.8	16.5	-	This location is upgradient of works and is therefore representative of background conditions.
13/12/2023, 12:49 am	EPL73	Marica groundwater downstream	15.2	68.7	6.89	90.8	72.6	6.3	-38.6	106	-	Low pH is consistent with upgradient conditions in December 2023.

JANUARY 2024

January 2024 EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring January 2024

Table 1 - Surface Water Quality Data
River and Minor Watercourses

	Water Quality Objectives (see note 1)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	90 - 110	-	30 - 350	-	6.5 - 8.0	-	2 - 25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
10/01/2024, 11:03 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	20.65	70.8	6.35	74	48	7.86	181	10.4	Sunny day, high flow, a bit turbid water, rain over in the las days, no odour.	This location is upstream of works and is therefore representative of background conditions.
10/01/2024, 11:27 am	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	21.16	52.9	4.7	81	53	7.69	189	4.6	Sunny day, rain over in the las days, clear water, low flow, no odour	Lower DO is consistent with background conditions for January 2024.
10/01/2024, 12:32 pm	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	23.5	56	4.75	88	57	7.97	181	3.8	Sunny day, rain over in the last days, high flow, fast flowing, no odour	Lower DO is within historical range and are consistent with background conditions for January 2024.
08/01/2024, 02:16 pm	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	21.83	74.3	6.52	86	56	7.57	152	12.1	Rainy day, high flow, a bit turbid water, no odour, rain overnight, big watercourse.	Lower DO is within historical range and are consistent with background conditions for January 2024.
10/01/2024, 10:42 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	19.98	61.6	5.6	77	50	8.24	164	10.9	Sunny day, rain over in the last days, a bit murky water, medium flow, no odour.	Elevated pH and low DO is generally consistent with background and historical conditions for this location and January 2024.
10/01/2024, 11:39 am	EPL14	Yarrangobilly River, downstream of road construction areas	21.86	69.7	6.11	72	47	7.77	183	4.1	Sunny day, rain over in the las days, shallow water, clear water, low flow	Lower DO is consistent with background conditions for January 2024.
10/01/2024, 11:58 am	EPL15	Yarrangobilly River, downstream of road construction areas	22.22	68.9	6	71	46	7.59	194	4	Sunny day, rain over in the las days, low flow, clear water, no odour.	Lower DO is consistent with background conditions for January 2024.
10/01/2024, 01:11 pm	EPL16	Yarrangobilly River, downstream of road construction areas	24.26	67.3	5.64	83	54	6.94	197	3	Sunny day, over rainfall in the las days, turbulent flow, clear appearance, no odour.	Lower DO is consistent with background conditions for January 2024.
10/01/2024, 12:47 pm	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	22.86	66.8	4.88	389	253	7.47	159	12	Sunny day, murky water, rain over in the last days, reasonable flow, no odour.	DO is lwoer than December 2023 and will be monitored though is within historical range for this location. EC is within historical range though is elevated compared to December 2023 and will also be monitored
21/01/2024, 10:47 am	EPL26	Eucumbene River downstream of Marica Road	14.77	68.5	6.94	32	21	6.41	202	2.5	Sunny, clear water, a lot of sediment when disturbed. No odour	Low DO is within historical range for this location and elevated pH is consistent with background conditions for January 2024.
21/01/2024, 11:07 am	EPL27	Eucumbene River upstream of Marica Road	13.9	99.1	10.24	30	19	6.9	172	1.7	Clear water, no odour, sunny	This location is upstream of works and is therefore representative of background conditions.
16/01/2024, 11:49 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	16.94	56.6	5.48	29	19	7.61	220	4.7	Cloudy day, rain over in the last days, low flow, small watercourse, animals around	DO and EC is within historical range for this location.
16/01/2024, 11:40 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	17.16	59.3	5.71	22	14	7.8	222	3.6	Cloudy day, rain over in the lasts days, clear water, no odour, animals around	DO and EC is within historical range for this location.
16/01/2024, 12:14 pm	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	19.26	67	6.18	34	22	7.64	219	3.4	Cloudy day, low level of water, it's not discharging from the reservoir, murky water, no odour	Low DO is within historical ranges for this location.
16/01/2024, 12:50 pm	EPL34	Nungar Creek, upstream of Tantangara Road	16.85	65.6	6.36	16	11	7.46	223	3.5	Cloudy day, rain over in the last days, a bit murky water, high flow, no odour	This location is upstream of works and is therefore representative of background conditions.
16/01/2024, 12:45 pm	EPL35	Nungar Creek, downstream of Tantangara Road	17.58	73.8	7.05	17	11	7.64	224	3	Cloudy day, rain over in the last days, high flow, a bit murky water, no odour, animals around	Low EC and DO are within historical range for this location and are consistent with background conditions for January 2024.
16/01/2024, 02:28 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	18.67	70.6	6.59	49	32	7.82	343	4.5	Sunny day, low flow, murky water, small watercourse, animals around, no odour	This location is upstream of works and is therefore representative of background conditions.
16/01/2024, 02:43 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	20.06	61.5	5.58	52	34	7.97	270	15.3	Sunny day, turbid water, no odour, low flow, small watercourse	Low DO is generally consistent with background conditions during sampling and within historical ranges.
23/01/2024, 09:10 am	EPL52	GF01 sediment basin	19.43	108.9	9.99	710	455	7.68	119	5	Clear water, sunny, no odour, spoil emplacement around	High EC due to runoff accumulating in sediment basin. Water was taken for treatement at process water treatement plant.
N/A	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	No water flow	Dry site.
N/A	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	No water flow	Dry site.
23/01/2024, 02:29 pm	EPL55	GF01 surface water downstream	18.47	97.6	9.13	725	464	7.72	120	5.1	Clear water, sunny, no odour, spoil emplacement around, low flow	High EC is consistent with low flow conditions. Water is collected from downstream and treated with the leachate basin water during the ongoing investigation at GF01.
17/01/2024, 04:01 pm	EPL71	Surface water downstream of Marica emplacement	14.1	64.2	6.6	43.2	35.5	6.96	1.9	74.2	Low flow	Low DO is generally consistent with background conditions at Marica during sampling. Elevated turbidity is likely due to disturbance during sampling low flow water.

Table 2 - Reservoir Water Quality Data
Talbingo and Tantangara Reservoirs

Water Quality Objectives (see note 2)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	90 - 110	-	20 - 30	-	6.5 - 8.0	-	1 - 20

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
13/01/2024, 01:35 pm	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	28.04	67.2	5.26	62	40	6.98	256	2.4	Sunny day, clear water, no odour.	Low DO with elevated EC are within historcial ranges and background concentrations due to recent rainfall for this location for January 2024.
13/01/2024, 01:05 pm	EPL11	Talbingo Reservoir, downstream of outlet	28.29	70.4	5.48	57	37	6.64	243	2.9	Sunny day, no odour, clear water.	Low DO with elevated EC are within historcial ranges and background concentrations due to recent rainfall for this location for January 2024.
20/01/2024, 10:06 am	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	19.46	101.9	9.37	26	17	7.79	149	12.8	Clear water, cloudy, no odour	All readings within WQO limits.
20/01/2024, 10:30 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	19.83	91.4	8.34	25	16	7.93	130	9.8	Clear water, cloudy, no odour	All readings within WQO limits.
20/01/2024, 10:23 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	20.08	102	9.25	25	16	7.96	128	10.4	Clear water, cloudy, no odour	All readings within WQO limits.
20/01/2024, 10:16 am	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	19.59	98.7	9.05	26	17	7.82	132	13.3	Clear water, cloudy, no odour	All readings within WQO limits.
20/01/2024, 9:57 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	18.97	100	9.28	27	18	7.55	139	12.6	Clear water, cloudy, no odour, some boats around	All readings within WQO limits.
20/01/2024, 9:48 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	16.18	97.4	9.57	28	18	7.82	133	13.2	Clear water, sunny, no odour	All readings within WQO limits.
20/01/2024, 10:38 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	19.93	102.2	9.3	27	17	7.91	127	10.2	Clear water, cloudy, no odour	All readings within WQO limits.

Table 3 - Treated Water Quality Data
Talbingo

Water Quality Objectives (see note 3)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	-	-	700	-	6.5 - 8.5	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
21/01/2024, 06:15 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	19.21	94.8	8.76	106	69	7.64	248	4.2	Clear water, cloudy, no odour	All readings within WQO limits.

Table 4 - Treated Water Quality Data
Tantangara

Water Quality Objectives (see note 3)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	-	-	200	-	6.5 - 8.5	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
16/01/2024, 11:17 am	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	18.97	68.6	6.36	22	14	8.15	191	3.7	Treated water	High pH will be monitored. pH is consistent with upgradient conditions.

Table 5 - Groundwater Quality Data
GF01 Surface Water and Groundwater

Water Quality Objectives (see note 1)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	-	-	30 - 350	-	6.5 - 8.0	-	-

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
23/01/2024, 12:30 pm	EPL56	GF01 groundwater upstream east	17.84	75.9	7.21	270	175	7.82	84	39	Clear water, sunny, no odour, spoil emplacement around, SWL- 10.663m	This location is upgradient of works and is therefore representative of background conditions.
23/01/2024, 11:30 am	EPL57	GF01 groundwater upstream west	21.02	99.6	8.87	276	179	7.38	153	60.2	Turbid water, sunny, no odour, spoil emplacement around, SWL-11.503m	This location is upgradient of works and is therefore representative of background conditions.
23/01/2024, 06:55 am	EPL58	GF01 groundwater downstream	20.35	90.1	8.12	721	461	6.55	170	29.7	Clear water, sunny, no odour, spoil emplacement around, SWL-7.401m	pH has come back into WQ criteria in January 2024. EC is still exceeding but has decreased between December 2023 and January 2024.
17/01/2024, 12:39 pm	EPL68	Tantangara groundwater downstream West	15.9	83.5	8.26	18.8	15	5.98	128	27.27	Heavy rainfall. Had to collect data a few hours after getting samples	Low pH is consistent with upgradient conditions in January 2024 as it was in December 2023. Low EC will be monitored.
17/01/2024, 12:33 pm	EPL69	Tantangara groundwater downstream East	15.7	80.2	7.96	21.8	17	5.97	137.7	15.16	Heavy Rainfall. Collected this data a few hours after getting the samples.	Low pH is consistent with upgradient conditions in January 2024 as it was in December 2023. Low EC will be monitored.
17/01/2024, 12:48 pm	EPL70	Tantangara groundwater upstream	14.8	77.7	7.87	66.6	54	6.18	104.3	38.33	Heavy Rainfall. Had to collect data a few hours after getting samples	This location is upgradient of works and is therefore representative of background conditions.
17/01/2024, 04:08 pm	EPL 72	Marica groundwater upstream	12	51.6	5.55	29	25	5.54	15.7	820	Overcast	This location is upgradient of works and is therefore representative of background conditions.
17/01/2024, 04:03 pm	EPL73	Marica groundwater downstream	14.8	60.8	6.16	120.8	97.5	6.69	2.2	82.9	Overcast.	All readings within WQO limits.

FEBRUARY 2024

February 2024 EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring February 2024

Table 1 - Surface Water Quality Data

River and Minor Watercourses

Water Quality Objectives (see note 1)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	90 - 110	-	30 - 350	-	6.5 - 8.0	-	2 - 25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
1/2/2024, 9:03 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	20.51	108.1	9.73	110	71	8.84	23	2.5	Sunny day, a bit turbulent, low flow, clear water, no odour	This location is upstream of works and is therefore representative of background conditions .
1/2/2024, 12:00 pm	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	24.71	112.4	9.34	111	72	8.45	72	0	Sunny day, a bit turbulent, low flow, clear water, no odour	DO and elevated pH are consistent with background conditions for this location for February 2024.
1/2/2024, 1:11 pm	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	25.54	108.6	8.88	112	73	7.7	149	0	Sunny day, low flow, a bit turbulent, clear water, no odour	Low turbidity is consistent with background conditions during sampling and within historical ranges.
1/2/2024, 2:55 pm	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	26.08	99.6	8.07	114	74	8.05	147	0	Sunny day, clear water, high flow, no odour	Elevated pH and low turbidity is consistent with background conditions for February 2024.
1/2/2024, 7:56 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	19.44	117.6	10.81	110	72	8.21	171	0	Sunny day, clear water, low flow, no odour	Low turbidity is within historical range for this location and elevated pH and DO are consistent with background conditions for this location for February 2024.
1/2/2024, 12:30 pm	EPL14	Yarrangobilly River, downstream of road construction areas	24.89	98.8	8.03	107	69	7.84	132	0	Sunny day, low flow, no odour, clean water	Low turbidity is consistent with background conditions during sampling and within historical ranges.
1/2/2024, 12:56 pm	EPL15	Yarrangobilly River, downstream of road construction areas	25.77	98.6	8.03	109	71	7.73	145	0	Sunny day, low flow, clean water, no odour	Low turbidity is consistent with background conditions during sampling and within historical ranges.
1/2/2024, 4:14 pm	EPL16	Yarrangobilly River, downstream of road construction areas	27.67	100.9	7.94	117	76	8.57	97	0	Sunny day, over rainfall in the las days, turbulent flow, clear appearance, no odour.	Elevated pH is consistent with background conditions and low turbidity is within historical range for this location for February 2024.
1/2/2024, 3:14 pm	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	22.89	128.2	11.01	410	267	6.28	194	0	Sunny day, murky water, rain over in the last days, reasonable flow, no odour.	Lower pH and turbidy is within historical range for this location. Elevated DO is likely due to recent rainfall but will be monitored as DO is generally less than WQO for this location.
13/2/2024, 10:46 am	EPL26	Eucumbene River downstream of Marica Road	17.95	109.6	10.38	40	26	7.96	182	0	Clear water, low flow, cloudy, no odour	Low turbidity is consistent with background conditions during sampling and within historical ranges.
13/2/2024, 10:32 am	EPL27	Eucumbene River upstream of Marica Road	16.18	109.3	10.75	45	29	7.94	174	0	Clear water, low flow, cloudy, no odour	This location is upstream of works and is therefore representative of background conditions .
7/2/2024, 12:28 pm	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	17.99	115	10.89	37	24	8.46	180	0	Sunny day, low flowing, clean water, no odour	Elevated pH and DO are similar to other inflows to the reservoir for February 2024. Low turbidity is within historical range for this location for February 2024.
7/2/2024, 12:18 pm	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	17.7	136.4	12.99	26	17	8.43	201	0	Sunny day, clean water, no odour, low flowing	Elevated pH and DO are similar to other inflows to the reservoir for February 2024. Low turbidity is within historical range for this location for February 2024.
7/2/2024, 11:47 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	20.96	109.7	9.78	36	23	8.2	204	6.4	Sunny day, low flow, low level of water, no odour	Elevated pH is generally consistent with background conditions during sampling and within historical ranges.
7/2/2024, 11:11 am	EPL34	Nungar Creek, upstream of Tantangara Road	16.55	141.9	13.84	24	15	8.26	260	0.1	Sunny day, low flow, a bit murky water, small watercourse, no odour	This location is upstream of works and is therefore representative of background conditions .
7/2/2024, 11:18 am	EPL35	Nungar Creek, downstream of Tantangara Road	16.41	141.6	13.85	23	15	8.48	193	0	Sunny day, low flow, small watercourse, no odour, clean water	Low EC and turbidity is within historical range for this location and high DO and pH is consistent with background conditions for February 2024.
7/2/2024, 3:09 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	20.99	113.2	10.11	64	42	7.91	221	16.1	Sunny day, turbid water, no flowing, small watercourse	This location is upstream of works and is therefore representative of background conditions .
7/2/2024, 3:25 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	24.09	118	9.91	56	36	8.55	180	7.4	Sunny day, no flowing, turbid water, no odour, low level of water	Elevated DO and pH is generally consistent with background conditions during sampling and within historical ranges.
14/2/2024, 11:03 am	EPL52	GF01 sediment basin	22.25	116	10.06	969	620	8.74	93	30.1	Clear water, sunny, construction work around, no odour	High EC, pH and turbidity due to runoff accumulating in sediment basin and low DO . Water was taken for treatement at process water treatement plant.
N/A	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
N/A	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
N/A	EPL55	GF01 surface water downstream	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
18/2/2024, 7:00 am	EPL71	Surface water downstream of Marica emplacement	16.6	87.8	8.56	49.6	38	7.36	126.9	26.78	Fine warm day.	Low DO is generally consistent with background conditions at Marica during sampling. Elevated turbidity is likely due to disturbance during sampling low flow water.

February 2024 EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring February 2024

Table 2 - Reservoir Water Quality Data
Talbingo and Tantangara Reservoirs

Water Quality Objectives (see note 2)								
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	
-	90 - 110	-	20 - 30	-	6.5 - 8.0	-	1 - 20	

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
7/2/2024, 7:41 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	23.99	141.4	11.9	95	62	7.63	261	7.4	Sunny day, clean water, no odour, low level of water	Elevated EC and DO are within historcial ranges and background concentrations for February 2024.
7/2/2024, 7:27 am	EPL11	Talbingo Reservoir, downstream of outlet	23.93	146.7	12.37	90	59	7.65	242	14.1	Sunny day, clear water, no odour, low level of water	Elevated EC and DO are within historcial ranges and background concentrations for February 2024.
27/2/2024, 11:00 am	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	21.52	159.9	14.11	28	18	7.96	221	2.4	Sunny day, no odour, clear water	This location is upstream of works and is therefore representative of background conditions .
27/2/2024, 11:33 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	21	83.8	7.47	25.4	18	8.06	204.9	12.77	Sunny day, clear water, no odour	Elevated pH and DO, and low turbidity are consistent with historic ranges for this locaiton and is generally consisitent with background conditions during sampling for February 2024.
27/2/2024, 11:19 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	16.27	114.2	11.2	29	19	7.78	136	0	No odour, sunny day, clear water	Elevated DO and low turbidity are within historcial ranges and consistent with background concentrations for February 2024.
27/2/2024, 11:11 am	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	21.19	125.7	11.16	27	18	7.9	202	1.8	Sunny day, clear water, no odour	Elevated DO is within historcial ranges and consistent with background concentrations for February 2024.
27/2/2024, 9:58 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	18.7	81.3	7.44	23.8	17	7.53	231.6	6.57	Clear water, cloudy, no odour, some boats around	This location is upstream of works and is therefore representative of background conditions .
27/2/2024, 9:21 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	18.98	139.3	12.92	32	21	7.77	157	0	Clear water, sunny, no odour	This location is upstream of works and is therefore representative of background conditions .
27/2/2024, 11:54 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	21.23	130.2	11.56	28	18	8.05	183	0.2	Sunny day, clear water, no odour	Elevated pH and DO, and low turbidity are consistent with historic ranges for this locaiton and is generally consisitent with background conditions during sampling for February 2024.

Table 3 - Treated Water Quality Data
Talbingo

Water Quality Objectives (see note 3)								
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	
-	-	-	700	-	6.5 - 8.0	-	25	

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
4/2/2024, 7:13 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	21.93	97.2	8.51	99	64	8.4	181	0.8	Very clean water. Warm, cloudy morning	No discharge was occurring at the time of sampling due to not meeting required WQO.

Table 4 - Treated Water Quality Data
Tantangara

Water Quality Objectives (see note 3)								
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	
-	-	-	200	-	6.5 - 8.0	-	25	

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
7/2/2024, 12:42 pm	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	21.31	92.3	8.18	14	9	8.42	179	0.1	Treated water	No discharge was occurring at the time of sampling due to not meeting required WQO.

Table 5 - Groundwater Quality Data
GF01 Surface Water and Groundwater

Water Quality Objectives (see note 1)								
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	
-	-	-	30 - 350	-	6.5 - 8.0	-	-	

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
1/2/2024, 11:01 am	EPL1	Wallace Creek Bridge	20.51	43.2	3.88	1020	768	8.28	-136	13.6	Sunny day, a bit smelly, clean water	Elevated EC and pH are generally consistent with and within background range for Febraury 2024.
2/2/2024, 8:50 am	EPL2	Wallace Creek Bridge	15.96	69.3	6.84	498	324	7.46	8	15.8	Sunny day, clean water, no odour	EC is within historical range for groundwater at Lobs Hole.
1/2/2024, 8:13 am	EPL4	Portal Access	16.84	16.5	1.6	1050	957	8.03	-161	5833	Suing day, solid emplacement in the bore, turbid water, black colour of the water, smelling	Elevated EC and pH are generally consistent with and within background range for Febraury 2024.
1/2/2024, 9:16 am	EPL25	Portal Access	18.83	44.3	4.12	449	292	7.37	48	71.7	Sunny day, sediment water settled in sleeve, no odour	EC is within historical range for groundwater at Lobs Hole.
14/2/2024, 9:58 am	EPL56	GF01 groundwater upstream east	17.2	73	7.02	259	168	7.81	196	9.7	Clear water, sunny, no odour, spoil emplacement around, SWL-10.827m	This location is upgradient of works and is therefore representative of background conditions.
14/2/2024, 10:12 am	EPL57	GF01 groundwater upstream west	17.08	81	7.8	264	172	7.95	192	28.4	Clear water, sunny, no odour, spoil emplacement around, SWL-18.946m	This location is upgradient of works and is therefore representative of background conditions.
14/2/2024, 10:53 am	EPL58	GF01 groundwater downstream	18.29	89.6	8.41	721	462	6.34	155	22.8	Clear water, sunny, no odour, spoil emplacement around, SWL-8.185m	Elevated EC with low pH will be monitored.
21/2/2024, 4:18 pm	EPL68	Tantangara groundwater downstream West	13	82.3	8.67	21.6	18	6.05	186.2	42.76	-	Low EC and pH will be monitored, however are generally consistent with upgradient conditions in February 2024.
21/2/2024, 4:21 pm	EPL69	Tantangara groundwater downstream East	14.7	74.2	7.54	22.9	19	6.19	186	14.77	-	Low EC and pH will be monitored, however are generally consistent with upgradient conditions in February 2024.
21/2/2024, 4:29 pm	EPL70	Tantangara groundwater upstream	15.1	72.6	7.31	69.3	56	6.53	146.6	29.94	-	This location is upgradient of works and is therefore representative of background conditions.
18/2/2024, 8:05 am	EPL 72	Marica groundwater upstream	15.4	72.6	7.25	31.7	25	6.31	246.7	375.79	Fine warm day	This location is upgradient of works and is therefore representative of background conditions.
18/2/2024, 6:35 am	EPL73	Marica groundwater downstream	14.1	67.6	6.96	71.3	59	6.75	174.7	22.32	Fine day	All readings within WQO limits.

MARCH 2024

March 2024 EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring March 2024

Table 1 - Surface Water Quality Data
River and Minor Watercourses

	Water Quality Objectives (see note 1)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	90 - 110	-	30 - 350	-	6.5 - 8.0	-	2 - 25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
2/3/2024, 8:56 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	18.79	105.9	9.86	126	82	8.11	174	2	Clear water, low flow, cloudy	This location is upstream of works and is therefore representative of background conditions.
2/3/2024, 9:26 am	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	17.98	109.6	10.38	133	86	8.08	179	0	Clear water, low flow, cloudy, no odour	Slightly elevated pH and low turbidity is consistent with background conditions for this location for March 2024.
2/3/2024, 10:52 am	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	19.89	94.2	8.58	139	91	8.41	167	0.5	Clear water, low flow, cloudy, no odour	Slightly elevated pH and low turbidity is consistent with background conditions for this location for March 2024.
2/3/2024, 11:40 am	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	20.82	104.6	9.35	127	82	8.28	178	0.2	Clear water, low flow, cloudy, no odour	Slightly elevated pH and low turbidity is consistent with background conditions for this location for March 2024.
2/3/2024, 9:10 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	19.38	109.9	10.11	125	81	8.15	176	0	Clear water, low flow, cloudy, no odour	Slightly elevated pH and low turbidity is consistent with background conditions for this location for March 2024.
2/3/2024, 9:43 am	EPL14	Yarrangobilly River, downstream of road construction areas	19.03	108.2	10.02	127	83	8.12	176	1.1	Clear water, low flow, cloudy, no odour	Slightly elevated pH and low turbidity is consistent with background conditions for this location for March 2024.
2/3/2024, 10:14 am	EPL15	Yarrangobilly River, downstream of road construction areas	19.87	108	9.84	127	82	8.21	127	0.2	Clear water, low flow, cloudy, no odour	Slightly elevated pH and low turbidity is consistent with background conditions for this location for March 2024.
2/3/2024, 12:10 pm	EPL16	Yarrangobilly River, downstream of road construction areas	21.17	103.6	9.2	137	89	7.91	187	0.3	Clear water, low flow, cloudy, no odour	Low turbidity is within historical range for this location and is consistent with background conditions for March 2024.
2/3/2024, 10:29 am	EPL17	Lick Hole Gully upstream	18.05	96.5	9.12	478	310	8.13	186	30.9	Clear water, low flow, cloudy, no odour	Elevated EC and turbidity is within historical range for this location and elevated pH is consistent with background conditions for March 2024
20/3/2024, 1:01 pm	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	21.15	71.6	6.35	671	430	7.14	152	164	Cloudy day, rain overnight, grey colour of water, no smelly	Elevated EC and grey turbidity are being investigated at this location and possible mitigation options are being reviewed.
17/3/2024, 11:46 am	EPL26	Eucumbene River downstream of Marica Road	16.31	109.7	10.76	69	45	7.98	192	3.5	Rainy day, clear water, no odour, low flowing, low level of water	All readings within WQO limits.
17/3/2024, 11:56 am	EPL27	Eucumbene River upstream of Marica Road	15.13	96.1	9.66	38	25	7.87	204	1.7	Rainy day, clear water, very slow flowing, no odour	This location is upstream of works and is therefore representative of background conditions.
9/3/2024, 10:21 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	15.07	80.1	8.06	30	19	7.7	216	1.6	Sunny day, clean water, slow flowing, no odour	Low DO and pH is consistent with background conditions within historical range for this location for March 2024.
9/3/2024, 10:08 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	16.7	83.7	8.14	28	18	8.04	204	2.8	Sunny day, clean water, no odour, a bit fast flowing	This location is upstream of works and is therefore representative of background conditions.
9/3/2024, 10:49 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	20.64	81.8	7.34	27	18	7.51	191	25	Sunny day, a bit turbid water, no odour	Low DO and EC is generally consistent with background conditions during sampling and within historical ranges for this location in March 2024.
9/3/2024, 11:19 am	EPL34	Nungar Creek, upstream of Tantangara Road	19.28	63.1	5.82	28	19	7.59	214	4.7	Sunny day, very slow flowing, a bit murky water, no odour	This location is upstream of works and is therefore representative of background conditions.
9/3/2024, 11:23 am	EPL35	Nungar Creek, downstream of Tantangara Road	18.97	82.7	7.68	27	18	7.6	202	3.5	Sunny day, clean water, no odour, low flowing, low level of water	Low EC and DO is within historical range and consistent with background conditions for this location for March 2024.
9/3/2024, 12:04 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	16.05	70.8	6.99	44	29	7.38	218	3.3	Sunny day, a bit turbid water, no flowing, no odour, animals around	This location is upstream of works and is therefore representative of background conditions.
9/3/2024, 12:17 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	21.91	63.3	5.54	53	34	7.17	220	48.5	Sunny day, very low level of water, no odour, animals around, very low flowing	Low DO is generally consistent with background conditions during sampling and within historical ranges. The elevated turbidity is likely due to animal interaction and low flows.
21/3/2024, 3:03 pm	EPL52	GF01 leachate basin	20.1	104	9.42	818	524	8.98	113	481	Turbid water, no odour, sunny, spoil emplacement around	This location is a leachate basin. Water exceeding or outside of WQO ranges is treated at the water treatment systems on site.
N/A	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
N/A	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
31/3/2024, 1:26 pm	EPL55	GF01 surface water downstream	28.03	96.7	7.55	829	530	8.57	128	11.60	EPL55 was dry for most of March, with a small stagnant pool of water to sample from after rainfall. The water wasn't flowing and as a result.	Water quality is similar to that of the leachate basin however no overtopping occurred. Based on the sample location of a stagnant pool, the results provided in this report are not considered representative of normal conditions at EPL55.
2/3/2024, 1:07 pm	EPL71	Surface water downstream of Marica emplacement	18.8	88.7	8.25	51.4	38	8.64	98.1	19.97	Overcast, water slightly turbid, low flow	Low DO with slightly elevated pH are generally consistent with background conditions during sampling and within historical ranges.
5/3/2024, 9:13 am	EPL84	F8 leachate basin	12.22	68.9	7.35	1800	1150	9.32	175	1000	Turbid water, no odour, sunny	This location is a leachate basin. Water exceeding or outside of WQO ranges is treated at the water treatment systems on site.
5/3/2024, 11:07 am	EPL85	MY07 leachate basin	12.31	117.1	12.49	1110	711	9.17	190	672	Turbid water, no odour, low level, sunny	This location is a leachate basin. Water exceeding or outside of WQO ranges is treated at the water treatment systems on site.
5/3/2024, 11:47 am	EPL86	LHG01 leachate basin	12.81	94.8	10	902	578	8.45	203	11.8	Low level of water, algae growing, no odour, brown- green colour of water, sunny day	This location is a leachate basin. Water exceeding or outside of WQO ranges is treated at the water treatment systems on site.

Table 2 - Reservoir Water Quality Data
Talbingo and Tantangara Reservoirs

Water Quality Objectives (see note 2)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	90 - 110	-	20 - 30	-	6.5 - 8.0	-	1 - 20

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
24/3/2024, 9:50 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	21.38	107.3	9.49	76	49	7.83	224	0	Clear water, sunny, no odour, spoil emplacement upstream	Elevated EC and low turbidity are within historical ranges and background concentrations for March 2024.
24/3/2024, 9:36 am	EPL11	Talbingo Reservoir, downstream of outlet	20.58	108	9.71	71	46	7.86	226	0.9	Clear water, sunny, no odour, spoil emplacement upstream	Elevated EC and low turbidity are within historical ranges and background concentrations for March 2024.
5/3/2024, 12:18 pm	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	21.28	109.7	9.72	26	17	7.98	180	24.7	Clear water, no odour, low level, sunny	This location is upstream of works and is therefore representative of background conditions.
5/3/2024, 12:51 pm	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	21.08	109.6	9.76	27	18	7.6	184	3.8	Sunny day, clear water, no odour	All readings within WQO limits.
5/3/2024, 12:40 pm	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	21.04	109.4	9.75	26	17	7.61	193	8	Clear water, no odour, construction work upstream, low level, sunny	All readings within WQO limits.
5/3/2024, 12:28 pm	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	21.02	108	9.62	26	17	7.79	188	5.3	Sunny day, clear water, no odour	All readings within WQO limits.
5/3/2024, 11:43 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	20.11	107.8	9.77	26	17	7.83	146	1.2	Clear water, no odour, horses around, low level, sunny	All readings within WQO limits.
5/3/2024, 12:03 pm	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	17.91	109	10.35	29	19	7.58	186	1.3	Clear water, sunny, no odour	All readings within WQO limits.
5/3/2024, 12:46 pm	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	20.48	108.3	9.75	26	17	6.89	223	1.8	Clear water, no odour, construction work upstream, low level, sunny	All readings within WQO limits.
5/3/2024, 1:01 pm	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	20.74	100.6	9.02	27	17	7.39	193	1.2	Clear water, no odour, construction work upstream, low level, sunny	All readings within WQO limits.
24/3/2024, 9:19 am	EPL 107	Upstream Yarrangobilly (Ravine Bay)	20.39	106.6	9.62	53	34	7.72	217	6.6	Clear water, sunny, no odour, spoil emplacement upstream	All readings within WQO limits.
24/3/2024, 9:08 am	EPL 108	Upstream Tumut (Ravine Bay)	20.28	95.9	8.67	43	28	7.76	214	9.2	Clear water, sunny, no odour, spoil emplacement upstream	All readings within WQO limits.
24/3/2024, 8:59 am	EPL 109	Downstream Tumut (Ravine Bay)	19.48	108.4	9.96	47	30	7.84	221	11.4	Clear water, sunny, no odour, spoil emplacement upstream	All readings within WQO limits.

Table 3 - Treated Water Quality Data
Talbingo

Water Quality Objectives (see note 3)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	-	-	700	-	6.5 - 8.0	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
3/3/2024, 6:21 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	18.87	95	8.83	105	68	8.08	143	26.4	Clear water, low flow, no odour	No water was being discharged on day of sampling.

Table 4 - Treated Water Quality Data
Tantangara

Water Quality Objectives (see note 3)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	-	-	200	-	6.5 - 8.0	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
9/3/2024, 9:46 am	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	19.36	95.3	43	67	43	6.89	136	1.9	Treated water	All readings within WQO limits.

Table 5 - Groundwater Quality Data

Groundwater

Water Quality Objectives (see note 1)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	-	-	30 - 350	-	6.5 - 8.0	-	-

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
21/3/2024, 9:48 am	EPL56	GF01 groundwater upstream east	12.86	77.8	8.21	259	169	7.02	150	52	Clear water, no odour, cloudy, spoil emplacement around, SWL-11.783m	All readings within WQO limits.
21/3/2024, 10:05 am	EPL57	GF01 groundwater upstream west	13.57	79	8.21	260	169	7.38	169	51.9	Clear water, no odour, cloudy, spoil emplacement around, SWL-19.025m	All readings within WQO limits.
21/3/2024, 11:48 am	EPL58	GF01 groundwater downstream	17.53	73.3	6.99	123	380	7.06	123	3.2	Clear water, no odour, sunny, spoil emplacement around, SWL-7.863m	All readings within WQO limits.
10/3/2024, 8:57 am	EPL68	Tantangara groundwater downstream West	13.1	82.1	8.64	18.8	16	7.74	171.6	6.98	-	Low EC will be monitored but is consistently lower.
10/3/2024, 9:45 am	EPL69	Tantangara groundwater downstream East	14.9	76	7.68	23.4	19	8.12	129.6	4.93	-	Low EC and elevated pH will be monitored. pH is consistent with upgradient conditions in March 2024. EC is consistent with previous results.
10/3/2024, 11:21 am	EPL70	Tantangara groundwater upstream	15.8	70.3	6.96	73.8	58	8.79	221.7	11.41	Sunny, cloudless; clear water, no odour.	This location is upgradient of works and is therefore representative of background conditions.
2/3/2024, 2:00 pm	EPL 72	Marica groundwater upstream	18.1	68.1	6.44	30.4	23	7.67	204.2	72.98	Overcast, water turbid, SWL- 36.6 m, total depth: 46.28 m, no smell.	All readings within WQO limits.
2/3/2024, 1:00 pm	EPL73	Marica groundwater downstream	18.2	67.9	6.41	75.6	57	7.89	224.3	9.78	Over cast weather, SWL- 13.4 m, total depth: 31.8 m, no smell, clear water.	All readings within WQO limits.
1/3/2024, 12:06 pm	EPL80	LHG groundwater upstream	25.02	51.1	4.21	843	540	6.92	13	25.5	Clear water, no odour, cloudy, spoil emplacement around, SWL-20.347m	This location is upgradient of works and is therefore representative of background conditions.
1/3/2024, 11:24 am	EPL81	LHG groundwater downstream	20.22	77.8	7.04	472	291	6.96	-30	256	Turbid water, no odour, cloudy, spoil emplacement around, SWL-4.352m	Elevated EC is consistent with upgradient conditions in March 2024
1/3/2024, 12:38 pm	EPL82	MY groundwater upstream	30.78	56	4.17	675	432	6.28	183	1000	Turbid water, no odour, cloudy, SWL-9.246m	This location is upgradient of works and is therefore representative of background conditions.
1/3/2024, 10:59 am	EPL83	MY groundwater downstream	27.15	65.5	5.2	432	281	6.15	155	43.8	Turbid water, no odour, cloudy, spoil emplacement around, SWL-4.073m	Elevated EC and a slightly low pH are generally consistent with background conditions in March 2024.
1/3/2024, 10:48 am	EPL87	MY groundwater downstream	31.74	58.5	4.29	292	190	6.47	226	1000	Turbid water, no odour, cloudy, spoil emplacement around, SWL-4.347m	A slightly low pH is generally consistent with upgradient conditions in March 2024.
1/3/2024, 11:10 am	EPL88	MY groundwater downstream	23.61	70.5	5.97	725	458	6.91	-95	48.9	Clear water, stinky odour, cloudy, spoil emplacement around, SWL-4.323m	Elevated EC is generally consistent with upgradient conditions in March 2024.
1/3/2024, 11:42 am	EPL89	LHG groundwater downstream	23.25	70.6	6.02	262	168	6.44	105	283	Turbid water, no odour, cloudy, SWL-3.208m	Slightly low pH is generally consistent with upgradient conditions at this location in March 2024.
21/3/2024, 12:23 pm	EPL90	GF01 groundwater downstream	18.84	83.9	7.8	78	51	6.97	144	449	Turbid water, no odour, sunny, spoil emplacement around, WLS-14.296m	All readings within WQO limits.
21/3/2024, 12:41 pm	EPL91	GF01 groundwater downstream	18.44	58.7	5.51	233	151	7.28	51	30.6	Clear water, no odour, sunny, spoil emplacement around, SWL-9.416m	All readings within WQO limits.
21/3/2024, 10:58 am	EPL92	GF01 groundwater downstream	14.4	101.8	10.39	95	62	7.82	182	0	Clear water, no odour, sunny, spoil emplacement around, SWL-13.685m	All readings within WQO limits.
21/3/2024, 11:17 am	EPL93	GF01 groundwater downstream	15.79	72.7	7.2	287	187	7.29	86	1000	Turbid water, no odour, sunny, spoil emplacement around, SWL-14.974m	All readings within WQO limits.
21/3/2024, 11:30 am	EPL94	GF01 groundwater downstream	16.94	66.5	6.43	197	128	6.91	-33	365	Turbid water, no odour, sunny, spoil emplacement around, SWL-14.027m	All readings within WQO limits.
21/3/2024, 11:59 am	EPL95	GF01 groundwater downstream	18.12	90.1	8.5	427	278	7.51	164	9.5	Clear water, no odour, cloudy, spoil emplacement around, SWL-8.814m	No spoil has been placed in this location, therefore elevated EC is representative of background conditions.
21/3/2024, 11:37 am	EPL96	GF01 groundwater downstream	16.93	70.3	6.8	431	280	6.62	59	753	Turbid water, no odour, cloudy, spoil emplacement around, SWL-5.039m	No spoil has been placed in this location, therefore elevated EC is representative of background conditions.
21/3/2024, 12:58 pm	EPL97	GF01 groundwater downstream	20	73.9	6.71	328	213	7.58	105	175	Turbid water, no odour, sunny, spoil emplacement around, SWL- 6.463m	All readings within WQO limits.
24/3/2024, 8:45 am	EPL 113	Ravine Bay groundwater upstream	17.14	44.4	4.28	201	131	7	135	1000	Too muddy, dirty water, sunny day, construction going around	All readings within WQO limits.
24/3/2024, 8:51 am	EPL 115	Ravine Bay groundwater downstream	17.36	116.4	11.07	367	238	6.9	35	19.1	Clean water, sunny, no odour, construction work	No spoil has been placed in this location, therefore elevated EC is representative of background conditions.
24/3/2024, 9:05 am	EPL 117	Ravine Bay groundwater downstream	18.26	133.2	12.53	135	88	6.58	14	6.8	Clean water, sunny, no odour, construction work going around	All readings within WQO limits.

APRIL 2024

April 2024 EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring April 2024

Table 1 - Surface Water Quality Data
River and Minor Watercourses

Water Quality Objectives (see note 1)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	90 - 110	-	30 - 350	-	6.5 - 8.0	-	2 - 25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
3/4/2024, 11:33 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	17.21	102.3	3.83	154	100	7.72	145	3.3	Cloudy day, rain over in the last day, high flowing, clear water, a bit turbulent water, no odour	This location is upstream of works and is therefore representative of background conditions.
3/4/2024, 12:07 pm	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	16.14	99.5	9.79	145	94	8.08	91	4.9	Cloudy day, rain over on the last day, very slow flowing, low level of water, no odour, clear water	Elevated pH is consistent with historical ranges for this location.
3/4/2024, 2:49 pm	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	18.96	94.5	8.77	157	102	8.38	101	2.5	Sunny day, clear water, no odour, medium flowing	Elevated pH is consistent with historical ranges for this location.
3/4/2024, 3:12 pm	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	18.5	103.1	9.66	148	96	8.38	103	0	Sunny day, rain over on the last day, low flowing, medium level of water, very clear water	Elevated pH is consistent with historical ranges and low turbidity is consistent with background conditions during sampling for this location for April 2024.
3/4/2024, 11:49 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	16.83	112.3	11	147	96	8.22	115	0.2	Cloudy day, rain over on the last day, medium flowing, clear water, no odour	Elevated pH is consistent with historical ranges and low turbidity is consistent with background conditions during sampling for this location for April 2024.
3/4/2024, 12:33 pm	EPL14	Yarrangobilly River, downstream of road construction areas	17.06	91.8	8.86	148	96	8.22	86	0.8	Sunny day, rain over on the last day, slow flowing, low level of water, clear water, no odour	Elevated pH is consistent with historical ranges and low turbidity is consistent with background conditions during sampling for this location for April 2024.
3/4/2024, 12:35 pm	EPL15	Yarrangobilly River, downstream of road construction areas	18.9	108	10.2	148	96	8.37	120	0	Cloudy day, rain over on the last day, slow flowing, quite low level of water, very clear water	Elevated pH is consistent with historical ranges and low turbidity is consistent with background conditions during sampling for this location for April 2024.
3/4/2024, 4:40 pm	EPL16	Yarrangobilly River, downstream of road construction areas	18.47	114.8	10.76	150	97	8.43	130	0	Cloudy day, rain over on the last day, medium flow, low level of water, very clear water, no smelly	Elevated pH is consistent with historical ranges and low turbidity is consistent with background conditions during sampling for this location for April 2024.
17/4/2024, 1:45 pm	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	21.56	90.2	7.93	702	449	7.82	69	3.8	Clear water, low level, no odour, sunny	Elevated EC and grey turbidity are being investigated at this location and possible mitigation options are being reviewed.
8/4/2024, 8:44 am	EPL26	Eucumbene River downstream of Marica Road	11.3	106.1	11.61	42	27	7.75	207	0.8	Cloudy day, rain over on the last day, clear water, slow flowing, low level of water	Low turbidity is consistent with background conditions during sampling and within historical ranges.
8/4/2024, 8:54 am	EPL27	Eucumbene River upstream of Marica Road	11.19	100.5	11.04	38	25	7.64	173	0.2	Cloudy day, rain event on the last days, clear water, no smelly, low flowing	This location is upstream of works and is therefore representative of background conditions.
19/4/2024, 11:42 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	12.12	99.7	10.71	37	24	7.18	155	3.7	Sunny day, clear water, no odour, slow flowing	All readings within WQO limits.
19/4/2024, 11:25 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	11.34	103.9	11.36	30	20	7.11	160	2.7	Sunny day, clear water, no odour, medium flowing, low level of water	All readings are within WQO limits.
19/4/2024, 11:00 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	11.97	100.3	10.82	34	22	6.96	166	3.4	Sunny day, green colour of water, presence of algae, no smelly, clear water	All readings are within WQO limits.
19/4/2024, 10:29 am	EPL34	Nungar Creek, upstream of Tantangara Road	11.21	95	10.42	27	17	7.34	184	12.1	Sunny day, clear water, low flowing, no odour, low level of water	This location is upstream of works and is therefore representative of background conditions.
19/4/2024, 10:35 am	EPL35	Nungar Creek, downstream of Tantangara Road	10.93	108.7	12.7	24	15	7.07	170	6.4	Sunny day, clear water, no odour, low flowing, low level of water	Low EC is representative of background conditions for this location for April 2024.
19/4/2024, 2:11 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	10.91	74.4	8.21	41	27	7.02	280	19.5	Sunny day, a bit murky water, no smelly, slow flowing, low level of water	This location is upstream of works and is therefore representative of background conditions.
19/4/2024, 2:26 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	12.49	65.2	6.94	44	28	7.21	273	17.1	Sunny day, a bit turbid water, animals around, no smelly, slow flow	Low DO is within historical range and consistent with background conditions for this location for April 2024.
19/4/2024, 11:50 am	EPL52	GF01 sediment basin	17.28	143	13.7	813	520	9.4	170	4.3	Turbid water, no odour, sunny, spoil emplacement around	This location is a leachate basin. Water exceeding or outside of WQO ranges is treated at the water treatment systems on site or re-used where re-use criteria is met.
N/A	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
N/A	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
19/4/2024, 12:05 pm	EPL55	GF01 surface water downstream	16.83	93.07	9.07	709	454	7.81	148	65.0	Sunny day, clear water, no smelly, low level of water	Water quality is similar to that of the leachate basin however no overtopping occurred. The water level was low with negligible flow observed.
7/4/2024, 9:07 am	EPL71	Surface water downstream of Marica emplacement	12.3	52	5.57	130	85	6.44	264	239	Heavy rain overnight, morning showers.	Low DO and pH with elevated turbidity are generally consistent with post rain conditions and within historical ranges.
17/4/2024, 11:07 am	EPL84	F8 Basin	15.7	93.3	9.21	1097	1260	8.06	-2	48.8	Turbid water, cloudy, no odour, spoil emplacement upstream	This location is a leachate basin. Water exceeding or outside of WQO ranges is treated at the water treatment systems on site or re-used where re-use criteria is met.
17/4/2024, 10:58 am	EPL85	MY07 Basin	13.72	95.6	9.9	610	390	10.19	151	134	Turbid water, cloudy, no odour, spoil emplacement upstream	This location is a leachate basin. Water exceeding or outside of WQO ranges is treated at the water treatment systems on site or re-used where re-use criteria is met.
17/4/2024, 10:48 am	EPL86	LHG01 Basin	14.2	138	14.12	1010	340	8.46	180	14.0	Turbid water, cloudy, no odour, spoil emplacement upstream	This location is a leachate basin. Water exceeding or outside of WQO ranges is treated at the water treatment systems on site or re-used where re-use criteria is met.

Table 2 - Reservoir Water Quality Data
Talbingo and Tantangara Reservoirs

Water Quality Objectives (see note 2)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	90 - 110	-	20 - 30	-	6.5 - 8.0	-	1 - 20

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
20/4/2024, 10:45 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	16.66	104.1	10.13	68	44	7.58	174	0.4	Clear water, high level, no odour, sunny, construction work around	Elevated EC and low turbidity are within historical ranges and background concentrations from the Yarrangobilly River for April 2024.
20/4/2024, 10:29 am	EPL11	Talbingo Reservoir, downstream of outlet	16.2	105.4	10.36	68	44	7.43	181	1	Clear water, sunny, no odour, spoil emplacement upstream	Elevated EC and low turbidity are within historical ranges and background concentrations from the Yarrangobilly River for April 2024.
15/4/2024, 10:34 am	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	14.7	86.5	8.78	22.2	18	8.17	143.2	7.38	Clear water, no odour, low level, sunny	This location is upstream of works and is therefore representative of background conditions.
15/4/2024, 11:39 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	15.7	89.9	8.92	23	18	7.85	110.1	8.41	Clear, sunny day. Visible algae growth. Separate pH probe used.	Low DO is within historical ranges and background concentrations for April 2024.
15/4/2024, 11:25 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	15.5	89.3	8.91	22.8	18	7.87	131.7	8.64	Clear, sunny day. Visible algae growth. Separate pH probe used.	Low DO is within historical ranges and background concentrations for April 2024.
15/4/2024, 11:07 am	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	15.2	87.5	8.78	22.6	18	7.64	118	9.31	Clear, sunny day. Visible algae growth. Separate pH probe used. Completed from boat not reservoir edge.	Low DO is within historical ranges and background concentrations for April 2024.
15/4/2024, 10:52 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	15.9	96.7	8.96	21.3	18	7.62	207.9	3.69	Clear, sunny day. Visible algae growth. Separate pH probe used.	All readings are within WQO limits.
15/4/2024, 10:40 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	12	85	9.16	21.2	18	7.84	131.5	8.5	Clear, sunny day. Visible algae growth. Separate pH probe used.	Low DO is within historical ranges and background concentrations for April 2024.
15/4/2024, 11:49 am	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	15.5	90.5	9.02	22.9	18	7.91	208.5	8.82	Clear, sunny day. Visible algae growth. Separate pH probe used.	All readings are within WQO limits.
15/4/2024, 11:43 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	15.2	88.7	8.9	22.7	18	7.88	114.8	9.17	Clear, sunny day. Visible algae growth. Separate pH probe used.	Low DO is within historical ranges and background concentrations for April 2024.

Table 3 - Treated Water Quality Data
Talbingo

Water Quality Objectives (see note 3)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	-	-	700	-	6.5 - 8.0	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
21/4/2024, 9:08 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	14.62	93.5	9.5	37	24	7.19	208	2.3	Clear water, low flow, no odour	All readings are within WQO limits.

Table 4 - Treated Water Quality Data
Tantangara

Water Quality Objectives (see note 3)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	-	-	200	-	6.5 - 8.0	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
19/4/2024, 1:15 pm	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	15.08	94.4	9.5	29	19	7.56	231	0	Treated water, clear water, no odour	Low turbidity due to the water was so clear

Table 5 - Groundwater Quality Data

GF01 Surface Water and Groundwater

Water Quality Objectives (see note 1)							
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
-	-	-	30 - 350	-	6.5 - 8.0	-	-

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
19/4/2024, 2:05 pm	EPL56	GF01 groundwater upstream east	16.72	15.9	1.55	250	163	7.78	94	75.5	Sunny day, clear water, no odour, SWL- 10.53 m deep	All readings are within WQO limits.
19/4/2024, 2:25 pm	EPL57	GF01 groundwater upstream west	15.86	19.5	1.93	252	164	8.05	72	79	Clear water, no odour, cloudy, spoil emplacement around, SWL-19.025m	This location is upgradient of works and is therefore representative of background conditions.
19/4/2024, 11:25 am	EPL58	GF01 groundwater downstream	18.45	61.4	5.74	748	479	6.19	181	2.9	Sunny day, no odour, clear water, SWL- 7.64 m deep	Elevated EC is generally consistent with downgradient conditions at GF01 where extraction is ongoing. Low pH will be monitored however is consistent with weekly results collected through April 2024.
17/4/2024, 9:05 am	EPL68	Tantangara groundwater downstream West	12.3	81.6	8.74	15	13	5.85	199	7.77	Used pH probe instead of pH sensor on YSI (as it is showing wrong results) Foggy; clear water, no odour.	Low EC and pH will be monitored though is generally consistent with previous results and upgradient conditions in April 2024.
17/4/2024, 8:47 am	EPL69	Tantangara groundwater downstream East	12.2	76	8.16	19.7	17	6.27	187.5	6.15	Used pH probe instead of pH sensor on YSI (as it is showing wrong results) Foggy; clear water, no odour.	Low EC and pH will be monitored though is generally consistent with previous results and upgradient conditions in April 2024.
17/4/2024, 8:03 am	EPL70	Tantangara groundwater upstream	9.4	73.6	8.42	56.9	53	6.88	179.1	29.84	Sunny, cloudless; clear water, no odour.	All readings are within WQO limits.
7/4/2024, 8:20 am	EPL 72	Marica groundwater upstream	12.49	47.7	5.09	46	30	5.53	267	267	Heavy rain overnight, morning showers.	This location is upgradient of works and is therefore representative of background conditions.
7/4/2024, 7:17 am	EPL73	Marica groundwater downstream	13.3	53.6	5.61	160	104	7.42	214	7.9	Heavy rain overnight, morning showers.	All readings are within WQO limits.
18/4/2024, 10:14 am	EPL80	LHG groundwater upstream	16.86	119.6	11.56	751	481	7.46	29	114	Clear water, sunny, no odour, spoil emplacement upstream, SWL- 20.447m	This location is upgradient of works and is therefore representative of background conditions.
18/4/2024, 9:48 am	EPL81	LHG groundwater downstream	15.43	119.9	11.96	614	393	7.46	58	1000	Turbid water, cloudy, no odour, spoil emplacement upstream,SWL-3.713m	Elevated EC is consistent with background conditions.
18/4/2024, 10:30 am	EPL82	MY groundwater upstream	19.34	109.4	10.04	728	466	6.82	190	732	Turbid water, cloudy, no odour, spoil emplacement upstream, SWL-8.516m	This location is upgradient of works and is therefore representative of background conditions.
18/4/2024, 9:30 am	EPL83	MY groundwater downstream	15.31	54	5.4	567	363	7.64	141	1000	Turbid water, cloudy, no odour, spoil emplacement upstream,SWL-3.972m	Elevated EC is consistent with background conditions.
18/4/2024, 9:06 am	EPL87	MY groundwater downstream	13.88	124.1	12.8	382	248	7.78	242	317	Turbid water, cloudy, no odour, spoil emplacement upstream,SWL-4.145m	All readings are within WQO limits.
18/4/2024, 9:21 am	EPL88	MY groundwater downstream	14.91	121.1	12.2	816	522	7.82	8	0	Clear water, sunny, stinky odour, spoil emplacement upstream, SWL-3.187m	Elevated EC is consistent with background conditions.
18/4/2024, 10:01 am	EPL89	LHG groundwater downstream	16.11	71.1	7	289	188	7.24	121	1000	Turbid water, cloudy, no odour, spoil emplacement upstream, SWL-3.908m	All readings are within WQO limits.
19/4/2024, 2:50 pm	EPL90	GF01 groundwater downstream	16.27	120	11.77	460	299	6.16	121	302	Sunny day, turbid water, no odour, SWL- 13.36 m deep	Elevated EC and low pH are generally consistent with surrounding conditions.
19/4/2024, 1:45 pm	EPL91	GF01 groundwater downstream	20.9	81.5	7.28	235	153	6.98	49	11.5	Sunny day, clear water, no odour, SWL- 8.52 m deep	All readings are within WQO limits.
19/4/2024, 12:25 pm	EPL92	GF01 groundwater downstream	19.74	92.6	8.46	128	83	7.24	117	38.1	Sunny day, clear water, no smelly, SWL- 13.55 m deep	All readings are within WQO limits.
19/4/2024, 1:10 pm	EPL93	GF01 groundwater downstream	23.19	35.3	3.01	279	181	7.41	61	53.1	Sunny day, clear water, no odour, SWL- 16.18 m deep	All readings are within WQO limits.
19/4/2024, 1:00 pm	EPL94	GF01 groundwater downstream	23.11	38	3.25	199	130	6.99	60	13.4	Sunny day, clear water, no odour, SWL- 13.07 m deep	All readings are within WQO limits.
19/4/2024, 11:35 am	EPL95	GF01 groundwater downstream	18.49	94.4	8.84	387	251	6.5	180	17.9	Sunny day, no odour, clear water, SWL-7.08 m deep	Slightly elevated EC is generally consistent with surrounding conditions.
19/4/2024, 12:10 pm	EPL96	GF01 groundwater downstream	17.77	80	7.61	1	1	6.99	114	90.1	Sunny day, turbid water, no odour, SWL- 6.33 m deep	Low EC is believed to be an anomalous result. Results from the week prior and post range from 120-270.
19/4/2024, 3:30 pm	EPL97	GF01 groundwater downstream	15.75	56.5	5.6	355	231	7.27	125	79	Sunny day, quite turbid, no smelly, SWL- 6.71 m deep	Slightly elevated EC is generally consistent with surrounding conditions.

MAY 2024

2024 EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring May 2024

Table 1 - Surface Water Quality Data
River and Minor Watercourses

Water Quality Objectives (see note 1)								
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	
-	90 - 110	-	30 - 350	-	6.5 - 8.0	-	2 - 25	

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
6/5/2024, 10:23 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	13.71	109.6	11.36	95	62	7.84	208	2.5	Clear water, low level, no odour, sunny	This location is upstream of works and is therefore representative of background conditions.
6/5/2024, 10:53 am	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	12.06	107.3	11.54	100	65	7.56	276	3.1	Clear water, low level, stinky odour around, sunny	All readings are within WQO limits.
6/5/2024, 1:13 pm	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	14.25	94.4	9.67	103	67	8.19	262	2.5	Clear water, low level, no odour, sunny	High pH is consistent with historical ranges for this location for May 2024.
6/5/2024, 1:36 pm	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	13.92	108.7	11.22	95	62	8.19	269	3	Clear water, low level, no odour, sunny	High pH is consistent with historical ranges for this location for May 2024.
6/5/2024, 10:39 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	12.47	109.3	11.66	92	60	7.8	247	1.8	Clear water, low level, no odour, sunny	Low turbidity is consistent with background conditions during sampling for this location.
6/5/2024, 11:13 am	EPL14	Yarrangobilly River, downstream of road construction areas	12.71	98.7	10.47	96	63	7.79	274	5.7	Clear water, low level, no odour, sunny	All readings are within WQO limits.
6/5/2024, 11:31 am	EPL15	Yarrangobilly River, downstream of road construction areas	12.1	95.1	10.22	94	61	8.12	261	1.2	Clear water, low level, no odour, sunny	Low turbidity and marginally elevated pH are consistent with historical ranges for this location.
6/5/2024, 2:11 pm	EPL16	Yarrangobilly River, downstream of road construction areas	15.65	91.7	9.11	99	64	8.32	258	4.5	Clear water, low level, no odour, sunny	Low turbidity and marginally elevated pH are consistent with historical ranges for this location.
6/5/2024, 1:50 pm	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	16.12	101.5	9.97	530	339	6.66	315	1.8	Clear water, low level, no odour, sunny	Elevated EC and low turbidity are consistent with EPL 24. Links to GF01 and EPL 24 are being investigated to account for the EC.
13/5/2024, 8:59 am	EPL26	Eucumbene River downstream of Marica Road	6.65	96.1	11.76	39	26	7.65	228	1.5	Sunny day, clear water, presence of algae in the bottom, no odour	Low turbidity is consistent with background conditions during sampling and within historical ranges.
13/5/2024, 9:08 am	EPL27	Eucumbene River upstream of Marica Road	6.85	73	8.89	33	22	7.53	230	2.4	Sunny day, clear water, presence of algae in the bottom, no odour	This location is upstream of works and is therefore representative of background conditions.
10/5/2024, 11:39 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	10.96	88.2	9.73	27	18	7.03	216	0.7	Cloudy day, very clear water, no odour, low flowing	Low DO, EC and turbidity are consistent with historical ranges but will be monitored to ensure variance is attributed to natural fluctuations.
10/5/2024, 11:28 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	11.02	80.3	8.85	24	16	7.28	200	1.1	Cloudy day, very clear water, no odour, low flowing	Low DO, EC and turbidity are consistent with historical ranges but will be monitored to ensure variance is attributed to natural fluctuations.
10/5/2024, 11:06 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	11.7	88.8	9.64	25	16	6.67	223	3.7	Cloudy day, very slow flowing, no odour, clear water	Low DO and EC are consistent with historical ranges but will be monitored to ensure variance is attributed to natural fluctuations.
10/5/2024, 10:30 am	EPL34	Nungar Creek, upstream of Tantangara Road	11.22	103.6	11.36	96	62	7.61	198	6.9	Cloudy day, low flow, no odour, clear water	This location is upstream of works and is therefore representative of background conditions.
10/5/2024, 10:39 am	EPL35	Nungar Creek, downstream of Tantangara Road	10.95	90.4	10.13	18	11	6.9	208	1.7	Cloudy day, no odour, slow flow, clear water	Low EC and turbidity is within the historical range for this location and likely due to inflows from other surface water sources for May 2024.
10/5/2024, 2:34 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	12.6	94.1	10.01	47	31	7.04	192	10.5	Cloudy day, a bit murky water, no odour, no flowing	This location is upstream of works and is therefore representative of background conditions.
10/5/2024, 2:45 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	12.27	79.6	8.52	40	26	6.98	194	15.1	Cloudy day, a bit murky water, no flowing, no odour	Low DO is within the historical range for this location for May 2024.
25/5/2024, 12:29 pm	EPL52	GF01 sediment basin	11.86	90.8	9.79	1020	651	8.68	118	29.8	Turbid water, cloudy, no odour, spoil emplacement upstream	High EC, pH and turbidity due to runoff accumulating in the sediment basin. Water was taken for treatment at the process water treatment plant or re-use where parameters where met.
N/A	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
N/A	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	No water flow	Dry site, no flow
25/5/2024, 12:40 pm	EPL55	GF01 surface water downstream	13.2	72.2	7.56	807	517	7.88	140	7.10	Clear water, cloudy, no odour, spoil emplacement upstream, low flow	Elevated EC and low DO are generally consistent with conditions at GF01 during sampling in May 2024.
4/5/2024, 9:20 am	EPL66	Tantangara Leachate basin downstream east from Tantangara emplacement area	10	86.7	9.78	16.1	15	6.52	217.7	11.18	Slightly overcast; clear water but on closer inspection has organic material floating material, no odour. Used pH probe instead of pH sensor on YSI (as it is showing wrong results).	Low DO and EC are within the historical range for this location for May 2024.
4/5/2024, 9:37 am	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	11.1	83.5	9.17	16.4	14	6.66	156.9	13.27	Slightly overcast; clear water but on closer inspection, has organic material floating in it, no odour. Used pH probe instead of pH sensor on YSI (as it is showing wrong results). Ignore 'other location code'	Low DO and EC are within the historical range for this location for May 2024.
4/5/2024, 01:27 pm	EPL71	Surface water downstream of Marica emplacement	10.96	52.6	5.8	74	48	6.98	307	2.7	Very low flow. Clear water.	Low DO is generally consistent with background conditions during sampling and previously recorded ranges.
15/5/2024, 11:20 am	EPL84	F8 Basin	17.3	109	10.43	135	863	8.6	132	23.8	Green tinted appearance. Fairly clear. No odour. Sunny, cool weather.	High pH due to runoff accumulating in the sediment basin. Water was taken for treatment at the process water treatment plant or re-use where parameters where met.
15/5/2024, 12:15 pm	EPL85	MY07 Basin	16.49	79.5	7.74	828	530	8.86	146	1000	Very turbid. Dirty odour. Sunny , cool weather.	High EC, pH, and turbidity with low DO are due to runoff accumulating in the sediment basin. Water was taken for treatment at the process water treatment plant or re-use where parameters where met.
15/5/2024, 11:50 am	EPL86	LHG01 Basin	15.94	105.1	10.35	912	584	8.15	166	19.4	Fairly clear. No odour. Water level very low. Sunny, cool weather.	High EC and pH are due to runoff accumulating in the sediment basin. Water was taken for treatment at the process water treatment plant or re-use where parameters where met.

Table 2 - Reservoir Water Quality Data
Talbingo and Tantangara Reservoirs

	Water Quality Objectives (see note 2)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	90 - 110	-	20 - 30	-	6.5 - 8.0	-	1 - 20

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
26/5/2024, 9:54 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	11.11	98.5	10.83	0	0	7.55	199	2.4	Sunny weatherNo odourNaturally clean water	Low EC is within historical ranges and background concentrations for May 2024.
26/5/2024, 9:44 am	EPL11	Talbingo Reservoir, downstream of outlet	10.3	71.4	8	0	0	7.47	199	10.9	Sunny Clear waterNo odour	Low EC and DO are within historical ranges and background concentrations for May 2024.
7/5/2024, 9:40 am	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	11.4	100.9	11.03	21	14	7.77	290	4	Clear water, no odour, cloudy	All readings are within WQO limits.
7/5/2024, 11:01 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	11.63	95.4	10.36	21	14	6.82	290	3.7	Clear water, no odour, sunny	All readings are within WQO limits.
7/5/2024, 10:50 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	11.55	96.5	10.51	24	16	6.97	277	7	Clear water, no odour, sunny	All readings are within WQO limits.
7/5/2024, 10:30 am	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	11.57	94.7	10.31	21	14	7.02	286	8.6	Clear water, no odour, sunny, spoil emplacement upstream	All readings are within WQO limits.
7/5/2024, 10:15 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	9.87	95.6	10.82	20	13	6.71	305	2.8	Clear water, no odour, sunny, spoil emplacement upstream	All readings are within WQO limits.
7/5/2024, 9:52 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	9.69	94.3	10.72	21	13	6.83	329	4	Clear water, no odour, sunny	All readings are within WQO limits.
7/5/2024, 11:17 am	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	11.49	96.3	10.5	22	14	6.83	266	4.2	Clear water, no odour, sunny	All readings are within WQO limits.
7/5/2024, 11:08 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	11.46	91.1	9.94	21	14	6.93	244	3.7	Clear water, no odour, sunny	All readings are within WQO limits.
12/5/2024, 09:25 am	EPL 107	Upstream Yarrangobilly (Ravine Bay)	13.68	101.1	10.49	36	23	6.59	266	2.3	Clear water, sunny, no odour, spoil emplacement upstream	No spoil has been placed in Ravine Bay to date, therefore this data is representative of background conditions.
12/5/2024, 09:14 am	EPL 108	Upstream Tumut (Ravine Bay)	13.5	103	10.73	33	21	6.81	254	0.6	Clear water, sunny, no odour, spoil emplacement upstream	No spoil has been placed in Ravine Bay to date, therefore this data is representative of background conditions.
12/5/2024, 09:06 am	EPL 109	Downstream Tumut (Ravine Bay)	13.51	104.2	10.85	33	21	6.97	245	6.1	Clear water, sunny, no odour, spoil emplacement upstream	No spoil has been placed in Ravine Bay to date, therefore this data is representative of background conditions.

Table 3 - Treated Water Quality Data
Talbingo

	Water Quality Objectives (see note 3)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	-	-	700	-	6.5 - 8.0	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
22/5/2024, 08:25 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	12.21	75.4	8.08	183	119	7.68	171	49.5	Collected from inside WTP unit	All readings are within WQO limits.

Table 4 - Treated Water Quality Data
Tantangara

	Water Quality Objectives (see note 3)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	-	-	200	-	6.5 - 8.0	-	25

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
10/5/2024, 11:52 am	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	13.34	62.8	6.57	16	11	7.09	212	0	Treatment plan, very clear water, no odour	All readings are within WQO limits.

Table 5 - Groundwater Quality Data
GF01 Surface Water and Groundwater

	Water Quality Objectives (see note 1)							
	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)
	-	-	-	30 - 350	-	6.5 - 8.0	-	-

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
1/5/2024, 03:05 pm	EPL1	Wallace Creek Bridge	14.75	41.1	4.16	370	240	6.77	8	61.7	Sunny day, turbid water, smell detected, SWL- 3.91 m deep	Elevated EC within the historical range for May 2024.
1/5/2024, 02:51 pm	EPL2	Wallace Creek Bridge	16.33	22.5	2.2	781	500	7.61	-42	30.1	Sunny day, a bit turbid water, smelly, SWL- 5.6 m deep	Elevated EC within the historical range for May 2024.
1/5/2024, 12:59 pm	EPL4	Portal Access	18.17	98.7	9.28	1007	685	7.58	-34	1000	Sunny day, a bit turbid water, odour detected, SWL- 2.80 m deep	Elevated EC within the historical range for May 2024.
1/5/2024, 01:04 pm	EPL25	Portal Access	11.02	42.5	4.69	191	124	7.88	186	39.3	Clear water, no odour, cloudy, construction work around	All readings are within WQO limits.
25/5/2024, 10:39 am	EPLS6	GF01 groundwater upstream east	12.29	93	9.95	168	109	8	188	88.8	Turbid water, cloudy, no odour, spoil emplacement upstream	This location is upstream of works and is therefore representative of background conditions.
25/5/2024, 10:59 am	EPLS7	GF01 groundwater upstream west	15.86	19.5	1.93	252	164	8.05	72	79	Clear water, no odour, cloudy, spoil emplacement around, SWL-19.025m	This location is upstream of works and is therefore representative of background conditions.
25/5/2024, 12:17 pm	EPLS8	GF01 groundwater downstream	15.63	83.6	8.31	538	344	6.14	208	1.8	Clear water, sunny, no odour, spoil emplacement upstream	Elevated EC is generally consistent with downgradient conditions at GF01 where extraction is ongoing. Low pH will be monitored however is consistent with weekly results collected through April 2024.
4/5/2024, 09:05 am	EPL68	Tantangara groundwater downstream West	11.3	84.3	9.24	13	11	5.92	262.9	14.18	Slightly overcast; clear water, no odour. Used pH probe instead of pH sensor on YSI (as it is showing wrong results). Ignore 'other location code'	Low EC and pH will be monitored though is generally consistent with previous results from April 2024 and upgradient conditions in May 2024.
4/5/2024, 11:05 am	EPL69	Tantangara groundwater downstream East	13.1	76.2	8.01	16.1	13	6.02	232.5	11.44	Slightly overcast; clear water, no odour. Used pH probe instead of pH sensor on YSI (as it is showing wrong results). Ignore 'other location code'	Low EC and pH will be monitored though is generally consistent with previous results from April 2024 and upgradient conditions in May 2024.
5/5/2024, 09:17 am	EPL70	Tantangara groundwater upstream	10.6	73.9	8.23	43.9	39	6.16	216.2	25	Overcast, foggy, slight drizzle; slightly turbid water, no odour. pH probe used in lieu of YSI pH sensor (needs r	This location is upstream of works and is therefore representative of background conditions.
4/5/2024, 02:37 pm	EPL 72	Marica groundwater upstream	10.82	63.3	6.68	55	36	5.96	270	223	Turbid water, no smell.	This location is upstream of works and is therefore representative of background conditions.
4/5/2024, 01:04 pm	EPL73	Marica groundwater downstream	13.9	83.2	8.59	37	24	7.29	251	3.8	Clear water, no smell.	All readings are within WQO limits.
14/5/2024, 10:36 am	EPL80	LHG groundwater upstream	16.37	16.7	1.64	645	413	6.89	39	37.7	Sunny day, turbid water, no odour, SWL- 20.43 m deep	This location is upstream of works and is therefore representative of background conditions.
14/5/2024, 10:51 am	EPL81	LHG groundwater downstream	16.39	0	0	577	369	6.75	-50	58	Sunny day, turbid water, no odour, SWL- 4.51 m deep	Elevated EC is consistent with background conditions and consistent with conditions recorded in April 2024.
14/5/2024, 11:44 am	EPL82	MY groundwater upstream	19.02	21.8	1.98	1067	1007	7.03	27	51.8	Sunny day, clear water, no odour, SWL- 9.32 m deep	This location is upstream of works and is therefore representative of background conditions.
14/5/2024, 11:29 am	EPL83	MY groundwater downstream	20.11	7.4	0.67	364	236	6.05	104	35.6	Sunny day, no odour, a bit turbid water, SWL- 3.89 m	Elevated EC and low pH are generally consistent with background conditions in May 2024 and previous conditions recorded in April 2024.
14/5/2024, 12:14 pm	EPL87	MY groundwater downstream	19.68	3.8	0.35	310	202	6.87	85	147	Sunny day, turbid water, no odour, SWL- 4.47 m deep	All readings are within WQO limits.
14/5/2024, 11:11 am	EPL88	MY groundwater downstream	18.29	17.9	1.68	627	402	6.81	-43	13.9	Sunny day, clear water, smelly, SWL- 3.46 m deep	Elevated EC and low pH are generally consistent with surrounding conditions and previous results recorded in April 2024.
14/5/2024, 09:56 am	EPL89	LHG groundwater downstream	14.26	21.2	2.17	250	162	6.5	101	51	Sunny day, clear water, no odour, SWL-3.22 m	All readings are within WQO limits.
25/5/2024, 01:03 pm	EPL90	GF01 groundwater downstream	14.73	82.9	8.41	148	96	5.92	203	609	Turbid water, sunny, no odour, spoil emplacement upstream	Elevated EC and low pH are generally consistent with surrounding conditions and previous results recorded in April 2024.
25/5/2024, 01:30 pm	EPL91	GF01 groundwater downstream	13.11	77.7	8.16	151	98	7.11	102	17.9	Turbid water, cloudy, no odour, spoil emplacement upstream	All readings are within WQO limits.
25/5/2024, 11:46 am	EPL92	GF01 groundwater downstream	13.42	96.8	10.1	14	9	6.59	106	52.6	Clear water, no odour, cloudy, construction work around	All readings are within WQO limits.
25/5/2024, 11:25 am	EPL93	GF01 groundwater downstream	14.02	51	5.25	188	122	7.28	-67	329	Turbid water, cloudy, no odour, spoil emplacement upstream	All readings are within WQO limits.
25/5/2024, 11:35 am	EPL94	GF01 groundwater downstream	14.51	91.4	9.32	120	78	7.02	-40	177	Turbid water, cloudy, no odour, spoil emplacement upstream	All readings are within WQO limits.
25/5/2024, 12:13 pm	EPL95	GF01 groundwater downstream	15.19	96.7	9.7	390	254	6.46	184	5.7	Clear water, sunny, no odour, spoil emplacement upstream	Elevated EC and low pH are generally consistent with surrounding conditions and previous results recorded in April 2024.
25/5/2024, 11:59 am	EPL96	GF01 groundwater downstream	14.73	93.5	9.48	120	54	6.92	120	221	Turbid water, cloudy, no odour, spoil emplacement upstream	All readings are within WQO limits.
25/5/2024, 01:14 pm	EPL97	GF01 groundwater downstream	16.5	73.1	7.13	275	178	7.02	23	82.7	Clear water, sunny, no odour, spoil emplacement upstream	All readings are within WQO limits.
11/5/2024, 09:42 am	EPL 113	Ravine Bay groundwater upstream	13.66	97.3	10.1	135	88	6.29	135	801	CloudyNo construction going aroundMilky colour waterNo smell	This location is upstream of works and is therefore representative of background conditions.
11/5/2024, 08:44 am	EPL114	Ravine Bay groundwater upstream	13.38	58.4	6.1	378	245	7.8	209	113	Cloudy Clean waterHydrasleeve employedNo construction around	This location is upstream of works and is therefore representative of background conditions.
11/5/2024, 10:08 am	EPL 115	Ravine Bay groundwater downstream	13.95	56.9	5.86	337	219	7.56	3	248	Cloudy, no construction around, slightly brown water. No odour	No spoil has been placed in Ravine Bay to date, therefore this data is representative of background conditions.
11/5/2024, 09:05 am	EPL116	Ravine Bay groundwater downstream	13.89	83.1	8.58	147	95	7.23	228	1000	Cloudy. Construction work going around. Dirty water, very turbid. No odour	No spoil has been placed in Ravine Bay to date, therefore this data is representative of background conditions.
11/5/2024, 09:19 am	EPL 117	Ravine Bay groundwater downstream	13.92	96.9	10	115	75	6.85	-7	1000	Cloudy. Construction going around. White colour. No smell	No spoil has been placed in Ravine Bay to date, therefore this data is representative of background conditions.

APPENDIX C – LABORATORY RESULTS TABLES

DECEMBER 2023

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 December 2023 Groundwater

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL56	EPL57	EPL58	EPL68	EPL69	EPL70	EPL72	EPL73
Physiochemical				16/12/2023	16/12/2023	16/12/2023	3/12/2023	3/12/2023	3/12/2023	13/12/2023	13/12/2023
pH	pH Unit	-	6.5-8	7.92	7.86	5.39	5.69	5.71	6.06	5.6	6.3
Electrical Conductivity	µS/cm	-	30-350	286	308	834	75.8	40.3	69.9	53.8	90.8
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	182	39	27	-47.8	-67.8	6.2	-22.8	-38.6
Temperature	°C	-	No Water Quality Objective Value	22.09	17.44	25.33	13.4	13.3	13	16.1	15.2
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	118.5	111.3	81.7	76.8	56.4	70.8	51.4	68.7
Turbidity	NTU	-	No Water Quality Objective Value	182	61	7.2	36	20.3	47.9	16.5	106
Laboratory analytes											
TSS	mg/L	5	No Water Quality Objective Value	211	241	15	24	14	21	265	212
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	151	150	284	<1	5	26	13	36
Nutrients											
Ammonia as N	µg/L	5	13	80	20	<10	20	90	<10	<10	100
Nitrite + Nitrate as N (Nox)	µg/L	10	15	130	30	73500	870	170	540	30	40
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	1500	400	4600	100	200	100	<100	200
Nitrogen (Total)	µg/L	10	250	1600	400	78100	1000	400	600	<100	200
Reactive Phosphorus	µg/L	1	15	2	10	3	3	7	26	#	#
Phosphorus (Total)	µg/L	5	20	430	460	<10	20	10	50	50	30
Inorganics											
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons											
Oil and Grease	mg/L	5	5	<5	<5	<5	<1	<1	<1	<1	<1
Metals											
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	25	79	<5	9	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	5050	8230	252	948	542	1020	4200	2580
Arsenic (dissolved)	µg/L	1	0.8	0.2	3.5	0.4	<0.2	<0.2	<0.2	0.4	<0.2
Arsenic (total)	µg/L	1	No Water Quality Objective Value	2.3	7.6	0.8	0.2	0.3	<0.2	1.8	0.4
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	0.3	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	16.4	21.3	2.2	0.7	0.8	1.1	8.3	4
Copper (dissolved)	µg/L	1	1	4.5	<0.5	1	<0.5	<0.5	<0.5	0.7	<0.5
Copper (total)	µg/L	1	No Water Quality Objective Value	41.6	22.6	2.8	1.1	1.2	1.1	11	3.9
Iron (dissolved)	µg/L	50	300	<2	<2	2	17	57	<2	15	<2
Iron (total)	µg/L	50	No Water Quality Objective Value	6720	9850	406	519	407	614	5030	1420
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	2.7	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	37.4	29.1	8	0.5	0.6	0.6	8	6.2
Manganese (dissolved)	µg/L	5	1,200	22.5	100	138	4.4	1.3	4.7	30.5	45
Manganese (total)	µg/L	5	No Water Quality Objective Value	283	443	143	33	14.4	23.7	150	118
Nickel (dissolved)	µg/L	1	8	0.6	0.6	8.8	0.6	<0.5	<0.5	3.5	<0.5
Nickel (total)	µg/L	1	No Water Quality Objective Value	19.3	31.8	10.4	2.1	1.6	1	14.6	2.2
Silver (dissolved)	µg/L	5	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	0.14	0.26	0.07	0.03	<0.01	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	5	2.4	10	<1	26	4	4	1	9	<1
Zinc (total)	µg/L	5	No Water Quality Objective Value	112	63	28	7	8	4	35	10

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 31 December 2023 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51
Field				10/12/23	10/12/23	12/12/23	12/12/23	12/12/23	12/12/23	12/12/23	12/12/23	12/12/23	12/12/23
pH	pH Unit	-	6.5-8	7.82	7.98	7.43	7.56	7.6	7.67	7.52	7.36	7.51	7.52
Electrical Conductivity	µS/cm	-	20-30	81	87	24.5	25.3	24.4	27.6	24.7	26.5	25.1	25
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	140	130	-22.5	-35.5	-41.2	-63.3	-27.3	-57.3	-33.7	-32.2
Temperature	°C	-	No Water Quality Objective Value	22.58	22.14	21	22.1	21.8	20.7	21.1	20.8	22.2	22.2
Dissolved Oxygen	% saturation	-	90-110	85.2	87.4	71.2	71.2	71.8	73.6	80.9	69.3	72.6	74
Turbidity	NTU	-	1-20	85.1	123	4.37	4.03	4.11	6.48	3.2	7.45	3.89	4.13
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	36	31	9	5	5	9	5	5	5	5
Nutrients													
Ammonia as N	µg/L	5	10	20	30	190	40	70	60	90	280	20	50
Nitrite + Nitrate as N (NOx)	µg/L	10	10	20	<10	<10	<10	<10	<10	<10	<10	<10	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	200	100	300	200	200	200	200	300	200	200
Nitrogen (Total)	µg/L	10	350	200	100	300	200	200	200	200	300	200	200
Reactive Phosphorus	µg/L	1	5	4	3	1	1	2	2	1	5	2	2
Phosphorus (Total)	µg/L	5	10	10	20	20	30	40	40	60	30	30	30
Inorganics													
Cyanide Total	µg/L	4	7	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons													
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Metals													
Aluminium (dissolved)	µg/L	5	55	14	13	30	47	41	27	43	31	49	45
Arsenic (dissolved)	µg/L	0.2	13	0.4	0.3	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (dissolved)	µg/L	0.5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iron (dissolved)	µg/L	2	300	36	28	105	124	117	96	117	95	123	126
Lead (dissolved)	µg/L	0.1	3.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	5.5	<0.5	0.8	1.3	1.1	0.6	0.9	0.6	0.9	1
Nickel (dissolved)	µg/L	0.5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biological													
Faecal Coliforms	CFU/100mL	1	10/100^	2000**	11000**	23	-	-	-	-	-	-	41
Biochemical Oxygen Demand	mg/L	2	1/5^	3	2	<2	<2	<2	<2	<2	<2	<2	<2

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 31 December 2023 - Surface Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL5	EPL6	EPL8	EPL9	EPL12	EPL14	EPL15	EPL16	EPL17	EPL24	EPL26	EPL27	EPL30	EPL31	EPL33	EPL34	EPL35	EPL36	EPL37	EPL52	EPL53	EPL54	EPL55	EPL71
Field				4/12/23	8/12/23	14/12/23	8/12/23	1/12/23	8/12/23	1/12/23	8/12/23	8/12/23	8/12/23	6/12/23	6/12/23	15/12/23	15/12/23	15/12/23	15/12/23	15/12/23	15/12/23	15/12/23	16/12/23	-	-	16/12/23	10/12/23
pH	-	-	6.5-8	7.25	8.09	7.13	7.31	8.2	8.32	7.5	7.69	7.77	6.42	7.92	7.99	7.33	6.66	7.03	6.96	6.96	6.72	7.08	7.97	Dry	Dry	7.86	7.79
Electrical Conductivity	µS/cm	-	30-350	51	74	122	88	60	91	54	89	541	222	24	28	41	105	30	31	25	62	69	1270	Dry	Dry	820	31
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	148	161	233	167	173	148	165	177	178	189	177	178	192	225	225	225	220	210	187	217	Dry	Dry	61	183
Temperature	°C	-	No Water Quality Objective Value	18.87	18.99	22.6	19.26	19.4	20.17	16.8	19.87	18.34	18.73	16.27	17.48	17.02	17.8	21.48	19.53	18.85	19.19	22.37	22.26	Dry	Dry	17.44	17.7
Dissolved Oxygen	% saturation	-	90-110	86	92.8	123.4	140.1	82.4	105	97.1	94.2	105.2	177.1	94.5	109.1	106.3	105.8	87.3	119.6	113.7	98.5	96.1	101.4	Dry	Dry	111.3	82.5
Turbidity	NTU	-	2-25	104	92.1	0	92.8	94.9	101	114	93.5	102	98.4	121	108	0	0	0	0	0	0	1.8	1.2	Dry	Dry	128	223
Laboratory analytes																											
TSS	mg/L	5	No Water Quality Objective Value	<5	<5	<5	249	Not sampled	<5	<5	<5	16	<5	<5	<5	8	9	<5	<5	<5	<5	19	<5	Dry	Dry	9	14
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	17	33	48	38	Not sampled	41	48	38	318	68	9	9	9	7	9	7	7	24	24	408	Dry	Dry	253	16
Nutrients																											
Ammonia as N	µg/L	5	13	<10	#	<10	#	Not sampled	20	<10	<10	<10	60	#	#	<10	<10	<10	<10	<10	20	20	560	Dry	Dry	60	10
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	#	<10	#	Not sampled	<10	<10	<10	<10	10100	#	#	<10	<10	<10	<10	<10	120	120	102000	Dry	Dry	50200	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	<100	#	100	#	Not sampled	<100	<100	<100	<100	900	#	#	200	200	400	300	300	300	400	5600	Dry	Dry	5000	1000
Nitrogen (Total)	µg/L	10	250	<100	#	100	#	Not sampled	<100	300	<100	<100	11000	#	#	200	200	400	300	300	400	500	108000	Dry	Dry	55200	<100
Reactive Phosphorus	µg/L	1	15	<10	#	4	#	Not sampled	4	<10	5	6	2	#	#	4	5	5	2	2	5	9	<1	Dry	Dry	<1	5
Phosphorus (Total)	µg/L	5	20	<10	#	40	#	Not sampled	20	<10	<10	<10	<10	#	#	20	20	30	20	10	30	30	<10	Dry	Dry	<10	20
Inorganics																											
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	Not sampled	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	Dry	Dry	<4	<4
Hydrocarbons																											
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	Not sampled	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	<1	<1
Metals																											
Aluminium (dissolved)	µg/L	5	27	20	9	8	14	Not sampled	14	44	14	<5	6	9	7	14	14	46	30	30	62	66	7	Dry	Dry	<5	15
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	Dry	Dry	76	603
Arsenic (dissolved)	µg/L	1	0.8	0.2	0.2	0.4	0.3	Not sampled	0.3	0.2	0.3	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	0.3	0.3	0.5	0.6	0.5	Dry	Dry	0.2	0.4
Arsenic (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	Dry	Dry	0.2	0.8
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	<0.2	<0.2	Not sampled	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	0.2	<0.2	0.6	<0.2	<0.2	0.3	0.2	0.3	1.1	Dry	Dry	0.6	0.3
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	Dry	Dry	1.8	0.7
Copper (dissolved)	µg/L	1	1	<0.5	<0.5	<0.5	<0.5	Not sampled	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dry	Dry	<0.5	<0.5
Copper (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	Dry	Dry	0.7	0.6
Iron (dissolved)	µg/L	50	300	45	10	15	22	Not sampled	20	71	22	<2	11	23	21	36	26	124	225	228	380	389	<2	Dry	Dry	<2	23
Iron (total)	µg/L	50	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	138	Dry	Dry	95	524
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	<0.1	<0.1	Not sampled	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	Dry	Dry	<0.1	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	Dry	Dry	0.3	0.6
Manganese (dissolved)	µg/L	5	1,200	1.9	1.6	1	3.4	Not sampled	1.2	12	1.8	1	49.1	3.6	1.6	2.6	1.9	1	3.7	3.6	37.5	16.2	1.8	Dry	Dry	2.8	21.1
Manganese (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.2	Dry	Dry	10.6	29.4
Nickel (dissolved)	µg/L	1	8	<0.5	<0.5	<0.5	<0.5	Not sampled	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	1.6	Dry	Dry	<0.5	1
Nickel (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9	Dry	Dry	1.2	1.4
Silver (dissolved)	µg/L	5	0.02	<0.01	<0.01	<0.01	<0.01	Not sampled	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	Dry	Dry	<0.01	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	Dry	Dry	<0.01	<0.01
Zinc (dissolved)	µg/L	5	2.4	<1	<1	<1	<1	Not sampled	<1	<1	<1	<1	11	44	<1	<1	<1	<1	25	<1	4	<1	18	Dry	Dry	<1	<1
Zinc (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	Dry	Dry	7	2

Monthly EPL Sampling: 01 - 31 December 2023 - Treated Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL 41	EPL 43	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49	EPL 50
Flow Rate				10/12/2023							15/12/2023
Inflow#	ML/day	-	-	-	0.0192	0.2929	0.0399	0.1424	0.0625	0.1168	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	8.11	-	-	-	-	-	-	7.23
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	93	-	-	-	-	-	-	13
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	182	-	-	-	-	-	-	199
Temperature	°C	-	15	21.59	-	-	-	-	-	-	17.59
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	80.9	-	-	-	-	-	-	73.8
Turbidity	NTU	-	<25	81.4	-	-	-	-	-	-	122
Laboratory analytes											
Total suspended solids	mg/L	5	5/10	<5	-	-	-	-	-	-	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	24	-	-	-	-	-	-	<1
Nutrients											
Ammonia as N	µg/L	5	200/2000^	720	-	-	-	-	-	-	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	1000	-	-	-	-	-	-	200
Nitrogen (Total)	µg/L	10	350/-^	1300	-	-	-	-	-	-	300
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	3	-	-	-	-	-	-	1
Phosphorus (Total)	µg/L	5	100/300^	<10	-	-	-	-	-	-	20
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	<4
Hydrocarbons											
Oil and Grease	mg/L	5	2/5^	<1	-	-	-	-	-	-	<1
Metals											
Aluminium (dissolved)	µg/L	5	55	83	-	-	-	-	-	-	<5
Arsenic (dissolved)	µg/L	0.2	13	0.4	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.3	-	-	-	-	-	-	<0.2
Copper (dissolved)	µg/L	0.5	14	2.3	-	-	-	-	-	-	<0.5
Iron (dissolved)	µg/L	2	300	28	-	-	-	-	-	-	<2
Lead (dissolved)	µg/L	0.1	3.4	0.2	-	-	-	-	-	-	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	2.4	-	-	-	-	-	-	<0.5
Nickel (dissolved)	µg/L	0.5	11	<0.5	-	-	-	-	-	-	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	-	-	-	-	-	-	<0.01
Zinc (dissolved)	µg/L	1	8	20	-	-	-	-	-	-	<1
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	<1	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	<5	5	<2	-	-	-	-	-	-	<2

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 31 December 2023 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/12/2023	-	-	0.26	0.08	0.26	0.10	0.23
2/12/2023	0.02	0.64	0.23	0.05	0.02	0.08	0.17
3/12/2023	0.47	0.27	0.21	0.04	0.18	0.09	0.26
4/12/2023	-	0.95	0.20	0.04	0.17	0.09	0.31
5/12/2023	-	0.37	0.14	0.05	0.18	0.09	0.43
6/12/2023	-	-	0.29	0.02	0.14	0.07	0.41
7/12/2023	-	-	0.24	0.09	0.14	0.07	0.51
8/12/2023	-	-	0.21	0.06	0.17	0.09	0.32
9/12/2023	-	-	0.23	0.05	0.19	0.08	0.49
10/12/2023	-	-	0.34	0.05	0.21	0.08	0.54
11/12/2023	-	-	0.29	0.06	0.14	0.08	0.40
12/12/2023	-	-	0.28	0.07	0.19	0.08	0.38
13/12/2023	-	-	0.18	0.03	0.15	0.07	0.29
14/12/2023	-	-	0.38	0.06	0.15	0.03	0.28
15/12/2023	-	-	0.23	0.03	0.17	0.07	0.66
16/12/2023	-	-	0.21	0.07	0.18	0.07	0.56
17/12/2023	-	-	0.24	0.06	0.17	0.07	0.55
18/12/2023	-	-	0.47	0.06	0.13	0.07	0.40
19/12/2023	-	-	0.27	0.04	0.19	0.07	0.59
20/12/2023	-	-	0.19	0.05	0.16	0.05	0.53
21/12/2023	-	-	0.25	0.07	0.16	0.09	0.41
22/12/2023	-	-	0.29	0.05	0.15	0.09	0.43
23/12/2023	-	-	0.21	0.07	0.14	0.07	0.41
24/12/2023	-	-	0.26	0.07	0.12	0.07	0.52
25/12/2023	-	-	0.35	0.04	0.14	0.06	0.50
26/12/2023	-	-	0.17	0.05	0.12	0.06	0.50
27/12/2023	-	-	0.42	0.04	0.16	0.08	0.21
28/12/2023	-	-	0.30	0.04	0.09	0.01	0.61
29/12/2023	-	-	0.28	0.06	0.17	0.11	0.69
30/12/2023	-	-	0.20	0.06	0.12	0.08	0.72
31/12/2023	-	-	0.29	0.04	0.13	0.06	0.59

Water not discharged on this day

Note: The EPL discharge volume limit for EPL 43 and 50 is 4.32 megalitres per day. Compliance with this criteria was met during the reporting month.

* EPL 44 volume inflows were not recorded in October 2023 due to the technology upgrades.

^ The maximum flow rate capacity for Lobs Hole STP/PWTP during the reporting month was 5.4 L/s.

\- The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 11 L/s.

-- Water not discharged on this day
Flow meter non-operational. Water volumes are considered to be similar daily flows to those recorded for each respective plant as works progressed at the same rate.

JANUARY 2024

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-31 January 2024 Groundwater

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL56	EPL57	EPL58	EPL68	EPL69	EPL70	EPL72	EPL73
Physiochemical				23/01/2024	23/01/2024	23/01/2024	17/01/2024	17/01/2024	17/01/2024	17/01/2024	17/01/2024
pH	pH Unit	-	6.5-8.0	7.82	7.38	6.55	5.98	5.97	6.18	5.54	6.69
Electrical Conductivity	µS/cm	-	30-350	270	276	721	18.8	21.8	66.6	29	120.8
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	84	153	170	128	137.7	104.3	15.7	2.2
Temperature	°C	-	No Water Quality Objective Value	17.84	21.02	20.35	15.9	15.7	14.8	12	14.8
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	75.9	99.6	90.1	83.5	80.2	77.7	51.6	60.8
Turbidity	NTU	-	No Water Quality Objective Value	39	60.2	29.7	27.27	15.16	38.33	820	82.9
Laboratory analytes											
TSS	mg/L	5	No Water Quality Objective Value	82	184	560	138	238	84	675	296
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	124	127	216	2	5	31	16	41
Nutrients											
Ammonia as N	µg/L	10	13	20	30	<10	20	10	<10	<10	<10
Nitrite + Nitrate as N (Nox)	µg/L	10	15	<10	2900	51200	890	140	500	30	50
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	300	4800	200	<100	<100	<100	<100
Nitrogen (Total)	µg/L	10	250	100	3200	56000	1100	100	500	<100	<100
Reactive Phosphorus	µg/L	10	15	3	8	4	2	5	15	16	17
Phosphorus (Total)	µg/L	10	20	120	120	280	190	70	40	210	120
Inorganics											
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons											
Oil and Grease	mg/L	5	5	<1	<1	<1	<5	<5	<5	<5	<5
Metals											
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	11	<5	<5	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	1800	5680	6510	2190	3360	2190	11600	4840
Arsenic (dissolved)	µg/L	0.2	0.8	0.3	2.8	0.5	<0.2	<0.2	<0.2	0.3	<0.2
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	0.9	6	9.5	0.4	1.2	0.3	4.9	0.8
Chromium (III+VI) (dissolved)	µg/L	0.2	0.01	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	0.4
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	5	11.2	16.3	1.5	3.6	3.7	15.2	8.6
Copper (dissolved)	µg/L	0.5	1	1.6	0.5	<0.5	5.4	6.5	1.9	<0.5	0.7
Copper (total)	µg/L	0.5	No Water Quality Objective Value	48.1	53.3	10.9	22	39.2	21	21.9	8.1
Iron (dissolved)	µg/L	2	300	<2	<2	<2	<2	11	<2	<2	<2
Iron (total)	µg/L	2	No Water Quality Objective Value	2720	7070	11500	1590	2900	1340	16600	3390
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	9.7	17.7	52.8	3.7	8.4	3.4	19.5	16.7
Manganese (dissolved)	µg/L	5	1,200	47.4	81.5	75.6	4.8	1.9	6.6	19.3	26.5
Manganese (total)	µg/L	5	No Water Quality Objective Value	137	366	394	124	157	48.8	356	311
Nickel (dissolved)	µg/L	5	8	0.8	<0.5	8.2	0.5	<0.5	0.5	1.1	0.6
Nickel (total)	µg/L	5	No Water Quality Objective Value	8.1	20.5	33.1	2	3.9	3.1	22.4	4.7
Silver (dissolved)	µg/L	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	0.01	No Water Quality Objective Value	0.25	0.04	0.16	0	0	0	0	0
Zinc (dissolved)	µg/L	1	2.4	1	<1	16	15	25	5	7	2
Zinc (total)	µg/L	1	No Water Quality Objective Value	32	42	86	23	44	21	71	26

* Water Quality Objective values for groundwater refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 31 January 2024 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51
Field				13/1/24	13/1/24	19/1/24	19/1/24	19/1/24	19/1/24	19/1/24	19/1/24	19/1/24	19/1/24
pH	pH Unit	-	6.5-8.0	6.98	6.64	7.79	7.93	7.96	7.82	7.55	7.82	7.97	7.91
Electrical Conductivity	µS/cm	-	20-30	62	57	26	25	25	26	27	28	26	27
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	256	243	149	130	128	132	139	133	113	127
Temperature	°C	-	No Water Quality Objective Value	28.04	28.29	19.46	19.83	20.08	19.59	18.97	16.18	19.48	19.93
Dissolved Oxygen	% saturation	-	90-110	67.2	70.4	101.9	91.4	102	98.7	100	97.4	101.9	102.2
Turbidity	NTU	-	1-20	2.4	2.9	12.8	9.8	10.4	13.3	12.6	13.2	8.2	10.2
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	6	<5	8	8	12	9	<5	<5	10	8
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	24	31	9	9	9	9	5	5	9	9
Nutrients													
Ammonia as N	µg/L	10	10	20	<10	30	<10	10	<10	<10	<10	<10	300
Nitrite + Nitrate as N (NOx)	µg/L	10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	100	500	500	500	500	500	200	500	500
Nitrogen (Total)	µg/L	10	350	100	100	500	500	500	500	500	200	500	500
Reactive Phosphorus	µg/L	10	5	3	4	5	4	3	3	3	4	2	3
Phosphorus (Total)	µg/L	10	10	20	20	40	50	10	10	10	10	10	10
Inorganics													
Cyanide Total	µg/L	4	7	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons													
Oil and Grease	mg/L	5	5	<1	<1	0	0	0	0	0	0	0	0
Metals													
Aluminium (dissolved)	µg/L	5	55	8	9	41	41	39	38	39	32	49	41
Arsenic (dissolved)	µg/L	0.2	13	0.3	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (dissolved)	µg/L	0.5	14	0.6	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iron (dissolved)	µg/L	2	300	14	16	126	119	115	123	120	98	123	119
Lead (dissolved)	µg/L	0.1	3.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	<0.5	1.4	1.2	1.1	1.2	1.4	2.4	0.9	1.2
Nickel (dissolved)	µg/L	0.5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biological													
Faecal Coliforms	CFU/100mL	1	10/100^	140**	320**	8**	-	-	-	-	-	-	15**
Biochemical Oxygen Demand	mg/L	2	1/5^	<2	<2	3	10	3.00	6	3	<2	<2	<2

* Water Quality Objective values for Talbingo and Tantangara Reservoir refer to the default trigger values for physical and chemical stressors in south-east Australia (fresh lakes and reservoirs) for the protection of 95% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

** Algal blooms can present as feacal coliforms - green tinge noted in Talbingo Resevroir water at time of sampling.

^ 90th percentile concentration limits / 100 percentile concentration limits

\- Sample not required at this location.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 31 January 2024 - Surface Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL5	EPL6	EPL8	EPL9	EPL12	EPL14	EPL15	EPL16	EPL17	EPL24	EPL26	EPL27	EPL30	EPL31	EPL33	EPL34	EPL35	EPL36	EPL37	EPL52	EPL53	EPL54	EPL55	EPL71	EPL84	EPL85	EPL86
Field				10/01/24	10/01/24	10/01/24	8/01/24	10/01/24	10/01/24	10/01/24	10/01/24	10/01/24	10/01/24	21/01/24	21/01/24	16/01/24	16/01/24	16/01/24	16/01/24	16/01/24	16/01/24	16/01/24	23/01/24	-	-	23/01/24	17/01/24	31/01/24	31/01/24	31/01/24
pH	-	-	6.5-8.0	7.86	7.69	7.97	7.57	8.24	7.77	7.59	6.94	7.72	7.47	6.41	6.9	7.61	7.8	7.64	7.46	7.64	7.82	7.97	7.68	Dry	Dry	7.72	6.96	10.14	7.78	8.66
Electrical Conductivity	µS/cm	-	30-350	74	81	88	86	77	72	71	83	488	389	32	30	29	22	34	16	17	49	52	710	Dry	Dry	725	43.2	492	830	117.4
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	181	189	181	152	164	183	194	197	208	159	202	172	220	222	219	223	224	343	270	119	Dry	Dry	120	1.9	30	9	62
Temperature	°C	-	No Water Quality Objective Value	20.65	21.16	23.5	21.83	19.98	21.86	22.22	24.26	21.84	22.86	14.77	13.9	16.94	17.16	19.26	16.85	17.58	18.67	20.06	19.43	Dry	Dry	18.47	14.1	31.52	27.89	30.21
Dissolved Oxygen	% saturation	-	90-110	70.8	52.9	56	74.3	61.6	69.7	68.9	67.3	60.3	66.8	68.5	99.1	56.6	59.3	67	65.6	73.8	70.6	61.5	108.9	Dry	Dry	97.6	64.2	122.6	102.3	117.4
Turbidity	NTU	-	2-25	10.4	4.6	3.8	12.1	10.9	4.1	4	3	7.7	12	2.5	1.7	4.7	3.6	3.4	3.5	3	4.5	15.3	5	Dry	Dry	5.1	74.2	72.1	9.1	21.9
Laboratory analytes																														
TSS	mg/L	5	No Water Quality Objective Value	13	8	13	32	13	10	8	13	41	54	<5	<5	<5	<5	<5	<5	<5	7	17	10	Dry	Dry	6	28	79	18	20
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	36	38	36	43	36	36	36	38	313	91	12	9	13	9	16	4	4	24	24	208	Dry	Dry	148	27	37	212	215
Nutrients																														
Ammonia as N	µg/L	10	13	<10	10	<10	<10	<10	<10	<10	10	20	<10	<10	70	<10	<10	<10	<10	<10	10	20	30	Dry	Dry	120	40	40	60	10
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	<10	<10	10	<10	<10	<10	30	13300	<10	<10	20	<10	20	<10	<10	120	120	37900	Dry	Dry	7760	<10	650	3190	900
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	600	100	400	200	200	500	200	900	1100	900	100	200	<100	<100	300	200	100	600	800	3000	Dry	Dry	1900	100	1300	700	900
Nitrogen (Total)	µg/L	10	250	600	100	400	200	200	500	200	900	1100	14200	100	200	<100	<100	300	200	100	700	900	40900	Dry	Dry	9700	100	2000	3900	1800
Reactive Phosphorus	µg/L	10	15	7	9	7	11	8	9	9	9	5	3	3	4	3	3	3	2	3	6	7	2	Dry	Dry	4	1	<1	4	42
Phosphorus (Total)	µg/L	10	20	30	20	20	40	20	20	20	20	30	30	10	10	30	20	30	30	40	60	90	10	Dry	Dry	30	30	160	40	160
Inorganics																														
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	Dry	Dry	<4	<4	<4	<4	<4
Hydrocarbons																														
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	<1	<5	<1	<1	<1
Metals																														
Aluminium (dissolved)	µg/L	5	27	27	6	26	9	30	28	30	29	<5	6	6	6	18	17	18	27	27	440	103	<5	Dry	Dry	10	11	32	34	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	193	Dry	Dry	146	-	-	-	-
Arsenic (dissolved)	µg/L	0.2	5	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	0.3	0.2	0.8	0.8	1	Dry	Dry	0.4	0.5	4.7	0.3	4.1
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	101	Dry	Dry	0.5	-	-	-	-
Chromium (III+VI) (dissolved)	µg/L	0.2	0.01	0.2	<0.2	<0.2	<0.2	0.2	0.2	<0.2	0.2	<0.2	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	0.3	1	Dry	Dry	0.3	<0.2	3.5	<0.2	0.5
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	Dry	Dry	0.6	-	-	-	-
Copper (dissolved)	µg/L	0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.7	0.7	<0.5	Dry	Dry	1.4	<0.5	1	1.8	1.8
Copper (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3	Dry	Dry	2.2	-	-	-	-
Iron (dissolved)	µg/L	2	300	63	20	59	23	63	60	60	63	2	7	25	24	49	38	248	212	208	1270	865	<2	Dry	Dry	13	46	4	103	2
Iron (total)	µg/L	2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	264	Dry	Dry	196	-	-	-	-
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	Dry	Dry	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	Dry	Dry	0.4	-	-	-	-
Manganese (dissolved)	µg/L	5	1,200	2.1	4.2	2.1	1.1	2.2	2	2.2	2.8	1.5	30.5	4.8	3.4	4.4	2.6	120	4.4	4.4	22.8	20.9	5.2	Dry	Dry	18.1	62.7	3	673	2.4
Manganese (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	Dry	Dry	29.4	-	-	-	-
Nickel (dissolved)	µg/L	5	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5	<0.5	<0.5	1.2	0.6	0.6	0.8	0.9	0.8	Dry	Dry	0.9	1	<0.5	14.5	0.9
Nickel (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	Dry	Dry	1.4	-	-	-	-
Silver (dissolved)	µg/L	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	Dry	Dry	0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	0.01	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	Dry	Dry	0.01	-	-	-	-
Zinc (dissolved)	µg/L	1	2.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	8	<1	<1	<1	<1	4	<1	<1	<1	<1	6	Dry	Dry	1	<1	<1	40	2
Zinc (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	Dry	Dry	3	-	-	-	-

* Water Quality Objective values for surface water refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

\- Sample not required at this location.

Monthly EPL Sampling: 01 - 31 January 2024 - Treated Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL 41	EPL 43	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49	EPL 50
Flow Rate				21/01/2024							16/01/2024
Inflow#	ML/day	-	-	-	0.0000	0.3586	0.0386	0.1423	0.0674	0.1496	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	7.64	-	-	-	-	-	-	8.15
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	106	-	-	-	-	-	-	22
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	248	-	-	-	-	-	-	191
Temperature	°C	-	15	19.2	-	-	-	-	-	-	19.0
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	94.8	-	-	-	-	-	-	68.6
Turbidity	NTU	-	<25	4.2	-	-	-	-	-	-	3.7
Laboratory analytes											
Total suspended solids	mg/L	5	5/10	<5	-	-	-	-	-	-	8.0
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	26.0	-	-	-	-	-	-	9.0
Nutrients											
Ammonia as N	µg/L	5	200/2000^	10.0	-	-	-	-	-	-	10.0
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	300	-	-	-	-	-	-	500
Nitrogen (Total)	µg/L	10	350/-^	1600	-	-	-	-	-	-	500
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	4.0	-	-	-	-	-	-	3.0
Phosphorus (Total)	µg/L	5	100/300^	20.0	-	-	-	-	-	-	10.0
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	<4
Hydrocarbons											
Oil and Grease	mg/L	5	2/5^	<1	-	-	-	-	-	-	<1
Metals											
Aluminium (dissolved)	µg/L	5	55	64.0	-	-	-	-	-	-	41.0
Arsenic (dissolved)	µg/L	0.2	13	0.4	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.3	-	-	-	-	-	-	<0.2
Copper (dissolved)	µg/L	0.5	14	2.2	-	-	-	-	-	-	<0.5
Iron (dissolved)	µg/L	2	300	27.0	-	-	-	-	-	-	119
Lead (dissolved)	µg/L	0.1	3.4	0.2	-	-	-	-	-	-	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	-	-	-	-	-	-	1.2
Nickel (dissolved)	µg/L	0.5	11	<0.5	-	-	-	-	-	-	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	-	-	-	-	-	-	<0.01
Zinc (dissolved)	µg/L	1	8	31	-	-	-	-	-	-	<1
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	<1	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	<5	5	9.0	-	-	-	-	-	-	3.0

Note: Treated water was not being discharged at Talbingo ot Tantangara Reservoirs at the time of EPL sampling.
There is no 100th percentile limit for Nitrogen (Total).

* Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

\- Samples not required

^ 90 Percentile concentration limit/100 Percentile limit

\# Inflows to STP and CWTP do not directly correspond to outflow at RO as much of the water is reused on site

FEBRUARY 2024

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-29 February 2024 Groundwater

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL1	EPL2	EPL4	EPL25	EPL56	EPL57	EPL58	EPL68	EPL69	EPL70	EPL72	EPL73
Physiochemical				1/02/2024	2/02/2024	1/02/2024	1/02/2024	14/02/2024	14/02/2024	14/02/2024	21/02/2024	21/02/2024	21/02/2024	18/02/2024	18/02/2024
pH	pH Unit	-	6.5-8	7.81	7.46	8.03	7.37	7.81	7.95	6.34	6.05	6.19	6.53	6.31	6.75
Electrical Conductivity	µS/cm	-	30-350	259	498	1050	449	259	264	721	21.6	22.9	69.3	31.7	71.3
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	196	8	-161	48	196	192	155	186.2	186	146.6	246.7	174.7
Temperature	°C	-	No Water Quality Objective Value	17.2	15.96	16.84	18.83	17.2	17.08	18.29	13	14.7	15.1	15.4	14.1
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	73	69.3	16.5	44.3	73	81	73	82.3	74.2	72.6	72.6	67.6
Turbidity	NTU	-	No Water Quality Objective Value	9.7	15.8	583	71.7	9.7	28.4	22.8	42.76	14.77	29.94	375.79	22.32
Laboratory analytes															
TSS	mg/L	5	No Water Quality Objective Value	30	41	7,050	153	42	80	6	73	44	61	651	89
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	159	249	225	214	133	127	236	2	2	29	13	36
Nutrients															
Ammonia as N	µg/L	10	13	180	30	310	30	10	30	30	<10	<10	<10	20	20
Nitrite + Nitrate as N (Nox)	µg/L	10	15	180	70	<10	<10	50	10	47	860	120	4100	10	40
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	400	200	1500	300	100	200	5100	<100	<100	600	<100	<100
Nitrogen (Total)	µg/L	10	250	600	300	1500	300	200	200	52100	900	100	4700	<100	<100
Reactive Phosphorus	µg/L	10	15	29	5	12	4	3	12	3	6	8	22	12	23
Phosphorus (Total)	µg/L	10	20	70	70	870	160	10	230	10	10	20	80	370	240
Inorganics															
Cyanide Total	µg/L	4	4	-	-	-	-	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons															
Oil and Grease	mg/L	5	5	-	-	-	-	<1	<1	<1	<1	<1		<1	<1
Metals															
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	522	1520	18	1790	1440	1610	6000	1130
Arsenic (dissolved)	µg/L	0.2	0.8	1	0.4	2.8	0.4	0.2	2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	0.5	3.4	<0.2	0.3	0.6	0.3	3.3	0.3
Chromium (III+VI) (dissolved)	µg/L	0.2	0.01	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	1.6	3.8	0.4	0.8	1.4	1.6	9.5	2.4
Copper (dissolved)	µg/L	0.5	1	25	13	<0.5	27.4	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	23.5	15.3
Copper (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	10.2	20.6	1	3.4	2.1	6.3	97.8	69.7
Iron (dissolved)	µg/L	2	300	<2	4	234	<2	<2	<2	<2	<2	4	<2	<2	5
Iron (total)	µg/L	2	No Water Quality Objective Value	-	-	-	-	713	2020	16	1140	1110	1130	8960	855
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.6	<0.1	<0.1	<0.1	<0.1	0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	2.7	5.5	5.2	0.8	1	0.8	14	7.8
Manganese (dissolved)	µg/L	5	1,200	126	191	426	932	24.2	46.4	24	4.8	<0.5	2.7	16.4	43.5
Manganese (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	49.4	158	22.3	58	46.4	34	159	97.9
Nickel (dissolved)	µg/L	5	8	12	2.4	2.6	28.8	<0.5	<0.5	5.8	0.5	<0.5	1	1.4	<0.5
Nickel (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	2.1	12.1	5.9	1.5	1.6	3.2	12.2	1.4
Silver (dissolved)	µg/L	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	0.01	No Water Quality Objective Value	-	-	-	-	0.08	0.03	0.04	<0.01	<0.01	<0.01	0	0
Zinc (dissolved)	µg/L	1	2.4	1	5	<1	82	2	<1	12	0	0	0	21	30
Zinc (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	13	502	13	2	<1	<1	51	38

* Water Quality Objective values for groundwater refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

\- Sample not required at this location.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 29 February 2024 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51
Field				7/2/24	7/2/24	27/2/24	27/2/24	27/2/24	27/2/24	27/2/24	27/2/24	27/2/24	27/2/24
pH	pH Unit	-	6.5-8	7.63	7.65	7.96	8.06	7.78	7.9	7.53	7.77	8.1	8.05
Electrical Conductivity	µS/cm	-	20-30	95	90	28	25.4	25.4	27	23.8	32	25.4	28
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	261	242	221	204.9	136	202	231.6	157	178.2	183
Temperature	°C	-	No Water Quality Objective Value	23.99	23.93	21.52	21	16.27	21.19	18.7	18.98	29.09	21.23
Dissolved Oxygen	% saturation	-	90-110	141.4	146.7	159.9	83.8	114.2	125.7	81.3	139.3	82.1	130.2
Turbidity	NTU	-	1-20	7.4	14.1	2.4	12.77	0	1.8	6.57	0	9.09	0.2
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	15	<5	13	<5	<5	<5	5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	43	41	9	9	9	9	9	9	9	9
Nutrients													
Ammonia as N	µg/L	5	10	20	10	70	190	110	90	10	10	100	100
Nitrite + Nitrate as N (NOx)	µg/L	10	10	<10	10	10	<10	<10	<10	<10	<10	20	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	300	100	500	800	600	600	300	100	600	600
Nitrogen (Total)	µg/L	10	350	300	100	500	800	600	600	300	100	600	600
Reactive Phosphorus	µg/L	1	5	4	4	8	7	6	6	5	7	6	<1
Phosphorus (Total)	µg/L	5	10	<10	20	20	30	20	20	20	10	20	20
Inorganics													
Cyanide Total	µg/L	4	7	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons													
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Metals													
Aluminium (dissolved)	µg/L	5	55	<5	<5	40	49	51	51	38	19	50	50
Arsenic (dissolved)	µg/L	0.2	13	0.4	0.5	0.3	0.2	0.3	0.2	0.3	<0.2	0.2	0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (dissolved)	µg/L	0.5	14	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iron (dissolved)	µg/L	2	300	18	19	279	166	170	167	274	118	174	171
Lead (dissolved)	µg/L	0.1	3.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	<0.5	7.7	7.1	7	8.2	7.6	3.5	12.5	6.2
Nickel (dissolved)	µg/L	0.5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	8	<1	<1	<1	<1	2	<1	<1	<1	<1	<1
Biological													
Faecal Coliforms	CFU/100mL	1	10/100^	37	35	17	-	-	-	-	-	-	90
Biochemical Oxygen Demand	mg/L	2	1/5^	<2	<2	<2	-	-	-	-	-	-	<2

* Water Quality Objective values for Talbingo and Tantangara Reservoir refer to the default trigger values for physical and chemical stressors in south-east Australia (fresh lakes and reservoirs) for the protection of 95% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

** Algal blooms can present as feacal coliforms - green tinge noted in Talbingo Resevroir water at time of sampling.

^ 90th percentile concentration limits / 100 percentile concentration limits

\- Sample not required at this location

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 29 February 2024 - Surface Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL5	EPL6	EPL8	EPL9	EPL12	EPL14	EPL15	EPL16	EPL24	EPL26	EPL27	EPL30	EPL31	EPL33	EPL34	EPL35	EPL36	EPL37	EPL52	EPL53	EPL54	EPL55	EPL71
Field				1/02/24	1/02/24	1/02/24	1/02/24	1/02/24	1/02/24	1/02/24	1/02/24	1/02/24	13/02/24	13/02/24	7/02/24	7/02/24	7/02/24	7/02/24	7/02/24	7/02/24	7/02/24	14/02/24	-	-	-	18/02/24
pH	-	-	6.5-8	8.84	8.45	7.7	8.05	8.21	7.84	7.73	8.57	6.28	7.96	7.94	8.46	8.43	8.2	8.26	8.48	7.91	8.55	8.74	Dry	Dry	Dry	7.36
Electrical Conductivity	µS/cm	-	30-350	110	111	112	114	110	107	109	117	410	40	45	37	26	36	24	15	42	42	969	Dry	Dry	Dry	49.6
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	23	72	149	147	171	132	145	145	194	182	174	180	201	204	260	260	221	221	93	Dry	Dry	Dry	126.9
Temperature	°C	-	No Water Quality Objective Value	20.51	24.71	25.54	26.08	19.44	24.89	25.77	27.67	22.89	17.95	16.18	17.99	17.7	20.96	16.55	16.41	20.99	20.99	22.25	Dry	Dry	Dry	16.6
Dissolved Oxygen	% saturation	-	90-110	108.1	112.4	108.6	99.6	117.6	98.8	98.6	100.9	128.2	109.6	109.3	115	136.4	109.7	141.9	141.6	113.2	113.2	116	Dry	Dry	Dry	87.8
Turbidity	NTU	-	2-25	2.5	0	0	0	0	0	0	0	0	0	0	0	0	6.4	0.1	0	16.1	7.4	30.1	Dry	Dry	Dry	26.78
Laboratory analytes																										
TSS	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	<5	<5	33	15	<5	<5	<5	<5	<5	<5	7	<5	18	Dry	Dry	Dry	12
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	51	48	53	51	51	51	51	51	86	16	16	9	7	12	7	7	13	13	169	Dry	Dry	Dry	25
Nutrients																										
Ammonia as N	µg/L	5	13	<10	10	20	<10	<10	<10	20	<10	<10	50	<10	<10	20	20	20	10	<10	20	60	Dry	Dry	Dry	<10
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	<10	<10	10	<10	<10	<10	20600	<10	<10	10	<10	20	<10	<10	160	100	29900	Dry	Dry	Dry	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	100	<100	100	200	<100	200	200	<100	1600	<100	<100	<100	<100	500	200	200	400	500	4700	Dry	Dry	Dry	<100
Nitrogen (Total)	µg/L	10	250	100	<100	100	200	<100	200	200	<100	22200	<100	<100	<100	<100	500	200	200	600	600	34600	Dry	Dry	Dry	<100
Reactive Phosphorus	µg/L	1	15	8	11	8	6	6	8	7	6	1	6	5	4	2	4	2	1	5	6	5	Dry	Dry	Dry	7
Phosphorus (Total)	µg/L	5	20	<10	20	<10	10	<10	<10	<10	<10	<10	30	<10	30	30	40	50	40	60	70	40	Dry	Dry	Dry	20
Inorganics																										
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	Dry	Dry	Dry	<4
Hydrocarbons																										
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	Dry	<1
Metals																										
Aluminium (dissolved)	µg/L	5	27	8	<5	9	9	8	9	9	10	6	6	<5	10	10	18	21	20	57	64	14	Dry	Dry	Dry	8
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	899	Dry	Dry	Dry	841
Arsenic (dissolved)	µg/L	1	0.8	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.5	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	0.3	0.3	0.5	0.5	2.9	Dry	Dry	Dry	0.4
Arsenic (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	Dry	Dry	Dry	1.3
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	1.5	Dry	Dry	Dry	<0.2
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1	Dry	Dry	Dry	1.3
Copper (dissolved)	µg/L	1	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	Dry	Dry	Dry	<0.5
Copper (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	Dry	Dry	Dry	2.1
Iron (dissolved)	µg/L	50	300	18	19	19	22	16	17	17	21	<2	32	22	38	30	82	232	222	340	364	<2	Dry	Dry	Dry	26
Iron (total)	µg/L	50	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1150	Dry	Dry	Dry	926
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Dry	Dry	Dry	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	Dry	Dry	Dry	0.6
Manganese (dissolved)	µg/L	5	1,200	1.1	2.8	1.3	2.9	1	0.9	1	1.9	38.6	9.6	3.2	1.7	2	1.2	2.7	3.4	8	2.7	<0.5	Dry	Dry	Dry	53.5
Manganese (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27.1	Dry	Dry	Dry	62.7
Nickel (dissolved)	µg/L	1	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dry	Dry	Dry	1
Nickel (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	Dry	Dry	Dry	2.6
Silver (dissolved)	µg/L	5	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	Dry	Dry	Dry	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	Dry	Dry	Dry	#
Zinc (dissolved)	µg/L	5	2.4	<1	<1	<1	<1	<1	<1	<1	<1	39	1	<1	<1	<1	4	<1	<1	4	<1	<1	Dry	Dry	Dry	<1
Zinc (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	Dry	Dry	Dry	4

NT Not triggered yet

* Water Quality Objective values for surface water refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

\- Sample not required at this location.

\# Sample result not returned.

Monthly EPL Sampling: 01 - 29 February 2024 - Treated Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL 41	EPL 43	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49	EPL 50
Flow Rate				4/02/2024							7/02/2024
Inflow#	ML/day	-	-	-	0.0000	0.3586	0.0386	0.1423	0.0674	0.1496	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	8.4	-	-	-	-	-	-	8.42
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	99	-	-	-	-	-	-	14
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	181	-	-	-	-	-	-	179
Temperature	°C	-	15	21.93	-	-	-	-	-	-	21.31
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	97.2	-	-	-	-	-	-	92.3
Turbidity	NTU	-	<25	0.1	-	-	-	-	-	-	0.1
Laboratory analytes											
Total suspended solids	mg/L	5	5/10	<5	-	-	-	-	-	-	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	29	-	-	-	-	-	-	48
Nutrients											
Ammonia as N	µg/L	5	200/2000^	<10	-	-	-	-	-	-	10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	300	-	-	-	-	-	-	100
Nitrogen (Total)	µg/L	10	350/-^	1600	-	-	-	-	-	-	100
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	6	-	-	-	-	-	-	1
Phosphorus (Total)	µg/L	5	100/300^	10	-	-	-	-	-	-	10
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	<4
Hydrocarbons											
Oil and Grease	mg/L	5	2/5^	<1	-	-	-	-	-	-	<1
Metals											
Aluminium (dissolved)	µg/L	5	55	65	-	-	-	-	-	-	5
Arsenic (dissolved)	µg/L	0.2	13	0.5	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.4	-	-	-	-	-	-	<0.2
Copper (dissolved)	µg/L	0.5	14	10.8	-	-	-	-	-	-	<0.5
Iron (dissolved)	µg/L	2	300	32	-	-	-	-	-	-	2
Lead (dissolved)	µg/L	0.1	3.4	5	-	-	-	-	-	-	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	1.9	-	-	-	-	-	-	<0.5
Nickel (dissolved)	µg/L	0.5	11	0.7	-	-	-	-	-	-	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	-	-	-	-	-	-	<0.01
Zinc (dissolved)	µg/L	1	8	75	-	-	-	-	-	-	<1
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	<1	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	<5	1/5^	<2	-	-	-	-	-	-	<2

Note: Treated water was not being discharged at Talbingo ot Tantangara Reservoirs at the time of EPL sampling.
There is no 100th percentile limit for Nitrogen (Total).

* Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

\- Samples not required

^ 90 Percentile concentration limit/100 Percentile limit

\# Inflows to STP and CWTP do not directly correspond to outflow at RO as much of the water is reused on site

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 29 February 2024 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/02/2024	-	-	0.24	0.05	0.14	0.07	0.87
2/02/2024	-	-	0.26	0.05	0.17	0.08	0.97
3/02/2024	-	-	0.29	0.05	0.18	0.08	0.67
4/02/2024	-	-	0.32	0.06	0.19	0.08	0.67
5/02/2024	-	-	0.36	0.06	0.17	0.08	0.62
6/02/2024	-	-	0.30	0.04	0.21	0.07	0.64
7/02/2024	-	-	0.33	0.05	0.16	0.09	0.88
8/02/2024	-	-	0.37	0.06	0.19	0.06	0.55
9/02/2024	-	-	0.28	0.05	0.20	0.07	0.79
10/02/2024	-	-	0.37	0.05	0.20	0.08	0.65
11/02/2024	-	-	0.41	0.04	0.18	0.07	0.53
12/02/2024	-	-	0.33	0.05	0.16	0.07	0.61
13/02/2024	-	-	0.29	0.03	0.12	0.08	0.62
14/02/2024	-	-	0.27	0.05	0.16	0.07	0.71
15/02/2024	-	-	0.38	0.05	0.19	0.07	0.34
16/02/2024	-	-	0.31	0.06	0.24	0.09	0.66
17/02/2024	-	-	0.31	0.05	0.21	0.07	0.99
18/02/2024	-	-	0.26	0.05	0.20	0.09	0.85
19/02/2024	-	-	0.37	0.04	0.24	0.08	0.67
20/02/2024	-	0.65	0.21	0.05	0.06	0.07	0.42
21/02/2024	-	-	0.26	0.05	0.17	0.07	0.91
22/02/2024	-	-	0.18	0.05	0.15	0.07	0.47
23/02/2024	-	-	0.22	0.07	0.20	0.08	0.72
24/02/2024	-	-	0.19	0.06	0.18	0.08	0.88
25/02/2024	-	-	0.25	0.03	0.19	0.07	0.92
26/02/2024	-	-	0.28	0.11	0.21	0.08	0.73
27/02/2024	-	-	0.03	0.05	0.15	0.07	0.38
28/02/2024	-	-	0.03	0.06	0.16	0.10	0.96
29/02/2024	-	-	0.06	0.07	0.21	0.07	0.84

Note: The EPL discharge volume limit for EPL 43 and 50 is 4.32 megalitres per day. Compliance with this criteria was met during the reporting month.

- Water not discharged on this day
- * EPL 44 volume inflows were not recorded in October 2023 due to the technology upgrades.
- ^ The maximum flow rate capacity for Lobs Hole STP/PWTP during the reporting month was 0.0 L/s.
- The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 7.5 L/s.

MARCH 2024

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-31 March 2024 Groundwater

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL56	EPL57	EPL58	EPL68	EPL69	EPL70	EPL72	EPL73	EPL80	EPL81	EPL82	EPL83	EPL87	EPL88	EPL89	EPL 90	EPL 91	EPL92	EPL93	EPL94	EPL95	EPL96	EPL97
Physiochemical				21/03/2024	21/03/2024	21/03/2024	10/03/2024	10/03/2024	10/03/2024	2/03/2024	2/03/2024	1/03/2024	1/03/2024	1/03/2024	1/03/2024	1/03/2024	1/03/2024	1/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024
pH	pH Unit	-	6.5-8	7.02	7.38	7.06	7.74	8.12	8.79	7.67	7.89	6.92	6.96	6.28	6.15	6.47	6.91	6.44	6.97	7.28	7.82	7.29	6.91	7.51	6.62	7.58
Electrical Conductivity	µS/cm	-	30-350	259	260	123	18.8	23.4	73.8	30.4	75.6	843	472	675	432	292	725	262	78	233	95	287	197	427	328	328
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	150	169	123	171.6	129.6	221.7	204.2	224.3	13	-30	183	155	226	-95	105	144	51	182	86	-33	164	105	105
Temperature	°C	-	No Water Quality Objective Value	12.86	13.57	17.53	13.1	14.9	15.8	18.1	18.2	25.02	20.22	30.78	27.15	31.74	23.61	23.25	18.84	18.44	14.4	15.79	16.94	18.12	16.93	20
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	77.8	79	73.3	82.1	76	70.3	68.1	67.9	51.1	77.8	56	65.5	58.5	70.5	70.6	83.9	58.7	101.8	72.7	66.5	90.1	70.3	73.9
Turbidity	NTU	-	No Water Quality Objective Value	52	51.9	3.2	6.98	4.93	11.41	72.98	9.78	25.5	256	1000	155	226	48.9	283	449	30.6	0	1000	365	9.5	753	175
Laboratory analytes																										
TSS	mg/L	5	No Water Quality Objective Value	221	202	<5	32	22	24	194	<5	16	479	2190	40	2470	30	916	539	22	1,770	2,770	349	<5	726	370
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	125	119	182	<1	2	24	13	32	352	316	267	85	84	129	59	15	118	23	130	83	144	128	79
Nutrients																										
Ammonia as N	µg/L	5	13	10	10	30	<10	10	<10	<10	<10	30	30	20	10	20	540	10	10	200	10	210	70	60	250	30
Nitrite + Nitrate as N (Nox)	µg/L	10	15	20	20	39000	780	120	500	30	50	<10	<10	20	5350	1620	<10	20	110	10	20	10	10	28500	11200	60
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	200	<100	5900	<100	<100	<100	<100	<100	200	500	2200	400	2700	1000	500	200	400	800	2700	500	3600	2400	100
Nitrogen (Total)	µg/L	10	250	200	<100	44900	800	100	500	<100	<100	200	500	2200	5800	4300	1000	500	300	400	800	2700	500	32100	13600	200
Reactive Phosphorus	µg/L	1	15	2	5	3	<1	8	18	17	18	4	3	4	2	2	6	4	10	22	6	137	6	12	10	17
Phosphorus (Total)	µg/L	5	20	30	50	<10	20	20	40	80	20	50	570	4000	80	2490	160	560	370	80	430	2530	300	30	480	120
Inorganics																										
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons																										
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	1	<1	<1	<1
Metals																										
Aluminium (dissolved)	µg/L	5	27	<5	<5	6	<5	5	<5	<5	<5	<5	<5	<5	18	<5	<5	<5	<5	<5	<5	<5	<5	6	<5	12
Aluminium (total)	µg/L	5	No Water Quality Objective Value	1890	2240	11	1430	798	1290	3000	105	37	3970	9180	480	42700	576	5170	3800	24	17900	40200	4960	63	13100	2990
Arsenic (dissolved)	µg/L	1	0.8	0.2	2.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2	7.5	3.4	0.3	3.1	0.2	9	0.6	<0.2	0.4	0.4	35.4	0.5	1.8	0.3	2.1
Arsenic (total)	µg/L	1	No Water Quality Objective Value	0.8	3.5	<0.2	0.3	0.3	0.2	1.4	<0.2	48	91.4	33.4	25.3	40.8	34	10.6	2.4	2.2	9.8	123	22.6	2.1	16.4	8.6
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.8	<0.2
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	5.6	5.6	0.3	0.9	1.1	1.1	4.9	0.6	0.5	7.7	24.7	1.3	101	2.4	11.9	9.2	<0.2	20.8	119	15.3	1.3	38.7	9.3
Copper (dissolved)	µg/L	1	1	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	13.1	9.8	0.5	1.5	0.6	0.9	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	68.8	0.8	5.3
Copper (total)	µg/L	1	No Water Quality Objective Value	18.4	16	0.8	2.1	1	2.4	49.1	49.9	1.2	30.2	17.9	3	120	4.6	13.9	9.2	<0.5	31	89.4	11.2	109	39.7	5.2
Iron (dissolved)	µg/L	50	300	<2	<2	<2	<2	4	<2	<2	<2	<2	<2	<2	<2	<2	2	3	<2	14	<2	3	<2	<2	<2	<2
Iron (total)	µg/L	50	No Water Quality Objective Value	2490	3000	9	905	525	834	4160	65	1480	11000	14400	903	74600	1230	9870	5350	222	14400	73100	12800	94	26300	5630
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	2.9	<0.1	<0.1	<0.1	0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.7	<0.1	<0.1	<0.1	<0.1	0.5
Lead (total)	µg/L	1	No Water Quality Objective Value	9.3	8.5	6.1	0.7	0.5	1.9	11.1	4.3	<0.1	9.4	5	0.4	76.6	1.8	5.3	18.2	0.3	346	230	24	0.4	171	75.6
Manganese (dissolved)	µg/L	5	1,200	25.9	42.6	25.3	3.7	0.7	3.2	15.2	44.5	174	230	207	114	232	215	51.6	15.4	554	129	489	685	371	0.8	140
Manganese (total)	µg/L	5	No Water Quality Objective Value	102	150	24.5	58.8	17	56.2	102	51.5	188	273	378	144	2210	254	182	170	612	684	2530	1080	361	1120	381
Nickel (dissolved)	µg/L	1	8	<0.5	0.6	5.7	<0.5	<0.5	<0.5	1.1	<0.5	13.2	4.2	14.1	11.2	2.6	2.2	2.7	2.9	1.4	3.6	2.4	2.5	16.7	1.8	1.8
Nickel (total)	µg/L	1	No Water Quality Objective Value	6.5	10.1	6.3	1.3	0.9	1.7	6.8	0.8	19.2	19.2	40.5	18.2	136	5.1	23.8	19.3	2.3	37.3	223	28.9	18.2	49.9	16.1
Silver (dissolved)	µg/L	5	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	0.02	0.02	<0.01	0	0	0	0	0	0.05	0.11	0.03	<0.01	0.79	<0.01	0.1	0.03	<0.01	0.28	0.56	0.06	<0.01	0.28	0.06
Zinc (dissolved)	µg/L	5	2.4	2	<1	15	3	8	1	0	0	1	1	4	3	<1	2	<1	12	2	21	2	5	74	2	15
Zinc (total)	µg/L	5	No Water Quality Objective Value	26	15	15	6	27	4	38	17	4	31	42	9	228	18	26	56	5	323	777	296	81	189	323

* Water Quality Objective values for groundwater refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 31 March 2024 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51
Field				24/3/24	24/3/24	5/3/24	5/3/24	5/3/24	5/3/24	5/3/24	5/3/24	5/3/24	5/3/24
pH	pH Unit	-	6.5-8	7.83	7.86	7.98	7.6	7.61	7.79	7.83	7.58	6.89	7.39
Electrical Conductivity	µS/cm	-	20-30	76	71	26	27	26	26	26	29	26	27
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	224	226	180	184	193	188	146	186	223	193
Temperature	°C	-	No Water Quality Objective Value	21.38	20.58	21.28	21.08	21.04	21.02	20.11	17.91	20.48	20.74
Dissolved Oxygen	% saturation	-	90-110	107.3	108	109.7	109.6	109.4	108	107.8	109	108.3	109
Turbidity	NTU	-	1-20	0	0.9	24.7	3.8	8	5.3	1.2	1.3	1.8	1.2
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	6	7	<5	6	<5	<5	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	38	33	9	9	<1	9	9	9	9	9
Nutrients													
Ammonia as N	µg/L	5	10	10	<10	<10	40	30	50	40	60	120	80
Nitrite + Nitrate as N (NOx)	µg/L	10	10	40	20	<10	30	<10	<10	<10	<10	20	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	300	100	400	800	700	600	500	100	600	700
Nitrogen (Total)	µg/L	10	350	300	100	400**	800**	700**	600**	500**	100	600**	700**
Reactive Phosphorus	µg/L	1	5	2	4	4	5	4	3	4	4	3	2
Phosphorus (Total)	µg/L	5	10	30	20	10	20	30	20	30	10	30	20
Inorganics													
Cyanide Total	µg/L	4	7	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons													
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Metals													
Aluminium (dissolved)	µg/L	5	55	<5	<5	53	51	51	49	50	18	49	50
Arsenic (dissolved)	µg/L	0.2	13	0.4	0.4	0.3	0.2	0.2	0.2	0.3	<0.2	0.2	0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (dissolved)	µg/L	0.5	14	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iron (dissolved)	µg/L	2	300	14	12	192	177	176	174	248	115	184	187
Lead (dissolved)	µg/L	0.1	3.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	<0.5	2.3	3	2.4	2.5	3.6	5.7	16.7	18.6
Nickel (dissolved)	µg/L	0.5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	8	<1	<1	<1	<1	2	<1	<1	<1	<1	<1
Biological													
Faecal Coliforms	CFU/100mL	1	10/100^	408	3000	25	-	-	-	-	-	-	26
Biochemical Oxygen Demand	mg/L	2	1/5^	-	-	-	-	-	-	-	-	-	-

* Water Quality Objective values for Talbingo and Tantangara Reservoir refer to the default trigger values for physical and chemical stressors in south-east Australia (fresh lakes and reservoirs) for the protection of 95% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

** Algal blooms can present as feacal coliforms - green tinge noted in Talbingo Resevroir water at time of sampling.

^ 90th percentile concentration limits / 100 percentile concentration limits

\- Sample not required at this location.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 31 March 2024 - Surface Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL5	EPL6	EPL8	EPL9	EPL12	EPL14	EPL15	EPL16	EPL24	EPL26	EPL27	EPL30	EPL31	EPL33	EPL34	EPL35	EPL36	EPL37	EPL52	EPL53	EPL54	EPL55	EPL71	EPL84	EPL85	EPL86
Field				2/03/24	2/03/24	2/03/24	2/03/24	2/03/24	2/03/24	2/03/24	2/03/24	20/03/24	17/03/24	17/03/24	9/03/24	9/03/24	9/03/24	9/03/24	9/03/24	9/03/24	9/03/24	21/03/24	-	-	31/03/24	2/03/24	5/03/24	5/03/24	5/03/24
pH	-	-	6.5-8	8.11	8.08	8.41	8.28	8.15	8.12	8.21	7.91	7.14	7.98	7.87	7.7	8.04	7.51	7.59	7.6	7.38	7.17	8.98	Dry	Dry	8.57	8.64	9.32	9.17	8.45
Electrical Conductivity	µS/cm	-	30-350	126	133	139	127	125	127	127	137	671	69	38	30	28	27	28	27	44	53	818	Dry	Dry	829	88.7	1800	1110	902
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	174	179	167	178	176	176	127	187	152	192	204	216	204	191	214	202	218	220	113	Dry	Dry	128	98.1	175	190	203
Temperature	°C	-	No Water Quality Objective Value	18.79	17.98	19.89	20.82	19.38	19.03	19.87	21.17	21.15	16.31	15.13	15.07	16.7	20.64	19.28	18.97	16.05	21.91	20.1	Dry	Dry	28.03	18.8	12.22	12.31	12.81
Dissolved Oxygen	% saturation	-	90-110	105.9	109.6	94.2	104.6	109.9	108.2	108	103.6	71.6	109.7	96.1	80.1	83.7	81.8	63.1	82.7	70.6	63.3	104	Dry	Dry	96.7	88.7	68.9	117.1	94.8
Turbidity	NTU	-	2-25	2	0	0.5	0.2	0	1.1	0.2	0.3	164	3.5	1.7	1.6	2.8	25	4.7	3.5	3.3	48.5	481	Dry	Dry	11.6	19.97	1000	672	11.8
Laboratory analytes																													
TSS	mg/L	5	No Water Quality Objective Value	6	<5	<5	<5	12	<5	<5	<5	82	<5	8	<5	<5	<5	<5	<5	<5	10	304	Dry	Dry	28	10	6,290	440	13
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	61	63	63	63	63	63	63	63	149	16	16	9	9	9	7	9	17	13	98	Dry	Dry	74	21	36	129	284
Nutrients																													
Ammonia as N	µg/L	5	13	<10	10	<10	<10	<10	10	20	<10	30	10	10	10	10	10	10	40	10	50	50	Dry	Dry	50	<10	140	40	40
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	10	<10	10	<10	20	<10	21000	<10	<10	<10	<10	10	10	10	90	20	18600	Dry	Dry	10	<10	2480	490	1090
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	100	100	100	200	200	100	500	100	2900	100	100	<100	100	700	200	200	100	400	3400	Dry	Dry	1900	<100	14500	4600	400
Nitrogen (Total)	µg/L	10	250	100	100	100	200	200	100	500	100	23900	100	100	<100	100	700	200	200	200	400	22000	Dry	Dry	1900	<100	17000	5100	1500
Reactive Phosphorus	µg/L	1	15	8	10	9	9	7	7	10	7	5	4	4	6	5	5	3	4	4	4	6	Dry	Dry	5	7	10	7	6
Phosphorus (Total)	µg/L	5	20	<10	<10	<10	<10	<10	<10	60	<10	50	10	20	<10	<10	20	10	10	10	20	180	Dry	Dry	160	20	2580	600	20
Inorganics																													
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	Dry	Dry	<4	<4	<4	<4	<4
Hydrocarbons																													
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	<1	<1	<1	<1	<1
Metals																													
Aluminium (dissolved)	µg/L	5	27	6	<5	6	6	7	6	10	6	<5	10	6	12	11	46	23	23	21	26	13	Dry	Dry	30	9	14	19	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8950	Dry	Dry	83	622	36800	3640	378
Arsenic (dissolved)	µg/L	1	0.8	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	0.2	0.2	0.2	0.4	5.5	Dry	Dry	0.9	0.4	26.7	6.2	3.2
Arsenic (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	Dry	Dry	0.9	0.9	38.4	7.7	3.4
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	4.8	Dry	Dry	0.9	<0.2	4.8	18.2	0.2
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35.8	Dry	Dry	1.2	0.8	114	27.9	0.9
Copper (dissolved)	µg/L	1	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	Dry	Dry	1.9	<0.5	5.4	1.7	2.1
Copper (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4	Dry	Dry	2.7	1.3	77.2	8.6	2.8
Iron (dissolved)	µg/L	50	300	26	26	16	16	13	14	15	16	2	35	14	43	33	246	232	243	144	167	<2	Dry	Dry	19	37	7	<2	<2
Iron (total)	µg/L	50	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13700	Dry	Dry	82	644	64100	5940	352
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Dry	Dry	0.2	<0.1	<0.1	<0.1	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	Dry	Dry	19	0.4	111	9.6	0.5
Manganese (dissolved)	µg/L	5	1,200	3.2	5.8	1.8	3.4	2.1	1.4	2.6	2.3	109	4.7	1.1	2.9	2.5	10.2	5.3	5.8	26.1	4.2	0.7	Dry	Dry	2.4	18.4	12.8	22.3	237
Manganese (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	286	Dry	Dry	15.1	26.5	1600	156	274
Nickel (dissolved)	µg/L	1	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	Dry	Dry	0.6	0.9	1.8	1	1.6
Nickel (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	Dry	Dry	0.9	1.9	163	17.6	2.6
Silver (dissolved)	µg/L	5	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	Dry	Dry	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	Dry	Dry	<0.01	0	0.19	0.03	<0.01
Zinc (dissolved)	µg/L	5	2.4	<1	<1	<1	<1	<1	<1	<1	2	2	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	Dry	Dry	1	<1	<1	<1	<1
Zinc (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	Dry	Dry	3	2	348	29	3

* Water Quality Objective values for surface water refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

\- Sample not required at this location.

Monthly EPL Sampling: 01 - 31 March 2024 - Treated Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL 41	EPL 43	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49	EPL 50
Flow Rate				3/03/2024							9/03/2024
Inflow#	ML/day	-	-	-	0.0000	0.3586	0.0386	0.1423	0.0674	0.1496	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	8.08	-	-	-	-	-	-	6.89
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	105	-	-	-	-	-	-	67
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	143	-	-	-	-	-	-	136
Temperature	°C	-	15	18.87	-	-	-	-	-	-	19.36
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	95	-	-	-	-	-	-	95.3
Turbidity	NTU	-	<25	26.4	-	-	-	-	-	-	1.9
Laboratory analytes											
Total suspended solids	mg/L	5	5/10	<5	-	-	-	-	-	-	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	29	-	-	-	-	-	-	<1
Nutrients											
Ammonia as N	µg/L	5	200/2000^	40	-	-	-	-	-	-	50
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	200	-	-	-	-	-	-	100
Nitrogen (Total)	µg/L	10	350/-^	1600	-	-	-	-	-	-	200
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	4	-	-	-	-	-	-	<1
Phosphorus (Total)	µg/L	5	100/300^	<10	-	-	-	-	-	-	<10
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	<4
Hydrocarbons											
Oil and Grease	mg/L	5	2/5^	<1	-	-	-	-	-	-	<1
Metals											
Aluminium (dissolved)	µg/L	5	55	55	-	-	-	-	-	-	<5
Arsenic (dissolved)	µg/L	0.2	13	0.4	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.3	-	-	-	-	-	-	<0.2
Copper (dissolved)	µg/L	0.5	14	2.9	-	-	-	-	-	-	<0.5
Iron (dissolved)	µg/L	2	300	24	-	-	-	-	-	-	<2
Lead (dissolved)	µg/L	0.1	3.4	0.6	-	-	-	-	-	-	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	-	-	-	-	-	-	<0.5
Nickel (dissolved)	µg/L	0.5	11	<0.5	-	-	-	-	-	-	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	-	-	-	-	-	-	<0.01
Zinc (dissolved)	µg/L	1	8	131	-	-	-	-	-	-	<1
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	<1	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	<5	5	<2	-	-	-	-	-	-	<2

Note: Treated water was not being discharged at Talbingo ot Tantangara Reservoirs at the time of EPL sampling.
There is no 100th percentile limit for Nitrogen (Total).

* Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

\- Sample not required at this location.

^ 90 Percentile concentration limit/100 Percentile limit

\# Inflows to STP and CWTP do not directly correspond to outflow at RO as much of the water is reused on site

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 31 March 2024 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
	-	-	0.10	0.054	0.30	0.08	0.29
2/03/2024	-	-	0.26	0.0600	0.21	0.08	0.50
3/03/2024	-	-	0.23	0.0440	0.20	0.06	0.91
4/03/2024	-	-	0.25	0.049	0.14	0.07	0.80
5/03/2024	-	-	0.39	0.05	0.20	0.85	0.34
6/03/2024	-	0.31	0.25	0.05	0.22	0.07	0.86
7/03/2024	-	0.69	0.29	0.05	0.18	0.08	0.43
8/03/2024	-	-	0.22	0.05	0.21	0.10	0.43
9/03/2024	-	0.20	0.17	0.05	0.20	0.04	0.29
10/03/2024	-	-	0.40	0.05	0.31	0.11	0.28
11/03/2024	-	-	0.36	0.06	0.08	0.04	0.77
12/03/2024	-	-	0.35	0.05	0.17	0.08	0.70
13/03/2024	-	-	0.34	0.05	0.16	0.11	0.57
14/03/2024	-	0.33	0.21	0.05	0.16	0.03	0.93
15/03/2024	-	0.40	0.14	0.06	0.20	0.09	0.76
16/03/2024	-	0.27	0.30	0.06	0.19	0.07	0.91
17/03/2024	-	0.001	0.24	0.05	0.19	0.08	0.71
18/03/2024	-	-	0.33	0.05	0.18	0.08	0.92
19/03/2024	-	-	0.09	0.04	0.13	0.09	0.69
20/03/2024	-	-	0.21	0.05	0.22	0.05	0.79
21/03/2024	-	-	0.56	0.05	0.18	0.15	0.51
22/03/2024	-	-	0.53	0.08	0.27	0.13	0.70
23/03/2024	-	-	0.39	0.07	0.20	0.08	0.77
24/03/2024	-	-	0.21	0.04	0.18	0.08	0.91
25/03/2024	-	0.31	0.25	0.06	0.18	0.09	0.31
26/03/2024	-	0.46	0.39	0.05	0.15	0.08	0.31
27/03/2024	-	-	0.27	0.04	0.18	0.07	0.32
28/03/2024	-	-	0.50	0.05	0.28	0.11	0.97
29/03/2024	-	-	0.24	0.07	0.41	0.07	0.49
30/03/2024	-	-	0.32	0.05	0.18	0.09	0.86
31/03/2024	-	-	0.40	0.04	0.18	0.10	0.52

Note: The EPL discharge volume limit for EPL 43 and 50 is 4.32 megalitres per day. Compliance with this criteria was met during the reporting month.

- Water not discharged on this day

* The maximum flow rate capacity for Lobs Hole STP/PWTP during the reporting month was 0.0 L/s.

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 7.99 L/s

APRIL 2024

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-30 April 2024 Groundwater

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL56	EPL57	EPL58	EPL68	EPL69	EPL70	EPL72	EPL73	EPL80	EPL81	EPL82	EPL83	EPL87	EPL88	EPL89	EPL 90	EPL 91	EPL92	EPL93	EPL94	EPL95	EPL96	EPL97
Physiochemical				19/04/2024	19/04/2024	19/04/2024	17/04/2024	17/04/2024	17/04/2024	7/04/2024	7/04/2024	18/04/2024	18/04/2024	18/04/2024	18/04/2024	18/04/2024	18/04/2024	18/04/2024	19/04/2024	19/04/2024	19/04/2024	19/04/2024	19/04/2024	19/04/2024	19/04/2024	19/04/2024
pH	pH Unit	-	6.5-8	7.78	8.05	6.19	5.85	6.27	6.88	5.53	7.42	7.46	7.46	6.82	7.64	7.78	7.82	7.24	6.16	6.98	7.24	7.41	6.99	6.5	6.99	7.27
Electrical Conductivity	µS/cm	-	30-350	250	252	748	15	19.7	56.9	46	160	751	614	728	567	382	816	289	460	235	128	279	199	387	1	355
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	94	72	181	199	187.5	179.1	267	214	29	58	190	141	242	8	121	121	49	117	61	60	180	114	125
Temperature	°C	-	No Water Quality Objective Value	16.72	15.86	18.45	12.3	12.2	9.4	12.49	13.3	16.86	15.43	19.34	15.31	13.88	14.91	16.11	16.27	20.9	19.74	23.19	23.11	18.49	17.77	15.75
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	15.9	19.5	81.6	76	73.6	47.7	53.6	119.6	119.9	109.4	54	124.1	121.1	71.1	70.6	120	81.5	92.6	35.3	38	94.4	80	56.5
Turbidity	NTU	-	No Water Quality Objective Value	75.5	79	2.9	7.77	6.15	29.84	267	7.9	114	1000	732	1000	317	0	1000	302	11.5	38.1	53.1	13.4	17.9	90.1	79
Laboratory analytes																										
TSS	mg/L	5	No Water Quality Objective Value	30	20	6	44	52	40	245	68	56	2,020	529	508	685	8	1,270	1,690	41	46	90	28	26	476	558
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	131	118	224	<1	2	26	13	36	312	295	242	109	96	118	56	43	111	22	117	83	128	70	94
Nutrients																										
Ammonia as N	µg/L	5	13	10	20	10	10	10	<10	<10	<10	50	10	<10	30	20	110	<10	10	90	<10	80	20	60	20	30
Nitrite + Nitrate as N (Nox)	µg/L	10	15	10	30	45500	740	100	490	20	40	<0.01	<0.01	40	6470	2080	20	50	1260	<10	<10	<10	<10	21500	1100	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	200	100	11000	100	<100	<100	100	<100	300	1600	200	1400	1000	200	1000	2400	200	<100	300	100	2500	600	200
Nitrogen (Total)	µg/L	10	250	200	100	56500	800	100	500	100	<0.1	300	1600	200	7900	3100	200	1000	3700	200	<100	300	100	24000	1700	200
Reactive Phosphorus	µg/L	1	15	3	4	5	<1	5	24	15	23	5	6	6	14	4	17	4	6	<1	10	51	11	10	6	9
Phosphorus (Total)	µg/L	5	20	130	40	10	40	40	40	130	20	50	880	240	370	610	80	770	1370	40	<10	120	30	20	250	140
Inorganics																										
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons																										
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1
Metals																										
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	5	<5	7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	<5	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	902	845	64	1410	711	920																	
Arsenic (dissolved)	µg/L	1	0.8	<0.2	1.4	0.2	<0.2	<0.2	<0.2	0.3	<0.2	3.7	1.4	0.3	5.1	0.3	7.4	0.6	<0.2	0.3	0.3	21.9	1	2.1	<0.2	2.8
Arsenic (total)	µg/L	1	No Water Quality Objective Value	0.3	2.1	0.3	0.3	0.2	<0.2																	
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	0.9	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	2.3	1.8	0.6	1	0.8	0.9																	
Copper (dissolved)	µg/L	1	1	2.3	0.8	0.5	0.9	<0.5	3	0.6	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	0.7	0.6	<0.5	<0.5	<0.5	<0.5	3.8	<0.5	<0.5
Copper (total)	µg/L	1	No Water Quality Objective Value	28.4	15.3	1.3	4.7	0.7	11																	
Iron (dissolved)	µg/L	50	300	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	3	3	<2	<2	<2	<2	<2	<2	<2	<2
Iron (total)	µg/L	50	No Water Quality Objective Value	1010	933	73	945	454	597																	
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	3.1	3.8	3.6	0.6	0.3	0.4																	
Manganese (dissolved)	µg/L	5	1,200	6.1	33	49.3	1.6	<0.5	2.3	10.6	34.6	186	121	61.2	62.3	166	153	77.5	11	527	87.1	254	616	916	26.9	212
Manganese (total)	µg/L	5	No Water Quality Objective Value	44.5	107	51.9	0	12.7	17.9																	
Nickel (dissolved)	µg/L	1	8	<0.5	<0.5	4.7	0.7	<0.5	3.4	1.2	<0.5	13.6	8.6	8.4	5.4	2.1	0.5	4.4	4.4	0.8	2.9	1.4	1.7	24.4	1.6	0.8
Nickel (total)	µg/L	1	No Water Quality Objective Value	2.6	2.8	5.2	1.8	<0.5	4.7																	
Silver (dissolved)	µg/L	5	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01																	
Zinc (dissolved)	µg/L	5	2.4	3	<1	27	1	<1	<1	7	1	50	2	6	3	1	2	<1	20	3	30	3	6	55	2	8
Zinc (total)	µg/L	5	No Water Quality Objective Value	17	8	29	4	2	2																	

* Water Quality Objective values for groundwater refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 30 April 2024 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51
Field				20/4/24	20/4/24	15/4/24	15/4/24	15/4/24	15/4/24	15/4/24	15/4/24	15/4/24	15/4/24
pH	pH Unit	-	6.5-8	7.58	7.43	8.17	7.85	7.87	7.64	7.62	7.84	7.91	7.88
Electrical Conductivity	µS/cm	-	20-30	68	68	22.2	23	22.8	22.6	21.3	21.2	22.9	22.7
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	174	181	143.2	110.1	131.7	118	207.9	131.5	208.5	114.8
Temperature	°C	-	No Water Quality Objective Value	16.66	16.2	14.7	15.7	15.5	15.2	15.9	12	15.5	15.2
Dissolved Oxygen	% saturation	-	90-110	104.1	105.4	86.5	89.9	89.3	87.5	96.7	85	90.5	88.7
Turbidity	NTU	-	1-20	0.4	1	7.38	8.41	8.64	9.31	3.69	8.5	8.82	9.17
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	<5	<5	7	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	24	24	9	9	9	9	9	9	9	9
Nutrients													
Ammonia as N	µg/L	5	10	<10	<10	<10	<10	<10	10	20	<10	<10	<10
Nitrite + Nitrate as N (NOx)	µg/L	10	10	<10	<10	<10	<10	<10	<10	<10	<10	40	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	100	100	300	400	400	500	300	200	500	300
Nitrogen (Total)	µg/L	10	350	100	100	300	400	400	500	300	200	500	300
Reactive Phosphorus	µg/L	1	5	7	5	6	6	6	4	4	5	3	5
Phosphorus (Total)	µg/L	5	10	30	20	30	20	20	40	30	20	20	20
Inorganics													
Cyanide Total	µg/L	4	7	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons													
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Metals													
Aluminium (dissolved)	µg/L	5	55	<5	<5	38	38	39	39	38	30	39	39
Arsenic (dissolved)	µg/L	0.2	13	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3
Chromium (III+VI) (dissolved)	µg/L	0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (dissolved)	µg/L	0.5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iron (dissolved)	µg/L	2	300	9	9	185	184	192	185	207	157	188	188
Lead (dissolved)	µg/L	0.1	3.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	<0.5	1.5	1.5	1.5	1.5	2.2	2.2	1.6	1.5
Nickel (dissolved)	µg/L	0.5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biological													
Faecal Coliforms	CFU/100mL	1	10/100^	14000	1400	5**	-	-	-	-	-	-	5**
Biochemical Oxygen Demand	mg/L	2	1/5^	-	-	-	-	-	-	-	-	-	-

* Water Quality Objective values for Talbingo and Tantangara Reservoir refer to the default trigger values for physical and chemical stressors in south-east Australia (fresh lakes and reservoirs) for the protection of 95% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

** Algal blooms can present as feacal coliforms - visible algal growth noted in Tantangara Resevroir water at time of sampling.

^ 90th percentile concentration limits / 100 percentile concentration limits

\- Sample not required at this location.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 30 April 2024 - Surface Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL5	EPL6	EPL8	EPL9	EPL12	EPL14	EPL15	EPL16	EPL17	EPL24	EPL26	EPL27	EPL30	EPL31	EPL33	EPL34	EPL35	EPL36	EPL37	EPL52	EPL53	EPL54	EPL55	EPL71	EPL84	EPL85	EPL86
Field				3/04/24	3/04/24	3/04/24	3/04/24	3/04/24	3/04/24	3/04/24	3/04/24	3/04/24	17/04/24	8/04/24	8/04/24	19/04/24	19/04/24	19/04/24	19/04/24	19/04/24	19/04/24	19/04/24	19/04/24	-	-	19/04/24	7/04/24	17/04/24	17/04/24	17/04/24
pH	-	-	6.5-8	7.72	8.08	8.38	8.38	8.33	8.33	8.37	8.43	8.15	7.82	7.75	7.64	7.18	7.11	6.96	7.34	7.07	7.02	7.21	9.4	Dry	Dry	7.81	6.44	8.06	10.19	8.46
Electrical Conductivity	µS/cm	-	30-350	154	145	157	148	147	148	148	150	479	702	42	38	37	30	34	27	24	41	44	813	Dry	Dry	709	130	1097	610	1010
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	145	91	101	103	115	86	120	130	114	69	207	173	155	160	166	184	170	280	273	170	Dry	Dry	148	264	-2	151	180
Temperature	°C	-	No Water Quality Objective Value	17.21	16.14	18.96	18.5	16.83	17.06	18.9	18.47	17.54	21.56	11.3	11.19	12.12	11.34	11.97	11.21	10.93	10.91	12.49	17.28	Dry	Dry	16.83	12.3	15.7	13.72	14.2
Dissolved Oxygen	% saturation	-	90-110	102.3	99.5	94.5	103.1	112.3	91.8	108	114.8	91.1	90.2	106.1	100.5	99.7	103.9	100.3	95	108.7	74.4	65.2	143	Dry	Dry	93.07	52	93.3	95.6	138
Turbidity	NTU	-	2-25	3.3	4.9	2.5	0	0.2	0.8	0	0	6.4	3.8	0.8	0.2	3.7	2.7	3.4	12.1	6.4	19.5	17.1	4.3	Dry	Dry	65	239	48.8	134	14
Laboratory analytes																														
TSS	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	6	11	19	12	7	8	Dry	Dry	28	118	115	107	19
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	66	67	66	66	63	68	66	66	239	144	18	16	13	7	9	7	2	13	13	178	Dry	Dry	152	50	105	50	289
Nutrients																														
Ammonia as N	µg/L	5	13	<10	<10	<10	<10	<10	10	20	<10	<10	<10	<10	<10	10	10	<10	<10	<10	<10	<10	40	Dry	Dry	10	10	1320	560	10
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	10	<10	<10	<10	40	<10	20	23000	30	10	<10	<10	10	<10	<10	100	80	29700	Dry	Dry	22300	60	12800	7870	7290
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	100	<100	100	<100	100	<100	100	<100	200	<2000	100	<100	100	<100	300	100	100	400	400	5100	Dry	Dry	4000	300	4400	2100	700
Nitrogen (Total)	µg/L	10	250	100	<100	100	<100	100	<100	100	<100	200	23000	100	<100	100	<100	300	100	100	500	500	34800	Dry	Dry	26300	400	17200	10000	8000
Reactive Phosphorus	µg/L	1	15	6	9	3	5	9	4	4	7	5	6	7	7	6	6	5	3	3	4	6	<10	Dry	Dry	2	6	28	5	3
Phosphorus (Total)	µg/L	5	20	<10	10	<10	10	10	10	10	10	20	10	30	40	20	20	20	<10	10	30	30	40	Dry	Dry	60	300	90	100	<10
Inorganics																														
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	Dry	Dry	<1	<4	15	<4	<4
Hydrocarbons																														
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	<1	<1	<1	<1	<1
Metals																														
Alluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	13	8	11	12	27	16	15	78	88	<5	Dry	Dry	<5	10	112	20	<5
Alluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	118	Dry	Dry	699	9180	1490	5430	132
Arsenic (dissolved)	µg/L	1	0.8	0.6	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	<0.2	<0.2	<0.2	<0.2	0.3	0.2	<0.2	0.4	0.4	2.2	Dry	Dry	<0.2	0.5	4.2	6.5	2.3
Arsenic (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	Dry	Dry	0.5	3.6	4.9	8.7	2.6
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.9	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.2	2.8	Dry	Dry	0.6	<0.2	104	21.5	0.2
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	Dry	Dry	2.3	17.2	115	40.5	0.5
Copper (dissolved)	µg/L	1	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dry	Dry	0.5	0.6	3.5	0.8	1.7
Copper (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	Dry	Dry	1.9	12.6	7	8.2	2.3
Iron (dissolved)	µg/L	50	300	34	21	8	8	8	7	8	8	3	<2	76	45	39	30	190	101	98	339	332	<2	Dry	Dry	<2	33	3	<2	<2
Iron (total)	µg/L	50	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	101	Dry	Dry	850	11100	1730	6880	124
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Dry	Dry	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	Dry	Dry	2.6	2.4	2.9	9.8	0.1
Manganese (dissolved)	µg/L	5	1,200	3	2.5	1.2	2.3	1	<0.5	1	1.4	<0.5	160	8.1	3.4	5.7	4.7	1.3	5.7	5.2	12.7	6.6	<0.5	Dry	Dry	<0.5	31.1	12.7	<0.5	163
Manganese (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	Dry	Dry	51.6	224	62.0	166	225
Nickel (dissolved)	µg/L	1	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dry	Dry	<0.5	1.4	1.1	<0.5	1.4
Nickel (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	Dry	Dry	2.8	35.9	6.4	22.6	1.9
Silver (dissolved)	µg/L	5	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	Dry	Dry	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	Dry	Dry	<0.01	<0.01	0.04	<0.01	<0.01
Zinc (dissolved)	µg/L	5	2.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	3	<1	<1	2	3	2	2	2	<1	<1	<1	Dry	Dry	1	<1	2	<1	<1
Zinc (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	Dry	Dry	13	20	19	34	1.0

* Water Quality Objective values for surface water refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

\- Sample not required at this location.

Monthly EPL Sampling: 01 - 30 April 2024 - Treated Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL 41	EPL 43	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49	EPL 50
Flow Rate				21/04/2024							19/04/2024
Inflow*	ML/day	-	-	-	0.0277	0.4371	0.0444	0.1255	0.0738	0.1370	-
Outflow*	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	7.19	-	-	-	-	-	-	7.56
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	37	-	-	-	-	-	-	29
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	208	-	-	-	-	-	-	231
Temperature	°C	-	15	14.62	-	-	-	-	-	-	15.08
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	93.5	-	-	-	-	-	-	94.4
Turbidity	NTU	-	<25	2.3	-	-	-	-	-	-	0
Laboratory analytes											
Total suspended solids	mg/L	5	5/10	<5	-	-	-	-	-	-	7
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	<1	-	-	-	-	-	-	<1
Nutrients											
Ammonia as N	µg/L	5	200/2000^	<10	-	-	-	-	-	-	30
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	<100	-	-	-	-	-	-	200
Nitrogen (Total)	µg/L	10	350/-^	<100	-	-	-	-	-	-	500
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	2	-	-	-	-	-	-	4
Phosphorus (Total)	µg/L	5	100/300^	20	-	-	-	-	-	-	<10
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	<4
Hydrocarbons											
Oil and Grease	mg/L	5	2/5^	<1	-	-	-	-	-	-	<1
Metals											
Aluminium (dissolved)	µg/L	5	55	<5	-	-	-	-	-	-	<5
Arsenic (dissolved)	µg/L	0.2	13	0.6	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.3	-	-	-	-	-	-	0.5
Copper (dissolved)	µg/L	0.5	14	<0.5	-	-	-	-	-	-	<0.5
Iron (dissolved)	µg/L	2	300	<2	-	-	-	-	-	-	<2
Lead (dissolved)	µg/L	0.1	3.4	<0.1	-	-	-	-	-	-	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	-	-	-	-	-	-	<0.5
Nickel (dissolved)	µg/L	0.5	11	<0.5	-	-	-	-	-	-	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	-	-	-	-	-	-	<0.01
Zinc (dissolved)	µg/L	1	8	<1	-	-	-	-	-	-	<1
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	<1	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	<5	5	<2	-	-	-	-	-	-	<2

Note: Treated water was not being discharged at Talbingo ot Tantangara Reservoirs at the time of EPL sampling.
There is no 100th percentile limit for Nitrogen (Total).

* Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

\- Samples not required

^ 90 Percentile concentration limit/100 Percentile limit

* Inflows to STP and CWTP do not directly correspond to outflow at RO as much of the water is reused on site

Monthly EPL Sampling: 01 - 30 April 2024 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/04/2024	-	-	0.41	0.05	0.25	0.07	0.46
2/04/2024	-	-	0.36	0.05	0.14	0.06	0.10
3/04/2024	-	-	0.39	0.05	0.23	0.07	0.54
4/04/2024	-	-	0.33	0.04	0.13	0.09	0.27
5/04/2024	-	-	0.07	0.06	0.21	0.08	0.47
6/04/2024	-	-	0.32	0.05	0.13	0.07	0.66
7/04/2024	-	-	0.36	0.06	0.15	0.08	0.71
8/04/2024	-	-	0.23	0.04	0.18	0.10	0.73
9/04/2024	-	-	0.81	0.06	0.25	0.09	0.80
10/04/2024	-	0.47	0.57	0.06	0.08	0.05	0.87
11/04/2024	0.21	-	0.33	0.06	0.19	0.10	0.89
12/04/2024	-	-	0.30	0.06	0.20	0.05	0.41
13/04/2024	-	-	0.36	0.06	0.21	0.08	0.42
14/04/2024	-	0.62	0.41	0.06	0.19	0.08	0.01
15/04/2024	-	0.15	0.24	0.05	0.15	0.07	0.01
16/04/2024	-	-	0.43	0.05	0.17	0.10	0.11
17/04/2024	-	-	0.42	0.04	0.20	0.09	0.12
18/04/2024	0.10	-	0.31	0.05	0.19	0.08	0.01
19/04/2024	-	0.79	0.68	0.07	0.22	0.09	0.07
20/04/2024	0.20	-	0.39	0.07	0.23	0.07	0.003
21/04/2024	0.18	0.31	0.32	0.03	0.11	0.10	0.001
22/04/2024	-	0.38	0.33	0.05	0.18	0.08	0.001
23/04/2024	0.15	-	0.36	0.05	0.18	0.08	0.002
24/04/2024	-	-	0.29	0.05	0.13	0.08	0.30
25/04/2024	-	-	0.38	0.05	0.19	0.09	0.54
26/04/2024	-	-	0.34	0.05	0.25	0.06	0.70
27/04/2024	-	-	0.35	0.06	0.23	0.09	0.67
28/04/2024	-	-	0.98	0.05	0.17	0.10	0.82
29/04/2024	-	-	0.03	0.04	0.20	0.06	0.38
30/04/2024	-	-	0.29	0.06	0.22	0.08	0.38

Note: The EPL discharge volume limit for EPL 43 and 50 is 4.32 megalitres per day. Compliance with this criteria was met during the reporting month.

* The maximum flow rate capacity for Lobs Hole STP/PWTP during the reporting month was 2.43 L/s.

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 9.14 L/s

\- Water not discharged on this day

MAY 2024

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-31 May 2024 Groundwater

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL1	EPL2	EPL4	EPL25	EPL56	EPL57	EPL58	EPL68	EPL69	EPL70	EPL72	EPL73	EPL80	EPL81	EPL82	EPL83	EPL87	EPL88	EPL89	EPL 90	EPL 91	EPL92	EPL93	EPL94	EPL95	EPL96	EPL97
Physicochemical				1/05/2024	1/05/2024	1/05/2024	1/05/2024	25/05/2024	25/05/2024	25/05/2024	4/05/2024	4/05/2024	4/05/2024	4/05/2024	4/05/2024	14/05/2024	14/05/2024	14/05/2024	14/05/2024	14/05/2024	14/05/2024	14/05/2024	25/05/2024	25/05/2024	25/05/2024	25/05/2024	25/05/2024	25/05/2024	25/05/2024	25/05/2224
pH	pH Unit	-	6.5-8	6.77	7.61	7.58	7.88	8	8.05	6.14	5.92	6.02	6.16	5.96	7.29	6.89	6.75	7.03	6.05	6.87	6.81	6.5	5.92	7.11	6.59	7.28	7.02	6.46	6.92	7.02
Electrical Conductivity	µS/cm	-	30-350	370	781	1007	191	168	252	538	13	16.1	43.9	55	37	645	577	1067	364	310	627	250	148	151	14	188	120	390	120	275
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	8	-42	-34	186	188	72	208	262.9	232.5	216.2	270	251	39	-50	27	104	85	-43	101	203	102	106	-67	-40	184	120	23
Temperature	°C	-	No Water Quality Objective Value	14.75	16.33	18.17	11.02	12.29	15.86	15.63	11.3	13.1	10.6	10.82	13.9	16.37	16.39	19.02	20.11	19.68	18.29	14.26	14.73	13.11	13.42	14.02	14.51	15.19	14.73	16.5
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	41.1	22.5	98.7	42.5	93	19.5	83.6	84.3	76.2	73.9	63.3	83.2	16.7	0	21.8	7.4	3.8	17.9	21.2	82.9	77.7	96.8	51	91.4	96.7	93.5	73.1
Turbidity	NTU	-	No Water Quality Objective Value	61.7	30.1	1000	39.3	88.8	79	1.8	14.18	11.44	25	223	3.8	37.7	58	51.8	35.6	147	13.9	51	609	17.9	52.6	329	177	5.7	221	82.7
Laboratory analytes																														
TSS	mg/L	5	No Water Quality Objective Value	124	8	1,550	140	17	41	<5	12	44	49	336	75	15	118	30	115	48	13	12	654	2,560	99	1,120	335	<5	264	52
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	271	151	205	213	124	125	214	<1	2	26	13	30	335	363	884	94	104	115	47	28	111	26	122	89	179	72	96
Nutrients																														
Ammonia as N	µg/L	5	13	10	180	970	120	<10	20	<10	<10	<10	<10	<10	<10	10	40	50	<10	<10	150	<10	<10	40	10	30	90	20	20	70
Nitrite + Nitrate as N (Nox)	µg/L	10	15	90	<10	<10	<10	20	60	37300	700	100	470	40	20	<10	<10	<10	1500	1040	10	40	1000	30	<10	20	<10	28400	330	20
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	200	400	5500	400	<100	200	300	400	<100	200	100	<100	200	200	300	400	400	300	100	<500	500	<100	600	300	700	500	100
Nitrogen (Total)	µg/L	10	250	300	400	5500	400	<100	300	37600	1100	100	700	100	<100	200	200	300	1900	1400	300	100	1000	500	<100	600	300	29100	800	100
Reactive Phosphorus	µg/L	1	15	5	29	30	4	5	9	6	<1	4	10	18	18	6	2	10	2	2	12	5	13	10	3	17	15	12	7	12
Phosphorus (Total)	µg/L	5	20	100	50	1830	120	350	270	10	20	30	90	130	40	50	210	30	110	120	90	30	700	330	10	350	110	10	120	150
Inorganics																														
Cyanide Total	µg/L	4	4	-	-	-	-	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons																														
Oil and Grease	mg/L	5	5	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1
Metals																														
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	<5	<5	<5	<5	6	<5	10	<5	<5	<5	<5	18	<5	<5	<5	6	<5	<5	<5	<5	<5	<5	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	486	1750	26	534	407	1180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (dissolved)	µg/L	1	0.8	0.6	0.8	12	0.5	<0.2	1.1	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	3.1	13.6	3.6	1.8	<0.2	13.3	<0.2	<0.2	1.2	0.3	19.1	0.5	1.4	<0.2	1.6
Arsenic (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	0.2	1.9	<0.2	<0.2	<0.2	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1	<0.2	0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.7	<0.2	<0.2	<0.2	0.6	<0.2	<0.2
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	1.3	3.9	1.1	0.4	0.5	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper (dissolved)	µg/L	1	1	2.9	14.1	<0.5	5.5	2.5	<0.5	2	<0.5	<0.5	19.1	1.5	<0.5	0.7	<0.5	<0.5	0.7	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	180	<0.5	<0.5
Copper (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	15.9	21	2.6	0.7	1	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	µg/L	50	300	13	<2	63	2	<2	<2	<2	<2	4	<2	<2	<2	<2	2	<2	38	<2	4	3	8	<2	<2	<2	<2	<2	<2	<2
Iron (total)	µg/L	50	No Water Quality Objective Value	-	-	-	-	516	1900	28	226	151	652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2.2	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	6.3	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	2.3	5.5	3.9	0.1	0.1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	µg/L	5	1,200	258	107	609	1190	3.7	30.5	29.2	2.1	0.9	2.4	10.5	26.1	168	231	244	90.2	351	128	22.2	57.7	568	83.7	339	653	442	125	272
Manganese (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	29.4	165	32.7	11.5	2.6	20.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (dissolved)	µg/L	1	8	1.9	3.1	3.7	5.1	<0.5	<0.5	4.2	<0.5	<0.5	2.1	1.4	<0.5	14.1	4.2	7.8	11.2	2.7	0.9	23.7	5.4	1.6	3.8	2.1	2.4	13.5	3.2	0.8
Nickel (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	1.6	6.1	4.4	0.7	0.6	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (dissolved)	µg/L	5	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (dissolved)	µg/L	5	2.4	3	2	<1	19	5	<1	12	3	2	1	9	1	7	1	11	6	<1	1	<1	27	4	35	<1	12	35	5	6
Zinc (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	13	14	14	3	2	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Water Quality Objective values for groundwater refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 31 May 2024 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51
Field				26/5/24	26/5/24	7/5/24	7/5/24	7/5/24	7/5/24	7/5/24	7/5/24	7/5/24	7/5/24
pH	pH Unit	-	6.5-8	7.55	7.47	7.77	6.82	6.97	7.02	6.71	6.83	6.83	6.93
Electrical Conductivity	µS/cm	-	20-30	0	0	21	21	24	21	20	21	22	21
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	199	199	290	290	277	286	305	329	266	244
Temperature	°C	-	No Water Quality Objective Value	11.11	10.3	11.4	11.63	11.55	11.57	9.87	9.69	11.49	11.46
Dissolved Oxygen	% saturation	-	90-110	98.5	71.4	100.9	95.4	96.5	94.7	95.6	94.3	96.3	91.1
Turbidity	NTU	-	1-20	2.4	10.9	4	3.7	7	8.6	2.8	4	4.2	3.7
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	7	<5	5	<5	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	19	19	13	9	9	9	9	9	9	9
Nutrients													
Ammonia as N	µg/L	5	10	<10	<10	60	60	70	40	10	10	40	40
Nitrite + Nitrate as N (NOx)	µg/L	10	10	20	20	<10	<10	<10	<10	<10	10	40	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	200	100	300	500	400	500	400	300	400	400
Nitrogen (Total)	µg/L	10	350	200	100	300	500	400	500	400	300	400	400
Reactive Phosphorus	µg/L	1	5	3	2	4	4	6	5	4	5	4	5
Phosphorus (Total)	µg/L	5	10	20	30	20	20	20	40	30	30	20	20
Inorganics													
Cyanide Total	µg/L	4	7	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons													
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Metals													
Aluminium (dissolved)	µg/L	5	55	<5	<5	37	38	36	38	30	26	35	37
Arsenic (dissolved)	µg/L	0.2	13	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (dissolved)	µg/L	0.5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iron (dissolved)	µg/L	2	300	6	5	177	182	177	184	163	142	177	178
Lead (dissolved)	µg/L	0.1	3.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	1.5	0.5	1.3	1.4	1.3	1.4	1.1	0.9	1.3	1.4
Nickel (dissolved)	µg/L	0.5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biological													
Faecal Coliforms	CFU/100mL	1	10/100^	1	2	<1	-	-	-	-	-	-	<1
Biochemical Oxygen Demand	mg/L	2	1/5^	-	-	3	-	-	-	-	-	-	3

* Water Quality Objective values for Talbingo and Tantangara Reservoir refer to the default trigger values for physical and chemical stressors in south-east Australia (fresh lakes and reservoirs) for the protection of 95% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

** Algal blooms can present as faecal coliforms - green tinge noted in Talbingo Reservoir water at time of sampling.

^ 90th percentile concentration limits / 100 percentile concentration limits

\- Sample not required at this location.

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 31 May 2024 - Surface Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL5	EPL6	EPL8	EPL9	EPL12	EPL14	EPL15	EPL16	EPL24	EPL26	EPL27	EPL30	EPL31	EPL33	EPL34	EPL35	EPL36	EPL37	EPL52	EPL53	EPL54	EPL55	EPL66	EPL67	EPL71	EPL84	EPL85	EPL86
Field				6/05/24	6/05/24	6/05/24	6/05/24	6/05/24	6/05/24	6/05/24	6/05/24	6/05/24	13/05/24	13/05/24	10/05/24	10/05/24	10/05/24	10/05/24	10/05/24	10/05/24	10/05/24	25/05/24	-	-	25/05/24	4/05/24	4/05/24	4/05/24	15/05/24	15/05/24	15/05/24
pH	-	-	6.5-8	7.84	7.56	8.19	8.19	7.8	7.79	8.12	8.32	6.66	7.65	7.53	7.03	7.28	6.67	7.61	6.9	7.04	6.98	8.68	Dry	Dry	7.88	6.52	6.66	6.98	8.6	8.86	8.15
Electrical Conductivity	µS/cm	-	30-350	95	100	103	95	92	96	94	99	530	39	33	27	24	25	96	18	47	40	1020	Dry	Dry	807	16.1	16.4	74	135	828	912
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	208	276	262	269	247	274	261	258	315	228	230	216	200	223	198	208	192	194	118	Dry	Dry	140	217.7	156.9	307	132	146	166
Temperature	°C	-	No Water Quality Objective Value	13.71	12.06	14.25	13.92	12.47	12.71	12.1	15.65	16.12	6.65	6.85	10.96	11.02	11.7	11.22	10.95	12.6	12.27	11.86	Dry	Dry	13.2	10	11.1	10.96	17.3	16.49	15.94
Dissolved Oxygen	% saturation	-	90-110	109.6	107.3	94.4	108.7	109.3	98.7	95.1	91.7	101.5	96.1	73	88.2	80.3	88.8	103.6	90.4	94.1	79.6	90.8	Dry	Dry	72.2	86.7	83.5	52.6	109	79.5	105.1
Turbidity	NTU	-	2-25	2.5	3.1	2.5	3	1.8	5.7	1.2	4.5	1.8	1.5	2.4	0.7	1.1	3.7	6.9	1.7	10.5	15.1	29.8	Dry	Dry	7.10	11.18	13.27	2.7	23.8	1000	19.4
Laboratory analytes																															
TSS	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	<5	<5	10	<5	<5	<5	<5	<5	<5	<5	<5	7	15	Dry	Dry	<5	<5	<5	<5	18	952	9
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	63	67	63	61	63	61	63	63	171	18	18	<1	<1	<1	<1	<1	11	4	196	Dry	Dry	149	9	9	25	71	77	340
Nutrients																															
Ammonia as N	µg/L	5	13	<10	50	<10	<10	<10	<10	<10	<10	<10	10	60	30	<10	50	<10	<10	<10	<10	750	Dry	Dry	20	<10	40	20	1960	30	10
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	50	<10	<10	<10	<10	<10	28500	<10	<10	<10	<10	<10	10	<10	110	90	34000	Dry	Dry	22200	10	<10	<10	12500	6470	6440
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	<100	<100	<100	<100	<100	<100	700	<100	4500	<100	<100	200	<100	400	100	100	300	500	1600	Dry	Dry	1200	500	500	<100	6700	5500	1200
Nitrogen (Total)	µg/L	10	250	<100	<100	<100	<100	<100	<100	700	<100	33000	<100	<100	200	<100	400	100	100	400	600	35600	Dry	Dry	23400	500	500	<100	19200	12000	7600
Reactive Phosphorus	µg/L	1	15	11	10	10	8	8	9	9	8	6	7	7	6	5	4	<1	<1	3	6	12	Dry	Dry	7	1	4	5	19	9	6
Phosphorus (Total)	µg/L	5	20	10	40	20	20	20	<10	<10	<10	<10	30	<10	40	<10	40	20	20	40	40	50	Dry	Dry	20	30	60	10	90	890	20
Inorganics																															
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	Dry	Dry	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons																															
Oil and Grease	mg/L	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	<1	<1	<1	<1	<1	<1	<1
Metals																															
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	12	12	32	13	13	62	65	38	Dry	Dry	<5	39	37	<5	375	10	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	872	Dry	Dry	187	137	68	-	-	-	-
Arsenic (dissolved)	µg/L	1	0.8	0.4	<0.2	0.4	0.4	0.4	0.4	0.4	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	0.3	0.4	2.9	Dry	Dry	0.3	0.2	0.3	<0.2	3.3	8.3	3.6
Arsenic (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	Dry	Dry	0.3	0.3	0.3	-	-	-	-
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.2	51.4	Dry	Dry	9.9	<0.2	<0.2	<0.2	91.9	31.5	0.2
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58.1	Dry	Dry	11.2	0.2	<0.2	-	-	-	-
Copper (dissolved)	µg/L	1	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	Dry	Dry	1	<0.5	<0.5	<0.5	2	1.8	1.9
Copper (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	Dry	Dry	1.2	0.5	<0.5	-	-	-	-
Iron (dissolved)	µg/L	50	300	6	12	6	7	4	5	6	6	<2	15	11	33	24	178	67	72	229	227	2	Dry	Dry	3	175	192	12	16	<2	<2
Iron (total)	µg/L	50	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	978	Dry	Dry	143	348	316	-	-	-	-
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Dry	Dry	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	Dry	Dry	0.4	<0.1	<0.1	-	-	-	-
Manganese (dissolved)	µg/L	5	1,200	1.5	3.8	1.2	2.9	0.8	1.3	1.2	2	192	2.9	0.9	2.2	1.3	1	2.3	2.4	6.7	5.4	<0.5	Dry	Dry	1.4	1.5	1.4	9.1	4	<0.5	16.8
Manganese (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32.1	Dry	Dry	5	25	37.3	-	-	-	-
Nickel (dissolved)	µg/L	1	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	Dry	Dry	0.6	<0.5	<0.5	0.6	0.9	0.9	1.3
Nickel (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9	Dry	Dry	1.1	<0.5	<0.5	-	-	-	-
Silver (dissolved)	µg/L	5	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	Dry	Dry	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	Dry	Dry	<0.01	<0.01	<0.01	-	-	-	-
Zinc (dissolved)	µg/L	5	2.4	<1	<1	<1	<1	<1	<1	<1	<1	11	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	Dry	Dry	3	<1	<1	<1	4	<1	6
Zinc (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	Dry	Dry	8	<1	<1	-	-	-	-

* Water Quality Objective values for surface water refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

Monthly EPL Sampling: 01 - 31 May 2024 - Treated Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL 41	EPL 43	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49	EPL 50
Flow Rate				22/05/2024							10/05/2024
Inflow#	ML/day	-	-	-	0.0257	0.4831	0.0447	0.1969	0.0721	0.1330	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	7.68	-	-	-	-	-	-	7.09
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	183	-	-	-	-	-	-	16
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	171	-	-	-	-	-	-	212
Temperature	°C	-	15	12.21	-	-	-	-	-	-	13.34
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	75.4	-	-	-	-	-	-	62.8
Turbidity	NTU	-	<25	49.5	-	-	-	-	-	-	0
Laboratory analytes											
Total suspended solids	mg/L	5	5/10	<5	-	-	-	-	-	-	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	<1	-	-	-	-	-	-	<1
Nutrients											
Ammonia as N	µg/L	5	200/2000^	20	-	-	-	-	-	-	100
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	400	-	-	-	-	-	-	300
Nitrogen (Total)	µg/L	10	350/-^	400	-	-	-	-	-	-	400
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	<1	-	-	-	-	-	-	<1
Phosphorus (Total)	µg/L	5	100/300^	20	-	-	-	-	-	-	<1
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	<4
Hydrocarbons											
Oil and Grease	mg/L	5	2/5^	<1	-	-	-	-	-	-	<1
Metals											
Aluminium (dissolved)	µg/L	5	55	<5	-	-	-	-	-	-	<5
Arsenic (dissolved)	µg/L	0.2	13	0.3	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.4	-	-	-	-	-	-	<0.2
Copper (dissolved)	µg/L	0.5	14	<0.5	-	-	-	-	-	-	<0.5
Iron (dissolved)	µg/L	2	300	<2	-	-	-	-	-	-	<2
Lead (dissolved)	µg/L	0.1	3.4	<0.1	-	-	-	-	-	-	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	-	-	-	-	-	-	<0.5
Nickel (dissolved)	µg/L	0.5	11	<0.5	-	-	-	-	-	-	<0.5
Silver (dissolved)	µg/L	0.01	0.05	<0.01	-	-	-	-	-	-	<0.01
Zinc (dissolved)	µg/L	1	8	<1	-	-	-	-	-	-	<1
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	<1	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	<5	5	<2	-	-	-	-	-	-	<2

Note: Treated water was not being discharged at Talbingo Reservoir at the time of EPL sampling.
There is no 100th percentile limit for Nitrogen (Total).

* Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

\- Samples not required

^ 90 Percentile concentration limit/100 Percentile limit

\# Inflows to STP and CWTP do not directly correspond to outflow at RO as much of the water is reused on site

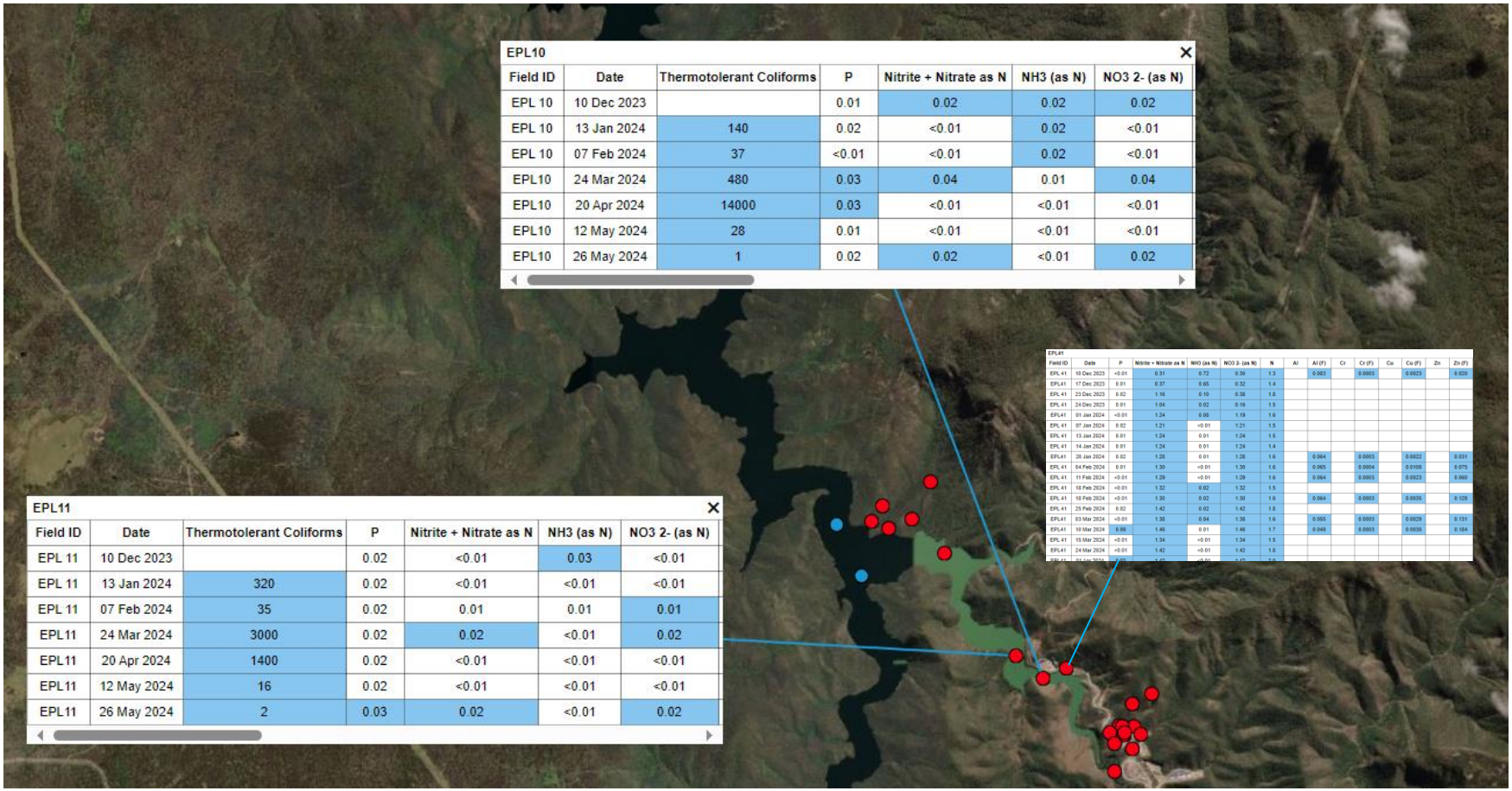
Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 31 May 2024 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/05/2024	-	-	0.24	0.046	0.13	0.07	0.75
2/05/2024	-	0.44	0.33	0.05	0.28	0.08	0.73
3/05/2024	0.28	-	0.07	0.06	0.09	0.08	0.65
4/05/2024	0.12	-	0.21	0.06	0.21	0.09	0.64
5/05/2024	-	-	0.13	0.05	0.22	0.09	0.58
6/05/2024	-	-	0.25	0.05	0.12	0.09	0.43
7/05/2024	-	0.67	0.38	0.04	0.15	0.08	0.54
8/05/2024	-	-	0.33	0.05	0.20	0.08	0.42
9/05/2024	-	0.52	0.36	0.04	0.26	0.08	0.60
10/05/2024	-	-	0.63	0.06	0.10	0.06	0.36
11/05/2024	-	0.51	0.35	0.07	0.19	0.07	0.85
12/05/2024	-	-	0.25	0.06	0.28	0.09	0.33
13/05/2024	-	-	0.38	0.05	0.13	0.06	0.27
14/05/2024	-	-	0.28	0.03	0.18	0.10	0.76
15/05/2024	-	0.69	0.26	0.07	0.22	0.07	0.87
16/05/2024	-	0.71	0.28	0.05	0.18	0.07	0.68
17/05/2024	-	-	0.24	0.07	0.24	0.09	0.71
18/05/2024	-	-	0.21	0.06	0.20	0.08	0.70
19/05/2024	0.40	-	0.32	0.06	0.22	0.07	0.66
20/05/2024	-	-	0.20	0.04	0.14	0.08	0.38
21/05/2024	-	-	0.26	0.05	0.17	0.09	0.33
22/05/2024	-	-	0.22	0.05	0.21	0.09	0.40
23/05/2024	-	-	0.52	0.04	0.09	0.09	0.27
24/05/2024	-	-	0.23	0.06	0.30	0.07	0.23
25/05/2024	-	0.46	0.26	0.05	0.22	0.07	0.55
26/05/2024	-	-	0.26	0.04	0.17	0.07	0.35
27/05/2024	-	-	0.30	0.05	0.18	0.11	0.48
28/05/2024	-	-	0.38	0.05	0.18	0.08	0.61
29/05/2024	-	-	0.31	0.05	0.21	0.08	0.20
30/05/2024	-	-	0.17	0.04	0.16	0.08	0.25
31/05/2024	-	-	0.35	0.06	0.26	0.09	0.54

- Water not discharged on this day
  Note: The EPL discharge volume limit for EPL 43 and 50 is 4.32 megalitres per day. Compliance with this criteria was met during the reporting month.
* The maximum flow rate capacity for Lobs Hole STP/PWTP during the reporting month was 4.62 L/s
^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 8.21 L/s

APPENDIX D – EXCEEDANCE MAP

TALBINGO

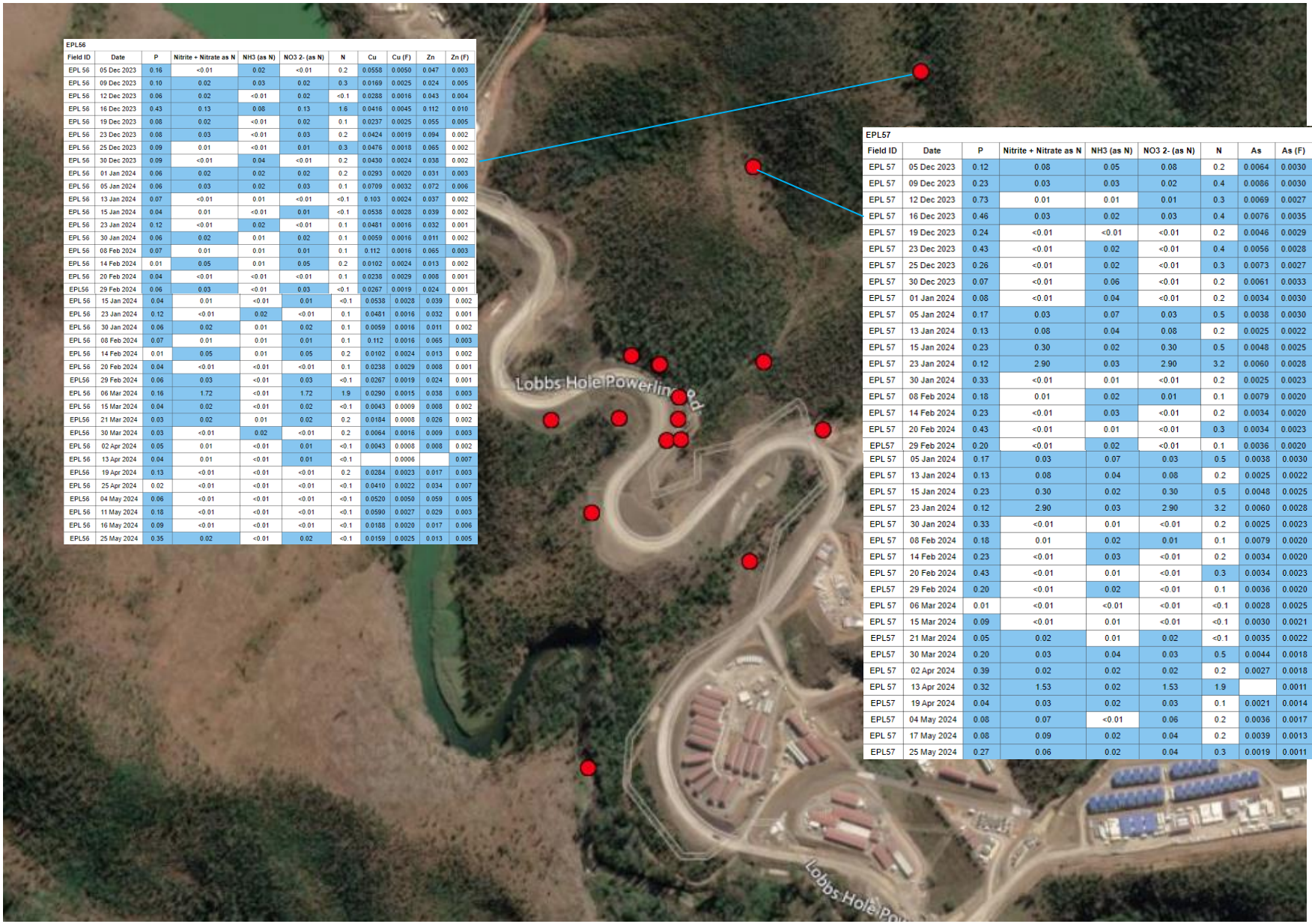


EPL10

Field ID	Date	Thermotolerant Coliforms	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)
EPL 10	10 Dec 2023		0.01	0.02	0.02	0.02
EPL 10	13 Jan 2024	140	0.02	<0.01	0.02	<0.01
EPL 10	07 Feb 2024	37	<0.01	<0.01	0.02	<0.01
EPL10	24 Mar 2024	480	0.03	0.04	0.01	0.04
EPL10	20 Apr 2024	14000	0.03	<0.01	<0.01	<0.01
EPL10	12 May 2024	28	0.01	<0.01	<0.01	<0.01
EPL10	26 May 2024	1	0.02	0.02	<0.01	0.02

EPL11

Field ID	Date	Thermotolerant Coliforms	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)
EPL 11	10 Dec 2023		0.02	<0.01	0.03	<0.01
EPL 11	13 Jan 2024	320	0.02	<0.01	<0.01	<0.01
EPL 11	07 Feb 2024	35	0.02	0.01	0.01	0.01
EPL11	24 Mar 2024	3000	0.02	0.02	<0.01	0.02
EPL11	20 Apr 2024	1400	0.02	<0.01	<0.01	<0.01
EPL11	12 May 2024	16	0.02	<0.01	<0.01	<0.01
EPL11	26 May 2024	2	0.03	0.02	<0.01	0.02

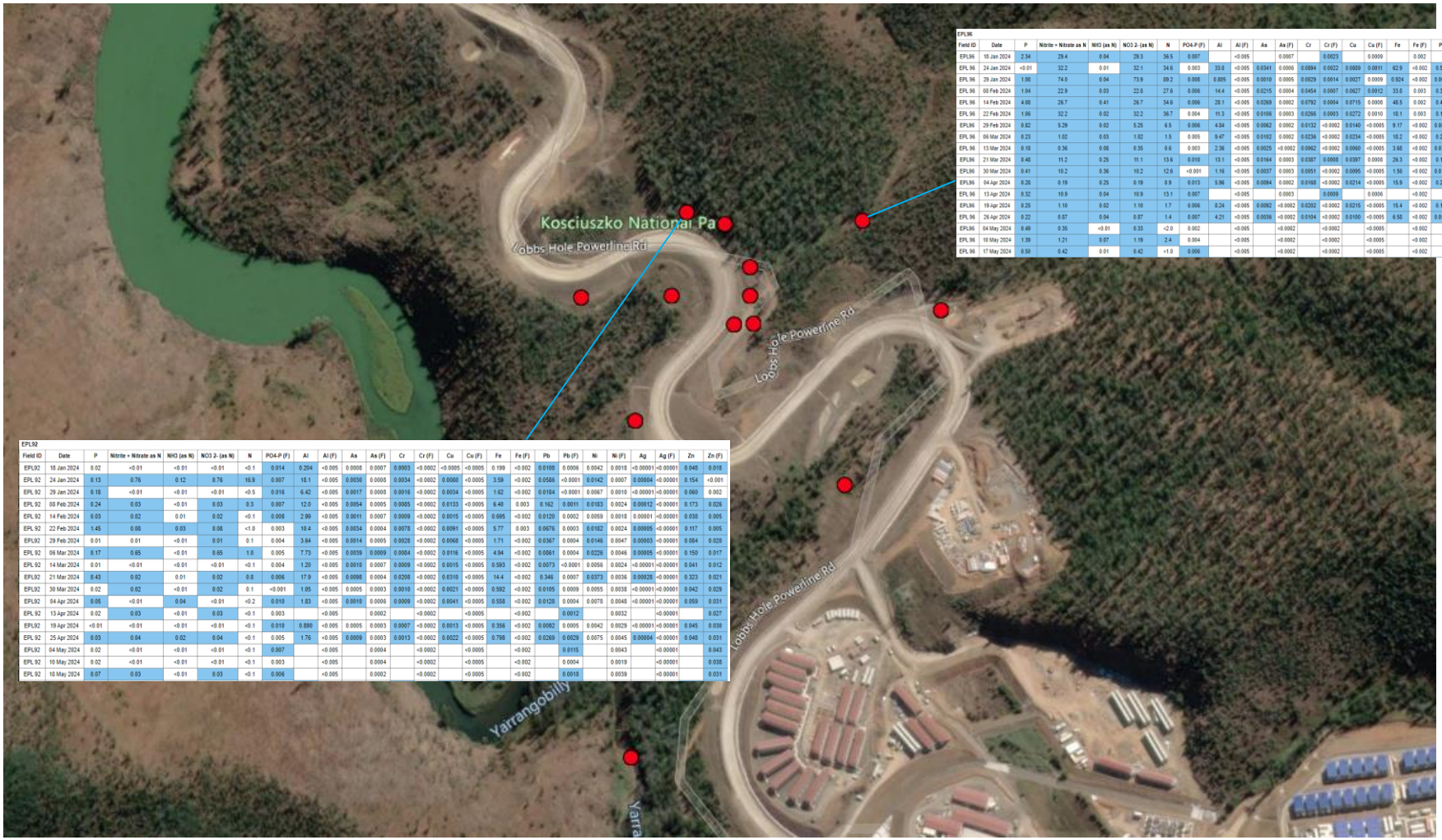


EPL56

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Cu	Cu (F)	Zn	Zn (F)
EPL 56	05 Dec 2023	0.16	<0.01	0.02	<0.01	0.2	0.0558	0.0050	0.047	0.003
EPL 56	09 Dec 2023	0.10	0.02	0.03	0.02	0.3	0.0169	0.0025	0.024	0.005
EPL 56	12 Dec 2023	0.06	0.02	<0.01	0.02	<0.1	0.0288	0.0016	0.043	0.004
EPL 56	16 Dec 2023	0.43	0.13	0.08	0.13	1.6	0.0416	0.0045	0.112	0.010
EPL 56	19 Dec 2023	0.08	0.02	<0.01	0.02	0.1	0.0237	0.0025	0.055	0.005
EPL 56	23 Dec 2023	0.08	0.03	<0.01	0.03	0.2	0.0424	0.0019	0.094	0.002
EPL 56	25 Dec 2023	0.09	0.01	<0.01	0.01	0.3	0.0476	0.0018	0.065	0.002
EPL 56	30 Dec 2023	0.09	<0.01	0.04	<0.01	0.2	0.0430	0.0024	0.038	0.002
EPL 56	01 Jan 2024	0.06	0.02	0.02	0.02	0.2	0.0293	0.0020	0.031	0.003
EPL 56	05 Jan 2024	0.06	0.03	0.02	0.03	0.1	0.0709	0.0032	0.072	0.006
EPL 56	13 Jan 2024	0.07	<0.01	0.01	<0.01	<0.1	0.103	0.0024	0.037	0.002
EPL 56	15 Jan 2024	0.04	0.01	<0.01	0.01	<0.1	0.0538	0.0028	0.039	0.002
EPL 56	23 Jan 2024	0.12	<0.01	0.02	<0.01	0.1	0.0481	0.0016	0.032	0.001
EPL 56	30 Jan 2024	0.06	0.02	0.01	0.02	0.1	0.0059	0.0016	0.011	0.002
EPL 56	08 Feb 2024	0.07	0.01	0.01	0.01	0.1	0.112	0.0016	0.065	0.003
EPL 56	14 Feb 2024	0.01	0.05	0.01	0.05	0.2	0.0102	0.0024	0.013	0.002
EPL 56	20 Feb 2024	0.04	<0.01	<0.01	<0.01	0.1	0.0238	0.0029	0.008	0.001
EPL56	29 Feb 2024	0.06	0.03	<0.01	0.03	<0.1	0.0267	0.0019	0.024	0.001
EPL 56	15 Jan 2024	0.04	0.01	<0.01	0.01	<0.1	0.0538	0.0028	0.039	0.002
EPL 56	23 Jan 2024	0.12	<0.01	0.02	<0.01	0.1	0.0481	0.0016	0.032	0.001
EPL 56	30 Jan 2024	0.06	0.02	0.01	0.02	0.1	0.0059	0.0016	0.011	0.002
EPL 56	08 Feb 2024	0.07	0.01	0.01	0.01	0.1	0.112	0.0016	0.065	0.003
EPL 56	14 Feb 2024	0.01	0.05	0.01	0.05	0.2	0.0102	0.0024	0.013	0.002
EPL 56	20 Feb 2024	0.04	<0.01	<0.01	<0.01	0.1	0.0238	0.0029	0.008	0.001
EPL56	29 Feb 2024	0.06	0.03	<0.01	0.03	<0.1	0.0267	0.0019	0.024	0.001
EPL 56	06 Mar 2024	0.16	1.72	<0.01	1.72	1.9	0.0290	0.0015	0.038	0.003
EPL 56	15 Mar 2024	0.04	0.02	<0.01	0.02	<0.1	0.0043	0.0009	0.008	0.002
EPL56	21 Mar 2024	0.03	0.02	0.01	0.02	0.2	0.0184	0.0008	0.026	0.002
EPL56	30 Mar 2024	0.03	<0.01	0.02	<0.01	0.2	0.0064	0.0016	0.009	0.003
EPL 56	02 Apr 2024	0.05	0.01	<0.01	0.01	<0.1	0.0043	0.0008	0.008	0.002
EPL 56	13 Apr 2024	0.04	0.01	<0.01	0.01	<0.1		0.0006		0.007
EPL56	19 Apr 2024	0.13	<0.01	<0.01	<0.01	0.2	0.0284	0.0023	0.017	0.003
EPL 56	25 Apr 2024	0.02	<0.01	<0.01	<0.01	<0.1	0.0410	0.0022	0.034	0.007
EPL56	04 May 2024	0.06	<0.01	<0.01	<0.01	<0.1	0.0520	0.0050	0.059	0.005
EPL 56	11 May 2024	0.18	<0.01	<0.01	<0.01	<0.1	0.0590	0.0027	0.029	0.003
EPL 56	16 May 2024	0.09	<0.01	<0.01	<0.01	<0.1	0.0188	0.0020	0.017	0.006
EPL56	25 May 2024	0.35	0.02	<0.01	0.02	<0.1	0.0159	0.0025	0.013	0.005

EPL57

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	As	As (F)	Cr	Cr (F)	Ag	Ag (F)	Zn
EPL 57	05 Dec 2023	0.12	0.08	0.05	0.08	0.2	0.0064	0.0030	0.0139	<0.0002	0.00013	<0.00001	0.041
EPL 57	09 Dec 2023	0.23	0.03	0.03	0.02	0.4	0.0086	0.0030	0.0251	<0.0002	<0.00001	<0.00001	0.071
EPL 57	12 Dec 2023	0.73	0.01	0.01	0.01	0.3	0.0069	0.0027	0.0160	<0.0002	0.00015	<0.00001	0.055
EPL 57	16 Dec 2023	0.46	0.03	0.02	0.03	0.4	0.0076	0.0035	0.0213	<0.0002	0.00026	<0.00001	0.063
EPL 57	19 Dec 2023	0.24	<0.01	<0.01	<0.01	0.2	0.0046	0.0029	0.0045	<0.0002	0.00015	<0.00001	0.054
EPL 57	23 Dec 2023	0.43	<0.01	0.02	<0.01	0.4	0.0056	0.0028	0.0091	<0.0002	0.00003	<0.00001	0.031
EPL 57	25 Dec 2023	0.26	<0.01	0.02	<0.01	0.3	0.0073	0.0027	0.0181	<0.0002	0.00009	<0.00001	0.074
EPL 57	30 Dec 2023	0.07	<0.01	0.01	<0.01	0.2	0.0061	0.0033	0.0152	<0.0002	0.00003	<0.00001	0.037
EPL 57	01 Jan 2024	0.08	<0.01	0.04	<0.01	0.2	0.0034	0.0030	0.0037	<0.0002	<0.00001	<0.00001	0.008
EPL 57	05 Jan 2024	0.17	0.03	0.07	0.03	0.5	0.0038	0.0030	0.0041	<0.0002	<0.00001	<0.00001	0.016
EPL 57	13 Jan 2024	0.13	0.08	0.04	0.08	0.2	0.0025	0.0022	0.0019	<0.0002	0.00002	<0.00001	0.009
EPL 57	15 Jan 2024	0.23	0.30	0.02	0.30	0.5	0.0048	0.0025	0.0098	<0.0002	0.00004	<0.00001	0.026
EPL 57	23 Jan 2024	0.12	2.90	0.03	2.90	3.2	0.0060	0.0028	0.0112	<0.0002	0.00004	<0.00001	0.042
EPL 57	30 Jan 2024	0.33	<0.01	0.01	<0.01	0.2	0.0025	0.0023	0.0014	<0.0002	<0.00001	<0.00001	0.004
EPL 57	08 Feb 2024	0.18	0.01	0.02	0.01	0.1	0.0079	0.0020	0.0214	<0.0002	0.00010	<0.00001	0.066
EPL 57	14 Feb 2024	0.23	<0.01	0.03	<0.01	0.2	0.0034	0.0020	0.0038	<0.0002	0.00003	<0.00001	0.502
EPL 57	20 Feb 2024	0.43	<0.01	0.01	<0.01	0.3	0.0034	0.0023	0.0026	<0.0002	<0.00001	<0.00001	0.008
EPL57	29 Feb 2024	0.20	<0.01	0.02	<0.01	0.1	0.0036	0.0020	0.0063	<0.0002	0.00006	<0.00001	0.018
EPL 57	05 Jan 2024	0.17	0.03	0.07	0.03	0.5	0.0038	0.0030	0.0041	<0.0002	<0.00001	<0.00001	0.016
EPL 57	13 Jan 2024	0.13	0.08	0.04	0.08	0.2	0.0025	0.0022	0.0019	<0.0002	0.00002	<0.00001	0.009
EPL 57	15 Jan 2024	0.23	0.30	0.02	0.30	0.5	0.0048	0.0025	0.0098	<0.0002	0.00004	<0.00001	0.026
EPL 57	23 Jan 2024	0.12	2.90	0.03	2.90	3.2	0.0060	0.0028	0.0112	<0.0002	0.00004	<0.00001	0.042
EPL 57	30 Jan 2024	0.33	<0.01	0.01	<0.01	0.2	0.0025	0.0023	0.0014	<0.0002	<0.00001	<0.00001	0.004
EPL 57	08 Feb 2024	0.18	0.01	0.02	0.01	0.1	0.0079	0.0020	0.0214	<0.0002	0.00010	<0.00001	0.066
EPL 57	14 Feb 2024	0.23	<0.01	0.03	<0.01	0.2	0.0034	0.0020	0.0038	<0.0002	0.00003	<0.00001	0.502
EPL 57	20 Feb 2024	0.43	<0.01	0.01	<0.01	0.3	0.0034	0.0023	0.0026	<0.0002	<0.00001	<0.00001	0.008
EPL57	29 Feb 2024	0.20	<0.01	0.02	<0.01	0.1	0.0036	0.0020	0.0063	<0.0002	0.00006	<0.00001	0.018
EPL 57	06 Mar 2024	0.01	<0.01	<0.01	<0.01	<0.1	0.0028	0.0025	0.0010	<0.0002	<0.00001	<0.00001	0.008
EPL 57	15 Mar 2024	0.09	<0.01	0.01	<0.01	<0.1	0.0030	0.0021	0.0034	<0.0002	<0.00001	<0.00001	0.009
EPL57	21 Mar 2024	0.05	0.02	0.01	0.02	<0.1	0.0035	0.0022	0.0056	<0.0002	0.00002	<0.00001	0.015
EPL57	30 Mar 2024	0.20	0.03	0.04	0.03	0.5	0.0044	0.0018	0.0116	<0.0002	0.00005	<0.00001	0.031
EPL 57	02 Apr 2024	0.39	0.02	0.02	0.02	0.2	0.0027	0.0018	0.0036	<0.0002	0.00002	<0.00001	0.01
EPL 57	13 Apr 2024	0.32	1.53	0.02	1.53	1.9		0.0011		<0.0002		<0.00001	
EPL57	19 Apr 2024	0.04	0.03	0.02	0.03	0.1	0.0021	0.0014	0.0018	<0.0002	<0.00001	<0.00001	0.008
EPL57	04 May 2024	0.08	0.07	<0.01	0.06	0.2	0.0036	0.0017	0.0068	<0.0002	0.00010	<0.00001	0.024
EPL 57	17 May 2024	0.08	0.09	0.02	0.04	0.2	0.0039	0.0013	0.0112	0.0017	0.00079	<0.00001	0.034
EPL57	25 May 2024	0.27	0.06	0.02	0.04	0.3	0.0019	0.0011	0.0039	<0.0002	<0.00001	<0.00001	0.014

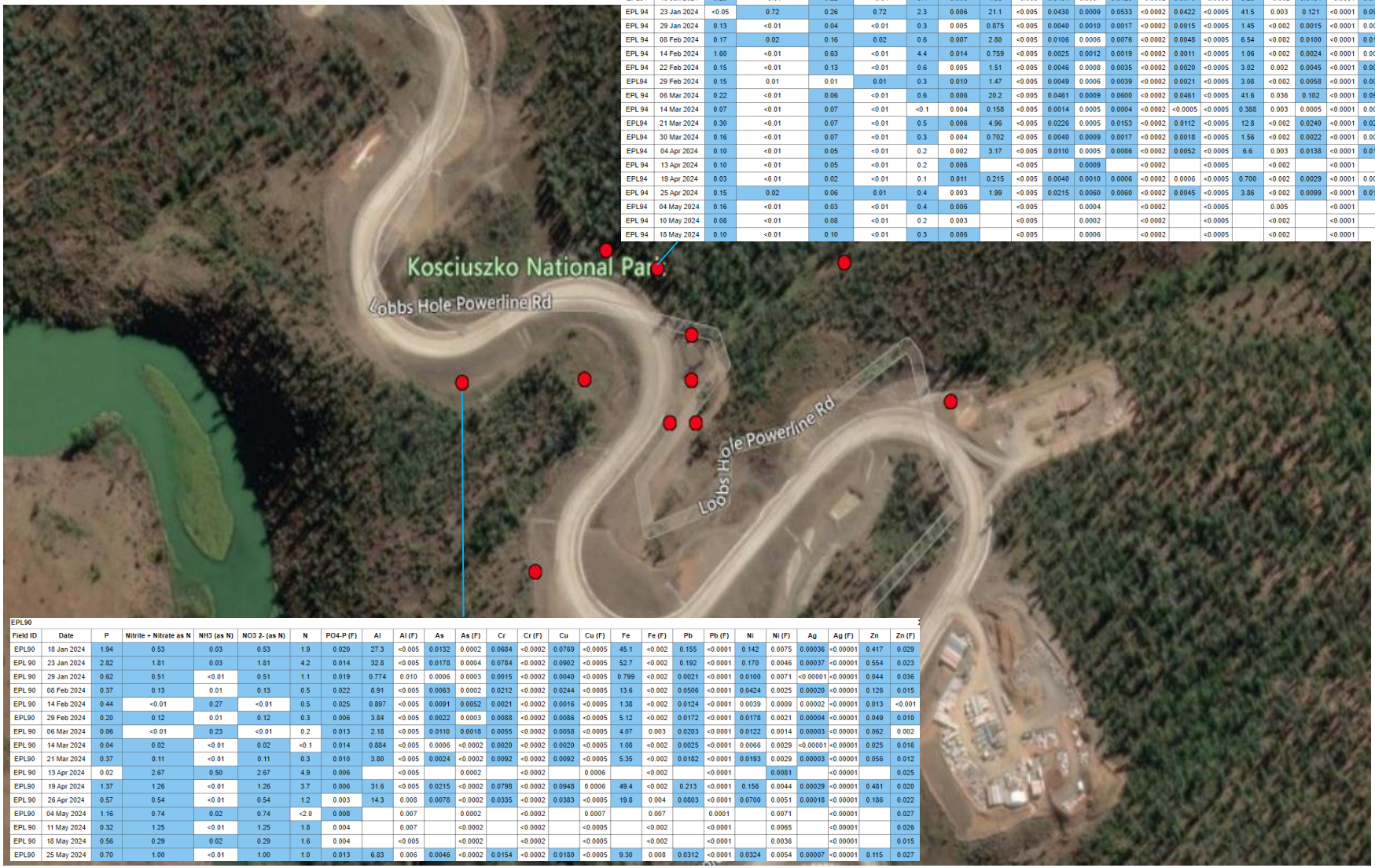


EPL96

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	PO4-P (F)	Al	Al (F)	As	As (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Ni	Ni (F)	Ag	Ag (F)	Zn	Zn (F)
EPL96	18 Jan 2024	2.34	29.4	0.04	29.3	36.5	0.007		<0.005		0.0007		0.0023		0.0009		0.002		<0.0001		0.0010		<0.00001		<0.001
EPL96	24 Jan 2024	<0.01	32.2	0.01	32.1	34.6	0.003	33.0	<0.005	0.0341	0.0006	0.0894	0.0022	0.0889	0.0011	62.9	<0.002	0.507	<0.0001	0.132	0.0013	0.00108	<0.00001	0.518	<0.001
EPL96	29 Jan 2024	1.66	74.0	0.04	73.9	89.2	0.008	0.805	<0.005	0.0010	0.0005	0.0029	0.0014	0.0027	0.0009	0.924	<0.002	0.0054	<0.0001	0.0058	0.0026	<0.00001	<0.00001	0.009	<0.001
EPL96	08 Feb 2024	1.04	22.9	0.03	22.8	27.6	0.006	14.4	<0.005	0.0215	0.0004	0.0454	0.0007	0.0627	0.0012	33.8	0.003	0.334	0.0001	0.0714	0.0049	0.00072	<0.00001	0.268	0.007
EPL96	14 Feb 2024	4.66	26.7	0.41	26.7	34.6	0.006	28.1	<0.005	0.0269	0.0002	0.0792	0.0004	0.0715	0.0008	48.5	0.002	0.429	<0.0001	0.103	0.0026	0.00054	<0.00001	0.306	<0.001
EPL96	22 Feb 2024	1.06	32.2	0.02	32.2	36.7	0.004	11.3	<0.005	0.0106	0.0003	0.0266	0.0003	0.0272	0.0010	18.1	0.003	0.144	0.0001	0.0372	0.0030	0.00022	<0.00001	0.136	0.004
EPL96	29 Feb 2024	0.82	5.29	0.02	5.25	6.5	0.006	4.84	<0.005	0.0062	0.0002	0.0132	<0.0002	0.0140	<0.0005	9.17	<0.002	0.0842	<0.0001	0.0217	0.0026	0.00016	<0.00001	0.089	0.006
EPL96	06 Mar 2024	0.23	1.02	0.03	1.02	1.5	0.005	9.47	<0.005	0.0102	0.0002	0.0230	<0.0002	0.0234	<0.0005	18.2	<0.002	0.208	<0.0001	0.0374	0.0029	0.00039	<0.00001	0.144	0.004
EPL96	13 Mar 2024	0.18	0.36	0.00	0.35	0.6	0.003	2.36	<0.005	0.0025	<0.0002	0.0062	<0.0002	0.0060	<0.0005	3.68	<0.002	0.0305	<0.0001	0.0113	0.0019	0.00002	<0.00001	0.036	0.003
EPL96	21 Mar 2024	0.48	11.2	0.25	11.1	13.6	0.010	13.1	<0.005	0.0164	0.0003	0.0387	0.0008	0.0397	0.0008	26.3	<0.002	0.171	<0.0001	0.0499	0.0018	0.00028	<0.00001	0.189	0.002
EPL96	30 Mar 2024	0.41	10.2	0.36	10.2	12.6	<0.001	1.16	<0.005	0.0037	0.0003	0.0051	<0.0002	0.0095	<0.0005	1.56	<0.002	0.0121	<0.0001	0.0082	0.0025	<0.00001	<0.00001	0.02	0.005
EPL96	04 Apr 2024	0.28	0.19	0.25	0.19	0.9	0.013	5.96	<0.005	0.0094	0.0002	0.0168	<0.0002	0.0214	<0.0005	15.9	<0.002	0.206	<0.0001	0.0283	0.0016	0.00034	<0.00001	0.145	0.002
EPL96	13 Apr 2024	0.32	10.9	0.04	10.9	13.1	0.007		<0.005		0.0003		0.0009		0.0006		<0.002		<0.0001		0.0014		<0.00001		0.002
EPL96	19 Apr 2024	0.25	1.10	0.02	1.10	1.7	0.006	8.24	<0.005	0.0092	<0.0002	0.0232	<0.0002	0.0215	<0.0005	15.4	<0.002	0.144	<0.0001	0.0310	0.0016	0.00039	<0.00001	0.136	0.002
EPL96	26 Apr 2024	0.22	0.87	0.04	0.87	1.4	0.007	4.21	<0.005	0.0036	<0.0002	0.0104	<0.0002	0.0100	<0.0005	6.58	<0.002	0.0585	<0.0001	0.0165	0.0029	0.00019	<0.00001	0.059	0.005
EPL96	04 May 2024	0.49	0.35	<0.01	0.33	<2.0	0.002		<0.005		<0.0002		<0.0002		<0.0005		<0.002		<0.0001		0.0032		<0.00001		0.006
EPL96	10 May 2024	1.39	1.21	0.07	1.19	2.4	0.004		<0.005		<0.0002		<0.0002		<0.0005		<0.002		<0.0001		0.0019		<0.00001		0.004
EPL96	17 May 2024	0.50	0.42	0.01	0.42	<1.0	0.006		<0.005		<0.0002		<0.0002		<0.0005		<0.002		<0.0001		0.0034		<0.00001		0.006

EPL92

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	PO4-P (F)	Al	Al (F)	As	As (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Ni	Ni (F)	Ag	Ag (F)	Zn	Zn (F)
EPL92	18 Jan 2024	0.02	<0.01	<0.01	<0.01	<0.1	0.014	0.204	<0.005	0.0008	0.0007	0.0003	<0.0002	<0.0005	<0.0005	0.199	<0.002	0.0105	0.0006	0.0042	0.0018	<0.00001	<0.00001	0.048	0.018
EPL 92	24 Jan 2024	0.13	0.76	0.12	0.76	16.9	0.007	18.1	<0.005	0.0030	0.0008	0.0024	<0.0002	0.0080	<0.0005	3.59	<0.002	0.0586	<0.0001	0.0142	0.0007	0.00004	<0.00001	0.154	<0.001
EPL 92	29 Jan 2024	0.18	<0.01	<0.01	<0.01	<0.5	0.016	6.42	<0.005	0.0017	0.0008	0.0016	<0.0002	0.0034	<0.0005	1.62	<0.002	0.0184	<0.0001	0.0067	0.0010	<0.00001	<0.00001	0.060	0.002
EPL 92	08 Feb 2024	0.24	0.03	<0.01	0.03	0.3	0.007	12.0	<0.005	0.0054	0.0005	0.0035	<0.0002	0.0133	<0.0005	6.40	0.003	0.162	0.0011	0.0183	0.0024	0.00012	<0.00001	0.173	0.026
EPL 92	14 Feb 2024	0.03	0.02	0.01	0.02	<0.1	0.008	2.99	<0.005	0.0011	0.0007	0.0009	<0.0002	0.0015	<0.0005	0.695	<0.002	0.0120	0.0002	0.0059	0.0018	0.00001	<0.00001	0.030	0.005
EPL 92	22 Feb 2024	1.45	0.05	0.03	0.08	<1.0	0.003	10.4	<0.005	0.0034	0.0004	0.0078	<0.0002	0.0091	<0.0005	5.77	0.003	0.0676	0.0003	0.0182	0.0024	0.00005	<0.00001	0.117	0.005
EPL92	29 Feb 2024	0.01	0.01	<0.01	0.01	0.1	0.004	3.64	<0.005	0.0014	0.0005	0.0028	<0.0002	0.0068	<0.0005	1.71	<0.002	0.0367	0.0004	0.0146	0.0047	0.00003	<0.00001	0.084	0.029
EPL 92	06 Mar 2024	0.17	0.05	<0.01	0.05	1.0	0.005	7.73	<0.005	0.0039	0.0009	0.0054	<0.0002	0.0116	<0.0005	4.94	<0.002	0.0561	0.0004	0.0226	0.0046	0.00005	<0.00001	0.150	0.017
EPL 92	14 Mar 2024	0.01	<0.01	<0.01	<0.01	<0.1	0.004	1.20	<0.005	0.0010	0.0007	0.0009	<0.0002	0.0015	<0.0005	0.593	<0.002	0.0073	<0.0001	0.0056	0.0024	<0.00001	<0.00001	0.041	0.012
EPL92	21 Mar 2024	0.43	0.02	0.01	0.02	0.8	0.006	17.9	<0.005	0.0098	0.0004	0.0208	<0.0002	0.0310	<0.0005	14.4	<0.002	0.346	0.0007	0.0373	0.0036	0.00028	<0.00001	0.323	0.021
EPL92	30 Mar 2024	0.02	0.02	<0.01	0.02	0.1	<0.001	1.05	<0.005	0.0005	0.0003	0.0010	<0.0002	0.0021	<0.0005	0.592	<0.002	0.0105	0.0009	0.0055	0.0038	<0.00001	<0.00001	0.042	0.029
EPL92	04 Apr 2024	0.05	<0.01	0.04	<0.01	<0.2	0.019	1.83	<0.005	0.0010	0.0006	0.0009	<0.0002	0.0041	<0.0005	0.558	<0.002	0.0128	0.0004	0.0078	0.0040	<0.00001	<0.00001	0.059	0.031
EPL 92	13 Apr 2024	0.02	0.03	<0.01	0.03	<0.1	0.003		<0.005		0.0002		<0.0002		<0.0005		<0.002		0.0012		0.0032		<0.00001		0.027
EPL92	19 Apr 2024	<0.01	<0.01	<0.01	<0.01	<0.1	0.010	0.890	<0.005	0.0005	0.0003	0.0007	<0.0002	0.0013	<0.0005	0.356	<0.002	0.0092	0.0005	0.0042	0.0029	<0.00001	<0.00001	0.045	0.030
EPL 92	25 Apr 2024	0.03	0.04	0.02	0.04	<0.1	0.005	1.76	<0.005	0.0009	0.0003	0.0013	<0.0002	0.0022	<0.0005	0.798	<0.002	0.0269	0.0029	0.0075	0.0045	0.00004	<0.00001	0.046	0.031
EPL92	04 May 2024	0.02	<0.01	<0.01	<0.01	<0.1	0.007		<0.005		0.0004		<0.0002		<0.0005		<0.002		0.0115		0.0043		<0.00001		0.043
EPL 92	10 May 2024	0.02	<0.01	<0.01	<0.01	<0.1	0.003		<0.005		0.0004		<0.0002		<0.0005		<0.002		0.0004		0.0019		<0.00001		0.038
EPL 92	18 May 2024	0.07	0.03	<0.01	0.03	<0.1	0.006		<0.005		0.0002		<0.0002		<0.0005		<0.002		0.0018		0.0039		<0.00001		0.031

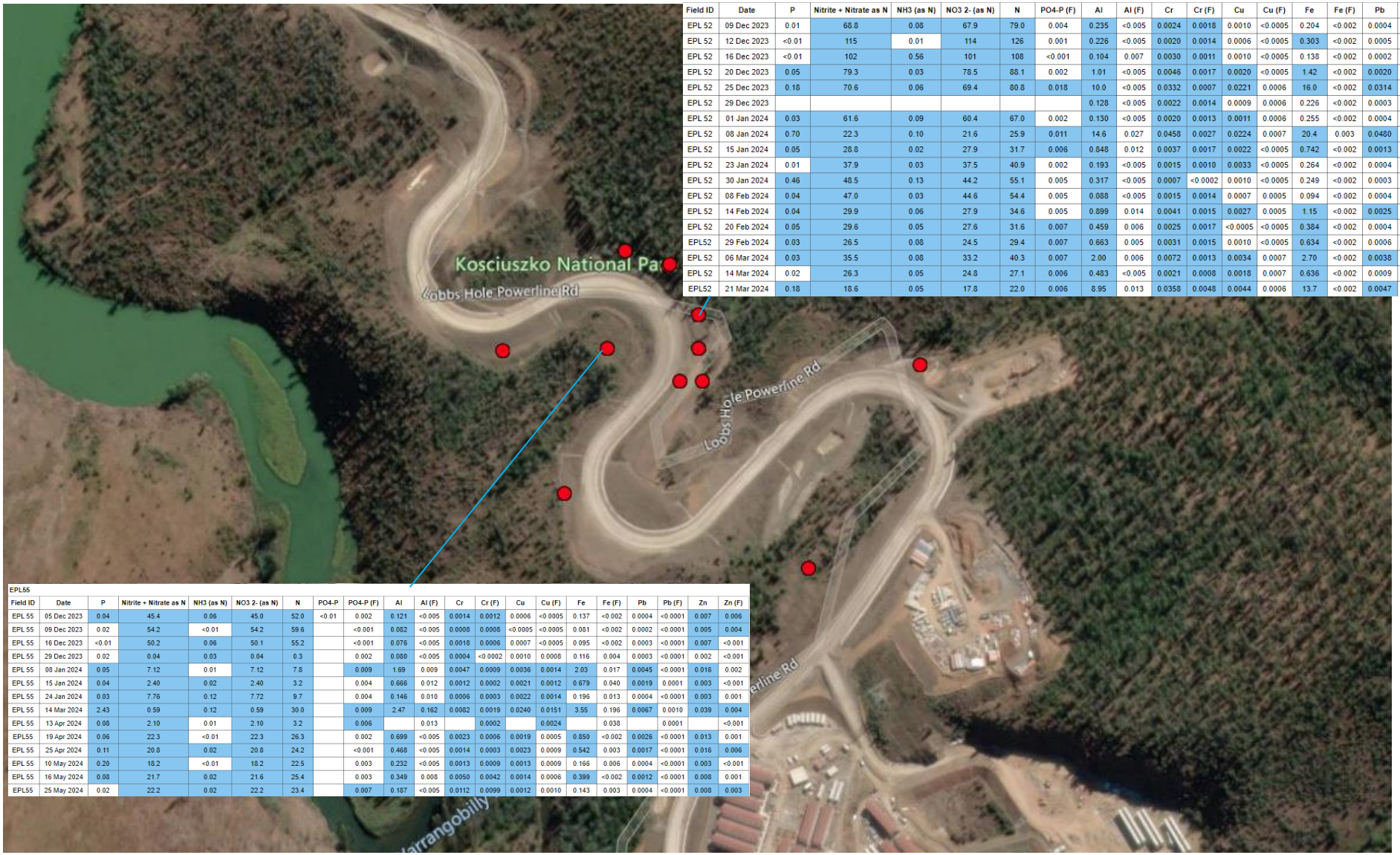


EPL94

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	PO4-P (F)	Al	Al (F)	As	As (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Ni	Ni (F)	Ag	Ag (F)	Zn	Zn (F)
EPL94	18 Jan 2024	0.20	<0.01	0.22	<0.01	0.4	0.006	4.35	<0.005	0.0101	0.0007	0.0120	<0.0002	0.0070	<0.0005	8.25	<0.002	0.0184	<0.0001	0.0189	0.0021	0.00003	<0.00001	0.236	0.015
EPL 94	23 Jan 2024	<0.05	0.72	0.26	0.72	2.3	0.006	21.1	<0.005	0.0430	0.0009	0.0533	<0.0002	0.0422	<0.0005	41.5	0.003	0.121	<0.0001	0.0917	0.0018	0.00025	<0.00001	1.03	0.003
EPL 94	29 Jan 2024	0.13	<0.01	0.04	<0.01	0.3	0.005	0.875	<0.005	0.0040	0.0010	0.0017	<0.0002	0.0015	<0.0005	1.45	<0.002	0.0015	<0.0001	0.0072	0.0027	<0.00001	<0.00001	0.089	0.025
EPL 94	08 Feb 2024	0.17	0.02	0.16	0.02	0.6	0.007	2.80	<0.005	0.0106	0.0006	0.0076	<0.0002	0.0048	<0.0005	6.54	<0.002	0.0100	<0.0001	0.0157	0.0021	0.00003	<0.00001	0.160	0.004
EPL 94	14 Feb 2024	1.60	<0.01	0.63	<0.01	4.4	0.014	0.759	<0.005	0.0025	0.0012	0.0019	<0.0002	0.0011	<0.0005	1.06	<0.002	0.0024	<0.0001	0.0053	0.0018	0.00011	<0.00001	0.043	0.003
EPL 94	22 Feb 2024	0.15	<0.01	0.13	<0.01	0.6	0.005	1.51	<0.005	0.0046	0.0008	0.0035	<0.0002	0.0020	<0.0005	3.02	0.002	0.0045	<0.0001	0.0081	0.0016	0.00001	<0.00001	0.108	0.007
EPL 94	29 Feb 2024	0.15	0.01	0.01	0.01	0.3	0.010	1.47	<0.005	0.0049	0.0006	0.0039	<0.0002	0.0021	<0.0005	3.08	<0.002	0.0058	<0.0001	0.0099	0.0027	0.00001	<0.00001	0.099	0.015
EPL 94	06 Mar 2024	0.22	<0.01	0.06	<0.01	0.6	0.006	20.2	<0.005	0.0461	0.0009	0.0600	<0.0002	0.0461	<0.0005	41.6	0.036	0.102	<0.0001	0.0950	0.0020	0.00021	<0.00001	1.59	0.003
EPL 94	14 Mar 2024	0.07	<0.01	0.07	<0.01	<0.1	0.004	0.158	<0.005	0.0014	0.0005	0.0004	<0.0002	<0.0005	<0.0005	0.388	0.003	0.0005	<0.0001	0.0037	0.0018	<0.00001	<0.00001	0.013	0.003
EPL 94	21 Mar 2024	0.30	<0.01	0.07	<0.01	0.5	0.006	4.96	<0.005	0.0226	0.0005	0.0153	<0.0002	0.0112	<0.0005	12.8	<0.002	0.0240	<0.0001	0.0289	0.0025	0.00006	<0.00001	0.296	0.005
EPL 94	30 Mar 2024	0.16	<0.01	0.07	<0.01	0.3	0.004	0.702	<0.005	0.0040	0.0009	0.0017	<0.0002	0.0018	<0.0005	1.56	<0.002	0.0022	<0.0001	0.0054	0.0028	<0.00001	<0.00001	0.037	0.008
EPL94	04 Apr 2024	0.10	<0.01	0.05	<0.01	0.2	0.002	3.17	<0.005	0.0110	0.0005	0.0086	<0.0002	0.0052	<0.0005	6.6	0.003	0.0138	<0.0001	0.0167	0.0019	0.00002	<0.00001	0.186	0.007
EPL 94	13 Apr 2024	0.10	<0.01	0.05	<0.01	0.2	0.006		<0.005		0.0009		<0.0002		<0.0005		<0.002		<0.0001		0.0018		<0.00001		0.004
EPL94	19 Apr 2024	0.03	<0.01	0.02	<0.01	0.1	0.011	0.215	<0.005	0.0040	0.0010	0.0006	<0.0002	0.0006	<0.0005	0.700	<0.002	0.0029	<0.0001	0.0033	0.0017	<0.00001	<0.00001	0.022	0.006
EPL 94	25 Apr 2024	0.15	0.02	0.06	0.01	0.4	0.003	1.99	<0.005	0.0215	0.0060	0.0060	<0.0002	0.0045	<0.0005	3.86	<0.002	0.0099	<0.0001	0.0108	0.0022	0.00002	<0.00001	0.098	0.014
EPL94	04 May 2024	0.16	<0.01	0.03	<0.01	0.4	0.006		<0.005		0.0004		<0.0002		<0.0005		0.005		<0.0001		0.0029		<0.00001		0.005
EPL 94	10 May 2024	0.08	<0.01	0.08	<0.01	0.2	0.003		<0.005		0.0002		<0.0002		<0.0005		<0.002		<0.0001		0.0013		<0.00001		0.002
EPL 94	18 May 2024	0.10	<0.01	0.10	<0.01	0.3	0.006		<0.005		0.0006		<0.0002		<0.0005		<0.002		<0.0001		0.0026		<0.00001		0.003

EPL90

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	PO4-P (F)	Al	Al (F)	As	As (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Ni	Ni (F)	Ag	Ag (F)	Zn	Zn (F)
EPL90	18 Jan 2024	1.94	0.53	0.03	0.53	1.9	0.020	27.3	<0.005	0.0132	0.0002	0.0684	<0.0002	0.0769	<0.0005	45.1	<0.002	0.155	<0.0001	0.142	0.0075	0.00036	<0.00001	0.417	0.029
EPL 90	23 Jan 2024	2.82	1.81	0.03	1.81	4.2	0.014	32.8	<0.005	0.0178	0.0004	0.0784	<0.0002	0.0902	<0.0005	52.7	<0.002	0.192	<0.0001	0.170	0.0046	0.00037	<0.00001	0.554	0.023
EPL 90	29 Jan 2024	0.62	0.51	<0.01	0.51	1.1	0.019	0.774	0.010	0.0006	0.0003	0.0015	<0.0002	0.0040	<0.0005	0.799	<0.002	0.0021	<0.0001	0.0100	0.0071	<0.00001	<0.00001	0.044	0.036
EPL 90	08 Feb 2024	0.37	0.13	0.01	0.13	0.5	0.022	8.91	<0.005	0.0063	0.0002	0.0212	<0.0002	0.0244	<0.0005	13.6	<0.002	0.0506	<0.0001	0.0424	0.0025	0.00020	<0.00001	0.126	0.015
EPL 90	14 Feb 2024	0.44	<0.01	0.27	<0.01	0.5	0.025	0.897	<0.005	0.0091	0.0052	0.0021	<0.0002	0.0016	<0.0005	1.38	<0.002	0.0124	<0.0001	0.0039	0.0009	0.00002	<0.00001	0.013	<0.001
EPL90	29 Feb 2024	0.20	0.12	0.01	0.12	0.3	0.006	3.84	<0.005	0.0022	0.0003	0.0088	<0.0002	0.0086	<0.0005	5.12	<0.002	0.0172	<0.0001	0.0178	0.0021	0.00004	<0.00001	0.049	0.010
EPL 90	06 Mar 2024	0.06	<0.01	0.23	<0.01	0.2	0.013	2.18	<0.005	0.0110	0.0018	0.0055	<0.0002	0.0058	<0.0005	4.07	0.003	0.0203	<0.0001	0.0122	0.0014	0.00003	<0.00001	0.062	0.002
EPL 90	14 Mar 2024	0.04	0.02	<0.01	0.02	<0.1	0.014	0.884	<0.005	0.0006	<0.0002	0.0020	<0.0002	0.0020	<0.0005	1.08	<0.002	0.0025	<0.0001	0.0066	0.0029	<0.00001	<0.00001	0.025	0.016
EPL90	21 Mar 2024	0.37	0.11	<0.01	0.11	0.3	0.010	3.80	<0.005	0.0024	<0.0002	0.0092	<0.0002	0.0092	<0.0005	5.35	<0.002	0.0182	<0.0001	0.0193	0.0029	0.00003	<0.00001	0.056	0.012
EPL 90	13 Apr 2024	0.02	2.67	0.50	2.67	4.9	0.006		<0.005		0.0002		<0.0002		0.0006		<0.002		<0.0001		0.0081		<0.00001		0.025
EPL90	19 Apr 2024	1.37	1.26	<0.01	1.26	3.7	0.006	31.6	<0.005	0.0215	<0.0002	0.0798	<0.0002	0.0948	0.0006	49.4	<0.002	0.213	<0.0001	0.156	0.0044	0.00029	<0.00001	0.481	0.020
EPL 90	26 Apr 2024	0.57	0.54	<0.01	0.54	1.2	0.003	14.3	0.008	0.0078	<0.0002	0.0335	<0.0002	0.0383	<0.0005	19.8	0.004	0.0803	<0.0001	0.0700	0.0051	0.00018	<0.00001	0.186	0.022
EPL90	04 May 2024	1.16	0.74	0.02	0.74	<2.0	0.008		0.007		0.0002		<0.0002		0.0007		0.007		0.0001		0.0071		<0.00001		0.027
EPL 90	11 May 2024	0.32	1.25	<0.01	1.25	1.8	0.004		0.007		<0.0002		<0.0002		<0.0005		<0.002		<0.0001		0.0065		<0.00001		0.026
EPL 90	18 May 2024	0.56	0.29	0.02	0.29	1.6	0.004		<0.005		<0.0002		<0.0002		<0.0005		<0.002		<0.0001		0.0036		<0.00001		0.015
EPL90	25 May 2024	0.70	1.00	<0.01	1.00	1.0	0.013	6.83	0.006	0.0046	<0.0002	0.0154	<0.0002	0.0180	<0.0005	9.30	0.008	0.0312	<0.0001	0.0324	0.0054	0.00007	<0.00001	0.115	0.027

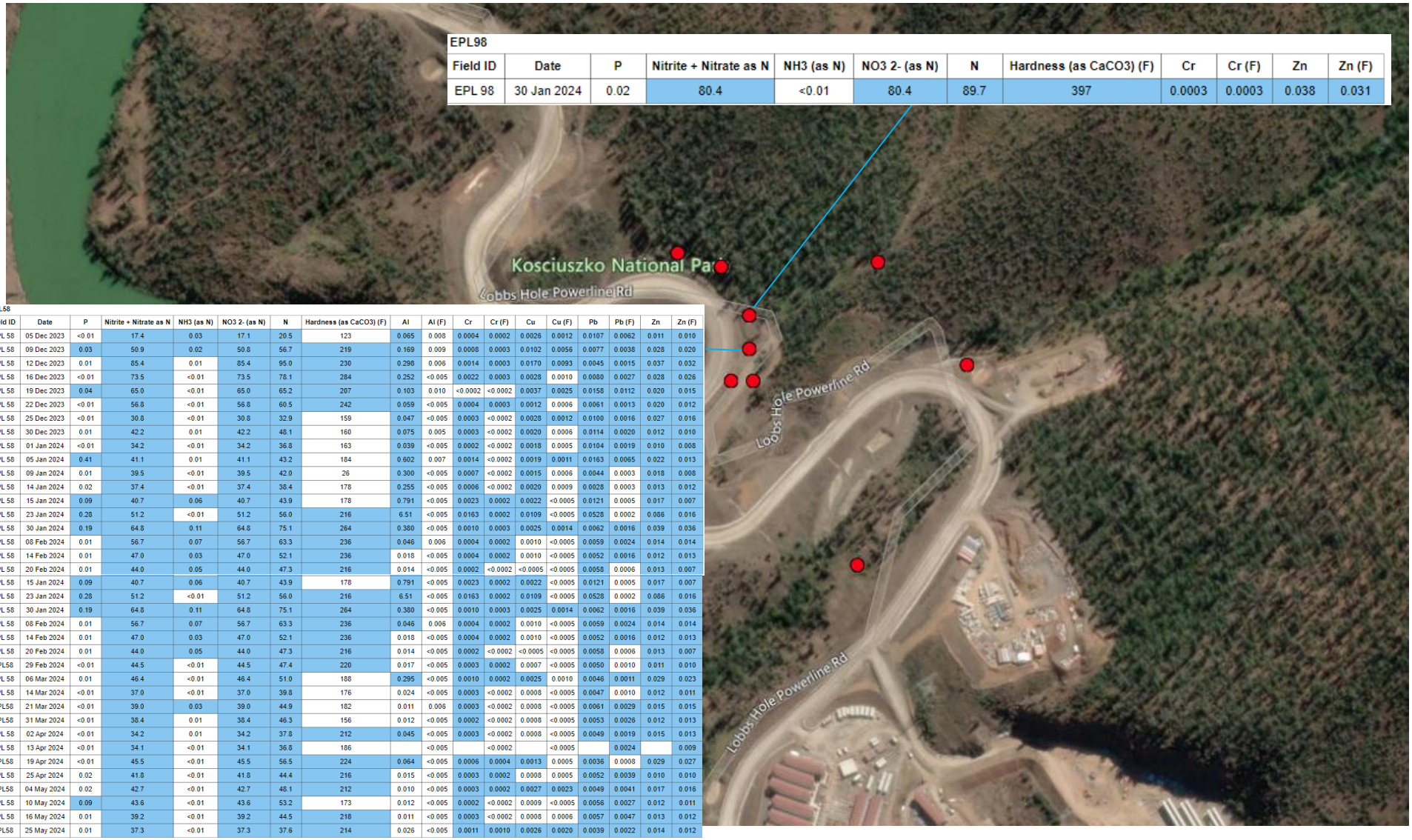


EPL52

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	PO4-P (F)	Al	Al (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Zn	Zn (F)
EPL 52	09 Dec 2023	0.01	68.8	0.08	67.9	79.0	0.004	0.235	<0.005	0.0024	0.0018	0.0010	<0.0005	0.204	<0.002	0.0004	<0.0001	0.070	0.055
EPL 52	12 Dec 2023	<0.01	115	0.01	114	126	0.001	0.226	<0.005	0.0020	0.0014	0.0006	<0.0005	0.303	<0.002	0.0005	<0.0001	0.089	0.086
EPL 52	16 Dec 2023	<0.01	102	0.56	101	108	<0.001	0.104	0.007	0.0030	0.0011	0.0010	<0.0005	0.138	<0.002	0.0002	<0.0001	0.018	0.018
EPL 52	20 Dec 2023	0.05	79.3	0.03	78.5	88.1	0.002	1.01	<0.005	0.0046	0.0017	0.0020	<0.0005	1.42	<0.002	0.0020	<0.0001	0.011	<0.001
EPL 52	25 Dec 2023	0.18	70.6	0.06	69.4	80.8	0.018	10.0	<0.005	0.0332	0.0007	0.0221	0.0006	16.0	<0.002	0.0314	<0.0001	0.140	<0.001
EPL 52	29 Dec 2023							0.128	<0.005	0.0022	0.0014	0.0009	0.0006	0.226	<0.002	0.0003	<0.0001	0.005	<0.001
EPL 52	01 Jan 2024	0.03	61.6	0.09	60.4	67.0	0.002	0.130	<0.005	0.0020	0.0013	0.0011	0.0006	0.255	<0.002	0.0004	<0.0001	0.003	<0.001
EPL 52	08 Jan 2024	0.70	22.3	0.10	21.6	25.9	0.011	14.6	0.027	0.0458	0.0027	0.0224	0.0007	20.4	0.003	0.0480	<0.0001	0.116	<0.001
EPL 52	15 Jan 2024	0.05	28.8	0.02	27.9	31.7	0.006	0.848	0.012	0.0037	0.0017	0.0022	<0.0005	0.742	<0.002	0.0013	<0.0001	0.007	<0.001
EPL 52	23 Jan 2024	0.01	37.9	0.03	37.5	40.9	0.002	0.193	<0.005	0.0015	0.0010	0.0033	<0.0005	0.264	<0.002	0.0004	<0.0001	0.021	0.006
EPL 52	30 Jan 2024	0.46	48.5	0.13	44.2	55.1	0.005	0.317	<0.005	0.0007	<0.0002	0.0010	<0.0005	0.249	<0.002	0.0003	<0.0001	0.025	0.004
EPL 52	08 Feb 2024	0.04	47.0	0.03	44.6	54.4	0.005	0.088	<0.005	0.0015	0.0014	0.0007	0.0005	0.094	<0.002	0.0004	<0.0001	0.002	<0.001
EPL 52	14 Feb 2024	0.04	29.9	0.06	27.9	34.6	0.005	0.899	0.014	0.0041	0.0015	0.0027	0.0005	1.15	<0.002	0.0025	<0.0001	0.008	<0.001
EPL 52	20 Feb 2024	0.05	29.6	0.05	27.6	31.6	0.007	0.459	0.006	0.0025	0.0017	<0.0005	<0.0005	0.384	<0.002	0.0004	<0.0001	0.002	<0.001
EPL52	29 Feb 2024	0.03	26.5	0.08	24.5	29.4	0.007	0.663	0.005	0.0031	0.0015	0.0010	<0.0005	0.634	<0.002	0.0006	<0.0001	0.003	<0.001
EPL 52	06 Mar 2024	0.03	35.5	0.08	33.2	40.3	0.007	2.00	0.006	0.0072	0.0013	0.0034	0.0007	2.70	<0.002	0.0038	<0.0001	0.014	<0.001
EPL 52	14 Mar 2024	0.02	26.3	0.05	24.8	27.1	0.006	0.483	<0.005	0.0021	0.0008	0.0018	0.0007	0.636	<0.002	0.0009	<0.0001	0.004	<0.001
EPL52	21 Mar 2024	0.18	18.6	0.05	17.8	22.0	0.006	8.95	0.013	0.0358	0.0048	0.0044	0.0006	13.7	<0.002	0.0047	<0.0001	0.043	<0.001

EPL55

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	PO4-P	PO4-P (F)	Al	Al (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Zn	Zn (F)
EPL 55	05 Dec 2023	0.04	45.4	0.06	45.0	52.0	<0.01	0.002	0.121	<0.005	0.0014	0.0012	0.0006	<0.0005	0.137	<0.002	0.0004	<0.0001	0.007	0.006
EPL 55	09 Dec 2023	0.02	54.2	<0.01	54.2	59.6		<0.001	0.082	<0.005	0.0008	0.0008	<0.0005	<0.0005	0.081	<0.002	0.0002	<0.0001	0.005	0.004
EPL 55	16 Dec 2023	<0.01	50.2	0.06	50.1	55.2		<0.001	0.076	<0.005	0.0018	0.0006	0.0007	<0.0005	0.095	<0.002	0.0003	<0.0001	0.007	<0.001
EPL 55	29 Dec 2023	0.02	0.04	0.03	0.04	0.3		0.002	0.080	<0.005	0.0004	<0.0002	0.0010	0.0008	0.116	0.004	0.0003	<0.0001	0.002	<0.001
EPL 55	08 Jan 2024	0.05	7.12	0.01	7.12	7.8		0.009	1.69	0.009	0.0047	0.0009	0.0036	0.0014	2.03	0.017	0.0045	<0.0001	0.016	0.002
EPL 55	15 Jan 2024	0.04	2.40	0.02	2.40	3.2		0.004	0.666	0.012	0.0012	0.0002	0.0021	0.0012	0.679	0.040	0.0019	0.0001	0.003	<0.001
EPL 55	24 Jan 2024	0.03	7.76	0.12	7.72	9.7		0.004	0.146	0.010	0.0006	0.0003	0.0022	0.0014	0.196	0.013	0.0004	<0.0001	0.003	0.001
EPL 55	14 Mar 2024	2.43	0.59	0.12	0.59	30.0		0.009	2.47	0.162	0.0082	0.0019	0.0240	0.0151	3.55	0.196	0.0067	0.0010	0.039	0.004
EPL 55	13 Apr 2024	0.08	2.10	0.01	2.10	3.2		0.006		0.013		0.0002		0.0024		0.038		0.0001		<0.001
EPL55	19 Apr 2024	0.06	22.3	<0.01	22.3	26.3		0.002	0.699	<0.005	0.0023	0.0006	0.0019	0.0005	0.850	<0.002	0.0026	<0.0001	0.013	0.001
EPL 55	25 Apr 2024	0.11	20.8	0.02	20.8	24.2		<0.001	0.468	<0.005	0.0014	0.0003	0.0023	0.0009	0.542	0.003	0.0017	<0.0001	0.016	0.006
EPL 55	10 May 2024	0.20	18.2	<0.01	18.2	22.5		0.003	0.232	<0.005	0.0013	0.0009	0.0013	0.0009	0.166	0.006	0.0004	<0.0001	0.003	<0.001
EPL 55	16 May 2024	0.08	21.7	0.02	21.6	25.4		0.003	0.349	0.008	0.0050	0.0042	0.0014	0.0006	0.399	<0.002	0.0012	<0.0001	0.008	0.001
EPL55	25 May 2024	0.02	22.2	0.02	22.2	23.4		0.007	0.187	<0.005	0.0112	0.0099	0.0012	0.0010	0.143	0.003	0.0004	<0.0001	0.008	0.003

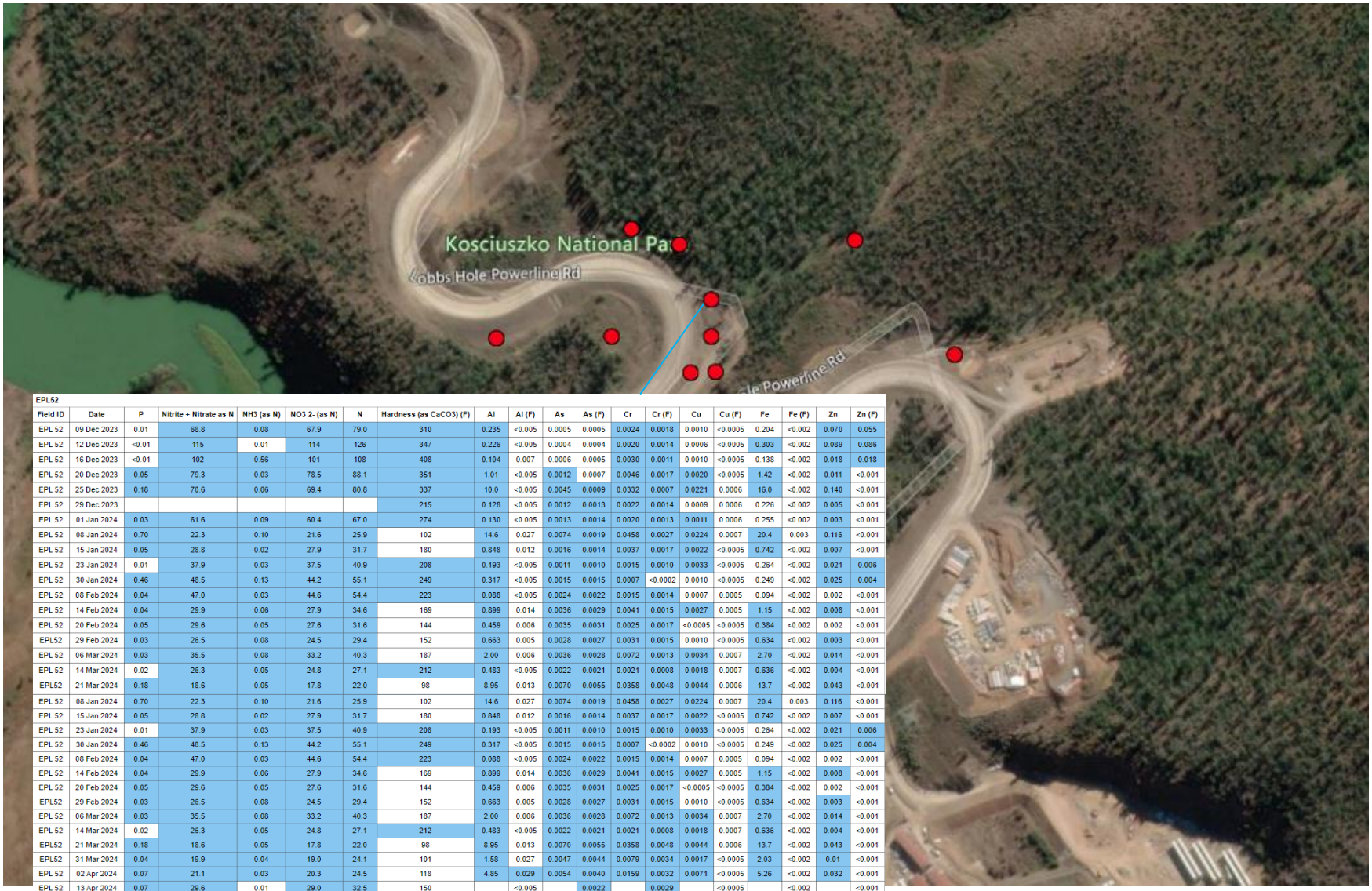


EPL98

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Hardness (as CaCO3) (F)	Cr	Cr (F)	Zn	Zn (F)
EPL 98	30 Jan 2024	0.02	80.4	<0.01	80.4	89.7	397	0.0003	0.0003	0.038	0.031

EPL58

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Hardness (as CaCO3) (F)	Al	Al (F)	Cr	Cr (F)	Cu	Cu (F)	Pb	Pb (F)	Zn	Zn (F)
EPL 58	05 Dec 2023	<0.01	17.4	0.03	17.1	20.5	123	0.065	0.008	0.0004	0.0002	0.0026	0.0012	0.0107	0.0062	0.011	0.010
EPL 58	09 Dec 2023	0.03	50.9	0.02	50.8	56.7	219	0.169	0.009	0.0008	0.0003	0.0102	0.0056	0.0077	0.0038	0.028	0.020
EPL 58	12 Dec 2023	0.01	85.4	0.01	85.4	95.0	230	0.298	0.006	0.0014	0.0003	0.0170	0.0093	0.0045	0.0015	0.037	0.032
EPL 58	16 Dec 2023	<0.01	73.5	<0.01	73.5	78.1	284	0.252	<0.005	0.0022	0.0003	0.0028	0.0010	0.0080	0.0027	0.028	0.026
EPL 58	19 Dec 2023	0.04	65.0	<0.01	65.0	65.2	207	0.103	0.010	<0.0002	<0.0002	0.0037	0.0025	0.0158	0.0112	0.020	0.015
EPL 58	22 Dec 2023	<0.01	56.8	<0.01	56.8	60.5	242	0.059	<0.005	0.0004	0.0003	0.0012	0.0006	0.0061	0.0013	0.020	0.012
EPL 58	25 Dec 2023	<0.01	30.8	<0.01	30.8	32.9	159	0.047	<0.005	0.0003	<0.0002	0.0028	0.0012	0.0100	0.0016	0.027	0.016
EPL 58	30 Dec 2023	0.01	42.2	0.01	42.2	48.1	160	0.075	0.005	0.0003	<0.0002	0.0020	0.0006	0.0114	0.0020	0.012	0.010
EPL 58	01 Jan 2024	<0.01	34.2	<0.01	34.2	36.8	163	0.039	<0.005	0.0002	<0.0002	0.0018	0.0005	0.0104	0.0019	0.010	0.008
EPL 58	05 Jan 2024	0.41	41.1	0.01	41.1	43.2	184	0.602	0.007	0.0014	<0.0002	0.0019	0.0011	0.0163	0.0065	0.022	0.013
EPL 58	09 Jan 2024	0.01	39.5	<0.01	39.5	42.0	26	0.300	<0.005	0.0007	<0.0002	0.0015	0.0006	0.0044	0.0003	0.018	0.008
EPL 58	14 Jan 2024	0.02	37.4	<0.01	37.4	38.4	178	0.255	<0.005	0.0006	<0.0002	0.0020	0.0009	0.0028	0.0003	0.013	0.012
EPL 58	15 Jan 2024	0.09	40.7	0.06	40.7	43.9	178	0.791	<0.005	0.0023	0.0002	0.0022	<0.0005	0.0121	0.0005	0.017	0.007
EPL 58	23 Jan 2024	0.28	51.2	<0.01	51.2	56.0	216	6.51	<0.005	0.0163	0.0002	0.0109	<0.0005	0.0528	0.0002	0.086	0.016
EPL 58	30 Jan 2024	0.19	64.8	0.11	64.8	75.1	264	0.380	<0.005	0.0010	0.0003	0.0025	0.0014	0.0062	0.0016	0.039	0.036
EPL 58	08 Feb 2024	0.01	56.7	0.07	56.7	63.3	236	0.046	0.006	0.0004	0.0002	0.0010	<0.0005	0.0059	0.0024	0.014	0.014
EPL 58	14 Feb 2024	0.01	47.0	0.03	47.0	52.1	236	0.018	<0.005	0.0004	0.0002	0.0010	<0.0005	0.0052	0.0016	0.012	0.013
EPL 58	20 Feb 2024	0.01	44.0	0.05	44.0	47.3	216	0.014	<0.005	0.0002	<0.0002	<0.0005	<0.0005	0.0058	0.0006	0.013	0.007
EPL 58	15 Jan 2024	0.09	40.7	0.06	40.7	43.9	178	0.791	<0.005	0.0023	0.0002	0.0022	<0.0005	0.0121	0.0005	0.017	0.007
EPL 58	23 Jan 2024	0.28	51.2	<0.01	51.2	56.0	216	6.51	<0.005	0.0163	0.0002	0.0109	<0.0005	0.0528	0.0002	0.086	0.016
EPL 58	30 Jan 2024	0.19	64.8	0.11	64.8	75.1	264	0.380	<0.005	0.0010	0.0003	0.0025	0.0014	0.0062	0.0016	0.039	0.036
EPL 58	08 Feb 2024	0.01	56.7	0.07	56.7	63.3	236	0.046	0.006	0.0004	0.0002	0.0010	<0.0005	0.0059	0.0024	0.014	0.014
EPL 58	14 Feb 2024	0.01	47.0	0.03	47.0	52.1	236	0.018	<0.005	0.0004	0.0002	0.0010	<0.0005	0.0052	0.0016	0.012	0.013
EPL 58	20 Feb 2024	0.01	44.0	0.05	44.0	47.3	216	0.014	<0.005	0.0002	<0.0002	<0.0005	<0.0005	0.0058	0.0006	0.013	0.007
EPL58	29 Feb 2024	<0.01	44.5	<0.01	44.5	47.4	220	0.017	<0.005	0.0003	0.0002	0.0007	<0.0005	0.0050	0.0010	0.011	0.010
EPL 58	06 Mar 2024	0.01	46.4	<0.01	46.4	51.0	188	0.295	<0.005	0.0010	0.0002	0.0025	0.0010	0.0046	0.0011	0.029	0.023
EPL 58	14 Mar 2024	<0.01	37.0	<0.01	37.0	39.8	176	0.024	<0.005	0.0003	<0.0002	0.0008	<0.0005	0.0047	0.0010	0.012	0.011
EPL58	21 Mar 2024	<0.01	39.0	0.03	39.0	44.9	182	0.011	0.006	0.0003	<0.0002	0.0008	<0.0005	0.0061	0.0029	0.015	0.015
EPL58	31 Mar 2024	<0.01	38.4	0.01	38.4	46.3	156	0.012	<0.005	0.0002	<0.0002	0.0008	<0.0005	0.0053	0.0026	0.012	0.013
EPL 58	02 Apr 2024	<0.01	34.2	0.01	34.2	37.8	212	0.045	<0.005	0.0003	<0.0002	0.0008	<0.0005	0.0049	0.0019	0.015	0.013
EPL 58	13 Apr 2024	<0.01	34.1	<0.01	34.1	36.8	186		<0.005		<0.0002		<0.0005		0.0024		0.009
EPL58	19 Apr 2024	<0.01	45.5	<0.01	45.5	56.5	224	0.064	<0.005	0.0006	0.0004	0.0013	0.0005	0.0036	0.0008	0.029	0.027
EPL 58	25 Apr 2024	0.02	41.8	<0.01	41.8	44.4	216	0.015	<0.005	0.0003	0.0002	0.0008	0.0005	0.0052	0.0039	0.010	0.010
EPL58	04 May 2024	0.02	42.7	<0.01	42.7	48.1	212	0.010	<0.005	0.0003	0.0002	0.0027	0.0023	0.0049	0.0041	0.017	0.016
EPL 58	10 May 2024	0.09	43.6	<0.01	43.6	53.2	173	0.012	<0.005	0.0002	<0.0002	0.0009	<0.0005	0.0056	0.0027	0.012	0.011
EPL 58	16 May 2024	0.01	39.2	<0.01	39.2	44.5	218	0.011	<0.005	0.0003	<0.0002	0.0008	0.0006	0.0057	0.0047	0.013	0.012
EPL58	25 May 2024	0.01	37.3	<0.01	37.3	37.6	214	0.026	<0.005	0.0011	0.0010	0.0026	0.0020	0.0039	0.0022	0.014	0.012



EPL52

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Hardness (as CaCO3) (F)	Al	Al (F)	As	As (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Zn	Zn (F)
EPL 52	09 Dec 2023	0.01	68.8	0.08	67.9	79.0	310	0.235	<0.005	0.0005	0.0005	0.0024	0.0018	0.0010	<0.0005	0.204	<0.002	0.070	0.055
EPL 52	12 Dec 2023	<0.01	115	0.01	114	126	347	0.226	<0.005	0.0004	0.0004	0.0020	0.0014	0.0006	<0.0005	0.303	<0.002	0.089	0.086
EPL 52	16 Dec 2023	<0.01	102	0.56	101	108	408	0.104	0.007	0.0006	0.0005	0.0030	0.0011	0.0010	<0.0005	0.138	<0.002	0.018	0.018
EPL 52	20 Dec 2023	0.05	79.3	0.03	78.5	88.1	351	1.01	<0.005	0.0012	0.0007	0.0046	0.0017	0.0020	<0.0005	1.42	<0.002	0.011	<0.001
EPL 52	25 Dec 2023	0.18	70.6	0.06	69.4	80.8	337	10.0	<0.005	0.0045	0.0009	0.0332	0.0007	0.0221	0.0006	16.0	<0.002	0.140	<0.001
EPL 52	29 Dec 2023						215	0.128	<0.005	0.0012	0.0013	0.0022	0.0014	0.0009	0.0006	0.226	<0.002	0.005	<0.001
EPL 52	01 Jan 2024	0.03	61.6	0.09	60.4	67.0	274	0.130	<0.005	0.0013	0.0014	0.0020	0.0013	0.0011	0.0006	0.255	<0.002	0.003	<0.001
EPL 52	08 Jan 2024	0.70	22.3	0.10	21.6	25.9	102	14.6	0.027	0.0074	0.0019	0.0458	0.0027	0.0224	0.0007	20.4	0.003	0.116	<0.001
EPL 52	15 Jan 2024	0.05	28.8	0.02	27.9	31.7	180	0.848	0.012	0.0016	0.0014	0.0037	0.0017	0.0022	<0.0005	0.742	<0.002	0.007	<0.001
EPL 52	23 Jan 2024	0.01	37.9	0.03	37.5	40.9	208	0.193	<0.005	0.0011	0.0010	0.0015	0.0010	0.0033	<0.0005	0.264	<0.002	0.021	0.006
EPL 52	30 Jan 2024	0.46	48.5	0.13	44.2	55.1	249	0.317	<0.005	0.0015	0.0015	0.0007	<0.0002	0.0010	<0.0005	0.249	<0.002	0.025	0.004
EPL 52	08 Feb 2024	0.04	47.0	0.03	44.6	54.4	223	0.088	<0.005	0.0024	0.0022	0.0015	0.0014	0.0007	0.0005	0.094	<0.002	0.002	<0.001
EPL 52	14 Feb 2024	0.04	29.9	0.06	27.9	34.6	169	0.899	0.014	0.0036	0.0029	0.0041	0.0015	0.0027	0.0005	1.15	<0.002	0.008	<0.001
EPL 52	20 Feb 2024	0.05	29.6	0.05	27.6	31.6	144	0.459	0.006	0.0035	0.0031	0.0025	0.0017	<0.0005	<0.0005	0.384	<0.002	0.002	<0.001
EPL52	29 Feb 2024	0.03	26.5	0.08	24.5	29.4	152	0.663	0.005	0.0028	0.0027	0.0031	0.0015	0.0010	<0.0005	0.634	<0.002	0.003	<0.001
EPL 52	06 Mar 2024	0.03	35.5	0.08	33.2	40.3	187	2.00	0.006	0.0036	0.0028	0.0072	0.0013	0.0034	0.0007	2.70	<0.002	0.014	<0.001
EPL 52	14 Mar 2024	0.02	26.3	0.05	24.8	27.1	212	0.483	<0.005	0.0022	0.0021	0.0021	0.0008	0.0018	0.0007	0.636	<0.002	0.004	<0.001
EPL52	21 Mar 2024	0.18	18.6	0.05	17.8	22.0	98	8.95	0.013	0.0070	0.0055	0.0358	0.0048	0.0044	0.0006	13.7	<0.002	0.043	<0.001
EPL 52	08 Jan 2024	0.70	22.3	0.10	21.6	25.9	102	14.6	0.027	0.0074	0.0019	0.0458	0.0027	0.0224	0.0007	20.4	0.003	0.116	<0.001
EPL 52	15 Jan 2024	0.05	28.8	0.02	27.9	31.7	180	0.848	0.012	0.0016	0.0014	0.0037	0.0017	0.0022	<0.0005	0.742	<0.002	0.007	<0.001
EPL 52	23 Jan 2024	0.01	37.9	0.03	37.5	40.9	208	0.193	<0.005	0.0011	0.0010	0.0015	0.0010	0.0033	<0.0005	0.264	<0.002	0.021	0.006
EPL 52	30 Jan 2024	0.46	48.5	0.13	44.2	55.1	249	0.317	<0.005	0.0015	0.0015	0.0007	<0.0002	0.0010	<0.0005	0.249	<0.002	0.025	0.004
EPL 52	08 Feb 2024	0.04	47.0	0.03	44.6	54.4	223	0.088	<0.005	0.0024	0.0022	0.0015	0.0014	0.0007	0.0005	0.094	<0.002	0.002	<0.001
EPL 52	14 Feb 2024	0.04	29.9	0.06	27.9	34.6	169	0.899	0.014	0.0036	0.0029	0.0041	0.0015	0.0027	0.0005	1.15	<0.002	0.008	<0.001
EPL 52	20 Feb 2024	0.05	29.6	0.05	27.6	31.6	144	0.459	0.006	0.0035	0.0031	0.0025	0.0017	<0.0005	<0.0005	0.384	<0.002	0.002	<0.001
EPL52	29 Feb 2024	0.03	26.5	0.08	24.5	29.4	152	0.663	0.005	0.0028	0.0027	0.0031	0.0015	0.0010	<0.0005	0.634	<0.002	0.003	<0.001
EPL 52	06 Mar 2024	0.03	35.5	0.08	33.2	40.3	187	2.00	0.006	0.0036	0.0028	0.0072	0.0013	0.0034	0.0007	2.70	<0.002	0.014	<0.001
EPL 52	14 Mar 2024	0.02	26.3	0.05	24.8	27.1	212	0.483	<0.005	0.0022	0.0021	0.0021	0.0008	0.0018	0.0007	0.636	<0.002	0.004	<0.001
EPL52	21 Mar 2024	0.18	18.6	0.05	17.8	22.0	98	8.95	0.013	0.0070	0.0055	0.0358	0.0048	0.0044	0.0006	13.7	<0.002	0.043	<0.001
EPL52	31 Mar 2024	0.04	19.9	0.04	19.0	24.1	101	1.58	0.027	0.0047	0.0044	0.0079	0.0034	0.0017	<0.0005	2.03	<0.002	0.01	<0.001
EPL 52	02 Apr 2024	0.07	21.1	0.03	20.3	24.5	118	4.85	0.029	0.0054	0.0040	0.0159	0.0032	0.0071	<0.0005	5.26	<0.002	0.032	<0.001
EPL 52	13 Apr 2024	0.07	29.6	0.01	29.0	32.5	150		<0.005		0.0022		0.0029		<0.0005		<0.002		<0.001
EPL52	19 Apr 2024	0.04	29.7	0.04	29.1	34.8	178	0.118	<0.005	0.0027	0.0022	0.0034	0.0028	0.0009	<0.0005	0.101	<0.002	0.003	<0.001
EPL 52	25 Apr 2024	0.02	32.2	0.02	31.6	34.6	206	0.757	0.008	0.0028	0.0025	0.0046	0.0026	0.0014	<0.0005	0.807	<0.002	0.006	<0.001
EPL52	04 May 2024	0.03	35.8	<0.01	35.4	42.0	207	0.909	0.014	0.0034	0.0028	0.0047	0.0024	0.0016	0.0006	1.01	<0.002	0.008	<0.001
EPL 52	10 May 2024	0.11	41.0	<0.01	40.7	51.8	195	0.338	0.007	0.0025	0.0024	0.0030	0.0020	0.0008	<0.0005	0.265	<0.002	0.004	<0.001
EPL 52	16 May 2024	0.05	36.3	0.01	36.0	41.5	286	0.601	0.026	0.0027	0.0026	0.0326	0.0303	0.0013	0.0005	0.564	<0.002	0.007	<0.001
EPL52	25 May 2024	0.05	34.0	0.75	33.3	35.6	196	0.872	0.038	0.0032	0.0029	0.0581	0.0514	0.0022	0.0011	0.978	0.002	0.014	0.002

EPL95

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	PO4-P (F)	Al	Al (F)	As	As (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Ni	Ni (F)	Zn	Zn (F)
EPL95	18 Jan 2024	1.39	13.4	0.06	13.4	15.6	0.018	36.9	<0.005	0.0371	0.0018	0.0935	<0.0002	0.0620	<0.0005	60.0	<0.002	0.174	<0.0001	0.142	0.0080	0.547	0.035
EPL 95	23 Jan 2024	<0.10	11.5	0.02	11.5	22.1	0.008	14.1	<0.005	0.0196	0.0013	0.0412	<0.0002	0.0249	<0.0005	28.7	<0.002	0.0667	<0.0001	0.0749	0.0055	0.312	0.021
EPL 95	29 Jan 2024	0.32	13.1	0.08	13.0	15.7	0.012	1.26	<0.005	0.0028	0.0014	0.0026	<0.0002	0.0021	<0.0005	1.62	<0.002	0.0035	<0.0001	0.0145	0.0076	0.079	0.041
EPL 95	08 Feb 2024	0.57	20.2	0.02	20.2	22.9	0.008	7.34	<0.005	0.0106	0.0010	0.0200	0.0002	0.0323	0.0017	12.4	<0.002	0.0229	<0.0001	0.195	0.141	0.160	0.067
EPL 95	14 Feb 2024	0.57	21.7	0.04	21.7	25.0	0.014	0.829	<0.005	0.0034	0.0022	0.0019	<0.0002	0.0043	0.0007	0.796	<0.002	0.0022	<0.0001	0.0284	0.0244	0.055	0.054
EPL 95	22 Feb 2024	0.03	19.6	0.03	19.6	20.1	0.009	0.176	<0.005	0.0023	0.0022	0.0007	<0.0002	0.0246	0.0047	0.224	<0.002	0.0005	<0.0001	0.0172	0.0117	0.046	0.041
EPL95	29 Feb 2024	0.05	18.6	<0.01	18.6	19.4	0.007	0.354	<0.005	0.0023	0.0020	0.0011	<0.0002	0.0110	0.0026	0.414	<0.002	0.0013	<0.0001	0.0206	0.0149	0.048	0.032
EPL 95	06 Mar 2024	0.18	26.0	0.01	26.0	28.8	0.005	2.92	<0.005	0.0077	0.0015	0.0091	<0.0002	0.0338	0.0072	4.58	<0.002	0.0112	<0.0001	0.0303	0.0177	0.092	0.050
EPL 95	13 Mar 2024	0.09	27.3	0.02	27.3	28.3	0.009	0.504	<0.005	0.0026	0.0014	0.0018	<0.0002	0.0056	0.0008	0.834	<0.002	0.0018	<0.0001	0.0197	0.0145	0.052	0.035
EPL95	21 Mar 2024	0.03	28.5	0.06	28.3	32.1	0.012	0.063	0.006	0.0021	0.0018	0.0013	<0.0002	0.109	0.0688	0.094	<0.002	0.0004	<0.0001	0.0182	0.0167	0.081	0.074
EPL95	31 Mar 2024	0.18	22.8	0.75	22.6	26.8	0.012	0.096	<0.005	0.0019	0.0018	0.0004	<0.0002	0.142	0.0975	0.075	<0.002	0.0003	<0.0001	0.0299	0.0276	0.068	0.068
EPL95	04 Apr 2024	0.08	28.7	0.18	28.7	31.3	0.017	0.297	0.006	0.0027	0.0020	0.0010	<0.0002	0.0296	0.0160	0.411	<0.002	0.0014	<0.0001	0.0172	0.0151	0.045	0.038
EPL95	19 Apr 2024	0.02	21.5	0.06	21.5	24.0	0.010	0.320	<0.005	0.0027	0.0021	0.0010	<0.0002	0.0146	0.0038	0.436	<0.002	0.0011	<0.0001	0.0296	0.0244	0.072	0.055
EPL 95	25 Apr 2024	0.08	22.6	0.05	22.5	25.0	0.014	0.337	<0.005	0.0023	0.0016	0.0010	<0.0002	0.0935	0.0697	0.444	<0.002	0.0017	0.0002	0.0170	0.0152	0.089	0.093
EPL95	04 May 2024	0.03	26.5	<0.01	24.7	32.6	0.005		0.005		0.0013		0.0002		0.179		<0.002		<0.0001		0.0233		0.055
EPL 95	10 May 2024	0.07	32.7	0.06	32.7	38.2	0.009		<0.005		0.0018		<0.0002		0.0140		<0.002		0.0001		0.0146		0.040
EPL 95	18 May 2024	0.04	31.8	0.03	31.8	36.0	0.009		<0.005		0.0014		<0.0002		0.110		<0.002		0.0001		0.0140		0.050
EPL95	25 May 2024	0.01	28.4	0.02	27.9	29.1	0.012	0.038	<0.005	0.0016	0.0014	0.0008	0.0006	0.281	0.180	0.041	<0.002	0.0003	<0.0001	0.0149	0.0135	0.041	0.035

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	PO4-P (F)	Al	Al (F)	As	As (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Ni	Ni (F)	Zn	Zn (F)
EPL97	18 Jan 2024	0.29	0.02	0.07	0.02	0.3	0.032	7.66	<0.005	0.0144	0.0053	0.0205	<0.0002	0.0113	<0.0005	11.3	<0.002	0.113	0.0002	0.0285	0.0010	1.10	0.007
EPL 97	23 Jan 2024	0.62	1.62	0.07	1.62	1.9	0.014	11.8	<0.005	0.0240	0.0060	0.0308	<0.0002	0.0193	<0.0005	19.0	<0.002	0.211	0.0001	0.0504	0.0008	1.25	0.005
EPL 97	29 Jan 2024	0.13	<0.01	0.09	<0.01	<0.1	0.026	2.48	<0.005	0.0098	0.0064	0.0064	<0.0002	0.0034	<0.0005	3.62	<0.002	0.0390	0.0001	0.0104	0.0009	0.275	0.010
EPL 97	08 Feb 2024	0.30	<0.01	0.04	<0.01	0.4	0.016	7.96	<0.005	0.0157	0.0029	0.0237	<0.0002	0.0135	<0.0005	14.1	<0.002	0.219	0.0007	0.0374	0.0010	1.06	0.015
EPL 97	14 Feb 2024	0.13	<0.01	0.02	<0.01	0.1	0.026	0.445	<0.005	0.0056	0.0043	0.0012	<0.0002	0.0011	<0.0005	0.565	<0.002	0.0065	<0.0001	0.0025	0.0006	0.043	0.005
EPL 97	22 Feb 2024	2.37	0.01	0.04	0.01	1.7	0.014	12.6	<0.005	0.0122	0.0019	0.0314	<0.0002	0.0153	<0.0005	17.6	0.006	0.183	0.0007	0.0412	0.0015	0.944	0.007
EPL97	29 Feb 2024	0.06	5.34	0.03	5.34	5.6	0.008	0.202	<0.005	0.0048	0.0037	0.0006	<0.0002	0.0010	<0.0005	0.308	<0.002	0.0027	<0.0001	0.0020	0.0008	0.016	0.002
EPL 97	06 Mar 2024	0.13	<0.01	0.05	<0.01	<0.1	0.012	4.39	<0.005	0.0465	0.0021	0.0120	<0.0002	0.0213	<0.0005	18.0	<0.002	0.0177	<0.0001	0.0499	0.0008	0.117	0.002
EPL 97	14 Mar 2024	0.42	<0.01	0.09	<0.01	0.4	0.007	2.71	<0.005	0.0054	0.0016	0.0086	<0.0002	0.0054	<0.0005	4.87	<0.002	0.0629	0.0007	0.0126	0.0007	0.321	0.011
EPL97	21 Mar 2024	0.12	0.06	0.03	0.06	0.2	0.017	2.99	<0.005	0.0086	0.0021	0.0093	<0.0002	0.0052	<0.0005	5.63	<0.002	0.0756	0.0005	0.0161	0.0018	0.323	0.015
EPL97	30 Mar 2024	0.10	<0.01	0.03	<0.01	0.2	0.007	0.983	<0.005	0.0033	0.0021	0.0031	<0.0002	0.0011	<0.0005	1.4	<0.002	0.0161	0.0004	0.0069	0.0023	0.101	0.040
EPL97	04 Apr 2024	0.12	<0.01	<0.01	<0.01	0.1	0.013	1.33	<0.005	0.0051	0.0022	0.0043	<0.0002	0.0024	<0.0005	2.06	<0.002	0.0301	0.0003	0.0068	0.0010	0.119	0.023
EPL 97	13 Apr 2024	0.26	1.07	0.04	1.05	1.4	0.021		<0.005		0.0022		<0.0002		<0.0005		<0.002		0.0002		0.0009		0.012
EPL97	19 Apr 2024	0.14	<0.01	0.03	<0.01	0.2	0.009	6.41	<0.005	0.0212	0.0028	0.0192	<0.0002	0.0096	<0.0005	11.1	<0.002	0.164	<0.0001	0.0307	0.0008	0.486	0.008
EPL 97	26 Apr 2024	0.32	<0.01	0.06	<0.01	0.2	0.010	10.6	<0.005	0.0404	0.0028	0.0339	<0.0002	0.0189	<0.0005	20.7	<0.002	0.308	0.0002	0.0551	0.0016	0.999	0.010
EPL97	04 May 2024	0.26	<0.01	0.03	<0.01	0.2	0.005		<0.005		0.0020		<0.0002		<0.0005		<0.002		0.0001		0.0010		0.008
EPL 97	11 May 2024	0.21	0.02	0.07	<0.01	0.1	<0.001		<0.005		0.0011		<0.0002		<0.0005		<0.002		<0.0001		<0.0005		0.004
EPL 97	18 May 2024	0.11	<0.01	0.04	<0.01	0.1	0.017		<0.005		0.0020		<0.0002		<0.0005		<0.002		<0.0001		0.0007		0.006
EPL97	25 May 2024	0.15	0.02	0.07	0.02	0.1	0.012	1.35	<0.005	0.0109	0.0016	0.0040	<0.0002	0.0025	<0.0005	3.03	<0.002	0.0292	<0.0001	0.0066	0.0008	0.134	0.006

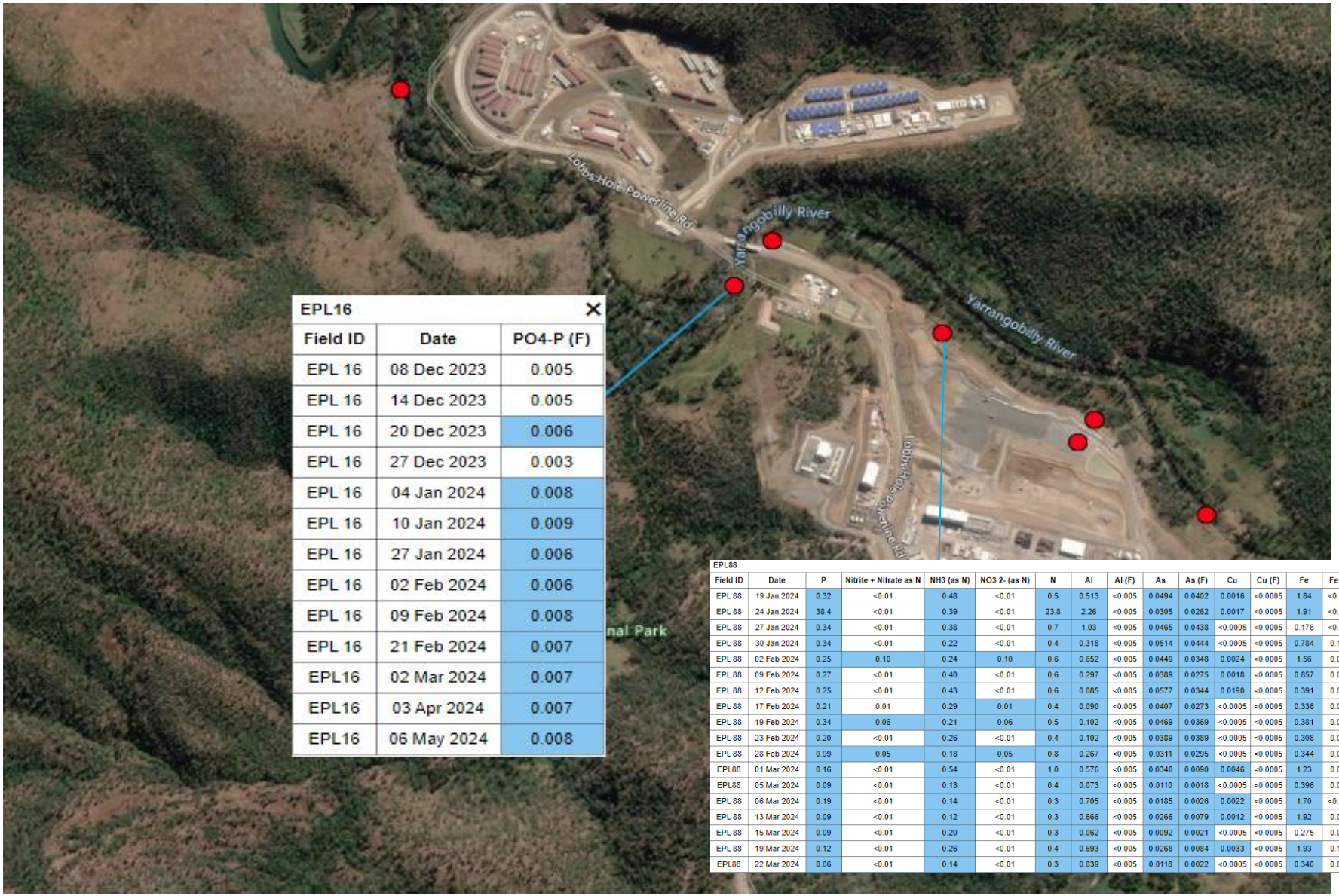
EPL24

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	NO2- (as N)	N	Cr	Cr (F)	Zn	Zn (F)
EPL 24	08 Dec 2023	<0.01	10.1	0.06	10.1	<0.01	11.0		<0.0002		0.011
EPL 24	10 Jan 2024	0.03	13.3	<0.01	13.3	0.02	14.2		0.0003		0.008
EPL 24	27 Jan 2024	0.05	14.7	<0.01	14.7	<0.01	15.3		0.0004		0.006
EPL 24	01 Feb 2024	<0.01	20.6	<0.01	20.6	<0.01	22.2		<0.0002		0.039
EPL 24	08 Feb 2024	0.02	31.5	0.02	31.5	0.02	37.8		<0.0002		0.011
EPL 24	16 Feb 2024	0.02	26.7	0.02	26.7	<0.01	29.1				
EPL 24	16 Feb 2024								<0.0002		0.029
EPL 24	21 Feb 2024	0.01	28.9	0.08	28.9	0.01	31.5		<0.0002		0.007
EPL24	02 Mar 2024	<0.01	36.2	<0.01	36.2	<0.01	39.2		<0.0002		0.011
EPL 24	07 Mar 2024	0.02	35.8	0.04	35.8	<0.01	41.8		<0.0002		0.006
EPL 24	13 Mar 2024	0.03	33.9	0.02	33.9	0.01	37.3		<0.0002		0.010
EPL24	20 Mar 2024	0.05	21.0	0.03	20.9	0.08	23.9		0.0011		0.002
EPL24	28 Mar 2024	0.23	30.8	0.03	30.8	<0.01	35.5	<0.0002	<0.0002	0.012	0.012
EPL24	03 Apr 2024	<0.01	26.5	<0.01	26.5	<0.01	28.2		<0.0002		0.014
EPL 24	17 Apr 2024	0.01	23.0	<0.01	23.0	<0.01	23.0	0.0028	0.0019	0.011	0.003
EPL 24	24 Apr 2024	0.02	27.9	0.01	27.9	<0.01	33.2		0.0004		0.006
EPL 24	30 Apr 2024	<0.01	26.8	<0.01	26.8	0.02	30.2		0.0004		0.011
EPL24	06 May 2024	<0.01	28.5	<0.01	28.5	<0.01	33.0		0.0004		0.011

LOBSHOLE – MAIN YARD

EPL87

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	PO4-P (F)	Al	Al (F)	As	As (F)	Cr	Cr (F)	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Mn	Mn (F)	Ni	Ni (F)	Ag	Ag (F)
EPL 87	18 Jan 2024	2.40	1.85	0.04	1.84	3.6	0.003	59.4	<0.005	0.0622	0.0008	0.140	<0.0002	0.245	<0.0005	132	<0.002	0.118	<0.0001	3.83	0.413	0.250	0.0048	0.00053	<0.00001
EPL 87	24 Jan 2024	38.7	3.28	0.44	3.10	32.7	0.004	28.4	<0.005	0.0300	0.0008	0.0613	<0.0002	0.0736	<0.0005	43.6	0.005	0.0365	<0.0001	5.42	3.54	0.0984	0.0065	0.00019	<0.00001
EPL 87	27 Jan 2024	1.70	1.79	0.04	1.76	3.6	0.006	15.1	<0.005	0.0182	0.0005	0.0344	<0.0002	0.0432	<0.0005	24.9	<0.002	0.0243	<0.0001	1.14	0.441	0.0542	0.0030	0.00010	<0.00001
EPL 87	30 Jan 2024	0.60	1.79	0.07	1.77	1.8	0.006	0.475	<0.005	0.0006	0.0004	0.0007	<0.0002	0.0008	<0.0005	0.388	<0.002	0.0003	<0.0001	0.569	0.485	0.0053	0.0026	<0.00001	<0.00001
EPL 87	02 Feb 2024	0.85	1.83	0.02	1.82	3.0	0.008	17.3	<0.005	0.0169	0.0003	0.0350	<0.0002	0.0383	<0.0005	27.4	<0.002	0.0267	<0.0001	1.04	0.402	0.0490	0.0021	0.00014	<0.00001
EPL 87	09 Feb 2024	2.09	1.79	0.02	1.79	4.3	0.006	37.2	<0.005	0.0397	0.0002	0.0976	<0.0002	0.142	<0.0005	73.4	<0.002	0.0753	<0.0001	2.21	0.172	0.139	0.0026	0.00046	<0.00001
EPL 87	12 Feb 2024	3.51	1.86	0.02	1.86	5.1	0.012	2.28	<0.005	0.0023	0.0003	0.0047	<0.0002	0.0047	<0.0005	3.03	<0.002	0.0024	<0.0001	0.301	0.232	0.0106	0.0032	0.00001	<0.00001
EPL 87	17 Feb 2024	0.29	1.24	0.08	1.24	1.8	0.005	0.386	<0.005	0.0006	0.0003	0.0008	<0.0002	0.0016	<0.0005	0.390	<0.002	0.0004	<0.0001	0.583	0.526	0.0044	0.0023	<0.00001	<0.00001
EPL 87	19 Feb 2024	1.17	1.55	0.05	1.55	3.4	0.006	0.373	<0.005	0.0004	0.0002	0.0006	<0.0002	<0.0005	<0.0005	0.332	<0.002	0.0003	<0.0001	0.475	0.435	0.0052	0.0030	<0.00001	<0.00001
EPL 87	23 Feb 2024	0.32	1.26	0.08	1.25	1.9	0.004	3.08	<0.005	0.0029	0.0002	0.0056	<0.0002	0.0059	<0.0005	4.14	<0.002	0.0034	<0.0001	0.530	0.429	0.0102	0.0023	0.00004	<0.00001
EPL 87	28 Feb 2024	0.25	1.80	0.06	1.80	2.4	0.008	0.491	<0.005	0.0006	<0.0002	0.0011	<0.0002	0.0010	<0.0005	0.179	<0.002	0.0005	<0.0001	0.265	0.233	0.0049	0.0023	<0.00001	<0.00001
EPL87	01 Mar 2024	2.49	1.62	0.02	1.62	4.3	0.002	42.7	<0.005	0.0408	0.0002	0.101	<0.0002	0.120	<0.0005	74.6	<0.002	0.0766	<0.0001	2.21	0.232	0.136	0.0026	0.00079	<0.00001
EPL87	05 Mar 2024	0.35	1.18	0.04	1.14	1.8	0.003	0.308	<0.005	0.0003	<0.0002	0.0005	<0.0002	0.0007	<0.0005	0.238	<0.002	0.0002	<0.0001	0.431	0.346	0.0054	0.0030	<0.00001	<0.00001
EPL 87	06 Mar 2024	0.49	1.03	0.01	1.03	1.6	0.006	20.8	<0.005	0.0208	<0.0002	0.0434	<0.0002	0.0444	<0.0005	30.3	<0.002	0.0301	<0.0001	1.15	0.436	0.0594	0.0031	0.00019	<0.00001
EPL 87	12 Mar 2024	0.29	0.45	0.07	0.44	1.0	0.003	8.50	<0.005	0.0103	0.0002	0.0167	<0.0002	0.0211	<0.0005	13.6	<0.002	0.0165	<0.0001	0.779	0.458	0.0286	0.0033	0.00010	<0.00001
EPL 87	15 Mar 2024	0.17	0.51	0.03	0.51	0.8	0.004	0.354	<0.005	0.0004	<0.0002	0.0007	<0.0002	0.0008	<0.0005	0.354	<0.002	0.0003	<0.0001	0.532	0.580	0.0056	0.0029	<0.00001	<0.00001
EPL 87	19 Mar 2024	0.40	0.28	0.03	0.28	0.8	0.004	0.353	<0.005	0.0004	0.0002	0.0008	<0.0002	0.0007	<0.0005	0.394	<0.002	0.0004	<0.0001	0.682	0.637	0.0052	0.0053	<0.00001	<0.00001
EPL 87	28 Feb 2024	0.25	1.80	0.06	1.80	2.4	0.008	0.491	<0.005	0.0006	<0.0002	0.0011	<0.0002	0.0010	<0.0005	0.179	<0.002	0.0005	<0.0001	0.265	0.233	0.0049	0.0023	<0.00001	<0.00001
EPL87	01 Mar 2024	2.49	1.62	0.02	1.62	4.3	0.002	42.7	<0.005	0.0408	0.0002	0.101	<0.0002	0.120	<0.0005	74.6	<0.002	0.0766	<0.0001	2.21	0.232	0.136	0.0026	0.00079	<0.00001
EPL87	05 Mar 2024	0.35	1.18	0.04	1.14	1.8	0.003	0.308	<0.005	0.0003	<0.0002	0.0005	<0.0002	0.0007	<0.0005	0.238	<0.002	0.0002	<0.0001	0.431	0.346	0.0054	0.0030	<0.00001	<0.00001
EPL 87	06 Mar 2024	0.49	1.03	0.01	1.03	1.6	0.006	20.8	<0.005	0.0208	<0.0002	0.0434	<0.0002	0.0444	<0.0005	30.3	<0.002	0.0301	<0.0001	1.15	0.436	0.0594	0.0031	0.00019	<0.00001
EPL 87	12 Mar 2024	0.29	0.45	0.07	0.44	1.0	0.003	8.50	<0.005	0.0103	0.0002	0.0167	<0.0002	0.0211	<0.0005	13.6	<0.002	0.0165	<0.0001	0.779	0.458	0.0286	0.0033	0.00010	<0.00001
EPL 87	15 Mar 2024	0.17	0.51	0.03	0.51	0.8	0.004	0.354	<0.005	0.0004	<0.0002	0.0007	<0.0002	0.0008	<0.0005	0.354	<0.002	0.0003	<0.0001	0.532	0.580	0.0056	0.0029	<0.00001	<0.00001
EPL 87	19 Mar 2024	0.40	0.28	0.03	0.28	0.8	0.004	0.353	<0.005	0.0004	0.0002	0.0008	<0.0002	0.0007	<0.0005	0.394	<0.002	0.0004	<0.0001	0.682	0.637	0.0052	0.0053	<0.00001	<0.00001
EPL87	22 Mar 2024	0.59	0.08	0.03	0.08	0.7	0.005	10.6	<0.005	0.0147	<0.0002	0.0276	<0.0002	0.0356	<0.0005	20.8	<0.002	0.0212	<0.0001	1.12	0.519	0.0412	0.0035	0.00010	<0.00001
EPL87	26 Mar 2024	4.90	6.64	0.07	6.64	12.5	0.003	0.646	<0.005	0.0008	0.0004	0.0011	<0.0002	0.0014	<0.0005	0.572	<0.002	0.0004	<0.0001	0.758	0.716	0.0054	0.0029	<0.00001	<0.00001
EPL87	27 Mar 2024	0.69	0.69	0.02	0.69	<1.0	0.007	0.718	<0.005	0.0131	0.0073	0.0016	<0.0002	0.0014	<0.0005	1.07	<0.002	0.0005	<0.0001	0.255	0.213	0.0337	0.0217	<0.00001	<0.00001
EPL 87	01 Apr 2024	1.07	1.89	0.01	1.89	3.0	0.002	11.2	<0.005	0.0091	0.0002	0.0165	<0.0002	0.0174	<0.0005	11	<0.002	0.0118	<0.0001	0.502	0.217	0.0227	0.0026	0.00007	<0.00001
EPL87	04 Apr 2024	0.10	0.80	0.02	0.80	1.0	0.005	2.38	<0.005	0.0031	0.0002	0.0050	<0.0002	0.0132	<0.0005	3.35	<0.002	0.0050	<0.0001	0.663	0.477	0.0104	0.0026	0.00001	<0.00001
EPL87	09 Apr 2024	0.29	8.26	0.05	8.26	9.1	0.008	1.9	<0.005	0.0024	<0.0002	0.0038	<0.0002	0.0040	<0.0005	2.75	<0.002	0.0029	<0.0001	0.471	0.313	0.0076	0.0019	0.00006	<0.00001
EPL87	16 Apr 2024	1.12	2.26	0.01	2.26	2.3	0.008	24.8	<0.005	0.0299	0.0002	0.0605	<0.0002	0.0747	<0.0005	53.5	<0.002	0.0477	<0.0001	1.34	0.127	0.0845	0.0025	0.00028	<0.00001
EPL 87	18 Apr 2024	0.61	2.08	0.02	2.08	3.1	0.004	7.44	<0.005	0.0085	0.0003	0.0167	<0.0002	0.0196	<0.0005	11.5	<0.002	0.0148	<0.0001	0.510	0.166	0.0238	0.0021	0.00006	<0.00001
EPL87	22 Apr 2024	0.10	0.58	0.07	0.58	1.4	0.006	2.23	<0.005	0.0056	0.0004	0.0047	<0.0002	0.0054	<0.0005	3.01	<0.002	0.0037	<0.0001	0.446	0.274	0.0090	0.0018	0.00002	<0.00001
EPL 87	29 Apr 2024	0.40	2.08	0.02	2.08	3.2	0.003		<0.005		0.0002		<0.0002		<0.0005		<0.002		<0.0001		0.263		0.0035		<0.00001
EPL87	07 May 2024	<0.10	2.03	0.02	2.03	2.0	0.003	6.66	<0.005	0.0096	0.0004	0.0137	<0.0002	0.0180	<0.0005	9.98	<0.002	0.0100	<0.0001	0.808	0.434	0.0212	0.0043	0.00016	<0.00001
EPL 87	14 May 2024	0.12	1.04	<0.01	1.04	1.4	0.002		<0.005		<0.0002		<0.0002		<0.0005		<0.002		<0.0001		0.351		0.0027		<0.00001
EPL87	22 May 2024	0.09	0.56	<0.01	0.55	0.7	0.004	3.32	<0.005	0.0042	<0.0002	0.0061	<0.0002	0.0063	<0.0005	4.33	<0.002	0.0046	<0.0001	0.580	0.408	0.0118	0.0043	0.00004	<0.00001



EPL16

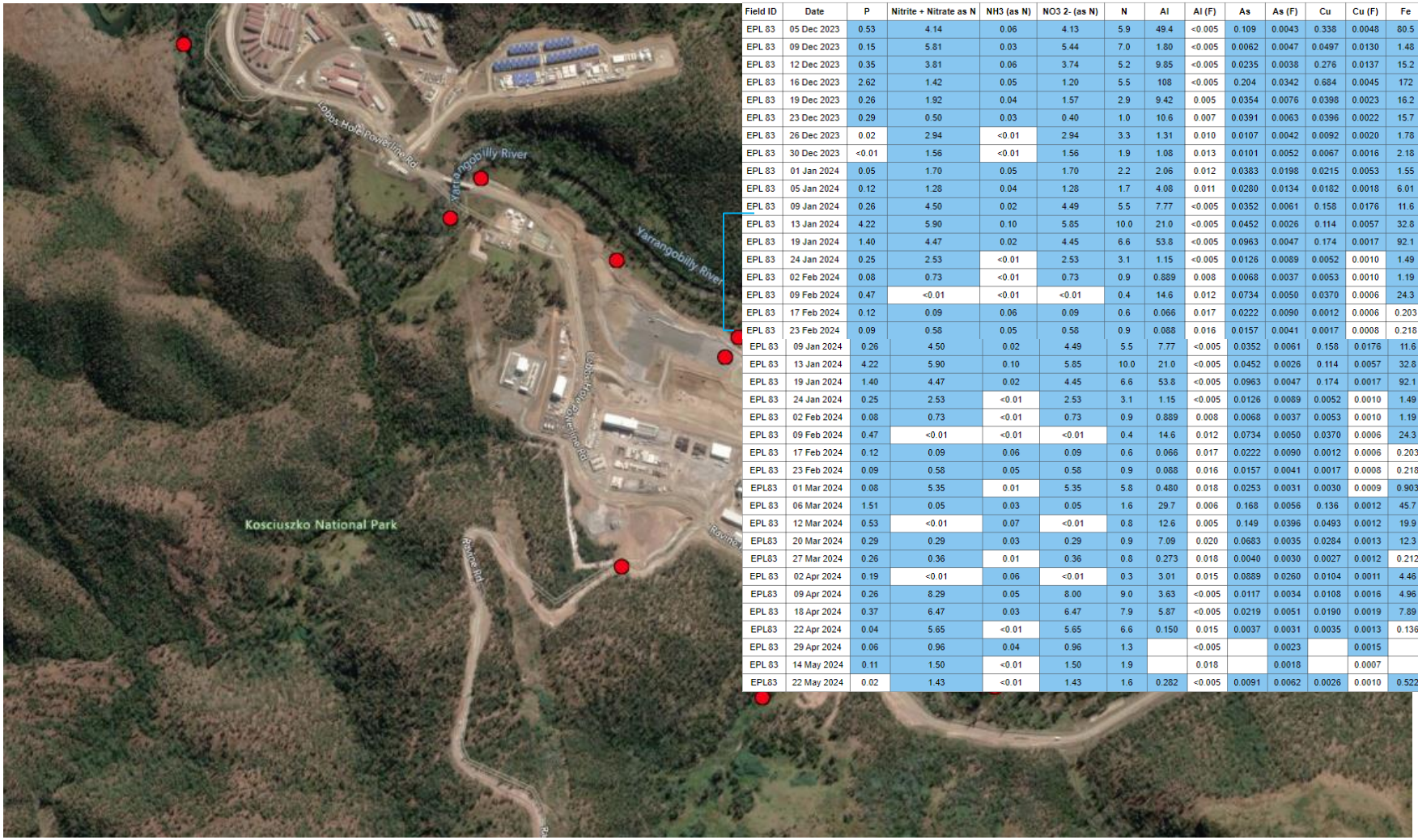
Field ID	Date	PO4-P (F)
EPL 16	08 Dec 2023	0.005
EPL 16	14 Dec 2023	0.005
EPL 16	20 Dec 2023	0.006
EPL 16	27 Dec 2023	0.003
EPL 16	04 Jan 2024	0.008
EPL 16	10 Jan 2024	0.009
EPL 16	27 Jan 2024	0.006
EPL 16	02 Feb 2024	0.006
EPL 16	09 Feb 2024	0.008
EPL 16	21 Feb 2024	0.007
EPL16	02 Mar 2024	0.007
EPL16	03 Apr 2024	0.007
EPL16	06 May 2024	0.008

EPL88

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Al	Al (F)	As	As (F)	Cu	Cu (F)	Fe	Fe (F)	Mn	Mn (F)	Zn	Zn (F)
EPL 88	19 Jan 2024	0.32	<0.01	0.48	<0.01	0.5	0.513	<0.005	0.0494	0.0402	0.0016	<0.0005	1.84	<0.002	0.258	0.231	0.021	0.003
EPL 88	24 Jan 2024	38.4	<0.01	0.39	<0.01	23.8	2.26	<0.005	0.0305	0.0262	0.0017	<0.0005	1.91	<0.002	0.221	0.154	0.026	0.002
EPL 88	27 Jan 2024	0.34	<0.01	0.38	<0.01	0.7	1.03	<0.005	0.0465	0.0438	<0.0005	<0.0005	0.176	<0.002	0.265	0.230	0.006	0.001
EPL 88	30 Jan 2024	0.34	<0.01	0.22	<0.01	0.4	0.318	<0.005	0.0514	0.0444	<0.0005	<0.0005	0.784	0.168	0.214	0.183	0.006	0.001
EPL 88	02 Feb 2024	0.25	0.10	0.24	0.10	0.6	0.652	<0.005	0.0449	0.0348	0.0024	<0.0005	1.56	0.003	0.203	0.165	0.016	0.002
EPL 88	09 Feb 2024	0.27	<0.01	0.40	<0.01	0.6	0.297	<0.005	0.0389	0.0275	0.0018	<0.0005	0.857	0.016	0.234	0.220	0.013	0.002
EPL 88	12 Feb 2024	0.25	<0.01	0.43	<0.01	0.6	0.085	<0.005	0.0577	0.0344	0.0190	<0.0005	0.391	0.019	0.234	0.216	0.020	0.001
EPL 88	17 Feb 2024	0.21	0.01	0.29	0.01	0.4	0.090	<0.005	0.0407	0.0273	<0.0005	<0.0005	0.336	0.010	0.171	0.167	0.004	<0.001
EPL 88	19 Feb 2024	0.34	0.06	0.21	0.06	0.5	0.102	<0.005	0.0469	0.0369	<0.0005	<0.0005	0.381	0.013	0.207	0.223	0.005	0.001
EPL 88	23 Feb 2024	0.20	<0.01	0.26	<0.01	0.4	0.102	<0.005	0.0389	0.0389	<0.0005	<0.0005	0.308	0.004	0.194	0.188	0.004	0.001
EPL 88	28 Feb 2024	0.99	0.05	0.18	0.05	0.8	0.267	<0.005	0.0311	0.0295	<0.0005	<0.0005	0.344	0.035	0.164	0.194	0.015	0.001
EPL88	01 Mar 2024	0.16	<0.01	0.54	<0.01	1.0	0.576	<0.005	0.0340	0.0090	0.0046	<0.0005	1.23	0.002	0.254	0.215	0.018	0.002
EPL88	05 Mar 2024	0.09	<0.01	0.13	<0.01	0.4	0.073	<0.005	0.0110	0.0018	<0.0005	<0.0005	0.396	0.020	0.208	0.188	0.004	0.001
EPL 88	06 Mar 2024	0.19	<0.01	0.14	<0.01	0.3	0.705	<0.005	0.0185	0.0026	0.0022	<0.0005	1.70	<0.002	0.251	0.260	0.021	0.004
EPL 88	13 Mar 2024	0.09	<0.01	0.12	<0.01	0.3	0.666	<0.005	0.0266	0.0079	0.0012	<0.0005	1.92	0.012	0.224	0.219	0.013	0.002
EPL 88	15 Mar 2024	0.09	<0.01	0.20	<0.01	0.3	0.062	<0.005	0.0092	0.0021	<0.0005	<0.0005	0.275	0.004	0.214	0.224	0.004	0.002
EPL 88	19 Mar 2024	0.12	<0.01	0.26	<0.01	0.4	0.693	<0.005	0.0268	0.0084	0.0033	<0.0005	1.93	0.185	0.220	0.214	0.015	0.001
EPL88	22 Mar 2024	0.06	<0.01	0.14	<0.01	0.3	0.039	<0.005	0.0118	0.0022	<0.0005	<0.0005	0.340	0.004	0.209	0.191	0.004	0.001

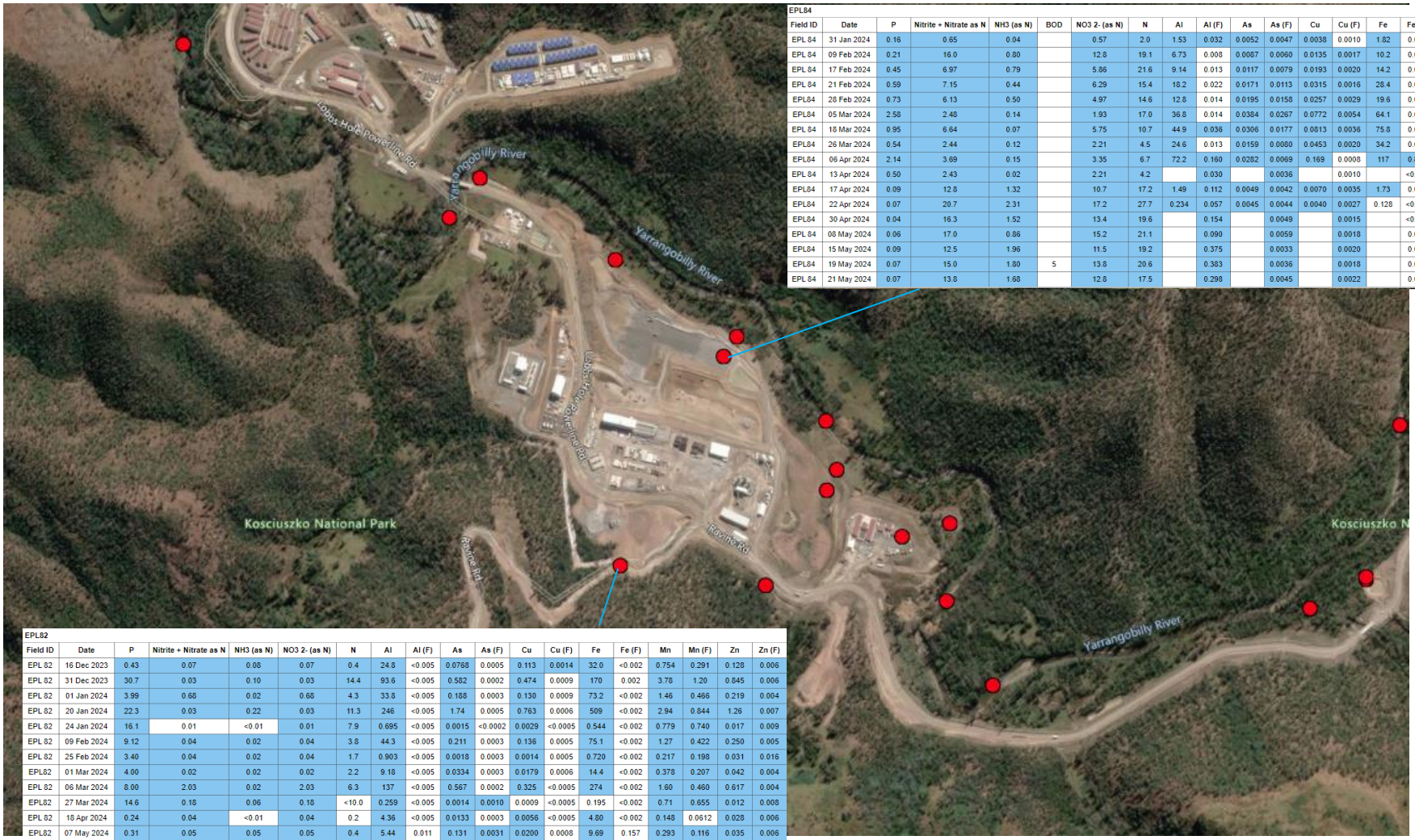
EPL83

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Al	Al (F)	As	As (F)	Cr	Cr (F)	Cr 3+	Cu	Cu (F)	Fe	Fe (F)	Pb	Pb (F)	Mn	Mn (F)	Ni	Ni (F)	Ag	Ag (F)	Zn
EPL 83	05 Dec 2023	0.53	4.14	0.06	4.13	5.9	49.4	<0.005	0.109	0.0043	0.168	0.0043		0.338	0.0048	80.5	<0.002	0.0450	<0.0001	1.92	0.0030	0.214	0.0026	0.00032	<0.00001	0.268
EPL 83	09 Dec 2023	0.15	5.81	0.03	5.44	7.0	1.80	<0.005	0.0062	0.0047	0.0060	0.0020		0.0497	0.0130	1.48	<0.002	0.0015	<0.0001	0.0608	0.0316	0.0111	0.0055	<0.00001	<0.00001	0.014
EPL 83	12 Dec 2023	0.35	3.81	0.06	3.74	5.2	9.85	<0.005	0.0235	0.0038	0.0309	0.0010		0.276	0.0137	15.2	<0.002	0.0093	<0.0001	0.392	0.0564	0.0442	0.0049	0.00006	<0.00001	0.076
EPL 83	16 Dec 2023	2.62	1.42	0.05	1.20	5.5	108	<0.005	0.204	0.0342	0.383	<0.0002		0.684	0.0045	172	<0.002	0.104	<0.0001	4.23	0.130	0.414	0.0050	0.00075	<0.00001	0.597
EPL 83	19 Dec 2023	0.26	1.92	0.04	1.57	2.9	9.42	0.005	0.0354	0.0076	0.0291	<0.0002		0.0398	0.0023	16.2	<0.002	0.0085	<0.0001	0.420	0.0902	0.0498	0.0062	0.00004	<0.00001	0.062
EPL 83	23 Dec 2023	0.29	0.50	0.03	0.40	1.0	10.6	0.007	0.0391	0.0063	0.0318	<0.0002		0.0396	0.0022	15.7	<0.002	0.0093	<0.0001	0.448	0.109	0.0503	0.0055	0.00007	<0.00001	0.072
EPL 83	26 Dec 2023	0.02	2.94	<0.01	2.94	3.3	1.31	0.010	0.0107	0.0042	0.0038	<0.0002		0.0092	0.0020	1.78	<0.002	0.0010	<0.0001	0.0796	0.0358	0.0210	0.0093	<0.00001	<0.00001	0.013
EPL 83	30 Dec 2023	<0.01	1.56	<0.01	1.56	1.9	1.08	0.013	0.0101	0.0052	0.0042	<0.0002		0.0067	0.0016	2.18	<0.002	0.0008	<0.0001	0.0695	0.0282	0.0210	0.0110	<0.00001	<0.00001	0.009
EPL 83	01 Jan 2024	0.05	1.70	0.05	1.70	2.2	2.06	0.012	0.0383	0.0198	0.0056	0.0004		0.0215	0.0053	1.55	<0.002	0.0019	<0.0001	2.82	2.72	0.0850	0.0457	<0.00001	<0.00001	0.065
EPL 83	05 Jan 2024	0.12	1.28	0.04	1.28	1.7	4.08	0.011	0.0280	0.0134	0.0109	<0.0002		0.0182	0.0018	6.01	<0.002	0.0033	<0.0001	1.42	1.34	0.0639	0.0383	0.00005	<0.00001	0.033
EPL 83	09 Jan 2024	0.26	4.50	0.02	4.49	5.5	7.77	<0.005	0.0352	0.0061	0.0242	<0.0002		0.158	0.0176	11.6	0.002	0.0121	<0.0001	0.858	0.660	0.0650	0.0291	0.00009	<0.00001	0.159
EPL 83	13 Jan 2024	4.22	5.90	0.10	5.85	10.0	21.0	<0.005	0.0452	0.0026	0.0647	0.0006		0.114	0.0057	32.8	0.002	0.0188	<0.0001	1.23	0.554	0.108	0.0236	0.00013	<0.00001	0.126
EPL 83	19 Jan 2024	1.40	4.47	0.02	4.45	6.6	53.8	<0.005	0.0963	0.0047	0.146	0.0033		0.174	0.0017	92.1	0.002	0.0513	<0.0001	1.95	0.0309	0.191	0.0016	0.00035	<0.00001	0.284
EPL 83	24 Jan 2024	0.25	2.53	<0.01	2.53	3.1	1.15	<0.005	0.0126	0.0089	0.0037	0.0003		0.0052	0.0010	1.49	<0.002	0.0012	<0.0001	0.190	0.134	0.0176	0.0084	<0.00001	<0.00001	0.028
EPL 83	02 Feb 2024	0.08	0.73	<0.01	0.73	0.9	0.889	0.008	0.0068	0.0037	0.0026	<0.0002		0.0053	0.0010	1.19	0.003	0.0009	<0.0001	0.167	0.141	0.0244	0.0150	<0.00001	<0.00001	0.019
EPL 83	09 Feb 2024	0.47	<0.01	<0.01	<0.01	0.4	14.6	0.012	0.0734	0.0050	0.0377	<0.0002		0.0370	0.0006	24.3	<0.002	0.0139	<0.0001	0.734	0.170	0.0609	0.0072	0.00008	<0.00001	0.081
EPL 83	17 Feb 2024	0.12	0.09	0.06	0.09	0.6	0.066	0.017	0.0222	0.0090	0.0002	<0.0002		0.0012	0.0006	0.203	0.057	<0.0001	<0.0001	0.0943	0.0792	0.0098	0.0059	<0.00001	<0.00001	0.005
EPL 83	23 Feb 2024	0.09	0.58	0.05	0.58	0.9	0.088	0.016	0.0157	0.0041	<0.0002	<0.0002		0.0017	0.0008	0.218	0.030	<0.0001	<0.0001	0.136	0.116	0.0118	0.0066	<0.00001	<0.00001	0.006



EPL83

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Al	Al (F)	As	As (F)	Cu	Cu (F)	Fe	Fe (F)	Mn	Mn (F)	Zn	Zn (F)
EPL 83	05 Dec 2023	0.53	4.14	0.06	4.13	5.9	49.4	<0.005	0.109	0.0043	0.338	0.0048	80.5	<0.002	1.92	0.0030	0.268	<0.001
EPL 83	09 Dec 2023	0.15	5.81	0.03	5.44	7.0	1.80	<0.005	0.0062	0.0047	0.0497	0.0130	1.48	<0.002	0.0608	0.0316	0.014	0.004
EPL 83	12 Dec 2023	0.35	3.81	0.06	3.74	5.2	9.85	<0.005	0.0235	0.0038	0.276	0.0137	15.2	<0.002	0.392	0.0564	0.076	0.009
EPL 83	16 Dec 2023	2.62	1.42	0.05	1.20	5.5	108	<0.005	0.204	0.0342	0.684	0.0045	172	<0.002	4.23	0.130	0.597	<0.001
EPL 83	19 Dec 2023	0.26	1.92	0.04	1.57	2.9	9.42	0.005	0.0354	0.0076	0.0398	0.0023	16.2	<0.002	0.420	0.0902	0.062	0.004
EPL 83	23 Dec 2023	0.29	0.50	0.03	0.40	1.0	10.6	0.007	0.0391	0.0063	0.0396	0.0022	15.7	<0.002	0.448	0.109	0.072	0.005
EPL 83	26 Dec 2023	0.02	2.94	<0.01	2.94	3.3	1.31	0.010	0.0107	0.0042	0.0092	0.0020	1.78	<0.002	0.0796	0.0358	0.013	0.003
EPL 83	30 Dec 2023	<0.01	1.56	<0.01	1.56	1.9	1.08	0.013	0.0101	0.0052	0.0067	0.0016	2.18	<0.002	0.0695	0.0282	0.009	0.002
EPL 83	01 Jan 2024	0.05	1.70	0.05	1.70	2.2	2.06	0.012	0.0383	0.0198	0.0215	0.0053	1.55	<0.002	2.82	2.72	0.065	0.015
EPL 83	05 Jan 2024	0.12	1.28	0.04	1.28	1.7	4.08	0.011	0.0280	0.0134	0.0182	0.0018	6.01	<0.002	1.42	1.34	0.033	0.010
EPL 83	09 Jan 2024	0.26	4.50	0.02	4.49	5.5	7.77	<0.005	0.0352	0.0061	0.158	0.0176	11.6	0.002	0.858	0.660	0.159	0.066
EPL 83	13 Jan 2024	4.22	5.90	0.10	5.85	10.0	21.0	<0.005	0.0452	0.0026	0.114	0.0057	32.8	0.002	1.23	0.554	0.126	0.014
EPL 83	19 Jan 2024	1.40	4.47	0.02	4.45	6.6	53.8	<0.005	0.0963	0.0047	0.174	0.0017	92.1	0.002	1.95	0.0309	0.284	<0.001
EPL 83	24 Jan 2024	0.25	2.53	<0.01	2.53	3.1	1.15	<0.005	0.0126	0.0089	0.0052	0.0010	1.49	<0.002	0.190	0.134	0.028	0.009
EPL 83	02 Feb 2024	0.08	0.73	<0.01	0.73	0.9	0.889	0.008	0.0068	0.0037	0.0053	0.0010	1.19	0.003	0.167	0.141	0.019	0.008
EPL 83	09 Feb 2024	0.47	<0.01	<0.01	<0.01	0.4	14.6	0.012	0.0734	0.0050	0.0370	0.0006	24.3	<0.002	0.734	0.170	0.081	0.004
EPL 83	17 Feb 2024	0.12	0.09	0.06	0.09	0.6	0.066	0.017	0.0222	0.0090	0.0012	0.0006	0.203	0.057	0.0943	0.0792	0.005	0.001
EPL 83	23 Feb 2024	0.09	0.58	0.05	0.58	0.9	0.088	0.016	0.0157	0.0041	0.0017	0.0008	0.218	0.030	0.136	0.116	0.006	0.002
EPL 83	09 Jan 2024	0.26	4.50	0.02	4.49	5.5	7.77	<0.005	0.0352	0.0061	0.158	0.0176	11.6	0.002	0.858	0.660	0.159	0.066
EPL 83	13 Jan 2024	4.22	5.90	0.10	5.85	10.0	21.0	<0.005	0.0452	0.0026	0.114	0.0057	32.8	0.002	1.23	0.554	0.126	0.014
EPL 83	19 Jan 2024	1.40	4.47	0.02	4.45	6.6	53.8	<0.005	0.0963	0.0047	0.174	0.0017	92.1	0.002	1.95	0.0309	0.284	<0.001
EPL 83	24 Jan 2024	0.25	2.53	<0.01	2.53	3.1	1.15	<0.005	0.0126	0.0089	0.0052	0.0010	1.49	<0.002	0.190	0.134	0.028	0.009
EPL 83	02 Feb 2024	0.08	0.73	<0.01	0.73	0.9	0.889	0.008	0.0068	0.0037	0.0053	0.0010	1.19	0.003	0.167	0.141	0.019	0.008
EPL 83	09 Feb 2024	0.47	<0.01	<0.01	<0.01	0.4	14.6	0.012	0.0734	0.0050	0.0370	0.0006	24.3	<0.002	0.734	0.170	0.081	0.004
EPL 83	17 Feb 2024	0.12	0.09	0.06	0.09	0.6	0.066	0.017	0.0222	0.0090	0.0012	0.0006	0.203	0.057	0.0943	0.0792	0.005	0.001
EPL 83	23 Feb 2024	0.09	0.58	0.05	0.58	0.9	0.088	0.016	0.0157	0.0041	0.0017	0.0008	0.218	0.030	0.136	0.116	0.006	0.002
EPL83	01 Mar 2024	0.08	5.35	0.01	5.35	5.8	0.480	0.018	0.0253	0.0031	0.0030	0.0009	0.903	<0.002	0.144	0.114	0.009	0.003
EPL 83	06 Mar 2024	1.51	0.05	0.03	0.05	1.6	29.7	0.006	0.168	0.0056	0.136	0.0012	45.7	<0.002	1.12	0.162	0.164	0.004
EPL 83	12 Mar 2024	0.53	<0.01	0.07	<0.01	0.8	12.6	0.005	0.149	0.0396	0.0493	0.0012	19.9	0.008	0.499	0.186	0.077	0.003
EPL83	20 Mar 2024	0.29	0.29	0.03	0.29	0.9	7.09	0.020	0.0683	0.0035	0.0284	0.0013	12.3	<0.002	0.410	0.180	0.050	0.004
EPL83	27 Mar 2024	0.26	0.36	0.01	0.36	0.8	0.273	0.018	0.0040	0.0030	0.0027	0.0012	0.212	<0.002	0.231	0.208	0.012	0.007
EPL 83	02 Apr 2024	0.19	<0.01	0.06	<0.01	0.3	3.01	0.015	0.0889	0.0260	0.0104	0.0011	4.46	0.278	0.26	0.158	0.025	0.006
EPL83	09 Apr 2024	0.26	8.29	0.05	8.00	9.0	3.63	<0.005	0.0117	0.0034	0.0108	0.0016	4.96	<0.002	0.14	0.0250	0.039	0.004
EPL 83	18 Apr 2024	0.37	6.47	0.03	6.47	7.9	5.87	<0.005	0.0219	0.0051	0.0190	0.0019	7.89	<0.002	0.242	0.0623	0.046	0.003
EPL83	22 Apr 2024	0.04	5.65	<0.01	5.65	6.6	0.150	0.015	0.0037	0.0031	0.0035	0.0013	0.136	0.003	0.0358	0.0324	0.020	0.017
EPL 83	29 Apr 2024	0.06	0.96	0.04	0.96	1.3		<0.005		0.0023		0.0015		<0.002		0.0146		<0.001
EPL 83	14 May 2024	0.11	1.50	<0.01	1.50	1.9		0.018		0.0018		0.0007		0.038		0.0902		0.006
EPL83	22 May 2024	0.02	1.43	<0.01	1.43	1.6	0.282	<0.005	0.0091	0.0062	0.0026	0.0010	0.522	0.016	0.0958	0.0724	0.008	0.005



EPL84

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	N	Al	Al (F)	As	As (F)	Cu	Cu (F)	Fe	Fe (F)	Mn	Mn (F)	Zn	Zn (F)
EPL 84	31 Jan 2024	0.16	0.65	0.04		0.57	2.0	1.53	0.032	0.0052	0.0047	0.0038	0.0010	1.82	0.004	0.0752	0.0030	0.010	<0.001
EPL 84	09 Feb 2024	0.21	16.0	0.80		12.8	19.1	6.73	0.008	0.0087	0.0060	0.0135	0.0017	10.2	0.003	0.232	0.0020	0.054	<0.001
EPL 84	17 Feb 2024	0.45	6.97	0.79		5.86	21.6	9.14	0.013	0.0117	0.0079	0.0193	0.0020	14.2	0.004	0.309	<0.0005	0.067	<0.001
EPL 84	21 Feb 2024	0.59	7.15	0.44		6.29	15.4	18.2	0.022	0.0171	0.0113	0.0315	0.0016	28.4	0.013	0.614	<0.0005	0.126	<0.001
EPL84	28 Feb 2024	0.73	6.13	0.50		4.97	14.6	12.8	0.014	0.0195	0.0158	0.0257	0.0029	19.6	0.003	0.520	0.0008	0.094	<0.001
EPL84	05 Mar 2024	2.58	2.48	0.14		1.93	17.0	36.8	0.014	0.0384	0.0267	0.0772	0.0054	64.1	0.007	1.60	0.0128	0.348	<0.001
EPL 84	18 Mar 2024	0.95	6.64	0.07		5.75	10.7	44.9	0.036	0.0306	0.0177	0.0813	0.0036	75.8	0.002	1.78	0.0010	0.327	<0.001
EPL84	26 Mar 2024	0.54	2.44	0.12		2.21	4.5	24.6	0.013	0.0159	0.0080	0.0453	0.0020	34.2	0.003	0.839	0.0062	0.194	<0.001
EPL84	06 Apr 2024	2.14	3.69	0.15		3.35	6.7	72.2	0.160	0.0282	0.0069	0.169	0.0008	117	0.884	3.15	0.0016	0.649	<0.001
EPL 84	13 Apr 2024	0.50	2.43	0.02		2.21	4.2		0.030		0.0036		0.0010		<0.002		<0.0005		<0.001
EPL84	17 Apr 2024	0.09	12.8	1.32		10.7	17.2	1.49	0.112	0.0049	0.0042	0.0070	0.0035	1.73	0.003	0.0620	0.0127	0.019	0.002
EPL84	22 Apr 2024	0.07	20.7	2.31		17.2	27.7	0.234	0.057	0.0045	0.0044	0.0040	0.0027	0.128	<0.002	0.0038	<0.0005	0.003	0.002
EPL84	30 Apr 2024	0.04	16.3	1.52		13.4	19.6		0.154		0.0049		0.0015		<0.002		0.0010		0.001
EPL 84	08 May 2024	0.06	17.0	0.86		15.2	21.1		0.090		0.0059		0.0018		0.003		0.0012		0.001
EPL84	15 May 2024	0.09	12.5	1.96		11.5	19.2		0.375		0.0033		0.0020		0.016		0.0040		0.004
EPL84	19 May 2024	0.07	15.0	1.80	5	13.8	20.6		0.383		0.0036		0.0018		0.028		0.0013		0.004
EPL 84	21 May 2024	0.07	13.8	1.68		12.8	17.5		0.298		0.0045		0.0022		0.016		0.0014		0.003

EPL82

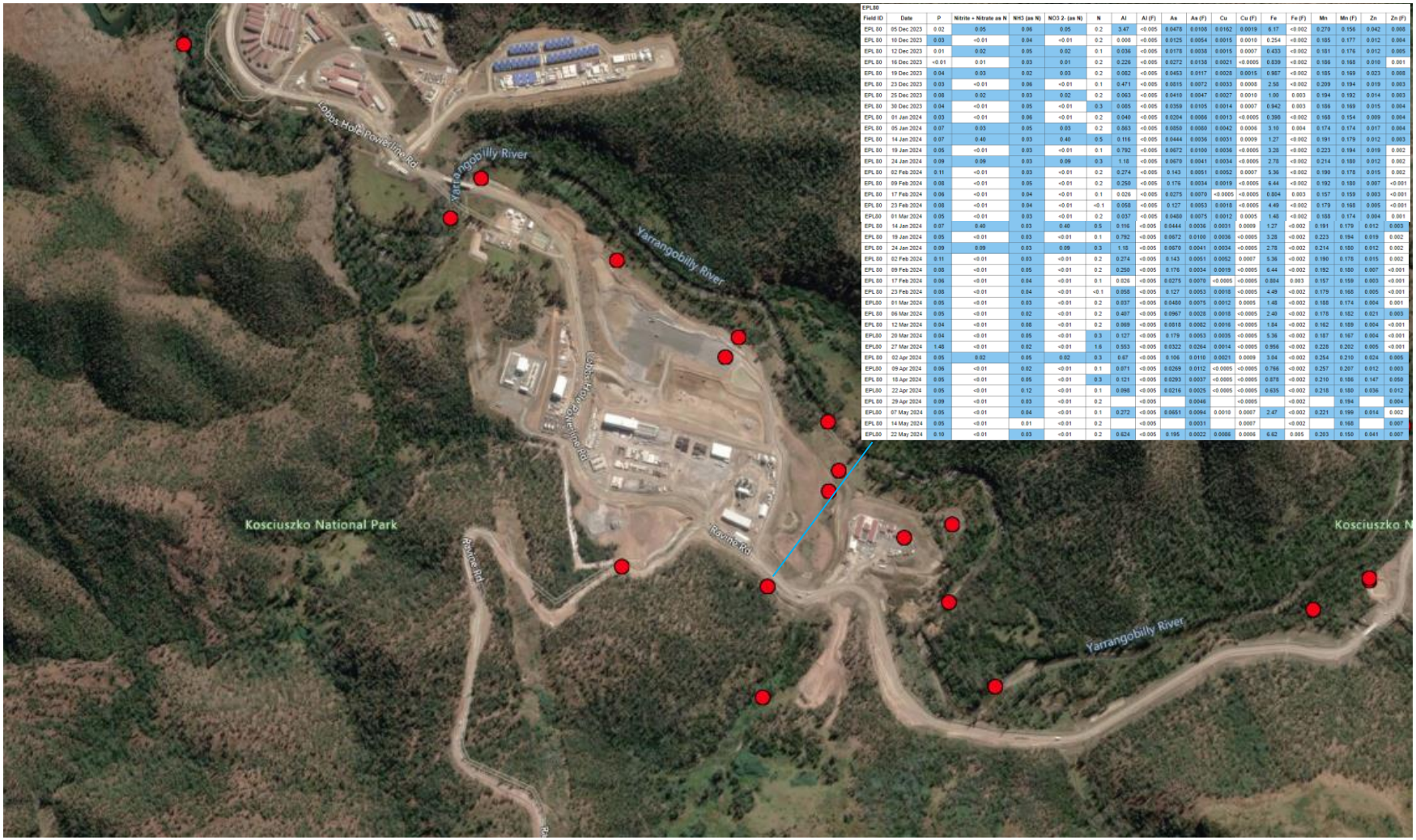
Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Al	Al (F)	As	As (F)	Cu	Cu (F)	Fe	Fe (F)	Mn	Mn (F)	Zn	Zn (F)
EPL 82	16 Dec 2023	0.43	0.07	0.08	0.07	0.4	24.8	<0.005	0.0768	0.0005	0.113	0.0014	32.0	<0.002	0.754	0.291	0.128	0.006
EPL 82	31 Dec 2023	30.7	0.03	0.10	0.03	14.4	93.6	<0.005	0.582	0.0002	0.474	0.0009	170	0.002	3.78	1.20	0.845	0.006
EPL 82	01 Jan 2024	3.99	0.68	0.02	0.68	4.3	33.8	<0.005	0.188	0.0003	0.130	0.0009	73.2	<0.002	1.46	0.466	0.219	0.004
EPL 82	20 Jan 2024	22.3	0.03	0.22	0.03	11.3	246	<0.005	1.74	0.0005	0.763	0.0006	509	<0.002	2.94	0.844	1.26	0.007
EPL 82	24 Jan 2024	16.1	0.01	<0.01	0.01	7.9	0.695	<0.005	0.0015	<0.0002	0.0029	<0.0005	0.544	<0.002	0.779	0.740	0.017	0.009
EPL 82	09 Feb 2024	9.12	0.04	0.02	0.04	3.8	44.3	<0.005	0.211	0.0003	0.136	0.0005	75.1	<0.002	1.27	0.422	0.250	0.005
EPL 82	25 Feb 2024	3.40	0.04	0.02	0.04	1.7	0.903	<0.005	0.0018	0.0003	0.0014	0.0005	0.720	<0.002	0.217	0.198	0.031	0.016
EPL82	01 Mar 2024	4.00	0.02	0.02	0.02	2.2	9.18	<0.005	0.0334	0.0003	0.0179	0.0006	14.4	<0.002	0.378	0.207	0.042	0.004
EPL 82	06 Mar 2024	8.00	2.03	0.02	2.03	6.3	137	<0.005	0.567	0.0002	0.325	<0.0005	274	<0.002	1.60	0.460	0.617	0.004
EPL82	27 Mar 2024	14.6	0.18	0.06	0.18	<10.0	0.259	<0.005	0.0014	0.0010	0.0009	<0.0005	0.195	<0.002	0.71	0.655	0.012	0.008
EPL 82	18 Apr 2024	0.24	0.04	<0.01	0.04	0.2	4.36	<0.005	0.0133	0.0003	0.0056	<0.0005	4.80	<0.002	0.148	0.0612	0.028	0.006
EPL82	07 May 2024	0.31	0.05	0.05	0.05	0.4	5.44	0.011	0.131	0.0031	0.0200	0.0008	9.69	0.157	0.293	0.116	0.035	0.006
EPL82	08 May 2024	<0.10	<0.01	0.10	<0.01	<1.0	3.29	<0.005	0.0769	0.0095	0.0032	<0.0005	12.1	0.004	0.353	0.261	0.060	0.014
EPL 82	14 May 2024	0.03	<0.01	0.05	<0.01	0.3		<0.005		0.0036		<0.0005		<0.002		0.244		0.011
EPL82	22 May 2024	0.05	26.6	0.05	26.6	27.4	1.31	<0.005	0.0327	0.0090	0.0008	<0.0005	2.55	<0.002	0.270	0.235	0.018	0.004

EPL81

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	N	Al	Al (F)	As	As (F)	Cu	Cu (F)	Fe	Fe (F)	Mn	Mn (F)	Zn	Zn (F)
EPL 81	05 Dec 2023	0.36	0.04	0.02		0.04	0.4	6.26	<0.005	0.179	0.0065	0.0140	<0.0005	14.1	0.006	0.218	0.161	0.058	0.004
EPL 81	10 Dec 2023	0.39	<0.01	0.05		<0.01	0.4	1.18	<0.005	0.0599	0.0080	0.0021	<0.0005	3.15	<0.002	0.195	0.184	0.009	<0.001
EPL 81	12 Dec 2023	0.54	0.06	0.02		0.06	0.5	2.43	<0.005	0.138	0.0046	0.0074	<0.0005	8.02	<0.002	0.235	0.210	0.039	0.006
EPL 81	16 Dec 2023	0.22	<0.01	0.05		<0.01	0.2	5.36	<0.005	0.172	0.0474	0.0136	<0.0005	12.9	0.004	0.258	0.185	0.064	0.001
EPL 81	19 Dec 2023	0.26	0.12	0.06		0.12	1.4	2.71	<0.005	0.140	0.0235	0.0075	<0.0005	9.74	<0.002	0.221	0.177	0.035	0.002
EPL 81	23 Dec 2023	0.19	0.07	0.06		0.07	0.7	9.71	<0.005	0.213	0.0042	0.0302	<0.0005	20.5	<0.002	0.288	0.199	0.105	0.001
EPL 81	25 Dec 2023	0.23	<0.01	0.02		<0.01	0.2	6.48	<0.005	0.213	0.0039	0.0186	<0.0005	16.9	0.004	0.249	0.192	0.065	<0.001
EPL 81	30 Dec 2023				<2			4.84	<0.005	0.0948	0.0027	0.0187	0.0011	12.9	0.002	0.248	0.0750	0.090	0.006
EPL 81	01 Jan 2024	2.28	<0.01	0.09		<0.01	7.4	108	<0.005	0.980	0.0028	0.622	<0.0005	278	0.002	1.30	0.122	1.44	<0.001
EPL 81	05 Jan 2024	9.34	5.50	0.38		5.48	22.6	205	<0.005	1.18	0.0045	0.730	0.0006	355	0.002	1.59	0.0829	1.82	<0.001
EPL 81	09 Jan 2024	0.93	0.02	0.09		0.02	3.4	26.8	<0.005	0.173	0.0054	0.0940	<0.0005	42.7	<0.002	0.507	0.226	0.288	0.001
EPL 81	14 Jan 2024	0.60	<0.01	0.04		<0.01	<0.5	2.92	<0.005	0.0768	0.0108	0.0110	<0.0005	9.56	0.014	0.333	0.302	0.029	0.002
EPL 81	19 Jan 2024	4.10	<0.01	0.27		<0.01	6.5	103	<0.005	0.840	0.0046	0.438	<0.0005	232	<0.002	1.11	0.194	0.873	<0.001
EPL 81	24 Jan 2024	13.1	<0.01	0.12		<0.01	26.8	38.5	<0.005	0.349	0.0049	0.168	<0.0005	76.1	<0.002	0.620	0.193	0.347	<0.001
EPL 81	02 Feb 2024	0.50	<0.01	0.05		<0.01	0.7	11.8	<0.005	0.174	0.0056	0.0329	<0.0005	23.9	<0.002	0.350	0.242	0.094	<0.001
EPL 81	09 Feb 2024	3.71	<0.01	0.10		<0.01	7.9	71.6	<0.005	0.445	0.0027	0.314	<0.0005	125	0.004	0.842	0.168	0.839	<0.001
EPL 81	17 Feb 2024	0.15	<0.01	0.06		<0.01	0.8	0.242	<0.005	0.0144	0.0035	0.0007	<0.0005	0.862	<0.002	0.222	0.220	0.007	<0.001
EPL 81	23 Feb 2024	0.59	<0.01	0.06		<0.01	1.0	3.22	<0.005	0.0309	0.0047	0.0067	0.0006	4.62	<0.002	0.216	0.196	0.020	<0.001
EPL 81	14 Jan 2024	0.60	<0.01	0.04		<0.01	<0.5	2.92	<0.005	0.0768	0.0108	0.0110	<0.0005	9.56	0.014	0.333	0.302	0.029	0.002
EPL 81	19 Jan 2024	4.10	<0.01	0.27		<0.01	6.5	103	<0.005	0.840	0.0046	0.438	<0.0005	232	<0.002	1.11	0.194	0.873	<0.001
EPL 81	24 Jan 2024	13.1	<0.01	0.12		<0.01	26.8	38.5	<0.005	0.349	0.0049	0.168	<0.0005	76.1	<0.002	0.620	0.193	0.347	<0.001
EPL 81	02 Feb 2024	0.50	<0.01	0.05		<0.01	0.7	11.8	<0.005	0.174	0.0056	0.0329	<0.0005	23.9	<0.002	0.350	0.242	0.094	<0.001
EPL 81	09 Feb 2024	3.71	<0.01	0.10		<0.01	7.9	71.6	<0.005	0.445	0.0027	0.314	<0.0005	125	0.004	0.842	0.168	0.839	<0.001
EPL 81	17 Feb 2024	0.15	<0.01	0.06		<0.01	0.8	0.242	<0.005	0.0144	0.0035	0.0007	<0.0005	0.862	<0.002	0.222	0.220	0.007	<0.001
EPL 81	23 Feb 2024	0.59	<0.01	0.06		<0.01	1.0	3.22	<0.005	0.0309	0.0047	0.0067	0.0006	4.62	<0.002	0.216	0.196	0.020	<0.001
EPL81	01 Mar 2024	0.57	<0.01	0.03		<0.01	0.5	3.97	<0.005	0.0914	0.0034	0.0302	0.0015	11.0	<0.002	0.273	0.230	0.031	0.001
EPL 81	06 Mar 2024	6.90	<0.01	<0.01		<0.01	9.3	214	<0.005	1.94	0.0034	0.928	<0.0005	491	<0.002	1.99	0.216	2.20	<0.001
EPL 81	12 Mar 2024	0.34	0.02	0.07		0.02	0.5	3.43	<0.005	0.0915	0.0283	0.0103	<0.0005	9.51	0.848	0.268	0.292	0.024	0.001
EPL81	20 Mar 2024	0.38	<0.01	0.05		<0.01	0.6	7.81	<0.005	0.171	0.0044	0.0330	0.0005	21.4	<0.002	0.319	0.243	0.073	0.001
EPL81	27 Mar 2024	0.11	<0.01	0.16		<0.01	0.3	0.182	<0.005	0.0035	0.0028	<0.0005	<0.0005	0.112	<0.002	0.242	0.238	0.01	0.005
EPL 81	02 Apr 2024	0.31	<0.01	0.03		<0.01	0.3	1.54	<0.005	0.0968	0.0426	0.0548	<0.0005	7.3	2.10	0.304	0.268	0.011	0.002
EPL81	09 Apr 2024	0.32	<0.01	0.03		<0.01	0.2	3.32	<0.005	0.1	0.0238	0.0085	<0.0005	9.26	0.004	0.264	0.203	0.024	0.001
EPL81	18 Apr 2024	0.88	<0.01	0.01		<0.01	1.6	16.9	<0.005	0.237	0.0014	0.0592	<0.0005	31.4	<0.002	0.265	0.121	0.147	0.002
EPL81	22 Apr 2024	0.80	<0.01	0.05		<0.01	4.4	14.3	<0.005	0.142	0.0022	0.0453	<0.0005	25.2	0.002	0.333	0.190	0.123	<0.001
EPL81	29 Apr 2024	0.58	0.01	0.05		0.01	1.0		<0.005		0.0086		<0.0005		<0.002		0.237		0.003
EPL81	07 May 2024	<0.20	<0.01	0.06		<0.01	<2.0	16.7	<0.005	0.157	0.0116	0.0512	<0.0005	29.8	<0.002	0.452	0.261	0.149	0.005
EPL81	14 May 2024	0.21	<0.01	0.04		<0.01	0.2		<0.005		0.0136		<0.0005		0.002		0.231		0.001
EPL81	22 May 2024	0.31	<0.01	0.06		<0.01	0.3	2.69	<0.005	0.0978	0.0018	0.0183	0.0011	9.13	<0.002	0.322	0.269	0.026	0.003

EPL85

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Al	Al (F)	As	As (F)	Cu	Cu (F)	Fe	Fe (F)	Mn	Mn (F)	Zn
EPL 85	31 Jan 2024	0.04	3.19	0.06	3.10	3.9	0.770	0.034	0.0006	0.0003	0.0064	0.0018	1.39	0.103	0.655	0.673	0.048
EPL 85	09 Feb 2024	0.04	5.41	0.16	5.17	7.0	0.198	0.059	0.0023	0.0020	0.0066	0.0024	0.195	<0.002	0.111	0.0495	0.028
EPL 85	17 Feb 2024	0.05	5.39	0.02	5.14	6.6	0.354	0.036	0.0033	0.0028	0.0015	0.0006	0.351	<0.002	0.0145	<0.0005	0.004
EPL 85	21 Feb 2024	0.06	6.43	0.02	6.10	7.6	1.06	0.011	0.0048	0.0042	0.0015	0.0008	1.30	<0.002	0.0355	0.0005	0.005
EPL85	28 Feb 2024	0.32	3.98	0.02	3.70	7.0	5.39	0.019	0.0063	0.0042	0.0116	0.0015	8.28	<0.002	0.227	0.0227	0.035
EPL85	05 Mar 2024	0.60	0.49	0.04	0.49	5.1	3.64	0.019	0.0077	0.0062	0.0086	0.0017	5.94	<0.002	0.156	0.0223	0.029
EPL 85	12 Mar 2024	0.78	<0.01	<0.01	<0.01	4.3	19.0	0.012	0.0177	0.0098	0.0387	0.0018	30.1	<0.002	0.697	0.0468	0.141
EPL 85	18 Mar 2024	0.20	5.58	0.02	5.20	8.3	3.00	0.028	0.0106	0.0101	0.0056	0.0016	4.68	<0.002	0.119	<0.0005	0.018
EPL85	26 Mar 2024						6.68		0.0098		0.0108		8.49		0.224		0.045
EPL85	06 Apr 2024	1.39	7.10	0.38	6.75	10.4	46.4	0.046	0.0213	0.0063	0.0945	0.0011	72.2	0.003	2.06	0.0019	0.402
EPL 85	13 Apr 2024	0.24	7.73	0.87	7.32	10.9		0.013		0.0049		0.0008		<0.002		<0.0005	
EPL85	17 Apr 2024	0.10	7.87	0.56	7.36	10.0	5.43	0.020	0.0087	0.0065	0.0082	0.0008	6.88	<0.002	0.166	<0.0005	0.034
EPL85	22 Apr 2024	0.13	7.61	0.17	7.07	9.6	3.64	0.015	0.0077	0.0066	0.0058	0.0008	4.29	<0.002	0.116	<0.0005	0.022
EPL85	30 Apr 2024	0.06	7.45	0.01	6.91	8.4		0.024		0.0069		0.0008		<0.002		<0.0005	
EPL 85	08 May 2024	0.67	8.05	0.04	7.59	11.6		0.015		0.0090		0.0017		0.002		<0.0005	
EPL85	15 May 2024	0.89	6.47	0.03	6.26	12.0		0.010		0.0083		0.0018		<0.002		<0.0005	
EPL 85	21 May 2024	1.83	5.67	0.22	5.53	12.2		0.017		0.0082		0.0020		0.005		0.0047	



EPL80

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	N	Al	Al (F)	As	As (F)	Cu	Cu (F)	Fe	Fe (F)	Mn	Mn (F)	Zn	Zn (F)
EPL 80	05 Dec 2023	0.02	0.05	0.06	0.05	0.2	3.47	<0.005	0.0478	0.0108	0.0162	0.0019	6.17	<0.002	0.270	0.156	0.042	0.008
EPL 80	10 Dec 2023	0.03	<0.01	0.04	<0.01	0.2	0.008	<0.005	0.0125	0.0054	0.0015	0.0010	0.254	<0.002	0.185	0.177	0.012	0.004
EPL 80	12 Dec 2023	0.01	0.02	0.05	0.02	0.1	0.036	<0.005	0.0178	0.0038	0.0015	0.0007	0.433	<0.002	0.181	0.176	0.012	0.005
EPL 80	16 Dec 2023	<0.01	0.01	0.03	0.01	0.2	0.226	<0.005	0.0272	0.0138	0.0021	<0.0005	0.839	<0.002	0.186	0.168	0.010	0.001
EPL 80	19 Dec 2023	0.04	0.03	0.02	0.03	0.2	0.062	<0.005	0.0453	0.0117	0.0028	0.0015	0.987	<0.002	0.185	0.169	0.023	0.008
EPL 80	23 Dec 2023	0.03	<0.01	0.06	<0.01	0.1	0.471	<0.005	0.0815	0.0072	0.0033	0.0008	2.58	<0.002	0.209	0.194	0.019	0.003
EPL 80	25 Dec 2023	0.08	0.02	0.03	0.02	0.2	0.063	<0.005	0.0410	0.0047	0.0027	0.0010	1.00	0.003	0.194	0.192	0.014	0.003
EPL 80	30 Dec 2023	0.04	<0.01	0.05	<0.01	0.3	0.085	<0.005	0.0359	0.0105	0.0014	0.0007	0.942	0.003	0.186	0.169	0.015	0.004
EPL 80	01 Jan 2024	0.03	<0.01	0.06	<0.01	0.2	0.040	<0.005	0.0204	0.0086	0.0013	<0.0005	0.398	<0.002	0.168	0.154	0.009	0.004
EPL 80	05 Jan 2024	0.07	0.03	0.05	0.03	0.2	0.563	<0.005	0.0850	0.0080	0.0042	0.0006	3.10	0.004	0.174	0.174	0.017	0.004
EPL 80	14 Jan 2024	0.07	0.40	0.03	0.40	0.5	0.116	<0.005	0.0444	0.0036	0.0031	0.0009	1.27	<0.002	0.191	0.179	0.012	0.003
EPL 80	19 Jan 2024	0.05	<0.01	0.03	<0.01	0.1	0.792	<0.005	0.0672	0.0100	0.0036	<0.0005	3.28	<0.002	0.223	0.194	0.019	0.002
EPL 80	24 Jan 2024	0.09	0.09	0.03	0.09	0.3	1.16	<0.005	0.0670	0.0041	0.0034	<0.0005	2.78	<0.002	0.214	0.180	0.012	0.002
EPL 80	02 Feb 2024	0.11	<0.01	0.03	<0.01	0.2	0.274	<0.005	0.143	0.0051	0.0052	0.0007	5.36	<0.002	0.190	0.178	0.015	0.002
EPL 80	09 Feb 2024	0.08	<0.01	0.05	<0.01	0.2	0.250	<0.005	0.176	0.0034	0.0019	<0.0005	6.44	<0.002	0.192	0.180	0.007	<0.001
EPL 80	17 Feb 2024	0.06	<0.01	0.04	<0.01	0.1	0.026	<0.005	0.0275	0.0070	<0.0005	<0.0005	0.804	0.003	0.157	0.159	0.003	<0.001
EPL 80	23 Feb 2024	0.08	<0.01	0.04	<0.01	<0.1	0.058	<0.005	0.127	0.0053	0.0015	<0.0005	4.49	<0.002	0.179	0.168	0.005	<0.001
EPL80	01 Mar 2024	0.05	<0.01	0.03	<0.01	0.2	0.037	<0.005	0.0480	0.0075	0.0012	0.0005	1.48	<0.002	0.185	0.174	0.004	0.001
EPL 80	06 Mar 2024	0.05	<0.01	0.02	<0.01	0.2	0.407	<0.005	0.0967	0.0028	0.0018	<0.0005	2.40	<0.002	0.178	0.182	0.021	0.003
EPL 80	12 Mar 2024	0.04	<0.01	0.08	<0.01	0.2	0.069	<0.005	0.0518	0.0062	0.0016	<0.0005	1.84	<0.002	0.162	0.159	0.004	<0.001
EPL80	20 Mar 2024	0.04	<0.01	0.05	<0.01	0.3	0.127	<0.005	0.179	0.0053	0.0035	<0.0005	5.36	<0.002	0.187	0.167	0.004	<0.001
EPL80	27 Mar 2024	1.48	<0.01	0.02	<0.01	1.6	0.553	<0.005	0.0322	0.0264	0.0014	<0.0005	0.956	<0.002	0.226	0.202	0.005	<0.001
EPL 80	02 Apr 2024	0.05	0.02	0.05	0.02	0.3	0.67	<0.005	0.106	0.0110	0.0021	0.0009	3.04	<0.002	0.254	0.210	0.024	0.005
EPL80	09 Apr 2024	0.06	<0.01	0.02	<0.01	0.1	0.071	<0.005	0.0269	0.0112	<0.0005	<0.0005	0.766	<0.002	0.257	0.207	0.012	0.003
EPL 80	16 Apr 2024	0.05	<0.01	0.05	<0.01	0.3	0.121	<0.005	0.0293	0.0037	<0.0005	<0.0005	0.878	<0.002	0.210	0.186	0.147	0.050
EPL80	22 Apr 2024	0.05	<0.01	0.12	<0.01	0.1	0.098	<0.005	0.0216	0.0025	<0.0005	<0.0005	0.635	<0.002	0.218	0.180	0.036	0.012
EPL 80	29 Apr 2024	0.09	<0.01	0.03	<0.01	0.2		<0.005		0.0046		<0.0005		<0.002		0.194		0.004
EPL80	07 May 2024	0.05	<0.01	0.04	<0.01	0.1	0.272	<0.005	0.0651	0.0094	0.0010	0.0007	2.47	<0.002	0.221	0.199	0.014	0.002
EPL 80	14 May 2024	0.05	<0.01	0.01	<0.01	0.2		<0.005		0.0031		0.0007		<0.002		0.168		0.007
EPL80	22 May 2024	0.10	<0.01	0.03	<0.01	0.2	0.624	<0.005	0.195	0.0022	0.0086	0.0008	6.62	0.005	0.203	0.150	0.041	0.007

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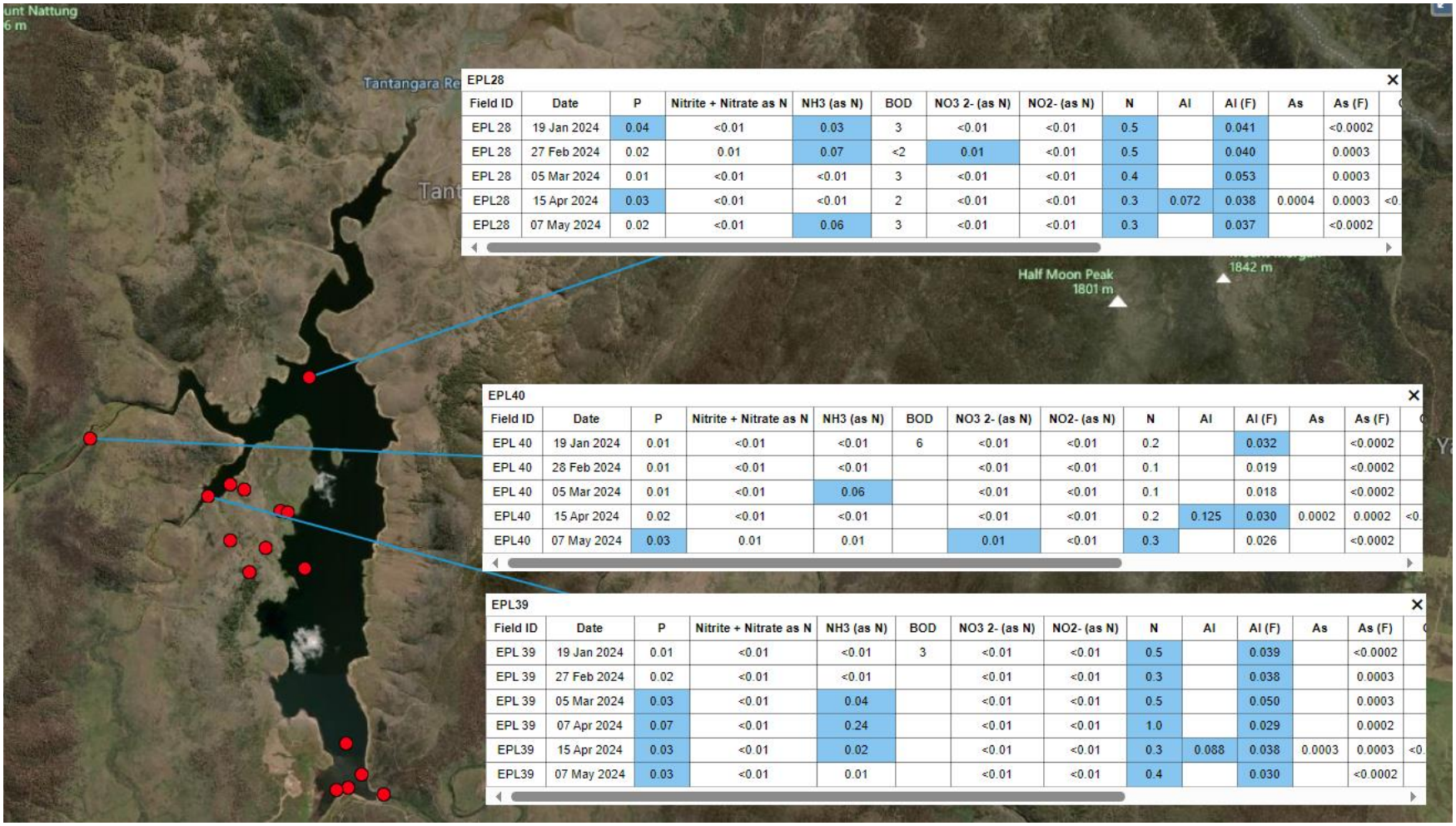
EPL27

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	NO2- (as N)	N	Al (F)	As (F)	Cu (F)	Fe (F)	Mn (F)
EPL 27	13 Feb 2024	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.005	<0.0002	<0.0005	0.022	0.0032
EPL 27	17 Mar 2024	0.02	<0.01	0.01	<0.01	<0.01	0.1	0.006	<0.0002	<0.0005	0.014	0.0011
EPL27	08 Apr 2024	0.04	0.01	<0.01	0.01	<0.01	<0.1	0.008	<0.0002	<0.0005	0.045	0.0034
EPL 27	13 May 2024	<0.01	<0.01	0.06	<0.01	<0.01	<0.1	<0.005	<0.0002	<0.0005	0.011	0.0009

EPL26

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	NO2- (as N)	N	Al (F)	As (F)	Cu (F)	Fe (F)	Mn (F)	Zn
EPL 26	13 Feb 2024	0.03	<0.01	0.05	<0.01	<0.01	<0.1	0.006	<0.0002	<0.0005	0.032	0.0096	0.
EPL 26	17 Mar 2024	0.01	<0.01	0.01	<0.01	<0.01	0.1	0.010	<0.0002	<0.0005	0.035	0.0047	<0
EPL26	08 Apr 2024	0.03	0.03	<0.01	0.03	<0.01	0.1	0.013	<0.0002	<0.0005	0.076	0.0081	<0
EPL 26	13 May 2024	0.03	<0.01	0.01	<0.01	<0.01	<0.1	<0.005	<0.0002	<0.0005	0.015	0.0029	<0

TANTANGARA



EPL28

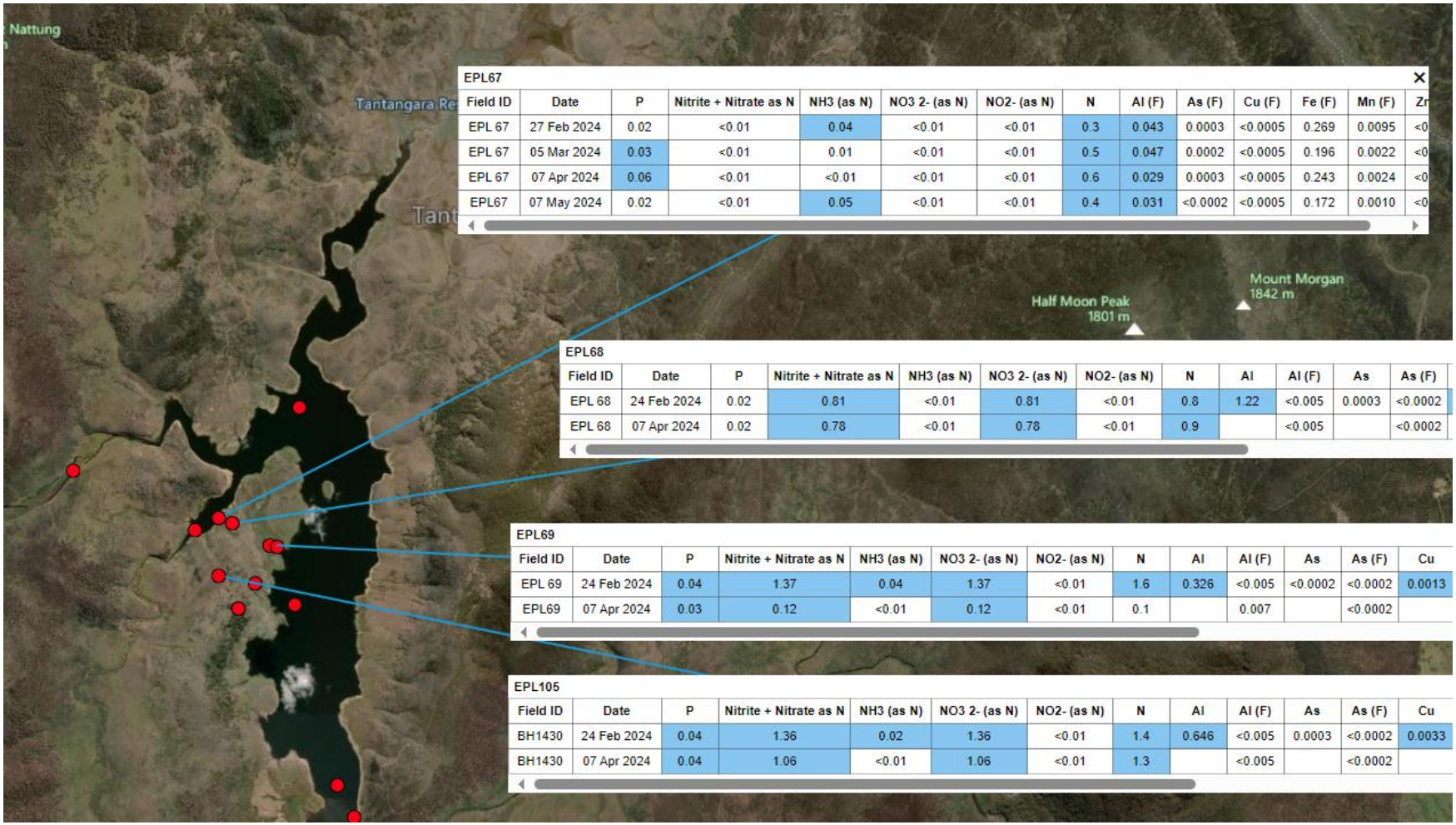
Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)	C
EPL 28	19 Jan 2024	0.04	<0.01	0.03	3	<0.01	<0.01	0.5		0.041		<0.0002	
EPL 28	27 Feb 2024	0.02	0.01	0.07	<2	0.01	<0.01	0.5		0.040		0.0003	
EPL 28	05 Mar 2024	0.01	<0.01	<0.01	3	<0.01	<0.01	0.4		0.053		0.0003	
EPL28	15 Apr 2024	0.03	<0.01	<0.01	2	<0.01	<0.01	0.3	0.072	0.038	0.0004	0.0003	<0.
EPL28	07 May 2024	0.02	<0.01	0.06	3	<0.01	<0.01	0.3		0.037		<0.0002	

EPL40

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)	C
EPL 40	19 Jan 2024	0.01	<0.01	<0.01	6	<0.01	<0.01	0.2		0.032		<0.0002	
EPL 40	28 Feb 2024	0.01	<0.01	<0.01		<0.01	<0.01	0.1		0.019		<0.0002	
EPL 40	05 Mar 2024	0.01	<0.01	0.06		<0.01	<0.01	0.1		0.018		<0.0002	
EPL40	15 Apr 2024	0.02	<0.01	<0.01		<0.01	<0.01	0.2	0.125	0.030	0.0002	0.0002	<0.
EPL40	07 May 2024	0.03	0.01	0.01		0.01	<0.01	0.3		0.026		<0.0002	

EPL39

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)	C
EPL 39	19 Jan 2024	0.01	<0.01	<0.01	3	<0.01	<0.01	0.5		0.039		<0.0002	
EPL 39	27 Feb 2024	0.02	<0.01	<0.01		<0.01	<0.01	0.3		0.038		0.0003	
EPL 39	05 Mar 2024	0.03	<0.01	0.04		<0.01	<0.01	0.5		0.050		0.0003	
EPL 39	07 Apr 2024	0.07	<0.01	0.24		<0.01	<0.01	1.0		0.029		0.0002	
EPL39	15 Apr 2024	0.03	<0.01	0.02		<0.01	<0.01	0.3	0.088	0.038	0.0003	0.0003	<0.
EPL39	07 May 2024	0.03	<0.01	0.01		<0.01	<0.01	0.4		0.030		<0.0002	



EPL67

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	NO2- (as N)	N	Al (F)	As (F)	Cu (F)	Fe (F)	Mn (F)	Zr
EPL 67	27 Feb 2024	0.02	<0.01	0.04	<0.01	<0.01	0.3	0.043	0.0003	<0.0005	0.269	0.0095	<0
EPL 67	05 Mar 2024	0.03	<0.01	0.01	<0.01	<0.01	0.5	0.047	0.0002	<0.0005	0.196	0.0022	<0
EPL 67	07 Apr 2024	0.06	<0.01	<0.01	<0.01	<0.01	0.6	0.029	0.0003	<0.0005	0.243	0.0024	<0
EPL67	07 May 2024	0.02	<0.01	0.05	<0.01	<0.01	0.4	0.031	<0.0002	<0.0005	0.172	0.0010	<0

EPL68

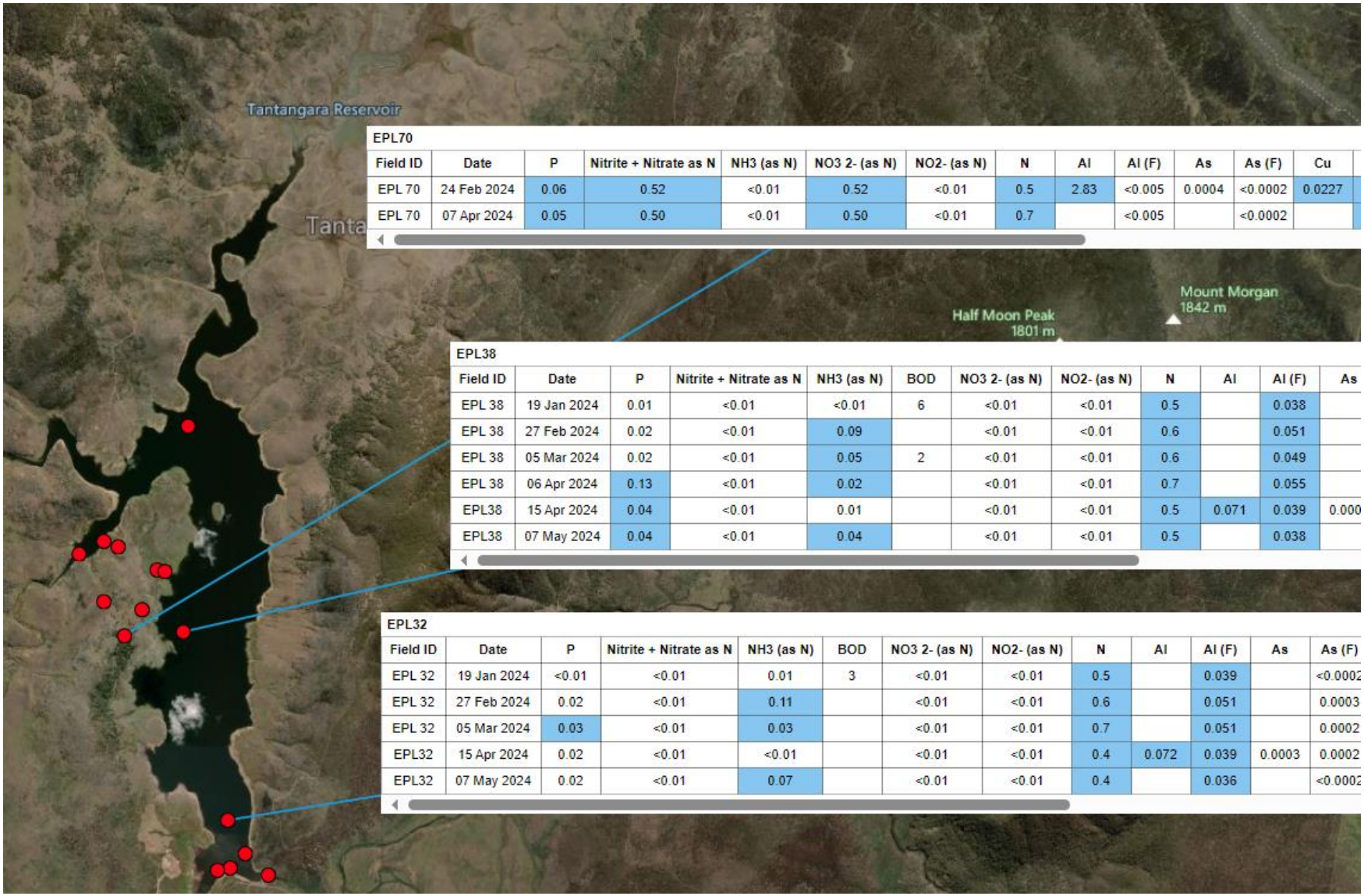
Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)
EPL 68	24 Feb 2024	0.02	0.81	<0.01	0.81	<0.01	0.8	1.22	<0.005	0.0003	<0.0002
EPL 68	07 Apr 2024	0.02	0.78	<0.01	0.78	<0.01	0.9		<0.005		<0.0002

EPL69

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)	Cu
EPL 69	24 Feb 2024	0.04	1.37	0.04	1.37	<0.01	1.6	0.326	<0.005	<0.0002	<0.0002	0.0013
EPL69	07 Apr 2024	0.03	0.12	<0.01	0.12	<0.01	0.1		0.007		<0.0002	

EPL105

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)	Cu
BH1430	24 Feb 2024	0.04	1.36	0.02	1.36	<0.01	1.4	0.646	<0.005	0.0003	<0.0002	0.0033
BH1430	07 Apr 2024	0.04	1.06	<0.01	1.06	<0.01	1.3		<0.005		<0.0002	



EPL70

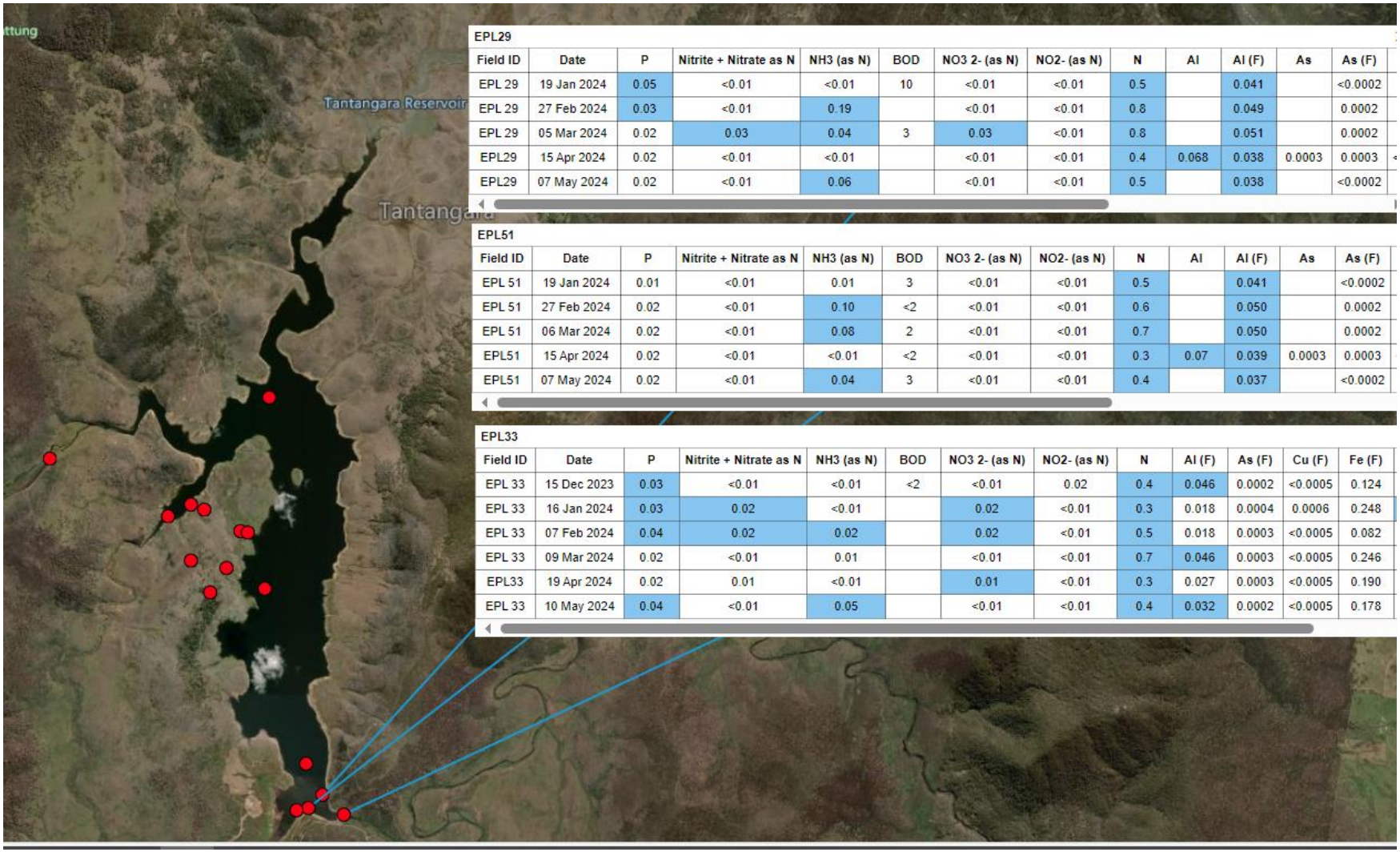
Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)	Cu
EPL 70	24 Feb 2024	0.06	0.52	<0.01	0.52	<0.01	0.5	2.83	<0.005	0.0004	<0.0002	0.0227
EPL 70	07 Apr 2024	0.05	0.50	<0.01	0.50	<0.01	0.7		<0.005		<0.0002	

EPL38

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As
EPL 38	19 Jan 2024	0.01	<0.01	<0.01	6	<0.01	<0.01	0.5		0.038	
EPL 38	27 Feb 2024	0.02	<0.01	0.09		<0.01	<0.01	0.6		0.051	
EPL 38	05 Mar 2024	0.02	<0.01	0.05	2	<0.01	<0.01	0.6		0.049	
EPL 38	06 Apr 2024	0.13	<0.01	0.02		<0.01	<0.01	0.7		0.055	
EPL38	15 Apr 2024	0.04	<0.01	0.01		<0.01	<0.01	0.5	0.071	0.039	0.000
EPL38	07 May 2024	0.04	<0.01	0.04		<0.01	<0.01	0.5		0.038	

EPL32

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)
EPL 32	19 Jan 2024	<0.01	<0.01	0.01	3	<0.01	<0.01	0.5		0.039		<0.0002
EPL 32	27 Feb 2024	0.02	<0.01	0.11		<0.01	<0.01	0.6		0.051		0.0003
EPL 32	05 Mar 2024	0.03	<0.01	0.03		<0.01	<0.01	0.7		0.051		0.0002
EPL32	15 Apr 2024	0.02	<0.01	<0.01		<0.01	<0.01	0.4	0.072	0.039	0.0003	0.0002
EPL32	07 May 2024	0.02	<0.01	0.07		<0.01	<0.01	0.4		0.036		<0.0002



EPL29

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)
EPL 29	19 Jan 2024	0.05	<0.01	<0.01	10	<0.01	<0.01	0.5		0.041		<0.0002
EPL 29	27 Feb 2024	0.03	<0.01	0.19		<0.01	<0.01	0.8		0.049		0.0002
EPL 29	05 Mar 2024	0.02	0.03	0.04	3	0.03	<0.01	0.8		0.051		0.0002
EPL29	15 Apr 2024	0.02	<0.01	<0.01		<0.01	<0.01	0.4	0.068	0.038	0.0003	0.0003
EPL29	07 May 2024	0.02	<0.01	0.06		<0.01	<0.01	0.5		0.038		<0.0002

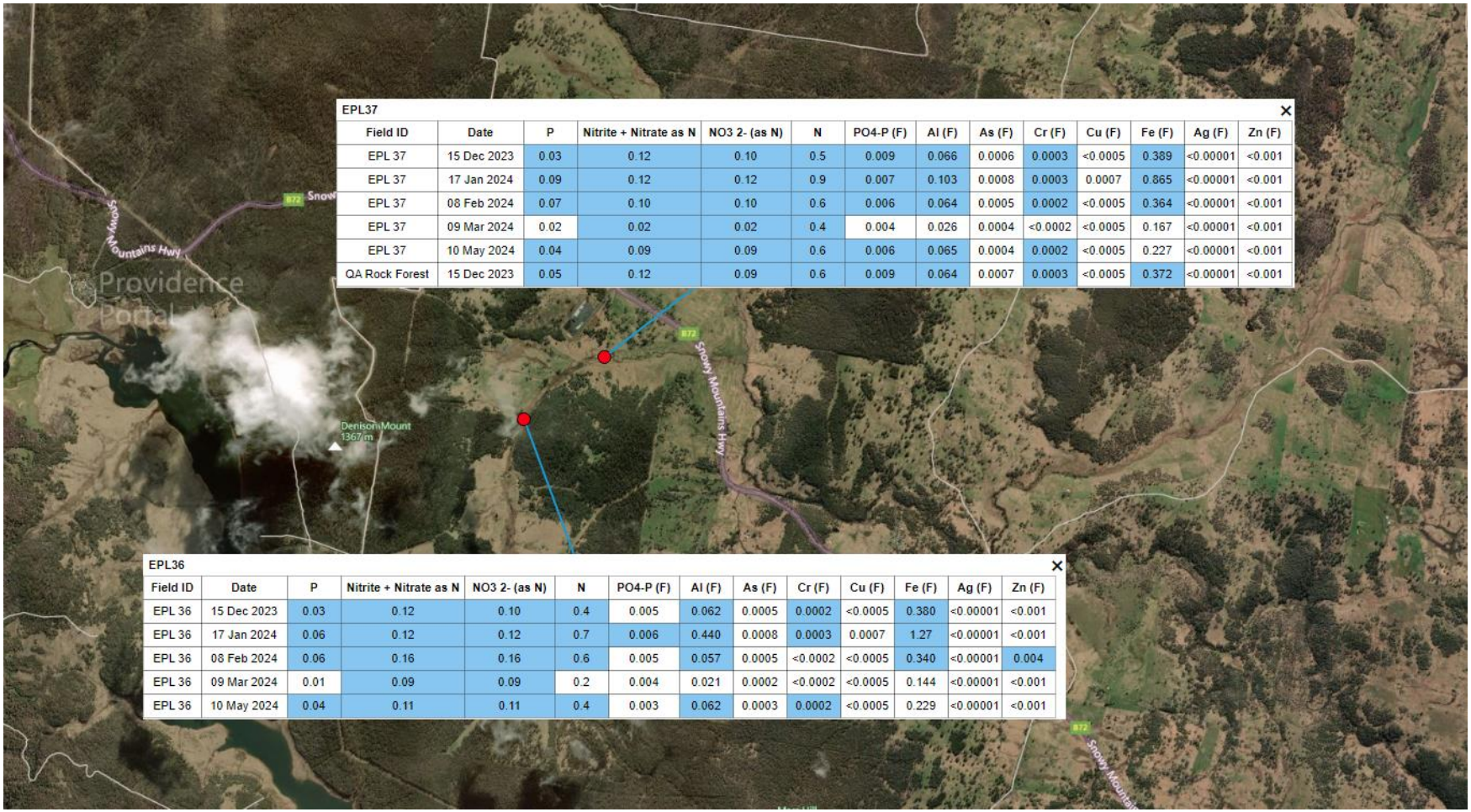
EPL51

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	NO2- (as N)	N	Al	Al (F)	As	As (F)
EPL 51	19 Jan 2024	0.01	<0.01	0.01	3	<0.01	<0.01	0.5		0.041		<0.0002
EPL 51	27 Feb 2024	0.02	<0.01	0.10	<2	<0.01	<0.01	0.6		0.050		0.0002
EPL 51	06 Mar 2024	0.02	<0.01	0.08	2	<0.01	<0.01	0.7		0.050		0.0002
EPL51	15 Apr 2024	0.02	<0.01	<0.01	<2	<0.01	<0.01	0.3	0.07	0.039	0.0003	0.0003
EPL51	07 May 2024	0.02	<0.01	0.04	3	<0.01	<0.01	0.4		0.037		<0.0002

EPL33

Field ID	Date	P	Nitrite + Nitrate as N	NH3 (as N)	BOD	NO3 2- (as N)	NO2- (as N)	N	Al (F)	As (F)	Cu (F)	Fe (F)
EPL 33	15 Dec 2023	0.03	<0.01	<0.01	<2	<0.01	0.02	0.4	0.046	0.0002	<0.0005	0.124
EPL 33	16 Jan 2024	0.03	0.02	<0.01		0.02	<0.01	0.3	0.018	0.0004	0.0006	0.248
EPL 33	07 Feb 2024	0.04	0.02	0.02		0.02	<0.01	0.5	0.018	0.0003	<0.0005	0.082
EPL 33	09 Mar 2024	0.02	<0.01	0.01		<0.01	<0.01	0.7	0.046	0.0003	<0.0005	0.246
EPL33	19 Apr 2024	0.02	0.01	<0.01		0.01	<0.01	0.3	0.027	0.0003	<0.0005	0.190
EPL 33	10 May 2024	0.04	<0.01	0.05		<0.01	<0.01	0.4	0.032	0.0002	<0.0005	0.178

ROCK FOREST



EPL37

Field ID	Date	P	Nitrite + Nitrate as N	NO3 2- (as N)	N	PO4-P (F)	Al (F)	As (F)	Cr (F)	Cu (F)	Fe (F)	Ag (F)	Zn (F)
EPL 37	15 Dec 2023	0.03	0.12	0.10	0.5	0.009	0.066	0.0006	0.0003	<0.0005	0.389	<0.00001	<0.001
EPL 37	17 Jan 2024	0.09	0.12	0.12	0.9	0.007	0.103	0.0008	0.0003	0.0007	0.865	<0.00001	<0.001
EPL 37	08 Feb 2024	0.07	0.10	0.10	0.6	0.006	0.064	0.0005	0.0002	<0.0005	0.364	<0.00001	<0.001
EPL 37	09 Mar 2024	0.02	0.02	0.02	0.4	0.004	0.026	0.0004	<0.0002	<0.0005	0.167	<0.00001	<0.001
EPL 37	10 May 2024	0.04	0.09	0.09	0.6	0.006	0.065	0.0004	0.0002	<0.0005	0.227	<0.00001	<0.001
QA Rock Forest	15 Dec 2023	0.05	0.12	0.09	0.6	0.009	0.064	0.0007	0.0003	<0.0005	0.372	<0.00001	<0.001

EPL36

Field ID	Date	P	Nitrite + Nitrate as N	NO3 2- (as N)	N	PO4-P (F)	Al (F)	As (F)	Cr (F)	Cu (F)	Fe (F)	Ag (F)	Zn (F)
EPL 36	15 Dec 2023	0.03	0.12	0.10	0.4	0.005	0.062	0.0005	0.0002	<0.0005	0.380	<0.00001	<0.001
EPL 36	17 Jan 2024	0.06	0.12	0.12	0.7	0.006	0.440	0.0008	0.0003	0.0007	1.27	<0.00001	<0.001
EPL 36	08 Feb 2024	0.06	0.16	0.16	0.6	0.005	0.057	0.0005	<0.0002	<0.0005	0.340	<0.00001	0.004
EPL 36	09 Mar 2024	0.01	0.09	0.09	0.2	0.004	0.021	0.0002	<0.0002	<0.0005	0.144	<0.00001	<0.001
EPL 36	10 May 2024	0.04	0.11	0.11	0.4	0.003	0.062	0.0003	0.0002	<0.0005	0.229	<0.00001	<0.001

APPENDIX E – TRENDS

Heavy Metals

Location	Site ID	Aluminium (filtered) Mean	Min	Max	StdDv	MK Trend	Arsenic (filtered) Mean	Min	Max	StdDv	MK Trend	Chromium III + IV (filtered) Mean	Min	Max	StdDv	MK Trend
Lobbs Hole	5	46.16	0.00	408.00	80.10	Decreasin	0.51	0.0	1.10	0.43	Insufficien	1.33	0.00	35.00	5.48	Insufficien
	6	20.93	0.00	170.00	35.47	Decreasin	0.46	0.0	1.00	0.42	Insufficien	0.85	0.00	18.00	2.81	Insufficien
	8	19.99	0.00	189.00	39.78	Decreasin	0.33	0.0	1.00	0.41	Decreasin	0.49	0.00	14.00	1.79	Decreasin
	9	35.98	0.00	496.00	81.35	Decreasin	0.49	0.0	1.10	0.43	Insufficien	0.79	0.00	14.00	2.19	Insufficien
	10	22.58	0.00	197.00	35.86	Decreasin	0.54	0.0	1.00	0.42	Insufficien	0.63	0.00	8.00	1.13	Insufficien
	11	20.29	0.00	195.00	34.02	Decreasin	0.53	0.0	1.00	0.43	Insufficien	0.63	0.00	6.00	0.93	Insufficien
	12	47.57	0.00	466.00	92.50	Decreasin	0.46	0.0	1.10	0.44	Decreasin	0.52	0.00	6.00	0.85	Insufficien
	14	37.55	0.00	590.00	97.23	Decreasin	0.44	0.0	1.10	0.44	Decreasin	0.46	0.00	4.00	0.63	Decreasin
	15	41.72	0.00	490.00	81.44	Decreasin	0.51	0.0	1.10	0.43	Decreasin	0.50	0.00	2.00	0.48	Insufficien
	16	26.78	0.00	357.00	52.55	Decreasin	0.44	0.0	1.00	0.43	Decreasin	0.44	0.00	2.00	0.51	Decreasin
	17	3.35	0.05	5.00	2.86	Insufficien	0.23	0.0	0.40	0.21	Insufficien	0.13	0.00	0.20	0.12	Insufficien
	24	571.80	0.00	30000.00	4004.00	Decreasin	0.42	0.0	1.00	0.44	Decreasin	4.00	0.00	4.00	0.73	Insufficien
	41	220.50	0.00	3900.00	706.00	Insufficien	0.70	0.0	11.00	1.55	Decreasin	25.68	0.00	400.00	78.71	Decreasin
	52	10.42	0.00	67.00	15.26	Decreasin	0.40	0.0	1.30	0.44	Insufficien	3.62	0.00	29.00	5.05	Decreasin
	53	19.50	0.00	58.00	27.34	Insufficien	0.30	0.0	1.00	0.48	Insufficien	0.33	0.00	1.00	0.47	Insufficien
	54	5.50	0.00	12.00	6.40	Insufficien	0.30	0.0	1.00	0.48	Insufficien	0.33	0.00	1.00	0.47	Insufficien
	55	22.17	0.00	500.00	83.04	Decreasin	0.23	0.0	1.00	0.31	Decreasin	0.71	0.00	4.00	0.99	Decreasin
Marica	26	9.91	0.00	44.00	11.56	Insufficien	0.49	0.0	1.00	0.44	Insufficien	0.50	0.00	2.00	0.49	Insufficien
	27	9.04	0.00	32.00	9.87	Decreasin	0.54	0.0	1.00	0.43	Insufficien	0.53	0.00	3.00	0.56	Insufficien
Tantangara	28	35.80	0.00	171.00	41.35	Decreasin	0.52	0.0	1.00	0.43	Insufficien	0.58	0.00	2.00	0.53	Insufficien
	29	34.87	0.00	110.00	31.60	Decreasin	0.50	0.0	1.00	0.43	Insufficien	0.52	0.00	2.00	0.49	Insufficien
	30	29.11	0.00	154.00	37.46	Decreasin	0.45	0.0	1.00	0.44	Insufficien	0.47	0.00	2.00	0.49	Insufficien
	31	28.59	0.00	150.00	34.35	Decreasin	0.45	0.0	1.00	0.44	Insufficien	0.51	0.00	3.00	0.60	Insufficien
	32	33.61	0.00	91.00	31.30	Decreasin	0.53	0.0	1.00	0.43	Insufficien	0.54	0.00	2.00	0.49	Insufficien
	33	33.07	0.00	290.00	48.26	Decreasin	0.50	0.0	1.00	0.43	Insufficien	0.49	0.00	2.00	0.49	Insufficien
	34	24.97	0.00	120.00	25.52	Decreasin	0.47	0.0	1.00	0.44	Insufficien	0.46	0.00	1.00	0.45	Insufficien
	35	22.40	0.00	77.00	23.62	Decreasin	0.46	0.0	1.00	0.44	Insufficien	0.48	0.00	3.00	0.56	Insufficien
	38	37.98	0.00	240.00	43.85	Decreasin	0.55	0.0	1.00	0.44	Insufficien	0.54	0.00	1.00	0.44	Insufficien
	39	25.60	0.00	110.00	28.08	Insufficien	0.52	0.0	1.00	0.45	Insufficien	0.52	0.00	1.00	0.45	Insufficien
	40	25.18	0.00	116.00	28.64	Decreasin	0.52	0.0	1.00	0.45	Insufficien	0.52	0.00	1.00	0.45	Insufficien
	46	0.26	0.04	0.49	0.21	Increasing	0.00	0.00	0.00	0.00	Insufficien	0.00	0.00	0.00	0.00	Insufficien
	50	4.40	0.00	21.00	4.75	Insufficien	0.48	0.00	1.00	0.47	Decreasin	0.52	0.00	2.00	0.56	Decreasin
	51	34.97	0.04	102.00	29.89	Decreasin	0.55	0.00	1.00	0.47	Decreasin	0.55	0.00	1.00	0.47	Decreasin
	66	0.06	0.06	0.06	-	Deficient v	0.00	0.00	0.00	-	Deficient v	0.00	0.00	0.00	-	Deficient v
	67	0.04	0.04	0.04	-	Deficient v	0.00	0.00	0.00	-	Deficient v	0.00	0.00	0.00	-	Deficient v
Rock Forest	36	55.72	0.00	279.00	64.72	Insufficien	0.53	0.00	1.00	0.42	Insufficien	0.52	0.00	2.00	0.47	Insufficien
	37	56.94	0.00	290.00	72.32	Insufficien	0.57	0.00	1.30	0.44	Insufficien	0.55	0.00	3.00	0.55	Insufficien

Location	Site ID	Copper (filtered) Mean	Min	Max	StdDv	MK Trend	Iron (dissolved) Mean	Min	Max	StdDv	MK Trend	Manganese (dissolved) Mean	Min	Max	StdDv	MK Trend
Lobbs Hole	5	0.67		3.40	0.64	Insufficien	63.65		699.00	112.50	Decreasin	5.95		95.20	14.81	Decreasin
	6	0.68		3.60	0.69	Insufficien	37.40		292.00	48.84	Insufficien	7.14		24.90	7.23	Decreasin
	8	0.60		10.50	1.39	Decreasin	30.98		384.00	56.35	Decreasin	3.87	0.00	60.20	8.86	Decreasin
	9	0.78		4.00	0.84	Decreasin	53.35		748.00	116.10	Decreasin	5.71	0.00	61.30	9.75	Decreasin
	10	0.84		4.00	0.88	Insufficien	37.56		100.00	27.76	Decreasin	8.72	0.00	122.00	19.76	Decreasin
	11	1.02		9.00	1.45	Insufficien	36.19		98.00	27.56	Decreasin	7.49	0.00	104.00	17.25	Insufficien
	12	0.78		12.00	1.60	Decreasin	61.33		670.00	111.70	Decreasin	5.94	0.00	94.70	15.70	Decreasin
	14	0.62		3.70	0.70	Decreasin	52.84		756.00	115.70	Decreasin	5.11	0.00	81.10	11.91	Decreasin
	15	0.86		7.40	1.30	Decreasin	59.54		780.00	113.90	Decreasin	5.56	0.00	66.70	10.99	Decreasin
	16	0.76		5.00	0.99	Decreasin	42.23		587.00	77.87	Decreasin	4.11	0.00	58.80	7.74	Decreasin
	17	0.40	0.00	0.70	0.36	Insufficien	1.33	0.00	2.00	1.15	Insufficien	0.90	0.00	2.20	1.15	Insufficien
	24	0.70		4.00	0.86	Decreasin	62.07		230.00	71.04	Decreasin	148.20	0.00	1690.00	318.80	Decreasin
	41	4.24		76.00	11.19	Decreasin	49.09		830.00	146.20	Decreasin	3.66	0.00	49.00	8.72	Decreasin
	52	0.73		9.00	1.75	Decreasin	5.41		50.00	13.60	Decreasin	1.09	0.00	8.80	2.09	Decreasin
	53	1.83		5.00	2.38	Insufficien	26.25		55.00	30.38	Insufficien	0.43	0.00	1.00	0.51	Insufficien
	54	0.38		1.00	0.48	Insufficien	15.50		50.00	23.69	Insufficien	0.38	0.00	1.00	0.48	Insufficien
	55	0.57		3.00	0.75	Insufficien	32.16		489.00	90.92	Insufficien	4.25	0.00	88.00	14.87	Decreasin
Marica	26	0.59		1.00	0.40	Insufficien	31.63		99.00	23.48	Insufficien	3.78	0.00	19.00	3.59	Insufficien
	27	0.60		1.00	0.39	Insufficien	32.24		94.00	22.46	Insufficien	3.37	0.00	12.00	2.59	Decreasin
Tantangara	28	0.70		2.00	0.46	Insufficien	123.20		380.00	108.40	Decreasin	11.00	0.00	68.00	14.39	Insufficien
	29	0.70		3.00	0.59	Insufficien	127.80		404.00	113.80	Decreasin	10.83	0.00	111.00	21.36	Decreasin
	30	0.62		3.40	0.57	Insufficien	47.16		127.00	36.39	Decreasin	3.30	0.00	11.00	2.69	Decreasin
	31	0.63		2.10	0.51	Insufficien	45.50		189.00	38.53	Decreasin	3.38	0.00	16.80	3.28	Decreasin
	32	0.67		2.00	0.48	Insufficien	133.00		392.00	116.30	Decreasin	10.88	0.00	127.00	21.66	Decreasin
	33	0.75		4.00	0.73	Decreasin	164.00		966.00	194.60	Decreasin	21.58	0.00	280.00	45.66	Decreasin
	34	0.61		2.00	0.49	Insufficien	117.40		420.00	128.40	Decreasin	4.53	0.00	37.00	5.57	Decreasin
	35	0.63		2.00	0.42	Insufficien	117.60		450.00	133.50	Decreasin	4.16	0.00	26.70	4.59	Decreasin
	38	0.99		7.30	1.47	Decreasin	135.10		420.00	122.30	Decreasin	9.65	0.00	142.00	22.26	Decreasin
	39	0.65		2.00	0.45	Insufficien	90.84		320.00	87.66	Decreasin	6.50	0.00	25.00	5.78	Decreasin
	40	0.62		1.00	0.40	Decreasin	74.20		230.00	67.58	Decreasin	5.00	0.00	28.00	5.16	Insufficien
	46	0.00	0.00	0.00	0.00	Insufficien	0.17	0.12	0.19	0.03	Increasing	0.01	0.00	0.02	0.01	Insufficien
	50	0.59		2.00	0.54	Decreasin	22.09		50.00	25.04	Decreasin	1.94	0.00	5.00	2.31	Decreasin
	51	0.72	0.00	2.40	0.58	Decreasin	92.09		340.00	98.50	Insufficien	11.48	0.00	69.00	20.84	Decreasin
	66	0.00	0.00	0.00	-	Deficient v	0.19	0.19	0.19	-	Deficient v	0.00	0.00	0.00	-	Deficient v
	67	0.00	0.00	0.00	-	Deficient v	0.27	0.27	0.27	-	Deficient v	0.01	0.01	0.01	-	Deficient v
Rock Forest	36	0.60		2.70	0.54	Insufficien	324.40		1300.00	310.10	Insufficien	17.13	0.00	87.50	23.59	Decreasin
	37	0.62		2.00	0.46	Insufficien	361.90		1400.00	382.10	Insufficien	14.77	0.00	142.00	23.25	Decreasin

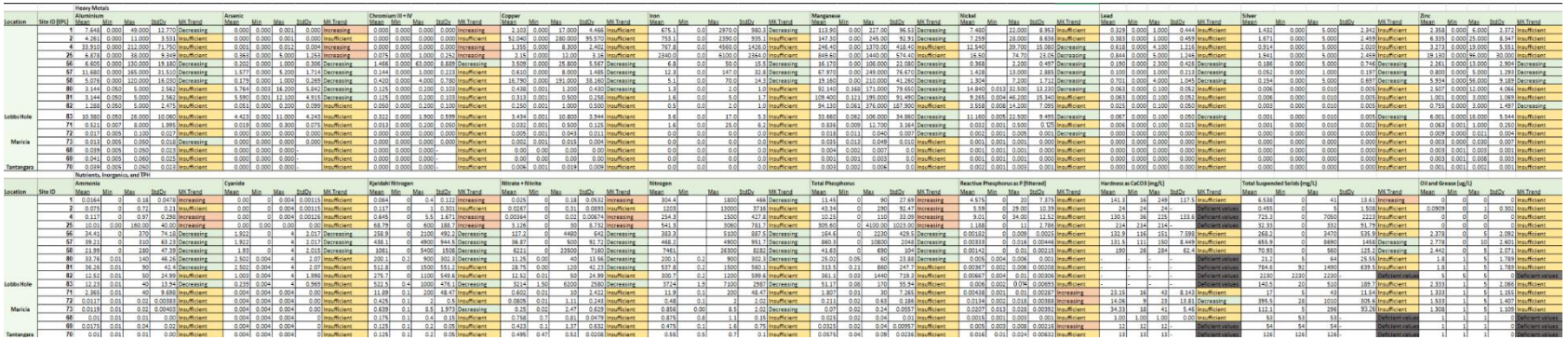
Location	Site ID	Nickel (dissolved) Mean	Min	Max	StdDv	MK Trend	Lead (dissolved) Mean	Min	Max	StdDv	MK Trend	Silver (dissolved) Mean	Min	Max	StdDv	MK Trend	Zinc (dissolved) Mean	Min	Max	StdDv	MK Trend
Lobbs Hole	5	1.11		23.00	3.57	Insufficien	0.40	0.00	1.00	0.46	Insufficien	1.66	0.00	5.00	2.36	Insufficient	2.23	0.00	8.00	2.32	Insufficient
	6	0.84		13.00	2.01	Insufficien	0.39	0.00	1.00	0.46	Insufficien	1.66	0.00	5.00	2.36	Insufficient	2.28	0.00	8.00	2.33	Insufficient
	8	0.52		10.00	1.29	Decreasin	0.26	0.00	1.00	0.41	Decreasin	1.07	0.00	5.00	2.05	Decreasing	1.55	0.00	6.00	2.13	Decreasing
	9	0.76		9.00	1.39	Insufficien	0.41	0.00	1.00	0.46	Insufficien	1.66	0.00	5.00	2.36	Insufficient	2.30	0.00	8.00	2.30	Insufficient
	10	0.77		5.00	0.93	Insufficien	0.46	0.00	1.00	0.47	Insufficien	2.05	0.00	5.00	2.46	Insufficient	2.83	0.00	8.00	2.45	Insufficient
	11	0.66		4.00	0.61	Insufficien	0.45	0.00	1.00	0.47	Insufficien	2.01	0.00	5.00	2.45	Insufficient	2.57	0.00	10.00	2.41	Insufficient
	12	0.58		4.00	0.63	Insufficien	0.41	0.00	2.00	0.50	Decreasin	1.59	0.00	5.00	2.31	Decreasing	2.16	0.00	10.00	2.41	Insufficient
	14	0.54		3.00	0.53	Decreasin	0.37	0.00	1.00	0.45	Decreasin	1.49	0.00	5.00	2.27	Decreasing	1.97	0.00	6.00	2.20	Decreasing
	15	0.62		2.00	0.46	Insufficien	0.44	0.00	1.00	0.46	Insufficien	1.77	0.00	5.00	2.38	Insufficient	2.37	0.00	7.00	2.26	Insufficient
	16	0.52		1.20	0.43	Decreasin	0.37	0.00	1.00	0.45	Decreasin	1.51	0.00	5.00	2.28	Decreasing	1.97	0.00	5.00	2.18	Decreasing
	17	0.33	0.00	0.50	0.29	Insufficien	0.07	0.00	0.10	0.06	Insufficien	0.01	0.00	0.01	0.01	Insufficient	0.67	0.00	1.00	0.58	Insufficient
	24	0.77		3.90	0.88	Decreasin	0.39	0.00	1.00	0.45	Decreasin	1.56	0.00	5.00	2.30	Decreasing	14.70	0.00	67.00	9.13	Decreasing
	41	16.50		74.70	23.05	Decreasin	0.44	0.00	3.00	0.61	Decreasin	1.58	0.00	5.00	2.31	Decreasing	24.34	0.00	270.00	51.25	Decreasing
	52	0.30		1.00	0.33	Decreasin	0.12	0.00	1.00	0.26	Decreasin	0.17	0.00	5.00	0.73	Decreasing	0.92	0.00	5.00	1.40	Decreasing
	53	0.38		1.00	0.48	Insufficien	0.33	0.00	1.00	0.47	Insufficien	0.28	0.00	1.00	0.49	Insufficient	2.75	0.00	6.00	3.20	Insufficient
	54	0.38		1.00	0.48	Insufficien	0.28	0.00	1.00	0.49	Insufficien	0.28	0.00	1.00	0.49	Insufficient	1.50	0.00	5.00	2.38	Insufficient
	55	0.38		2.00	0.42	Insufficien	0.47	0.00	1.00	1.97	Insufficien	0.23	0.00	5.00	0.85	Decreasing	1.41	0.00	9.00	2.06	Decreasing
Marica	26	0.59		1.00	0.40	Insufficien	0.45	0.00	1.00	0.47	Insufficien	1.93	0.00	5.00	2.42	Insufficient	2.96	0.00	21.00	3.48	Insufficient
	27	0.60		1.00	0.39	Insufficien	0.45	0.00	1.00	0.47	Insufficien	1.91	0.00	5.00	2.41	Insufficient	2.59	0.00	8.00	2.26	Insufficient
Tantangara	28	0.66		1.00	0.37	Insufficien	0.50	0.00	1.00	0.47	Insufficien	2.19	0.00	5.00	2.48	Insufficient	3.34	0.00	16.00	3.68	Insufficient
	29	0.66		2.00	0.47	Insufficien	0.46	0.00	1.00	0.47	Insufficien	2.03	0.00	5.00	2.46	Insufficient	4.42	0.00	91.00	13.37	Insufficient
	30	0.57		1.00	0.40	Insufficien	0.42	0.00	1.00	0.46	Insufficien	1.75	0.00	5.00	2.37	Insufficient	2.46	0.00	9.00	2.51	Insufficient
	31	0.57		1.10	0.41	Insufficien	0.43	0.00	1.00	0.46	Insufficien	1.75	0.00	5.00	2.37	Insufficient	2.62	0.00	11.00	2.65	Insufficient
	32	0.67		2.40	0.47	Insufficien	0.48	0.00	1.00	0.47	Insufficien	2.14	0.00	5.00	2.48	Insufficient	3.13	0.00	24.00	4.05	Insufficient
	33	0.64		2.00	0.49	Insufficien	0.43	0.00	1.00	0.47	Insufficien	1.82	0.00	5.00	2.39	Insufficient	3.19	0.00	14.00	3.54	Insufficient
	34	0.57		1.00	0.41	Insufficien	0.43	0.00	1.00	0.47	Insufficien	1.82	0.00	5.00	2.39	Insufficient	2.98	0.00	25.00	3.92	Insufficient
	35	0.58		2.00	0.46	Insufficien	0.41	0.00	1.00	0.46	Insufficien	1.71	0.00	5.00	2.36	Insufficient	2.77	0.00	16.00	3.53	Insufficient
	38	0.65		1.00	0.38	Insufficien	0.50	0.00	1.00	0.47	Insufficien	2.24	0.00	5.00	2.49	Insufficient	3.42	0.00	20.00	3.86	Insufficient
	39	0.62		1.00	0.40	Insufficien	0.49	0.00	1.00	0.48	Insufficien	2.19	0.00	5.00	2.48	Insufficient	3.50	0.00	21.00	3.93	Insufficient
	40	0.62		1.00	0.40	Insufficien	0.49	0.00	1.00	0.48	Insufficien	2.19	0.00	5.00	2.48	Insufficient	2.86	0.00	8.00	2.42	Insufficient
	46	0.00	0.00	0.00	0.00	Insufficien	0.00	0.00	0.00	0.00	Insufficien	0.00	0.00	0.00	0.00	Insufficient	0.00	0.00	0.00	0.00	Insufficient
	50	0.54		1.00	0.45	Decreasin	0.46	0.00	1.00	0.49	Decreasin	1.83	0.00	5.00	2.38	Decreasing	3.09	0.00	18.00	4.12	Decreasing
	51	0.63	0.00	1.00	0.43	Decreasin	0.53	0.00	1.00	0.49	Decreasin	2.31	0.00	5.00	2.50	Decreasing	2.80	0.00	5.00	2.31	Decreasing
	66	0.00	0.00	0.00	-	Deficient v	0.000	0.000	0.000	-	Deficient v	0.00	0.00	0.00	-	Deficient va	0.00	0.00	0.00	-	Deficient values
	67	0.00	0.00	0.00	-	Deficient v	0.000	0.000	0.000	-	Deficient v	0.00	0.00	0.00	-	Deficient va	0.00	0.00	0.00	-	Deficient values
Rock Forest	36	0.73		2.00	0.53	Decreasin	0.43	0.00	1.00	0.47	Insufficien	1.85	0.00	5.00	2.40	Insufficient	3.12	0.00	21.00	3.40	Insufficient
	37	0.73		2.00	0.56	Decreasin	0.45	0.00	1.00	0.47	Insufficien	1.91	0.00	5.00	2.42	Insufficient	2.61	0.00	5.00	2.20	Insufficient

Nutrients, Inorganics, and TPH

Location	Site ID	Ammonia Mean	Min	Max	StdDv	MK Trend	Cyanide Mean	Min	Max	StdDv	MK Trend	Kjeldahl Nitrogen Mean	Min	Max	StdDv	MK Trend
Lobbs Hole	5	12.18	0.00	110.00	21.66	Insufficien	2.90	0	8	2.022	Decreasin	137.00	0.00	2130.00	345.70	Insufficien
	6	10.75	0.00	60.00	16.14	Decreasin	3.63	0	18	3.933	Decreasin	64.43	0.00	780.00	138.00	Insufficien
	8	9.49	0.00	150.00	25.20	Decreasin	1.94	0	8	2.14	Decreasin	64.63	0.00	530.00	110.20	Decreasin
	9	19.23	0.00	390.00	64.49	Decreasin	8.58	0	230	35.96	Decreasin	85.55	0.00	700.00	136.10	Insufficien
	10	15.83	0.00	200.00	31.43	Decreasin	3.21	0	9	1.913	Decreasin	150.20	0.00	900.00	220.90	Decreasin
	11	13.38	0.00	180.00	27.55	Insufficien	3.15	0	8	1.905	Decreasin	132.50	0.00	630.00	164.30	Insufficien
	12	14.38	0.00	160.00	28.02	Decreasin	2.69	0	9	2.153	Decreasin	111.20	0.00	1450.00	245.60	Insufficien
	14	8.50	0.00	90.00	14.69	Decreasin	2.61	0	8	2.09	Decreasin	94.07	0.00	770.00	172.40	Decreasin
	15	22.21	0.00	300.00	53.08	Insufficien	2.96	0	8	1.989	Decreasin	153.90	0.00	2500.00	369.40	Insufficien
	16	12.87	0.00	190.00	30.81	Decreasin	2.87	0	10	2.465	Decreasin	75.12	0.00	430.00	101.30	Insufficien
	17	6.67	0.01	10.00	5.77	Insufficien	2.67	0.004	4	2.307	Insufficien	100.10	0.20	200.00	99.90	Insufficien
	24	17.22	0.00	220.00	40.78	Decreasin	3.29	0	21	4.034	Insufficien	111.70	0.00	750.00	177.80	Insufficien
	41	1069.00	0.00	76600.00	8666.00	Decreasin	3.12	0	22	3.348	Decreasin	1862.00	0.00	102000.00	11831.00	Decreasin
	52	18.48	0.00	170.00	32.45	Decreasin	2.04	0	4	2.018	Decreasin	1362.00	0.00	6000.00	1743.00	Decreasin
	53	22.50	0.00	60.00	28.72	Insufficien	2.00	0	4	2.309	Insufficien	75.00	0.00	200.00	95.74	Insufficien
	54	17.50	0.00	60.00	28.72	Insufficien	2.00	0	4	2.309	Insufficien	50.00	0.00	100.00	57.74	Insufficien
	55	45.04	0.00	500.00	98.15	Decreasin	2.38	0	4	1.99	Decreasin	968.40	0.00	6600.00	1361.00	Decreasin
Marica	26	8.04	0.00	100.00	14.27	Insufficien	3.06	0	8	1.945	Insufficien	70.20	0.00	800.00	118.40	Insufficien
	27	10.69	0.00	160.00	25.11	Insufficien	3.51	-0.07	10	2.534	Insufficien	163.70	0.00	5200.00	721.60	Insufficien
Tantangara	28	8.48	-35.00	70.00	14.06	Insufficien	11.16	0	340	50.77	Insufficien	137.30	0.00	800.00	145.80	Decreasin
	29	6.85	-6.03	30.00	6.33	Insufficien	3.76	0	18	3.536	Decreasin	124.70	0.00	440.00	107.70	Decreasin
	30	7.98	0.00	64.00	11.33	Insufficien	3.00	0	9	2.02	Decreasin	75.62	0.00	520.00	91.44	Insufficien
	31	6.50	0.00	34.00	6.35	Insufficien	2.98	0	7	1.932	Decreasin	70.61	0.00	400.00	74.94	Insufficien
	32	6.94	0.00	35.00	7.44	Insufficien	8.33	0	230	33.85	Decreasin	141.80	0.00	940.00	163.50	Decreasin
	33	9.98	0.00	110.00	17.64	Insufficien	2.85	-0.27	5	1.865	Decreasin	105.70	0.00	280.00	83.85	Insufficien
	34	7.42	0.00	42.00	9.33	Insufficien	2.87	-0.23	6	2.003	Insufficien	91.06	0.00	300.00	93.93	Insufficien
	35	6.18	0.00	41.00	7.37	Insufficien	2.71	0	5	1.941	Decreasin	98.65	0.00	700.00	126.20	Insufficien
	38	8.68	0.00	50.00	10.87	Insufficien	3.33	0	6	1.782	Decreasin	167.50	0.00	1300.00	243.10	Decreasin
	39	7.50	0.00	30.00	8.36	Insufficien	2.98	-0.13	5	1.866	Decreasin	100.70	0.00	500.00	115.50	Insufficien
	40	12.59	0.00	140.00	23.24	Insufficien	3.05	0	5	1.79	Decreasin	99.11	0.00	450.00	108.00	Insufficien
	46	0.06	0.01	0.12	0.05	Insufficien	0.00	0.00	0.00	0	Insufficien	0.52	0.40	0.60	0.08	Insufficien
	50	21.27	0.00	130.00	39.20	Insufficien	2.74	0.00	6.00	2.09	Decreasin	318.70	0.00	5000.00	1028.00	Insufficien
	51	8.01	0.00	34.00	8.55	Insufficien	3.05	0.004	5	1.818	Decreasin	108.10	0.00	400.00	106.50	Insufficien
	66	0.05	0.05	0.05	-	Deficient v	0.00	0.00	0.00	-	Deficient v	0.60	0.60	0.60	-	Deficient v
	67	0.04	0.04	0.04	-	Deficient v	0.00	0.00	0.00	-	Deficient v	0.3	0.3	0.3	-	Deficient v
Rock Forest	36	14.20	0.00	220.00	32.36	Decreasin	3.66	0	22	4.293	Decreasin	269.6	0.00	3000	453.9	Insufficien
	37	18.87	0	210	35.99	Decreasin	2.844	0	5	1.963	Decreasin	265.5	0.00	1880	341.2	Insufficien

Location	Site ID	Nitrate + Nitrite Mean	Min	Max	StdDv	MK Trend	Nitrogen Mean	Min	Max	StdDv	MK Trend	Total Phosphorus Mean	Min	Max	StdDv	MK Trend
Lobbs Hole	5	16.69	0	102	23.27	Decreasin	148.10		2230.00	361.30	Decreasin	39.51	0	1160.00	182.30	Insufficien
	6	32.00	0	262.00	59.70	Decreasin	94.68		850.00	160.40	Insufficien	35.40	0	846.00	135.20	Insufficien
	8	15.72	0	115.00	26.73	Decreasin	78.16	0.00	550.00	118.10	Decreasin	20.80	0	924.00	117.90	Decreasin
	9	20.16	0	120.00	31.22	Insufficien	101.60	0.00	700.00	152.80	Insufficien	30.85	0	873.00	138.90	Insufficien
	10	93.39	0	4200.00	580.90	Insufficien	236.40	0.00	5100.00	714.70	Decreasin	32.18	0	1260.00	173.80	Insufficien
	11	42.74	0	1500.00	204.90	Insufficien	168.50	0.00	2100.00	309.00	Insufficien	7.93	0	50.00	9.58	Insufficien
	12	41.33	0	640.00	111.10	Decreasin	148.50	0.00	1520.00	281.10	Insufficien	32.43	0	1340.00	175.30	Insufficien
	14	24.95	0	520.00	72.94	Decreasin	106.80	0.00	800.00	183.80	Decreasin	33.42	0	1130.00	144.70	Insufficien
	15	15.21	0	100.00	24.14	Decreasin	165.20	0.00	2500.00	374.60	Insufficien	26.56	0	731.00	101.00	Insufficien
	16	15.97	0	220.00	34.80	Decreasin	86.43	0.00	590.00	121.70	Decreasin	23.40	0.00	869.00	110.80	Insufficien
	17	20.01	0.02	40.00	19.99	Insufficien	100.10	0.20	200.00	99.90	Insufficien	26.67	0.02	40.00	23.08	Insufficien
	24	292.30	0	5640.00	859.10	Insufficien	406.60	0.00	6300.00	953.10	Insufficien	40.00	0.00	810.00	135.80	Insufficien
	41	334.20	0	6380.00	989.50	Decreasin	2185.00	0.00	108000.00	12490.00	Decreasin	18.98	0.00	230.00	37.41	Decreasin
	52	8281.00	0	30300.00	9937.00	Decreasin	10001.00	0.00	35100.00	11411.00	Decreasin	7.50	0.00	20.00	9.57	Insufficien
	53	7.50	0	20.00	9.57	Insufficien	75.00	0.00	200.00	95.74	Insufficien	5.00	0.00	10.00	5.77	Insufficien
	54	10.00	0	20.00	11.55	Insufficien	50.00	0.00	100.00	57.74	Insufficien	21.31	0.00	150.00	31.07	Decreasin
	55	5747.00	0	23900.00	7186.00	Decreasin	6859.00	0.00	26700.00	8207.00	Decreasin	164.60	0.00	2230.00	429.50	Decreasin
Marica	26	44.91	0	1500.00	205.40	Insufficien	107.40	0.00	2300.00	315.40	Decreasin	12.93	0.00	97.00	19.94	Insufficien
	27	174.20	0	7000.00	985.30	Insufficien	327.70	0.00	12000.00	1676.00	Decreasin	12.43	0.00	100.00	19.12	Insufficien
Tantangara	28	13.00	0	110.00	19.28	Insufficien	142.80	0.00	800.00	146.20	Decreasin	19.18	0.00	210.00	33.95	Insufficien
	29	12.36	0	50.00	15.01	Insufficien	131.00	0.00	440.00	109.90	Decreasin	11.58	0.00	50.00	12.13	Insufficien
	30	12.72	0	60.00	15.56	Insufficien	81.42	0.00	580.00	97.57	Insufficien	12.16	0.00	69.00	14.52	Insufficien
	31	10.82	0	139.00	21.52	Insufficien	76.41	0.00	400.00	80.34	Insufficien	14.52	0.00	180.00	27.38	Insufficien
	32	16.71	0	250.00	38.55	Insufficien	160.00	0.00	940.00	185.20	Decreasin	81.60	0.00	3100.00	460.50	Insufficien
	33	10.77	0	50.00	12.27	Insufficien	110.30	0.00	290.00	86.51	Decreasin	10.94	0.00	60.00	12.72	Insufficien
	34	7.46	0	50.00	8.92	Insufficien	92.52	0.00	300.00	95.42	Insufficien	6.94	0.00	30.00	7.38	Insufficien
	35	33.67	0	850.00	123.50	Insufficien	114.50	0.00	700.00	136.20	Insufficien	17.68	0.00	150.00	30.50	Insufficien
	38	661.70	0	28000.00	4268.00	Insufficien	833.10	0.00	29000.00	4455.00	Decreasin	17.80	0.00	370.00	55.65	Insufficien
	39	15.32	0	210.00	33.02	Insufficien	111.00	0.00	500.00	128.10	Insufficien	10.87	0.00	90.00	15.83	Insufficien
	40	15.71	0	310.00	46.63	Insufficien	108.90	0.00	610.00	132.70	Insufficien	188.90	0.00	13100.00	1482.00	Decreasin
	46	0.03	0.01	0.04	0.01	Decreasin	0.50	0.40	0.60	0.08	Insufficien	0.02	0.02	0.03	0.00	Insufficien
	50	266.10	0.00	4200.00	863.90	Decreasin	415.70	0.00	5000.00	1017.00	Decreasin	8.83	0.00	50.00	11.70	Insufficien
	51	24.00	0.01	250.00	54.71	Decreasin	115.90	0.00	400.00	106.80	Insufficien	18.20	0.01	120.00	28.70	Decreasin
	66	0.47	0.47	0.47	-	Deficient v	1.10	1.10	1.10	-	Deficient v	0.04	0.04	0.04	-	Deficient v
	67	0.01	0.01	0.01	-	Deficient v	0.3	0.3	0.3	-	Deficient v	0.02	0.02	0.02	-	Deficient v
Rock Forest	36	418.30	0.00	18000.00	2539.00	Insufficien	686	0	21000	2942	Insufficien	9.20	0.00	110.00	18.15	Insufficien
	37	209	0	8700	1214	Insufficien	308.9	0	2100	375.3	Insufficien	14.68	0.00	120	20.92	Insufficien

Location	Site ID	Reactive Phosphorus as P (filtered) Mean	Min	Max	StdDv	MK Trend	Hardnes as CaCO3 (filtered) Mean	Min	Max	StdDv	MK Trend	Total suspended solids Mean	Min	Max	StdDv	MK Trend	Oil and Grease (ug/L) Mean	Min	Max	StdDv	MK Trend
Lobbs Hole	5	3.386		23	5.494	Decreasin	101	36	195	73.03	Insufficien	84.52	0.00	2190.00	353.10	Decreasing	5.53	0.00	27.00	5.86	Decreasing
	6	4.69		22.00	7.15	Decreasin	63.20	33.00	126.00	38.02	Insufficien	45.21	0.00	840.00	143.80	Insufficient	4.44	0.00	15.00	2.84	Decreasing
	8	2.59	0	25.00	5.38	Insufficien	81.84	18.00	347.00	85.47	Insufficien	73.97	0.00	1500.00	245.40	Insufficient	3.75	0.00	22.00	4.25	Decreasing
	9	3.82	0	24.00	6.08	Decreasin	84.00	31.00	257.00	96.98	Insufficien	113.90	0.00	2490.00	450.60	Decreasing	5.17	0.00	20.00	4.42	Decreasing
	10	0.77	0	6.00	1.56	Decreasin	33.50	24.00	43.00	13.44	Insufficien	6.19	0.00	20.00	4.50	Decreasing	6.81	0.00	28.00	7.54	Insufficient
	11	0.69	0	6.00	1.46	Decreasin	36.00	31.00	41.00	7.07	Deficient v	5.72	0.00	22.00	4.37	Decreasing	6.46	0.00	53.00	8.53	Decreasing
	12	2.23	0	23.00	4.52	Decreasin	42.17	26.00	51.00	9.91	Insufficien	55.32	0.00	1870.00	260.30	Decreasing	4.26	0.00	24.00	4.66	Decreasing
	14	2.43	0	24.00	5.06	Insufficien	42.56	26.00	51.00	7.96	Insufficien	46.85	0.00	1430.00	202.90	Decreasing	4.04	0.00	18.00	4.06	Decreasing
	15	2.77	0	23.00	5.18	Decreasin	43.50	36.00	51.00	10.61	Deficient v	58.63	0.00	1510.00	241.90	Decreasing	4.29	0.00	21.00	3.87	Decreasing
	16	2.16	0	23.00	4.74	Insufficien	43.89	29.00	51.00	7.11	Insufficien	40.66	0.00	1680.00	215.00	Decreasing	4.26	0.00	30.00	5.08	Decreasing
	17	0.01	0.01	0.01	0.00	Deficient v	-	-	-	-	Deficient v	22.00	5.00	34.00	15.13	Insufficient	1.00	1.00	1.00	0.00	Deficient values
	24	1.46	0	16.00	3.31	Decreasin	117.00	86.00	156.00	29.00	Insufficien	38.61	0.00	820.00	119.70	Insufficient	5.07	0.00	33.00	6.24	Decreasing
	41	0.00	0	0.01	0.00	Insufficien	19.71	1.00	29.00	12.85	Insufficien	9.24	0.00	320.00	38.22	Insufficient	3.32	0.00	26.00	4.75	Decreasing
	52	0.00	0	0.02	0.00	Insufficien	224.60	102.00	408.00	90.27	Decreasin	44.65	0.00	922.00	147.20	Increasing	1.15	0.00	5.00	1.12	Insufficient
	53	0.00	0.00	0.00	0.00	Insufficien	0.00	0.00	0.00	0.00	Deficient v	12.33	0.00	5.00	17.21	Insufficient	2.00	2.00	2.00	0.00	Deficient values
	54	0.00	0.00	0.00	0.00	Insufficien	0.00	0.00	0.00	0.00	Deficient v	3.33	0.00	5.00	2.89	Insufficient	2.00	2.00	2.00	0.00	Deficient values
	55	0.00	0.00	0.01	0.00	Increasing	154.30	80.00	253.00	76.48	Insufficien	13.09	0.00	64.00	17.00	Insufficient	1.32	0.00	5.00	1.27	Decreasing
Marica	26	1.00	0	9.00	2.04	Decreasin	16.00	16.00	16.00	-	Deficient v	23.54	0.00	964.00	131.70	Insufficient	4.29	0.00	17.00	3.64	Decreasing
	27	1.10	0	8.00	1.95	Decreasin	16.00	16.00	16.00	-	Deficient v	6.11	0.00	29.00	4.98	Insufficient	5.40	0.00	24.00	5.39	Decreasing
Tantangara	28	0.50	0.00	3.00	0.93	Decreasin	9.00	9.00	9.00		Insufficien	17.26	0.00	476.00	71.71	Insufficient	5.99	0.00	27.00	6.05	Insufficient
	29	0.40	0.00	3.00	0.78	Decreasin	8.00	1.00	13.00	5.03	Insufficien	5.27	0.00	24.00	3.42	Insufficient	11.33	0.00	130.00	24.05	Insufficient
	30	0.90	0.00	6.00	1.89	Decreasin	6.00	1.00	9.00	3.46	Insufficien	8.08	0.00	52.00	8.16	Decreasing	4.70	0.00	24.00	4.82	Decreasing
	31	0.82	0	5.00	1.55	Decreasin	6.33	1.00	9.00	4.62	Insufficien	8.28	0.00	49.00	7.91	Decreasing	5.32	0.00	70.00	10.33	Decreasing
	32	0.36	0	4.00	0.77	Decreasin	9.50	1.00	16.00	6.35	Insufficien	6.15	0.00	30.00	5.08	Insufficient	9.36	0.00	140.00	22.80	Insufficient
	33	0.45	0	4.00	0.90	Decreasin	4.75	1.00	7.00	2.87	Insufficien	4.83	0.00	14.00	2.76	Insufficient	4.70	0.00	52.00	7.68	Decreasing
	34	0.36	0	4.00	0.79	Decreasin	4.75	1.00	7.00	2.87	Insufficien	4.98	0.00	24.00	3.83	Insufficient	4.19	0.00	17.00	4.00	Decreasing
	35	0.30	0	3.00	0.61	Decreasin	18.50	13.00	24.00	7.78	Insufficien	16.77	0.00	473.00	72.31	Insufficient	4.37	0.00	21.00	4.89	Decreasing
	38	0.37	0	5.00	0.90	Decreasin	9.00	9.00	9.00	0.00	Deficient v	7.68	0.00	54.00	10.35	Insufficient	6.44	0.00	50.00	8.60	Decreasing
	39	0.46	0	4.00	1.04	Decreasin	9.00	9.00	9.00	0.00	Deficient v	4.83	0.00	14.00	2.76	Insufficient	5.98	-2.20	63.00	10.71	Insufficient
	40	0.57	0.00	9.00	1.56	Decreasin	7.00	5.00	9.00	2.83	Deficient v	5.33	0.00	22.00	3.63	Insufficient	3.94	0.00	11.00	3.03	Decreasing
	46	0.00	0.00	0.01	0.00	Insufficien	9.00	9.00	9.00	0.00	Deficient v	6.25	5.00	10.00	2.50	Insufficient	1.00	1.00	1.00	0.00	Deficient values
	50	0.00	0.00	0.00	0.00	Insufficien	8.83	1.00	48.00	19.19	Insufficien	4.65	0.00	7.00	1.53	Insufficient	5.35	0.00	30.00	8.31	Decreasing
	51	0.00	0.00	0.01	0.00	Insufficien	9.00	9.00	9.00	0.00	Deficient v	12.77	5.00	140.00	30.14	Insufficient	5.32	0.00	21.00	5.91	Decreasing
	66	0.00	0.00	0.00	-	Deficient v	9.00	9.00	9.00	0.00	Deficient v	5.00	5.00	5.00	-	Deficient va	1.00	1.00	1.00	0.00	Deficient values
	67	0.00	0.00	0.00	-	Deficient v	9.00	9.00	9.00	0.00	Deficient v	5.00	5.00	5.00	-	Deficient va	1.00	1.00	1.00	0.00	Deficient values
Rock Forest	36	0.674	0.00	8	1.586	Decreasin	18.50	13.00	24.00	7.78	Insufficien	6.02		22.00	4.32	Insufficient	6.59	0.00	62.00	10.32	Decreasing
	37	0.621	0.00	5	1.276	Decreasin	20.33	13.00	24.00	6.35	Insufficien	9.61		80.00	12.99	Insufficient	33.96	0	1400	201.4	Decreasing



Location	Site ID [EPL]	Heavy Metals						Arsenic						Chromium III + IV					
		Aluminium																	
		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend	
	1	7.641	0.000	49.000	12.775	Decreasing		0.000	0.000	0.001	0.000	Increasing		0.000	0.000	0.000	0.000	Increasing	
	2	4.261	0.000	11.000	3.531	Insufficient		0.000	0.000	0.001	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient	
	4	33.910	0.000	212.000	71.750	Insufficient		0.001	0.000	0.011	0.004	Increasing		0.000	0.000	0.000	0.000	Increasing	
	25	4.873	0.000	38.000	9.349	Insufficient		0.361	0.000	5.000	1.353	Increasing		0.075	0.000	1.000	0.252	Increasing	
	56	6.605	0.000	130.000	19.180	Decreasing		0.201	0.000	1.000	0.306	Decreasing		1.466	0.000	43.000	8.889	Decreasing	
	57	11.680	0.000	166.000	31.510	Decreasing		1.977	0.000	5.200	1.714	Decreasing		0.144	0.000	1.000	0.223	Insufficient	
	58	5.076	0.000	120.000	16.030	Decreasing		0.175	0.000	1.000	0.265	Decreasing		0.420	0.000	4.000	0.780	Insufficient	
	80	3.144	0.050	5.000	2.562	Insufficient		5.764	0.003	16.200	5.842	Decreasing		0.125	0.000	0.200	0.103	Insufficient	
	81	3.144	0.050	5.000	2.562	Insufficient		5.590	0.001	12.100	4.915	Decreasing		0.125	0.000	0.200	0.103	Insufficient	
	82	1.288	0.050	5.000	2.475	Insufficient		0.051	0.000	0.200	0.099	Insufficient		0.050	0.000	0.200	0.100	Insufficient	
Lobbs Hole	83	10.380	0.050	26.000	10.060	Insufficient		4.423	0.001	11.000	4.243	Insufficient		0.322	0.000	1.900	0.595	Insufficient	
	71	0.521	0.007	6.000	1.995	Insufficient		0.019	0.000	0.300	0.075	Insufficient		0.013	0.000	0.200	0.050	Insufficient	
	72	0.017	0.005	0.100	0.017	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient	
Maricia	73	0.013	0.005	0.060	0.018	Decreasing		0.000	0.000	0.000	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient	
	68	0.039	0.005	0.060	0.023	Insufficient		0.000	0.000	0.000	-	Insufficient		0.000	0.000	0.000	-	Insufficient	
	69	0.041	0.005	0.060	0.015	Insufficient		0.000	0.000	0.000	-	Insufficient		0.000	0.000	0.000	-	Insufficient	
Tantangara	70	0.039	0.005	0.060	0.023	Insufficient		0.000	0.000	0.000	-	Insufficient		0.000	0.000	0.000	-	Insufficient	

Location	Site ID	Copper						Iron						Manganese						Nickel						Lead						Silver						Zinc					
		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend	
	1	2.100	0.000	17.000	4.466	Insufficient		675.1	0.0	2970.0	960.3	Decreasing		112.90	0.00	227.00	96.53	Decreasing		7.400	-	22.000	8.953	Insufficient		0.329	0.000	1.000	0.444	Insufficient		1.432	0.000	5.000	2.342	Insufficient		2.358	0.000	6.000	2.372	Insufficient	
	2	52.040	0.000	280.000	95.570	Insufficient		753.1	0.0	2390.0	936.1	Insufficient		147.30	0.00	245.00	92.91	Decreasing		7.259	-	28.000	8.636	Insufficient		0.383	0.000	1.000	0.459	Insufficient		1.671	0.000	5.000	2.459	Insufficient		6.335	0.000	25.000	8.347	Insufficient	
	4	1.355	0.000	8.300	2.401	Insufficient		787.8	0.0	4560.0	1426.9	Insufficient		246.40	0.00	1370.00	418.40	Insufficient		12.540	-	39.700	15.080	Decreasing		0.618	0.000	4.100	1.216	Insufficient		0.914	0.000	5.000	2.020	Insufficient		3.273	0.000	13.000	3.551	Insufficient	
	25	3.15	0.000	11.00	3.16	Insufficient		2340.0	0.0	6100.0	2264.0	Insufficient		849.40	0.00	1440.00	574.40	Insufficient		16.50	-	74.70	23.05	Decreasing		0.844	0.000	5.000	1.346	Insufficient		1.941	0.000	5.000	2.459	Insufficient		19.130	0.000	96.000	30.000	Insufficient	
	56	3.509	0.000	25.800	5.567	Decreasing		6.8	0.0	50.0	15.5	Decreasing		16.170	0.00	106.000	21.080	Decreasing		0.368	-	2.200	0.457	Decreasing		0.190	0.000	2.300	0.426	Decreasing		0.186	0.000	5.000	0.746	Decreasing		2.261	0.000	13.000	3.904	Decreasing	
	57	0.610	0.000	8.000	1.485	Decreasing		12.3	0.0	147.0	32.8	Decreasing		67.970	0.00	249.000	76.670	Decreasing		1.418	-	13.000	2.885	Decreasing		0.100	0.000	1.000	0.213	Decreasing		0.053	0.000	1.000	0.197	Decreasing		0.800	0.000	5.000	1.291	Decreasing	
	58	16.790	0.000	191.000	38.160	Decreasing		5.1	0.0	70.0	14.3	Decreasing		19.160	0.00	210.000	41.260	Decreasing		1.304	-	7.200	1.732	Decreasing		0.701	0.000	4.000	1.045	Decreasing		0.154	0.000	5.000	0.697	Decreasing		5.934	0.000	56.000	9.185	Decreasing	
	80	0.438	0.001	1.200	0.430	Decreasing		1.3	0.0	2.0	1.0	Insufficient		92.140	0.168	171.000	79.650	Decreasing		14.840	0.013	32.500	13.220	Decreasing		0.063	0.000	0.100	0.052	Insufficient		0.006	0.000	0.010	0.005	Insufficient		2.507	0.000	11.000	4.064	Insufficient	
	81	0.313	0.001	0.500	0.250	Insufficient		1.6	0.0	5.0	1.7	Insufficient		109.400	0.121	195.000	91.490	Decreasing		9.265	0.004	46.200	19.340	Insufficient		0.063	0.000	0.100	0.052	Insufficient		0.006	0.000	0.010	0.005	Insufficient		1.001	0.000	3.000	1.069	Insufficient	
	82	0.250	0.001	1.000	0.500	Insufficient		0.5	0.0	2.0	1.0	Insufficient		94.130	0.061	376.000	187.900	Insufficient		3.558	0.008	14.200	7.095	Insufficient		0.023	0.000	0.100	0.050	Insufficient		0.003	0.000	0.010	0.005	Insufficient		0.753	0.000	3.000	1.497	Decreasing	
Lobbs Hole	83	3.434	0.001	10.800	3.944	Insufficient		3.6	0.0	17.0	5.3	Insufficient		33.660	0.062	106.000	34.860	Decreasing		11.160	0.005	22.500	9.495	Decreasing		0.067	0.000	0.100	0.050	Decreasing		0.001	0.000	0.010	0.005	Decreasing		6.001	0.000	18.000	5.544	Insufficient	
	71	0.032	0.001	0.500	0.125	Insufficient		1.6	0.0	25.0	6.1	Insufficient		0.826	0.009	11.700	3.164	Decreasing		0.032	0.001	0.500	0.125	Insufficient		0.006	0.000	0.100	0.025	Insufficient		0.001	0.000	0.010	0.002	Insufficient		0.063	0.001	1.000	0.250	Insufficient	
	72	0.005	0.001	0.043	0.011	Insufficient		0.0	0.0	0.0	0.0	Insufficient		0.018	0.011	0.040	0.007	Decreasing		0.002	0.001	0.009	0.001	Decreasing		0.000	0.000	0.000	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.009	0.000	0.011	0.004	Insufficient	
Maricia	73	0.002	0.001	0.015	0.004	Insufficient		0.0	0.0	0.0	0.0	Insufficient		0.035	0.013	0.049	0.010	Decreasing		0.001	0.001	0.001	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.003	0.000	0.030	0.007	Insufficient	
	68	0.000	0.000	0.000	-	Insufficient		0.0	0.0	0.0	-	Insufficient		0.004	0.002	0.007	0.0	Insufficient		0.001	0.001	0.001	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.003	0.001	0.003	0.001	Insufficient	
	69	0.000	0.000	0.000	-	Insufficient		0.0	0.0	0.0	-	Insufficient		0.001	0.001	0.002	0.0	Insufficient		0.001	0.001	0.001	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.003	0.001	0.008	0.003	Insufficient	
Tantangara	70	0.000	0.000	0.000	-	Insufficient		0.0	0.0	0.0	-	Insufficient		0.003	0.002	0.004	0.0	Insufficient		0.002	0.001	0.003	0.001	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.000	0.000	0.000	0.000	Insufficient		0.001	0.001	0.002	0.001	Insufficient	

Location	Site ID	Nutrients, Inorganics, and TPH						Ammonia						Cyanide						Kjeldahl Nitrogen						Nitrate + Nitrite						Nitrogen						Total Phosphorus					
		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend	
	1	0.0464	0	0.18	0.0478	Increasing		0.00	0	0.004	0.00115	Insufficient		0.0641	0	0.4	0.122	Increasing		0.025	0	0.18	0.053	Increasing		304.4		1800	466	Decreasing		11.49	0	90	27.69	Increasing		4.575	0	20	7.375	Insufficient	
	2	0.079	0	0.72	0.21	Insufficient		0.00	0	0.004	0.00115	Insufficient		0.117	0	1	0.301	Insufficient		0.0267	0	0.31	0.0893	Insufficient		1203		13000	3716	Insufficient		43.34	0	290	92.47	Increasing		5.59	0	29.00	10.39	Insufficient	
	4	0.117	0	0.97	0.290	Increasing		0.00	0	0.004	0.00126	Insufficient		0.645	0	5.5	1.671	Increasing		0.00264	0	0.02	0.00674	Increasing		254.3		1500	427.8	Insufficient		10.25	0	110	33.09	Increasing		9.01	0	34.00	12.52	Insufficient	
	25	10.01	0.00	160.00	40.00	Insufficient		0.00	0.00	0.00	0.00	Insufficient		68.79	0	600	188.7	Increasing		5.126	0	50	8.732	Increasing		541.3		9060	783.7	Insufficient		925.60	0	4100.00	1023.00	Decreasing		1.188	0	11	2.786	Insufficient	
	56	34.41	0	370	74.18	Decreasing		1.922	0	4	2.017	Decreasing		268.9	0	2100	492.2	Decreasing		127.2	0	4480	641	Decreasing		383.3		5100	887.5	Decreasing		164.6	0	2230	629.5	Decreasing		0.00182	0	0.009	0.0015	Insufficient	
	57	39.21	0	310	69.13	Decreasing		1.922	0	4	2.017	Decreasing		438.1	0	4900	944.6	Decreasing		96.87	0	920	90.71	Decreasing		468.2		4900	951.7	Decreasing		860.3	0	10800	2048	Decreasing		0.00318	0	0.016	0.00446	Insufficient	
	58	21.99	0	280	47.39	Decreasing		1.93	0	4	2.015	Decreasing		1061	0	5400	1508	Decreasing		621.1	0	23500	7160	Decreasing		7461		26300	8282	Decreasing		41.63	0	690	304	Decreasing		0.00142	0	0.01	0.00215	Insufficient	
	80	33.74	0.01	140	46.26	Decreasing		2.502	0.004	4	2.07	Insufficient		200.1	0.2	900	302.3	Decreasing		11.25	0.00	40	13.96	Decreasing		200.1	0.2	900	302.3	Decreasing		15.00	0.05	60	23.88	Decreasing		0.005	0.004	0.006	0.001	Insufficient	
	81	36.28	0.01	90	42.4	Decreasing		2.502	0.004	4	2.07	Insufficient		512.8	0	1500	551.2	Insufficient		28.75	0.00	120	42.23	Decreasing		537.8	0.2	1500	560.1	Insufficient		313.5	0.23	860	247.7	Insufficient		0.00367	0.002	0.006	0.00208	Insufficient	
	82	12.52	0.01	50	24.99	Insufficient		1.003	0.004	4	1.996	Insufficient		275.7	0	1100	549.6	Insufficient		12.52	0.01	50	24.99	Insufficient		300.7	0.2	1200	599.6	Insufficient		361.1	0.03	1440	719.3	Insufficient		0.00667	0.004	0.01	0.00306	Insufficient	
Lobbs Hole	83	12.23	0.01	40	13.54	Decreasing		0.235	0.004	4	0.969	Insufficient		522.5	0.4	1000	476.1	Decreasing		32.14	1.50	6200	2582	Decreasing		37.24	1.5	7100	2987	Decreasing		51.17	0.06	170	55.54	Insufficient		0.006	0.002	0.074	0.00693	Insufficient	
	71	2.365	0.01	40	9.686	Insufficient		0.004	0.004	0.004	0.00	Insufficient		11.89	0.1	200	48.47	Insufficient		0.602	0.01	10	2.422	Insufficient		11.9	0.1	200	48.47	Insufficient		1.807	0.01	30	7.265	Insufficient		0.00418	0.001	0.01	0.00187	Increasing	
	72	0.0117	0.01	0.02	0.00383	Insufficient		0.004	0.004	0.004	0.00	Insufficient		0.425	0.1	2	0.5	Insufficient		0.0805	0.01	1.11	0.243	Insufficient		0.48	0.1	2	2.01	Insufficient		0.211	0.02	0.63	0.186	Insufficient		0.00134	0.001	0.018	0.00388	Increasing	
Maricia	73	0.639	0.1	8.5	1.973	Decreasing		0.004	0.004	0.004	0.00	Insufficient		0.639	0.1	8.5	1.973	Decreasing		0.25	0.02	2.47	0.629	Insufficient		0.856	0.00	8.5	2.01	Decreasing		0.07	0.02	0.14	0.0557	Insufficient		0.0207	0.013	0.028	0.00391	Insufficient	
	68	0.01	0.01	0.01	0.00	Insufficient		0.004	0.004	0.004	0	Insufficient		0.175	0.1	0.4	0.15	Insufficient		0.748	0.7	0.81	0.0479	Insufficient		0.875	0.8	1.1	0.15	Insufficient		0.025	0.02	0.04	0.01	Insufficient		0.0015	0.001	0.003	0.001	Insufficient	
	69	0.0175	0.01	0.04	0.02	Insufficient		0.004	0.004	0.004	0	Insufficient		0.125	0.1	0.2	0.05	Insufficient		0.423	0.1	1.37	0.632	Insufficient		0.475	0.1	1.6	0.75	Insufficient		0.0325	0.02	0.04	0.00957	Insufficient		0.005	0.003	0.008	0.00216	Increasing	
Tantangara	70	0.01	0.01	0.01	0.00	Insufficient		0.004	0.004	0.004	0	Insufficient		0.125	0.1	0.2	0.05	Insufficient		0.495	0.47	0.52	0.0206	Insufficient		0.55	0.5	0.7	0.1	Insufficient		0.0675	0.04	0.09	0.0236	Insufficient		0.016	0.01	0.024	0.00632	Insufficient	

Location	Site ID	Reactive Phosphorus as P [Filtered]						Hardness as CaCO3 [mg/L]						Total Suspended Solids [mg/L]						Oil and Grease [ug/L]					
		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend		Mean	Min	Max	StdDv	MK Trend	
	1	141.3	16	249	117.5	Insufficient		6.538	0	43	13.61	Increasing		0	0	0	0	Insufficient	
	2	24	24	24	-	Deficient values		0.455	0	5	1.508	Insufficient		0.0909	0	1	0.302	Insufficient	
	4	130.5	36	225	133.6	Deficient values		723.3	0	7050	2223	Insufficient		0	0	0	0	Insufficient	
	25	214	214	214	-	Deficient values		92.33	0	332	91.79	Insufficient		0	0	0	0	Insufficient	
	56	132.9	116	151	7.593	Insufficient		268.2	0	3470	926.9	Insufficient		2.273	0	5	2.092	Insufficient	
	57	131.5	111	150	8.449	Insufficient		653.9	0	8690	1458	Decreasing		2.778	0	10	2.601	Insufficient	
	58	150	26	234	63.4	Insufficient		70.92	0	560	125.2	Decreasing		2.442	0	5	2.07	Insufficient	
	80	-	-	-	-	Deficient values		21.2	5	64	25.55	Insufficient		1.8	1	5	1.789	Insufficient	
	81	-	-	-	-	Deficient values		784.6	92	1490	639.5	Insufficient		1.8	1	5	1.789	Insufficient	
	82	-	-	-	-	Deficient values		2230	2230	2230	-	Deficient values		5	5	5	0	Deficient values	
Lobbs Hole	83	-	-	-	-	Deficient values		140.5	20	510	189.7	Insufficient		2.333	1	5	1.066	Insufficient	
	71	23.15	16	43	8.143	Insufficient		17	6	43	11.64	Insufficient		1.333	1	5	1.155	Insufficient	
	72	14.06	9	23	13.81	Decreasing		395.5	28	1010	305.4	Insufficient		1.533	1	5	1.407	Insufficient	
Maricia	73	34.33	18	41	5.45	Insufficient		112.1	5	296	93.26	Insufficient		1.308	1	5	1.109	Insufficient	
	68	1.00	1.00	1.00	0.00	Insufficient		53	53	53	-	Deficient values		1	1	1	0	Deficient values	
	69	12	12	12	-	Deficient values		54	54	54	-	Deficient values		1	1	1	0	Deficient values	
Tantangara	70	13	13	13	-	Deficient values		126	126	126	-	Deficient values		1	1	1	0	Deficient values	