REPORT

EPL 21266 – BI-ANNUAL MONITORING REPORT JUNE 2024 – NOVEMBER 2024

S2-FGJV-ENV-REP-0116

Rev A

JANUARY 2025

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

Rev.	Date	Reason for Issue	Responsible	Accountable	Endorsed
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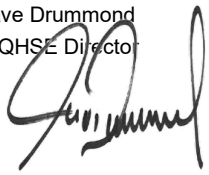
E ndorsed:	Name: Dave Drummond Job Title: QHSE Director Signed:  Date: 15/01/2025

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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.

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

Name	X	Y	Location	Sample Type	Description
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

Name	X	Y	Location	Sample Type	Description
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

Name	X	Y	Location	Sample Type	Description
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

Name	X	Y	Location	Sample Type	Description
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 June 2024 to November 2024, no variations to EPL21266 were issued to SHL.

1.4. Regulatory Actions

Clean-Up Notice 3507331 (SR-1638) was issued to SHL on the 1st of December 2023. Notice 3507331 comprised directions regarding management of materials and water, more specifically, nutrient concentrations in ground water and surface water from the Project spoil emplacement areas exceeding the relevant WQO's. 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.

On the 14th of November 2024, SHL was issued Variation 3510847 to Clean Up Notice 3507331. The variation encompassed updated defintiions regarding material requiring managemend under the Notice. Specifically, the updates included:

- Immediately from the date of this Notice, being 1 December 2023, cease all further emplacement of waste sludge and filter cake material at all permanent and temporary spoil emplacement area within Kosciuszko National Park until a date approved in writing by the EPA. Filter cake material refers to suspended solids removed from the Water Treatment Plant. Waste sludge material refers to fines collected from:
    - Water collection tanks from the tunnels
    - Water treatment tanks
    - Wedge pits
    - Leachate basins.
- By 5pm on the date which is one (1) week from the date of this Notice being 8 December 2023, commence providing a fortnightly status report to the EPA via info@epa.nsw.gov.au and copy in carlie.armstrong@epa.nsw.gov.au on the progress of:
    - a. The Action Plan provided in response to the Prevention Notice
    - b. Extraction volumes and treatment of groundwater and surface water at relevant spoil emplacement locations where relevant guidelines have been exceeded
    - c. All updated water quality monitoring data collect and analysed for monitoring points relevant to the spoil emplacement areas across the project. The data must:
        - Be provided in continuous excel format
        - Adopt mg/L as the unit of measurement
        - Not include negative values
        - Include consistent Limits of Detection across all reports and
        - Refer to relevant licence monitoring point numbers with no spacing (e.g. EPL1, EPL2)
- By 5pm on the date which is one (1) week from the date of this Notice, being 8 December 2023, establish meetings between Snowy Hydro and the EPA to provide a platform discussing the status of the response to the incident and next steps. The EPA recommends that these meetings are rotated fortnightly, with week 1 being led by operational staff, and week 2 being led by senior officers (e.g. Project Directors). Meeting invites can be directed to Andreas Stricker at andreas.stricker@epa.nsw.gov.au for distribution to relevant EPA attendees.

1.5. Project Updates

This bi-annual monitoring update includes sampling events within the reporting period. This period included significant progress of the Main Works package of the Snowy 2.0 Project. Please note Modification 3 works are not included due to lack of approval within the reporting period. A summary of construction activities at each site is outlined below.

1.5.1. Lobs Hole – (Mat Portal / Main Yard / ECVT / Ravine Bay / Main Camp / Ex Camp / GF01)

- All relevant Leachate Detection Procedures in place during the reporting period.
- Ravine Bay installation of emplacement liners completed.
- Ravine Bay spoil emplacement commenced, Stage 1 completed.
- GF01 storage capacity reached. Spoil placement ceased.
- 350 mm tunnel dewatering pipeline spanning mine trail road completed.
- Utilities cable pulling works completed.

1.5.2. Marica

- Marica Trail sealed until USS spoil pad.
- Sediment basins decommissioned, with exception to MC01, MC02 and MC03.

1.5.3. Tantangara

- Sediment basin decommissioning works along Quarry Trail complete.
- PSE excavation and installation works commenced.

Surface Depression rehabilitation works completed.

1.5.4. Trunk Services (Gooandra)

- Works Complete.
- Rehabilitation works complete.

1.5.5. Rock Forest

- Preparation for Modification 3 spoil placement works completed.
- Storage of materials including delivery of segments.

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 within the reporting period **Figure 2-1.**

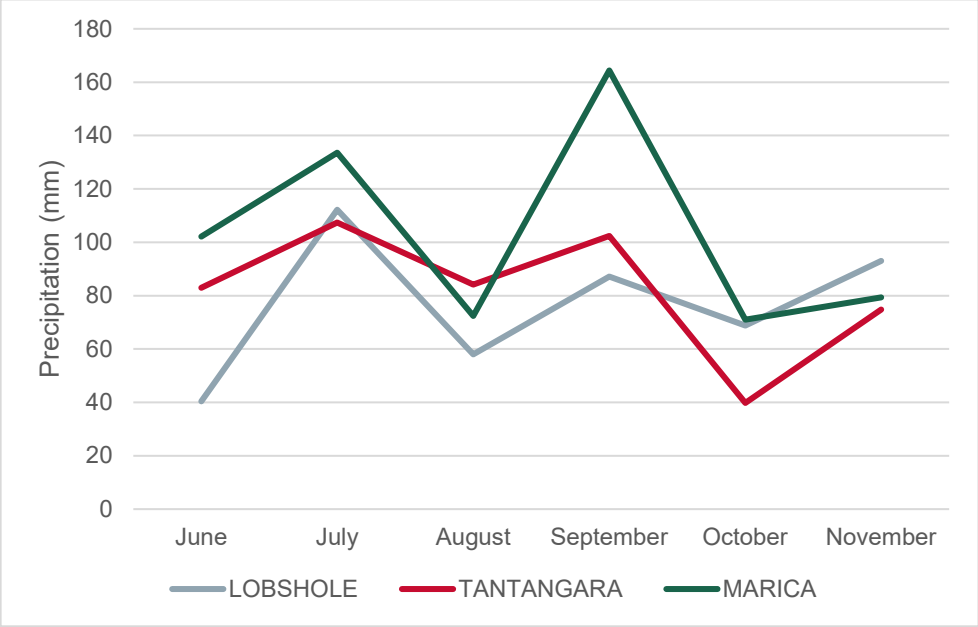


Figure 2-1: Cumulative Rainfall across Lobs Hole, Tantangara and Cabramurra

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:

- 44.4 mm at Lobs Hole – 28 November 2024;
- 67 mm at Cabramurra (Marica) – 12 June 2024; and
- 35.2 mm at Tantangara – 26 September 2024.

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

- Lobs Hole: 51.4 mm between 16 and 20 July 2024;
- Cabramurra (Marica): 92.8 mm between 21 and 26 September 2024; and
- Tantangara: 61.2 mm between the 17 and 21 July 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
June	83	57.8	102.2	124.5	40.4	102.3
July	107.4	53.8	133.6	113.8	112.2	103.6
August	84.2	59.7	72.4	127.7	58	106.2
September	102.4	60.1	164.4	120.0	87.2	90.0
October	39.8	67.8	71	109.4	68.8	95.2
November	74.8	58.9	79.4	122.9	93	77.0

Tantangara reported monthly rainfall totals greater than long term averages for every month excluding October. Marica reported July and September as greater than long term averages within the reporting period while Lobs Hole received greater than Long-Term Average rainfalls in July and November 2024.

Tantangara and Lobs Hole received a reduction in total rainfall when compared to the previous annual reporting period (June to November 2023) whilst Marica experienced an increase of 160 mm total rainfall within the timeframe.

2.3. Temperature Data

Figure 2-2 to **Figure 2-4** show temperature maximum and minimums across the project at Lobs Hole and Cabramurra weather stations.

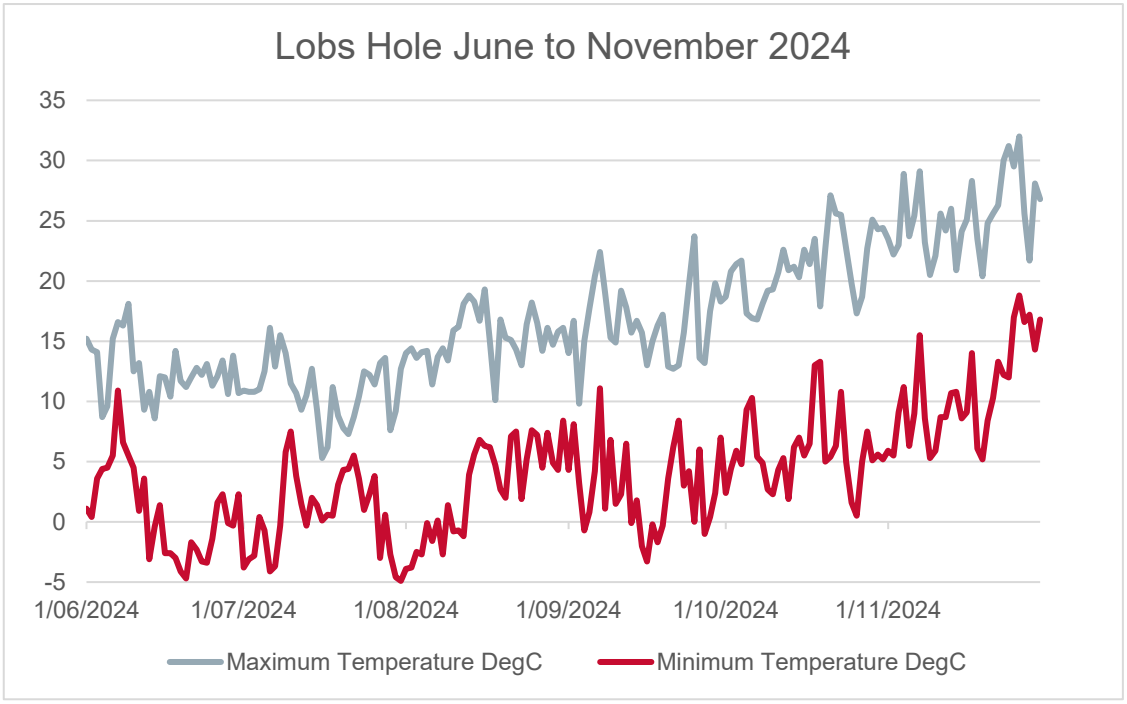


Figure 2-2: Lobs Hole - Minimum and Maximum Temperatures

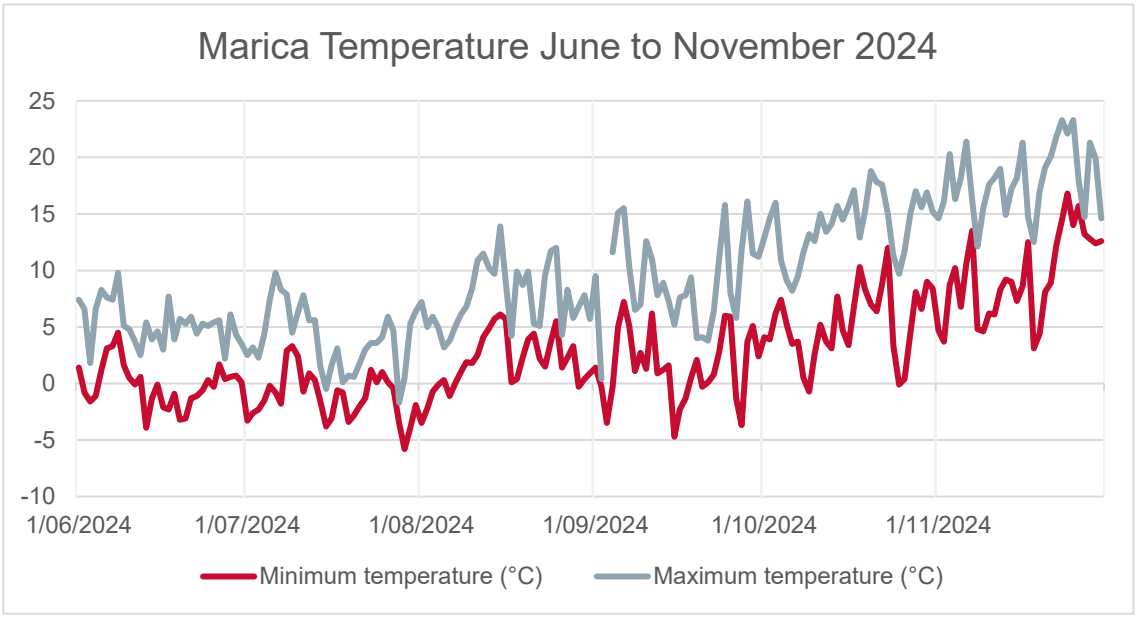


Figure 2-3: Marica - Minimum and Maximum Temperatures

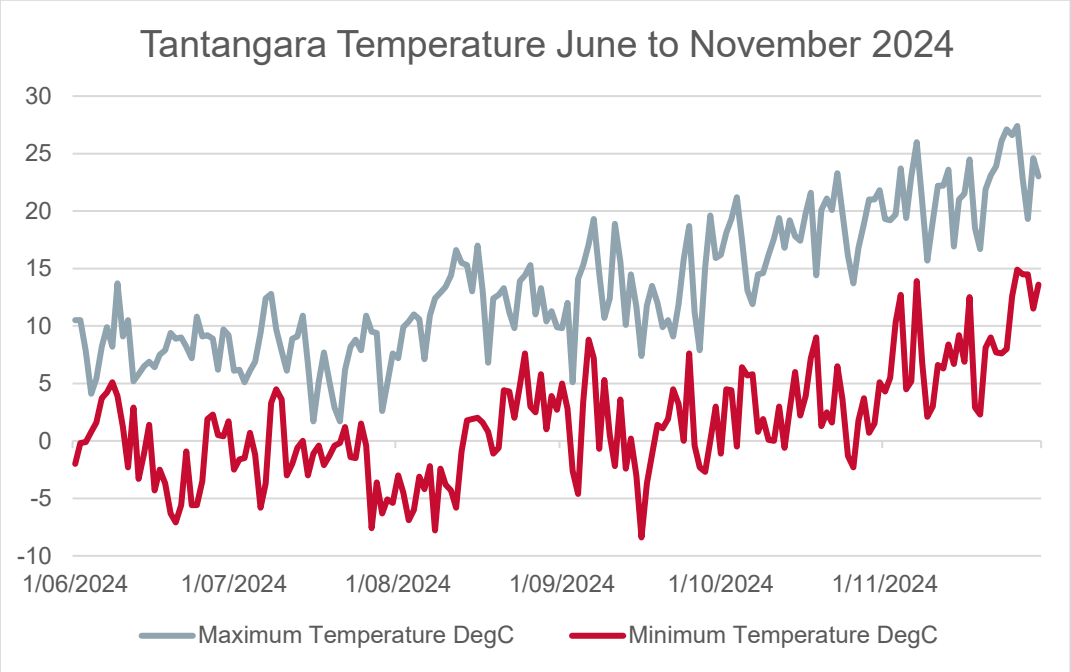


Figure 2-4: Tantangara - Minimum and Maximum Temperatures

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. June – November 2024 Water Quality Monitoring

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

- S2-FGJV-ENV-PLN-0010 Water Management Plan – Snowy 2.0 Main Works;
- S2-FGJV-ENV-PRO-0048 - Water Monitoring Procedure;
- 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 manmade;
- 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	
June to November 2024					
June	16	26	17	6	There were an increase exceedances of DO and EC for some EPLs which can result from rainfall events, temperature fluctuations and water level fluctuations throughout the project. An increase in pH exceedances is noted to have occurred within the reporting period. Turbidity exceedances are noted to be minor and likely congruent with rainfall events effecting runoff.
July	20	34	24	15	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.
August	17	36	19	10	Periods of dry followed by days of intense rainfall coupled with a rise in maximum temperatures throughout the reporting period are understood to influence water levels, pH, EC and DO within the reporting period.
September	36	35	24	10	The exceedances in DO and EC are noted to be greater than the previous reporting period. Turbidity ais attributed to natural variation and precipitation.
October	17	31	12	9	There were fewer exceedances for DO and turbidity within October. EC was observed at an increase frequency of exceedances within the month.

November	15	30	20	9	November included EC exceedances increase from the previous reporting period. EC is generally influenced by minerals and salts dissolving in flooding or surface water runoff / groundwater inundation.

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 climatic conditions experienced across the Project, variations between precipitation and temperature, fluctuations in reservoir water levels and varying stages of chemical change within the nitrogen cycle. The major water bodies within Tantangara and Lobs Hole act as the final recipient of overland runoff, which after periods of dry and intense wet, can see minor alterations to in-situ parameters.

Additionally, in-situ water quality parameters are understood to vary significantly following a rain event, when water levels are low or when groundwater bores have some degree of sediment build up within the water column. As all sampling locations are influenced by the aforementioned factors, the presented in-situ results are in line with conditions experienced on Project.

3.3. Groundwater Monitoring

Regular Groundwater monitoring events are undertaken to determine the conditions within the numerous subsurface water systems across the Project. 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 EPL21266, the numerous Leachate Detection Procedures (LDP's) and the Water Monitoring Procedure.

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 an additional network of boreholes is collected and assessed by SHL.

3.3.1. EPL 1, 2, 4, 25

Groundwater sampling was undertaken throughout the reporting period in 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, noting that several Project areas fall within naturally enriched metal formations. The nutrient exceedances generally fall within standard variation for these wells, with some increase in concentration frequencies. Nutrient exceedances form part of investigative works undertaken to inform management decisions and Project processes.

3.3.2. GF01

Groundwater sampling at GF01 was undertaken weekly within the reporting period 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 most elevated nutrients were observed to correlate to rainfall events and down gradient locations, indicating a relationship with leachate migration following rainfall events.

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 within the reporting period 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 and Lick Hole Gully 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.

3.4. Surface Water

Routine surface water quality monitoring is undertaken in accordance with relevent Conditions of 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;
- Arsenic;
- Aluminium (total);
- Aluminium (dissolved);
- Copper (dissolved);
- Chromium;
- Iron;
- Lead;
- Manganese;
- Zinc (dissolved); and
- BOD.

Some exceedances in nutrients and BOD were observed. This was most likely due to runoff from natural processes, as there was minimal discharge for the reported period.

Primarily, discharged water appeared to be inconsistent with the exceedances observed in the reservoir. It is noted that Emergency discharge actions have been actioned within the reporting period, however fluctuations in concentration exceedances are not understood to correlate accordingly.

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, analytical results within the reporting period 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);
- Copper (dissolved)
- Iron (dissolved);
- Lead (dissolved);
- Nickel (dissolved); and
- Zinc (dissolved).

Exceedances are observed for some analytes in some points caused by rain events and runoff. During the reported period, there was a exceedance in nutrient concentrations at nominal locations which have triggered TARPS. These locations were noted to occur within proximity to spoil emplacement areas.

Both sediment laden water and leachate water are collected in respective basins. All leachate water is treated prior to its reuse. Metal 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. Further sample locations include leachate basins and one down gradient stream location.

Analyte concentrations that exceed or are outside the range of relevant water quality trigger values are presented in **Appendix C**. Generally, analytical results within the reporting period were less than, or within, relevant water quality trigger values with exception of:

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

The exceedances to the water quality objectives within the Eucumbene sample locations are considered natural in origin and not caused or added to by the ongoing Project activities. The results obtained from locations within the LDP are currently operating under TARP conditions and are therefore sampled weekly.

3.4.4. Tantangara Surface Water

The predominant water bodies within Tantangara (excluding the reservoir) are the Nungar and Kelly's Plain Creeks (**Appendix A**). The leachate basins along with the outflow of the Tantangara Reservoir comprise 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 within the reporting period 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);
- Copper (dissolved)
- Iron (dissolved);
- Lead (dissolved);
- Nickel (dissolved);
- Zinc (dissolved); and
- BOD.

The majority of WQO analytes were within parameters throughout the reporting period. Nutrient concentrations throughout Tantangara were influenced by reservoir water levels, temperature of water bodies, rainfall events and other such natural influences.

The stream-based locations are primarily located above and below gradient of sealed or similar surfaced roadways, with exception to those located at confluences. All locations are anticipated to be influenced by contributing nutrient rich saturation zones, hooved animal disturbance and fluctuating states of dry and flood. The LDP locations are operating under TARP conditions.

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. In accordance with the Rock Forest LDP, five (5) monitoring bores were installed across the potential spoil emplacement area.

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;

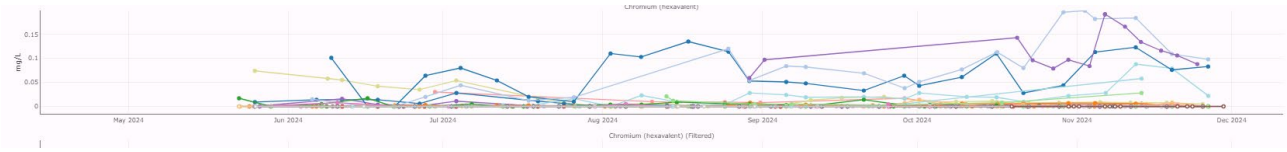
- Nitrogen (total);
- Aluminium (dissolved);
- Arsenic (dissolved);
- Chromium (dissolved);
- Iron (dissolved);
- Zinc (dissolved);

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 consistent fertiliser application and low rates of natural vegetation recovery throughout the grazing pasture. This is supported by the lack of any spoiling activities occurring at the location throughout the reporting period.

3.5. Trends

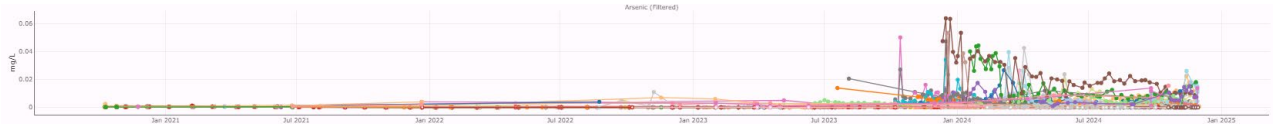
3.5.1. Decreasing Trends – Lobs Hole

Chromium (Hexavalent)

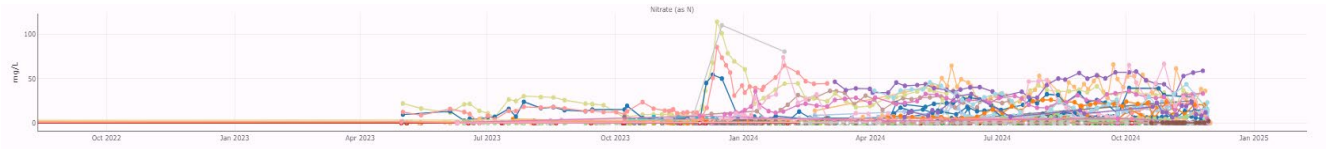


3.5.2. Increasing Trends – Lobs Hole

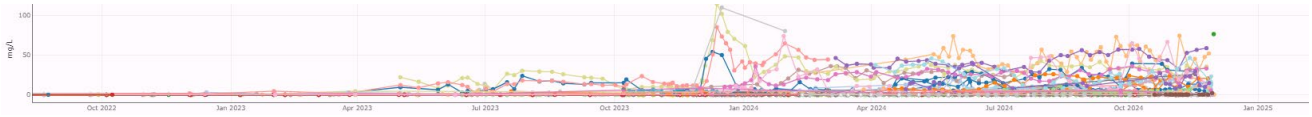
Arsenic (Filtered)



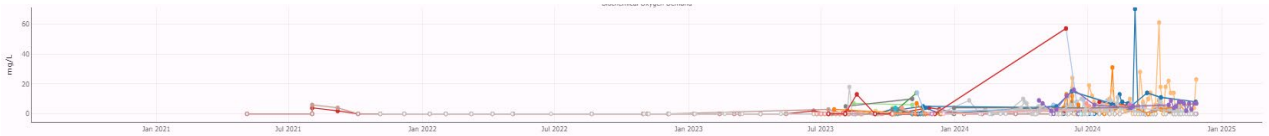
Nitrate



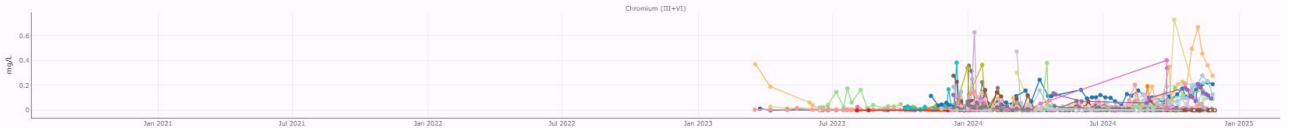
Nitrite + Nitrate as N



Biochemical Oxygen Demand



Chromium (III + VI)

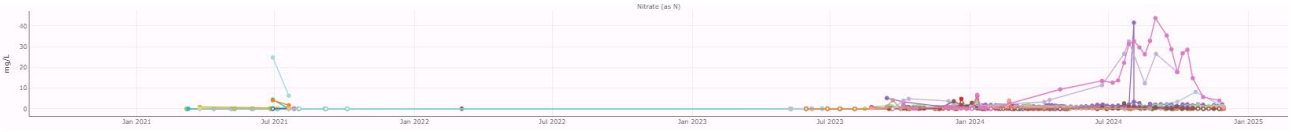


3.5.3. Decreasing Trend - Tantangara

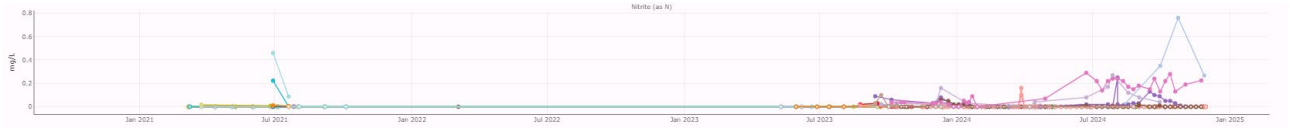
None identified.

3.5.4. Increasing Trend - Tantangara

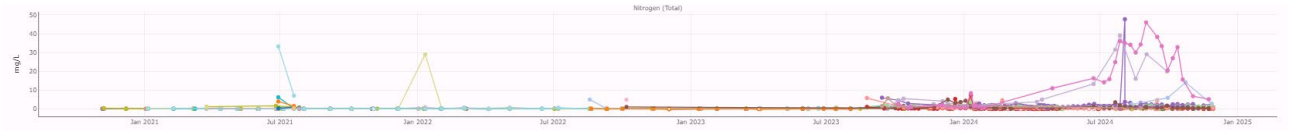
Nitrate



Nitrite



Total Nitrogen

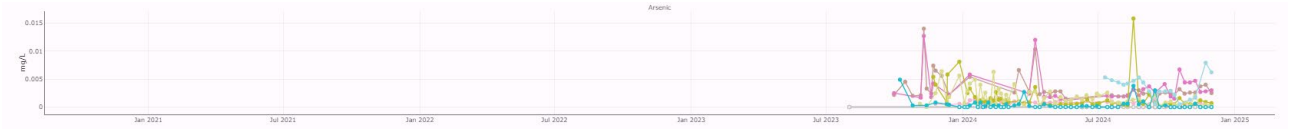


3.5.5. Decreasing Trend - Marica

None Identified

3.5.6. Increasing Trend – Marica

Arsenic



A review of the analytical trends indicate a greater number of increasing trends as opposed to decreasing trends across project sites. Analytical data for key nutrients is observed to be increasing across the majority of project sites, with data from Marica primarily comprised of leachate storage infrastructure, which skews the information.

Lobs Hole was observed to contain the greatest number of analytical trend increases, specifically within the nutrient analytical family.

3.6. EPA Notifiable Events

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

Table -2: Events Triggering TARP Implementation and EPA Notification

Date	Site	Incident Number	Event
11/06/2024	Lobs Hole	S2-FGJV-ENV-INC-114797	Sediment-laden water reporting to Yarrangobilly River at F5a basin
11/06/2024	Lobs Hole	S2-FGJV-ENV-INC-114861	Elevated nitrogen concentration at EPL monitoring point EPL55 Confluence
12/06/2024	Tantangara	S2-FGJV-ENV-INC-114861	Tantangara sediment basins overtopping event
13/06/2024	Lobs Hole	S2-FGJV-ENV-INC-114807	Sediment-laden water reporting to EPL55B and the Yarrangobilly River
3/07/2024	Lobs Hole	S2-FGJV-ENV-INC-115922	Talbingo Wedge-pit Material Placed in Pad 50
9/07/2024	Lobs Hole	S2-FGJV-ENV-INC-115977	GF01 Gully Sump A leaking
16/07/2024	Lobs Hole	S2-FGJV-ENV-INC-115998	Lobs Hole Sediment Basin Overtopping
20/07/2024	Lobs Hole	S2-FGJV-ENV-INC-116015	Sediment Basin Overtopping Event
20/07/2024	Lobs Hole	S2-FGJV-ENV-INC-116012	Sediment-laden water entering Yahoo Gully from F10.5 basin
21/07/2024	Tantangara	S2-FGJV-ENV-INC-116029	Tantangara Sediment Basin Overtopping Event
26/07/2024	Marica	S2-FGJV-ENV-INC-116056	Marica Sediment Basin Overtopping Event
27/07/2024	Tantangara	S2-FGJV-ENV-INC-116102	Elevated nitrates and total nitrogen concentration at EPL103
4/08/2024	Lobs Hole	S2-FGJV-ENV-INC-116100	Improper Waste Management at Lick Hole Gully PSE
13/08/2024	Lobs Hole	S2-FGJV-ENV-INC-116160	F5a sediment basin overtopping due to excessive upstream watercart irrigation
26/08/2024	Lobs Hole/Tantangara/Marica	S2-FGJV-ENV-INC-116230 S2-FGJV-ENV-INC-116229	Overtopping Basins at Lobs Hole, Tantangara, and Marica
7/09/2024	Tantangara	S2-FGJV-ENV-INC-116302	Breach of Construction Envelope by Watercart on Tantangara Road
26/08/2024	Tantangara	S2-FGJV-ENV-INC-116340	Tantangara Site Discharge - Exceedance in BOD Analyte

18/08/2024	Lobs Hole	S2-FGJV-ENV-INC-116359	EPL Sampling Non-Conformance
25/09/2024	Lobs Hole	S2-FGJV-ENV-INC-116410	Sediment laden water entering Yarrangobilly River
25/09/2024	Lobs Hole	S2-FGJV-ENV-INC-116411	F5a and F9 Basin Overtopping
26/09/2024	Lobs Hole	S2-FGJV-ENV-INC-116420	Sediment leachate laden water entering Yarrangobilly River from EPL84
26/09/2024	Tantangara	S2-FGJV-ENV-INC-116425	Tantangara Basin Overtopping Event
21/09/2024	Tantangara	S2-FGJV-ENV-INC-116429	EPL69 Analytical Exceedance
27/09/2024	Marica	S2-FGJV-ENV-INC-116427	EIS boundary encroachment from rock and fill material
5/10/2024	Lobs Hole	S2-FGJV-ENV-INC-116478	F5A Sediment Basin Overtopping
12/10/2024	Lobs Hole	S2-FGJV-ENV-INC-116512	Sediment laden water entering Middle Creek
16/10/2024	Lobs Hole	S2-FGJV-ENV-INC-116545	Discharge of non-compliant water into Talbingo reservoir
19/10/2024	Lobs Hole and Marica	S2-FGJV-ENV-INC-116568	Sediment basin overtopping event
19/10/2024	Lobs Hole	S2-FGJV-ENV-INC-116571	Sediment leachate laden water entering Yarrangobilly River from EPL84 basin
14/11/2024	Lobs Hole	S2-FGJV-ENV-INC-116788	Sediment leachate laden water entering Yarrangobilly River
26/11/2024	Lobs Hole	S2-FGJV-ENV-INC-116859	Sediment laden water reporting to Yarrangobilly river at basin F5a (26/11/2024)
28/11/2024	Lobs Hole	S2-FGJV-ENV-INC-116872	F5A and F9 basin overtopping, reaching Yarrangobilly River
28/11/2024	Lobs Hole	S2-FGJV-ENV-INC-116868	Sediment and leachate laden water entering Yarrangobilly River from basins F8 and F8.5
28/11/2024	Lobs Hole	S2-FGJV-ENV-INC-116870	Sediment laden water entering Yahoo Gully from basin F10.5
30/11/2024	Lobs Hole	S2-FGJV-ENV-INC-116884	ECVT turkey's nest overtopping
30/11/2024	Lobs Hole	S2-FGJV-ENV-INC-116897	F1, F3a, F3b, and TTP01 sediment basin overtopping event

DISCUSSION

Monitoring of all water locations occurred between the 1*st* of June and the 30*th* November 2024 across Lobs Hole, Marica and Tantangara.

The observed variations are considered consistent with climatic conditions experienced across the Project, specifically, variations between precipitation and temperature, fluctuations in reservoir water levels and varying stages of chemical change within the nitrogen cycle. The nitrogen cycle has influenced such factors through promoting algal presence within primary water bodies.

The Reservoirs act as the major water bodies within Tantangara and Lobs Hole. These features are the final recipient of overland runoff, which after periods of dry and intense wet, can see minor alterations to in-situ parameters following dissolved minerals and salts.

Additionally, in-situ water quality parameters are understood to vary significantly following a rain event, when water levels are low or when groundwater bores have some degree of sediment build up within the water column. Rainfall duration further influences surface saturation, which results in reactional variations to water seepage and hydrogeological conductivity.

Laboratory analytical results include increasing nutrient loads within areas of proximity to, or down gradient of permanent spoil emplacement areas. Within this focus area, water collected from leachate infrastructure is treated and reused when appropriate analytical concentrations dictate. Analytical concentrations were observed to have some correlation to those locations within above gradient positions to the permanent spoil emplacement areas on site. For example, Tantangara above gradient location EPL70 consistently exceeded the adopted WQO's in line with down gradient LDP locations throughout the reporting period.

APPENDIX A – SNOWY 2.0 – EPL SAMPLING LOCATIONS

SURFACE WATER EPL POINTS SAMPLING

SURFACE WATER EPL POINTS SAMPLING
LOBSHOLE – MAT PORTAL /ECVT

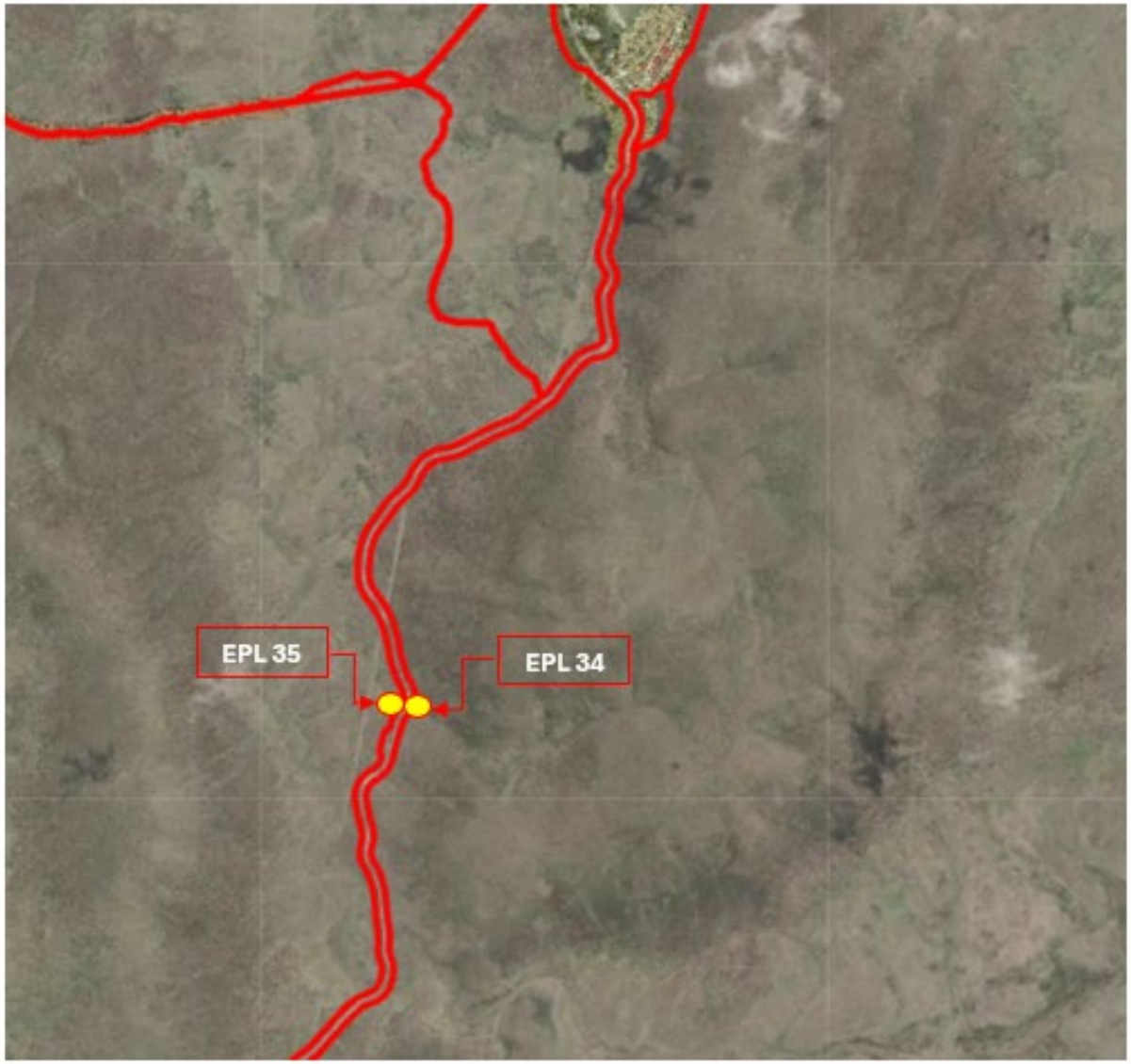
SURFACE WATER EPL POINTS SAMPLING
LOBSHOLE – MAIN OFFICE/ MAIN YARD

SURFACE WATER EPL POINTS SAMPLING
LOBSHOLE – MAIN CAMP/GF01

SURFACE WATER EPL POINTS SAMPLING
MARICA

SURFACE WATER EPL POINTS SAMPLING
TANTANGARA

SURFACE WATER EPL POINTS SAMPLING
TANTANGARA



SURFACE WATER EPL POINTS SAMPLING
ROCK FOREST

SURFACE WATER LEACHATE EPL POINTS SAMPLING

SURFACE WATER LEACHATE EPL POINTS SAMPLING
LOBSHOLE – GF01

SURFACE WATER LEACHATE EPL POINTS SAMPLING
LOBSHOLE – MAIN YARD

SURFACE WATER LEACHATE EPL POINTS SAMPLING
TANTANGARA

SURFACE WATER LEACHATE EPL POINTS SAMPLING
MARICA

GROUND WATER EPL POINTS SAMPLING

GROUND WATER EPL POINTS SAMPLING
LOBSHOLE – MAT PORTAL /ECVT

GROUND WATER LEACHATE EPL POINTS SAMPLING

GROUND WATER LEACHATE EPL POINTS SAMPLING
LOBSHOLE – GF01

GROUND WATER LEACHATE EPL POINTS SAMPLING
LOBSHOLE – MAIN YARD

GROUND WATER LEACHATE EPL POINTS SAMPLING
LOBSHOLE – TANTANGARA

APPENDIX B – IN SITU RESULTS TABLES

JUNE 2024

2024 EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring June 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
3/6/2024, 9:24 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	9.36	118.1	13.53	68	44	8.25	199	3.2	Clear and moderate flow, not turbid, no odour	This location is upstream of works and is therefore representative of background conditions.
3/6/2024, 10:06 am	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	9.32	89.8	10.3	84	55	7.96	219	3.4	Clear water, low level, stinky odour around, sunny	Low DO is consistent with historical ranges for this location however the cause for the decrease in DO from EPL 5 is unknown and will be monitored.
3/6/2024, 11:15 am	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	10.84	93.4	10.34	30	45	7.89	226	3.4	Clear, consistent and moderate flow, no turbidity or odour	All readings are within WQO limits.
1/6/2024, 10:41 am	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	8.4	93.4	10.95	58	38	8.43	183	37.5	Turbid water,cloudy, no odour, foams on water	Elevated pH is generally consistent with background conditions during sampling and within historical ranges. The evelated turbidity is likely due to recent rainfall (32.6 mm recorded for 31/5/2024)
3/6/2024, 9:43 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	9.45	100.9	11.54	67	43	8.08	210	3.1	Clear, consistent and moderate flow, no turbidity, no odour	High pH is consistent with background conditions during sampling for this location for June 2024.
3/6/2024, 10:31 am	EPL14	Yarrangobilly River, downstream of road construction areas	9.9	93.2	11.1	69	45	7.89	224	3	Clear, consistent and moderate flow, no turbidity or odour	All readings are within WQO limits.
3/6/2024, 10:57 am	EPL15	Yarrangobilly River, downstream of road construction areas	10.41	102.3	11.42	30	44	7.85	228	7.1	Clear, consiste and moderate flow, not turbid and no odour	All readings are within WQO limits.
3/6/2024, 11:32 am	EPL16	Yarrangobilly River, downstream of road construction areas	10.6	96.3	10.72	30	45	7.92	225	3.6	Clear, consistent and moderate flow, no turbidity or no odour	All readings are within WQO limits.
6/6/2024, 10:35 am	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	11.71	68.8	7.46	451	293	7.21	185	7.7	Clear water, low level, no odour, sunny	Elevated EC is consistent with EPL 24. Links to GF01 and EPL 24 are being investigated to account for the EC.
3/6/2024, 1:26 pm	EPL26	Eucumbene River downstream of Marica Road	8.19	100.2	11.8	30	19	8.49	157	0.3	Cool morning, fine day.	High pH and low turbidity are consistent with background conditions during sampling and within historical ranges.
3/6/2024, 1:19 pm	EPL27	Eucumbene River upstream of Marica Road	9.06	106.6	12.32	31	19	8.35	162	22.6	Cool morning, fine day.	This location is upstream of works and is therefore representative of background conditions.
12/6/2024, 11:40 am	EPL30	Kellye Plain Creek, downstream of accommodation camp and laydown areas	8.06	96.8	11.45	32	20	7.83	227	24.5	Turbid water, no odour, cloudy	All readings are within WQO limits.
12/6/2024, 11:19 am	EPL31	Kellye Plain Creek, upstream of accommodation camp and laydown areas	9.43	102.7	11.75	35	23	7.94	179	20.7	Turbid water, no odour, cloudy	All readings are within WQO limits.
12/6/2024, 10:55 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	8.77	101.3	11.78	30	20	7.87	186	0	Very clear water, no odour, cloudy	Turbidity reading was less than measureable on in situ meter. More sensitive meter is being sourced.
12/6/2024, 10:30 am	EPL34	Nungar Creek, upstream of Tantangara Road	7.82	99.4	11.82	15	10	7.86	202	9.4	Turbid water, no odour, cloudy	This location is upstream of works and is therefore representative of background conditions.
12/6/2024, 10:35 am	EPL35	Nungar Creek, downstream of Tantangara Road	8.05	100.2	11.85	18	12	7.82	188	15.5	Turbid water, no odour, cloudy	Low EC is within historical range for this location and is consistent with background conditions for June 2024.
12/6/2024, 2:38 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	8.02	93.8	11.1	37	24	7.75	444	15	Turbid water, no odour, cloudy	All readings are within WQO limits.
12/6/2024, 2:50 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	8	94.4	11.18	39	25	7.71	458	17.5	Cloudy day, a bit murky water, no flowing, no odour	All readings are within WQO limits.
11/6/2024, 10:40 am	EPL52	GF01 sediment basin	7.74	98.6	11.73	731	468	9.01	216	50.7	Rainy day, low level of water, no odour, turbid water	High EC, pH, and turbidity are due to runoff accumulating in the 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
11/6/2024, 10:46 am	EPL55	GF01 surface water downstream	10.02	63.7	7.17	626	401	7.98	236	16.00	Rainy day, low flowing, clear water, no odour	Elevated EC and low DO are generally consistent with conditions at GF01 during sampling in June 2024.
16/6/2024, 10:37 am	EPL 66	Tantangara Leachate basin downstream east from Tantangara emplacement area	7.2	89.3	10.8	15.2	15	6.31	213.5	3.74	Sunny, clear skies; relatively clear water with bits of organic material in it, no odour. Used pH probe instead of pH sensor on YSI (as it is showing wrong results). HACH turbidimeter in lieu of YSI.	Low EC, DO and pH are generally consistent with background conditions during sampling and within historical ranges.
16/6/2024, 9:23 am	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	3.8	86.6	11.42	8.9	10	7.25	153.7	6.08	Sunny, clear skies; relatively clear water with bits of organic material in it, no odour. Used pH probe instead of pH sensor on YSI (as it is showing wrong results). HACH turbidimeter in lieu of YSI.	Low EC and DO are generally consistent with background conditions during sampling and within historical ranges.
2/6/2024, 8:29 am	EPL71	Surface water downstream of Marica emplacement	1.51	99.8	13.99	49	32	8.42	232	13.3	Cold, windy day	Elevated pH is generally consistent with background conditions during sampling and within historical ranges.
21/6/2024, 2:30 pm	EPL84	FB Basin	11.97	117.9	12.65	676	433	9.82	29	543	Partly cloudy, light rain early this morning, algae present, basin 50% cap, no odour, highly turbid	High EC, pH, and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant or re-use where parameters where met.
21/6/2024, 2:40 pm	EPL85	MYO7 Basin	10.86	95.6	10.56	452	294	9.1	85	75.5	Partly cloudy, highly turbid, no odour	High EC, pH, and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant or re-use where parameters where met.
21/6/2024, 2:55 pm	EPL86	LHG01 Basin	10.84	97.5	10.76	903	578	8.22	131	19.7	Fairly clear. No odour. Water level very low. Sunny, cool weather.	High EC, pH, and turbidity are due to runoff accumulating in the 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
23/6/2024, 9:42 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	9.38	89.5	10.25	0	0	7.52	178	2	Freezy morning, clear water, nothing unusual detected, the surface of water is clear	Low DO is within historical ranges and background concentrations for June 2024. Turbidity reading was less than measureable on in situ meter. More sensitive meter is being sourced.
23/6/2024, 9:41 am	EPL11	Talbingo Reservoir, downstream of outlet	9.45	76.6	8.76	0	0	7.08	216	5.3	Freezy morning, clear water, nothing unusual detected, the surface of water is clear	Low DO are within historical ranges and background concentrations for June 2024. Turbidity reading was less than measureable on in situ meter. More sensitive meter is being sourced.
28/6/2024, 10:37 am	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	5.7	86.2	10.81	18	19	7.18	115.6	1.56	Sunny; relatively clear water with high amount of organic material in it, no odour	This location is upstream of works and is therefore representative of background conditions.
28/6/2024, 11:25 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	6.1	84.9	10.53	19.1	20	7.36	166.9	1.39	Sunny; relatively clear water with a high amount of organic material in it, no odour	Low EC and DO are within historical ranges and background concentrations for June 2024.
28/6/2024, 11:21 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	11.55	96.5	10.51	24	16	6.97	277	7	Partly cloudy; relatively clear water with a high amount of organic material in it, no odour	All readings are within WQO limits.
28/6/2024, 10:56 am	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	5.9	84.6	10.56	18.7	19	7.3	180	148	Party cloudy; slightly turbid water with a high amount of organic material in it, no odour	Low EC and DO are within historical ranges and background concentrations for June 2024.
28/6/2024, 10:17 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	4.2	86.2	11.23	11.23	11	7.12	154.6	3.67	Sunny with scattered clouds; relatively turbid water with high amount of organic material in it, no odour. Had to sample closer to EPL 67 due to lower water level than normal	This location is upstream of works and is therefore representative of background conditions.
28/6/2024, 10:01 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	4.4	85.4	11.09	16	17	7.55	90.8	199.32	Sunny with scattered clouds; relatively turbid water with high amount of organic material in it, no odour. Sample was taken further from EPL 40 than normal due to low water level in reservoir.	This location is upstream of works and is therefore representative of background conditions.
28/6/2024, 11:42 am	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	6.1	84.4	10.48	19.3	20	7.32	168.4	1.39	Sunny; relatively clear water with a high amount of organic material in it, no odour	Low EC and DO are within historical ranges and background concentrations for June 2024.
28/6/2024, 11:32 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	6.1	84.9	10.54	19.4	20	7.34	165.9	1.37	Sunny; relatively clear water with a high amount of organic material in it, no odour	Low EC and DO are within historical ranges and background concentrations for June 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
12/6/2024, 8:17 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	13.72	73.5	7.62	25	16	7.57	229	20.8	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
12/6/2024, 12:54 pm	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	8.24	91	10.72	7	4	6.75	366	0	Clear water, no odour, cloudy	Turbidity reading was less than measureable on in situ meter. More sensitive meter is being sourced.

Table 3 - Groundwater Quality Data
SF01 Surface Water and Groundwater

	Water Quality Objectives (see note 4)							
	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
1/6/2024, 10:45 am	EPL56	GF01 groundwater upstream east	12.84	30.7	3.25	179	116	7.43	165	19.1	Sunny day, clear water, no odour, SWL- 11.88 m deep	All readings are within WQO limits.
1/6/2024, 10:58 am	EPL57	GF01 groundwater upstream west	13.05	24.6	2.59	158	103	7.92	162	71.5	Sunny day, clear water, no odour, SWL- 20.94 m deep	All readings are within WQO limits.
1/6/2024, 11:46 am	EPL58	GF01 groundwater downstream	14.93	36.4	3.67	504	322	6.26	191	5.5	Sunny day, clear water, no odour, SWL- 8.83 m deep	High EC and low pH are generally consistent with conditions at GF01 during sampling.
16/6/2024, 10:26 am	EPL68	Tantangara groundwater downstream West	10.5	80.9	9.03	10.9	10	5.8	227.5	12.1	Clear sky/no clouds; clear water, no odour. pH probe used in lieu of YSI pH sensor (needs service). HACH turbidimeter in lieu of YSI.	Low pH and EC will be monitored though is generally consistent with previous results from May 2024 and upgradient conditions in June 2024.
16/6/2024, 9:55 am	EPL69	Tantangara groundwater downstream East	9.8	70.7	8.01	143	13	6.2	201.7	22.6	Clear sky/no clouds; clear water, no odour. pH probe used in lieu of YSI pH sensor (needs service). HACH turbidimeter in lieu of YSI.	Low pH will be monitored though is generally consistent with previous results from May 2024 and upgradient conditions in June 2024.
16/6/2024, 11:52 am	EPL70	Tantangara groundwater upstream	10.4	70.6	7.88	45.4	41	6.3	181.6	106	Clear sky/no clouds; pretty turbid water, no odour. pH probe used in lieu of YSI pH sensor (needs service). HACH turbidimeter in lieu of YSI.	This location is upstream of works and is therefore representative of background conditions.
8/6/2024, 12:01 pm	EPL 72	Marica groundwater upstream	8.94	86.8	10.04	32	21	6.97	211	37.1	Cold, windy day.	All readings are within WQO limits.
8/6/2024, 9:00 am	EPL73	Marica groundwater downstream	1.25	99.7	15.07	44	28	7.79	256	18.9	Cold, windy day.	All readings are within WQO limits.
7/6/2024, 9:10 am	EPL80	LHG groundwater upstream	15.38	95.6	9.55	483	314	7.0	6	63.7	Sunny day, turbid water, no odour, SWL- 20.360 m deep	This location is upstream of works and is therefore representative of background conditions.
7/6/2024, 10:11 am	EPL81	LHG groundwater downstream	14.81	18.8	1.9	402	261	6.92	-24	241	Sunny day, turbid water, no odour, SWL- 3.68 m deep	Elevated EC is consistent with background conditions and consistent with conditions recorded in May 2024.
7/6/2024, 9:31 am	EPL82	MY groundwater upstream	15.55	91.2	9.04	1680	1080	6.83	-16	52.4	Sunny day, clear water, no odour, SWL- 9.28 m deep	This location is upstream of works and is therefore representative of background conditions.
7/6/2024, 10:50 am	EPL83	MY groundwater downstream	15.84	25.8	2.55	485	315	7.03	-60	7.6	Sunny day, no odour, a bit turbid water, SWL- 3.67 m	Elevated EC is generally consistent with background conditions in June 2024 and previous conditions recorded in May 2024.
7/6/2024, 9:53 am	EPL87	MY groundwater downstream	14.92	15.5	1.57	274	178	7.05	57	44.7	Sunny day, turbid water, no odour, SWL- 4.01 m deep	All readings are within WQO limits.
7/6/2024, 10:30 am	EPL88	MY groundwater downstream	15.84	25.8	2.55	485	315	7.03	-60	7.6	Sunny day, clear water, smelly, SWL- 3.31 m deep	Elevated EC is generally consistent with background conditions in June 2024 and previous conditions recorded in May 2024.
7/6/2024, 2:25 pm	EPL89	LHG groundwater downstream	15.55	29.7	2.96	177	115	6.93	179	107	Sunny day, clear water, no odour, SWL-3.133 m	All readings are within WQO limits.
1/6/2024, 12:02 pm	EPL90	GF01 groundwater downstream	13.54	65.5	6.82	196	127	6.49	185	241	Sunny day, turbid water, no odour, SWL-12.95 m deep	Low pH is generally consistent with surrounding conditions and previous results recorded in June 2024.
1/6/2024, 12:20 pm	EPL91	GF01 groundwater downstream	14.49	32.1	3.27	163	106	6.85	98	50.8	Sunny day, turbid water, no odour, SWL-8.20 m deep	All readings are within WQO limits.
1/6/2024, 11:15 am	EPL92	GF01 groundwater downstream	12.83	65.1	6.88	46	30	6.9	206	49	Sunny day, no dour, turbid water, SWL-14.90 m deep	All readings are within WQO limits.
1/6/2024, 11:35 am	EPL93	GF01 groundwater downstream	12.88	52.3	5.53	167	109	7.09	19	158	Sunny day, turbid water, no odour, SWL- 16.42 m deep	All readings are within WQO limits.
1/6/2024, 11:28 am	EPL94	GF01 groundwater downstream	13.39	33.9	3.54	112	73	6.72	88	89.1	Sunny day, turbid water, no odour, SWL- 14.66 m deep	All readings are within WQO limits.
1/6/2024, 11:44 am	EPL95	GF01 groundwater downstream	13.82	52.3	5.4	340	221	6.28	176	12	Sunny day, clear water, no odour, SWL- 11.20 m	Low pH is generally consistent with surrounding conditions and previous results recorded in June 2024.
1/6/2024, 11:52 am	EPL96	GF01 groundwater downstream	13.92	40.9	4.22	188	122	7.08	152	510	Sunny day, turbid water, no odour, SWL- 6.552 m deep	All readings are within WQO limits.
1/6/2024, 12:21 pm	EPL97	GF01 groundwater downstream	14.07	30.2	3.11	245	159	7.04	91	95.2	Sunny day, turbid water, no odour, SWL- 7.32 m deep	All readings are within WQO limits.

Note 1: Water Quality Objective values for the Yarrangobilly River and Minor Watercourses refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 2: Water Quality Objective values for Talbingo Reservoir are the default trigger values for physical and chemical stressors in south-east Australia (freshwater lakes and reservoirs) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 3: 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.

Note 4: Water Quality Objective values for groundwater reference the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for pH and electrical conductivity.

JULY 2024

2024 EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring July 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
14/7/2024, 10:45 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	8.52	98.5	11.52	96	63	7.93	268	2	Clear and moderate flow, not turbid, no odour, high flowing	This location is upstream of works and is therefore representative of background conditions.
14/7/2024, 11:31 am	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	7.08	81.9	9.92	109	71	8.28	262	5.7	Clear water, low level, stinky odour around, sunny	pH and DO levels remain consistent with baseline conditions. During the baseline studies in winter months, pH and Dissolved oxygen displayed frequent exceedances from project WQO. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.
14/7/2024, 2:16 pm	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	10.18	88.5	9.95	102	66	8.3	263	0.9	Clear, consistent and moderate flow, no turbidity or odour	Elevated pH with low DO and turbidity levels remain consistent with baseline conditions. During the baseline studies in winter months, pH and Dissolved oxygen displayed frequent exceedances from project WQO.The turbidity was generally representative of background conditions in July 2024.
14/7/2024, 2:44 pm	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	8.4	85.5	10.03	99	65	8.84	240	1.5	Turbid water,cloudy, no odour, foams on water	Elevated pH with low DO and turbidity levels remain consistent with baseline conditions. During the baseline studies in winter months, pH and Dissolved oxygen displayed frequent exceedances from project WQO. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities. The turbidity was generally representative of background conditions in July 2024.
14/7/2024, 11:03 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	6.97	82.3	10	91	59	8.26	255	1.6	Clear, consistent and moderate flow, no turbidity, no odour	Elevated pH with low DO and turbidity levels remain consistent with baseline conditions. During the baseline studies in winter months, pH and Dissolved oxygen displayed frequent exceedances from project WQO. The turbidity was generally representative of background conditions in July 2024.
14/7/2024, 11:54 am	EPL14	Yarrangobilly River, downstream of road construction areas	7.22	78.8	9.51	94	61	8.31	263	1.7	Clear, consistent and moderate flow, no turbidity or odour	Elevated pH with low DO and turbidity levels remain consistent with baseline conditions. During the baseline studies in winter months, pH and Dissolved oxygen displayed frequent exceedances from project WQO. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.The turbidity was generally representative of background conditions in July 2024.
14/7/2024, 12:18 pm	EPL15	Yarrangobilly River, downstream of road construction areas	7.14	78.9	9.54	95	62	8.4	263	0.9	Clear, consiste and moderate flow, not turbid and no odour	Elevated pH with low DO and turbidity levels remain consistent with baseline conditions. During the baseline studies in winter months, pH and Dissolved oxygen displayed frequent exceedances from project WQO. The turbidity reading was less than measurable on in situ meter. More sensitive meter is being sourced. The turbidity was generally representative of background conditions in July 2024.
14/7/2024, 3:03 pm	EPL16	Yarrangobilly River, downstream of road construction areas	8.5	75.5	8.83	100	65	8.88	245	1.5	Clear, consistent and moderate flow, no turbidity or no odour	Elevated pH with low DO and turbidity levels remain consistent with baseline conditions. During the baseline studies in winter months, pH and Dissolved oxygen displayed frequent exceedances from project WQO. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities. The turbidity was generally representative of background conditions in July 2024.
19/7/2024, 10:53 am	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	8.05	70	8.28	300	195	7.71	250	6.6	More flowing than usual due to the recent rainfall event, quite turbid water, no smelly	Low DO concentrations align with historical data for EPL 24. In July, the EC decreased its levels in comparison with June.
19/7/2024, 2:38 pm	EPL26	Eucumbene River downstream of Marica Road	3.4	90.2	12.03	22.7	25	7.52	123.3	4.99	Snow overnight	Low EC is consistent with background conditions during sampling and within historical ranges for winter.
19/7/2024, 2:53 pm	EPL27	Eucumbene River upstream of Marica Road	3.1	88.3	11.85	8.2	3.55	7.05	132.7	3.55	Snow overnight	This location is upstream of works and is therefore representative of background conditions.
22/7/2024, 10:07 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	5.16	83.6	10.66	35	23	6.72	289	7.8	Freezy morning, clear water, high flowing, no odour	Low DO is consistent with the baseline water quality conditions for winter and generally within historical ranges.
22/7/2024, 9:51 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	5.29	73.6	9.33	20	13	6.7	302	5	Freezy morning, hhg flowing, a bit trubulent, clear water, no odour	Low DO and conductivity are consistent with the baseline water quality conditions for winter and generally within historical ranges.
22/7/2024, 10:46 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	4.46	91.7	11.87	25	16	7.34	263	2.2	Freezy morning, Hgh level of water and very high flowing, clear water, no smelly, turbulent	Low EC is consistent with the baseline water quality conditions for winter and generally within historical ranges.
22/7/2024, 8:48 am	EPL34	Nungar Creek, upstream of Tantangara Road	3.22	89.8	12.03	11	7	7.13	233	5.6	Freezy morning, Hgh flowing, turbulent water, clear water, no odour	Low DO and conductivity are consistent with the baseline water quality conditions for winter and generally within historical ranges.
22/7/2024, 8:55 am	EPL35	Nungar Creek, downstream of Tantangara Road	3.55	90.1	11.93	11	7	6.63	250	4.9	Turbid water, no odour, cloudy	Low EC is within the historical range for this location and is consistent with background conditions for JULY 2024.
22/7/2024, 12:30 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	7.53	80	9.57	40	26	6.97	277	9.1	Turbid water, no odour, cloudy	This location is upstream of works and is therefore representative of background conditions.
22/7/2024, 12:52 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	8.09	89.9	10.61	42	27	7.16	264	10.3	Sunny afternoon, clear water, slow flowing, animals around	Low DO is within the historical range for this location and is consistent with background conditions for JULY 2024.
3/7/2024, 2:41 pm	EPL52	GF01 sediment basin	9.81	91.2	10.3	1021	775	8.54	150	330	Sunny day, high level of water, turbid water, no smelly, very dirty water	High EC, pH, and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the 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

3/7/2024, 2:49 pm	EPL55	GF01 surface water downstream	10.36	74.3	8.29	1001	646	8.03	158	65.70	Sunny day, very low flow, clear conditions	Elevated EC and turbidity with low DO are generally consistent with conditions at GF01 during sampling in July 2024.
27/7/2024, 11:33 am	EPL 66	Tantangara leachate basin downstream east from Tantangara emplacement area	9.1	100.9	11.65	10.6	10	6.62	188.2	5.56	Clear, sunny day, warmer than usual. Predicted snowfall tomorrow (28/7). Clear water, sediment and organic material present, no odour. Water level has reduced significantly.	Low EC is generally consistent with background conditions during sampling. Water was taken for treatment at the process water treatment plant .
N/A	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	-	-	-	-	-	-	-	-	Unable to sample due to the water level being reduced significantly in the reservoir.	-
27/7/2024, 12:40 pm	EPL71	Surface water downstream of Marica emplacement	8.6	103.6	13.98	24	14	6.41	342	117	Turbid water, no sheen, no oil and grease, no odour Clear day, sunny	Elevated DO and turbidity with low pH and conductivity are within the historical baseline water quality result for winter.
17/7/2024, 3:52 pm	EPL64	F8 Basin	8.93	98.1	11.34	638	409	9.33	226	1000	Sunny day, high level of water, very turbid water, no odour	High EC, pH, and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant.
17/7/2024, 3:27 pm	EPL65	MY07 Basin	10.2	45.1	4.84	462	300	8.96	245	196	Partly cloudy, highly turbid, no odour	High EC, pH, and turbidity with low DO are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant.
17/7/2024, 3:10 pm	EPL66	LH001 Basin	11.2	51.1	5.59	1004	665	8.5	259	45.2	Sunny day, low level of water, turbid water, no odour	High EC, pH, and turbidity with low DO are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant.

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
17/7/2024, 9:43 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	8.83	83.2	7.34	35	23	7.79	247	0.5	Freezy day, no smelly, very clear water	Low EC and DO levels remain consistent with baseline conditions. During winter EC and DO displayed frequent exceedances from project WQO. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities. The turbidity was generally representative of background conditions in July 2024.
17/7/2024, 9:32 am	EPL11	Talbingo Reservoir, downstream of outlet	8.87	83.2	9.64	34	22	7.78	260	0.5	Freezy day, no smelly, very clear water	Low EC and DO are within historical ranges and background concentrations for July 2024. The turbidity was generally representative of background conditions in July 2024.
30/7/2024, 9:47 am	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	2.2	90.9	12.51	10	12	7.17	148	3.89	Sunny; relatively clear water with high amount of organic material in it, no odour	This location is upstream of works and is therefore representative of background conditions.
31/7/2024, 9:43 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	3.7	92.8	12.25	15.6	17	6.7	66.4	5.37	Snowy, windy, minus degree weather. Visible turbidity and murky water. No odour or visible sheen.	Low EC is within historical ranges and background concentrations for July 2024.
31/7/2024, 9:38 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	3.7	93.5	12.35	22.4	25	8.56	29.8	6.33	Snowy, windy, minus degree weather. Visible turbidity and murky water. No odour or visible sheen.	Elevated pH is within historical ranges and background concentrations for July 2024. However, the pH will be monitored.
30/7/2024, 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	3.7	90.4	11.94	12.1	13	7.07	176.7	5.63	Sunny, cold wind. Reservoir water level significantly low. Water clear, brownish; sediment and organic material present; no sheen or odour.	Low EC is within historical ranges and background concentrations for July 2024.
30/7/2024, 10:05 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	2.4	93.1	12.76	10.3	12	7.01	148	7.54	Sunny, cold wind. Reservoir water level significantly low. Water clear, brownish; sediment and organic material present; no sheen or odour.	This location is upstream of works and is therefore representative of background conditions.
30/7/2024, 10:01 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	2.3	92.8	12.71	10.1	12	7.17	149	115.98	Cloudy, cold wind. Reservoir water level significantly low. Water clear, greyish brown; sediment and organic material present; no sheen or odour.	This location is upstream of works and is therefore representative of background conditions. Elevated turbidity levels are attributed to a combination of decreased water volume and increased organic matter within the reserve.
30/7/2024, 9:14 am	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	4.2	91.5	11.92	17.8	19	7.63	150.9	3.76	Cloudy, cold wind. Reservoir water level significantly low. Water clear; sediment and organic material present on bed; no sheen or odour.	Low EC is within historical ranges and background concentrations for July 2024.
30/7/2024, 9:04 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	5	90.1	11.5	17.6	19	7.75	135.6	4.6	Cloudy, cold wind. Reservoir water level significantly low. Water clear, greyish brown in colour; sediment and organic material present; no sheen or odour.	Low EC is within historical ranges and background concentrations for July 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
31/7/2024, 8:52 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	8.85	86.9	10.07	72	47	6.52	257	7.9	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
23/7/2024, 8:41 am	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	7.3	95.4	11.5	2.6	3	5.5	189.5	1.67	Clear water, no odour, cloudy	The pH levels will continue to be monitored in the coming sampling rounds.

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
3/7/2024, 1:43 pm	EPL56	GF01 groundwater upstream east	13.49	27.5	2.86	219	142	8	148	18.5	Sunny day, clear water, no odour, SWL- 10.63 m deep	This location is upstream of works and is therefore representative of background conditions.
3/7/2024, 1:55 pm	EPL57	GF01 groundwater upstream west	12.16	20.4	2.19	185	120	8.21	144	168	Sunny day, turbid water, no odour, SWL-19.90	This location is upstream of works and is therefore representative of background conditions. Elevated pH is within the historical ranges for this location.
3/7/2024, 2:19 pm	EPL58	GF01 groundwater downstream	14.7	27.2	2.76	703	450	6.58	211	38	Sunny day, clear water, no odour, SWL- 8.83 m deep	High EC is generally consistent with conditions at GF01 during sampling.
27/7/2024, 11:20 am	EPL68	Tantangara groundwater downstream West	11.7	88.3	9.58	36.3	23	5.8	213.9	15.11	Clear, sunny day, warmer than usual. Predicted snowfall tomorrow (28/7). Clear water, some sediment within sleeve, no odour.	Low pH and EC are generally consistent with previous results from June 2024 and upgradient conditions in July 2024. These conditions are following expected changes due to altered climatic conditions.
27/7/2024, 12:24 pm	EPL69	Tantangara groundwater downstream East	10.8	82.3	9.1	17.1	15	5.93	178.3	11.77	Clear, sunny day, warmer than usual. Predicted snowfall tomorrow (28/7). Clear water, some sediment within bottom of sleeve, no odour.	Low pH and EC are generally consistent with previous results from June 2024 and upgradient conditions in June 2024. These conditions are following expected changes due to altered climatic conditions.
27/7/2024, 1:20 pm	EPL70	Tantangara groundwater upstream	11.6	67.1	7.3	59.2	52	6.19	237.7	25.4	Clear, sunny day, warmer than usual. Predicted snowfall tomorrow (28/7). Clear water, though some sediment present at bottom of sleeve, no odour.	This location is upstream of works and is therefore representative of background conditions.
2/7/2024, 2:21 pm	EPL 72	Marica groundwater upstream	10.5	61.7	6.88	27.6	25	5.52	231	31.24	Cold, windy day.	This location is upgradient of works and is therefore representative of background conditions.
2/7/2024, 12:03 pm	EPL73	Marica groundwater downstream	10.1	62.5	7.05	51.5	47	6.15	219.2	5.96	Cold, windy day.	Low pH is generally consistent with the previous results for this location and the exceedance is consistent with the upgradient conditions in July 2024.
26/7/2024, 4:08 pm	EPL80	LHG groundwater upstream	14.89	24.9	2.51	599	385	6.8	185	24.2	SWL- 20.25m, sunny Day, slightly turbid	This location is upstream of works and is therefore representative of background conditions.
26/7/2024, 3:33 pm	EPL81	LHG groundwater downstream	14.37	50.2	5.13	518	331	6.76	87	163	SWL- 2.78m, sunny day, turbid water	Elevated EC is consistent with background conditions and consistent with conditions recorded in June 2024.
26/7/2024, 4:17 pm	EPL82	MY groundwater upstream	15.17	16.7	1.67	2170	1390	6.64	67	8.4	SWL- 9.31m, sunny day, clear water	This location is upstream of works and is therefore representative of background conditions. Electrical conductivity levels will continue to be monitored in the coming sampling rounds.
26/7/2024, 2:57 pm	EPL83	MY groundwater downstream	15.71	109	10.81	470	305	6.6	180	110	SWL- 2.35m, sunny Day, clean Water	Elevated EC is generally consistent with background conditions in July 2024 and previous conditions recorded in June 2024.
26/7/2024, 3:25 pm	EPL87	MY groundwater downstream	14.45	65.4	6.72	269	178	6.39	182	140	SWL- 3.25m, sunny day, clear water	Low pH is generally consistent with surrounding conditions in July 2024.
26/7/2024, 2:16 pm	EPL88	MY groundwater downstream	15.6	95	14.7	674	432	6.8	19	47.9	SWL- 2.7m, sunny Day, clean water	Elevated EC is generally consistent with background conditions in July 2024 and previous conditions recorded in the last sampling rounds.
26/7/2024, 3:58 pm	EPL89	LHG groundwater downstream	12.81	45.4	4.8	250	163	7.3	154	34.5	SWL- 2.35m, clean water, sunny day	All readings are within WQO limits.
23/7/2024, 11:50 am	EPL90	GF01 groundwater downstream	13.78	53.1	5.49	330	214	5.92	203	417	SWL- 12.82m, cloudy, turbid water	Low pH is generally consistent with surrounding conditions and previous results recorded.
23/7/2024, 12:07 pm	EPL91	GF01 groundwater downstream	14.55	20.5	2.09	253	165	6.64	66	52.1	SWL- 8.31m, cloudy day	All readings are within WQO limits.
23/7/2024, 11:25 am	EPL92	GF01 groundwater downstream	13.48	71.7	7.48	79	51	6.35	327	268	SWL- 15.2m, cloudy day, turbid water	Low pH is generally consistent with surrounding conditions.
23/7/2024, 11:43 am	EPL93	GF01 groundwater downstream	13.75	34.4	3.56	236	153	7.19	39	332	SWL- 14.98m, cloudy, turbid water	All readings are within WQO limits.
23/7/2024, 11:58 am	EPL94	GF01 groundwater downstream	13.68	40.3	4.18	157	102	6.72	85	131	SWL- 13.32m, cloudy day, turbid water	All readings are within WQO limits.
23/7/2024, 11:12 am	EPL95	GF01 groundwater downstream	15.64	55.4	5.51	428	278	6.14	339	2.8	SWL- 8.45 m, cloudy, clear water	Low pH and elevated conductivity are generally consistent with surrounding conditions and previous results recorded in June 2024.
23/7/2024, 10:48 am	EPL96	GF01 groundwater downstream	15.01	61	6.13	1030	659	7.34	267	417	SWL- 5.3 m deep, sunny day, no odour, turbid water	High EC is believed to be an anomalous result. Results from the week prior and post range from 115-266. This will be reviewed.
23/7/2024, 12:15 pm	EPL97	GF01 groundwater downstream	14.54	40.1	4.08	388	252	6.7	185	136	SWL 6.10m, cloudy, turbid water	Slightly elevated EC is generally consistent with surrounding conditions.

Note 1: Water Quality Objective values for the Yarrangobilly River and Minor Watercourses refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 2: Water Quality Objective values for Talbingo Reservoir are the default trigger values for physical and chemical stressors in south-east Australia (freshwater lakes and reservoirs) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 3: 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.

Note 4: Water Quality Objective values for groundwater reference the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for pH and electrical conductivity.

AUGUST 2024

2024 EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring August 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)	Context
3/8/2024, 11:14 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	6.38	88	10.85	51	33	7.9	133	4.6	This location is upstream of works and is therefore representative of background conditions.
3/8/2024, 11:50 am	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	5.78	96.4	12.06	36	23	7.91	222	4.3	All readings are within WQO limits.
3/8/2024, 2:23 pm	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	8.27	103.6	12.17	66	43	7.89	230	17.7	All readings are within WQO limits.
3/8/2024, 2:55 pm	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	7.05	99.1	12.03	67	43	7.33	268	5.8	All readings are within WQO limits.
3/8/2024, 11:35 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	4.71	102.7	13.23	52	34	7.83	206	0.9	Low turbidity is consistent with background conditions during sampling for this location.
3/8/2024, 12:10 pm	EPL14	Yarrangobilly River, downstream of road construction areas	5.05	101.3	12.92	46	30	7.68	248	3	All readings are within WQO limits.
3/8/2024, 12:32 pm	EPL15	Yarrangobilly River, downstream of road construction areas	5.35	101	12.78	50	32	7.76	254	0.7	Low turbidity is consistent with historical ranges for this location.
3/8/2024, 3:13 pm	EPL16	Yarrangobilly River, downstream of road construction areas	6.56	97.3	11.94	66	43	7.59	257	0	Low turbidity is consistent with historical ranges for this location.
2/8/2024, 3:21 pm	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	11.38	76.2	8.33	194	126	7.8	164	6	Low DO is generally consitent with background conditions in August 2024 and is within historical ranges.
10/8/2024, 10:30 am	EPL26	Eucumbene River downstream of Marica Road	4.13	90.3	11.81	27	17	7.23	231	0	Low turbidity and EC are consistent with background conditions during sampling and within historical ranges.
3/8/2024, 2:48 pm	EPL27	Eucumbene River upstream of Marica Road	7.6	90.7	10.86	19.8	19	6.65	226.5	3.2	This location is upstream of works and is therefore representative of background conditions.
12/8/2024, 10:41 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	6.8	90.1	10.99	31	20	7.84	99	6.3	All readings are within WQO limits.
12/8/2024, 9:55 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	8.41	105.2	12.32	491	319	7.1	106	7	High EC is being monitored to ensure variance is attributed to natural fluctuations. No visiual indicators were identified to explain the concentration of EC.
12/8/2024, 11:10 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	7.14	92.1	11.13	32	21	7.85	107	6.8	All readings are within WQO limits.
12/8/2024, 11:44 am	EPL34	Nungar Creek, upstream of Tantangara Road	5.6	93.7	11.77	15	10	7.91	111	4.8	This location is upstream of works and is therefore representative of background conditions.
12/8/2024, 11:52 am	EPL35	Nungar Creek, downstream of Tantangara Road	5.54	84.3	10.62	15	10	7.74	109	4.7	Low EC is consistent with background conditions in August 2024. Low DO is being monitored to ensure variance is attributed to natural fluctuations.
12/8/2024, 1:45 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	10.08	75.7	8.53	56	37	7.34	124	6.6	This location is upstream of works and is therefore representative of background conditions.
12/8/2024, 2:03 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	10.72	79.5	8.82	52	34	7.57	117	9.6	Low DO is within the historical range and is consistent with background conditions for this location for August 2024.
5/8/2024, 12:30 pm	EPL52	GF01 leachate basin	11.46	104	11.32	615	393	8.33	307	9.1	High pH is 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.
	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	Dry site, no flow
	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	Dry site, no flow
5/8/2024, 12:40 pm	EPL55	GF01 surface water downstream	10.8	95.8	10.58	584	374	8.05	306	3.50	Minor exceedance in pH is being monitored, however is generally consistent with background conditions for August 2024.
11/8/2024, 10:17 am	EPL66	Tantangara Leachate basin downstream east from Tantangara emplacement area	6.2	91.3	11.3	16.8	17	6.67	150.4	3.22	Low EC is within the historical range and is consistent with background conditions for this location for August 2024.
27/8/2024, 7:57 am	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	8.8	87.9	10.22	15.9	15	6.51	283.1	37.47	Low EC is within the historical range and is consistent with background conditions for this location for August 2024.
3/8/2024, 1:17 pm	EPL71	Surface water downstream of Marica emplacement	6.4	94.9	11.7	33	33	6.84	226.5	23.6	All readings are within WQO limits.

2024 EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring August 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	
29/8/2024, 11:03 am	EPL84	F8 Basin	13.74	72.3	7.74	984	630	8.2	68	282	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.
29/8/2024, 11:16 am	EPL85	MY07 Basin	13.59	76.1	7.91	431	280	9.31	60	229	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.
29/8/2024, 2:17 pm	EPL86	LHG01 Basin	16.21	88.1	8.63	1080	691	7.95	95	405	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)**	**Context**
18/8/2024, 10:11 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	10.72	79.5	8.82	49	32	6.73	-5	2.3	Low DO is being monitored to ensure variance is attributed to natural fluctuations. EC is consistent with background conditions in the Yarrangobilly River for August 2024.
18/8/2024, 9:38 am	EPL11	Talbingo Reservoir, downstream of outlet	10.72	79.5	8.82	49	32	6.73	178	2.3	Low DO is being monitored to ensure variance is attributed to natural fluctuations. EC is consistent with background conditions in the Yarrangobilly River for August 2024.
27/8/2024, 7:57 am	EPL28	Tantangara Reservoir, upstream of works in the mouth of the Murrumbidgee River	8.6	88.1	10.29	15.2	14	6.25	286.5	33.11	This location is upstream of works and is therefore representative of background conditions and low reservoir water levels.
27/8/2024, 10:44 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	8.4	92.8	10.87	14.7	14	7.05	303.1	3.88	Low EC is consistent with background conditions in August 2024.
27/8/2024, 10:33 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	8.5	94.1	11.01	14.7	14	7.13	289.9	3.53	Low EC is consistent with background conditions in August 2024.
27/8/2024, 8:49 am	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	8.9	94.1	10.9	13	12	6.7	307.9	10.54	Low EC is consistent with background conditions in August 2024.
27/8/2024, 7:58 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	8.8	87.8	10.22	15.9	15	6.59	279.6	36.77	Low EC and DO and elevated turbidity are consistent with background conditions and low reservoir water levels for August 2024.
27/8/2024, 7:58 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	8.7	87.9	10.22	15.8	15	6.62	278.1	36.48	This location is upstream of works and is therefore representative of background conditions and low reservoir water levels.
27/8/2024, 11:22 am	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	9	94.2	10.9	16.6	16	7.13	275	8.84	Low EC is within the historical range and is consistent with background conditions for this location for August 2024.
27/8/2024, 11:24 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	9.3	94.7	10.86	15.6	14	7.09	270	10.04	Low EC is within the historical range and is consistent with background conditions for this location for August 2024.
18/8/2024, 9:21 am	EPL 107	Upstream Yarrangobilly (Ravine Bay)	10.1	83.8	9.43	31	20	6.58	145	1.8	Spoil emplacement has commenced at Ravine Bay, and low DO is being monitored but is consistent with reservoir conditions in August 2024.
18/8/2024, 9:11 am	EPL 108	Upstream Tumut (Ravine Bay)	9.78	83	9.42	30	19	6.71	-4	1.9	Spoil emplacement has commenced at Ravine Bay, and low DO is being monitored but is consistent with reservoir conditions in August 2024.
18/8/2024, 9:04 am	EPL 109	Downstream Tumut (Ravine Bay)	9.66	80	9.1	31	20	6.97	113	1.9	Spoil emplacement has commenced at Ravine Bay, and low DO is being monitored but is consistent with reservoir conditions in August 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)**	**Context**
11/8/2024, 9:18 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	11.71	53.2	5.77	84	55	5.7	178	4.5	No dicharge occurred on this day.

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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)**	**Context**
12/8/2024, 10:19 am	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	9.65	69.4	7.9	36	24	7.91	75	5.8	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)**	**Context**
4/8/2024, 2:24 pm	EPL1	Wallace Creek Bridge	12.7	55.1	5.83	365	237	6.98	2	50	Elevated EC is within the historical range for this location.
4/8/2024, 2:34 pm	EPL2	Wallace Creek Bridge	13.34	29.1	3.03	861	551	7.83	-76	218	Elevated EC is within the historical range for this location.
3/8/2024, 10:47 am	EPL4	Portal Access	11.25	30.8	3.37	736	471	8.2	139	1000	Elevated EC and pH are within the historical range for this location.
3/8/2024, 11:01 am	EPL25	Portal Access	11.85	23.8	2.57	384	250	6.71	35	1000	Elevated EC is within the historical range for this location.
6/8/2024, 12:58 pm	EPL56	GF01 groundwater upstream east	13.06	26.3	2.76	186	121	7.94	301	2.3	All readings are within WQO limits.
6/8/2024, 1:18 pm	EPL57	GF01 groundwater upstream west	13.48	24	2.5	171	111	8.16	285	87.3	This location is upstream of works and is therefore representative of background conditions.
6/8/2024, 12:26 pm	EPL58	GF01 groundwater downstream	14.9	46.2	4.66	532	341	6.48	384	8.4	Elevated EC is generally consistent with groundwater in Lobs Hole for August 2024. Low pH will be monitored however extraction at this location is ongoing.
3/8/2024, 10:04 am	EPL68	Tantangara groundwater downstream West	10.7	92.9	10.32	27.6	25	5.9	218.7	15.19	Low EC will be monitored but generally consistent with reservoir conditions for August 2024. Low EC is consistent with upgradient groundwater in August 2024.
11/8/2024, 10:25 am	EPL69	Tantangara groundwater downstream East	9.4	86.3	9.87	18.2	17	6.07	185.9	7.43	Low EC will be monitored but generally consistent with reservoir conditions for August 2024. Low EC is consistent with upgradient groundwater in August 2024.
3/8/2024, 9:15 am	EPL70	Tantangara groundwater upstream	9.5	75.9	8.66	58.5	54	6.23	174.4	36.9	This location is upstream of works and is therefore representative of background conditions.
3/8/2024, 2:30 pm	EPL 72	Marica groundwater upstream	11.2	56.5	6.2	27.7	24	5.53	234.6	6.24	This location is upstream of works and is therefore representative of background conditions.
4/8/2024, 1:32 pm	EPL73	Marica groundwater downstream	10.4	70.7	7.92	48.6	44	6.1	241.7	18.37	All readings are within WQO limits.
2/8/2024, 2:56 pm	EPL80	LHG groundwater upstream	15.96	28.4	2.8	511	327	7.07	68	37.6	This location is upstream of works and is therefore representative of background conditions.
2/8/2024, 11:16 am	EPL81	LHG groundwater downstream	11.75	21.4	2.32	467	304	6.82	70	218	Elevated EC is consistent with background conditions in August 2024.
2/8/2024, 12:47 pm	EPL82	MY groundwster upstream	15.48	25.3	2.51	1890	1210	6.92	126	7.7	This location is upstream of works and is therefore representative of background conditions.
2/8/2024, 12:05 pm	EPL83	MY groundwster downstream	16.31	56.3	5.51	327	213	8.06	183	17.5	Elevated pH will be monitored.
2/8/2024, 11:02 am	EPL87	MY groundwater downstream	11.22	46.6	5.11	293	190	6.48	243	384	Low pH is generally consistent with upgradient background conditions in August 2024.
2/8/2024, 11:41 am	EPL88	MY groundwster downstream	13.52	74.6	7.76	574	367	7.15	7	3.8	Elevated EC will be monitored.
2/8/2024, 2:35 pm	EPL89	LHG groundwater downstream	14.4	46.2	4.71	263	171	7.66	209	190	All readings are within WQO limits.
5/8/2024, 11:23 am	EPL 90	GF01 groundwater downstream	13.18	59	6.19	154	100	6.19	240	444	Low pH is not consistent with up gradient conditions or conditions in GF01 but appears consistent with other downstream wells and will be monitored.
5/8/2024, 11:48 am	EPL 91	GF01 groundwater downstream	13.81	29.8	3.08	179	116	6.93	246	13.9	All readings are within WQO limits.
5/8/2024, 11:00 am	EPL 92	GF01 groundwater downstream	8.66	99.8	11.63	68	44	7.34	277	14.2	Low EC is not consistent with up gradient conditions or conditions in GF01 but appears generally consistent with other downstream wells and will be monitored.
5/8/2024, 11:12 am	EPL 93	GF01 groundwater downstream	12.85	41	4.33	192	125	7.28	134	244	All readings are within WQO limits.
5/8/2024, 11:10 am	EPL 94	GF01 groundwater downstream	12.15	20	2.14	130	84	6.93	158	34.1	All readings are within WQO limits.

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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	-	-	
5/8/2024, 11:36 am	EPL 95	GF01 groundwater downstream	14.08	38.1	3.92	338	220	6.4	279	13.8	Low pH is not consistent with up gradient conditions or conditions in GF01 but appears consistent with other downstream wells and will be monitored.
5/8/2024, 11:25 am	EPL 96	GF01 groundwater downstream	13.17	66.5	6.97	854	546	6.75	256	316	EC is elevated more than other ground and surface water locations in GF01, inclusive of the leachate basin. This will be monitored and a permanent pump for extraction be set up for this location to enable treatment of water if required.
5/8/2024, 11:55 am	EPL 97	GF01 groundwater downstream	13.33	33.1	3.46	318	206	6.92	209	42.3	All readings are within WQO limits.
4/8/2024, 10:10 am	EPL 113	Ravine Bay groundwater upstream	10.44	36	4.03	138	90	6.21	304	1000	This location is upstream of works and is therefore representative of background conditions.
4/8/2024, 10:56 am	EPL114	Ravine Bay groundwater upstream	12.26	51.5	5.51	353	230	7.14	167	17.9	This location is upstream of works and is therefore representative of background conditions.
4/8/2024, 10:31 am	EPL 115	Ravine Bay groundwater downstream	11.36	23.9	2.61	373	242	7.12	111	50	Elevated EC is consistent with upgradient background conditions for August 2024.
4/8/2024, 11:29 am	EPL116	Ravine Bay groundwater downstream	11.88	81.7	8.82	181	117	6.79	152	1000	All readings are within WQO limits.
4/8/2024, 11:13 am	EPL 117	Ravine Bay groundwater downstream	13.31	86.9	9.09	120	78	6.34	44	41.6	Low pH is consistent with upgradient background conditions for August 2024.

Note 1: Water Quality Objective values for the Yarrangobilly River and Minor Watercourses refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 2: Water Quality Objective values for Talbingo Reservoir are the default trigger values for physical and chemical stressors in south-east Australia (freshwater lakes and reservoirs) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 3: 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.

Note 4: Water Quality Objective values for groundwater reference the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for pH and electrical conductivity.

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2024 EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring September 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
4/9/2024, 11:28 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	12.33	170.7	18.24	156	102	8.25	124	11.8	Sunny day , Clear water, Plenty of flow	This location is upstream of works and is therefore representative of background conditions.
4/9/2024, 12:05 pm	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	9.65	120.6	13.71	55	36	8.03	140	4.9	Sunny day , Clear water, Plenty of flow	Elevated pH and DO levels remain consistent with baseline conditions. During the baseline studies in the spring season, pH and Dissolved oxygen displayed frequent exceedances in the Yarrangobilly River. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.
4/9/2024, 1:57 pm	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	13.67	116.9	12.12	93	60	7.99	156	8.7	Sunny day , Clear water, Plenty of flow	Elevated DO readings during the September reporting period can be attributed to the increased flow velocity of the water courses associated with US slope snow melt.
4/9/2024, 2:30 pm	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	12.98	205	21.6	76	50	8.02	157	8.5	Sunny day, Clear water, Slow flow	During the baseline studies in the spring season, pH and Dissolved oxygen displayed frequent exceedances in the Yarrangobilly River. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.
4/9/2024, 11:48 am	EPL12	Yarrangobilly River, Immediately downstream of portal pad	11.48	106.1	11.56	81	53	8.2	133	11	Sunny day, Clear water, Plenty of flow	Elevated pH levels remain consistent with baseline conditions, and historical data from spring monitoring periods indicate frequent exceedances of project water quality objectives (WQO).
4/9/2024, 12:28 pm	EPL14	Yarrangobilly River, downstream of road construction areas	11.97	176.4	19.01	74	48	8.0	150	6.3	Sunny day, Clear water, Plenty of flow	Elevated DO readings during the September reporting period can be attributed to the increased flow velocity of the water courses at Yarrangobilly River in September.
4/9/2024, 12:38 pm	EPL15	Yarrangobilly River, downstream of road construction areas	11.29	114.9	12.58	79	52	8.05	149	0	Sunny day, Clear water, Slight flow	Elevated pH and DO levels remain consistent with baseline conditions. During the baseline studies in the spring season, pH and Dissolved oxygen displayed frequent exceedances in the Yarrangobilly River. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.
4/9/2024, 2:44 pm	EPL16	Yarrangobilly River, downstream of road construction areas	12.55	177.6	18.91	76	49	8.01	158	1.3	Sunny day, Clear water, Plenty of flow	Elevated pH and DO levels remain consistent with baseline conditions. During the baseline studies in the spring season, pH and Dissolved oxygen displayed frequent exceedances in the Yarrangobilly River. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.
6/9/2024, 3:20 pm	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	16	74	7.3	386	251	7.28	146	11.6	Very clear, no odour, Sunny, hot, minimal wind today.	Low DO and elevated EC concentrations align with historical data for EPL 24.
7/9/2024, 12:16 pm	EPL26	Eucumbene River downstream of Marica Road	11.8	92.1	9.96	37	24	7.81	-68	5.8	Cloudy, Rain in the morning, Clear water, Plenty of flow	All readings are within WQO limits.
7/9/2024, 12:08 pm	EPL27	Eucumbene River upstream of Marica Road	12.2	91.3	9.79	64	42	7.94	109	3.4	Sunny, Rain in the morning, Clear water, Plenty of flow, Duplicate & Triplicate sample	All readings are within WQO limits.
13/9/2024, 9:59 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	8.95	131.7	15.24	36	23	8.5	97	12	Sunny, Plenty of creek flow, Clear water	Elevated DO and pH readings during the September reporting period can be attributed to the increased flow velocity of the water courses in September.
13/9/2024, 10:22 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	8.94	100.9	11.67	24	16	7.88	114	16.7	Sunny, Plenty of creek flow, Clear water	Low electrical conductivity (EC) is consistent with historical data and conditions for this location for September.
13/9/2024, 10:59 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	11.28	92	10.08	23	15	7.51	130	13.5	Sunny, Clear water , Depth about 0.2m	Low electrical conductivity (EC) is consistent with historical data and conditions for this location for September.
13/9/2024, 11:40 am	EPL34	Nungar Creek, upstream of Tantangara Road	9.54	97.1	11.18	15	10	7.78	104	2.1	Sunny, Plenty of flow, Clear water	Low electrical conductivity (EC) is consistent with historical data and conditions for this location for September.
13/9/2024, 11:27 am	EPL35	Nungar Creek, downstream of Tantangara Road	11.87	97.3	10.51	15	10	7.88	112	5.1	Sunny, Plenty of flow, Clear water	Low electrical conductivity (EC) is consistent with historical data and conditions for this location for September.
21/9/2024, 10:35 am	EPL36	Camerons Creek, upstream of works in Rock Forest	8.08	57.4	6.78	36	24	5.84	182	28.6	Clear water. Cold windy day. Decomposing vegetation around stream line. No odour.	This location is upstream of works and is therefore representative of background conditions.
21/9/2024, 10:01 am	EPL37	Camerons Creek, downstream of works in Rock Forest	7.84	71.8	8.55	33	21	6.59	145	42.1	Recent rain, cold and windy conditions. Water quite clear. No odour.	Low DO and high turbidity are within the historical range for this location and are consistent with background conditions for September 2024.
3/9/2024, 12:45 pm	EPL52	GF01 sediment basin	15.57	111.9	11.11	939	601	8.56	71	12.7	Sunny day, Clear water, Duplicate & Triplicate	High EC, pH, and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant .
-	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	-	Dry site, no flow
-	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	-	Dry site, no flow

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		
3/9/2024, 1:03 pm	EPL55	GF01 surface water downstream	12.8	106.1	11.2	752	481	7.06	-26	0.00	Sunny day, algal growth, limited water	Elevated EC is generally consistent with historical data and conditions at GF01 during sampling in September 2024.
21/9/2024, 11:41 am	EPL 66	Tantangara Leachate basin downstream east from Tantangara emplacement area	8.7	66.1	7.7	0	0	8.13	204	11.40	Sunny, heavy rain occurring overnight and early morning; warmer temps than normal. Water relatively clear; organic material present; no distinct odour. Due to severely low water level in reservoir, insitu conducted approximately 20m away from location point.	Low electrical conductivity (EC) is consistent with historical data and conditions for this location in September.
22/9/2024, 9:05 am	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	10.02	67	7.56	14	9	8.06	156	10.90	Overcast; mild wind. Water clear with organic material present; no odour or oily sheen. Sample taken from original established Nungar creek that was present due to significantly low reservoir level.	Low electrical conductivity (EC) is consistent with historical data and conditions for this location in September.
21/9/2024, 9:13 am	EPL71	Surface water downstream of Marica emplacement	6.22	257.6	31.87	185	120	6.87	254	15	Overcast, mild wind. Water slightly turbid with organic material present; no odour or oily sheen. Sample was taken at the deepest part of this shallow creek	Elevated DO is within the historical baseline water quality result during wet season conditions at Marica.
5/9/2024, 9:33 am	EPL84	F8 Basin	10.76	92.9	10.26	1030	662	8.39	146	1000	Cloudy, Turbidity > 1000 NTU, Depth 50%	High EC, pH, and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant.
5/9/2024, 9:50 am	EPL85	MY07 Basin	10.92	103.9	11.46	483	314	10.07	107	90.1	Sunny, Clear water, No odour, Mid depth	High EC, pH and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant.
5/9/2024, 10:47 am	EPL86	LH001 Basin	15.85	88.4	8.72	1170	748	7.78	-26	55.5	Sunny, Clear water, Depth low, No odour	High EC and turbidity with low DO are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant.

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**
8/9/2024, 8:42 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	13.07	99.6	10.48	80	52	6.83	-14	3.7	Clear no odour, no algal growth visible	High EC remains consistent with baseline conditions. EC displayed frequent exceedances during the September season. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.
8/9/2024, 8:28 am	EPL11	Talbingo Reservoir, downstream of outlet	13.27	99.1	10.38	75	49	6.96	-21	3.8	Clear no odours, no algal growth visible	High EC remains consistent with baseline conditions. EC displayed frequent exceedances during the September season. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.
24/9/2024, 9:12 am	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	8.71	83.4	9.71	18	12	7.42	126	236	Sunny, no wind. Water green/grey colour with organic material present; no odour or oily sheen.	This location is upstream of works and is therefore representative of background conditions.
24/9/2024, 10:06 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	9.49	87	9.94	17	11	6.94	205	3.8	Sunny, slight wind. Water green/grey colour with organic material present; no odour or oily sheen.	Low electrical conductivity (EC) is consistent with historical data and conditions for this location for September.
24/9/2024, 9:58 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	9.41	81.8	9.36	16	10	7.73	158	3.9	Sunny, no wind. Water green/grey colour with organic material present; no odour or oily sheen.	Low electrical conductivity (EC) and DO are consistent with historical data and conditions for this location for September.
24/9/2024, 9:38 am	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	9.12	80.8	9.32	16	11	6.99	170	5	Sunny, no wind. Water green/grey colour with organic material present; no odour or oily sheen.	Low electrical conductivity (EC) and DO are consistent with historical data and conditions for this location for September.
22/9/2024, 8:53 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	9.25	89	10.23	19	12	8.63	136	10.7	Overcast; mild wind. Water clear with organic material present; no odour or oily sheen. Sample taken from original established Nungar creek that was present due to significantly low reservoir level.	This location is upstream of works and is therefore representative of background conditions. Elevated pH and low DO can be attributed to the decreased level of water and the presence of organic material.
24/9/2024, 9:14 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	8.5	79.8	9.33	18	12	7.07	84	51.4	Sunny, no wind. Water green/grey colour with organic material present; no odour or oily sheen.	This location is upstream of works and is therefore representative of background conditions.
24/9/2024, 10:24 am	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	9.42	80.2	9.18	17	11	6.77	211	3.8	Sunny, slight wind. Water green/grey colour with organic material present; no odour or oily sheen.	Low electrical conductivity (EC) and DO are consistent with historical data and conditions for this location for September.
24/9/2024, 10:16 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	9.41	80.7	9.24	17	11	7.54	173	3.8	Sunny, slight wind. Water green/grey colour with organic material present; no odour or oily sheen.	Low electrical conductivity (EC) and DO are consistent with historical data and conditions for this location for September.

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**
4/9/2024, 8:33 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	11.38	52.2	5.69	315	205	7.45	105	25.8	Clear water RO startup sample after 5 mins	No dicharge occurred at this time.

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
29/9/2024, 12:28 pm	EPL50	Tantangara STP/FWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	14.2	67.2	6.88	222	181.6	5.69	35.1	2.5	RO plant has not been running due to installation of additional parts. Clear, running water with no odour	The pH and EC levels will continue to be monitored in the coming sampling rounds.

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
3/9/2024, 11:36 am	EPL56	GF01 groundwater upstream east	11.25	111.5	12.19	503	322	5.65	197	23.4	SWL 10.49m, Clear water, Hydrasleeve with collar, No oil visible	This location is upstream of works and is therefore representative of background conditions.
3/9/2024, 11:49 am	EPL57	GF01 groundwater upstream west	13.22	110.3	11.56	237	154	4.82	209	328	SWL 15.96m, Sunny day , Clear water, No oil visible, Hydrasleeve	This location is upstream of works and is therefore representative of background conditions.Low pH is generally consistent with surrounding conditions.
3/9/2024, 12:57 pm	EPL58	GF01 groundwater downstream	15.79	95.5	9.46	819	513	7.87	104	79.5	Sunny day, Clear water, Footvalve	High EC is generally consistent with conditions at GF01 during sampling.
7/9/2024, 11:25 am	EPL68	Tantangara groundwater downstream West	13.2	92.1	9.65	27.7	23	5.74	182.1	4.88	Sunny, heavy rain occuring overnight and early morning; warmer temps than normal. Clear water, no odour.	Low pH and EC are generally consistent with previous results in the last months. These conditions are following expected changes due to altered climatic conditions.
21/9/2024, 11:09 am	EPL69	Tantangara groundwater downstream East	10.9	83.6	9.25	18.6	17	5.82	165.1	5.57	Sunny, heavy rain occuring overnight and early morning; warmer temps than normal. Water clear; no odour.	Low pH and EC are generally consistent with previous results in the last months. These conditions are following expected changes due to altered climatic conditions.
7/9/2024, 2:46 pm	EPL70	Tantangara groundwater upstream	13.9	66.7	6.89	112.7	93	6.1	195.9	15.53	Sunny, heavy rain occuring overnight and early morning; warmer temps than normal. Water clear with sediment stirred up at bottom of sleeve; no odour.	This location is upstream of works and is therefore representative of background conditions.
7/9/2024, 10:54 am	EPL 72	Marica groundwater upstream	11.64	47.1	5.12	54	35	6.11	136	108	Clear sunny day, Non turbid water. Bore had minimal water, dry, SWL 26.0 m	This location is upgradient of works and is therefore representative of background conditions.
7/9/2024, 9:05 am	EPL73	Marica groundwater downstream	11.92	88.9	9.56	560	358	8.09	140	760	SWL 16.5m, Foggy Rainy day, Slightly discoloured water, Hydrasleeve in	Elevated pH and EC are generally consistent with the previous results for this location and the exceedance is consistent with the historical data.
5/9/2024, 11:21 am	EPL80	LHG groundwater upstream	18.31	33.4	3.13	812	520	6.88	-23	50.9	SWL 20.35m, Sunny, Slightly turbid, Hydrasleeve in	This location is upstream of works and is therefore representative of background conditions.
5/9/2024, 10:33 am	EPL81	LHG groundwater downstream	15.27	54.8	5.48	696	445	7.04	-85	309	SWL 3.25m, Sunny, Turbid water with lot of silt and floating debris, Concrete pad under construction, Hydrasleeve in	Elevated EC is generally consistent with the previous results for this location and the exceedance is consistent with the historical data.
5/9/2024, 11:34 am	EPL82	MY groundwater upstream	18.38	69.1	6.44	2670	1710	7.14	-16	181	SWL 8.2m, Sunny, Turbid water, Footvalve in	This location is upstream of works and is therefore representative of background conditions and within historical ranges.
5/9/2024, 10:24 am	EPL83	MY groundwater downstream	13.53	89	9.25	649	415	7.65	2	790	SWL 3.1m, Sunny day, Turbid water, Concrete pad under construction, Footvalve in	Elevated EC is generally consistent with background conditions in September 2024 and previous conditions recorded in this location.
5/9/2024, 9:20 am	EPL87	MY groundwater downstream	10.91	66	7.28	517	331	7.02	148	1000	SWL 3.54m, Cloudy, Very turbid water, Foot valve in, Turbidity > 1000 NTU	Low pH is generally consistent with surrounding conditions in September 2024.
5/9/2024, 10:11 am	EPL88	MY groundwater downstream	13.17	29.9	3.13	842	539	7.18	-27	1.3	SWL 2.95m, Sunny day, Very clear water, Hydrasleeve, dust supression run off batter	Elevated EC is generally consistent with background conditions in September 2024 and previous conditions recorded in the last sampling rounds.
5/9/2024, 11:06 am	EPL89	LHG groundwater downstream	14.97	66.9	6.74	329	210	7.74	42	106	SWL 2.82m, Sunny, Slightly turbid, Construction work Upstream, Hydrasleeve in	All readings are within WQO limits.
2/9/2024, 3:32 pm	EPL90	GF01 groundwater downstream	13.11	49.5	5.2	186	121	5.39	66	1000	SWL 13.03, Turbidity > 100 NTU, No odour	Low pH is generally consistent with surrounding conditions and previous results recorded.
2/9/2024, 2:51 pm	EPL91	GF01 groundwater downstream	14.41	26.2	2.67	262	170	6.67	51	39.3	SWL 8.22mbtoc, Clear, no odours	All readings are within WQO limits.
3/9/2024, 12:09 pm	EPL92	GF01 groundwater downstream	14.67	76.5	7.78	193	125	6.64	199	1000	SWL 14.88m, Sunny day, Turbid water over 1000 NTU, Foot valve in	All readings are within WQO limits.
3/9/2024, 12:19 pm	EPL93	GF01 groundwater downstream	14.47	105.7	10.78	295	192	6.94	-74	436	SWL 14.53m, Sunny day, Turbid water	All readings are within WQO limits.
3/9/2024, 12:26 pm	EPL94	GF01 groundwater downstream	14.6	100.1	10.17	202	131	7.13	-39	135	SWL 13.76m, Sunny day, Turbid water, Foot valve in	All readings are within WQO limits.
2/9/2024, 3:19 pm	EPL95	GF01 groundwater downstream	14.37	64.7	6.6	560	359	5.88	39	225	Swl 6.81mbtoc, No odour	Low pH and elevated conductivity are generally consistent with surrounding conditions and previous results recorded.
2/9/2024, 3:06 pm	EPL96	GF01 groundwater downstream	13.87	35.9	3.7	457	297	6.83	92	759	Swl 4.91mbtocDtb 12.21	Slightly elevated EC is generally consistent with surrounding conditions.
2/9/2024, 2:42 pm	EPL97	GF01 groundwater downstream	14.07	71.8	7.38	481	313	6.54	133	85.4	Swl 6.14mbtoc, Clean, no odour	Slightly elevated EC is generally consistent with surrounding conditions.

Note 1: Water Quality Objective values for the Yarrangobilly River and Minor Watercourses refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 2: Water Quality Objective values for Talbingo Reservoir are the default trigger values for physical and chemical stressors in south-east Australia (freshwater lakes and reservoirs) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 3: 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.

Note 4: Water Quality Objective values for groundwater reference the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for pH and electrical conductivity.

OCTOBER 2024

2024 EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring October 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
4/10/2024, 10:09 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	11.26	106.7	11.59	81	53	7.45	189	3.4	Cloudy day, clean water,high flow, turbulent water, no odour	This location is upstream of works and is therefore representative of background conditions.
4/10/2024, 4:15 pm	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	10.19	95.4	10.73	60	39	6.7	235	7.9	Cloudy day, high flow, high level of water, clear water, no smell	All readings are within WQO limits.
4/10/2024, 11:44 am	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	12.32	89	9.52	93	61	6.65	235	6.2	Cloudy day, high flow, clean water, no odour	All readings except DO is within WQO limits. DO is consistent with baseline data.
4/10/2024, 12:13 pm	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	12.13	90.8	9.75	82	53	6.69	237	3.7	Cloudy day, high flowing, no odour, clean water, high level of water	All readings are within WQO limits.
4/10/2024, 10:24 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	11.81	96.4	10.43	81	53	6.62	228	3.7	Cloudy day, no odour, clean water, high flowing, a bit turbulent water	All readings are within WQO limits.
4/10/2024, 11:01 am	EPL14	Yarrangobilly River, downstream of road construction areas	6.64	89.8	9.77	78	51	6.64	241	3.5	Cloudy day, no odour, low flow, low level of water, clear water	All readings are within WQO limits. DO is marginally low
4/10/2024, 4:24 pm	EPL15	Yarrangobilly River, downstream of road construction areas	12.02	91.8	9.88	77	50	6.7	236	3.8	Cloudy day, high flowing, no odour, clear water	All readings are within WQO limits.
4/10/2024, 12:25 pm	EPL16	Yarrangobilly River, downstream of road construction areas	12.66	80.1	8.5	88	57	6.58	240	10.4	Cloudy day, turbulent water, high flowing, no odour, clear water	All readings except DO is within WQO limits. DO is consistent with baseline data.
1/10/2024, 4:23 pm	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	17.73	70.9	6.74	301	196	7.18	170	23.4	Sunny, Clear water, Plenty of flow	All readings except DO is within WQO limits. DO is consistent with baseline data.
6/10/2024, 8:53 am	EPL26	Eucumbene River downstream of Marica Road	11.86	107.5	11.62	63	41	7.11	163	19.2	Rainy day, clear water, no odour, slow flow	All readings are within WQO limits.
6/10/2024, 8:58 am	EPL27	Eucumbene River upstream of Marica Road	9.95	96	10.84	33	22	7.9	134	5.8	Rainy day, clear water, no odour, slow flow	All readings are within WQO limits.
5/10/2024, 10:17 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	11.22	71.2	7.81	29	19	6.4	187	10.1	Cloudy day, clear water, slow flow, no odour	Do and pH levels are consistent with baseline data.
5/10/2024, 10:26 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	11.21	71.2	7.81	24	16	6.42	185	7.1	Cloudy day, low level of water, slow flowing, clear water, no odour	Do and pH levels are consistent with baseline data.
5/10/2024, 9:54 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	12.6	84.7	9.01	22	14	6.68	157	6.3	Cloudy day, high flowing, clear water, no odour	Low DO levels are consitent with baseline data.
5/10/2024, 9:21 am	EPL34	Nungar Creek, upstream of Tantangara Road	12.14	86.3	9.26	99	64	6.57	94	20.5	Cloudy day, turbulent water, a bit turdid,high flow, no odour	Low DO levels are consitent with baseline data.
5/10/2024, 9:25 am	EPL35	Nungar Creek, downstream of Tantangara Road	9.88	83.2	9.4	17	11	7.46	70	14.8	Cloudy day, turbulent water, high flow, clear water, no odour	Low DO and EC levels are consitent with baseline data.
13/10/2024, 1:35 pm	EPL36	Camerons Creek, upstream of works in Rock Forest	16.18	100.4	9.87	52	34	5.9	209	0.3	Sunny day, low turbidity, slow flow, small watercourse, no odour, animals closely of the stream	This location is upstream of works and is therefore representative of background conditions.
13/10/2024, 1:11 pm	EPL37	Camerons Creek, downstream of works in Rock Forest	18.45	30.9	9.59	60	39	6.66	185	56.5	Sunny day, turbid water, no odour, slow flow	Low DO and high turbidity are within the historical range for this location and are consistent with background conditions for September 2024.
3/10/2024, 11:24 am	EPL52	GT01 sediment basin	20.23	99.8	9.01	949	620	8.1	85	25.3	Sunny, Clear water, Mid depth	High EC, pH, and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant .
-	EPL53	GT01 surface water upstream east	-	-	-	-	-	-	-	-	-	Dry site, no flow
-	EPL54	GT01 surface water upstream west	-	-	-	-	-	-	-	-	-	Dry site, no flow
5/10/2024, 1:41 pm	EPL 66	Tantangara Leachate basin downstream east from Tantangara emplacement area	13.48	94.5	9.85	26	17	7.97	177	20.2	Gale force winds, cloudy day, post morning rain. Visible turbidity and brown coloured water with no odour. Shallow with lowered reservoir levels	Low EC is consistent with historical data and conditions for this location.
30/10/2024, 3:15 pm	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	10.8	92.1	8.41	52.5	38	7.57	115	2.96	Sunny afternoon, no wind. Sediment on bank	All readings are within WQO limits.
6/10/2024, 9:43 am	EPL71	Surface water downstream of Marica emplacement	8.78	86.1	10	64	42	7.44	261	67.5	Rainy day, turbid water, no smelly, low level pf water, very slow flow	DO is within the historical baseline water quality result during wet season conditions at Marica.
9/10/2024, 10:54 am	EPL84	F8 Basin	17.17	95.8	9.21	837	565	8.28	169	1000	Sunny Dead algal growth visible High Turbidity greater than 1000 NTU	High EC, pH, and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant.
9/10/2024, 11:12 am	EPL85	MY07 Basin	16.93	84.6	8.18	482	313	9.33	142	77.1	Sunny Clear water No Algal growth visible Mid depth in basin	High EC, pH and turbidity are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant.
9/10/2024, 11:05 am	EPL86	LH001 Basin	17.57	84.8	8.07	1140	756	9.3	99	58	Sunny Clear water low turbidity Mid depth Algal growth on entrance to basin	High EC and turbidity with low DO are due to runoff accumulating in the basin. Water was taken for treatment at the process water treatment plant.

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
7/10/2024, 8:17 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	14.42	110	11.23	63	41	7.62	174	22.3	Cloudy weather sample tak	High EC remains consistent with baseline conditions. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.
7/10/2024, 9:41 am	EPL11	Talbingo Reservoir, downstream of outlet	14.75	72.2	7.32	55	36	7.58	193	10.6	Sample taken on reservoir at EPL 11 point. Cloudy weather	Low DO and High EC remains consistent with baseline conditions. As such, it is anticipated that these exceedances are not a result of Snowy 2.0 construction activities.
16/10/2024, 8:16 am	EPL28	Tantangara Reservoir, upstream in the mouth of the Murrumbidgee River	10.8	88.6	9.81	16.8	15	7.14	203.5	3.86	Heavy fog, slight breeze; cold. Water relatively clear with organic material present; no odour or oily sheen. Wat	This location is upstream of works and is therefore representative of background conditions.
16/10/2024, 9:07 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	12.6	91.2	9.7	16.5	14	6.73	179.7	4.3	Foggy, cold; slight breeze. Water relatively clear with organic material present; no odour or oily sheen.	Low electrical conductivity (EC) is consistent with historical data and conditions for this location.
16/10/2024, 9:00 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	12.5	91.6	9.76	16.6	14	7.31	226	4.37	Foggy, cold; slight breeze. Water relatively clear with organic material present; no odour or oily sheen.	Low electrical conductivity (EC) is consistent with historical data and conditions for this location.
16/10/2024, 8:40 am	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	13	93.5	9.86	16.7	14	7.28	223.1	4.33	Heavy fog, cold; slight breeze. Water relatively clear with organic material present; no odour or oily sheen.	Low electrical conductivity (EC) is consistent with historical data and conditions for this location.
5/10/2024, 11:13 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	12.06	69.2	7.45	20	13	6.57	194	11.0	Cloudy day, high level of water, constantly flowing, no odour	This location is upstream of works and is therefore representative of background conditions. Low DO can be attributed to the decreased level of water and the presence of organic material.
10/10/2024, 2:17 pm	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	16.98	62.5	6.04	70	46	8.08	-78	31.0	Sunny day, light winds. Taken from river. Running water.	This location is upstream of works and is therefore representative of background conditions.
16/10/2024, 9:19 am	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	12.5	91.2	9.71	18.1	15	6.55	226.4	4.55	Fog clearing, slight breeze. Water relatively clear with organic material present; no odour or oily sheen.	Low EC is consistent with historical data and conditions for this location.
16/10/2024, 9:12 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	12.5	90.9	9.68	16.5	14	6.58	221.3	4.51	Fog clearing, slight breeze. Water relatively clear with organic material present; no odour or oily sheen.	Low EC is consistent with historical data and conditions for this location.

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
2/10/2024, 8:00 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	11.58	85.5	9.3	112	73	7.45	138	26.5	Clear water RO startup sample after 5 mins	Slightly elevated turbidity however no discharge was occurring at the time 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
23/10/2024, 10:14 am	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	17.6	86.9	8.5	133.1	101	5.8	171.2	1.18	The RO plant is non- functioning due to maintenance upgrades. The sample is from a tank. No discharges have occurred this month. Clear water with no odour or sheen.	The pH levels will continue to be monitored in the coming sampling rounds.

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
15/10/2024, 10:43 am	EPL56	GF01 groundwater upstream east	15.96	22.7	2.24	269	175	7.43	192	185	SWL- 10.49 m, sunny day, a bit turbid water, no odour	This location is upstream of works and is therefore representative of background conditions.
15/10/2024, 11:06 am	EPL57	GF01 groundwater upstream west	17.95	36.5	3.48	252	164	7.95	213	196	SWL- 15.38 m, sunny day, turbid water, no odour	This location is upstream of works and is therefore representative of background conditions.
15/10/2024, 1:43 pm	EPL58	GF01 groundwater downstream	18.06	50.1	4.72	809	518	5.88	266	60.1	SWL- 6.72 m, sunny day, clear water, no odour	High EC and low pH are generally consistent with conditions at GF01 during sampling.
19/10/2024, 11:21 am	EPL68	Tantangara groundwater downstream West	13.63	78.7	8.18	30	19	7.88	186	6.8	SWL: 2.36 m. Partly cloudy day, recent rain yesterday and this morning. Water is very clear. No odour.	All readings are within WQO limits.
19/10/2024, 11:43 am	EPL69	Tantangara groundwater downstream East	13.57	87.1	9.05	28	18	7.25	213	4.1	SWL: 3.64 m. Cloudy day, recent rain. Clear water no odour.	Low pH is generally consistent with previous results in the last months. These conditions are following expected changes due to altered climatic conditions.
19/10/2024, 9:11 am	EPL70	Tantangara groundwater upstream	13.04	71.2	7.49	146	95	5.78	278	64.5	SWL: 5.57 m. Cloudy day. Water very clear, no odour	This location is upstream of works and is therefore representative of background conditions.
6/10/2024, 9:13 am	EPL 72	Marica groundwater upstream	10.24	82.1	9.22	36	24	7.84	218	45.9	Rainy day, a bit turbid water, no smelly	This location is upgradient of works and is therefore representative of background conditions.
6/10/2024, 9:32 am	EPL73	Marica groundwater downstream	10.16	81.3	9.14	64	42	7.69	263	54.1	Rainy day, a bit turbid water, no smelly	All readings are within WQO limits.
1/10/2024, 1:47 pm	EPL80	LHG groundwater upstream	19.2	75.7	6.97	963	616	6.75	-6	79.1	SWL 20.26m, Sunny, Clear water	This location is upstream of works and is therefore representative of background conditions.
1/10/2024, 12:29 pm	EPL81	LHG groundwater downstream	16.75	54.1	5.3	772	494	6.41	-112	105	SWL 3.16m, Sunny, Clear water	Elevated EC and low pH are generally consistent with the previous results for this location and the exceedance is consistent with the historical data.
1/10/2024, 1:45 pm	EPL82	MY groundwater upstream	17.13	18.6	1.77	2970	1900	6.66	17	175	SWL 9.27m, Sunny, Clear water	This location is upstream of works and is therefore representative of background conditions and within historical ranges.
1/10/2024, 12:12 pm	EPL83	MY groundwater downstream	20.62	61.1	5.48	643	411	6.81	114	1000	SWL 3.09m, Sunny, Turbid water greater than 1000NTU	Elevated EC is generally consistent with background conditions and historical data recorded in this location.
1/10/2024, 1:43 pm	EPL87	MY groundwater downstream	15.02	89.8	9.04	597	382	6.74	116	1000	SWL 2.7m, Sunny, Turbid water greater than 1000NTU	Elevated EC is generally consistent with background conditions and historical data recorded in this location.
1/10/2024, 11:49 am	EPL88	MY groundwater downstream	17.05	23.6	2.27	1910	1220	6.92	9	7.1	SWL 2.93m, Sunny, Clear water	Elevated EC is generally consistent with background conditions and previous conditions recorded in the last sampling rounds.
1/10/2024, 10:37 am	EPL89	LHG groundwater downstream	15.96	61.7	6.08	348	226	7.51	108	114	SWL 2.65m, Sunny, Clear water	All readings are within WQO limits.
15/10/2024, 11:44 am	EPL90	GF01 groundwater downstream	17.51	61	5.85	363	237	6.17	182	246	SWL- 13.61 m, sunny day, turbid water, no odour	Low pH is generally consistent with surrounding conditions and previous results recorded.
15/10/2024, 10:19 am	EPL91	GF01 groundwater downstream	17.5	28.3	2.71	325	211	6.92	209	92.7	SWL- 8.98 m, sunny day, turbid water, no odour	All readings are within WQO limits.
15/10/2024, 10:32 am	EPL92	GF01 groundwater downstream	16.69	58.7	5.71	160	104	7.05	174	1000	SWL- 13.49 m, sunny day, very turbid water, no odour	All readings are within WQO limits.
15/10/2024, 11:33 am	EPL93	GF01 groundwater downstream	16.76	26.4	2.56	682	437	6.74	80	200	SWL- 13.62 m, sunny day, turbid water, no odour	All readings are within WQO limits.
15/10/2024, 11:27 am	EPL94	GF01 groundwater downstream	17.17	45.1	4.34	273	177	7.32	230	283	SWL- 14.4 m, sunny day, turbid water, no odour	All readings are within WQO limits.
15/10/2024, 1:35 pm	EPL95	GF01 groundwater downstream	19.45	15.9	1.46	550	352	5.8	271	108	SWL- 7.2 m, sunny day, a bit turbid water, no odour	Elevated EC and low pH are generally consistent with the background and previous conditions recorded in the last sampling rounds.
15/10/2024, 1:21 pm	EPL96	GF01 groundwater downstream	18.98	25.5	2.36	842	534	6.81	243	293	SWL- 5.1 m, sunny day, turbid water, no odour	Elevated EC is generally consistent with surrounding conditions.
15/10/2024, 11:56 am	EPL97	GF01 groundwater downstream	18.12	31	2.92	478	311	6.42	220	107	SWL- 6.31 m, sunny day, a bit turbid water, no odour	Elevated EC and pH levels are generally consistent with surrounding conditions.

Note 1: Water Quality Objective values for the Yarrangobilly River and Minor Watercourses refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 2: Water Quality Objective values for Talbingo Reservoir are the default trigger values for physical and chemical stressors in south-east Australia (freshwater lakes and reservoirs) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 3: 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.

Note 4: Water Quality Objective values for groundwater reference the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for pH and electrical conductivity.

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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
3/11/2024, 1:24 pm	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	20.33	109.4	9.88	100	65	7.64	52	2.04	Sunny day, very clear water, constant flow, no odour, a bit turbulent	All readings are within WQO limits.
3/11/2024, 2:00 pm	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	18.79	107.8	10.04	74	48	7.47	99	2.48	Sunny day, very clear water, constant flow, no odour, small stream	All readings are within WQO limits.
3/11/2024, 2:49 pm	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	21.85	90.2	7.9	107	70	7.85	93	1.83	Sunny day, very clear water, constant flow, no odour, a bit turbulent water	Low turbidity is consistent with historical ranges for this location.
3/11/2024, 3:16 pm	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	21.72	92.6	8.14	102	92.6	7.91	95	3.61	Sunny day, very clear water, constant flow, no odour	All readings are within WQO limits.
3/11/2024, 1:42 pm	EPL12	Yarrangobilly River, immediately downstream of portal pad	20.41	100.7	9.08	100	65	7.65	88	1.89	Sunny day, very clear water, constant flow, no odour	Low turbidity is consistent with background conditions during sampling for this location.
3/11/2024, 2:18 pm	EPL14	Yarrangobilly River, downstream of road construction areas	22.84	102.2	8.79	97	63	7.95	88	1.87	Sunny day, very clear water, constant flow, no odour, low level of water	Low turbidity is consistent with background conditions during sampling for this location.
3/11/2024, 2:30 pm	EPL15	Yarrangobilly River, downstream of road construction areas	21.2	105.4	9.36	96	62	7.93	91	1.28	Sunny day, very clear water, constant flow, no odour, low level of water	Low turbidity is consistent with historical ranges for this location.
3/11/2024, 3:31 pm	EPL16	Yarrangobilly River, downstream of road construction areas	22.54	94.2	8.15	107	70	7.89	89	4.9	Sunny day, very clear water, constantly flow, no odour, a bit turbulent	All readings are within WQO limits.
4/11/2024, 12:27 pm	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	14.58	66.3	6.74	655	419	6.58	72	0	Sunny day, clear water, slow flow, no smell	Low DO and high EC align with the historical ranges. Probe due for replacement.
1/11/2024, 1:33 pm	EPL26	Eucumbene River downstream of Marica Road	15.16	92.7	9.3	37	24	6.83	164	0	Sunny day, clear water, no odour, slow flow, low level of water	Low turbidity within historical ranges. Probe due for replacement.
1/11/2024, 1:26 pm	EPL27	Eucumbene River upstream of Marica Road	16.44	77	7.52	48	31	6.61	165	0	Sunny day, clear water, no odour, slow flow, low level of water	This location is upstream of works and is therefore representative of background conditions. Probe due for replacement.
2/11/2024, 10:04 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	12.86	80.6	8.52	29	19	6.09	186	2.9	Sunny day, clear water, no odour, slow flow	Low DO, EC, and pH are generally consistent with background conditions and are within historical ranges.
2/11/2024, 9:41 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	12.97	81	8.54	25	16	6.24	178	2.4	Sunny day, clear water, no odour, slow flow	Low DO , EC and pH are generally consistent with background conditions and are within historical ranges.
2/11/2024, 8:58 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	14.36	91.4	9.34	24	15	6.5	158	4.2	Sunny day, clear water, no odour, slow flow	Low EC aligns with historical data for November.
2/11/2024, 8:19 am	EPL34	Nungar Creek, upstream of Tantangara Road	13.2	99.1	10.39	34	22	7.85	109	1.3	Sunny day, clear water, no odour, slow flow	This location is upstream of works and is therefore representative of background conditions.
2/11/2024, 8:24 am	EPL35	Nungar Creek, downstream of Tantangara Road	12.72	99.7	10.57	22	14	7.48	112	0.2	Sunny day, clear water, no odour, slow flow	Low EC is consistent with background conditions. Low DO is being monitored to ensure variance is attributed to natural fluctuations.
9/11/2024, 11:01 am	EPL36	Cameron Creek, upstream of works in Rock Forest	15.03	82.8	8.34	61	40	6.95	85	69.3	Sunny, Slight flow in creek, Clear water	This location is upstream of works and is therefore representative of background conditions.
9/11/2024, 10:36 am	EPL37	Cameron Creek, downstream of works in Rock Forest	16.75	85.7	8.33	75	49	7.24	60	57.8	Sunny, Slight flow in creek, Clear water	Low DO is within the historical range and is consistent with background conditions for this location.
5/11/2024, 12:03 pm	EPL52	GF01 leachate basin	21.2	90.6	8.02	965	618	8.47	-10	66.8	sunny day, turbid water, no odour	High pH, Turbidity and EC 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 were met.
-	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	-	Dry site, no flow
-	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	-	Dry site, no flow
5/11/2024, 11:55 am	EPL55	GF01 surface water downstream	-	-	-	-	-	-	-	-	This location is dry and it's not a representation for sampling	Dry site, no flow
16/11/2024, 11:15 am	EPL66	Tantangara Leachate basin downstream east from Tantangara emplacement area	19.48	69.8	6.41	24	16	7.38	158	6.3	sunny day, clear water, no odour	Low EC is within the historical range and is consistent with background conditions for this location.
16/11/2024, 10:57 am	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	18.16	78.8	7.44	22	14	7.41	155	4	sunny day, clear water, no odour, contently flowing	Low EC is within the historical range and is consistent with background conditions for this location for November 2024.
1/11/2024, 11:12 am	EPL71	Surface water downstream of Marica emplacement	12.93	65.4	6.9	71	46	6.29	271	20.4	sunny day, turbid water, no odour, small flow, low level of water, constantly flow	Low DO and pH are within the historical range and are consistent with background conditions for this location for November 2024.
4/11/2024, 2:38 pm	EPL84	FB Basin	23.4	162.8	13.8	1530	982	8.3	57	1000	Sunny day, turbid water, no odour	High pH, EC, NTU and DO 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.
4/11/2024, 2:48 pm	EPL85	MY07 Basin	21.77	64.8	5.68	695	445	10.45	-2	93.9	Sunny day, turbid water, no odour	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.
4/11/2024, 3:07 pm	EPL86	LHG01 Basin	22.18	90.2	7.83	1250	802	7.92	62	126	Sunny day, turbid water, no odour	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.

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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**
3/11/2024, 8:39 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	19.15	93.6	8.66	78	51	7.44	105	1.5	Clear, no odours, no algal bloom	Low Turbidity is generally consistent with the baseline data for this location. EC is consistent with background conditions in the Tarrangobilly River for November 2024.
3/11/2024, 8:28 am	EPL11	Talbingo Reservoir, downstream of outlet	18.97	88.1	8.18	70	45	6.74	135	1.3	Clear, no odours, no algal growth	Low DO is being monitored to ensure variance is attributed to natural fluctuations. EC is consistent with background conditions in the Tarrangobilly River for November 2024.
26/11/2024, 8:06 am	EPL28	Tantangara Reservoir, upstream of works in the mouth of the Murrumbidgee River	19.5	88.2	8.09	25.8	19	9.51	144.4	7.67	Overcast, slight breeze. Water level at 0.6m, turbid with sediment stirred up; organic material and algae present; no odour or oily sheen.	Elevated pH levels, likely resulting from decreased water levels and increased organic matter, were observed. These locations will be closely monitored during the next sampling round. Low DO remains with the historical data.
26/11/2024, 8:42 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	20.3	94	8.5	22	16	9.69	208.2	4.33	Overcast, windy. Water level at 14.2m, choppy; organic material present; no odour or oily sheen.	Elevated pH levels, likely resulting from decreased water levels and increased organic matter, were observed. These locations will be closely monitored during the next sampling round.
26/11/2024, 8:37 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	20.4	93.7	8.46	22.1	16	10.11	182.2	4.38	Cloudy, wind picking up. Water level at 11.5m; choppy; organic material present; no odour or oily sheen.	Elevated pH levels, likely resulting from decreased water levels and increased organic matter, were observed. These locations will be closely monitored during the next sampling round.
16/11/2024, 12:20 pm	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	19.01	89	8.25	25	16	6.59	190	8.6	Sunny day, very clear water, no odour	Low DO remains with the historical data.
16/11/2024, 10:51 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	18.56	74	6.92	26	17	7.25	155	3.9	Sunny day, clear water, no odour, high flow	Low DO and EC are consistent with background conditions and low reservoir water levels for November 2024.
4/11/2024, 12:20 pm	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	14.9	95.5	9.65	20	16	7.6	168	3.95	Overcast, windy. Water, fast flowing, relatively clear with organic material present; no odour or oily sheen.	All readings are within WQO limits.
26/11/2024, 8:52 am	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	20.3	94.5	854	23.1	17	9.8	197.6	4.39	Cloudy, windy. Water level at 4.6m, choppy; organic material present; no odour or oily sheen.	Elevated pH levels, likely resulting from decreased water levels and increased organic matter, were observed.
26/11/2024, 8:47 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	20.3	94	8.49	22.1	16	9.83	194.8	4.24	Cloudy, windy. Water level at 12.7m; choppy; organic material and algae present; no odour or oily sheen.	Elevated pH levels, likely resulting from decreased water levels and increased organic matter, were observed.

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**
17/11/2024, 9:33 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	24.32	80.5	6.73	24	16	8.72	118	4.7	Clear, no odour, plant running prior to sample	pH readings will be closely monitored.

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**
27/11/2024, 1:34 pm	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	18.9	88.7	8.25	158.4	117	8.98	223.6	9.48	Water clear; no odour or oily sheen.	pH readings will be closely monitored.

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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
4/11/2024, 10:30 am	EPL1	Wallace Creek Bridge	16.03	41.4	4.08	460	299	6.68	-31	20.1	SWL- 3.71m, turbid water, organic material smell	Elevated EC is within the historical range for this location.
4/11/2024, 10:42 am	EPL2	Wallace Creek Bridge	18.07	35.9	3.39	519	333	7.55	-122	387	SWL- 3.64 m, sunny day, sediment emplacement in the bottom, stinky odour, turbid water	Elevated EC is within the historical range for this location.
17/11/2024, 9:24 am	EPL4	Portal Access	17.77	11.5	1.09	1320	842	7.16	-110	1000	SWL 2.70m Cloudy day Borehole under submerged water mud from previous rain events. Turbidity greater than 1000 NTU. HORIBA MAX OUT.	Elevated EC is within the historical range for this location.
4/11/2024, 10:09 am	EPL25	Portal Access	16.45	15.4	1.5	502	321	6.31	-3	96.8	SWL- 3.71 m, sunny day, turbid water, organic material smell	Elevated EC and low pH is within the historical range for this location.
5/11/2024, 10:48 am	EPL56	GF01 groundwater upstream east	16.44	29.2	2.86	287	186	8.02	59	65.7	SWL- 10.5 m, sunny day, turbid water, no odour	Marginal pH exceedence.
5/11/2024, 11:05 am	EPL57	GF01 groundwater upstream west	18.83	41.9	3.94	269	175	8.2	61	80.2	SWL- 15.07 m, sunny day, turbid water, no odour	This location is upstream of works and is therefore representative of background conditions.
5/11/2024, 12:14 pm	EPL58	GF01 groundwater downstream	17.35	17.6	1.69	902	578	6.06	85	20.9	SWL- 6.77 m, sunny day, turbid water, no odour	Elevated EC is generally consistent with historical range for this location. Low pH will be monitored.
2/11/2024, 11:52 am	EPL68	Tantangara groundwater downstream West	13.1	90.2	9.48	9.6	8	6.24	257.4	3.36	Sunny, windy, 18 degrees ambient temperature. Water clear with no odour or oily sheen. SWL 4.55m, Depth 9.74m	Low pH and EC are generally consistent with previous results in the last months. These conditions are following expected changes due to altered climatic conditions.
2/11/2024, 12:11 pm	EPL69	Tantangara groundwater downstream East	13.3	87.7	9.19	19.7	16	6.17	277.9	7.49	Sunny, windy, 18 degrees ambient temperature. Water relatively clear with some sediment present at bottom of sleeve; no odour or oily sheen. SWL 2.31m, Depth 6.97m	Low pH and EC are generally consistent with previous results in the last months. These conditions are following expected changes due to altered climatic conditions.
2/11/2024, 1:06 pm	EPL70	Tantangara groundwater upstream	15.4	63.5	6.35	65	52	6.07	292.1	22.55	Sunny, windy, 18 degrees ambient temperature. Water relatively clear with some sediment pr	This location is upstream of works and is therefore representative of background conditions.
8/11/2024, 11:31 am	EPL 72	Marica groundwater upstream	11.37	40.2	4.39	61	40	6.18	79	188	Cloudy SWL 35.24m Clear water Hydrasleeve in	This location is upstream of works and is therefore representative of background conditions.
8/11/2024, 10:55 am	EPL 73	Marica groundwater downstream	11.89	55.8	6.02	72	47	6.67	105	88.3	SWL 13.01m Cloudy Clear water low turbidity Hydrasleeve in	All readings are within WQO limits.
6/11/2024, 2:32 pm	EPL80	LHG groundwater upstream	19.27	22.5	2.07	892	571	6.88	-31	134	SWL- 19.43 m, turbid water, no odour	This location is upstream of works and is therefore representative of background conditions.
6/11/2024, 1:22 pm	EPL81	LHG groundwater downstream	17.98	17.2	1.62	794	508	6.83	-87	223	SWL- 3.49 m, turbid water, no odour	Elevated EC is consistent with background conditions in November 2024.
6/11/2024, 2:48 pm	EPL82	MY groundwater upstream	18.93	17.1	1.3	2640	1690	6.75	-68	120	SWL- 8.40 m, turbid water, no odour	This location is upstream of works and is therefore representative of background conditions.
6/11/2024, 1:40 pm	EPL83	MY groundwater downstream	17.46	39.3	3.76	698	447	7.27	-96	1000	SWL- 3.62 m, turbid water, no odour	Elevated pH will be monitored.
6/11/2024, 1:06 pm	EPL87	MY groundwater downstream	16.78	64.9	6.29	442	287	6.44	92	1000	SWL- 3.92 m,turbid water, no odour	Low pH aligned with the historical data for this location in November t 2024.
6/11/2024, 1:37 pm	EPL88	MY groundwater downstream	18.6	50	4.67	827	529	7.05	-170	5.8	SWL- 3.21 m, turbid water, no odour	Elevated EC will be monitored.
6/11/2024, 2:10 pm	EPL89	LHG groundwater downstream	6.69	14.6	1.41	367	239	6.69	-9	128	SWL- 3.14 m, turbid water, no odour	Marginal EC exceedence.
5/11/2024, 12:22 pm	EPL 90	GF01 groundwater downstream	17.73	34.8	3.32	85	55	5.67	93	340	SWL- 13.94 m, sunny day, turbid water, no odour	Low pH is not consistent with up gradient conditions or conditions in GF01 but appears consistent with other downstream wells and will be monitored.
5/11/2024, 12:41 pm	EPL 91	GF01 groundwater downstream	18.47	0	0	250	163	6.46	44	23.9	SWL- 9.27 m, sunny day, turbid water, no odour	pH is marginally low.
5/11/2024, 11:24 am	EPL 92	GF01 groundwater downstream	17.82	47.3	4.48	150	98	7.31	82	229	SWL- 14.10 m, sunny day, turbid water, no odour	All readings are within WQO limits.
5/11/2024, 11:31 am	EPL 93	GF01 groundwater downstream	17.42	17.1	1.64	262	170	7.18	62	162	SWL- 14.68 m, sunny day, turbid water, no odour	All readings are within WQO limits.
5/11/2024, 11:46 am	EPL 94	GF01 groundwater downstream	17.02	24.6	2.38	182	118	6.74	-67	84.7	SWL- 13.59 m, sunny day, turbid water, no odour	All readings are within WQO limits.
5/11/2024, 12:07 pm	EPL 95	GF01 groundwater downstream	18.08	0.4	0.04	525	336	5.98	81	109	SWL- 7.21 m, sunny day, turbid water, no odour	Low pH is not consistent with up gradient conditions or conditions in GF01 but appears consistent with other downstream wells and will be monitored.
5/11/2024, 11:56 am	EPL 96	GF01 groundwater downstream	18.01	80.6	7.6	1100	703	6.94	5	370	SWL- 5.04 m, sunny day, turbid water, no odour	EC is elevated more than other ground and surface water locations in GF01, inclusive of the leachate basin. The top of bore casing is open and may be a contributing factor to elevated levels. This will be closely monitored and a permanent pump for extraction be set up for this location to enable treatment of water if required.
5/11/2024, 12:33 pm	EPL 97	GF01 groundwater downstream	17.64	0	0	429	279	6.27	86	36.4	SWL- 6.43, sunny day, turbid water, no odour	Elevated EC and low pH will be monitored.

Note 1: Water Quality Objective values for the Yarrangobilly River and Minor Watercourses refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 2: Water Quality Objective values for Talbingo Reservoir are the default trigger values for physical and chemical stressors in south-east Australia (freshwater lakes and reservoirs) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 3: 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.

Note 4: Water Quality Objective values for groundwater reference the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for pH and electrical conductivity.

APPENDIX C – LABORATORY RESULTS TABLES

JUNE 2024

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-30 June 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				4/06/2024	4/06/2024	4/06/2024	16/06/2024	16/06/2024	16/06/2024	2/06/2024	2/06/2024	3/06/2024	7/06/2024	7/06/2024	7/06/2024	7/06/2024	7/06/2024	7/06/2024	4/06/2024	4/06/2024	4/06/2024	4/06/2024	4/06/2024	4/06/2024	4/06/2024	4/06/2024
pH	pH Unit	-	6.5-8	7.43	7.92	6.26	5.8	6.2	6.3	6.97	7.79	7	6.92	6.83	7.03	7.05	7.03	6.93	6.49	6.85	6.9	7.09	6.72	6.28	7.08	7.04
Electrical Conductivity	µS/cm	-	30-350	179	158	504	35.9	143	45.4	32	44	483	402	1680	485	274	485	177	194	163	46	167	112	340	188	345
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	165	142	191	10.9	143	45.4	211	256	6	-24	-16	-60	57	-60	179	185	98	206	19	88	176	152	91
Temperature	°C	-	No Water Quality Objective Value	12.84	13.05	14.93	10.5	9.8	10.4	8.94	1.25	15.38	14.81	15.55	15.84	14.92	15.84	15.55	13.54	14.49	12.83	12.88	13.39	13.82	13.92	14.07
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	30.7	24.6	36.4	80.9	70.7	70.6	86.8	99.7	95.6	18.8	91.2	25.8	15.5	25.8	29.7	65.5	32.1	65.1	52.3	33.9	52.3	40.9	30.3
Turbidity	NTU	-	No Water Quality Objective Value	19.1	71.5	5.5	12.1	22.6	106	37.1	18.9	63.7	241	52.4	7.6	44.7	7.6	107	241	50.8	49	158	89.1	12	510	95.2
Laboratory analytes																										
TSS	mg/L	5	No Water Quality Objective Value	94	<5	<5	26	162	122	218	79	38	264	38	93	38	12	699	442	52	119	216	240	8	374	126
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	116	138	207	<1	2	26	13	30	312	314	1,140	264	103	120	52	71	126	29	132	83	189	85	112
Nutrients																										
Ammonia as N	µg/L	5	13	30	<10	110	<10	20	<10	<10	40	40	50	110	30	10	160	<10	60	50	30	70	100	10	<10	20
Nitrite + Nitrate as N (Nox)	µg/L	10	15	140	30	37800	720	120	550	20	40	10	20	<10	8060	1800	10	80	460	10	200	<0.01	<0.01	24500	430	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	<100	<100	9600	200	200	<1000	<100	<100	200	300	200	1800	300	300	300	200	200	<100	400	400	3100	400	200
Nitrogen (Total)	µg/L	10	250	100	<100	47400	900	300	<1000	<100	<100	200	300	200	9900	2100	300	400	700	200	200	400	400	27900	800	200
Reactive Phosphorus	µg/L	1	15	1	4	5	3	6	25	17	26	3	<1	<1	2	3	10	4	15	18	8	31	7	11	6	12
Phosphorus (Total)	µg/L	5	20	100	20	10	<10	40	260	70	90	100	250	<10	90	20	30	200	140	60	20	440	150	60	290	110
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	8	57	<5	9	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	2600	262	111	471	2080	1830	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (dissolved)	µg/L	1	0.8	1.1	<0.2	0.2	<0.2	<0.2	<0.2	0.2	<0.2	3.4	2	2.7	1.8	<0.2	9.2	<0.2	<0.2	0.4	0.2	18.7	0.8	1.6	0.2	1.1
Arsenic (total)	µg/L	1	No Water Quality Objective Value	2.4	<0.2	0.2	<0.2	0.6	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (III+VI) (dissolved)	µg/L	1	0.01	<0.2	<0.2	6.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	1.6	<0.2
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	6.4	0.9	6.7	0.4	2.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper (dissolved)	µg/L	1	1	<0.5	1	1	3.7	<0.5	1.8	1	<0.5	0.9	0.7	<0.5	2.8	<0.5	<0.5	5.6	1	<0.5	<0.5	<0.5	<0.5	75.4	<0.5	<0.5
Copper (total)	µg/L	1	No Water Quality Objective Value	22.8	8.4	1.6	6.2	3.6	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	µg/L	50	300	<2	<2	<2	6	80	<2	<2	<2	<2	<2	620	<2	<2	9	3	<2	<2	<2	<2	<2	<2	<2	<2
Iron (total)	µg/L	50	No Water Quality Objective Value	3310	352	88	218	1580	1180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead (dissolved)	µg/L	1	1	<0.1	<0.1	0.9	<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	3.8	<0.1	<0.1	<0.1	<0.1	0.1
Lead (total)	µg/L	1	No Water Quality Objective Value	8	1.1	3.2	0.1	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	µg/L	5	1,200	6.6	1.7	15.3	1.8	0.7	3	8.2	22.6	172	183	308	75.7	150	142	19.6	37	638	302	342	661	603	25.3	291
Manganese (total)	µg/L	5	No Water Quality Objective Value	111	17.5	17.7	12.8	65.8	29.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (dissolved)	µg/L	1	8	<0.5	<0.5	2.8	1.6	<0.5	0.8	1.2	<0.5	16.7	3.1	1.2	16.8	2.4	7.7	3.2	5.2	1.1	6	1.4	2.3	15.6	2.1	1.6
Nickel (total)	µg/L	1	No Water Quality Objective Value	8.2	1.1	3.3	2.4	2	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	<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	<1	4	5	3	2	1	7	<1	7	1	<1	6	1	16	2	23	3	178	<5	8	32	2	11
Zinc (total)	µg/L	5	No Water Quality Objective Value	20	10	6	5	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* 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 - 30 June 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				23/6/24	23/6/24	28/6/24	28/6/24	28/6/24	28/6/24	28/6/24	28/6/24	28/6/24	28/6/24
pH	pH Unit	-	6.5-8	7.52	7.08	7.18	7.36	6.97	7.3	7.12	7.55	7.32	7.34
Electrical Conductivity	µS/cm	-	20-30	0	0	18	19.1	24	18.7	11.23	16	19.3	19.4
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	178	216	113.6	166.9	277	180	154.6	90.8	168.4	165.9
Temperature	°C	-	No Water Quality Objective Value	9.38	9.45	5.7	6.1	11.55	5.9	4.2	4.4	6.1	6.1
Dissolved Oxygen	% saturation	-	90-110	89.5	76.6	86.2	84.9	96.5	84.6	86.2	85.4	84.4	84.4
Turbidity	NTU	-	1-20	2	5.3	1.56	1.39	7	148	3.67	199.32	1.39	1.37
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	8	<5	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	14	12	9	9	12	9	2	9	9	9
Nutrients													
Ammonia as N	µg/L	5	10	<10	<10	100	140	120	110	10	30	120	120
Nitrite + Nitrate as N (NOx)	µg/L	10	10	30	30	20	10	50	10	<10	50	40	<10
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	200	200	300	300	400	300	100	<100	400	300
Nitrogen (Total)	µg/L	10	350	200	200	300	300	400	300	100	<100	400	300
Reactive Phosphorus	µg/L	1	5	6	4	5	5	3	3	1	3	3	3
Phosphorus (Total)	µg/L	5	10	30	20	20	10	<10	20	10	10	30	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	<1	<1	<1	<1	<1	<1	<1	<1
Metals													
Aluminium (dissolved)	µg/L	5	55	<5	<5	14	14	14	14	14	12	13	13
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	3	<2	39	40	40	41	40	43	39	41
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	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	4	4.8	<0.5	<0.5
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	<0.01	<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^	1	<1	<1	-	-	-	-	-	-	<1
Biochemical Oxygen Demand	mg/L	2	1/5^	<2	<2	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.

^ 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 June 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	EPL84	EPL85	EPL86
Field				8/06/24	8/06/24	8/06/24	1/06/24	8/06/24	8/06/24	8/06/24	8/06/24	6/06/24	9/06/24	9/06/24	12/06/24	12/06/24	13/06/24	13/06/24	13/06/24	13/06/24	13/06/24	11/06/24			11/06/24	16/06/24	16/06/24	21/06/24	21/06/24	21/06/24
pH	-	-	6.5-8	8.25	7.96	7.89	8.43	8.08	7.89	7.85	7.92	7.21	8.49	8.35	7.83	7.94	7.87	7.86	7.82	7.75	7.71	9.01	Dry	Dry	7.98	6.31	7.25	9.82	9.1	8.22
Electrical Conductivity	µS/cm	-	30-350	68	84	30	58	67	69	30	30	421	30	31	32	35	30	15	18	37	39	731	Dry	Dry	626	15.2	9.9	676	432	903
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	199	219	226	183	210	224	228	225	185	157	162	227	179	186	202	188	444	458	216	Dry	Dry	236	213.5	153.7	29	85	131
Temperature	°C	-	No Water Quality Objective Value	9.36	9.32	10.84	8.4	9.45	9.9	10.41	10.6	11.71	8.19	9.06	10.96	11.02	11.7	11.22	10.95	12.6	12.27	7.74	Dry	Dry	10.02	7.2	3.8	11.97	10.86	10.84
Dissolved Oxygen	% saturation	-	90-110	118.1	89.8	93.4	93.4	100.9	98.2	102.3	96.3	68.8	100.2	106.6	96.8	102.7	101.3	99.4	100.2	93.8	94.4	98.6	Dry	Dry	63.7	89.3	86.6	117.9	95.6	97.5
Turbidity	NTU	-	2-25	3.2	3.4	3.4	37.5	3.1	3	7.1	3.6	7.7	0.3	22.6	24.5	20.7	0	9.4	15.5	15	17.5	50.7	Dry	Dry	16.00	3.74	6.08	543	75.5	19.7
Laboratory analytes																														
TSS	mg/L	5	No Water Quality Objective Value	<5	<5	<5	24	<5	20	<5	<5	64	<5	<5	16	12	6	16	17	12	14	20	Dry	Dry	<5	<5	<5	267	24	6
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	48	61	51	29	48	<1	53	51	139	12	12	13	9	9	<1	<1	13	13	150	Dry	Dry	153	9	<1	21	76	342
Nutrients																														
Ammonia as N	µg/L	5	13	<10	<10	<10	<10	<10	<10	<10	<10	10	10	<10	<10	<10	120	20	30	10	20	2040	Dry	Dry	210	90	<10	990	40	<10
Nitrite + Nitrate as N (NOx)	µg/L	10	15	10	<10	10	<10	<10	<10	<10	<10	23000	60	<10	40	<10	20	10	20	50	60	31700	Dry	Dry	28800	40	<10	15300	6730	11100
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	100	<100	100	500	<100	<100	<100	100	2800	100	<100	300	300	400	300	300	800	900	8000	Dry	Dry	6000	500	200	11900	1100	3000
Nitrogen (Total)	µg/L	10	250	100	<100	<100	500	<100	<100	<100	<100	25800	200	<100	300	300	400	300	300	800	1000	39700	Dry	Dry	34800	500	200	27200	7800	14100
Reactive Phosphorus	µg/L	1	15	6	6	5	6	5	5	4	4	2	5	7	5	7	<1	<1	<1	3	3	8	Dry	Dry	6	4	4	14	2	6
Phosphorus (Total)	µg/L	5	20	<10	<10	<10	90	<10	<10	<10	<10	<10	<10	<10	60	140	30	40	40	80	110	70	Dry	Dry	50	10	10	730	50	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
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
Metals																														
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	70	<5	<5	<5	<5	<5	6	5	61	63	23	41	40	133	137	7	Dry	Dry	<5	22	25	19	12	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1030	Dry	Dry	240	71	357	-	-	-
Arsenic (dissolved)	µg/L	1	0.8	0.4	0.2	0.4	0.3	0.4	0.4	0.4	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	0.4	0.5	2.4	Dry	Dry	0.3	<0.2	<0.2	3.9	4.6	2.2
Arsenic (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	Dry	Dry	0.4	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	<0.2	<0.2	0.6	0.2	0.2	0.2	0.2	<0.2	<0.2	<0.2	0.4	0.4	45.6	Dry	Dry	11	<0.2	<0.2	64.6	16	2.4
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49.3	Dry	Dry	11.7	<0.2	0.4	-	-	-
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	1	0.6	<0.5	<0.5	0.8	1	1.3	Dry	Dry	0.8	<0.5	<0.5	2.7	0.7	1.7
Copper (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	Dry	Dry	1.1	<0.5	<0.5	-	-	-
Iron (dissolved)	µg/L	50	300	12	8	12	143	11	10	11	12	<2	14	10	85	81	114	68	68	292	294	<2	Dry	Dry	<2	126	55	6	<2	<2
Iron (total)	µg/L	50	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1090	Dry	Dry	163	280	265	-	-	-
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
Lead (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	Dry	Dry	0.4	<0.1	0.1	-	-	-
Manganese (dissolved)	µg/L	5	1,200	0.8	3.3	1	4.9	0.6	<0.5	0.8	1.7	198	1.8	0.6	3.3	2.8	<0.5	5.7	5.5	6.8	8	<0.5	Dry	Dry	1.6	<0.5	5.2	<0.5	<0.5	16.8
Manganese (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33.9	Dry	Dry	4.8	44.9	11.8	-	-	-
Nickel (dissolved)	µg/L	1	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.9	1	Dry	Dry	0.5	<0.5	<0.5	0.8	<0.5	1.1
Nickel (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8	Dry	Dry	0.9	<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	0.23	0.03	<0.01	0.02	<0.01	<0.01	<0.01	Dry	Dry	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	Dry	Dry	<0.02	<0.01	<0.01	-	-	-
Zinc (dissolved)	µg/L	5	2.4	<1	<1	<1	<1	<1	<1	<1	<1	5	<1	<1	2	1	1	4	4	3	4	1	Dry	Dry	1	<1	<1	1	<1	6
Zinc (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	Dry	Dry	3	<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.

\- Samples not required

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 30 June 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				12/06/2024							12/06/2024
Inflow#	ML/day	-	-	-	0.0120	0.4283	0.0557	0.1439	0.0729	0.1081	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	7.57	-	-	-	-	-	-	6.75
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	25	-	-	-	-	-	-	7
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	229	-	-	-	-	-	-	366
Temperature	°C	-	15	13.72	-	-	-	-	-	-	8.24
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	73.5	-	-	-	-	-	-	91
Turbidity	NTU	-	<25	20.8	-	-	-	-	-	-	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^	30	-	-	-	-	-	-	80
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	200	-	-	-	-	-	-	400
Nitrogen (Total)	µg/L	10	350/-^	300	-	-	-	-	-	-	500
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	3	-	-	-	-	-	-	<1
Phosphorus (Total)	µg/L	5	100/300^	<10	-	-	-	-	-	-	70
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	1.8	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.2	-	-	-	-	-	-	<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	-	-	-	-	-	-	0.04
Zinc (dissolved)	µg/L	1	8	<1	-	-	-	-	-	-	2
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	<0.02	-	-	-	-	-	-	<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

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 30 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)				
1/06/2024	-	-	0.48	0.050	0.20	0.07	0.63
2/06/2024	0.11	-	0.34	0.047	0.32	0.13	0.55
3/06/2024	-	-	0.35	0.050	0.05	0.09	0.42
4/06/2024	-	-	0.47	0.068	0.21	0.08	0.46
5/06/2024	-	-	0.11	0.074	0.24	0.09	0.62
6/06/2024	-	-	0.20	0.057	0.14	0.06	0.42
7/06/2024	0.25	-	0.31	0.071	0.19	0.10	0.20
8/06/2024	-	-	0.32	0.045	0.10	0.10	0.38
9/06/2024	-	-	0.35	0.053	0.27	0.11	0.63
10/06/2024	-	-	0.57	0.068	0.04	0.05	0.47
11/06/2024	-	-	0.27	0.071	0.23	0.11	0.34
12/06/2024	-	-	0.25	0.052	0.13	0.09	0.52
13/06/2024	-	-	0.19	0.058	0.17	0.10	0.38
14/06/2024	-	-	0.22	0.087	0.31	0.10	0.29
15/06/2024	-	-	0.28	0.069	0.08	0.08	0.42
16/06/2024	-	-	0.18	0.067	0.17	0.09	0.15
17/06/2024	-	-	0.18	0.050	0.14	0.09	0.49
18/06/2024	-	-	0.27	0.048	0.12	0.09	0.35
19/06/2024	-	-	0.19	0.046	0.15	0.07	0.50
20/06/2024	-	-	0.09	0.070	0.31	0.09	0.15
21/06/2024	-	-	0.21	0.057	0.05	0.09	0.47
22/06/2024	-	-	0.19	0.070	0.13	0.06	0.23
23/06/2024	-	-	0.27	0.078	0.06	0.05	0.32
24/06/2024	-	-	0.27	0.058	0.21	0.07	0.46
25/06/2024	-	-	0.22	0.078	0.10	0.11	0.28
26/06/2024	-	-	0.38	0.072	0.15	0.06	0.46
27/06/2024	-	-	0.20	0.072	0.17	0.06	0.39
28/06/2024	-	-	0.22	0.069	0.15	0.09	0.21
29/06/2024	-	-	0.13	0.051	0.23	0.11	0.09
30/06/2024	-	-	0.22	0.057	0.09	0.08	0.13
			0.14	0.071	0.16	0.08	0.20

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 2.89 ML/day.

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 0.0 ML/day

\- Water not discharged on this day

JULY 2024

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-31 July 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
Physicochemical																										
pH	pH Unit	-	6.5-8	8	8.21	6.98	5.8	5.93	6.19	5.92	6.15	6.8	6.76	6.64	6.6	6.39	6.9	7.1	5.82	6.64	6.95	7.19	6.72	6.14	7.34	6.7
Electrical Conductivity	uS/cm	-	30-350	219	185	703	24.3	17.1	94.2	27.6	51.5	599	518	2170	670	288	674	260	330	250	79	236	157	428	1030	388
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	148	144	211	213.9	178.3	187.7	201	219.2	185	87	67	180	182	19	154	203	66	327	39	85	139	267	185
Temperature	°C	-	No Water Quality Objective Value	13.49	12.16	14.7	11.7	10.8	11.6	10.5	10.1	14.89	14.37	15.17	15.71	14.45	15.6	12.81	13.78	14.55	13.48	13.75	13.68	15.64	15.01	14.56
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	27.5	20.4	27.2	88.3	82.3	87.1	81.7	82.5	24.9	50.2	18.7	109	65.4	97	45.4	58.1	257	71.7	34.4	40.3	55.4	61	40.1
Turbidity	NTU	-	No Water Quality Objective Value	18.5	168	38	15.11	11.77	25.4	31.24	5.96	24.2	168	8.4	110	140	47.9	34.5	417	52.1	268	332	131	2.8	417	136
Laboratory analytes																										
TSS	mg/L	5	No Water Quality Objective Value	45	82	6	25	52	40	304	42	17	511	11	194	98	168	74	780	85	343	365	228	9	380	179
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	134	118	176	<1	2	26	13	27	304	308	1,190	112	84	128	52	21	121	29	116	81	116	418	134
Nutrients																										
Ammonia as N	ug/L	5	13	10	20	40	<10	10	<10	<10	60	40	80	100	<10	10	140	20	20	90	10	30	30	10	<10	<10
Nitrite + Nitrate as N (NOx)	ug/L	10	15	<10	330	29800	1170	140	420	20	30	<10	<10	<10	4430	2829	<10	310	3110	<0.01	40	<0.01	10	20400	46700	260
Kjeldahl Nitrogen Total	ug/L	10	No Water Quality Objective Value	100	<100	8000	100	100	200	<100	<100	300	800	200	700	700	300	100	<1000	400	<100	<1000	500	2800	4200	<100
Nitrogen (Total)	ug/L	10	250	100	300	37800	1300	200	600	<100	<100	300	800	200	5100	3500	300	400	3100	400	<100	<1000	500	23200	50900	300
Reactive Phosphorus	ug/L	1	15	3	6	8	<1	<1	14	19	19	4	5	3	9	3	9	6	5	37	3	68	5	7	10	10
Phosphorus (Total)	ug/L	5	20	<10	40	10	20	70	100	120	80	150	2050	<10	90	90	40	40	430	250	80	380	90	30	20	100
Inorganics																										
Cyanide Total	ug/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	<7	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Metals																										
Aluminium (dissolved)	ug/L	5	27	<5	<5	<5	8	75	<5	10	<5	<5	<5	<5	8	<5	<5	<5	43	<5	<5	<5	<5	<5	<5	<5
Aluminium (total)	ug/L	5	No Water Quality Objective Value	1060	2410	481	1190	1660	3210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (dissolved)	ug/L	1	0.8	<0.2	1.1	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	1.9	3.1	2.7	2.5	<0.2	11.3	0.2	<0.2	0.2	<0.2	20.8	0.8	1.4	0.3	0.4
Arsenic (total)	ug/L	1	No Water Quality Objective Value	0.4	2.1	0.4	0.2	0.5	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (III+VI) (dissolved)	ug/L	1	0.01	<0.2	<0.2	10.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	14	0.6	<0.2	<0.2	0.3	<0.2	<0.2	<0.2	<0.2	0.4	1.9	<0.2
Chromium (III+VI) (total)	ug/L	1	No Water Quality Objective Value	3.4	5.5	12.1	1.5	1.9	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper (dissolved)	ug/L	1	1	2.1	<0.5	1.3	<0.5	0.6	5	0.6	<0.5	0.5	0.7	<0.5	1.9	<0.5	3.6	22.7	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	14.3	0.8	<0.5
Copper (total)	ug/L	1	No Water Quality Objective Value	30.4	28.4	2.2	2.6	6.2	22.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	ug/L	50	300	<2	<2	<2	4	61	<2	<2	<2	<2	<2	<2	1080	2	<2	<2	3	57	3	<2	<2	<2	<2	<2	<2
Iron (total)	ug/L	50	No Water Quality Objective Value	1430	2740	375	482	1030	3050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead (dissolved)	ug/L	1	1	<0.1	<0.1	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	1	<0.1	<0.1	1.1	<0.1	<0.1	<0.1	0.1
Lead (total)	ug/L	1	No Water Quality Objective Value	8.4	7.9	5	0.4	1.2	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	ug/L	5	1,200	3.6	0.8	16.7	2.2	1	2.7	8	16.3	182	172	339	30.9	66.8	171	14.1	16.4	571	94.8	299	555	177	14.6	478
Manganese (total)	ug/L	5	No Water Quality Objective Value	77.2	180	24.2	20.8	50.8	76.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (dissolved)	ug/L	1	8	<0.5	<0.5	2	<0.5	<0.5	0.7	1.1	<0.5	16.7	3.8	7.2	1.9	1.8	5.4	1.7	3.4	0.7	2.5	1.4	1.8	8.2	3.4	3
Nickel (total)	ug/L	1	No Water Quality Objective Value	4.1	9	3.4	1.6	1.6	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (dissolved)	ug/L	5	0.02	<0.01	<0.01	<0.01	0.04	<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)	ug/L	5	No Water Quality Objective Value	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (dissolved)	ug/L	5	2.4	3	<5	6	3	<5	3	6	<5	4	3	5	13	<5	4	<5	10	3	15	<5	5	17	3	32
Zinc (total)	ug/L	5	No Water Quality Objective Value	18	18	15	5	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Water Quality Objective values for groundwater refer to the default trigger values for physical and chemical stressors in south-west 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 - 31 July 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				17/7/24	17/7/24	30/7/24	31/7/24	31/7/24	30/7/24	30/7/24	30/7/24	30/7/24	30/7/24
pH	pH Unit	-	6.5-8	7.79	7.78	7.17	6.7	8.56	7.07	7.01	7.17	7.63	7.75
Electrical Conductivity	µS/cm	-	20-30	35	34	10	15.6	22.4	12.1	10.3	10.1	17.8	17.6
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	247	260	148	44.4	29.8	176.7	148	149	150.9	135.6
Temperature	°C	-	No Water Quality Objective Value	8.83	8.87	2.2	3.7	3.7	3.7	2.4	2.3	4.2	5
Dissolved Oxygen	% saturation	-	90-110	63.2	83.2	90.9	92.8	93.5	90.4	93.1	92.8	91.5	90.1
Turbidity	NTU	-	1-20	0.5	0.5	3.89	5.37	6.33	5.63	7.54	115.98	3.76	4.6
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	8	<5	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	14	14	9	9	12	9	2	9	9	9
Nutrients													
Ammonia as N	µg/L	5	10	20	<10	30	60	50	40	50	<100	70	70
Nitrite + Nitrate as N (NOx)	µg/L	10	10	70	120	20	100	60	30	10	10	40	40
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	100	<100	200	300	300	300	200	100	400	400
Nitrogen (Total)	µg/L	10	350	200	100	200	400	400	300	200	100	400	400
Reactive Phosphorus	µg/L	1	5	2	1	<1	15	3	<1	<1	1	1	3
Phosphorus (Total)	µg/L	5	10	30	80	<10	30	<10	40	20	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	28	25	24	36	25	23	18	21
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	0.4	<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	7	7	55	62	63	68	40	39	56	58
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	06	<0.5	21.9	9.2	8.3	19.5	3.8	3.2	7.1	6.4
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	<0.01	<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^	1	<1	<1	-	-	-	-	-	-	<1
Biochemical Oxygen Demand	mg/L	2	1/5^	8	4	<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.

^ 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 July 2024 - Surface Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*
Field			
pH	-	-	6.5-8
Electrical Conductivity	µS/cm	-	30-350
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value
Temperature	°C	-	No Water Quality Objective Value
Dissolved Oxygen	% saturation	-	90-110
Turbidity	NTU	-	2-25
Laboratory analytes			
TSS	mg/L	5	No Water Quality Objective Value
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value
Nutrients			
Ammonia as N	µg/L	5	13
Nitrite + Nitrate as N (NOx)	µg/L	10	15
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value
Nitrogen (Total)	µg/L	10	250
Reactive Phosphorus	µg/L	1	15
Phosphorus (Total)	µg/L	5	20
Inorganics			
Cyanide Total	µg/L	4	4
Hydrocarbons			
Oil and Grease	mg/L	5	5
Metals			
Aluminium (dissolved)	µg/L	5	27
Aluminium (total)	µg/L	5	No Water Quality Objective Value
Arsenic (dissolved)	µg/L	1	0.8
Arsenic (total)	µg/L	1	No Water Quality Objective Value
Chromium (III+VI) (dissolved)	µg/L	1	0.01
Chromium (III+VI) (total)	µg/L	1	No Water Quality Objective Value
Copper (dissolved)	µg/L	1	1
Copper (total)	µg/L	1	No Water Quality Objective Value
Iron (dissolved)	µg/L	50	300
Iron (total)	µg/L	50	No Water Quality Objective Value
Lead (dissolved)	µg/L	1	1
Lead (total)	µg/L	1	No Water Quality Objective Value
Manganese (dissolved)	µg/L	5	1,200
Manganese (total)	µg/L	5	No Water Quality Objective Value
Nickel (dissolved)	µg/L	1	8
Nickel (total)	µg/L	1	No Water Quality Objective Value
Silver (dissolved)	µg/L	5	0.02
Silver (total)	µg/L	5	No Water Quality Objective Value
Zinc (dissolved)	µg/L	5	2.4
Zinc (total)	µg/L	5	No Water Quality Objective Value

* 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.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 31 July 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				31/07/2024							23/07/2024
Inflow#	ML/day	-	-	-	0.0000	0.2710	0.0471	0.1529	0.0713	0.1326	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	6.52	-	-	-	-	-	-	5.5
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	72	-	-	-	-	-	-	2.6
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	257	-	-	-	-	-	-	189.5
Temperature	°C	-	15	8.85	-	-	-	-	-	-	7.3
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	86.9	-	-	-	-	-	-	95.4
Turbidity	NTU	-	<25	7.9	-	-	-	-	-	-	1.67
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^	30	-	-	-	-	-	-	30
Kjeldahl Nitrogen Total	µg/L	10	No Water Quality Objective Value	200	-	-	-	-	-	-	200
Nitrogen (Total)	µg/L	10	350/-^	300	-	-	-	-	-	-	200
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	<1	-	-	-	-	-	-	<1
Phosphorus (Total)	µg/L	5	100/300^	<10	-	-	-	-	-	-	<10
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	7.00
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	<0.2	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.9	-	-	-	-	-	-	<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 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 - 31 July 2024 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/07/2024	-	-	0.17	0.071	0.12	0.77	0.20
2/07/2024	-	-	0.23	0.071	0.15	0.08	0.08
3/07/2024	-	-	0.16	0.052	0.08	0.07	0.19
4/07/2024	-	-	0.26	0.047	0.16	0.08	0.42
5/07/2024	-	-	0.20	0.059	0.25	0.03	0.19
6/07/2024	-	-	0.20	0.050	0.17	0.07	0.26
7/07/2024	-	-	0.20	0.049	0.17	0.08	0.37
8/07/2024	-	-	0.21	0.046	0.17	0.08	0.44
9/07/2024	-	-	0.32	0.048	0.23	0.08	0.43
10/07/2024	-	-	0.33	0.049	0.08	0.08	0.51
11/07/2024	-	-	0.10	0.055	0.15	0.08	0.46
12/07/2024	-	-	0.21	0.063	0.17	0.09	0.19
13/07/2024	-	-	0.23	0.051	0.18	0.08	0.28
14/07/2024	-	-	0.21	0.045	0.17	0.13	0.25
15/07/2024	-	-	0.32	0.045	0.18	0.04	0.06
16/07/2024	-	-	0.32	0.062	0.19	0.08	0.48
17/07/2024	-	-	0.21	0.048	0.16	0.08	0.76
18/07/2024	-	-	0.21	0.046	0.15	0.08	0.79
19/07/2024	-	-	0.18	0.064	0.21	0.16	0.78
20/07/2024	-	-	0.24	0.069	0.18	0.08	0.71
21/07/2024	-	-	0.29	0.053	0.18	0.07	0.45
22/07/2024	-	-	0.27	0.057	0.14	0.08	0.82
23/07/2024	-	-	0.35	0.051	0.15	0.09	0.36
24/07/2024	-	-	0.26	0.054	0.24	0.08	0.87
25/07/2024	-	-	0.25	0.042	0.19	0.06	0.76
26/07/2024	-	-	0.30	0.085	0.21	0.08	0.87
27/07/2024	-	-	0.27	0.055	0.20	0.08	0.49
28/07/2024	-	-	0.44	0.053	0.19	0.09	0.88
29/07/2024	-	-	0.28	0.039	0.24	0.08	0.39
30/07/2024	-	-	0.21	0.048	0.20	0.16	0.40
31/07/2024	-	-	0.17	0.068	0.21	0.09	0.03

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 0.0 ML/day.

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 0.0 ML/day

\- Water not discharged on this day

AUGUST 2024

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-31 Aug 2024 (Groundwater

Analyte	Unit	Unit of Reporting	Water Quality Objective Value*
Field Parameters			
pH	pH Unit	-	6.5-8
Electrical Conductivity	µS/cm	-	1614.56
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value
Temperature	°C	-	No Water Quality Objective Value
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value
Turbidity	NTU	-	No Water Quality Objective Value
Laboratory Analytes			
TSS	mg/L	5	No Water Quality Objective Value
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value
Metals			
Aluminium (ACID)	mg/L	10	55
Nickel - Nitric acid (HNO3)	mg/L	10	11
Dissolved Manganese Total	mg/L	100	No Water Quality Objective Value
Manganese (Total)	mg/L	100	1900
Fluoride, Fluorogenic	mg/L	5	125
Phosphorus (Total)	mg/L	50	20
Inorganics			
Cyanide, Total	mg/L	0	0
Hydrocarbons			
Oil and Grease	mg/L	5	5
Metals			
Aluminium (dissolved)	mg/L	5	27
Aluminium (total)	mg/L	5	No Water Quality Objective Value
Arsenic (dissolved)	mg/L	0.2	0.8
Arsenic (total)	mg/L	0.2	No Water Quality Objective Value
Beryllium (ACID) (dissolved)	mg/L	0.2	0.05
Beryllium (ACID) (total)	mg/L	0.2	No Water Quality Objective Value
Copper (dissolved)	mg/L	0.5	5
Copper (total)	mg/L	0.5	No Water Quality Objective Value
Iron (dissolved)	mg/L	2	300
Iron (total)	mg/L	2	No Water Quality Objective Value
Lead (dissolved)	mg/L	0.5	5
Lead (total)	mg/L	0.5	No Water Quality Objective Value
Manganese (dissolved)	mg/L	0.5	1,900
Manganese (total)	mg/L	0.5	No Water Quality Objective Value
Nickel (dissolved)	mg/L	0.5	11
Nickel (total)	mg/L	0.5	No Water Quality Objective Value
Silver (dissolved)	mg/L	0.05	0.02
Silver (total)	mg/L	0.05	No Water Quality Objective Value
Zinc (dissolved)	mg/L	5	14
Zinc (total)	mg/L	5	No Water Quality Objective Value

EPL1	EPL2	EPL4	EPL15	EPL16	EPL17	EPL18	EPL19	EPL20	EPL21	EPL22	EPL23	EPL24	EPL25	EPL26	EPL27	EPL28	EPL29	EPL30	EPL31	EPL32	EPL33	EPL34	EPL35	EPL36	EPL37
6.2	6.75	6.66	7.05	7.08	6.95	6.63	5.9	6.67	6.23	5.92	5.1	7.07	6.61	6.65	6.48	7.11	7.05	6.39	6.99	7.13	7.18	6.98	6.6	6.75	6.92
746	561	851	861	844	575	722	2716	58.7	58.1	37.7	66.6	531	442	1002	527	496	526	854	754	579	58	192	530	1066	456	514
100	91	2	-76	801	245	166	2167	561.6	1254	2164	191.7	48	26	126	140	184	7	209	164	146	177	156	178	179	156	209
13.23	13.85	13.7	13.54	13.98	14.48	14.9	14.7	9.6	9.3	11.2	9.8	12.98	11.75	15.68	16.91	14.22	10.52	14.4	13.38	13.85	8.65	12.45	12.13	14.88	13.17	13.58
90.8	15.4	15.1	20.1	25.3	13	65.1	51.9	85.3	75.9	76.5	78.7	20.4	21.4	17.1	76.1	84.8	76.6	85.4	90	20.8	79.4	45	83	58.1	66.3	82.4
3000	2280	36	238	2.5	87.5	8.4	31.69	7.45	36.5	8.29	18.67	57.4	238	7.2	67.5	388	3.4	285	88.4	13.8	14.2	226	20.1	13.8	9.6	42.3
371	319	12100	5430	36	330	<5	4.2	<5	12	38	370	45	170	45	450	290	52	1430	1020	170	43	478	92	320	730	564
220	121	174	206	124	108	210	2	2	25	19	43	117	117	1460	89	75	122	70	29	110	25	128	80	128	88	164
110	300	910	170	110	30	10	210	300	10	110	10.2	70	30	190	21	190	130	110	110	10.2	30	130	70	130	30	210	122
430	300	1180	230	30	30	41200	1430	400	30	410	30	40	230	130	30	30	30	30	30	230	30	30	30	30	30	30	30
880	700	3280	2230	800	230	1200	200	200	280	1320	1100	330	230	1180	1120	1200	1020	2130	880	800	800	230	1020	880	2030	2040	200
260	1010	7160	2230	660	830	40000	1430	400	760	1320	1100	330	230	1180	1120	2130	1020	2130	880	800	1000	230	1020	880	23000	52000	500
6	10	20	-	5	5	5	5	5	10	-	37	6	5	5	21	11	6	10	7	10	10	6	5	5	5	6	6
70	170	1480	900	60	50	4100	60	50	100	60	40	40	50	20	40	580	90	580	990	230	80	790	60	50	520	500	
-	-	-	-	<5	<5	<5	<5	<5	<5.0	<5	<5	<5		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
-	-	-	-	1.11	2620	10	1030	620	2160	-	1030	1.01	2010	130	1690	1030	310	1720	2130	1870	410	1870	700	1870	1160	1160
0.3	1.1	1.1	1	0	1.1	10.2	130	40.2	40.2	40.2	1.1	1.0	0.2	0.2	0.5	0.2	10.6	0.2	40.2	0.6	10.2	10.2	0.5	1.1	0.2	0.2
-	-	-	-	0	2.1	10.2	130	40.2	0.2	-	-	2.0	0.7	0.2	1.0	0.2	10.6	0.2	40.2	0.6	10.2	10.2	0.5	1.1	2.1	1.4	2.0
40.2	40.2	40.2	40.2	2	40.2	0.0	40.2	40.2	40.2	40.2	0.2	40.2	40.2	40.2	0.1	1.4	40.2	40.2	40.2	40.2	0.2	0.2	40.2	40.2	0.2	40.2
1.1	1.4	1.1	40.2	1.0	0.0	40.2	0.2	40.2	2.0	1.0	40.2	40.2	40.2	40.2	1.7	40.2	2.4	1.9	40.2	40.2	40.2	40.2	40.2	40.2	0.2	40.2
0.1	0.1	0.1	0.1	50.2	50.2	0.2	0.2	1.0	40	-	-	1.2	1	40.2	27.2	1.0	10.4	0.2	36.2	1.2	1.1	1.0	0.1	40	36.4	1.6
10	10	1	40	10	10	10	10	10.0	10	1	10	9	10	9	10	1	1.7	9	10	10	10	10	10	10	10	10
2	2	2	2	1.00	2.01	2	2.0	2	2.0	2	2	2.01	2.00	2.0	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
40.1	40.1	40.1	40.1	40.1	40.1	1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1
0.5	0.5	0.5	0.5	1.0	0	0.5	0.4	0.0	2	-	-	0.5	1	0.5	12.5	0.0	1.0	10	1.0	175	25.6	25.8	0.5	2.7	30.5	0.5
260	90.2	420	1270	1.2	0.5	0.5	2	40.5	2.0	0.6	12.4	100	290	0.0	1.0	27.6	175	25.6	25.8	0.0	0.6	290	50	0.0	1.7	0.0
-	-	-	-	70.2	290	0.6	27.7	7.5	40.3	-	-	0.0	270	0.0	290	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
2.4	0.5	0.5	0.5	40.5	40.5	0.5	0.5	40.5	40.5	0.5	40.5	27.5	0.5	0.5	0.5	0.5	1.0	1	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5
0.5	0.5	-	0.5	0.5	40.5	0.5	0	0.2	0.5	0.5	0.5	0.5	-	20.6	40.5	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05
5	45	45	14	5	45	9	5	4	45.0	6	45	9	45	4	5	45	2	45	18	45	10	45	4	10	2	29
-	-	-	-	20	20	10	5	5	8	-	-	10	20	8	11	52	8	10	520	20	10	135	21	10	200	204

* 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 95% 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 - 31 Aug 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				18/8/24	18/8/24	27/8/24	27/8/24	27/8/24	27/8/24	27/8/24	27/8/24	27/8/24	27/8/24
pH	pH Unit	-	6.5-8	6.73	6.73	6.25	7.05	7.13	6.7	6.59	6.62	7.13	7.09
Electrical Conductivity	µS/cm	-	20-30	49	49	15.2	14.7	14.7	13	15.9	15.8	16.6	15.6
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	-5	178	286.5	303.1	289.9	307.9	279.6	278.1	275	270
Temperature	°C	-	No Water Quality Objective Value	10.72	10.72	8.6	8.4	8.5	8.9	8.8	8.7	9	9.3
Dissolved Oxygen	% saturation	-	90-110	79.5	79.5	88.1	92.8	94.1	94.1	87.8	87.9	94.2	94.7
Turbidity	NTU	-	1-20	2.3	2.3	33.11	3.88	3.53	10.54	36.77	36.48	8.84	10.04
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	30	<5	<5	<5	34	31	23	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	17	17	2	2	2	2	2	2	2	2
Nutrients													
Ammonia as N	µg/L	10	10	<10	<10	30	120	20	20	50	40	100	20
Nitrite + Nitrate as N (NOx)	µg/L	10	10	30	30	40	<10	<10	<10	100	80	20	20
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	100	800	300	200	300	600	600	300	300
Nitrogen (Total)	µg/L	100	350	100	100	800	300	200	300	700	700	300	300
Reactive Phosphorus	µg/L	1	5	<1	<1	5	4	2	3	7	6	5	4
Phosphorus (Total)	µg/L	10	10	360	10	50	<10	10	<10	60	40	40	<10
Inorganics													
Cyanide Total	µg/L	4	7	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons													
Oil and Grease	mg/L	1	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Metals													
Aluminium (dissolved)	µg/L	5	55	7	6	145	20	19	24	127	151	24	24
Arsenic (dissolved)	µg/L	0.2	13	0.3	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	0.3	<0.2	<0.2	<0.2	0.3	0.3	<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	11	177	55	54	60	160	183	63	59
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	4.1	2	19.1	0.8	0.7	0.9	15.6	19	1	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^	1	<1	1	-	-	-	-	-	-	1
Biochemical Oxygen Demand	mg/L	2	1/5^	**	**	6	-	-	-	-	-	-	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.

** Samples not analysed for this location - incident raised.

^ 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 Aug 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				3/08/24	3/08/24	3/08/24	3/08/24	3/08/24	3/08/24	3/08/24	3/08/24	3/08/24	10/08/24	3/08/24	11/08/24	11/08/24	11/08/24	11/08/24	11/08/24	11/08/24	11/08/24	6/08/24	Dry	Dry	5/08/24	11/08/24	27/08/24	6/08/24	29/08/24	29/08/24	29/08/24	29/08/24
pH	-	-	6.5-8	7.9	7.91	7.89	7.38	7.83	7.68	7.76	7.59	7.8	7.28	6.65	7.84	7.1	7.85	7.91	7.74	7.34	7.57	8.33	Dry	Dry	8.05	6.67	6.51	6.84	8.2	9.31	7.95
Electrical Conductivity	µS/cm	-	30-350	51	36	66	67	52	46	50	66	194	27	19.8	21	491	22	15	15	56	52	615	Dry	Dry	584	16.8	15.9	22	984	421	1080
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	183	222	230	268	206	248	254	257	164	191	226.5	99	106	107	111	109	134	117	307	Dry	Dry	306	150.4	288.1	226.5	68	60	95
Temperature	°C	-	No Water Quality Objective Value	6.38	5.78	8.17	7.05	4.71	5.05	5.35	6.56	11.38	4.13	7.6	6.8	8.41	7.14	5.6	5.54	10.08	10.72	11.46	Dry	Dry	10.8	6.2	8.8	6.4	13.74	14.59	14.21
Dissolved Oxygen	% saturation	-	90-110	88	96.4	103.6	99.1	101.7	101.3	101	97.3	76.3	90.8	90.7	90.1	105.2	93.1	93.7	84.3	75.7	79.5	104	Dry	Dry	95.8	91.3	87.9	94.9	72.3	76.1	88.1
Turbidity	NTU	-	2-25	4.6	4.3	17.7	5.8	0.9	3	0.7	0	6	0	3.2	6.3	7	6.8	4.8	4.7	6.6	9.6	9.1	Dry	Dry	3.59	3.22	27.47	23.6	282	229	405
Laboratory analytes																															
TSS	mg/L	5	No Water Quality Objective Value	<5	16	<5	<5	<5	20	<5	<5	6	6	<5	9	<5	7	<5	<5	5	8	6	Dry	Dry	<5	50	30	6	532	77	44
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	33	19	34	33	31	31	33	33	63	5	9	7	7	2	<1	<1	17	17	240	Dry	Dry	208	2	2	16	64	56	268
Nutrients																															
Ammonia as N	µg/L	10	13	<10	<10	<10	<10	<10	<10	<10	<10	<100	<100	<100	<10	<10	30	<10	<10	<10	20	10	Dry	Dry	140	60	40	<10	580	50	60
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	50	10	<10	<10	<10	10	10600	10	50	<10	<10	30	<10	<10	80	80	37000	Dry	Dry	22400	70	40	<10	5500	4100	19100
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	<100	<100	<100	300	100	<100	<0.1	1.9	0.2	0.1	<100	<100	200	<100	<100	300	400	4400	Dry	Dry	2100	600	600	<100	2100	4000	300
Nitrogen (Total)	µg/L	100	250	<100	<100	<100	<100	300	100	<100	<100	12500	200	200	<100	<100	200	<100	<100	400	500	41600	Dry	Dry	35500	700	600	<100	8600	8100	19400
Reactive Phosphorus	µg/L	1	15	10	6	6	9	8	8	6	6	4	8	4	1	1	2	<1	<1	<1	5	2	Dry	Dry	2	3	6	5	11	5	5
Phosphorus (Total)	µg/L	10	30	10	20	<10	<10	60	20	10	10	20	10	10	10	20	20	20	10	30	50	10	Dry	Dry	10	40	30	40	530	120	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	Dry	Dry	<4	<4	<4	4	<4	<4	<4
Hydrocarbons																															
Oil and Grease	mg/L	1	5	<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	Dry	Dry	<1	<1	<1	<1	<1.0	<1.0	<1
Metals																															
Aluminium (dissolved)	µg/L	5	27	12	5	18	12	14	14	14	14	<5	8	8	11	11	22	11	10	40	56	<5	Dry	Dry	<5	30	128	8	10	29	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	811	Dry	Dry	150	871	1580	1070	18700	5530	2140
Arsenic (dissolved)	µg/L	0.2	0.8	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	Dry	Dry	0.2	0.2	<0/2	<0.2	2.9	2.5	1.9
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	Dry	Dry	0.2	0.5	0.5	0.4	10.5	5.2	5.2
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	<0.2	<0.2	<0.2	<0.2	0.2	0.2	4.8	Dry	Dry	2.7	<0.2	0.2	<0.2	51.7	12.4	7.8
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	Dry	Dry	3.1	1	2	2.1	102	66.8	11.6
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dry	Dry	<0.5	<0.5	<0.5	<0.5	1.8	0.7	2.1
Copper (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	Dry	Dry	0.6	1.4	1.4	0.9	43.1	10.1	6
Iron (dissolved)	µg/L	2	300	18	9	17	17	20	19	16	18	10	13	17	16	10	49	24	23	134	162	<2	Dry	Dry	<2	158	160	17	6	<2	<2
Iron (total)	µg/L	2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	258	Dry	Dry	140	1830	3280	1210	29000	7620	2820
Lead (dissolved)	µg/L	0.1	3	<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	0.1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	Dry	Dry	0.4	0.9	1.3	0.8	49	14.2	4.1
Manganese (dissolved)	µg/L	0.5	1,200	1	1.7	1.2	0.7	0.9	1.1	1.8	2.1	44.4	1.1	0.3	1.4	1	0.7	0.2	0.8	0.2	0.1	<0.5	Dry	Dry	1.1	61.8	16.3	7.2	2.8	<0.5	0.6
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	Dry	Dry	7	160	41.3	25.6	760	195	101
Nickel (dissolved)	µg/L	0.5	8	<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	0.7	Dry	Dry	<0.5	<0.5	<0.5	0.7	0.9	<0.5	0.7
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	Dry	Dry	0.9	0.8	1	4.5	86.7	25.4	5.8
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	Dry	Dry	<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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	Dry	Dry	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	2.4	<1	<1	<1	<1	<1	<1	<1	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	Dry	Dry	<1	<1	<1	3	<1	<1	<1
Zinc (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	Dry	Dry	3	4	4	<1	155	42	14

* Water Quality Objective values for surface water refer to the default trigger values for physical and chemical stressors in south-east Australia (upland river) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2018), they are not pollutant limits imposed by EPL 21266.

\- Samples not required

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 31 Aug 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				11/08/2024	11/08/2024	11/08/2024	11/08/2024	11/08/2024	11/08/2024	11/08/2024	12/08/2024
Inflow#	ML/day	-	-	-	0.0076	0.0246	0.0043	0.0176	0.0074	0.0202	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	5.7	-	-	-	-	-	-	7.91
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	84	-	-	-	-	-	-	36
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	178	-	-	-	-	-	-	75
Temperature	°C	-	15	11.71	-	-	-	-	-	-	9.65
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	53.2	-	-	-	-	-	-	69.4
Turbidity	NTU	-	<25	4.5	-	-	-	-	-	-	5.8
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	10	200/2000^	40	-	-	-	-	-	-	960
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	200	-	-	-	-	-	-	1800
Nitrogen (Total)	µg/L	100	350/-^	300	-	-	-	-	-	-	2500
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	5	-	-	-	-	-	-	<1
Phosphorus (Total)	µg/L	10	100/300^	<10	-	-	-	-	-	-	30
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	<4
Hydrocarbons											
Oil and Grease	mg/L	1	2/5^	<1	-	-	-	-	-	-	<1
Metals											
Aluminium (dissolved)	µg/L	5	55	<5	-	-	-	-	-	-	<5
Arsenic (dissolved)	µg/L	0.2	13	0.4	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.8	-	-	-	-	-	-	<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	2	5	11	-	-	-	-	-	-	<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 Aug 2024 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/08/2024	-	-	0.35	0.063	0.16	0.01	0.47
2/08/2024	-	-	0.27	0.07	0.28	0.06	0.44
3/08/2024	-	-	0.32	0.05	0.10	0.08	0.18
4/08/2024	0.13	-	0.29	0.07	0.25	0.07	0.21
5/08/2024	0.05	-	0.12	0.11	0.22	0.02	0.54
6/08/2024	-	-	0.30	0.08	0.20	0.11	0.48
7/08/2024	-	-	0.33	0.07	0.12	0.06	0.49
8/08/2024	-	-	0.34	0.04	0.20	0.06	0.27
9/08/2024	-	-	0.30	0.06	0.27	0.09	0.55
10/08/2024	-	-	0.33	0.03	0.30	0.05	0.84
11/08/2024	-	-	0.42	0.06	0.02	0.01	0.05
12/08/2024	-	-	0.34	0.05	0.22	0.16	0.31
13/08/2024	-	-	0.36	0.06	0.20	0.08	0.85
14/08/2024	-	-	0.33	0.07	0.21	0.07	0.46
15/08/2024	-	-	0.26	0.05	0.29	0.02	0.60
16/08/2024	-	-	0.21	0.06	0.07	0.02	0.52
17/08/2024	-	-	0.22	0.04	0.15	0.08	0.76
18/08/2024	-	-	0.22	0.04	0.17	0.09	0.60
19/08/2024	0.16	-	0.16	0.04	0.22	0.08	0.61
20/08/2024	-	-	0.30	0.04	0.13	0.08	0.32
21/08/2024	-	-	0.21	0.05	0.18	0.07	0.35
22/08/2024	-	-	0.19	0.05	0.18	0.10	0.66
23/08/2024	-	-	0.19	0.05	0.08	0.06	0.63
24/08/2024	-	-	0.10	0.04	0.27	0.08	0.65
25/08/2024	-	-	0.24	0.05	0.20	0.08	0.66
26/08/2024	-	-	0.48	0.05	0.19	0.08	0.71
27/08/2024	-	0.39	0.26	0.05	0.20	0.20	0.76
28/08/2024	-	-	0.31	0.05	0.17	0.07	0.49
29/08/2024	-	-	0.12	0.05	0.22	0.09	0.85
30/08/2024	-	-	0.45	0.04	0.20	0.10	0.60
31/08/2024	-	-	0.40	0.05	0.24	0.07	0.79

- 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 1.85 L/s
- ^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 4.51 L/s
- -- Water not discharged on this day
  flows to those recorded for each respective plant as works progressed at the same

SEPTEMBER 2024

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-30 September 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
Physicochemical				3/09/2024	3/09/2024	3/09/2024	07/09/2024	31/08/2024	07/09/2024	07/09/2024	07/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024	2/09/2024	2/09/2024	3/09/2024	3/09/2024	3/09/2024	2/09/2024	2/09/2024	2/09/2024
pH	pH Unit	-	6.5-8	5.65	4.82	7.07	5.74	5.82	6.1	6.11	6.09	6.88	7.04	7.14	7.65	7.02	7.18	7.74	5.39	6.67	6.64	6.94	7.13	5.88	6.83	6.54
Electrical Conductivity	µS/cm	-	30-350	503	107	819	27.7	18.6	112.7	54	560	812	696	3670	649	517	842	333	186	262	193	295	202	560	457	481
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	197	209	104	192.1	165.1	195.9	136	140	-23	-65	-16	2	148	-27	42	66	51	199	-74	-39	39	92	133
Temperature	°C	-	No Water Quality Objective Value	13.25	13.22	15.79	13.2	10.9	13.9	11.64	11.92	18.31	15.27	18.38	13.53	10.91	13.17	14.87	13.11	14.41	14.67	14.47	14.6	14.37	13.87	14.07
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	111.5	110.3	95.5	92.1	83.6	66.7	47.1	88.9	33.4	54.8	69.1	89	66	29.9	66.9	49.5	25.2	76.5	105.7	100.1	64.7	35.9	71.8
Turbidity	NTU	-	No Water Quality Objective Value	23.4	328	79.5	4.88	5.57	15.53	108	760	50.9	109	181	790	1000	1.3	106	1000	28.3	1000	416	115	225	759	85.4
Laboratory analytes																										
TSS	mg/L	5	No Water Quality Objective Value	45	306	339	22	11	48	66	378	13	460	841	568	2,110	20	50	1,820	34	2,510	1,500	195	372	902	106
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	136	121	282	7	<1	26	13	22	354	262	1,270	110	78	124	50	36	116	66	135	83	156	154	146
Nutrients																										
Ammonia as N	µg/L	10	13	<10	30	<10	<10	20	10	<10	<10	30	50	100	<10	20	200	<10	<10	<10	10	70	20	<10	<10	10
Nitrite + Nitrate as N (Nox)	µg/L	10	15	<10	490	50,000	1,440	470	360	290	2,430	<10	<10	<10	5,500	3,400	<10	200	1,320	60	30	<10	10	26,000	12,200	630
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	200	1,100	500	200	200	100	100	200	200	400	1,200	2,800	400	100	<1,000	<100	<1,000	200	100	1,700	1,700	100
Nitrogen (Total)	µg/L	100	250	<100	700	51,100	1,900	700	600	400	2,500	200	200	400	6,700	6,200	400	100	1,300	<100	<1,000	200	100	27,700	13,900	500
Reactive Phosphorus	µg/L	1	15	3	4	3	<1	2	14	18	20	6	4	4	7	7	11	8	14	6	7	34	2	6	4	4
Phosphorus (Total)	µg/L	10	20	40	310	120	20	40	80	70	70	50	340	70	500	1,300	60	50	1,420	70	640	370	100	270	680	80
Inorganics																										
Cyanide Total	mg/L	4	4	10	<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	<1.0	<1.0	<1.0	<1.0	<1	<1.0	<5.0	<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
Metals																										
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	8	<5	10	<5	<5	<5	<5	<5	<5	6	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	835	5,810	2,090	710	667	3,400	201	727	10	4,450	3,220	12,000	64,800	211	896	30,500	444	20,200	24,800	3,380	5,720	15,700	1,450
Arsenic (dissolved)	µg/L	0.2	0.8	<0.2	1.4	0.2	<0.2	<0.2	<0.2	0.2	<0.2	2.4	1.2	0.4	2.5	0.2	0.3	<0.2	<0.2	0.3	0.5	18.8	0.8	1.3	<0.2	0.4
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	0.5	4.0	2.6	<0.2	0.2	0.5	0.3	<0.2	20.5	294	57.4	44.4	18.1	33.1	0.6	14.7	2.7	16.8	55.1	13.2	16.4	19.5	4.9
Chromium (III+VI) (dissolved)	µg/L	0.2	0.01	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.3	<0.2	<0.2	<0.2	24.5	1.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	3.2	13.2	6.8	1.7	0.7	5.5	0.9	0.7	0.2	10.3	6.3	64.3	191	2.7	1.7	82.1	1.2	29.0	66.3	10.3	13.8	45.9	4.6
Copper (dissolved)	µg/L	0.5	1	6.3	3.9	0.6	4.5	<0.5	53.4	2.4	<0.5	<0.5	<0.5	<0.5	2.4	0.7	<0.5	38.4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5
Copper (total)	µg/L	0.5	No Water Quality Objective Value	71.1	438	4.5	9.2	1.3	124	4.9	1.7	<0.5	15.4	3.8	44.4	143	14.3	98.2	87.4	0.6	47.9	63.7	6.2	31.9	47.6	2.4
Iron (dissolved)	µg/L	2	300	145	<2	<2	<2	7	<2	2	<2	<2	<2	66	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Iron (total)	µg/L	2	No Water Quality Objective Value	1,430	6,660	3,340	335	344	2,390	164	222	891	23,800	8,500	18,400	95,200	1,040	820	47,000	990	38,900	38,800	7,540	8,090	38,000	3,070
Lead (dissolved)	µg/L	0.1	1	<0.1	<0.1	0.8	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.8	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (total)	µg/L	0.1	No Water Quality Objective Value	7.1	20.5	37.0	0.3	0.3	2.7	0.6	0.8	<0.1	11.4	10.3	23.3	143	1.6	0.6	180	2.7	964	140	18.4	68.4	316	43.4
Manganese (dissolved)	µg/L	0.5	1,200	35.2	26.2	263	3.1	<0.5	3.4	9.4	9.9	186	190	330	8.3	35.0	9.7	11.4	23.3	248	250	291	593	344	6.5	546
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	88.1	550	352	15.5	7.4	80.2	12.2	15.2	216	357	422	538	2,060	25.5	21.7	2,040	314	1,360	1,270	814	850	2,960	737
Nickel (dissolved)	µg/L	0.5	8	<0.5	<0.5	4.7	1.5	<0.5	2.2	1.7	<0.5	18.4	1.8	7.2	3.8	1.2	<0.5	2.7	4.4	<0.5	3.4	2.7	1.7	11.2	1.9	3.8
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	3.9	22.7	13.0	2.7	0.6	7.1	3.4	0.6	22.2	19.9	15.1	55.8	287	8.2	4.7	177	1.9	51.8	116	16.3	32.2	94.9	11.2
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	<0.01	<0.01	<0.01
Silver (total)	µg/L	0.01	No Water Quality Objective Value	0.06	0.05	0.10	-	-	-	0.06	<0.01	<0.01	0.06	0.01	0.08	0.29	<0.01	<0.01	0.29	<0.01	0.54	0.26	0.03	0.10	0.40	0.03
Zinc (dissolved)	µg/L	1	2.4	2	<1	12	4	<1	2	12	<1	2	<1	8	3	<1	<1	2	32	2	7	<1	3	36	3	37
Zinc (total)	µg/L	1	No Water Quality Objective Value	22	48	28	6	3	10	14	7	5	43	68	100	565	12	5	467	10	313	341	172	91	254	186

* 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 asuatic species ANZECC / ARMCANZ (2000). thse are not sediment limits imposed by EPL 21266.

- Sample not received due to laboratory error.

Snowy Hydro 2.0 Main Works

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

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL50
Field				8/9/24	8/9/24	24/9/24	24/9/24	22/9/24	24/9/24	24/9/24	24/9/24	24/9/24	29/9/24
pH	pH Unit	-	6.5-8	6.83	6.96	7.42	6.94	7.73	6.99	8.63	7.07	6.77	7.54
Electrical Conductivity	µS/cm	-	20-30	80	75	18	17	16	16	19	18	17	17
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	-14	-21	126	205	158	170	136	84	211	173
Temperature	°C	-	No Water Quality Objective Value	13.07	13.27	8.71	9.49	9.41	9.12	9.25	8.5	9.42	9.41
Dissolved Oxygen	% saturation	-	90-110	99.6	99.1	83.4	87	81.8	80.8	89	79.8	80.2	80.7
Turbidity	NTU	-	1-20	3.7	3.8	236	3.8	3.9	5	10.7	51.4	3.8	3.8
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	33	5	2	2	2	<1	9	2	<1
Nutrients													
Ammonia as N	µg/L	10	10	<10	80	40	20	50	20	40	80	20	30
Nitrite + Nitrate as N (NOx)	µg/L	10	10	20	30	<10	10	20	10	10	<10	20	20
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	100	200	200	200	200	100	200	200	200
Nitrogen (Total)	µg/L	100	350	100	100	200	200	200	200	100	200	200	200
Reactive Phosphorus	µg/L	1	5	5	3	2	2	2	2	<1	2	2	2
Phosphorus (Total)	µg/L	10	10	<10	<10	30	30	30	40	<10	20	30	60
Inorganics													
Cyanide Total	µg/L	4	7	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons													
Oil and Grease	mg/L	1	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals													
Aluminium (dissolved)	µg/L	5	55	7	8	10	15	14	14	13	20	15	<5
Arsenic (dissolved)	µg/L	0.2	13	0.3	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	<0.2	<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	17	16	53	56	57	67	32	102	55	2
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	13.1	9.3	50.7	0.9	0.9	1.0	2.9	52.0	0.9	3.7
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^	10	2	<1	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	2	1/5^	5	5	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.

^ 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 September 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				4/09/24	4/09/24	4/09/24	4/09/24	4/09/24	4/09/24	4/09/24	4/09/24	6/09/24	7/09/24	7/09/24	13/09/24	13/09/24	13/09/24	13/09/24	13/09/24	21/09/24	21/09/24	3/09/24			3/09/24	21/09/24	22/09/24	21/08/24	5/09/24	5/09/24	5/09/24
pH	-	-	6.5-8	8.25	8.03	7.99	8.02	8.2	8	8.05	8.01	7.28	7.81	7.94	8.5	7.88	7.51	7.78	7.88	5.84	6.59	8.56	Dry	Dry	7.06	8.13	8.07	6.87	8.39	10.07	7.78
Electrical Conductivity	uS/cm	-	30-350	156	55	93	76	81	74	79	76	386	37	64	36	24	23	15	15	36	33	939	Dry	Dry	752	0	14	185	1030	483	1170
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	124	140	156	157	133	150	149	158	146	-68	109	97	114	130	104	112	182	145	71	Dry	Dry	-26	204	156	254	146	107	-26
Temperature	°C	-	No Water Quality Objective Value	12.33	9.65	13.67	12.98	11.48	11.97	11.29	12.55	16	11.8	12.2	8.95	8.94	11.28	9.34	11.87	8.08	7.84	15.57	Dry	Dry	12.8	8.7	10.02	6.22	10.76	10.92	15.85
Dissolved Oxygen	% saturation	-	90-110	170.7	120.6	116.9	205	106.1	176.4	114.9	177.8	74	92.1	91.3	131.7	100.9	92	97.1	97.3	57.4	71.8	111.9	Dry	Dry	106.1	66.1	67	257.6	92.9	103.9	88.4
Turbidity	NTU	-	2-25	11.8	4.9	8.7	8.5	11	6.3	0	1.3	11.6	5.8	3.4	12	16.7	13.5	2.1	5.1	28.6	42.1	12.7	Dry	Dry	0	11.4	10.9	15	1000	90.1	55.5
Laboratory analytes																															
TSS	mg/L	5	No Water Quality Objective Value	<5	<5	<5	7	<5	<5	<5	6	<5	<5	<5	5	5	5	<5	<5	<5	<5	6	Dry	Dry	<5	28	<5	<5	469	34	19
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	36	23	38	33	36	33	33	36	93	9	9	2	7	<1	2	<1	11	13	230	Dry	Dry	183	<1	<1	54	64	38	311
Nutrients																															
Ammonia as N	µg/L	10	13	<10	<10	<10	30	<10	<10	<10	30	<10	<10	<10	30	<10	10	90	80	10	<10	10	Dry	Dry	<10	80	50	60	600	110	<10
Nitrite + Nitrate as N (NOx)	µg/L	10	15	10	<10	40	10	<10	<10	<10	<10	14,900	<10	<10	<10	<10	<10	20	<10	20	20	34,700	Dry	Dry	24,200	140	<10	110	5,860	4,240	20,900
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	<100	100	<100	100	100	<100	100	200	300	300	100	<100	200	300	200	500	500	3,700	Dry	Dry	1,800	400	<100	<100	2,400	900	2,300
Nitrogen (Total)	µg/L	100	250	100	<100	100	<100	100	100	<100	100	15,100	300	300	100	<100	200	300	200	500	500	38,400	Dry	Dry	26,000	500	<100	100	8,300	5,100	23,200
Reactive Phosphorus	µg/L	1	15	3	8	4	5	3	4	4	4	5	1	1	2	3	<1	2	<1	2	88	<1	Dry	Dry	3	2	<1	4	9	<1	7
Phosphorus (Total)	µg/L	10	20	30	40	20	30	30	<10	20	<10	140	20	10	40	40	30	40	50	30	140	40	Dry	Dry	30	60	<10	20	410	50	40
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	1	5	<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	Dry	Dry	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals																															
Aluminium (dissolved)	µg/L	5	27	10	<5	8	9	11	9	9	8	<5	16	14	12	12	16	19	16	62	81	<5	Dry	Dry	<5	17	13	<5	<5	32	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	196	93	145	148	184	182	157	176	332	68	62	-	-	-	-	-	-	-	120	Dry	Dry	142	411	196	278	17,300	1,260	999
Arsenic (dissolved)	µg/L	0.2	0.8	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	<0.2	<0.2	0.4	0.5	1.7	Dry	Dry	<0.2	<0.2	<0.2	0.2	<5	2.5	2.4
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	0.3	<0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	<0.2	<0.2	-	-	-	-	-	-	-	1.7	Dry	Dry	0.2	0.3	<0.2	0.2	10.6	2.8	3.3
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	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	0.3	7.2	Dry	Dry	1.4	<0.2	<0.2	<0.2	54.9	90.5	5.2
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	0.5	<0.2	0.4	0.4	0.5	0.5	0.5	0.5	1.0	0.3	2.2	-	-	-	-	-	-	-	7.2	Dry	Dry	1.5	0.6	0.4	0.5	104	87.0	7.2
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dry	Dry	<0.5	<0.5	<0.5	<0.5	1.7	0.6	2.1
Copper (total)	µg/L	0.5	No Water Quality Objective Value	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.7	<0.5	-	-	-	-	-	-	-	0.6	Dry	Dry	0.5	0.6	<0.5	0.6	39.9	2.8	3.9
Iron (dissolved)	µg/L	2	300	16	6	16	14	16	16	14	16	3	26	24	16	20	30	48	32	260	267	<2	Dry	Dry	<2	87	32	4	4	<2	<2
Iron (total)	µg/L	2	No Water Quality Objective Value	132	60	95	96	125	127	101	128	240	78	84	-	-	-	-	-	-	-	89	Dry	Dry	110	828	211	239	26,300	1,640	1,080
Lead (dissolved)	µg/L	0.1	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	0.3	<0.1	<0.1
Lead (total)	µg/L	0.1	No Water Quality Objective Value	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.3	<0.1	<0.1	-	-	-	-	-	-	-	0.1	Dry	Dry	0.3	0.3	0.1	<0.1	46.0	2.9	2.5
Manganese (dissolved)	µg/L	0.5	1,200	1.2	1.4	1.4	4.0	1.3	1.4	2.0	2.4	49.8	2.2	1.8	2.2	2.3	4.0	1.0	4.1	20.4	18.3	<0.5	Dry	Dry	3.6	67.0	2.8	10.1	0.9	<0.5	2.1
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	3.4	2.7	2.7	5.6	3.2	4.0	3.3	5.4	61.2	3.1	2.7	-	-	-	-	-	-	-	5.1	Dry	Dry	6.2	123	5.7	11.9	675	41.7	68.8
Nickel (dissolved)	µg/L	0.5	8	<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	0.9	1.0	<0.5	Dry	Dry	<0.5	<0.5	<0.5	1.9	0.9	<0.5	1.0
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	-	-	-	-	-	-	-	0.9	Dry	Dry	0.6	<0.5	<0.5	2.2	84.9	5.8	3.2
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	Dry	Dry	<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	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	<0.01	Dry	Dry	<0.01	<0.01	<0.01	-	0.06	<0.01	<0.01
Zinc (dissolved)	µg/L	1	2.4	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	1	<1	2	1	1	1	Dry	Dry	<1	<1	<1	<1	<1	<1	<1
Zinc (total)	µg/L	1	No Water Quality Objective Value	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	-	-	-	-	-	-	-	6	Dry	Dry	2	1	<1	<1	152	8	6

* 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.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 30 September 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				4/09/2024							29/09/2024
Inflow#	ML/day	-	-	-	0.0000	0.0483	0.0135	0.0473	0.0164	0.0384	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	7.45	-	-	-	-	-	-	5.69
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	315	-	-	-	-	-	-	222
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	105	-	-	-	-	-	-	35.1
Temperature	°C	-	15	11.38	-	-	-	-	-	-	14.2
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	52.2	-	-	-	-	-	-	67.2
Turbidity	NTU	-	<25	25.8	-	-	-	-	-	-	2.5
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	2	-	-	-	-	-	-	<1
Nutrients											
Ammonia as N	µg/L	10	200/2000^	170	-	-	-	-	-	-	1060
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	200	-	-	-	-	-	-	2100
Nitrogen (Total)	µg/L	100	350/-^	500	-	-	-	-	-	-	5900
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	7	-	-	-	-	-	-	<1
Phosphorus (Total)	µg/L	10	100/300^	10	-	-	-	-	-	-	10
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	11.00
Hydrocarbons											
Oil and Grease	mg/L	1	2/5^	<1.0	-	-	-	-	-	-	<1.0
Metals											
Aluminium (dissolved)	µg/L	5	55	<5	-	-	-	-	-	-	12
Arsenic (dissolved)	µg/L	0.2	13	0.5	-	-	-	-	-	-	0.5
Chromium (III+VI) (dissolved)	µg/L	0.2	1	36.8	-	-	-	-	-	-	2.8
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	7.1	-	-	-	-	-	-	<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	2	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 - 30 September 2024 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/09/2024	-	-	0.17	0.071	0.12	0.77	0.20
2/09/2024	-	-	0.23	0.071	0.15	0.08	0.08
3/09/2024	-	-	0.16	0.052	0.08	0.07	0.19
4/09/2024	-	-	0.26	0.047	0.16	0.08	0.42
5/09/2024	-	-	0.20	0.059	0.25	0.03	0.19
6/09/2024	-	-	0.20	0.050	0.17	0.07	0.26
7/09/2024	-	-	0.20	0.049	0.17	0.08	0.37
8/09/2024	-	-	0.21	0.046	0.17	0.08	0.44
9/09/2024	-	-	0.32	0.048	0.23	0.08	0.43
10/09/2024	-	-	0.33	0.049	0.08	0.08	0.51
11/09/2024	-	-	0.10	0.055	0.15	0.08	0.46
12/09/2024	-	-	0.21	0.063	0.17	0.09	0.19
13/09/2024	-	-	0.23	0.051	0.18	0.08	0.28
14/09/2024	-	-	0.21	0.045	0.17	0.13	0.25
15/09/2024	-	-	0.32	0.045	0.18	0.04	0.06
16/09/2024	-	-	0.32	0.062	0.19	0.08	0.48
17/09/2024	-	-	0.21	0.048	0.16	0.08	0.76
18/09/2024	-	-	0.21	0.046	0.15	0.08	0.79
19/09/2024	-	-	0.18	0.064	0.21	0.16	0.78
20/09/2024	-	-	0.24	0.069	0.18	0.08	0.71
21/09/2024	-	-	0.29	0.053	0.18	0.07	0.45
22/09/2024	-	-	0.27	0.057	0.14	0.08	0.82
23/09/2024	-	-	0.35	0.051	0.15	0.09	0.36
24/09/2024	-	-	0.26	0.054	0.24	0.08	0.87
25/09/2024	-	-	0.25	0.042	0.19	0.06	0.76
26/09/2024	0.63	-	0.30	0.085	0.21	0.08	0.87
27/09/2024	-	-	0.27	0.055	0.20	0.08	0.49
28/09/2024	-	-	0.44	0.053	0.19	0.09	0.88
29/09/2024	-	-	0.28	0.039	0.24	0.08	0.39
30/09/2024	-	-	0.21	0.048	0.20	0.16	0.40
	-	-	0.17	0.068	0.21	0.09	0.03

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 0.0 ML/day.

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 0.0 ML/day

\- Water not discharged on this day

OCTOBER 2024

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-31 October 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				15/10/2024	15/10/2024	15/10/2024	19/10/2024	19/10/2024	19/10/2024	6/10/2024	6/10/2024	1/10/2024	1/10/2024	1/10/2024	1/10/2024	1/10/2024	1/10/2024	1/10/2024	15/10/2024	15/10/2024	15/10/2024	15/10/2024	15/10/2024	15/10/2024	15/10/2024	15/10/2024
pH	pH Unit	-	6.5-8	7.23	7.95	5.88	7.88	7.78	5.78	7.94	7.09	6.75	6.41	6.66	6.81	6.74	6.92	7.51	6.17	6.92	7.05	6.74	7.23	5.8	6.81	6.42
Electrical Conductivity	uS/cm	-	30-350	269	252	809	30	28	146	36	64	943	772	2970	643	587	1910	348	363	325	160	682	373	550	842	476
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	192	213	266	186	213	278	218	263	-6	-112	17	114	116	9	108	182	209	174	80	230	271	243	220
Temperature	°C	-	No Water Quality Objective Value	15.96	17.85	18.06	13.63	13.57	13.04	10.24	10.16	18.2	16.75	17.18	20.62	15.03	17.05	15.96	17.51	17.5	16.68	16.76	17.17	14.45	14.98	18.12
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	32.7	36.5	50.1	78.7	87.1	71.2	82.1	81.3	75.7	34.1	18.6	61.1	89.8	33.6	61.7	61	28.3	58.7	26.4	45.1	15.9	25.5	31
Turbidity	NTU	-	No Water Quality Objective Value	185	196	60.1	6.8	4.1	64.5	45.9	54.1	79.1	105	175	1000	1000	7.1	114	246	92.7	1000	200	283	108	293	107
Laboratory analytes																										
TSS	mg/L	5	No Water Quality Objective Value	31	101	170	15	54	34	117	394	36	116	224	2,520	1,260	<5	68	578	59	620	176	196	160	1,240	229
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	137	127	269	<1	<1	16	11	20	387	344	1,250	89	78	124	59	15	126	50	131	87	183	267	153
Nutrients																										
Ammonia as N	µg/L	10	13	<10	10	20	<10	<10	70	<10	20	30	40	110	10	20	260	<10	<10	40	30	10	<10	10	<10	10
Nitrite + Nitrate as N (Nox)	µg/L	10	15	<10	640	48,000	1,240	160	400	<10	10	10	20	10	4,780	1,830	<10	220	290	20	<10	20	<10	29,400	26,000	620
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	200	400	16,100	<100	<100	200	<100	200	200	200	900	1,020	2,400	600	300	400	200	400	300	200	8,400	6,000	400
Nitrogen (Total)	µg/L	100	150	200	1,000	64,100	1,200	200	600	<100	200	200	200	900	6,400	6,200	600	500	700	200	400	300	200	37,300	34,000	1,000
Reactive Phosphorus	µg/L	1	15	3	9	2	<1	2	12	12	10	4	6	4	18	9	13	11	4	7	2	30	4	5	4	5
Phosphorus (Total)	µg/L	10	20	60	260	70	20	40	70	50	50	110	260	530	810	840	100	100	260	160	340	250	130	200	250	170
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	1	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<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
Metals																										
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	15	<5	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	554	1,640	2,830	309	1,340	1,140	1,850	1,010	581	1,410	1,020	26,200	22,000	14	910	3,560	835	2,860	518	822	1,080	5,130	1,560
Arsenic (dissolved)	µg/L	0.2	0.8	<0.2	2.0	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	9.4	1.9	4.4	3.9	0.3	9.5	0.2	<0.2	0.5	0.4	14.8	0.5	1.2	<0.2	1.0
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	0.4	2.9	4.3	0.3	0.5	0.2	-	-	66.5	66.0	19.1	53.2	7.9	21.5	0.7	2.6	4.4	2.2	17.4	6.7	4.1	6.2	4.6
Chromium (III+VI) (dissolved)	µg/L	0.2	0.01	<0.2	<0.2	1.2	<0.2	<0.2	<0.2	<0.2	0.2	0.6	<0.2	<0.2	25.6	17.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	1.9	3.8	9.8	1.4	1.3	1.8	-	-	1.2	2.1	1.6	100	75.7	0.3	1.5	8.0	2.8	3.0	1.2	2.8	3.1	13.4	4.0
Copper (dissolved)	µg/L	0.5	1	20.1	4.0	<0.5	3.5	<0.5	29.5	280	1.3	<0.5	<0.5	<0.5	3.4	1.2	<0.5	8.0	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5
Copper (total)	µg/L	0.5	No Water Quality Objective Value	63.0	75.3	5.4	7.4	2.2	45.7	-	-	0.7	2.4	0.5	88.6	41.8	1.8	33.9	7.9	1.5	4.4	0.6	1.8	11.1	12.5	1.8
Iron (dissolved)	µg/L	2	300	<2	<2	<2	<2	11	<2	<2	<2	<2	6	918	3	5	3	<2	<2	<2	<2	<2	<2	<2	<2	4
Iron (total)	µg/L	2	No Water Quality Objective Value	718	1,990	5,080	413	864	702	-	-	3,520	6,900	3,760	36,100	26,100	211	841	4,700	2,200	1,900	670	2,680	1,740	9,790	2,900
Lead (dissolved)	µg/L	0.1	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	<0.1	<0.1	<0.1	<0.1	<0.1	1.7	<0.1	<0.1	<0.1	<0.1	0.2
Lead (total)	µg/L	0.1	No Water Quality Objective Value	3.0	4.6	31.8	0.3	1.0	0.6	-	-	<0.1	2.0	1.9	49.1	33.4	<0.1	0.6	11.6	17.7	62.1	2.1	4.0	6.2	48.5	22.7
Manganese (dissolved)	µg/L	0.5	1,200	5.7	47.0	51.0	2.8	<0.5	3.6	7.1	9.4	232	227	386	13.9	32.2	184	10.3	21.0	69.6	183	256	668	411	5.1	537
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	47.4	168	184	17.4	51.9	23.0	-	-	240	253	415	913	590	191	20.4	135	317	246	281	608	455	502	624
Nickel (dissolved)	µg/L	0.5	8	<0.5	<0.5	2.8	0.8	<0.5	1.0	1.7	1.6	18.2	2.4	3.2	2.1	1.7	4.6	2.2	3.2	<0.5	3.8	1.4	2.1	10.2	3.2	4.9
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	2.2	5.4	11.2	1.7	1.4	2.0	-	-	22.0	5.2	4.8	101	70.7	5.6	4.5	15.6	3.7	7.6	3.7	5.6	14.3	27.4	12.2
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	<0.01	<0.01	<0.01
Silver (total)	µg/L	0.01	No Water Quality Objective Value	<0.01	0.02	0.22	<0.01	<0.01	<0.01	-	-	1.28	<0.01	<0.01	0.20	0.08	<0.01	<0.01	0.02	0.02	0.03	<0.01	<0.01	0.01	0.07	0.01
Zinc (dissolved)	µg/L	1	2.4	7	1	6	3	<1	3	7	<1	4	<1	5	1	<1	2	2	10	4	24	<1	10	10	4	36
Zinc (total)	µg/L	1	No Water Quality Objective Value	13	16	77	5	5	4	-	-	8	8	15	221	138	4	5	51	18	45	6	115	45	70	180

* Water Quality Objective values for groundwater refer to the default trigger values for chemical and chemical stressors in south-east Australia (upland rivers) for the protection of 95% of aquatic species ANZECC / ARMCANZ f2000B. they are not indicant limits imposed by EPL 21366.

\- Sample not required at this location.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-31 October 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				7/10/24	7/10/24	16/10/24	16/10/24	16/10/24	16/10/24	5/10/24	13/10/24	16/10/24	16/10/24
pH	pH Unit	-	6.5-8	7.62	7.58	7.14	6.73	7.31	7.28	6.57	8.08	6.55	6.58
Electrical Conductivity	µS/cm	-	20-30	63	55	16.8	16.5	16.6	16.7	20	70	18.1	16.5
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	174	193	203.5	179.7	226	223.1	194	-78	226.4	221.3
Temperature	°C	-	No Water Quality Objective Value	14.42	14.75	10.8	12.6	12.5	13	12.06	16.98	12.5	12.5
Dissolved Oxygen	% saturation	-	90-110	110	72.2	88.6	91.2	91.6	93.5	69.2	62.5	91.2	90.9
Turbidity	NTU	-	1-20	22.3	10.6	3.86	4.3	4.37	4.33	11	31	4.55	4.51
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	10	6	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	26	19	2	2	2	2	<1	2	2	2
Nutrients													
Ammonia as N	µg/L	10	10	<10	<10	10	40	50	30	<10	10	100	40
Nitrite + Nitrate as N (NOx)	µg/L	10	10	<10	<10	<10	30	30	40	<10	10	60	50
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	200	200	200	300	300	400	200	100	300	300
Nitrogen (Total)	µg/L	100	350	200	200	200	300	300	400	200	100	400	400
Reactive Phosphorus	µg/L	1	5	6	5	3	<1	<1	<1	1	<1	<1	<1
Phosphorus (Total)	µg/L	10	10	40	20	20	20	20	20	<10	30	50	10
Inorganics													
Cyanide Total	µg/L	4	7	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons													
Oil and Grease	mg/L	1	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals													
Aluminium (dissolved)	µg/L	5	55	8	8	15	32	31	31	19	<5	30	29
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	0.4	<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	13	11	57	90	88	89	37	3	89	87
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	0.7	0.5	14.2	5.9	4.5	7.2	2.1	3.4	5.8	5.8
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													
Fsecal Coliforms	CFU/100mL	1	10/100^	3	7	11	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	2	1/5^	5	5	4	-	-	-	-	-	-	4

* 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.

^ 90th percentile concentration limits / 100 percentile concentration limits

\- Sample not required at this location.

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

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01 - 31 October 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				4/10/24	4/10/24	4/10/24	4/10/24	4/10/24	4/10/24	4/10/24	4/10/24	1/10/24	6/10/24	6/10/24	5/10/24	5/10/24	5/10/24	5/10/24	5/10/24	13/10/24	13/10/24	3/10/24	-	-	3/10/24	23/10/24	30/10/24	6/10/24	9/10/24	9/10/24	9/10/24
pH	-	-	6.5-8	7.45	6.7	6.69	6.69	6.62	6.64	6.7	6.58	7.18	7.11	7.9	6.4	6.42	6.68	6.57	7.46	5.9	6.7	6.66	8.1	Dry	Dry	7.33	7.97	7.97	7.44	8.28	9.33	9.33
Electrical Conductivity	uS/cm	-	30-350	81	60	93	82	81	78	77	88	301	63	33	29	24	22	99	17	52	60	969	Dry	Dry	875	26	52.5	64	837	482	1140
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	189	235	235	237	223	241	236	240	170	163	134	187	185	157	94	70	209	185	85	Dry	Dry	130	177	115	261	95.8	84.6	84.8
Temperature	°C	-	No Water Quality Objective Value	11.26	10.19	12.32	12.13	11.81	6.64	12.02	12.66	17.73	11.86	9.95	11.22	11.21	12.6	12.14	9.88	16.18	18.45	20.23	Dry	Dry	17.69	13.48	19.8	8.78	17.17	16.93	17.57
Dissolved Oxygen	% saturation	-	90-110	106.7	95.4	89	90.8	96.4	89.8	91.8	80.1	70.9	107.5	96	71.2	71.2	84.7	86.3	83.2	100.4	30.9	99.8	Dry	Dry	76.7	94.5	92.1	86.1	95.8	84.6	84.8
Turbidity	NTU	-	2-25	3.4	7.9	6.2	3.7	3.7	3.5	3.8	10.4	23.4	19.2	5.8	10.1	7.1	6.3	20.5	14.8	0.3	56.5	25.3	Dry	Dry	8.2	20.2	2.96	67.5	1000	77.1	58
Laboratory analytes																															
TSS	mg/L	5	No Water Quality Objective Value	14	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	7	9	<5	12	12	5	31	<5	Dry	Dry	21	6	6	16	632	8	10
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	36	26	38	36	38	36	36	36	83	9	9	7	7	2	<1	<1	17	17	212	Dry	Dry	223	2	4	18	26	21	307
Nutrients																															
Ammonia as N	µg/L	10	13	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	60	<10	<10	10	20	10	Dry	Dry	<10	3,580	20	<10	40	40	20
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	40	<10	<10	<10	<10	<10	12,900	<10	<10	120	<10	20	<10	<10	<10	<10	35,400	Dry	Dry	39,300	8,910	30	20	5,720	4,450	21,700
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	<100	100	100	200	100	100	100	600	<100	100	200	200	400	300	300	500	800	3,900	Dry	Dry	3,900	5,200	200	<100	4,600	1,400	1,600
Nitrogen (Total)	µg/L	100	250	<100	<100	100	100	200	100	100	100	13,500	<100	100	300	200	400	300	300	500	800	39,300	Dry	Dry	43,200	14,100	200	<100	10,300	5,800	23,300
Reactive Phosphorus	µg/L	1	15	9	12	10	9	8	9	7	8	7	6	8	3	4	4	1	<1	<1	3	2	Dry	Dry	6	<1	<1	8	13	5	7
Phosphorus (Total)	µg/L	10	20	10	20	30	20	20	<10	20	30	40	20	20	10	20	<10	20	10	30	80	20	Dry	Dry	20	20	10	80	1,390	<100	170
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	1	5	<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	Dry	Dry	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals																															
Aluminium (dissolved)	µg/L	5	27	8	<5	10	9	9	10	9	9	<5	6	6	22	21	28	29	31	45	61	8	Dry	Dry	<5	22	<5	11	15	22	<5
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94	Dry	Dry	109	291	127	-	26,800	2,380	818
Arsenic (dissolved)	µg/L	0.2	0.8	0.3	<0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	0.7	3.0	Dry	Dry	0.4	<0.2	<0.2	0.2	8.3	4.6	2.2
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	Dry	Dry	0.4	<0.2	<0.2	-	14.6	5.2	3.1
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	0.7	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	0.3	9.8	Dry	Dry	3.1	<0.2	<0.2	<0.2	53.1	66.7	4.8
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.8	Dry	Dry	3.3	0.4	0.2	-	129	76.6	6.6
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dry	Dry	<0.5	<0.5	<0.5	<0.5	2.2	0.6	2.0
Copper (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	Dry	Dry	0.6	<0.5	<0.5	-	46.9	3.7	3.6
Iron (dissolved)	µg/L	2	300	13	6	12	13	12	13	14	13	6	15	13	34	27	84	46	48	336	487	<2	Dry	Dry	<2	89	3	24	28	<2	<2
Iron (total)	µg/L	2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	Dry	Dry	251	388	208	-	40,500	3,020	994
Lead (dissolved)	µg/L	0.1	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	0.1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	Dry	Dry	1.4	<0.1	<0.1	-	51.9	3.4	1.9
Manganese (dissolved)	µg/L	0.5	1,200	1.5	1.0	1.2	2.5	1.0	1.4	1.3	1.7	34.5	2.4	1.5	2.1	1.7	1.9	4.2	4.2	13.4	10.2	<0.5	Dry	Dry	0.5	49.6	2.8	11.7	<0.5	<0.5	0.7
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.8	Dry	Dry	14.9	65.3	6	-	833	61.7	45.5
Nickel (dissolved)	µg/L	0.5	8	<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	0.6	<0.5	<0.5	0.9	1.0	0.6	Dry	Dry	<0.5	<0.5	<0.5	0.9	0.6	<0.5	0.8
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	Dry	Dry	0.8	<0.5	<0.5	-	103	8.6	2.8
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	Dry	Dry	<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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	Dry	Dry	<0.01	<0.01	<0.01	-	0.07	<0.01	<0.01
Zinc (dissolved)	µg/L	1	2.4	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	25	1	1	<1	2	2	Dry	Dry	1	<1	<1	<1	<1	<1	<1
Zinc (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	Dry	Dry	3	<1	<1	-	191	13	5

* 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.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 31 October 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				2/10/2024							23/10/2024
Inflow#	ML/day	-	-	-	0.0000	0.5790	0.0506	0.1780	0.0748	0.5509	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	7.45	-	-	-	-	-	-	5.8
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	112	-	-	-	-	-	-	133.1
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	138	-	-	-	-	-	-	171.2
Temperature	°C	-	15	11.58	-	-	-	-	-	-	17.6
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	9.3	-	-	-	-	-	-	86.9
Turbidity	NTU	-	<25	26.5	-	-	-	-	-	-	1.18
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	10	200/2000^	60	-	-	-	-	-	-	3580
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	200	-	-	-	-	-	-	5200
Nitrogen (Total)	µg/L	100	350/-^	200	-	-	-	-	-	-	14100
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	2	-	-	-	-	-	-	<1
Phosphorus (Total)	µg/L	10	100/300^	20	-	-	-	-	-	-	20
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	34.00
Hydrocarbons											
Oil and Grease	mg/L	1	2/5^	<1.0	-	-	-	-	-	-	<1
Metals											
Aluminium (dissolved)	µg/L	5	55	<5	-	-	-	-	-	-	<5
Arsenic (dissolved)	µg/L	0.2	13	<0.2	-	-	-	-	-	-	0.4
Chromium (III+VI) (dissolved)	µg/L	0.2	1	<0.2	-	-	-	-	-	-	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	12	-	-	-	-	-	-	<1
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	<1	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	2	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 - 31 October 2024 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/10/2024	-	-	0.60	0.05	0.12	0.10	0.43
2/10/2024	-	-	0.58	0.05	0.15	0.08	0.68
3/10/2024	-	-	0.53	0.07	0.08	0.09	0.83
4/10/2024	0.01	-	0.46	0.04	0.16	0.08	0.58
5/10/2024	-	-	0.18	0.05	0.25	0.08	0.54
6/10/2024	-	-	0.44	0.05	0.17	0.08	0.43
7/10/2024	0.85	-	0.71	0.05	0.17	0.07	0.51
8/10/2024	-	-	0.66	0.05	0.17	0.07	0.74
9/10/2024	-	-	0.70	0.05	0.23	0.09	0.60
10/10/2024	-	-	0.74	0.04	0.08	0.10	0.39
11/10/2024	0.48	-	0.51	0.06	0.15	0.09	0.46
12/10/2024	-	-	0.87	0.05	0.17	0.08	0.77
13/10/2024	0.57	-	0.84	0.04	0.18	0.07	0.74
14/10/2024	-	-	0.69	0.04	0.17	0.08	0.71
15/10/2024	0.35	-	0.69	0.04	0.18	0.08	0.59
16/10/2024	0.49	-	0.70	0.05	0.19	0.07	0.61
17/10/2024	-	-	0.67	0.06	0.16	0.07	0.73
18/10/2024	-	-	0.42	0.07	0.15	0.08	0.41
19/10/2024	-	-	0.66	0.04	0.21	0.07	0.41
20/10/2024	-	-	0.61	0.00	0.18	0.08	0.94
21/10/2024	-	-	0.46	0.00	0.18	0.07	0.58
22/10/2024	-	-	0.57	0.00	0.14	0.08	0.38
23/10/2024	-	-	0.65	0.00	0.15	0.05	0.17
24/10/2024	-	-	0.54	0.00	0.24	0.06	0.43
25/10/2024	-	-	0.50	0.26	0.19	0.08	0.54
26/10/2024	-	-	0.56	0.06	0.21	0.07	0.62
27/10/2024	-	-	0.45	0.04	0.20	0.06	0.72
28/10/2024	-	-	0.67	0.06	0.19	0.07	0.72
29/10/2024	-	-	0.61	0.07	0.24	0.06	0.16
30/10/2024	-	-	0.46	0.02	0.20	0.07	0.36
31/10/2024	-	-	0.26	0.07	0.21	0.07	0.28

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 9.84 ML/day.

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 0.0 ML/day

\- Water not discharged on this day

NOVEMBER 2024

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-30 Nov 2024 Groundwater

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL1	EPL2	EPL4	EPL25	EPL26	EPL27	EPL28	EPL66	EPL69	EPL70	EPL71	EPL73	EPL80	EPL81	EPL82	EPL83	EPL87	EPL88	EPL89	EPL 90	EPL 91	EPL92	EPL93	EPL94	EPL95	EPL96	EPL97
Physiochemical				4/11/24	4/11/24	17/11/24	4/11/24	5/11/24	5/11/24	5/11/24	434998	434998	434998	434934	434934	434922	434922	434922	434922	434922	434922	434922	434921	434921	434921	434921	434921	434921	434921	434921	434921
pH	pH Unit	-	6.5-8	6.88	7.36	7.28	6.61	8.03	8.3	8.28	6.34	6.17	6.07	6.19	6.97	6.88	6.83	6.79	7.27	6.44	7.29	6.99	5.87	6.49	7.31	7.18	6.74	5.98	6.94	6.27
Electrical Conductivity	uS/cm	-	30-350	480	519	1820	502	287	289	902	9.6	16.7	66	61	61	892	794	2460	888	642	827	867	85	260	592	362	182	526	1320	429
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	-91	-123	-110	-9	98	45	85	267.4	277.9	293.1	79	126	-91	-87	-98	-96	92	-170	-9	93	66	82	62	-87	81	5	86
Temperature	°C	-	No Water Quality Objective Value	16.08	16.07	17.77	16.45	16.44	16.88	17.55	18.1	16.8	16.4	15.47	15.89	19.27	17.98	18.93	17.48	16.79	18.6	8.68	17.73	16.47	17.82	17.42	17.02	16.08	18.05	17.96
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	41.4	35.9	11.6	16.4	29.7	41.9	17.6	80.2	87.7	89.6	87.2	89.6	40.2	40.2	22.9	17.2	17.1	33.6	96.8	82	14.4	84.6	0	47.2	17.1	26.6	0.4	80.8	0
Turbidity	NTU	-	No Water Quality Objective Value	253	387	1000	98.8	86.7	80.2	203	8.38	7.48	22.46	186	89.8	184	218	130	3330	1050	9.8	118	340	20.8	278	162	84.7	328	825	99.4
Laboratory analytes																														
TSS	mg/L	5	No Water Quality Objective Value	88	181	3,060	98	88	81	71	12	<5	16	174	94	58	91	479	975	7,410	<5	80	1,080	72	438	182	108	183	367	181
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	266	193	719	218	130	111	282	7	3	17	16	23	377	348	1,300	536	328	191	76	8	116	42	117	76	178	440	198
Nutrients																														
Ammonia as N	µg/L	10	10	20	80	940	180	<10	<10	<10	70	40	30	20	20	20	40	40	70	190	930	<10	<10	<10	<10	10	<10	<10	<10	<10
Nitrite + Nitrate as N (NOx)	µg/L	10	15	90	40	24,000	<10	20	410	32,700	840	140	900	20	20	<10	<10	<10	1,000	4,470	<10	40	210	140	90	<10	<10	14,700	10,900	190
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	200	4,200	900	<100	<100	2,400	200	100	200	100	100	200	100	200	500	4,600	1,800	300	4,200	900	600	<100	<100	3,400	2,600	<100
Nitrogen (Total)	µg/L	100	260	<100	280	29,400	900	<100	400	34,300	1,000	200	700	100	100	200	100	200	1,500	9,100	1,800	300	4,200	900	600	<100	<100	18,300	15,700	200
Reactive Phosphorus	µg/L	1	15	4	34	18	8	3	11	2	<1	1	16	15	9	3	3	4	12	5	7	6	4	8	4	38	4	5	3	8
Phosphorus (total)	µg/L	10	30	70	70	2,960	330	40	40	60	<10	20	30	40	10	80	110	90	200	2,040	230	30	1,280	80	90	90	80	50	190	80
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	-	-	-	-	<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	<5.0	<5.0	<5.0	<5.0	<5.0
Metals																														
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	996	1,940	833	654	796	1,940	3470	557	58	582	1,910	18,100	977,000	82	670	18,700	866	3,280	1,490	1,900	1,990	5,890	1,310
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	<5	<5	<5	<5	17	<5	8	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	0.5	2.7	1.3	<0.2	0.2	0.3	2	0.8	198	80.0	58.2	64.4	76.4	28.2	0.6	6.4	4.0	5.3	20.4	14.4	9.0	8.0	9.0
Arsenic (dissolved)	µg/L	0.2	0.8	1.0	1.8	4.3	1.0	0.2	1.9	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	2.2	4.4	0.4	2.0	<0.2	3.9	0.2	<0.2	0.5	0.2	0.6	0.4	0.9	0.2	0.6
Chromium (VI+) (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	2.8	8.1	3.3	0.8	0.8	3.1	8.5	0.8	1.4	1.0	2.9	83.8	980	0.8	0.2	35.4	2.0	9.0	8.8	3.2	6.4	13.4	3.8
Chromium (VI+) (dissolved)	µg/L	0.2	0.01	<0.2	0.2	0.5	<0.2	<0.2	<0.2	0.8	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	27.6	0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2
Copper (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	80.6	38.8	1.9	8.3	1.8	278	328	3.3	1.8	1.1	0.9	76.8	987	17.6	18.2	84.4	1.0	15.7	6.1	9.2	16.1	16.2	1.6
Copper (dissolved)	µg/L	0.5	1	1.6	0.6	7.6	8.0	0.8	1.8	<0.5	0.5	<0.5	10.2	66.3	0.6	<0.5	<0.5	<0.5	2.7	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5
Iron (total)	µg/L	2	No Water Quality Objective Value	-	-	-	-	1,140	1,470	1,420	234	642	1,060	4480	694	9,780	3,420	7,290	28,100	290,000	918	618	18,700	1,480	3,710	1,320	1,980	2,360	11,800	2,140
Iron (dissolved)	µg/L	2	300	18	<2	4	<2	<2	<2	<2	<2	18	<2	<2	<2	<2	<2	<2	98	<2	<2	11	<2	<2	<2	<2	<2	<2	<2	<2
Lead (total)	µg/L	0.1	No Water Quality Objective Value	-	-	-	-	8.2	4.0	8.4	0.2	0.4	1.2	11.9	0.8	0.8	0.8	4.2	28.8	388	0.2	0.6	74.0	0.4	270	16.1	9.4	15.1	74.0	20.8
Lead (dissolved)	µg/L	0.1	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	<0.1	0.8	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	76.8	168	176	12.8	16.2	40.9	1390	260	228	194	669	828	6,040	234	7.0	771	661	930	366	897	992	708	588
Manganese (dissolved)	µg/L	0.5	1,900	299	102	936	1,060	21.1	91.2	188	3.4	<0.5	2.8	7.8	56.1	190	176	995	1.4	87.0	190	2.8	19.4	80.1	80.4	329	566	698	1.4	431
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	8.0	6.0	8.0	1.4	0.7	6.3	1.4	0.7	26.9	4.9	6.1	81.9	758	5.7	4.4	69.8	2.7	16.1	14.5	8.9	18.9	84.0	9.8
Nickel (dissolved)	µg/L	0.5	9	2.2	0.8	6.3	4.2	<0.5	<0.5	2.9	0.6	<0.5	<0.5	0.9	<0.5	16.2	2.0	2.0	3.4	1.8	3.8	2.0	2.6	<0.5	0.5	1.9	10.6	8.0	6.2
Silver (total)	µg/L	0.05	No Water Quality Objective Value	-	-	-	-	0.32	0.01	0.04	0.05	<0.01	<0.01	0.03	0.04	<0.01	<0.05	<0.05	0.08	1.39	<0.01	<0.05	0.12	0.01	0.19	0.04	0.03	0.05	0.12	0.02
Silver (dissolved)	µg/L	0.05	0.02	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05
Zinc (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	16	11	18	4	3	4	22	9	7	5	20	182	1,840	6	2	189	19	86	42	101	80	89	179
Zinc (dissolved)	µg/L	1	2.4	2	1	<1	17	3	<1	7	1	1	1	3	3	<1	<1	4	<1	<1	<1	<1	11	2	20	<1	3	12	3	10

* 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 - 30 Nov 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				3/11/24	3/11/24	26/11/24	26/11/24	26/11/24	16/11/24	16/11/24	4/11/24	26/11/24	26/11/24
pH	pH Unit	-	6.5-8	7.44	6.74	9.51	9.69	10.11	6.59	7.25	7.6	9.8	9.83
Electrical Conductivity	µS/cm	-	20-30	78	70	25.8	22	22.1	25	26	20	23.1	22.1
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	105	135	144.4	203.2	182.2	190	155	168	197.6	194.8
Temperature	°C	-	No Water Quality Objective Value	19.15	18.97	19.5	20.3	20.4	19.01	18.56	14.9	20.3	20.3
Dissolved Oxygen	% saturation	-	90-110	93.6	88.1	88.2	94	93.7	89	74	95.3	94.5	94
Turbidity	NTU	-	1-20	1.5	1.3	7.67	4.33	4.38	8.6	3.9	3.95	4.39	4.24
Laboratory analytes													
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	16	11	9	8	6	<5	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	31	28	9	2	2	2	<1	2	2	2
Nutrients													
Ammonia as N	µg/L	10	10	<10	30	60	90	40	20	<10	20	20	60
Nitrite + Nitrate as N (NOx)	µg/L	10	10	10	40	10	15	18	26	20	<10	20	14
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	200	200	500	400	200	200	200	100	300	300
Nitrogen (Total)	µg/L	100	350	200	200	500	400	200	200	200	100	300	300
Reactive Phosphorus	µg/L	1	5	4	5	4	3	3	7	2	5	3	4
Phosphorus (Total)	µg/L	10	10	20	30	40	20	10	40	20	<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	1	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals													
Aluminium (dissolved)	µg/L	5	55	10	8	<5	<5	<5	49	18	15	37	39
Arsenic (dissolved)	µg/L	0.2	13	0.3	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	<0.2	<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	30	23	3	3	<2	152	78	37	115	114
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	0.6	<0.5	24.5	2.4	1.3	72.2	3.6	5.2	2.3	2.3
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^	5	1		-	-	-	-	-	-	7
Biochemical Oxygen Demand	mg/L	2	1/5^	4	4		-	-	-	-	-	-	<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.

^ 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 Nov 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	EPL67	EPL71	EPL84	EPL85	EPL86
Field				45599	45599	45599	45599	45599	45599	45599	45599	45600	45597	45597	45598	45598	45598	45598	45598	45605	45605	45601	Dry	Dry	Dry	45612	45597	45600	45600	45600
pH	-	-	6.5-8	7.64	7.47	7.85	7.91	7.65	7.95	7.93	7.89	6.58	6.83	6.61	6.09	6.34	6.5	7.85	7.48	6.95	7.34	8.47	Dry	Dry	Dry	7.41	6.29	8.3	10.45	7.92
Electrical Conductivity	µS/cm	-	30-350	100	74	107	102	100	97	96	107	655	37	48	29	25	24	34	22	61	75	965	Dry	Dry	Dry	22	71	1530	695	1250
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	52	99	93	95	88	88	91	89	72	164	165	186	178	158	109	112	85	60	-10	Dry	Dry	Dry	155	271	57	-2	62
Temperature	°C	-	No Water Quality Objective Value	20.33	18.79	21.85	21.72	20.41	22.84	21.2	22.54	14.58	15.16	16.44	12.86	12.97	14.36	13.2	12.72	15.03	16.75	21.2	Dry	Dry	Dry	18.16	12.93	23.4	21.77	22.18
Dissolved Oxygen	% saturation	-	90-110	109.4	107.8	90.2	92.6	100.7	102.2	105.4	94.2	66.3	92.7	77	80.6	81	91.4	99.1	99.7	82.8	85.7	90.6	Dry	Dry	Dry	78.8	65.4	162.8	64.8	90.2
Turbidity	NTU	-	3-25	2.04	2.48	1.83	3.61	1.89	1.87	1.28	4.9	0	0	0	2.9	2.4	4.2	1.3	0.2	69.3	57.8	66.8	Dry	Dry	Dry	4	20.4	1000	93.9	126
Laboratory analytes																														
TSS	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	7	14	21	Dry	Dry	Dry	<5	<5	426	6	24
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	46	31	46	43	46	43	43	43	184	12	9	7	9	2	<1	<1	24	24	233	Dry	Dry	Dry	<1	16	18	32	280
Nutrients																														
Ammonia as N	µg/L	10	13	<10	<10	<10	<10	<10	10	10	<10	<10	10	<10	<10	<10	40	<10	<10	<10	20	<10	Dry	Dry	Dry	10	<10	1,220	150	<10
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	10	10	<10	<10	<10	10	16,600	<10	30	<10	<10	20	<10	<10	70	40	18,500	Dry	Dry	Dry	<10	<10	6,080	4,670	18,200
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	100	<100	100	100	200	100	<100	1,100	<100	100	100	100	300	200	200	300	400	2800	Dry	Dry	Dry	100	100	4,400	1,400	2,600
Nitrogen (Total)	µg/L	100	250	<100	100	<100	100	100	200	100	<100	17,700	<100	100	100	100	300	200	200	400	400	21300	Dry	Dry	Dry	100	100	10,400	6,100	20,800
Reactive Phosphorus	µg/L	1	15	9	9	6	6	6	9	7	5	5	4	2	7	7	4	2	1	6	9	3	Dry	Dry	Dry	2	6	31	15	7
Phosphorus (Total)	µg/L	10	20	20	50	80	50	50	60	60	40	20	20	30	20	20	20	10	30	30	50	60	Dry	Dry	Dry	20	90	270	60	40
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	<4	<4	<4	<4
Hydrocarbons																														
Oil and Grease	mg/L	1	5	<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	Dry	Dry	Dry	<1.0	<1.0	18.7	<1.0	<1.0
Metals																														
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	879	Dry	Dry	Dry	152	708	18,000	917	784
Aluminium (dissolved)	µg/L	5	27	8	<5	7	10	8	9	9	8	<5	6	<5	12	14	29	19	18	17	30	10	Dry	Dry	Dry	19	11	15	212	5
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	Dry	Dry	Dry	0.2	0.5	17.3	1.5	3.7
Arsenic (dissolved)	µg/L	0.2	0.8	0.3	<0.2	0.3	0.3	0.2	0.3	0.2	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	0.4	0.6	5.2	Dry	Dry	Dry	<0.2	0.5	11.6	1.2	3.0
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.6	Dry	Dry	Dry	0.3	1.3	171	195	7.3
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	0.3	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	8.5	Dry	Dry	Dry	<0.2	<0.2	117	182	5.4
Copper (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	Dry	Dry	Dry	<0.5	1.1	32.4	1.2	3.1
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dry	Dry	Dry	<0.5	<0.5	2.6	0.5	1.3
Iron (total)	µg/L	2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	944	Dry	Dry	Dry	247	654	24,300	494	818
Iron (dissolved)	µg/L	2	300	9	6	8	9	8	9	8	8	<2	12	11	26	20	95	77	76	188	278	<2	Dry	Dry	Dry	77	22	11	3	<2
Lead (total)	µg/L	0.1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	Dry	Dry	Dry	0.1	0.2	38.6	0.6	1.3
Lead (dissolved)	µg/L	0.1	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	<0.1	<0.1	<0.1	<0.1
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.0	Dry	Dry	Dry	5.4	14.4	557	11.4	38.7
Manganese (dissolved)	µg/L	0.5	1,300	1.4	2.2	1.4	3.5	1.0	1.2	1.2	1.9	131	2.4	0.8	2.5	2.0	36.6	3.7	3.9	41.8	40.4	<0.5	Dry	Dry	Dry	3.5	6.8	<0.5	<0.5	<0.5
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	Dry	Dry	Dry	<0.5	2.5	73.9	1.6	2.8
Nickel (dissolved)	µg/L	0.5	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.8	<0.5	Dry	Dry	Dry	<0.5	0.7	1.5	<0.5	1.0
Silver (total)	µg/L	0.01	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	Dry	Dry	Dry	<0.01	<0.01	0.06	<0.01	<0.01
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	Dry	Dry	Dry	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	Dry	Dry	Dry	<1	2	135	3	4
Zinc (dissolved)	µg/L	1	2.4	2	<1	<1	<1	<1	<1	1	<1	6	<1	1	<1	1	<1	2	<1	<1	<1	<1	Dry	Dry	Dry	<1	1	<1	<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 95% of aquatic species ANZECC / ARMCANZ (2018), they are not pollutant limits imposed by EPL 21266.

- Samples not required

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01 - 30 Nov 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				17/11/2024							27/11/2024
Inflow#	ML/day	-	-	-	0.0000	0.4957	0.0511	0.1865	0.0791	0.5600	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	8.72	-	-	-	-	-	-	8.98
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	24	-	-	-	-	-	-	158.4
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	118	-	-	-	-	-	-	223.6
Temperature	°C	-	15	24.32	-	-	-	-	-	-	18.9
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	80.5	-	-	-	-	-	-	88.7
Turbidity	NTU	-	<25	4.7	-	-	-	-	-	-	9.48
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							2
Nutrients											
Ammonia as N	µg/L	10	200/2000^	70	-	-	-	-	-	-	60
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	-	-	-	-	-	-	300
Nitrogen (Total)	µg/L	100	350/-^	300	-	-	-	-	-	-	300
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	<1	-	-	-	-	-	-	4
Phosphorus (Total)	µg/L	10	100/300^	40	-	-	-	-	-	-	20
Inorganics											
Cyanide Total	µg/L	4	No Water Quality Objective Value	<4	-	-	-	-	-	-	<4
Hydrocarbons											
Oil and Grease	mg/L	1	2/5^	<1.0	-	-	-	-	-	-	<1.0
Metals											
Aluminium (dissolved)	µg/L	5	55	<5	-	-	-	-	-	-	39
Arsenic (dissolved)	µg/L	0.2	13	<0.2	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	0.3	-	-	-	-	-	-	<0.2
Copper (dissolved)	µg/L	0.5	14	<0.5	-	-	-	-	-	-	<0.5
Iron (dissolved)	µg/L	2	300	<2	-	-	-	-	-	-	114
Lead (dissolved)	µg/L	0.1	3.4	<0.1	-	-	-	-	-	-	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	-	-	-	-	-	-	2.3
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	2	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 - 30 Nov 2024 - Treated Water

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/11/2024	-	-	0.23	0.05	0.12	0.09	0.51
2/11/2024	-	-	0.46	0.05	0.19	0.09	0.47
3/11/2024	-	-	0.54	0.04	0.20	0.08	0.46
4/11/2024	-	-	0.37	0.04	0.10	0.08	0.48
5/11/2024	-	-	0.45	0.03	0.31	0.08	0.58
6/11/2024	-	-	0.71	0.04	0.15	0.08	0.65
7/11/2024	-	-	0.46	0.06	0.21	0.07	0.58
8/11/2024	-	-	0.47	0.04	0.13	0.08	0.48
9/11/2024	-	-	0.42	0.05	0.17	0.08	0.56
10/11/2024	-	-	0.87	0.06	0.20	0.04	0.59
11/11/2024	-	-	0.40	0.06	0.15	0.11	0.63
12/11/2024	-	-	0.43	0.06	0.17	0.07	0.34
13/11/2024	-	-	0.64	0.03	0.17	0.06	0.49
14/11/2024	-	-	0.39	0.03	0.21	0.07	0.43
15/11/2024	-	-	0.58	0.15	0.25	0.07	0.43
16/11/2024	-	-	0.43	0.06	0.18	0.08	0.58
17/11/2024	-	-	0.46	0.06	0.21	0.10	0.42
18/11/2024	-	-	0.59	0.04	0.19	0.05	0.40
19/11/2024	-	-	0.46	0.05	0.20	0.11	0.64
20/11/2024	-	-	0.43	0.05	0.14	0.07	0.76
21/11/2024	-	-	0.50	0.05	0.25	0.07	0.24
22/11/2024	-	-	0.67	0.05	0.15	0.09	0.94
23/11/2024	-	-	0.63	0.06	0.18	0.06	0.63
24/11/2024	-	-	0.14	0.04	0.19	0.13	0.54
25/11/2024	-	-	0.72	0.04	0.17	0.09	0.53
26/11/2024	-	-	0.54	0.06	0.20	0.09	0.91
27/11/2024	-	-	0.54	0.04	0.16	0.09	0.83
28/11/2024	0.03	-	0.54	0.05	0.28	0.03	0.65
29/11/2024	-	-	0.54	0.02	0.18	0.08	0.63
30/11/2024	-	-	0.26	0.04	0.19	0.09	0.45

- 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.

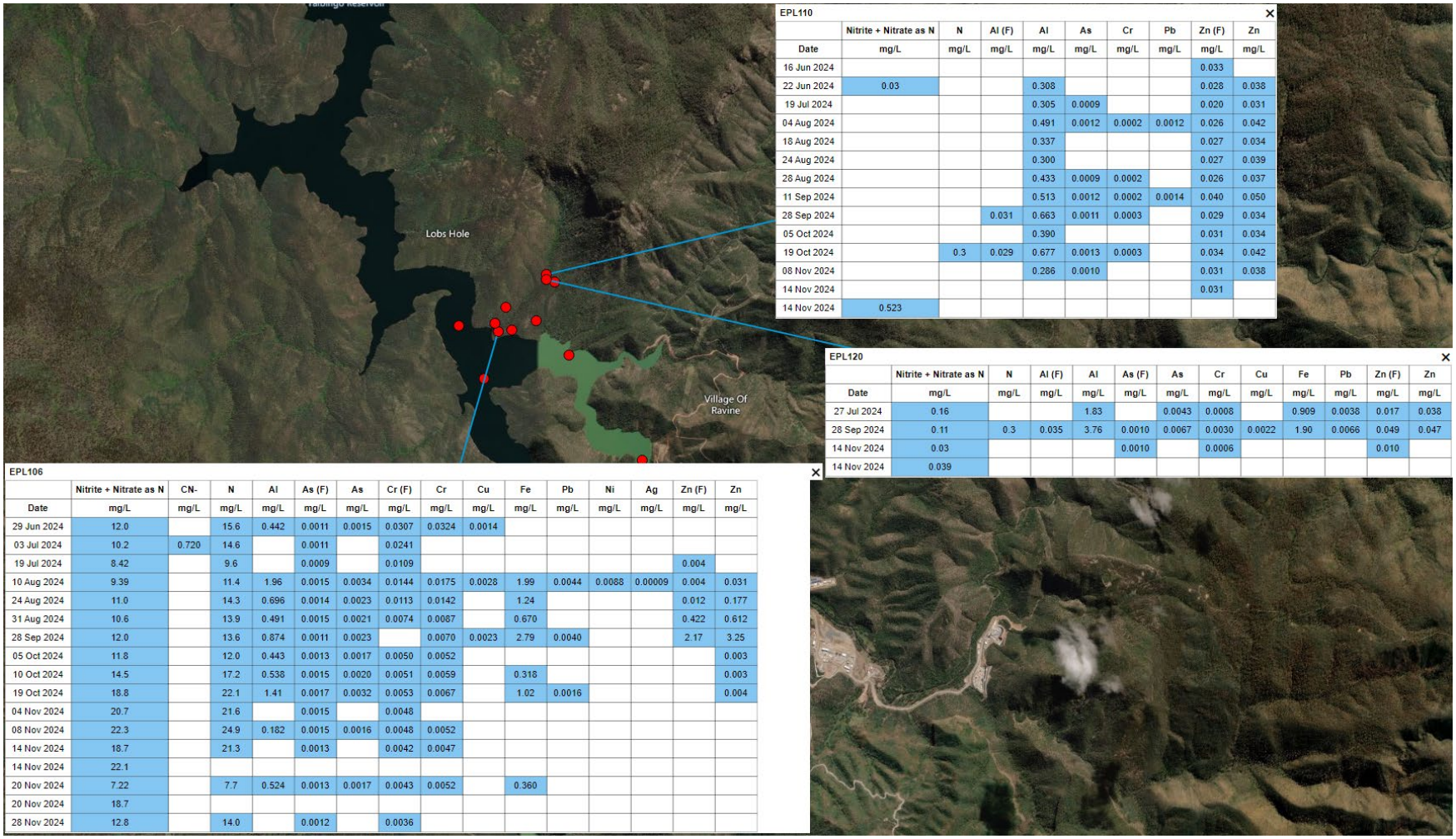
* The maximum flow rate capacity for Lobs Hole STP/PWTP during the reporting month was 1.85 L/s

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 4.51 L/s

-- Water not discharged on this day

APPENDIX D – EXCEEDANCE MAP

TALBINGO



EPL110

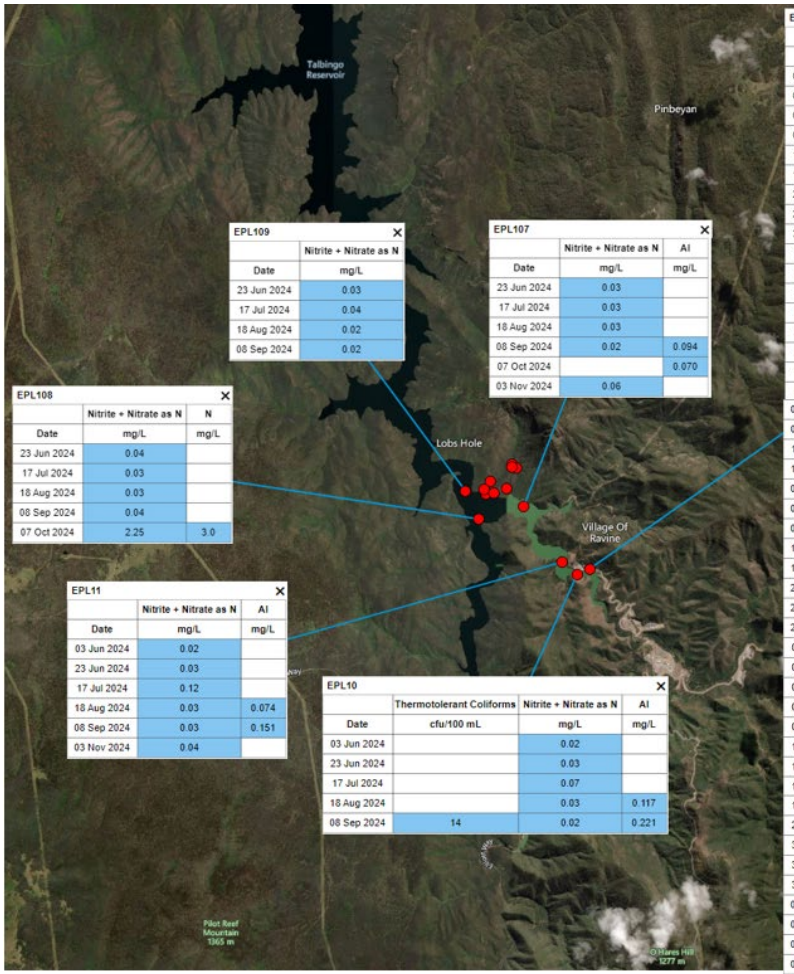
Date	Nitrite + Nitrate as N mg/L	N mg/L	Al (F) mg/L	Al mg/L	As mg/L	Cr mg/L	Pb mg/L	Zn (F) mg/L	Zn mg/L
16 Jun 2024								0.033	
22 Jun 2024	0.03			0.308				0.028	0.038
19 Jul 2024				0.305	0.0009			0.020	0.031
04 Aug 2024				0.491	0.0012	0.0002	0.0012	0.026	0.042
18 Aug 2024				0.337				0.027	0.034
24 Aug 2024				0.300				0.027	0.039
28 Aug 2024				0.433	0.0009	0.0002		0.026	0.037
11 Sep 2024				0.513	0.0012	0.0002	0.0014	0.040	0.050
28 Sep 2024			0.031	0.663	0.0011	0.0003		0.029	0.034
05 Oct 2024				0.390				0.031	0.034
19 Oct 2024		0.3	0.029	0.677	0.0013	0.0003		0.034	0.042
08 Nov 2024				0.286	0.0010			0.031	0.038
14 Nov 2024								0.031	
14 Nov 2024	0.523								

EPL120

Date	Nitrite + Nitrate as N mg/L	N mg/L	Al (F) mg/L	Al mg/L	As (F) mg/L	As mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Pb mg/L	Zn (F) mg/L	Zn mg/L
27 Jul 2024	0.16			1.83		0.0043	0.0008		0.909	0.0038	0.017	0.038
28 Sep 2024	0.11	0.3	0.035	3.76	0.0010	0.0067	0.0030	0.0022	1.90	0.0066	0.049	0.047
14 Nov 2024	0.03				0.0010		0.0006				0.010	
14 Nov 2024	0.039											

EPL106

Date	Nitrite + Nitrate as N mg/L	CN- mg/L	N mg/L	Al mg/L	As (F) mg/L	As mg/L	Cr (F) mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Pb mg/L	Ni mg/L	Ag mg/L	Zn (F) mg/L	Zn mg/L
29 Jun 2024	12.0		15.6	0.442	0.0011	0.0015	0.0307	0.0324	0.0014						
03 Jul 2024	10.2	0.720	14.6		0.0011		0.0241								
19 Jul 2024	8.42		9.6		0.0009		0.0109							0.004	
10 Aug 2024	9.39		11.4	1.96	0.0015	0.0034	0.0144	0.0175	0.0028	1.99	0.0044	0.0088	0.00009	0.004	0.031
24 Aug 2024	11.0		14.3	0.696	0.0014	0.0023	0.0113	0.0142		1.24				0.012	0.177
31 Aug 2024	10.6		13.9	0.491	0.0015	0.0021	0.0074	0.0087		0.670				0.422	0.612
28 Sep 2024	12.0		13.6	0.874	0.0011	0.0023		0.0070	0.0023	2.79	0.0040			2.17	3.25
05 Oct 2024	11.8		12.0	0.443	0.0013	0.0017	0.0050	0.0052							0.003
10 Oct 2024	14.5		17.2	0.538	0.0015	0.0020	0.0051	0.0059		0.318					0.003
19 Oct 2024	18.8		22.1	1.41	0.0017	0.0032	0.0053	0.0067		1.02	0.0016				0.004
04 Nov 2024	20.7		21.6		0.0015		0.0048								
08 Nov 2024	22.3		24.9	0.182	0.0015	0.0016	0.0048	0.0052							
14 Nov 2024	18.7		21.3		0.0013		0.0042	0.0047							
14 Nov 2024	22.1														
20 Nov 2024	7.22		7.7	0.524	0.0013	0.0017	0.0043	0.0052		0.360					
20 Nov 2024	18.7														
28 Nov 2024	12.8		14.0		0.0012		0.0036								



EPL109

Date	Nitrite + Nitrate as N mg/L
23 Jun 2024	0.03
17 Jul 2024	0.04
18 Aug 2024	0.02
08 Sep 2024	0.02

EPL107

Date	Nitrite + Nitrate as N mg/L	Al mg/L
23 Jun 2024	0.03	
17 Jul 2024	0.03	
18 Aug 2024	0.03	
08 Sep 2024	0.02	0.094
07 Oct 2024		0.070
03 Nov 2024	0.06	

EPL108

Date	Nitrite + Nitrate as N mg/L	N mg/L
23 Jun 2024	0.04	
17 Jul 2024	0.03	
18 Aug 2024	0.03	
08 Sep 2024	0.04	
07 Oct 2024	2.25	3.0

EPL11

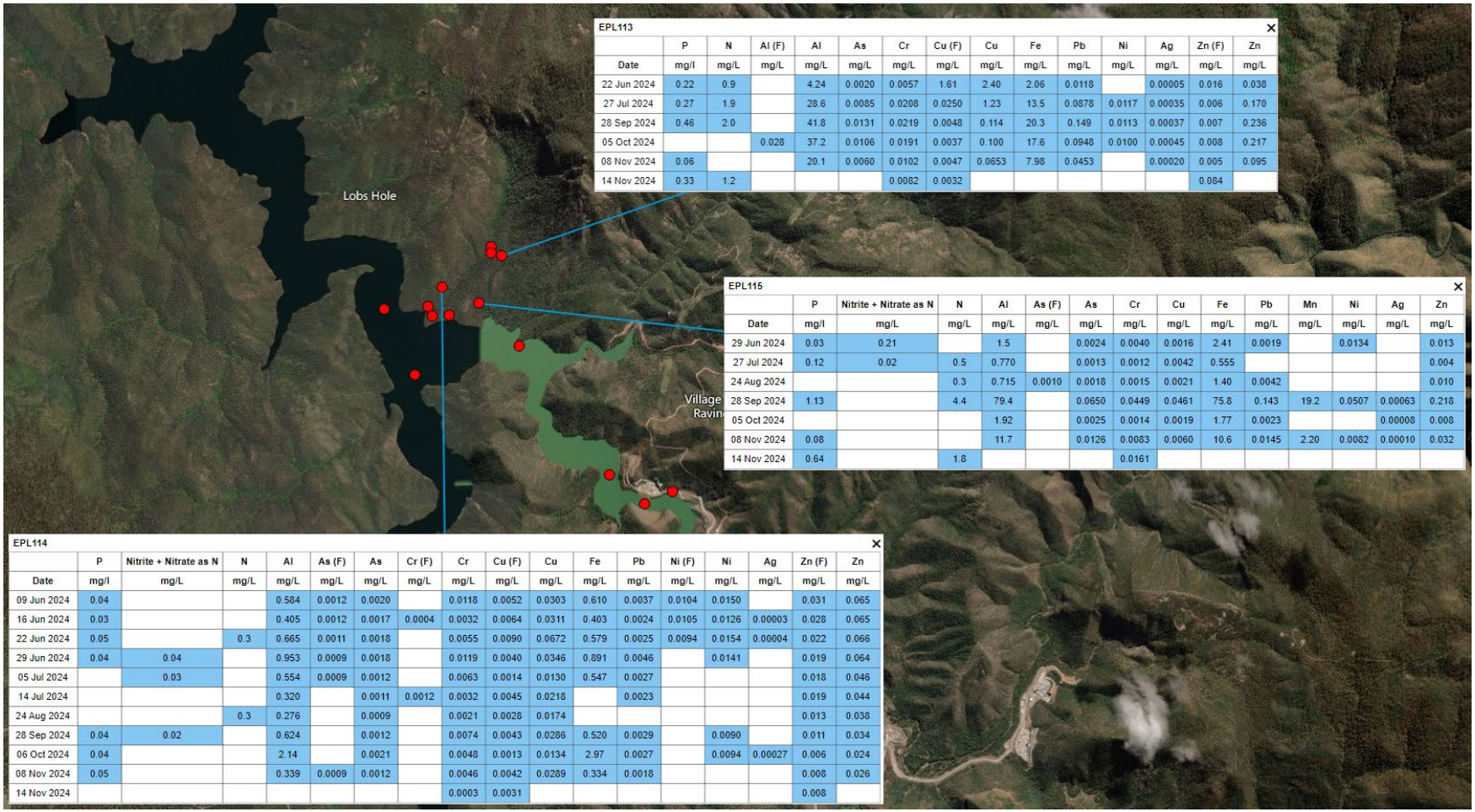
Date	Nitrite + Nitrate as N mg/L	Al mg/L
03 Jun 2024	0.02	
23 Jun 2024	0.03	
17 Jul 2024	0.12	
18 Aug 2024	0.03	0.074
08 Sep 2024	0.03	0.151
03 Nov 2024	0.04	

EPL10

Date	Thermotolerant Coliforms cfu/100 mL	Nitrite + Nitrate as N mg/L	Al mg/L
03 Jun 2024		0.02	
23 Jun 2024		0.03	
17 Jul 2024		0.07	
18 Aug 2024		0.03	0.117
08 Sep 2024	14	0.02	0.221

EPL41

Date	Thermotolerant Coliforms cfu/100 mL	Nitrite + Nitrate as N mg/L	N mg/L	Al mg/L	Cr (F) mg/L	Cr mg/L	Ag mg/L	Zn (F) mg/L	Zn mg/L
03 Jun 2024		0.02	0.5						
04 Jun 2024		0.02							
05 Jun 2024							0.00679		
08 Jun 2024		0.03							
12 Jun 2024		0.06							
16 Jun 2024		0.44	0.7			0.0011			
26 Jun 2024		0.24	0.5						
28 Jun 2024		0.20	0.4						
30 Jun 2024		0.19	0.4						
10 Jul 2024		0.09							
14 Jul 2024		0.13							
17 Jul 2024		0.09							
21 Jul 2024		0.10	0.4						
24 Jul 2024		0.10							
27 Jul 2024		0.09							
28 Jul 2024		0.09							
31 Jul 2024		0.10							
04 Aug 2024		0.08							
07 Aug 2024		0.07							
11 Aug 2024		0.07							
14 Aug 2024		0.06							
01 Sep 2024		0.12			0.0024	0.0025			
04 Sep 2024		0.33	0.5		0.0368				
08 Sep 2024		0.09	0.7		0.0013	0.0013			
15 Sep 2024		0.51	1.3						
18 Sep 2024	37		0.6						
22 Sep 2024			0.8					0.016	0.017
25 Sep 2024			1.0						
29 Sep 2024								0.024	0.028
02 Oct 2024								0.012	0.012
06 Oct 2024		0.02							
07 Oct 2024		0.03							
09 Oct 2024		0.08		0.073					
09 Oct 2024		0.04		0.071					
13 Oct 2024		8.57	9.7	0.061					
14 Oct 2024		0.27	2.3						
16 Oct 2024		2.32	3.0						
16 Oct 2024		2.09	2.5						
27 Oct 2024		0.29	0.8						
30 Oct 2024		0.25	0.4	0.173		0.0014	0.00030		0.009
30 Oct 2024		0.25	0.4						
30 Oct 2024		0.25	0.4						
04 Nov 2024	11	0.08	0.5					0.010	
04 Nov 2024		0.08	0.5					0.010	
04 Nov 2024		0.08	0.4					0.011	
06 Nov 2024		0.51	0.8						
10 Nov 2024		0.50	0.7						
10 Nov 2024		0.51	0.7						
10 Nov 2024		0.51	0.8						
13 Nov 2024		0.55	0.8		0.0032				
17 Nov 2024		0.18							
17 Nov 2024		0.195							
20 Nov 2024		0.098							
20 Nov 2024		0.10							



EPL113

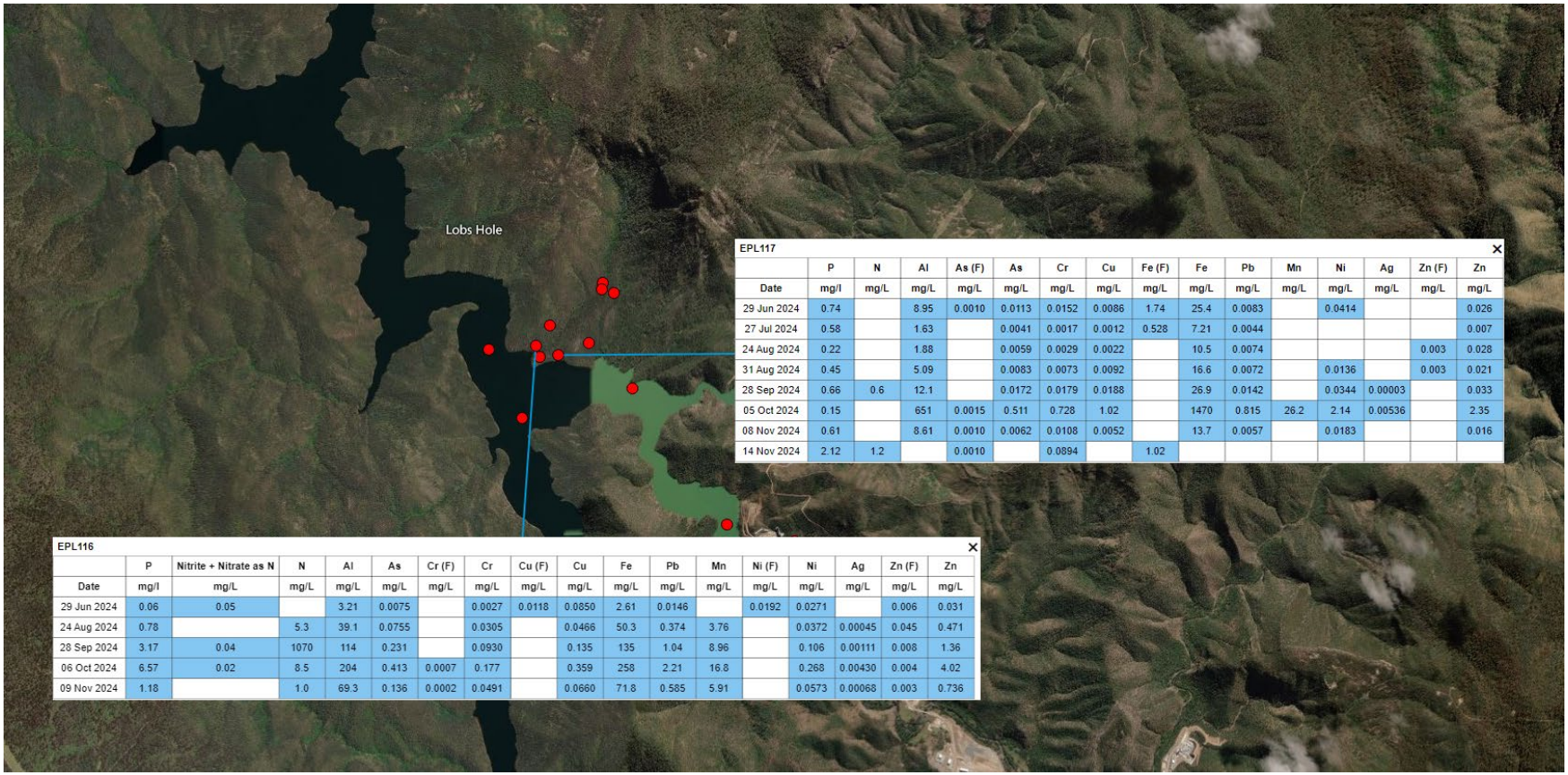
	P	N	Al (F)	Al	As	Cr	Cu (F)	Cu	Fe	Pb	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
22 Jun 2024	0.22	0.9		4.24	0.0020	0.0057	1.61	2.40	2.06	0.0118		0.00005	0.016	0.038
27 Jul 2024	0.27	1.9		28.6	0.0085	0.0208	0.0250	1.23	13.5	0.0878	0.0117	0.00035	0.006	0.170
28 Sep 2024	0.46	2.0		41.8	0.0131	0.0219	0.0048	0.114	20.3	0.149	0.0113	0.00037	0.007	0.236
05 Oct 2024			0.028	37.2	0.0106	0.0191	0.0037	0.100	17.6	0.0948	0.0100	0.00045	0.008	0.217
08 Nov 2024	0.06			20.1	0.0060	0.0102	0.0047	0.0653	7.98	0.0453		0.00020	0.005	0.095
14 Nov 2024	0.33	1.2				0.0082	0.0032						0.084	

EPL115

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr	Cu	Fe	Pb	Mn	Ni	Ag	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
29 Jun 2024	0.03	0.21		1.5		0.0024	0.0040	0.0016	2.41	0.0019		0.0134		0.013
27 Jul 2024	0.12	0.02	0.5	0.770		0.0013	0.0012	0.0042	0.555					0.004
24 Aug 2024			0.3	0.715	0.0010	0.0018	0.0015	0.0021	1.40	0.0042				0.010
28 Sep 2024	1.13		4.4	79.4		0.0650	0.0449	0.0461	75.8	0.143	19.2	0.0507	0.00063	0.218
05 Oct 2024				1.92		0.0025	0.0014	0.0019	1.77	0.0023			0.00008	0.008
08 Nov 2024	0.08			11.7		0.0126	0.0083	0.0060	10.6	0.0145	2.20	0.0082	0.00010	0.032
14 Nov 2024	0.64		1.8				0.0161							

EPL114

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ni (F)	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
09 Jun 2024	0.04			0.584	0.0012	0.0020		0.0118	0.0052	0.0303	0.610	0.0037	0.0104	0.0150		0.031	0.065
16 Jun 2024	0.03			0.405	0.0012	0.0017	0.0004	0.0032	0.0064	0.0311	0.403	0.0024	0.0105	0.0126	0.00003	0.028	0.065
22 Jun 2024	0.05		0.3	0.665	0.0011	0.0018		0.0055	0.0090	0.0672	0.579	0.0025	0.0094	0.0154	0.00004	0.022	0.066
29 Jun 2024	0.04	0.04		0.953	0.0009	0.0018		0.0119	0.0040	0.0346	0.891	0.0046		0.0141		0.019	0.064
05 Jul 2024		0.03		0.554	0.0009	0.0012		0.0063	0.0014	0.0130	0.547	0.0027				0.018	0.046
14 Jul 2024				0.320		0.0011	0.0012	0.0032	0.0045	0.0218		0.0023				0.019	0.044
24 Aug 2024			0.3	0.276		0.0009		0.0021	0.0028	0.0174						0.013	0.038
28 Sep 2024	0.04	0.02		0.624		0.0012		0.0074	0.0043	0.0286	0.520	0.0029		0.0090		0.011	0.034
06 Oct 2024	0.04			2.14		0.0021		0.0048	0.0013	0.0134	2.97	0.0027		0.0094	0.00027	0.006	0.024
08 Nov 2024	0.05			0.339	0.0009	0.0012		0.0046	0.0042	0.0289	0.334	0.0018				0.008	0.026
14 Nov 2024								0.0003	0.0031							0.008	

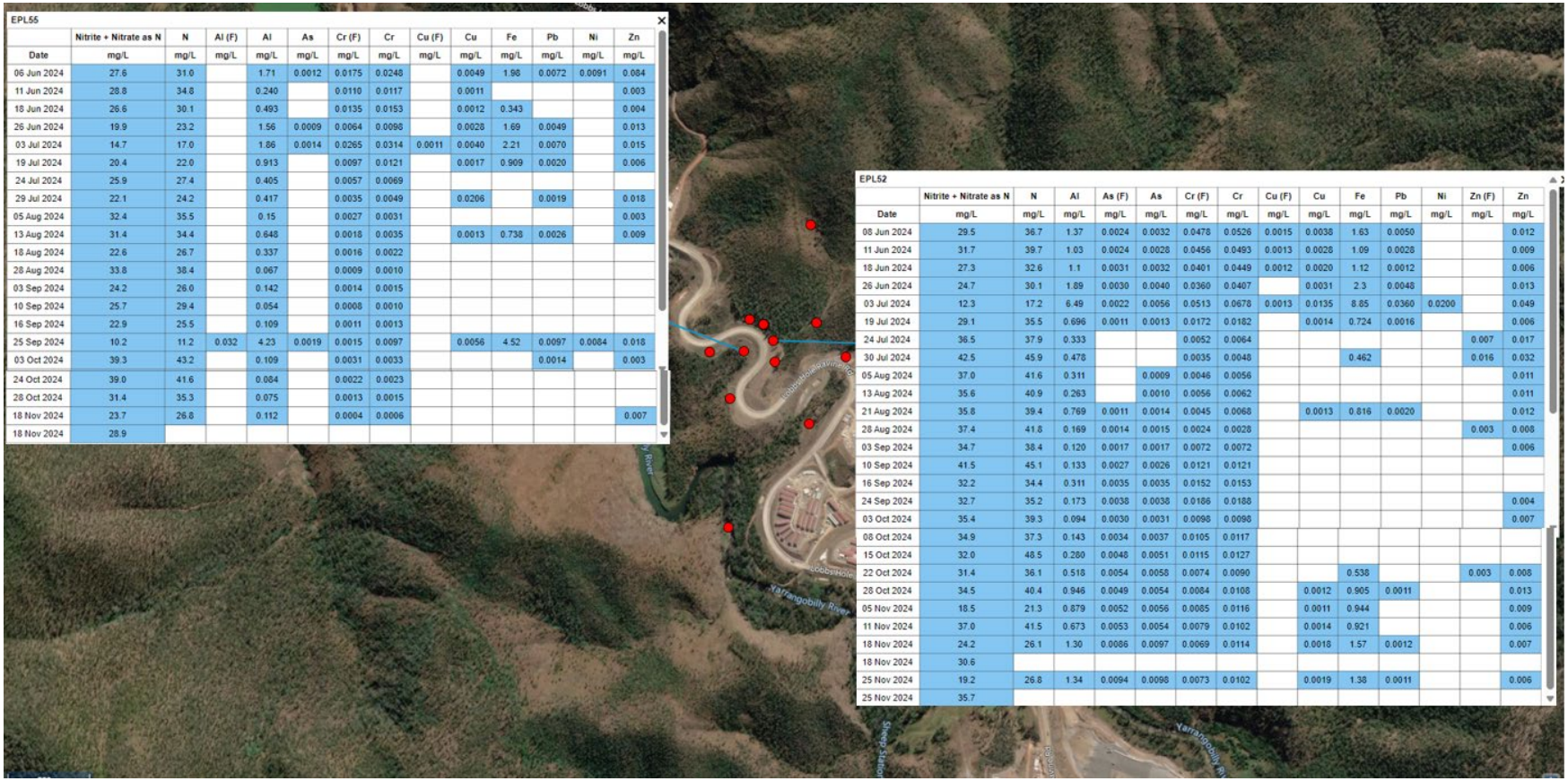


EPL117

	P	N	Al	As (F)	As	Cr	Cu	Fe (F)	Fe	Pb	Mn	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
29 Jun 2024	0.74		8.95	0.0010	0.0113	0.0152	0.0086	1.74	25.4	0.0083		0.0414			0.026
27 Jul 2024	0.58		1.63		0.0041	0.0017	0.0012	0.528	7.21	0.0044					0.007
24 Aug 2024	0.22		1.88		0.0059	0.0029	0.0022		10.5	0.0074				0.003	0.028
31 Aug 2024	0.45		5.09		0.0083	0.0073	0.0092		16.6	0.0072		0.0136		0.003	0.021
28 Sep 2024	0.66	0.6	12.1		0.0172	0.0179	0.0188		26.9	0.0142		0.0344	0.00003		0.033
05 Oct 2024	0.15		651	0.0015	0.511	0.728	1.02		1470	0.815	26.2	2.14	0.00536		2.35
08 Nov 2024	0.61		8.61	0.0010	0.0062	0.0108	0.0052		13.7	0.0057		0.0183			0.016
14 Nov 2024	2.12	1.2		0.0010		0.0894		1.02							

EPL116

	P	Nitrite + Nitrate as N	N	Al	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Mn	Ni (F)	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
29 Jun 2024	0.06	0.05		3.21	0.0075		0.0027	0.0118	0.0850	2.61	0.0146		0.0192	0.0271		0.006	0.031
24 Aug 2024	0.78		5.3	39.1	0.0755		0.0305		0.0466	50.3	0.374	3.76		0.0372	0.00045	0.045	0.471
28 Sep 2024	3.17	0.04	1070	114	0.231		0.0930		0.135	135	1.04	8.96		0.106	0.00111	0.008	1.36
06 Oct 2024	6.57	0.02	8.5	204	0.413	0.0007	0.177		0.359	258	2.21	16.8		0.268	0.00430	0.004	4.02
09 Nov 2024	1.18		1.0	69.3	0.136	0.0002	0.0491		0.0660	71.8	0.585	5.91		0.0573	0.00068	0.003	0.736

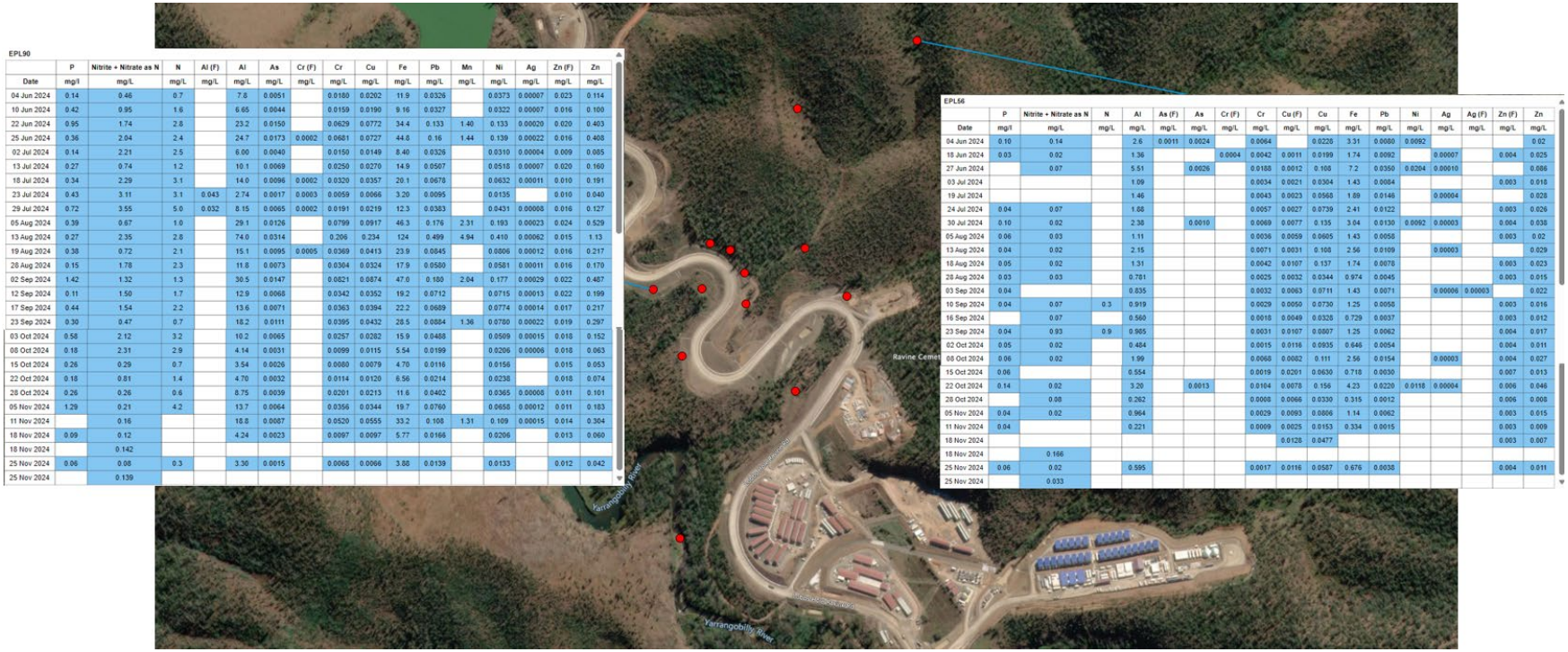

EPL55
Nitrite + Nitrate as N | N | Al (F) | Al | As | Cr (F) | Cr | Cu (F) | Cu | Fe | Pb | Ni | Zn
Date | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L
06 Jun 2024 | 27.6 | 31.0 | | 1.71 | 0.0012 | 0.0175 | 0.0248 | | 0.0049 | 1.98 | 0.0072 | 0.0091 | 0.084
11 Jun 2024 | 28.8 | 34.8 | | 0.240 | | 0.0110 | 0.0117 | | 0.0011 | | | | 0.003
18 Jun 2024 | 26.6 | 30.1 | | 0.493 | | 0.0135 | 0.0153 | | 0.0012 | 0.343 | | | 0.004
26 Jun 2024 | 19.9 | 23.2 | | 1.56 | 0.0009 | 0.0064 | 0.0098 | | 0.0028 | 1.69 | 0.0049 | | 0.013
03 Jul 2024 | 14.7 | 17.0 | | 1.86 | 0.0014 | 0.0265 | 0.0314 | 0.0011 | 0.0040 | 2.21 | 0.0070 | | 0.015
19 Jul 2024 | 20.4 | 22.0 | | 0.913 | | 0.0097 | 0.0121 | | 0.0017 | 0.909 | 0.0020 | | 0.006
24 Jul 2024 | 25.9 | 27.4 | | 0.405 | | 0.0057 | 0.0069 | | | | | |
29 Jul 2024 | 22.1 | 24.2 | | 0.417 | | 0.0035 | 0.0049 | | 0.0206 | | 0.0019 | | 0.018
05 Aug 2024 | 32.4 | 35.5 | | 0.15 | | 0.0027 | 0.0031 | | | | | | 0.003
13 Aug 2024 | 31.4 | 34.4 | | 0.648 | | 0.0018 | 0.0035 | | 0.0013 | 0.738 | 0.0026 | | 0.009
18 Aug 2024 | 22.6 | 26.7 | | 0.337 | | 0.0016 | 0.0022 | | | | | |
28 Aug 2024 | 33.8 | 38.4 | | 0.067 | | 0.0009 | 0.0010 | | | | | |
03 Sep 2024 | 24.2 | 26.0 | | 0.142 | | 0.0014 | 0.0015 | | | | | |
10 Sep 2024 | 25.7 | 29.4 | | 0.054 | | 0.0008 | 0.0010 | | | | | |
16 Sep 2024 | 22.9 | 25.5 | | 0.109 | | 0.0011 | 0.0013 | | | | | |
25 Sep 2024 | 10.2 | 11.2 | 0.032 | 4.23 | 0.0019 | 0.0015 | 0.0097 | | 0.0056 | 4.52 | 0.0097 | 0.0084 | 0.018
03 Oct 2024 | 39.3 | 43.2 | | 0.109 | | 0.0031 | 0.0033 | | | | 0.0014 | | 0.003
24 Oct 2024 | 39.0 | 41.6 | | 0.084 | | 0.0022 | 0.0023 | | | | | |
28 Oct 2024 | 31.4 | 35.3 | | 0.075 | | 0.0013 | 0.0015 | | | | | |
18 Nov 2024 | 23.7 | 26.8 | | 0.112 | | 0.0004 | 0.0006 | | | | | | 0.007
18 Nov 2024 | 28.9 | | | | | | | | | | | |
EPL52
Nitrite + Nitrate as N | N | Al | As (F) | As | Cr (F) | Cr | Cu (F) | Cu | Fe | Pb | Ni | Zn (F) | Zn
Date | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L
08 Jun 2024 | 29.5 | 36.7 | 1.37 | 0.0024 | 0.0032 | 0.0478 | 0.0526 | 0.0015 | 0.0038 | 1.63 | 0.0050 | | | 0.012
11 Jun 2024 | 31.7 | 39.7 | 1.03 | 0.0024 | 0.0028 | 0.0456 | 0.0493 | 0.0013 | 0.0028 | 1.09 | 0.0028 | | | 0.009
18 Jun 2024 | 27.3 | 32.6 | 1.1 | 0.0031 | 0.0032 | 0.0401 | 0.0449 | 0.0012 | 0.0020 | 1.12 | 0.0012 | | | 0.006
26 Jun 2024 | 24.7 | 30.1 | 1.89 | 0.0030 | 0.0040 | 0.0360 | 0.0407 | | 0.0031 | 2.3 | 0.0048 | | | 0.013
03 Jul 2024 | 12.3 | 17.2 | 6.49 | 0.0022 | 0.0056 | 0.0513 | 0.0678 | 0.0013 | 0.0135 | 8.85 | 0.0360 | 0.0200 | | 0.049
19 Jul 2024 | 29.1 | 35.5 | 0.696 | 0.0011 | 0.0013 | 0.0172 | 0.0182 | | 0.0014 | 0.724 | 0.0016 | | | 0.006
24 Jul 2024 | 36.5 | 37.9 | 0.333 | | | 0.0052 | 0.0064 | | | | | | 0.007 | 0.017
30 Jul 2024 | 42.5 | 45.9 | 0.478 | | | 0.0035 | 0.0048 | | | 0.462 | | | 0.016 | 0.032
05 Aug 2024 | 37.0 | 41.6 | 0.311 | | 0.0009 | 0.0046 | 0.0056 | | | | | | | 0.011
13 Aug 2024 | 35.6 | 40.9 | 0.263 | | 0.0010 | 0.0056 | 0.0062 | | | | | | | 0.011
21 Aug 2024 | 35.8 | 39.4 | 0.769 | 0.0011 | 0.0014 | 0.0045 | 0.0068 | | 0.0013 | 0.816 | 0.0020 | | | 0.012
28 Aug 2024 | 37.4 | 41.8 | 0.169 | 0.0014 | 0.0015 | 0.0024 | 0.0028 | | | | | | 0.003 | 0.008
03 Sep 2024 | 34.7 | 38.4 | 0.120 | 0.0017 | 0.0017 | 0.0072 | 0.0072 | | | | | | | 0.006
10 Sep 2024 | 41.5 | 45.1 | 0.133 | 0.0027 | 0.0026 | 0.0121 | 0.0121 | | | | | | |
16 Sep 2024 | 32.2 | 34.4 | 0.311 | 0.0035 | 0.0035 | 0.0152 | 0.0153 | | | | | | |
24 Sep 2024 | 32.7 | 35.2 | 0.173 | 0.0038 | 0.0038 | 0.0186 | 0.0188 | | | | | | | 0.004
03 Oct 2024 | 35.4 | 39.3 | 0.094 | 0.0030 | 0.0031 | 0.0098 | 0.0098 | | | | | | | 0.007
08 Oct 2024 | 34.9 | 37.3 | 0.143 | 0.0034 | 0.0037 | 0.0105 | 0.0117 | | | | | | |
15 Oct 2024 | 32.0 | 48.5 | 0.260 | 0.0048 | 0.0051 | 0.0115 | 0.0127 | | | | | | |
22 Oct 2024 | 31.4 | 36.1 | 0.518 | 0.0054 | 0.0058 | 0.0074 | 0.0090 | | | 0.538 | | | 0.003 | 0.008
28 Oct 2024 | 34.5 | 40.4 | 0.946 | 0.0049 | 0.0054 | 0.0084 | 0.0108 | | 0.0012 | 0.905 | 0.0011 | | | 0.013
05 Nov 2024 | 18.5 | 21.3 | 0.879 | 0.0052 | 0.0056 | 0.0085 | 0.0116 | | 0.0011 | 0.944 | | | | 0.009
11 Nov 2024 | 37.0 | 41.5 | 0.673 | 0.0053 | 0.0054 | 0.0079 | 0.0102 | | 0.0014 | 0.921 | | | | 0.006
18 Nov 2024 | 24.2 | 26.1 | 1.30 | 0.0086 | 0.0097 | 0.0069 | 0.0114 | | 0.0018 | 1.57 | 0.0012 | | | 0.007
18 Nov 2024 | 30.6 | | | | | | | | | | | | |
25 Nov 2024 | 19.2 | 26.8 | 1.34 | 0.0094 | 0.0098 | 0.0073 | 0.0102 | | 0.0019 | 1.38 | 0.0011 | | | 0.006
25 Nov 2024 | 35.7 | | | | | | | | | | | | |
Yarrangobilly River
Sheep Station

EPL9

	Nitrite + Nitrate as N	N	Al (F)	Al	Cr (F)	Cr	Cu (F)	Fe
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
01 Jun 2024		0.5	0.070	0.58	0.0002	0.0006		0.402
04 Sep 2024				0.148		0.0004		
25 Sep 2024	0.03				0.0002		0.0011	
03 Nov 2024					0.0002			

EPL24

	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ni	Zn (F)	Zn
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
06 Jun 2024	23.0	25.8	0.094			0.0006	0.0008						0.005	0.008
16 Jun 2024	15.0	16.0	0.998			0.0007	0.0030		0.0021	1.10	0.0017		0.005	0.018
16 Jun 2024	17.7	20.0	1.00		0.0009	0.0009	0.0034		0.0020	1.17	0.0015		0.003	0.014
18 Jun 2024	24.1	27.1				0.0006	0.0009						0.004	
26 Jun 2024	25.0	29.5	0.123			0.0011	0.0013						0.004	0.009
04 Jul 2024	22.5	25.3				0.0004							0.004	
09 Jul 2024	25.2	28.6				0.0010							0.003	
19 Jul 2024	8.14	9.1				0.0006								
25 Jul 2024	8.07	8.9				0.0003								
02 Aug 2024	10.6	12.5	0.633			0.0002	0.0018			0.558				0.005
08 Aug 2024	18.2	23.6											0.003	
14 Aug 2024	24.2	28.2	0.105			0.0003	0.0005							0.005
24 Aug 2024	15.6	20.4	0.277			0.0003	0.0008							0.005
30 Aug 2024	7.09	8.5	0.671			0.0002	0.0014			0.476				0.004
06 Sep 2024	14.9	15.1	0.332			0.0004	0.0010							0.004
10 Sep 2024	16.3	18.9				0.0004								
18 Sep 2024	19.6	22.1				0.0003							0.004	
24 Sep 2024	24.5	26.8				0.0002							0.004	
01 Oct 2024	12.9	13.5				0.0007								
09 Oct 2024	18.0	20.0				0.0011								
17 Oct 2024	23.4	25.5				0.0009							0.004	
26 Oct 2024	18.2	20.4				0.0004							0.003	
30 Oct 2024	13.6	14.3				0.0005							0.004	
04 Nov 2024	16.6	17.7				0.0002							0.006	
13 Nov 2024	30.2	34.7	5.99	0.0013	0.0036	0.0057	0.0195	0.0017	0.0097	7.90	0.0088	0.0212		0.042
13 Nov 2024	32.5													

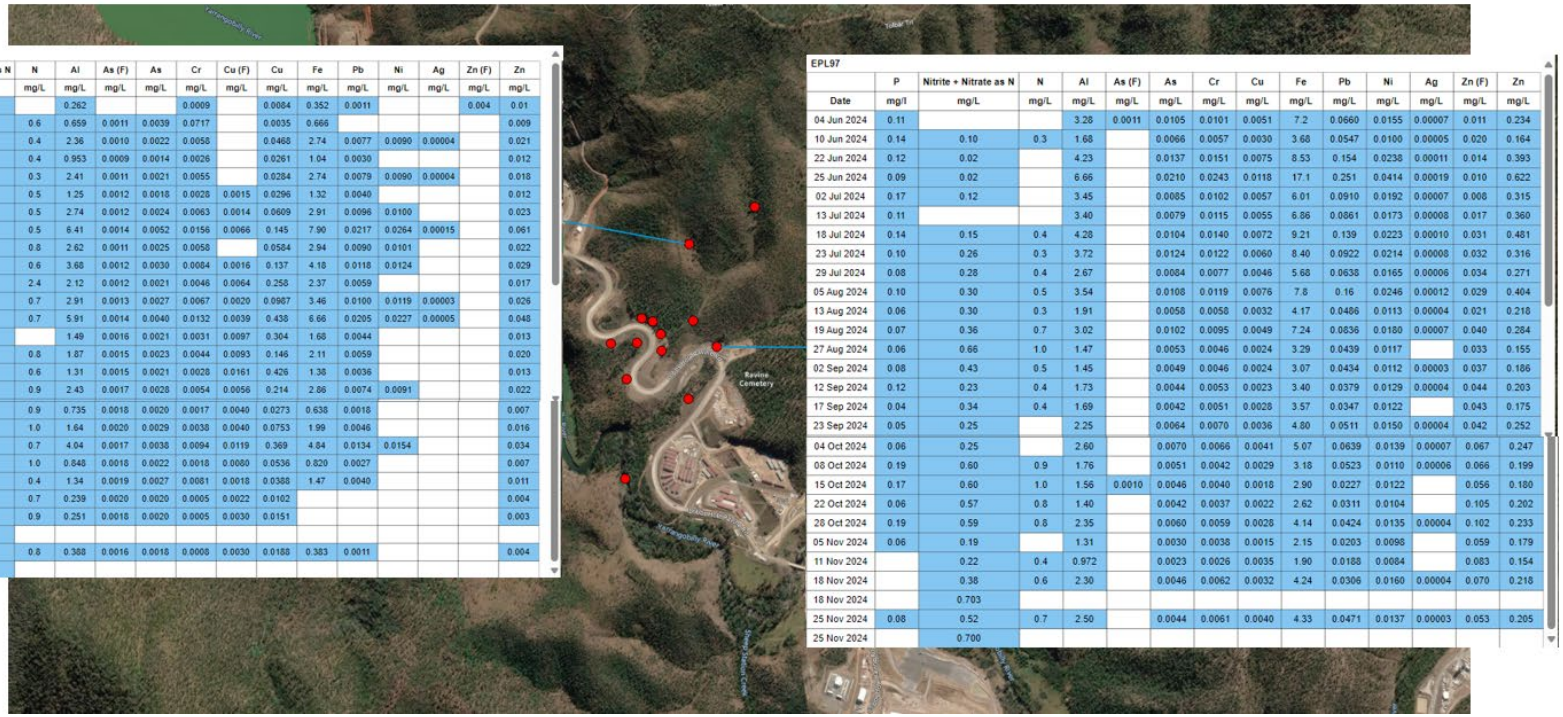


EPL90

	P	Nitrite + Nitrate as N	N	Al (F)	Al	As	Cr (F)	Cr	Cu	Fe	Pb	Mn	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
04 Jun 2024	0.14	0.46	0.7		7.8	0.0051		0.0180	0.0202	11.9	0.0326		0.0373	0.00007	0.023	0.114
10 Jun 2024	0.42	0.95	1.6		6.65	0.0044		0.0159	0.0190	9.16	0.0327		0.0322	0.00007	0.016	0.100
22 Jun 2024	0.95	1.74	2.8		23.2	0.0150		0.0629	0.0772	34.4	0.133	1.40	0.133	0.00020	0.020	0.403
25 Jun 2024	0.36	2.04	2.4		24.7	0.0173	0.0002	0.0681	0.0727	44.8	0.16	1.44	0.139	0.00022	0.016	0.408
02 Jul 2024	0.14	2.21	2.5		6.00	0.0040		0.0150	0.0149	8.40	0.0326		0.0310	0.00004	0.009	0.085
13 Jul 2024	0.27	0.74	1.2		10.1	0.0069		0.0250	0.0270	14.9	0.0507		0.0518	0.00007	0.020	0.160
18 Jul 2024	0.34	2.29	3.1		14.0	0.0096	0.0002	0.0320	0.0357	20.1	0.0678		0.0632	0.00011	0.010	0.191
23 Jul 2024	0.43	3.11	3.1	0.043	2.74	0.0017	0.0003	0.0059	0.0066	3.20	0.0095		0.0135		0.010	0.040
29 Jul 2024	0.72	3.55	5.0	0.032	8.15	0.0065	0.0002	0.0191	0.0219	12.3	0.0383		0.0431	0.00008	0.016	0.127
05 Aug 2024	0.39	0.67	1.0		29.1	0.0126		0.0799	0.0917	46.3	0.176	2.31	0.193	0.00023	0.024	0.529
13 Aug 2024	0.27	2.35	2.8		74.0	0.0314		0.206	0.234	124	0.499	4.94	0.410	0.00062	0.015	1.13
19 Aug 2024	0.38	0.72	2.1		15.1	0.0095	0.0005	0.0369	0.0413	23.9	0.0845		0.0806	0.00012	0.016	0.217
28 Aug 2024	0.15	1.78	2.3		11.8	0.0073		0.0304	0.0324	17.9	0.0580		0.0581	0.00011	0.016	0.170
02 Sep 2024	1.42	1.32	1.3		30.5	0.0147		0.0821	0.0874	47.0	0.180	2.04	0.177	0.00029	0.022	0.487
12 Sep 2024	0.11	1.50	1.7		12.9	0.0068		0.0342	0.0352	19.2	0.0712		0.0715	0.00013	0.022	0.199
17 Sep 2024	0.44	1.54	2.2		13.6	0.0071		0.0363	0.0394	22.2	0.0689		0.0774	0.00014	0.017	0.217
23 Sep 2024	0.30	0.47	0.7		18.2	0.0111		0.0395	0.0432	26.5	0.0884	1.36	0.0760	0.00022	0.019	0.297
03 Oct 2024	0.58	2.12	3.2		10.2	0.0065		0.0257	0.0282	15.9	0.0488		0.0509	0.00015	0.018	0.152
08 Oct 2024	0.18	2.31	2.9		4.14	0.0031		0.0099	0.0115	5.54	0.0199		0.0206	0.00006	0.018	0.063
15 Oct 2024	0.26	0.29	0.7		3.54	0.0026		0.0080	0.0079	4.70	0.0116		0.0156		0.015	0.053
22 Oct 2024	0.18	0.81	1.4		4.70	0.0032		0.0114	0.0120	6.56	0.0214		0.0238		0.018	0.074
28 Oct 2024	0.26	0.26	0.6		8.75	0.0039		0.0201	0.0213	11.6	0.0402		0.0365	0.00008	0.011	0.101
05 Nov 2024	1.29	0.21	4.2		13.7	0.0064		0.0356	0.0344	19.7	0.0760		0.0658	0.00012	0.011	0.183
11 Nov 2024		0.16			18.8	0.0087		0.0520	0.0555	33.2	0.108	1.31	0.109	0.00015	0.014	0.304
18 Nov 2024	0.09	0.12			4.24	0.0023		0.0097	0.0097	5.77	0.0166		0.0206		0.013	0.060
18 Nov 2024		0.142														
25 Nov 2024	0.06	0.08	0.3		3.36	0.0015		0.0068	0.0066	3.88	0.0139		0.0133		0.012	0.042
25 Nov 2024		0.139														

EPL56

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ni	Ag	Ag (F)	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
04 Jun 2024	0.10	0.14		2.6	0.0011	0.0024		0.0064		0.0226	3.31	0.0080	0.0092				0.02
18 Jun 2024	0.03	0.02		1.36			0.0004	0.0042	0.0011	0.0199	1.74	0.0092		0.00007		0.004	0.025
27 Jun 2024		0.07		5.51		0.0026		0.0188	0.0012	0.100	7.2	0.0350	0.0204	0.00010			0.086
03 Jul 2024				1.09				0.0034	0.0021	0.0304	1.43	0.0084				0.003	0.018
19 Jul 2024				1.46				0.0043	0.0023	0.0565	1.89	0.0146		0.00004			0.028
24 Jul 2024	0.04	0.07		1.68				0.0057	0.0027	0.0739	2.41	0.0122				0.003	0.026
30 Jul 2024	0.10	0.02		2.38		0.0010		0.0069	0.0077	0.135	3.04	0.0130	0.0092	0.00003		0.004	0.038
05 Aug 2024	0.06	0.03		1.11				0.0036	0.0059	0.0605	1.43	0.0058				0.003	0.02
13 Aug 2024	0.04	0.02		2.15				0.0071	0.0031	0.108	2.56	0.0109		0.00003			0.029
18 Aug 2024	0.05	0.02		1.31				0.0042	0.0107	0.137	1.74	0.0078				0.003	0.023
28 Aug 2024	0.03	0.03		0.781				0.0025	0.0032	0.0344	0.974	0.0045				0.003	0.015
03 Sep 2024	0.04			0.835				0.0032	0.0063	0.0711	1.43	0.0071		0.00006	0.00003		0.022
10 Sep 2024	0.04	0.07	0.3	0.919				0.0029	0.0050	0.0730	1.25	0.0058				0.003	0.016
16 Sep 2024		0.07		0.560				0.0016	0.0049	0.0326	0.729	0.0037				0.003	0.012
23 Sep 2024	0.04	0.93	0.9	0.985				0.0031	0.0107	0.0807	1.25	0.0062				0.004	0.017
02 Oct 2024	0.05	0.02		0.484				0.0015	0.0116	0.0935	0.646	0.0054				0.004	0.011
08 Oct 2024	0.06	0.02		1.99				0.0068	0.0082	0.111	2.56	0.0154		0.00003		0.004	0.027
15 Oct 2024	0.06			0.554				0.0019	0.0201	0.0630	0.718	0.0030				0.007	0.013
22 Oct 2024	0.14	0.02		3.20		0.0013		0.0104	0.0078	0.156	4.23	0.0220	0.0118	0.00004		0.006	0.046
28 Oct 2024		0.08		0.262				0.0008	0.0066	0.0330	0.315	0.0012				0.005	0.008
05 Nov 2024	0.04	0.02		0.964				0.0029	0.0093	0.0806	1.14	0.0062				0.003	0.015
11 Nov 2024	0.04			0.221				0.0009	0.0025	0.0153	0.334	0.0015				0.003	0.009
18 Nov 2024									0.0128	0.0477						0.003	0.007
18 Nov 2024		0.166															
25 Nov 2024	0.06	0.02		0.595				0.0017	0.0116	0.0587	0.676	0.0038				0.004	0.011
25 Nov 2024		0.033															

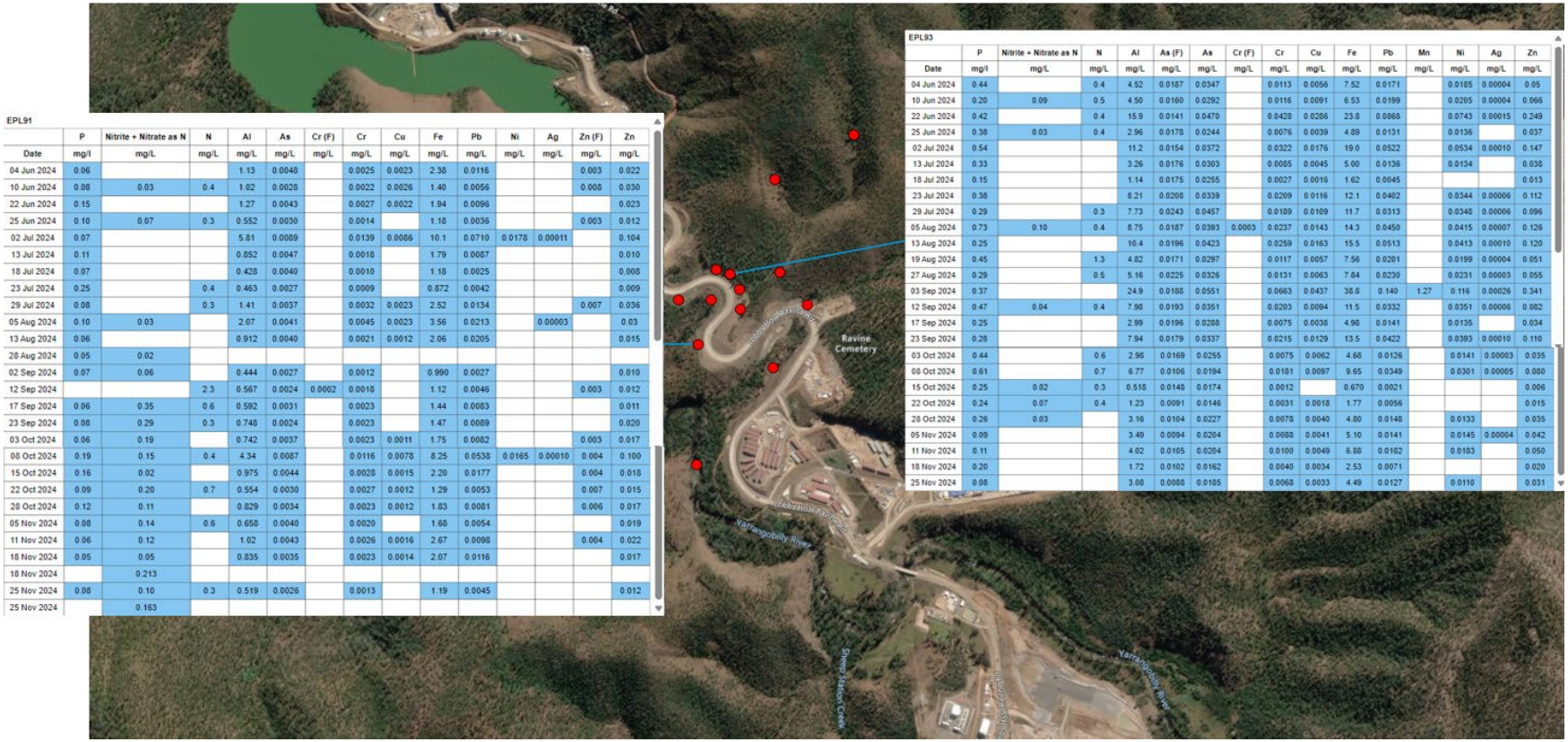


EPL57

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr	Cu (F)	Cu	Fe	Pb	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
04 Jun 2024		0.03		0.262			0.0009		0.0084	0.352	0.0011			0.004	0.01
11 Jun 2024	0.22	0.22	0.6	0.659	0.0011	0.0039	0.0717		0.0035	0.666					0.009
18 Jun 2024	0.12	0.22	0.4	2.36	0.0010	0.0022	0.0058		0.0468	2.74	0.0077	0.0090	0.00004		0.021
27 Jun 2024	0.03	0.35	0.4	0.953	0.0009	0.0014	0.0026		0.0261	1.04	0.0030				0.012
03 Jul 2024	0.04	0.33	0.3	2.41	0.0011	0.0021	0.0055		0.0284	2.74	0.0079	0.0090	0.00004		0.018
19 Jul 2024	0.08	0.37	0.5	1.25	0.0012	0.0018	0.0028	0.0015	0.0296	1.32	0.0040				0.012
24 Jul 2024	0.03	0.42	0.5	2.74	0.0012	0.0024	0.0063	0.0014	0.0609	2.91	0.0096	0.0100			0.023
30 Jul 2024	0.21	0.34	0.5	6.41	0.0014	0.0052	0.0156	0.0066	0.145	7.90	0.0217	0.0264	0.00015		0.061
05 Aug 2024	0.05	0.56	0.8	2.62	0.0011	0.0025	0.0058		0.0584	2.94	0.0090	0.0101			0.022
13 Aug 2024	0.10	0.60	0.6	3.68	0.0012	0.0030	0.0084	0.0016	0.137	4.18	0.0118	0.0124			0.029
18 Aug 2024	0.34	0.51	2.4	2.12	0.0012	0.0021	0.0046	0.0064	0.258	2.37	0.0059				0.017
26 Aug 2024	0.20	0.51	0.7	2.91	0.0013	0.0027	0.0067	0.0020	0.0987	3.46	0.0100	0.0119	0.00003		0.026
03 Sep 2024	0.31	0.49	0.7	5.91	0.0014	0.0040	0.0132	0.0039	0.438	6.66	0.0205	0.0227	0.00005		0.048
10 Sep 2024	0.31	0.59		1.49	0.0016	0.0021	0.0031	0.0097	0.304	1.68	0.0044				0.013
16 Sep 2024	0.11	0.62	0.8	1.87	0.0015	0.0023	0.0044	0.0093	0.146	2.11	0.0059				0.020
23 Sep 2024	0.06	0.60	0.6	1.31	0.0015	0.0021	0.0028	0.0161	0.426	1.38	0.0036				0.013
03 Oct 2024	0.21	0.67	0.9	2.43	0.0017	0.0028	0.0054	0.0056	0.214	2.86	0.0074	0.0091			0.022
08 Oct 2024	0.03	0.83	0.9	0.735	0.0018	0.0020	0.0017	0.0040	0.0273	0.638	0.0018				0.007
15 Oct 2024	0.26	0.64	1.0	1.64	0.0020	0.0029	0.0038	0.0040	0.0753	1.99	0.0046				0.016
22 Oct 2024	0.11	0.51	0.7	4.04	0.0017	0.0038	0.0094	0.0119	0.369	4.84	0.0134	0.0154			0.034
28 Oct 2024	0.06	0.80	1.0	0.848	0.0018	0.0022	0.0018	0.0080	0.0536	0.820	0.0027				0.007
05 Nov 2024	0.04	0.41	0.4	1.34	0.0019	0.0027	0.0081	0.0018	0.0388	1.47	0.0040				0.011
11 Nov 2024	0.03	0.73	0.7	0.239	0.0020	0.0020	0.0005	0.0022	0.0102						0.004
18 Nov 2024	0.05	0.77	0.9	0.251	0.0018	0.0020	0.0005	0.0030	0.0151						0.003
18 Nov 2024		1.04													
25 Nov 2024	0.14	0.68	0.8	0.388	0.0016	0.0018	0.0008	0.0030	0.0188	0.383	0.0011				0.004
25 Nov 2024		1.09													

EPL97

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr	Cu	Fe	Pb	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
04 Jun 2024	0.11			3.28	0.0011	0.0105	0.0101	0.0051	7.2	0.0660	0.0155	0.00007	0.011	0.234
10 Jun 2024	0.14	0.10	0.3	1.68		0.0066	0.0057	0.0030	3.68	0.0547	0.0100	0.00005	0.020	0.164
22 Jun 2024	0.12	0.02		4.23		0.0137	0.0151	0.0075	8.53	0.154	0.0238	0.00011	0.014	0.393
25 Jun 2024	0.09	0.02		6.66		0.0210	0.0243	0.0118	17.1	0.251	0.0414	0.00019	0.010	0.622
02 Jul 2024	0.17	0.12		3.45		0.0085	0.0102	0.0057	6.01	0.0910	0.0192	0.00007	0.008	0.315
13 Jul 2024	0.11			3.40		0.0079	0.0115	0.0055	6.86	0.0861	0.0173	0.00008	0.017	0.360
18 Jul 2024	0.14	0.15	0.4	4.28		0.0104	0.0140	0.0072	9.21	0.139	0.0223	0.00010	0.031	0.481
23 Jul 2024	0.10	0.26	0.3	3.72		0.0124	0.0122	0.0060	8.40	0.0922	0.0214	0.00008	0.032	0.316
29 Jul 2024	0.08	0.28	0.4	2.67		0.0084	0.0077	0.0046	5.68	0.0638	0.0165	0.00006	0.034	0.271
05 Aug 2024	0.10	0.30	0.5	3.54		0.0108	0.0119	0.0076	7.8	0.16	0.0246	0.00012	0.029	0.404
13 Aug 2024	0.06	0.30	0.3	1.91		0.0058	0.0058	0.0032	4.17	0.0486	0.0113	0.00004	0.021	0.218
19 Aug 2024	0.07	0.36	0.7	3.02		0.0102	0.0095	0.0049	7.24	0.0836	0.0180	0.00007	0.040	0.284
27 Aug 2024	0.06	0.66	1.0	1.47		0.0053	0.0046	0.0024	3.29	0.0439	0.0117		0.033	0.155
02 Sep 2024	0.08	0.43	0.5	1.45		0.0049	0.0046	0.0024	3.07	0.0434	0.0112	0.00003	0.037	0.186
12 Sep 2024	0.12	0.23	0.4	1.73		0.0044	0.0053	0.0023	3.40	0.0379	0.0129	0.00004	0.044	0.203
17 Sep 2024	0.04	0.34	0.4	1.69		0.0042	0.0051	0.0028	3.57	0.0347	0.0122		0.043	0.175
23 Sep 2024	0.05	0.25		2.25		0.0064	0.0070	0.0036	4.80	0.0511	0.0150	0.00004	0.042	0.252
04 Oct 2024	0.06	0.25		2.60		0.0070	0.0066	0.0041	5.07	0.0639	0.0139	0.00007	0.067	0.247
08 Oct 2024	0.19	0.60	0.9	1.76		0.0051	0.0042	0.0029	3.18	0.0523	0.0110	0.00006	0.066	0.199
15 Oct 2024	0.17	0.60	1.0	1.56	0.0010	0.0046	0.0040	0.0018	2.90	0.0227	0.0122		0.056	0.180
22 Oct 2024	0.06	0.57	0.8	1.40		0.0042	0.0037	0.0022	2.62	0.0311	0.0104		0.105	0.202
28 Oct 2024	0.19	0.59	0.8	2.35		0.0060	0.0059	0.0028	4.14	0.0424	0.0135	0.00004	0.102	0.233
05 Nov 2024	0.06	0.19		1.31		0.0030	0.0038	0.0015	2.15	0.0203	0.0098		0.059	0.179
11 Nov 2024		0.22	0.4	0.972		0.0023	0.0026	0.0035	1.90	0.0188	0.0084		0.083	0.154
18 Nov 2024		0.38	0.6	2.30		0.0046	0.0062	0.0032	4.24	0.0306	0.0160	0.00004	0.070	0.218
18 Nov 2024		0.703												
25 Nov 2024	0.08	0.52	0.7	2.50		0.0044	0.0061	0.0040	4.33	0.0471	0.0137	0.00003	0.053	0.205
25 Nov 2024		0.700												



EPL91

Date	P mg/l	Nitrite + Nitrate as N mg/L	N mg/L	Al mg/L	As mg/L	Cr (F) mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Pb mg/L	Ni mg/L	Ag mg/L	Zn (F) mg/L	Zn mg/L
04 Jun 2024	0.06			1.13	0.0048		0.0025	0.0023	2.38	0.0116			0.003	0.022
10 Jun 2024	0.08	0.03	0.4	1.02	0.0028		0.0022	0.0026	1.40	0.0056			0.008	0.030
22 Jun 2024	0.15			1.27	0.0043		0.0027	0.0022	1.94	0.0096				0.023
25 Jun 2024	0.10	0.07	0.3	0.552	0.0030		0.0014		1.18	0.0036			0.003	0.012
02 Jul 2024	0.07			5.81	0.0089		0.0139	0.0086	10.1	0.0710	0.0178	0.00011		0.104
13 Jul 2024	0.11			0.852	0.0047		0.0018		1.79	0.0087				0.010
18 Jul 2024	0.07			0.428	0.0040		0.0010		1.18	0.0025				0.008
23 Jul 2024	0.25		0.4	0.463	0.0027		0.0009		0.872	0.0042				0.009
29 Jul 2024	0.08		0.3	1.41	0.0037		0.0032	0.0023	2.52	0.0134			0.007	0.036
05 Aug 2024	0.10	0.03		2.07	0.0041		0.0045	0.0023	3.56	0.0213		0.00003		0.03
13 Aug 2024	0.06			0.912	0.0040		0.0021	0.0012	2.06	0.0205				0.015
28 Aug 2024	0.05	0.02												
02 Sep 2024	0.07	0.06		0.444	0.0027		0.0012		0.990	0.0027				0.010
12 Sep 2024			2.3	0.567	0.0024	0.0002	0.0018		1.12	0.0046			0.003	0.012
17 Sep 2024	0.06	0.35	0.6	0.592	0.0031		0.0023		1.44	0.0083				0.011
23 Sep 2024	0.08	0.29	0.3	0.748	0.0024		0.0023		1.47	0.0089				0.020
03 Oct 2024	0.06	0.19		0.742	0.0037		0.0023	0.0011	1.75	0.0082			0.003	0.017
08 Oct 2024	0.19	0.15	0.4	4.34	0.0087		0.0116	0.0078	8.25	0.0538	0.0165	0.00010	0.004	0.100
15 Oct 2024	0.16	0.02		0.975	0.0044		0.0028	0.0015	2.20	0.0177			0.004	0.018
22 Oct 2024	0.09	0.20	0.7	0.554	0.0030		0.0027	0.0012	1.29	0.0053			0.007	0.015
28 Oct 2024	0.12	0.11		0.829	0.0034		0.0023	0.0012	1.83	0.0081			0.006	0.017
05 Nov 2024	0.08	0.14	0.6	0.658	0.0040		0.0020		1.68	0.0054				0.019
11 Nov 2024	0.06	0.12		1.02	0.0043		0.0026	0.0016	2.67	0.0098			0.004	0.022
18 Nov 2024	0.05	0.05		0.835	0.0035		0.0023	0.0014	2.07	0.0116				0.017
18 Nov 2024		0.213												
25 Nov 2024	0.08	0.10	0.3	0.519	0.0026		0.0013		1.19	0.0045				0.012
25 Nov 2024		0.163												

EPL93

Date	P mg/l	Nitrite + Nitrate as N mg/L	N mg/L	Al mg/L	As (F) mg/L	As mg/L	Cr (F) mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Pb mg/L	Mn mg/L	Ni mg/L	Ag mg/L	Zn mg/L
04 Jun 2024	0.44		0.4	4.52	0.0187	0.0347		0.0113	0.0056	7.52	0.0171		0.0185	0.00004	0.05
10 Jun 2024	0.20	0.09	0.5	4.50	0.0160	0.0292		0.0116	0.0091	6.53	0.0199		0.0205	0.00004	0.066
22 Jun 2024	0.42		0.4	15.9	0.0141	0.0470		0.0428	0.0286	23.8	0.0868		0.0743	0.00015	0.249
25 Jun 2024	0.38	0.03	0.4	2.96	0.0178	0.0244		0.0076	0.0039	4.89	0.0131		0.0136		0.037
02 Jul 2024	0.54			11.2	0.0154	0.0372		0.0322	0.0176	19.0	0.0522		0.0534	0.00010	0.147
13 Jul 2024	0.33			3.26	0.0176	0.0303		0.0085	0.0045	5.00	0.0136		0.0134		0.038
18 Jul 2024	0.15			1.14	0.0175	0.0255		0.0027	0.0016	1.62	0.0045				0.013
23 Jul 2024	0.38			8.21	0.0208	0.0339		0.0209	0.0116	12.1	0.0402		0.0344	0.00006	0.112
29 Jul 2024	0.29		0.3	7.73	0.0243	0.0457		0.0189	0.0109	11.7	0.0313		0.0348	0.00006	0.096
05 Aug 2024	0.73	0.10	0.4	8.75	0.0187	0.0393	0.0003	0.0237	0.0143	14.3	0.0450		0.0415	0.00007	0.126
13 Aug 2024	0.25			10.4	0.0196	0.0423		0.0259	0.0163	15.5	0.0513		0.0413	0.00010	0.120
19 Aug 2024	0.45		1.3	4.82	0.0171	0.0297		0.0117	0.0057	7.56	0.0201		0.0199	0.00004	0.051
27 Aug 2024	0.29		0.5	5.16	0.0225	0.0326		0.0131	0.0063	7.84	0.0230		0.0231	0.00003	0.055
03 Sep 2024	0.37			24.9	0.0188	0.0551		0.0663	0.0437	38.8	0.140	1.27	0.116	0.00026	0.341
12 Sep 2024	0.47	0.04	0.4	7.98	0.0193	0.0351		0.0203	0.0094	11.5	0.0332		0.0351	0.00006	0.082
17 Sep 2024	0.25			2.99	0.0196	0.0288		0.0075	0.0038	4.98	0.0141		0.0135		0.034
23 Sep 2024	0.28			7.94	0.0179	0.0337		0.0215	0.0129	13.5	0.0422		0.0393	0.00010	0.110
03 Oct 2024	0.44		0.6	2.98	0.0169	0.0255		0.0075	0.0062	4.68	0.0126		0.0141	0.00003	0.035
08 Oct 2024	0.61		0.7	6.77	0.0106	0.0194		0.0181	0.0097	9.65	0.0349		0.0301	0.00005	0.080
15 Oct 2024	0.25	0.02	0.3	0.518	0.0148	0.0174		0.0012		0.670	0.0021				0.006
22 Oct 2024	0.24	0.07	0.4	1.23	0.0091	0.0146		0.0031	0.0018	1.77	0.0056				0.015
28 Oct 2024	0.26	0.03		3.16	0.0104	0.0227		0.0078	0.0040	4.80	0.0148		0.0133		0.035
05 Nov 2024	0.09			3.49	0.0094	0.0204		0.0088	0.0041	5.10	0.0141		0.0145	0.00004	0.042
11 Nov 2024	0.11			4.02	0.0105	0.0204		0.0100	0.0049	6.88	0.0182		0.0183		0.050
18 Nov 2024	0.20			1.72	0.0102	0.0162		0.0040	0.0034	2.53	0.0071				0.020
25 Nov 2024	0.08			3.08	0.0088	0.0185		0.0068	0.0033	4.49	0.0127		0.0110		0.031


EPL92
EPL96
Ravine Cemetery
Yarrangobilly River

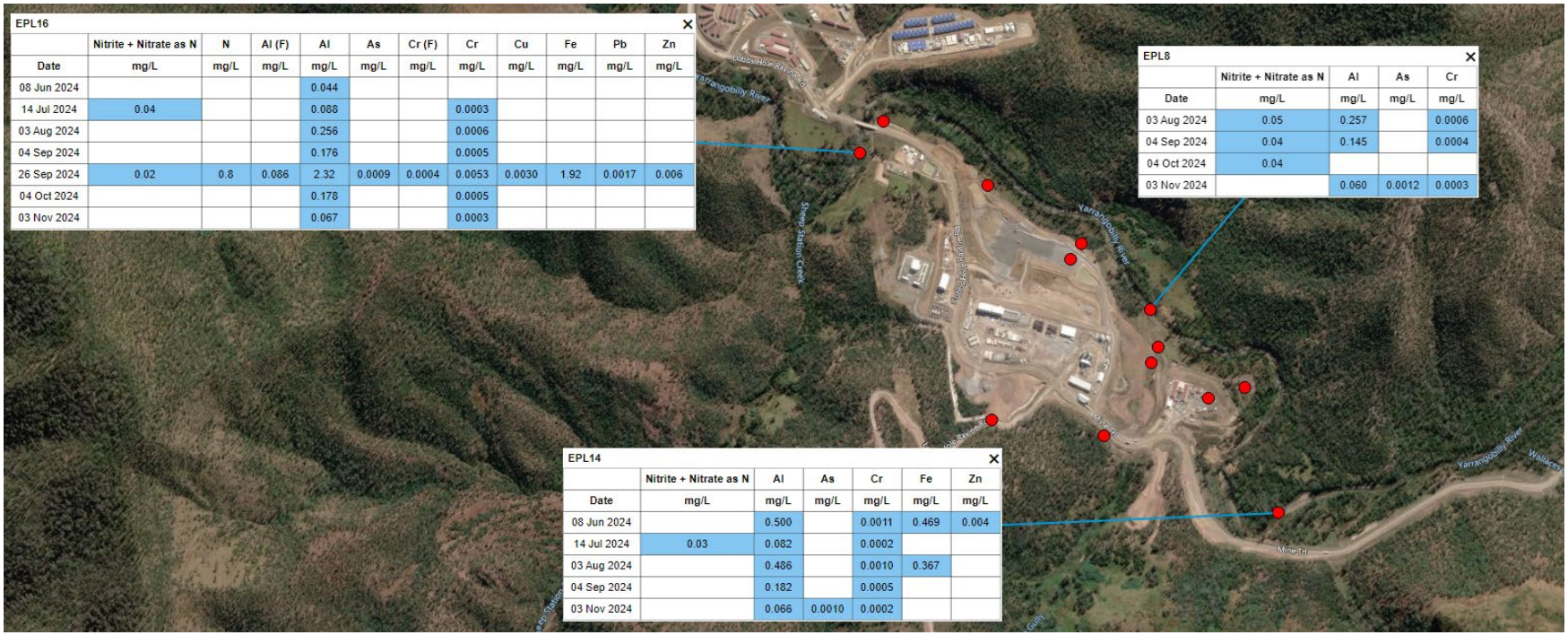
EPL94

Date	P mg/l	Nitrite + Nitrate as N mg/L	N mg/L	Al mg/L	As (F) mg/L	As mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Pb mg/L	Mn mg/L	Ni mg/L	Ag mg/L	Zn (F) mg/L	Zn mg/L
04 Jun 2024	0.15		0.4	3.54		0.0116	0.0094	0.0067	8.44	0.0168		0.0156	0.00003	0.008	0.356
10 Jun 2024	0.11	0.02	0.4	1.90	0.0014	0.0087	0.0052	0.0036	4.44	0.0091		0.0106		0.007	0.142
22 Jun 2024	0.33		0.6	7.10		0.0174	0.0225	0.0170	13.8	0.0359		0.0353	0.00006	0.012	0.595
25 Jun 2024	0.06			2.12	0.0036	0.0137	0.0064	0.0044	6.7	0.0095		0.0116			0.159
02 Jul 2024	0.13			8.14		0.0192	0.0270	0.0176	16.9	0.0445		0.0407	0.00006	0.008	0.725
13 Jul 2024	0.20			4.52		0.0167	0.0143	0.0120	10.4	0.0262		0.0195	0.00008	0.012	0.324
18 Jul 2024	0.07			0.668		0.0059	0.0055		2.12	0.0026				0.006	0.058
23 Jul 2024	0.09		0.5	4.40		0.0163	0.0136	0.0098	10.0	0.0240		0.0207	0.00004	0.005	0.356
29 Jul 2024	0.07		0.3	6.18	0.0011	0.0171	0.0176	0.0111	12.5	0.0260		0.0293	0.00004	0.008	0.402
05 Aug 2024	0.04	0.04		0.508		0.0074	0.0014		2.09	0.0027				0.004	0.031
13 Aug 2024	0.54		0.8	22.4		0.0583	0.0689	0.0548	49.6	0.113	1.70	0.103	0.00023		2.03
19 Aug 2024	0.24	0.06	1.4	12.6		0.0300	0.0364	0.0299	26.2	0.0655	1.32	0.0619	0.00010	0.008	0.726
28 Aug 2024	0.06	0.02		2.97		0.0102	0.0090	0.0053	6.82	0.0258		0.0146		0.005	0.154
03 Sep 2024	0.10		0.3	3.38		0.0132	0.0103	0.0062	7.54	0.0184		0.0163	0.00003	0.003	0.172
11 Sep 2024	0.09			0.316		0.0027	0.0009		0.954	0.0014				0.007	0.027
17 Sep 2024	0.09			2.48		0.0131	0.0075	0.0044	6.90	0.0161		0.0132		0.006	0.178
23 Sep 2024	0.06			2.16		0.0135	0.0067	0.0041	6.34	0.0137		0.0115	0.00003	0.009	0.184
03 Oct 2024	0.09			1.53		0.0159	0.0043	0.0028	5.57	0.0075				0.008	0.095
08 Oct 2024	0.09		0.3	1.99	0.0011	0.0130	0.0058	0.0039	5.40	0.0091		0.0096		0.010	0.113
15 Oct 2024	0.13			0.932		0.0067	0.0028	0.0018	2.68	0.0040				0.019	0.135
22 Oct 2024	0.10			1.76		0.0068	0.0049	0.0050	4.21	0.0088		0.0088		0.020	0.130
28 Oct 2024	0.13			1.63		0.0123	0.0046	0.0028	5.01	0.0078				0.012	0.091
05 Nov 2024	0.03			1.92		0.0144	0.0052	0.0032	5.39	0.0094		0.0089	0.00003	0.005	0.131
11 Nov 2024	0.04			3.01		0.0150	0.0068	0.0060	8.60	0.0154		0.0157		0.012	0.252
18 Nov 2024	0.10		0.3	2.32	0.0010	0.0185	0.0067	0.0073	7.10	0.0126		0.0132		0.003	0.149
25 Nov 2024	0.21		0.3	1.70		0.0145	0.0047	0.0067	5.47	0.0092		0.0111		0.003	0.157

EPL95

Date	P mg/l	Nitrite + Nitrate as N mg/L	N mg/L	Al mg/L	As (F) mg/L	As mg/L	Cr (F) mg/L	Cr mg/L	Cu (F) mg/L	Cu mg/L	Fe mg/L	Pb mg/L	Mn mg/L	Ni (F) mg/L	Ni mg/L	Ag mg/L	Zn (F) mg/L	Zn mg/L
04 Jun 2024	0.06	24.5	27.6	0.126	0.0016	0.0018	0.0005	0.0009	0.0754	0.177				0.0156	0.0170		0.032	0.035
10 Jun 2024	0.03	25.7	28.4		0.0018	0.0019	0.0008	0.0009	0.0782	0.170				0.0145	0.0155		0.032	0.034
22 Jun 2024	0.11	25.4	28.1	0.210	0.0017	0.0023	0.0005	0.0013	0.229	0.243		0.0015		0.0161	0.0191		0.045	0.051
25 Jun 2024	0.07	22.9	25.1	1.98	0.0014	0.0069	0.0004	0.0070	0.157	0.572	3.75	0.0096		0.0136	0.0361		0.039	0.065
02 Jul 2024		26.1	32.9	0.340	0.0016	0.0022	0.0004	0.0014	0.0616	0.251	0.336	0.0014		0.0108	0.0145		0.027	0.036
13 Jul 2024		30.3	31.5	0.431	0.0017	0.0026	0.0008	0.0021	0.0568	0.287	0.567	0.0024		0.0117	0.0154		0.024	0.036
18 Jul 2024		27.6	33.9	0.681	0.0017	0.0027	0.0007	0.0033	0.0103	0.0542	1.36	0.0054		0.0155	0.0210	0.00003	0.019	0.040
23 Jul 2024	0.03	20.4	23.2	0.135	0.0014	0.0016	0.0004	0.0009	0.0143	0.0640				0.0082	0.0112		0.017	0.027
29 Jul 2024	0.08	17.2	18.5	0.736	0.0015	0.0032		0.0021	0.0523	0.172	1.08	0.0031		0.0114	0.0159		0.029	0.038
05 Aug 2024	0.05	17.3	20.2	1.85	0.0011	0.0071		0.0056	0.0966	0.467	2.89	0.0101		0.0132	0.0224		0.033	0.056
13 Aug 2024	0.04	23.3	26.2	0.474	0.0014	0.0022	0.0002	0.0016	0.0045	0.0300	0.630	0.0022			0.0128		0.024	0.046
19 Aug 2024	0.04	23.1	26.5	0.473	0.0020	0.0027	0.0003	0.0021	0.0029	0.0107	0.633	0.0016		0.0115	0.0144		0.086	0.102
27 Aug 2024	0.06	31.2	32.1	3.08	0.0013	0.0146		0.0124	0.0082	0.0406	5.87	0.0214		0.0161	0.0333	0.00006	0.040	0.071
02 Sep 2024	0.27	26.0	27.7	5.72	0.0013	0.0164		0.0138	0.0012	0.0319	8.09	0.0484		0.0112	0.0322	0.00010	0.026	0.091
11 Sep 2024	0.29	24.9	27.5	7.04		0.0224		0.0188	0.0023	0.0415	11.4	0.0522		0.0100	0.0348	0.00015	0.031	0.096
17 Sep 2024	0.12	32.3	34.5	2.70	0.0019	0.0112		0.0088	0.0080	0.0316	5.16	0.0191		0.0132	0.0256	0.00004	0.028	0.054
23 Sep 2024	0.12	33.5	34.3	6.70		0.0166		0.0191	0.0118	0.140	12.2	0.0421		0.0110	0.0392	0.00012	0.036	0.118
03 Oct 2024	0.15	36.1	36.4	10.2		0.0227		0.0289	0.0103	0.263	19.4	0.0581	1.30	0.0126	0.0552	0.00018	0.033	0.152
08 Oct 2024	0.22	32.3	34.9	3.36		0.0073		0.0095	0.0132	0.0706	5.45	0.0193		0.0141	0.0271	0.00004	0.033	0.067
15 Oct 2024	0.20	29.4	37.6	1.08	0.0012	0.0041		0.0031	0.0024	0.0111	1.74	0.0062		0.0102	0.0143		0.035	0.045
22 Oct 2024	0.13	28.1	32.7	2.30	0.0010	0.0087		0.0074	0.0028	0.0166	3.95	0.0151		0.0109	0.0213		0.030	0.052
28 Oct 2024	0.16	29.8	32.7	2.01		0.0061		0.0057	0.0062	0.0292	4.64	0.0136		0.0120	0.0192	0.00004	0.030	0.048
05 Nov 2024	0.05	14.7	18.5	1.99	0.0009	0.0090		0.0064	0.0027	0.0191	3.36	0.0151		0.0104	0.0185	0.00005	0.032	0.050
11 Nov 2024	0.08	30.7	34.8	2.09	0.0011	0.0075		0.0063	0.0012	0.0149	3.60	0.0158		0.0100	0.0205	0.00003	0.027	0.057
18 Nov 2024	0.13	28.8	29.3	2.06		0.0080		0.0060	0.0061	0.0259	3.62	0.0138		0.0125	0.0225		0.036	0.057
18 Nov 2024		32.6																
25 Nov 2024	0.10	31.9	36.0	2.29		0.0073		0.0058	0.0037	0.0174	3.80	0.0172		0.0114	0.0199	0.00003	0.034	0.050
25 Nov 2024		33.2																

LOBSHOLE – MAIN YARD



EPL16

Date	Nitrite + Nitrate as N	N	Al (F)	Al	As	Cr (F)	Cr	Cu	Fe	Pb	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
08 Jun 2024				0.044							
14 Jul 2024	0.04			0.088			0.0003				
03 Aug 2024				0.256			0.0006				
04 Sep 2024				0.176			0.0005				
26 Sep 2024	0.02	0.8	0.086	2.32	0.0009	0.0004	0.0053	0.0030	1.92	0.0017	0.006
04 Oct 2024				0.178			0.0005				
03 Nov 2024				0.067			0.0003				

EPL8

Date	Nitrite + Nitrate as N	Al	As	Cr
	mg/L	mg/L	mg/L	mg/L
03 Aug 2024	0.05	0.257		0.0006
04 Sep 2024	0.04	0.145		0.0004
04 Oct 2024	0.04			
03 Nov 2024		0.060	0.0012	0.0003

EPL14

Date	Nitrite + Nitrate as N	Al	As	Cr	Fe	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
08 Jun 2024		0.500		0.0011	0.469	0.004
14 Jul 2024	0.03	0.082		0.0002		
03 Aug 2024		0.486		0.0010	0.367	
04 Sep 2024		0.182		0.0005		
03 Nov 2024		0.066	0.0010	0.0002		

EPL85

Date	Nitrite + Nitrate as N	N	Al (F)	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Mn	Ni	Ag	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
01 Jun 2024	34.2	40.8		2.36	0.0051	0.0067	0.0097	0.0162		0.0049	2.98	0.0038		0.0101		0.018
05 Jun 2024	5.82	7.0		1.64	0.0052	0.0058	0.0123	0.0180		0.0036	1.86	0.0032				0.010
16 Jun 2024	6.42	8.0		2.58	0.0050	0.0064	0.0160	0.0238		0.0047	3.37	0.0044		0.0113		0.018
21 Jun 2024	6.73	7.8		1.24	0.0046	0.0050	0.0160	0.0199		0.0027	1.41	0.0023				0.010
27 Jun 2024	6.47	8.0		2.15	0.0044	0.0054	0.0200	0.0258		0.0034	2.56	0.0039				0.012
04 Jul 2024	6.10	7.6		1.85	0.0036	0.0042	0.0424	0.0482		0.0036	2.36	0.0032				0.011
10 Jul 2024	6.41	7.7			0.0032		0.0364									
17 Jul 2024	4.56	5.4		1.24	0.0035	0.0038	0.0122	0.0152		0.0023	1.36	0.0022				0.010
26 Jul 2024	2.94	3.6		1.86	0.0028	0.0036	0.0168	0.0218		0.0034	2.16	0.0047				0.012
25 Aug 2024	6.79	8.8		0.239	0.0009	0.0011	0.124	0.126		0.0016						0.003
29 Aug 2024	4.10	8.1	0.029	5.53	0.0035	0.0053	0.0526	0.0668		0.0101	7.62	0.0142		0.0254		0.042
05 Sep 2024	4.24	5.1	0.032	1.26	0.0025	0.0028	0.0905	0.0870		0.0028	1.64	0.0029				0.008
09 Sep 2024	4.72	4.7	0.049	3.64	0.0034	0.0044	0.0846	0.0911		0.0058	5.49	0.0073		0.0154		0.023
20 Sep 2024	5.55	6.8	0.040	10.9	0.0051	0.0092	0.0633	0.0977		0.0186	15.9	0.0198		0.0490	0.00003	0.076
28 Sep 2024	3.58	5.5	0.034	8.90	0.0058	0.0091	0.0393	0.0630		0.0138	10.7	0.0150		0.0335		0.053
01 Oct 2024	4.08	4.9	0.039	3.24	0.0059	0.0072	0.0494	0.0607		0.0052	3.91	0.0050		0.0130		0.018
09 Oct 2024	4.45	5.8		2.38	0.0046	0.0052	0.0667	0.0766		0.0037	3.02	0.0034		0.0086		0.013
16 Oct 2024	4.40	5.0		0.771	0.0032	0.0034	0.0938	0.101		0.0014	0.844					0.005
21 Oct 2024	3.39	4.0		1.23	0.0032	0.0037	0.0881	0.0964		0.0020	1.30	0.0019				0.006
29 Oct 2024	4.39	5.2	0.123	0.992		0.0009	0.185	0.190		0.0015	0.765					0.003
02 Nov 2024	3.11	4.7	0.107	0.478			0.193	0.204		0.0017						0.003
04 Nov 2024	4.67	6.1	0.212	0.917	0.0012	0.0015	0.182	0.195		0.0012	0.494					0.003
12 Nov 2024	9.13	10.4	0.028	31.6	0.0114	0.0193	0.182	0.279	0.0011	0.0442	52.4	0.0529		0.151	0.00010	0.210
19 Nov 2024	7.21	11.8		42.6	0.0176	0.0288	0.103	0.235	0.0016	0.0627	62.5	0.0680	1.41	0.216	0.00010	0.295
19 Nov 2024	12.1															
26 Nov 2024	6.62	8.4		12.9	0.0157	0.0213	0.0818	0.128	0.0012	0.0172	16.3	0.0213		0.0596		0.077
26 Nov 2024	16.8															
28 Nov 2024	5.71	5.7			0.0128		0.0407		0.0012							
28 Nov 2024	6.06	6.2			0.0118		0.0360		0.0018							
28 Nov 2024	8.24															

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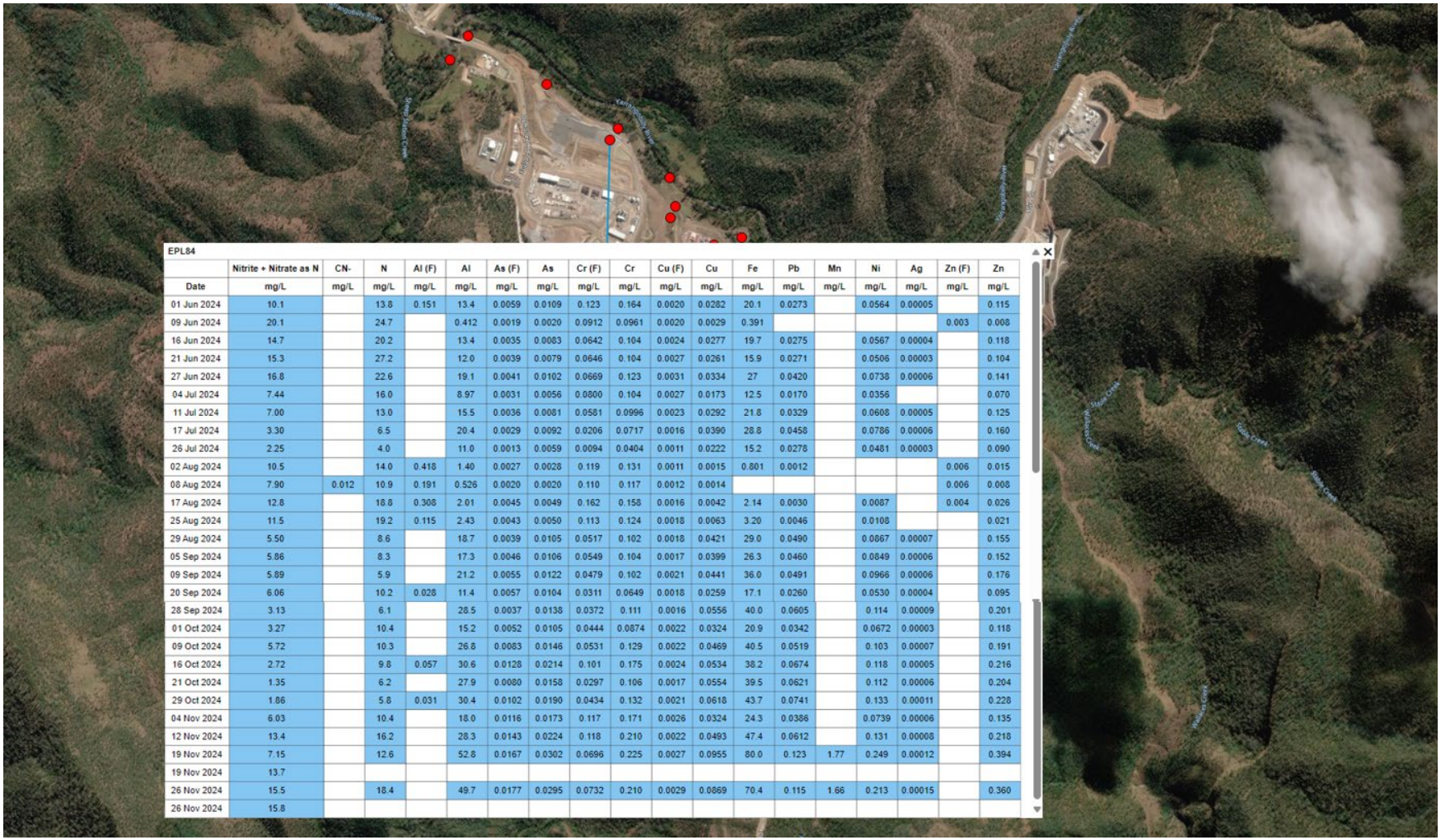
Date	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
01 Jun 2024	4.25	5.0	0.66	0.0021	0.0033	0.0006	0.0017	0.0021	0.0032	0.753	0.0012	0.004
05 Jun 2024	5.50	6.5	0.225	0.0023	0.0026	0.0022	0.0028	0.0018	0.0023			
16 Jun 2024	6.92	8.1	0.534	0.0021	0.0029	0.0026	0.0038	0.0018	0.0028	0.592		0.003
21 Jun 2024	11.1	14.1	0.211	0.0022	0.0025	0.0024	0.0029	0.0017	0.0023			0.006
27 Jun 2024	15.4	18.9	0.297	0.0023	0.0027	0.0028	0.0034	0.0018	0.0021			
04 Jul 2024	11.3	13.9	0.300	0.0025	0.0028	0.0010	0.0016	0.0019	0.0025			
11 Jul 2024	18.8	20.0	0.558	0.0022	0.0029	0.0024	0.0035	0.0016	0.0026	0.534	0.0012	0.003
17 Jul 2024	13.8	17.2	0.689	0.0020	0.0030	0.0018	0.0030	0.0019	0.0028	0.749	0.0016	0.005
26 Jul 2024	24.6	28.1	0.599	0.0024	0.0033	0.0010	0.0018	0.0016	0.0033	0.504	0.0011	0.010
02 Aug 2024	25.9	29.9	0.495	0.0024	0.0030	0.0014	0.0022	0.0017	0.0019	0.415		0.003
08 Aug 2024	26.1	30.0	0.466	0.0028	0.0033	0.0012	0.0021	0.0016	0.0026	0.467	0.0012	0.003
15 Aug 2024	24.2	27.5	0.757	0.0023	0.0032	0.0024	0.0039	0.0018	0.0030	0.628	0.0013	0.003
25 Aug 2024	23.5	29.1	0.838	0.0022	0.0032	0.0020	0.0037	0.0019	0.0036	1.09	0.0019	0.006
29 Aug 2024	19.1	19.4	2.14	0.0019	0.0052	0.0078	0.0116	0.0021	0.0060	2.82	0.0061	0.014
05 Sep 2024	20.9	23.2	0.999	0.0024	0.0033	0.0052	0.0072	0.0021	0.0039	1.08	0.0025	0.006
09 Sep 2024	22.2	27.3	0.958	0.0029	0.0041	0.0040	0.0056	0.0020	0.0038	1.24	0.0027	0.006
22 Sep 2024	21.8	24.4	1.62	0.0026	0.0048	0.0031	0.0061	0.0021	0.0055	2.04	0.0038	0.011
28 Sep 2024	18.9	21.5	1.92	0.0021	0.0048	0.0021	0.0054	0.0024	0.0059	2.15	0.0043	0.010
01 Oct 2024	24.2	28.3	0.863	0.0022	0.0035	0.0024	0.0040	0.0022	0.0040	0.984	0.0020	0.005
09 Oct 2024	21.7	23.3	0.818	0.0022	0.0031	0.0048	0.0066	0.0020	0.0036	0.964	0.0019	0.005
16 Oct 2024	22.4	24.4	1.08	0.0030	0.0043	0.0054	0.0070	0.0020	0.0047	1.25	0.0027	0.008
21 Oct 2024	6.00	6.5	1.90	0.0030	0.0042	0.0107	0.0147	0.0022	0.0053	2.10	0.0034	0.010
30 Oct 2024	23.8	26.5	0.942	0.0028	0.0034	0.0067	0.0089	0.0015	0.0030	0.904	0.0012	0.004
04 Nov 2024	18.2	20.8	0.784	0.0030	0.0037	0.0054	0.0073	0.0012	0.0031	0.818	0.0012	0.004
12 Nov 2024	10.1	11.6	0.701	0.0024	0.0031	0.0035	0.0050	0.0015	0.0032	0.941	0.0012	0.004
19 Nov 2024	11.3	13.2	1.40	0.0020	0.0043	0.0022	0.0050	0.0019	0.0047	1.83	0.0030	0.010
19 Nov 2024	20.9											
26 Nov 2024	9.51	15.5	0.513	0.0017	0.0022	0.0014	0.0022	0.0015	0.0028	0.465		0.003
26 Nov 2024	20.6											



EPL84

	Nitrite + Nitrate as N	CN-	N	Al (F)	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Mn	Ni	Ag	Zn (F)	Zn
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
01 Jun 2024	10.1		13.8	0.151	13.4	0.0059	0.0109	0.123	0.164	0.0020	0.0282	20.1	0.0273		0.0564	0.00005		0.115
09 Jun 2024	20.1		24.7		0.412	0.0019	0.0020	0.0912	0.0961	0.0020	0.0029	0.391					0.003	0.008
16 Jun 2024	14.7		20.2		13.4	0.0035	0.0083	0.0642	0.104	0.0024	0.0277	19.7	0.0275		0.0567	0.00004		0.118
21 Jun 2024	15.3		27.2		12.0	0.0039	0.0079	0.0646	0.104	0.0027	0.0261	15.9	0.0271		0.0506	0.00003		0.104
27 Jun 2024	16.8		22.6		19.1	0.0041	0.0102	0.0669	0.123	0.0031	0.0334	27	0.0420		0.0738	0.00006		0.141
04 Jul 2024	7.44		16.0		8.97	0.0031	0.0056	0.0800	0.104	0.0027	0.0173	12.5	0.0170		0.0356			0.070
11 Jul 2024	7.00		13.0		15.5	0.0036	0.0081	0.0581	0.0996	0.0023	0.0292	21.8	0.0329		0.0608	0.00005		0.125
17 Jul 2024	3.30		6.5		20.4	0.0029	0.0092	0.0206	0.0717	0.0016	0.0390	28.8	0.0458		0.0786	0.00006		0.160
26 Jul 2024	2.25		4.0		11.0	0.0013	0.0059	0.0094	0.0404	0.0011	0.0222	15.2	0.0278		0.0481	0.00003		0.090
02 Aug 2024	10.5		14.0	0.418	1.40	0.0027	0.0028	0.119	0.131	0.0011	0.0015	0.801	0.0012				0.006	0.015
08 Aug 2024	7.90	0.012	10.9	0.191	0.526	0.0020	0.0020	0.110	0.117	0.0012	0.0014						0.006	0.008
17 Aug 2024	12.8		18.8	0.308	2.01	0.0045	0.0049	0.162	0.158	0.0016	0.0042	2.14	0.0030		0.0087		0.004	0.026
25 Aug 2024	11.5		19.2	0.115	2.43	0.0043	0.0050	0.113	0.124	0.0018	0.0063	3.20	0.0046		0.0108			0.021
29 Aug 2024	5.50		8.6		18.7	0.0039	0.0105	0.0517	0.102	0.0018	0.0421	29.0	0.0490		0.0867	0.00007		0.155
05 Sep 2024	5.86		8.3		17.3	0.0046	0.0106	0.0549	0.104	0.0017	0.0399	26.3	0.0460		0.0849	0.00006		0.152
09 Sep 2024	5.89		5.9		21.2	0.0055	0.0122	0.0479	0.102	0.0021	0.0441	36.0	0.0491		0.0966	0.00006		0.176
20 Sep 2024	6.06		10.2	0.028	11.4	0.0057	0.0104	0.0311	0.0649	0.0018	0.0259	17.1	0.0260		0.0530	0.00004		0.095
28 Sep 2024	3.13		6.1		28.5	0.0037	0.0138	0.0372	0.111	0.0016	0.0556	40.0	0.0605		0.114	0.00009		0.201
01 Oct 2024	3.27		10.4		15.2	0.0052	0.0105	0.0444	0.0874	0.0022	0.0324	20.9	0.0342		0.0672	0.00003		0.118
09 Oct 2024	5.72		10.3		26.8	0.0083	0.0146	0.0531	0.129	0.0022	0.0469	40.5	0.0519		0.103	0.00007		0.191
16 Oct 2024	2.72		9.8	0.057	30.6	0.0128	0.0214	0.101	0.175	0.0024	0.0534	38.2	0.0674		0.118	0.00005		0.216
21 Oct 2024	1.35		6.2		27.9	0.0080	0.0158	0.0297	0.106	0.0017	0.0554	39.5	0.0621		0.112	0.00006		0.204
29 Oct 2024	1.86		5.8	0.031	30.4	0.0102	0.0190	0.0434	0.132	0.0021	0.0618	43.7	0.0741		0.133	0.00011		0.228
04 Nov 2024	6.03		10.4		18.0	0.0116	0.0173	0.117	0.171	0.0026	0.0324	24.3	0.0386		0.0739	0.00006		0.135
12 Nov 2024	13.4		16.2		28.3	0.0143	0.0224	0.118	0.210	0.0022	0.0493	47.4	0.0612		0.131	0.00008		0.218
19 Nov 2024	7.15		12.6		52.8	0.0167	0.0302	0.0696	0.225	0.0027	0.0955	80.0	0.123	1.77	0.249	0.00012		0.394
19 Nov 2024	13.7																	
26 Nov 2024	15.5		18.4		49.7	0.0177	0.0295	0.0732	0.210	0.0029	0.0869	70.4	0.115	1.66	0.213	0.00015		0.360
26 Nov 2024	15.8																	

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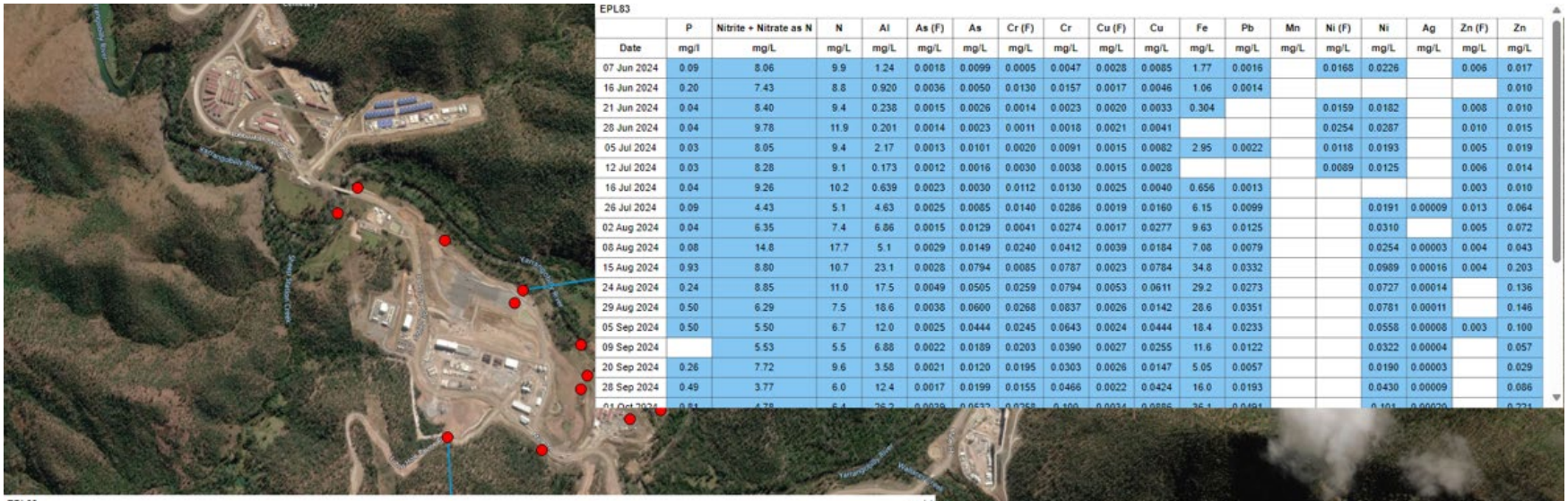
	P	Nitrite + Nitrate as N	N	Al	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Mn	Ni	Ag	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
07 Jun 2024		1.80	2.1	1.02	0.0013	0.0004	0.0022		0.0020	0.998	0.0015				0.007
16 Jun 2024	0.05	1.92	2.1	3.10	0.0033	0.0005	0.0063		0.0057	3.79	0.0051		0.0096	0.00004	0.016
21 Jun 2024	0.17	2.51	3.2	2.88	0.0021		0.0038		0.0040	2.53	0.0045		0.0087	0.00003	0.013
28 Jun 2024	0.10	2.79	3.5	3.47	0.0019		0.0036		0.0036	2.53	0.0062		0.0082	0.00003	0.013
06 Jul 2024	0.03	2.26	2.8	1.18	0.0009		0.0014		0.0018	1.22	0.0015				0.007
12 Jul 2024	0.04	2.56	2.9	3.79	0.0027		0.0041		0.0056	2.87	0.0060		0.0081	0.00004	0.017
16 Jul 2024	0.06	3.31	4.1	3.91	0.0028	0.0003	0.0050		0.0053	3.32	0.0049				0.014
26 Jul 2024	0.09	2.82	3.5	2.77	0.0017	0.0006	0.0060		0.0044	3.01	0.0039		0.0088		0.013
02 Aug 2024	0.53	2.06	4.2	9.29	0.0031	0.0014	0.0234		0.0140	11.2	0.0139		0.0317		0.052
08 Aug 2024	0.25	2.32	4.8	21	0.0059	0.0008	0.0496		0.0312	25.1	0.0321		0.0679	0.00009	0.112
15 Aug 2024	0.92	2.64	4.3	51.2	0.0320		0.121		0.120	71.8	0.107	2.04	0.174	0.00078	0.386
24 Aug 2024	0.17	2.94	3.9	13.2	0.0083	0.0002	0.0285		0.0301	19.4	0.0192		0.0426	0.00008	0.077
29 Aug 2024	0.48	3.14	4.3	17.4	0.0082	0.0051	0.0500		0.0356	23.8	0.0319		0.0660	0.00011	0.107
05 Sep 2024	1.33	3.43	6.2	64.8	0.0181	0.0018	0.191		0.143	95.2	0.143	2.06	0.287	0.00029	0.565
09 Sep 2024		3.65	3.6	36.6	0.0141	0.0013	0.0970		0.0848	58.8	0.0686		0.141	0.00015	0.248
20 Sep 2024	0.74	3.21	5.9	43.6	0.0161	0.0004	0.125		0.0931	63.3	0.0789		0.174	0.00023	0.309
28 Sep 2024	1.53	3.58	8.3	152	0.0461	0.0045	0.350		0.271	174	0.247	3.39	0.472	0.00067	0.796
01 Oct 2024	0.84	3.83	6.7	23.6	0.0079	0.0173	0.0757	0.0012	0.0418	28.1	0.0334		0.0787	0.00008	0.139

EPL88

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ni (F)	Ni	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
07 Jun 2024	0.03		0.3	0.207	0.0092	0.0179		0.0013		0.0062	0.504			0.0101	0.016	0.033
16 Jun 2024	0.05	0.04		0.104	0.0088	0.0127	0.0006	0.0012		0.0040			0.0086	0.0112	0.024	0.053
21 Jun 2024	0.04		0.3	0.103	0.0077	0.0166		0.0018	0.0011	0.0075	0.313			0.0098	0.013	0.036
28 Jun 2024	0.03	0.02	0.3	0.148	0.0091	0.0170		0.0021	0.0183	0.0672	0.405		0.0083	0.0107	0.018	0.044
06 Jul 2024	0.06	0.03	0.5	0.139	0.0090	0.0212		0.0017	0.0142	0.124	0.482			0.0083	0.013	0.030
12 Jul 2024	0.05		0.3	0.472	0.0078	0.0221		0.0040	0.0085	0.0786	0.964	0.0015			0.004	0.024
16 Jul 2024	0.08	0.02	0.4	0.156	0.0077	0.0240		0.0018	0.0050	0.0601	0.606				0.003	0.011
26 Jul 2024	0.04		0.3	2.37	0.0113	0.0280		0.0046	0.0036	0.0450	3.10	0.0046		0.0136	0.004	0.034
02 Aug 2024	0.09		0.3	0.164	0.0126	0.0566		0.0021	0.0024	0.0358	1.30	0.0023				0.008
08 Aug 2024	0.08		0.4	0.103	0.0066	0.0379		0.0013	0.0017	0.0152	0.868					0.004
15 Aug 2024	0.05		0.4	0.054	0.0090	0.0377		0.0008		0.0072	0.670					
24 Aug 2024	0.04		0.6	0.265	0.0060	0.0199		0.0011	0.0013	0.0052	0.648					0.008
29 Aug 2024	0.07	0.02	0.6	0.041	0.0079	0.0273		0.0006		0.0056	0.455					0.005
05 Sep 2024	0.06		0.4	0.211		0.0331		0.0027		0.0143	1.04	0.0016		0.0082		0.012
09 Sep 2024	0.05	0.03	0.5	0.077	0.0075	0.0337		0.0008		0.0050	0.751					0.004
20 Sep 2024	0.07		0.5	0.038	0.0083	0.0312	0.0003	0.0073		0.0052	0.611					0.003
28 Sep 2024	0.05		0.5	0.251	0.0100	0.0287		0.0033	0.0020	0.0227	0.792					0.008
01 Oct 2024	0.10		0.6		0.0095	0.0215		0.0003		0.0018	0.311					0.004
10 Oct 2024	0.05		0.5	0.029	0.0062	0.0218		0.0006		0.0044	0.396					0.003
16 Oct 2024	0.07		0.6	0.060	0.0112	0.0275		0.0006		0.0062	0.478					0.004
21 Oct 2024	0.07		0.7	0.102	0.0068	0.0298		0.0013		0.0121	0.871					0.005
29 Oct 2024	0.09	0.03	0.6	0.515	0.0055	0.0277		0.0015		0.0051	1.41					0.004
06 Nov 2024	0.22		1.6	0.062	0.0039	0.0232		0.0005		0.0175	0.915					0.004
12 Nov 2024	0.03			0.029	0.0122	0.0350		0.0007		0.136	1.45					
19 Nov 2024	0.05		0.7	0.033	0.0150	0.0351		0.0006		0.0068	1.42					
26 Nov 2024	0.08		0.7	0.044	0.0181	0.0344		0.0008		0.0307	1.45					0.003



EPL83

Date	P mg/l	Nitrite + Nitrate as N mg/L	N mg/L	Al mg/L	As (F) mg/L	As mg/L	Cr (F) mg/L	Cr mg/L	Cu (F) mg/L	Cu mg/L	Fe mg/L	Pb mg/L	Mn mg/L	Ni (F) mg/L	Ni mg/L	Ag mg/L	Zn (F) mg/L	Zn mg/L
07 Jun 2024	0.09	8.06	9.9	1.24	0.0018	0.0099	0.0005	0.0047	0.0028	0.0085	1.77	0.0016		0.0168	0.0226		0.006	0.017
16 Jun 2024	0.20	7.43	8.8	0.920	0.0036	0.0050	0.0130	0.0157	0.0017	0.0046	1.06	0.0014						0.010
21 Jun 2024	0.04	8.40	9.4	0.238	0.0015	0.0026	0.0014	0.0023	0.0020	0.0033	0.304			0.0159	0.0182		0.008	0.010
28 Jun 2024	0.04	9.78	11.9	0.201	0.0014	0.0023	0.0011	0.0018	0.0021	0.0041				0.0254	0.0287		0.010	0.015
05 Jul 2024	0.03	8.05	9.4	2.17	0.0013	0.0101	0.0020	0.0091	0.0015	0.0082	2.95	0.0022		0.0118	0.0193		0.005	0.019
12 Jul 2024	0.03	8.28	9.1	0.173	0.0012	0.0016	0.0030	0.0038	0.0015	0.0028				0.0089	0.0125		0.006	0.014
16 Jul 2024	0.04	9.26	10.2	0.639	0.0023	0.0030	0.0112	0.0130	0.0025	0.0040	0.656	0.0013					0.003	0.010
26 Jul 2024	0.09	4.43	5.1	4.63	0.0025	0.0085	0.0140	0.0286	0.0019	0.0160	6.15	0.0099			0.0191	0.00009	0.013	0.064
02 Aug 2024	0.04	6.35	7.4	6.86	0.0015	0.0129	0.0041	0.0274	0.0017	0.0277	9.63	0.0125			0.0310		0.005	0.072
08 Aug 2024	0.08	14.8	17.7	5.1	0.0029	0.0149	0.0240	0.0412	0.0039	0.0184	7.08	0.0079			0.0254	0.00003	0.004	0.043
15 Aug 2024	0.93	8.80	10.7	23.1	0.0028	0.0794	0.0085	0.0787	0.0023	0.0784	34.8	0.0332			0.0989	0.00016	0.004	0.203
24 Aug 2024	0.24	8.85	11.0	17.5	0.0049	0.0505	0.0259	0.0794	0.0053	0.0611	29.2	0.0273			0.0727	0.00014		0.136
29 Aug 2024	0.50	6.29	7.5	18.6	0.0038	0.0600	0.0268	0.0837	0.0026	0.0142	28.6	0.0351			0.0781	0.00011		0.146
05 Sep 2024	0.50	5.50	6.7	12.0	0.0025	0.0444	0.0245	0.0643	0.0024	0.0444	18.4	0.0233			0.0558	0.00008	0.003	0.100
09 Sep 2024		5.53	5.5	6.88	0.0022	0.0189	0.0203	0.0390	0.0027	0.0255	11.6	0.0122			0.0322	0.00004		0.057
20 Sep 2024	0.26	7.72	9.6	3.58	0.0021	0.0120	0.0195	0.0303	0.0026	0.0147	5.05	0.0057			0.0190	0.00003		0.029
28 Sep 2024	0.49	3.77	6.0	12.4	0.0017	0.0199	0.0155	0.0466	0.0022	0.0424	16.0	0.0193			0.0430	0.00009		0.086
01 Oct 2024	0.51	4.78	6.4	26.2	0.0028	0.0532	0.0253	0.100	0.0034	0.0656	36.1	0.0491			0.101	0.00020		0.231

EPL82

Date	P mg/l	Nitrite + Nitrate as N mg/L	N mg/L	Al mg/L	As (F) mg/L	As mg/L	Cr (F) mg/L	Cr mg/L	Cu mg/L	Fe (F) mg/L	Fe mg/L	Pb mg/L	Ni (F) mg/L	Ni mg/L	Ag mg/L	Zn (F) mg/L	Zn mg/L
07 Jun 2024				0.460	0.0027	0.0175		0.0006		0.620	3.21						0.004
16 Jun 2024	0.04	0.02		0.363	0.0102	0.0225		0.0006		1.31	4.50						0.005
21 Jun 2024	0.04	0.03		0.184	0.0083	0.0194		0.0004		2.29	3.45						0.003
28 Jun 2024	0.04	0.02		0.294	0.0082	0.0167		0.0004		1.18	3.16						0.005
05 Jul 2024				0.356	0.0132	0.0201		0.0004		2.44	4.13						0.004
12 Jul 2024	0.03	0.49	0.8	0.189	0.0103	0.0183				1.91	3.37						0.004
16 Jul 2024				0.177	0.0114	0.0154		0.0002		2.36	3.39						0.004
26 Jul 2024				0.174	0.0027	0.0110				1.08	1.92			0.0081		0.005	0.007
02 Aug 2024		0.04	0.3	0.196		0.0067		0.0003			0.751		0.0086	0.0102		0.004	0.008
08 Aug 2024		0.02	0.3	0.724	0.0014	0.0199		0.0012			2.95	0.0011	0.0134	0.0164		0.009	0.029
15 Aug 2024				0.938		0.0226		0.0018	0.0016		3.46	0.0019	0.0136	0.0172		0.010	0.038
24 Aug 2024	0.05		0.5	6.46	0.0009	0.101		0.0119	0.0056		20.9	0.0172	0.0122	0.0287		0.008	0.116
29 Aug 2024	0.06		0.3	1.42		0.0240		0.0023			4.14	0.0030	0.0081	0.0110		0.007	0.025
05 Sep 2024	0.07		0.4	3.22		0.0574		0.0063	0.0038		8.50	0.0103		0.0151		0.009	0.068
09 Sep 2024		0.02		1.19	0.0011	0.0252		0.0019		0.768	4.71	0.0025		0.0087		0.009	0.026
21 Sep 2024	0.12		0.6	1.15		0.0203		0.0019	0.0012	0.867	3.96	0.0024				0.009	0.030
28 Sep 2024	0.93		2.3	13.2	0.0018	0.161	0.0002	0.0248	0.0124		34.5	0.0292		0.0290	0.00004	0.004	0.154
01 Oct 2024	0.51		0.9	1.02	0.0044	0.0191		0.0016		0.918	3.76	0.0019				0.005	0.015
10 Oct 2024	0.05			2.57	0.0013	0.0417		0.0042	0.0015	0.995	8.08	0.0039				0.004	0.030
16 Oct 2024				0.547		0.0205		0.0011			3.48	0.0012				0.005	0.015
26 Oct 2024		3.11	4.0	0.665	0.0014	0.0163		0.0012		1.42	3.93	0.0012			0.00053	0.009	0.020
29 Oct 2024	0.06	0.02	0.3	0.489	0.0016	0.0145		0.0007		0.759	3.30					0.005	0.013
06 Nov 2024	0.09			1.51		0.0582		0.0029			7.29	0.0042				0.004	0.023
12 Nov 2024				0.559	0.0010	0.0269		0.0010		0.710	4.86	0.0014				0.003	0.012
19 Nov 2024	0.04			0.886	0.0036	0.0350		0.0015		1.36	5.71	0.0018					0.012
26 Nov 2024	0.03			0.919	0.0062	0.0296		0.0013		1.90	5.68	0.0018				0.003	0.011

EPL81

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr	Cu	Fe (F)	Fe	Pb	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
07 Jun 2024	0.25	0.02	0.3	2.76	0.0020	0.0733	0.0056	0.0150		7.59	0.0064	0.0156	0.00004		0.024
16 Jun 2024	0.42		0.4	4.97	0.0029	0.138	0.0091	0.0165		14.9	0.0104	0.0214	0.00005		0.043
21 Jun 2024	0.36	0.05	0.4	3.12	0.0019	0.107	0.0056	0.0094		9.24	0.0068	0.0150	0.00003		0.031
28 Jun 2024	0.29	0.02	0.3	4.95	0.0016	0.163	0.0090	0.0124		16.2	0.0103	0.0194	0.00004		0.036
05 Jul 2024	1.24		1.2	5.06	0.0017	0.182	0.0092	0.0180		21.1	0.0116	0.0211	0.00005		0.037
12 Jul 2024	0.16			4.01	0.0039	0.0962	0.0075	0.0100		11.7	0.0095	0.0142	0.00004		0.037
16 Jul 2024	0.31	0.05		2.74	0.0016	0.0887	0.0053	0.0073		10.7	0.0056	0.0107			0.022
26 Jul 2024	2.05		0.8	4.82	0.0031	0.345	0.0110	0.0185		32.8	0.0154	0.0260	0.00008	0.003	0.057
02 Aug 2024	0.37			2.31	0.0014	0.130	0.0047	0.0050		13.1	0.0050	0.0107			0.020
08 Aug 2024	0.45		1.8	1.68	0.0020	0.102	0.0029	0.0033		10.2	0.0028				0.012
15 Aug 2024	0.92	0.13	0.5	2.07	0.0009	0.158	0.0042	0.0058		14.0	0.0041				0.018
24 Aug 2024	0.86		0.7	1.94		0.118	0.0033	0.0044		12.8	0.0039				0.017
29 Aug 2024	0.66		0.4	2.74	0.0011	0.132	0.0053	0.0074		12.4	0.0067	0.0101			0.020
05 Sep 2024	0.34			4.45	0.0012	0.294	0.0103	0.0154		23.8	0.0134	0.0199	0.00006		0.043
09 Sep 2024	0.43	3.43	3.4	3.68	0.0042	0.187	0.0076	0.0121		19.5	0.0104	0.0180	0.00029		0.040
20 Sep 2024	0.59		0.3	0.342	0.0011	0.0195	0.0006			1.78					0.003
28 Sep 2024	0.31		0.3	1.44	0.0011	0.0480	0.0021	0.0024		4.75	0.0017				0.008

EPL80

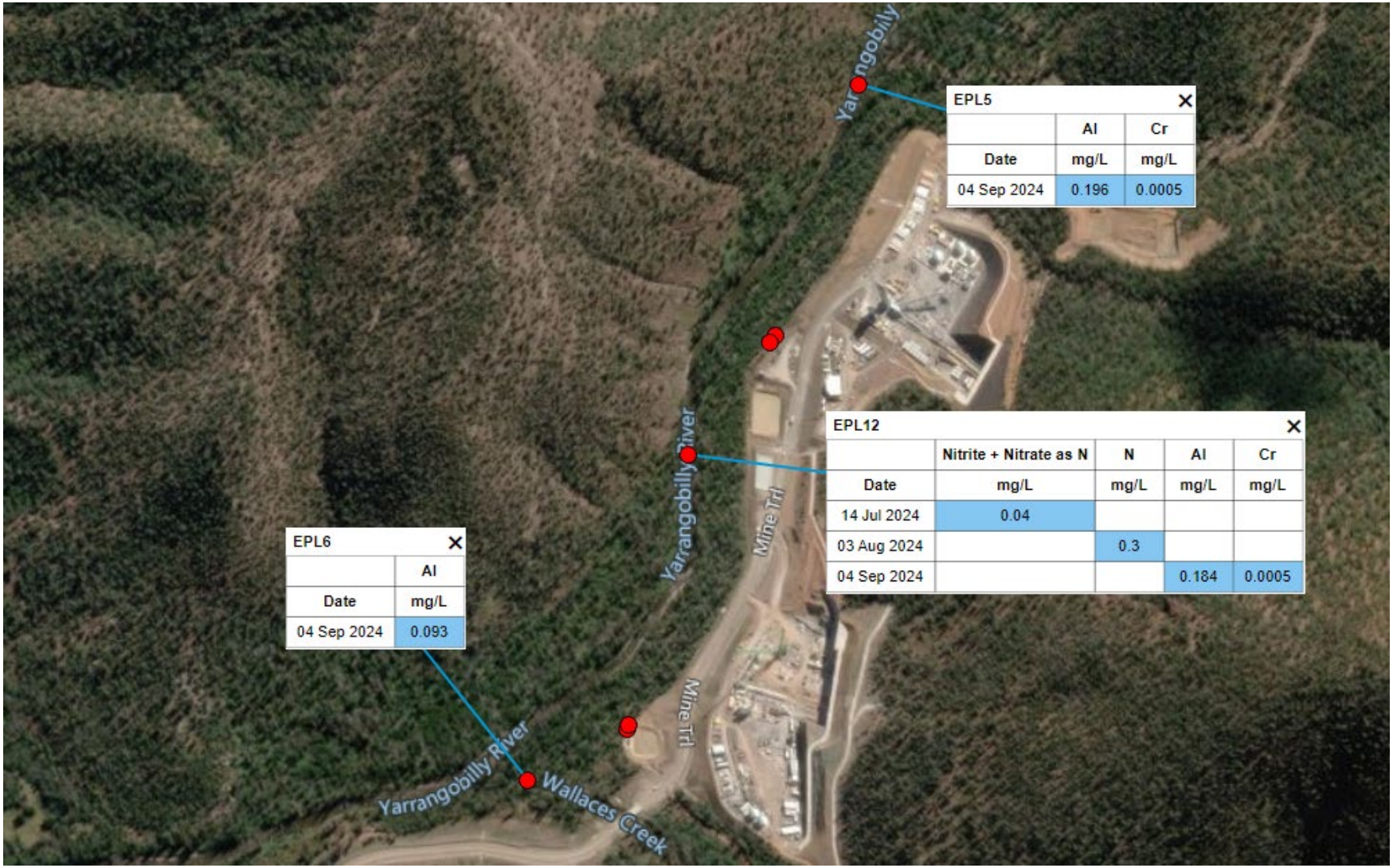
	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr (F)	Cr	Cu	Fe	Pb	Ni (F)	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
07 Jun 2024	0.10			0.457	0.0034	0.151		0.0039	0.0058	5.20	0.0014	0.0167	0.0233	0.00130	0.007	0.031
16 Jun 2024	0.13	0.02		0.596	0.0021	0.247		0.0063	0.0055	9.69	0.0015	0.0192	0.0290		0.006	0.053
21 Jun 2024	0.07	0.04		0.108	0.0019	0.0746		0.0012	0.0011	2.46		0.0174	0.0236			0.012
28 Jun 2024	0.06			0.442	0.0016	0.217		0.0053	0.0040	8.1		0.0183	0.0275		0.007	0.041
05 Jul 2024	0.11	0.02			0.0024	0.0270		0.0002		0.997		0.0196	0.0226		0.003	0.007
12 Jul 2024	0.15			0.640	0.0020	0.373		0.0072	0.0086	13.7	0.0013	0.0155	0.0274			0.033
16 Jul 2024	0.11			0.234	0.0018	0.0908		0.0039	0.0033	3.72		0.0169	0.0240		0.010	0.042
26 Jul 2024	0.15		0.3	0.200	0.0019	0.0937		0.0032	0.0032	3.61		0.0167	0.0240		0.004	0.022
02 Aug 2024	0.04			0.121	0.0031	0.0896		0.0023	0.0012	3.83		0.0175	0.0246		0.003	0.018
08 Aug 2024	0.06			0.211	0.0016	0.13		0.0039	0.0022	5.5		0.0180	0.0282		0.003	0.022
15 Aug 2024	0.06			0.334	0.0018	0.327	0.0003	0.0072	0.0052	13.5		0.0189	0.0312			0.038
24 Aug 2024	0.14		0.4	0.064	0.0022	0.0911		0.0013		4.18		0.0194	0.0258		0.004	0.014
29 Aug 2024	0.09		0.4	0.263	0.0013	0.377		0.0063	0.0039	16.7		0.0182	0.0268			0.023
05 Sep 2024	0.05				0.0024	0.0205		0.0002		0.891		0.0184	0.0222			0.005
09 Sep 2024	0.08	0.04	0.3	0.060		0.0873		0.0012		4.16		0.0180	0.0235			0.008
20 Sep 2024	0.05	0.02		0.036		0.0779		0.0009	0.0013	3.10		0.0174	0.0224			0.005
28 Sep 2024	0.08			0.262	0.0030	0.135		0.0021	0.0027	5.67		0.0176	0.0244			0.012
01 Oct 2024	0.11			0.581	0.0094	0.0665	0.0006	0.0012		3.52		0.0182	0.0220	0.00128	0.004	0.009
10 Oct 2024	0.10			0.059	0.0036	0.115		0.0011	0.0011	5.32		0.0157	0.0226			0.005
16 Oct 2024	0.06			0.031	0.0030	0.109		0.0006		4.41		0.0172	0.0239			0.006
25 Oct 2024	0.25		0.3	0.176	0.0026	0.241		0.0024	0.0039	11.6		0.0167	0.0237	0.00009		0.014
29 Oct 2024	0.05			0.090	0.0028	0.163		0.0010	0.0037	7.34		0.0187	0.0245		0.003	0.013
06 Nov 2024	0.08			0.058	0.0022	0.198		0.0014	0.0016	9.78		0.0182	0.0249			0.007
12 Nov 2024				0.157	0.0014	0.474		0.0035	0.0037	23.6	0.0018	0.0182	0.0272			0.013
19 Nov 2024	0.04				0.0039	0.0684		0.0005		3.33		0.0190	0.0248			0.004
26 Nov 2024	0.09				0.0052	0.0934		0.0009		4.90		0.0164	0.0210			0.005

EPL81

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr	Cu	Fe (F)	Fe	Pb	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
07 Jun 2024	0.25	0.02	0.3	2.76	0.0020	0.0733	0.0056	0.0150		7.59	0.0064	0.0156	0.00004		0.024
16 Jun 2024	0.42		0.4	4.97	0.0029	0.138	0.0091	0.0165		14.9	0.0104	0.0214	0.00005		0.043
21 Jun 2024	0.36	0.05	0.4	3.12	0.0019	0.107	0.0056	0.0094		9.24	0.0068	0.0150	0.00003		0.031
28 Jun 2024	0.29	0.02	0.3	4.95	0.0016	0.163	0.0090	0.0124		16.2	0.0103	0.0194	0.00004		0.036
05 Jul 2024	1.24		1.2	5.06	0.0017	0.182	0.0092	0.0180		21.1	0.0116	0.0211	0.00005		0.037
12 Jul 2024	0.16			4.01	0.0039	0.0962	0.0075	0.0100		11.7	0.0095	0.0142	0.00004		0.037
16 Jul 2024	0.31	0.05		2.74	0.0016	0.0887	0.0053	0.0073		10.7	0.0056	0.0107			0.022
26 Jul 2024	2.05		0.8	4.82	0.0031	0.345	0.0110	0.0185		32.8	0.0154	0.0260	0.00008	0.003	0.057
02 Aug 2024	0.37			2.31	0.0014	0.130	0.0047	0.0050		13.1	0.0050	0.0107			0.020
08 Aug 2024	0.45		1.8	1.68	0.0020	0.102	0.0029	0.0033		10.2	0.0028				0.012
15 Aug 2024	0.92	0.13	0.5	2.07	0.0009	0.158	0.0042	0.0058		14.0	0.0041				0.018
24 Aug 2024	0.86		0.7	1.94		0.118	0.0033	0.0044		12.8	0.0039				0.017
29 Aug 2024	0.66		0.4	2.74	0.0011	0.132	0.0053	0.0074		12.4	0.0067	0.0101			0.020
05 Sep 2024	0.34			4.45	0.0012	0.294	0.0103	0.0154		23.8	0.0134	0.0199	0.00006		0.043
09 Sep 2024	0.43	3.43	3.4	3.68	0.0042	0.187	0.0076	0.0121		19.5	0.0104	0.0180	0.00029		0.040
20 Sep 2024	0.59		0.3	0.342	0.0011	0.0195	0.0006			1.78					0.003
28 Sep 2024	0.31		0.3	1.44	0.0011	0.0480	0.0021	0.0024		4.75	0.0017				0.008

EPL80

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr (F)	Cr	Cu	Fe	Pb	Ni (F)	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
07 Jun 2024	0.10			0.457	0.0034	0.151		0.0039	0.0058	5.20	0.0014	0.0167	0.0233	0.00130	0.007	0.031
16 Jun 2024	0.13	0.02		0.596	0.0021	0.247		0.0063	0.0055	9.69	0.0015	0.0192	0.0290		0.006	0.053
21 Jun 2024	0.07	0.04		0.108	0.0019	0.0746		0.0012	0.0011	2.46		0.0174	0.0236			0.012
28 Jun 2024	0.06			0.442	0.0016	0.217		0.0053	0.0040	8.1		0.0183	0.0275		0.007	0.041
05 Jul 2024	0.11	0.02			0.0024	0.0270		0.0002		0.997		0.0196	0.0226		0.003	0.007
12 Jul 2024	0.15			0.640	0.0020	0.373		0.0072	0.0086	13.7	0.0013	0.0155	0.0274			0.033
16 Jul 2024	0.11			0.234	0.0018	0.0908		0.0039	0.0033	3.72		0.0169	0.0240		0.010	0.042
26 Jul 2024	0.15		0.3	0.200	0.0019	0.0937		0.0032	0.0032	3.61		0.0167	0.0240		0.004	0.022
02 Aug 2024	0.04			0.121	0.0031	0.0896		0.0023	0.0012	3.83		0.0175	0.0246		0.003	0.018
08 Aug 2024	0.06			0.211	0.0016	0.13		0.0039	0.0022	5.5		0.0180	0.0282		0.003	0.022
15 Aug 2024	0.06			0.334	0.0018	0.327	0.0003	0.0072	0.0052	13.5		0.0189	0.0312			0.038
24 Aug 2024	0.14		0.4	0.064	0.0022	0.0911		0.0013		4.18		0.0194	0.0258		0.004	0.014
29 Aug 2024	0.09		0.4	0.263	0.0013	0.377		0.0063	0.0039	16.7		0.0182	0.0268			0.023
05 Sep 2024	0.05				0.0024	0.0205		0.0002		0.891		0.0184	0.0222			0.005
09 Sep 2024	0.08	0.04	0.3	0.060		0.0873		0.0012		4.16		0.0180	0.0235			0.008
20 Sep 2024	0.05	0.02		0.036		0.0779		0.0009	0.0013	3.10		0.0174	0.0224			0.005
28 Sep 2024	0.08			0.262	0.0030	0.135		0.0021	0.0027	5.67		0.0176	0.0244			0.012
01 Oct 2024	0.11			0.581	0.0094	0.0665	0.0006	0.0012		3.52		0.0182	0.0220	0.00128	0.004	0.009
10 Oct 2024	0.10			0.059	0.0036	0.115		0.0011	0.0011	5.32		0.0157	0.0226			0.005
16 Oct 2024	0.06			0.031	0.0030	0.109		0.0006		4.41		0.0172	0.0239			0.006
25 Oct 2024	0.25		0.3	0.176	0.0026	0.241		0.0024	0.0039	11.6		0.0167	0.0237	0.00009		0.014
29 Oct 2024	0.05			0.090	0.0028	0.163		0.0010	0.0037	7.34		0.0187	0.0245		0.003	0.013
06 Nov 2024	0.08			0.058	0.0022	0.198		0.0014	0.0016	9.78		0.0182	0.0249			0.007
12 Nov 2024				0.157	0.0014	0.474		0.0035	0.0037	23.6	0.0018	0.0182	0.0272			0.013
19 Nov 2024	0.04				0.0039	0.0684		0.0005		3.33		0.0190	0.0248			0.004
26 Nov 2024	0.09				0.0052	0.0934		0.0009		4.90		0.0164	0.0210			0.005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Mine Trl
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EPL5
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04 Sep 2024
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EPL12
Nitrite + Nitrate as N
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mg/L
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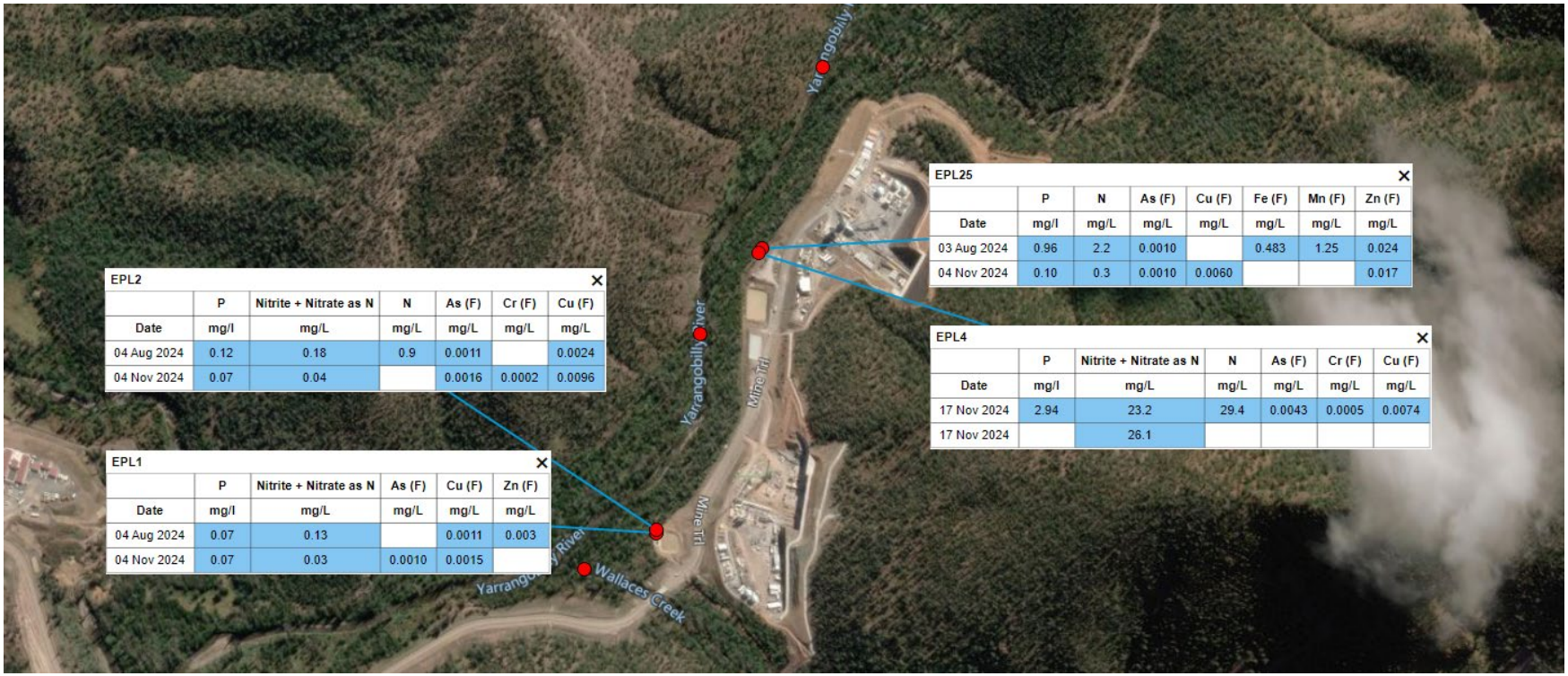


EPL25

	P	N	As (F)	Cu (F)	Fe (F)	Mn (F)	Zn (F)
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
03 Aug 2024	0.96	2.2	0.0010		0.483	1.25	0.024
04 Nov 2024	0.10	0.3	0.0010	0.0060			0.017

EPL2

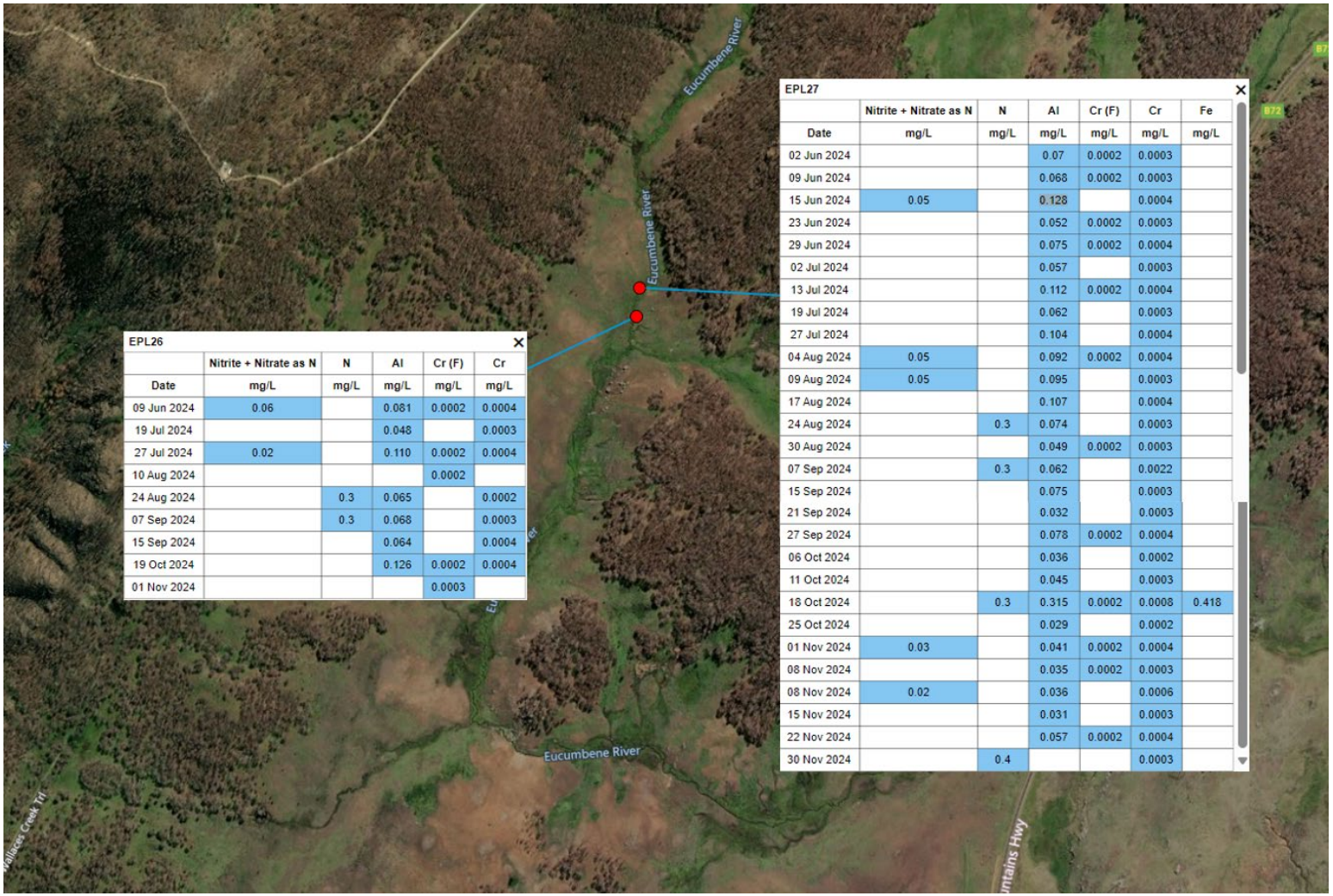
	P	Nitrite + Nitrate as N	N	As (F)	Cr (F)	Cu (F)
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L
04 Aug 2024	0.12	0.18	0.9	0.0011		0.0024
04 Nov 2024	0.07	0.04		0.0016	0.0002	0.0096

EPL4

	P	Nitrite + Nitrate as N	N	As (F)	Cr (F)	Cu (F)
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L
17 Nov 2024	2.94	23.2	29.4	0.0043	0.0005	0.0074
17 Nov 2024		26.1				

EPL1

	P	Nitrite + Nitrate as N	As (F)	Cu (F)	Zn (F)
Date	mg/l	mg/L	mg/L	mg/L	mg/L
04 Aug 2024	0.07	0.13		0.0011	0.003
04 Nov 2024	0.07	0.03	0.0010	0.0015	



EPL26

	Nitrite + Nitrate as N	N	Al	Cr (F)	Cr
Date	mg/L	mg/L	mg/L	mg/L	mg/L
09 Jun 2024	0.06		0.081	0.0002	0.0004
19 Jul 2024			0.048		0.0003
27 Jul 2024	0.02		0.110	0.0002	0.0004
10 Aug 2024				0.0002	
24 Aug 2024		0.3	0.065		0.0002
07 Sep 2024		0.3	0.068		0.0003
15 Sep 2024			0.064		0.0004
19 Oct 2024			0.126	0.0002	0.0004
01 Nov 2024				0.0003	

EPL27

	Nitrite + Nitrate as N	N	Al	Cr (F)	Cr	Fe
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
02 Jun 2024			0.07	0.0002	0.0003	
09 Jun 2024			0.068	0.0002	0.0003	
15 Jun 2024	0.05		0.128		0.0004	
23 Jun 2024			0.052	0.0002	0.0003	
29 Jun 2024			0.075	0.0002	0.0004	
02 Jul 2024			0.057		0.0003	
13 Jul 2024			0.112	0.0002	0.0004	
19 Jul 2024			0.062		0.0003	
27 Jul 2024			0.104		0.0004	
04 Aug 2024	0.05		0.092	0.0002	0.0004	
09 Aug 2024	0.05		0.095		0.0003	
17 Aug 2024			0.107		0.0004	
24 Aug 2024		0.3	0.074		0.0003	
30 Aug 2024			0.049	0.0002	0.0003	
07 Sep 2024		0.3	0.062		0.0022	
15 Sep 2024			0.075		0.0003	
21 Sep 2024			0.032		0.0003	
27 Sep 2024			0.078	0.0002	0.0004	
06 Oct 2024			0.036		0.0002	
11 Oct 2024			0.045		0.0003	
18 Oct 2024		0.3	0.315	0.0002	0.0008	0.418
25 Oct 2024			0.029		0.0002	
01 Nov 2024	0.03		0.041	0.0002	0.0004	
08 Nov 2024			0.035	0.0002	0.0003	
08 Nov 2024	0.02		0.036		0.0006	
15 Nov 2024			0.031		0.0003	
22 Nov 2024			0.057	0.0002	0.0004	
30 Nov 2024		0.4			0.0003	

EPL99

Date	Nitrite + Nitrate as N	CN-	N	Al (F)	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ag (F)	Ag	Zn (F)	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
10 Jul 2024	3.13	0.019	4.6		0.443	0.0046	0.0053	0.0146	0.0155	0.0025	0.0044						
19 Jul 2024	3.14	0.010	4.4		0.806	0.0034	0.0048	0.0145	0.0157	0.0020	0.0045	1.12					0.003
28 Jul 2024	1.47		2.4		3.24	0.0034	0.0044	0.0131	0.0216		0.0026	3.50	0.0012				0.008
04 Aug 2024	1.36		2.2		1.78	0.0034	0.0040	0.0139	0.0169			2.12					0.005
09 Aug 2024	1.50		2.2		1.23	0.0037	0.0042	0.0136	0.0154		0.0015	1.18					0.003
17 Aug 2024	3.08		4.2		1.35	0.0040	0.0047	0.0136	0.0164		0.0014	1.16					0.005
24 Aug 2024	1.29		1.9		2.36	0.0040	0.0053	0.0114	0.0161	0.0011	0.0045	3.53	0.0016		0.00004		0.016
30 Aug 2024	9.12	0.142	17.0		2.78	0.0027	0.0044	0.0110	0.0160	0.0157	0.0352	5.22	0.0020				0.012
07 Sep 2024	6.91	0.066	10.1		0.756	0.0022	0.0028	0.0068	0.0085	0.0094	0.0210	0.849					
15 Sep 2024	0.07				1.07				0.0045	0.0045	0.0091	1.16	0.0028			0.008	0.012
21 Sep 2024	19.7	0.015	29.3		1.06	0.0025	0.0028	0.0055	0.0068	0.0017	0.0115	1.19					0.003
29 Sep 2024	16.9		22.6	0.035	0.850	0.0027	0.0028	0.0078	0.0090		0.0029	0.851					
06 Oct 2024	16.8		25.0	0.030	0.513	0.0030	0.0029	0.0076	0.0080		0.0025	0.422					
11 Oct 2024	40.3	0.225	58.4		1.30	0.0017	0.0022	0.0114	0.0147	0.0342	0.0527	2.56		0.00004	0.00004		0.005
18 Oct 2024	23.6	0.115	34.5		0.121			0.0829	0.0892	0.0021	0.0060						0.003
01 Nov 2024	26.2	0.027	46.0		0.995	0.0011	0.0013	0.0559	0.0579		0.0023	1.14					
08 Nov 2024	24.5	0.205	39.4		0.076	0.0016	0.0017	0.0264	0.0278	0.0169	0.0241			0.00003	0.00003		

EPL71

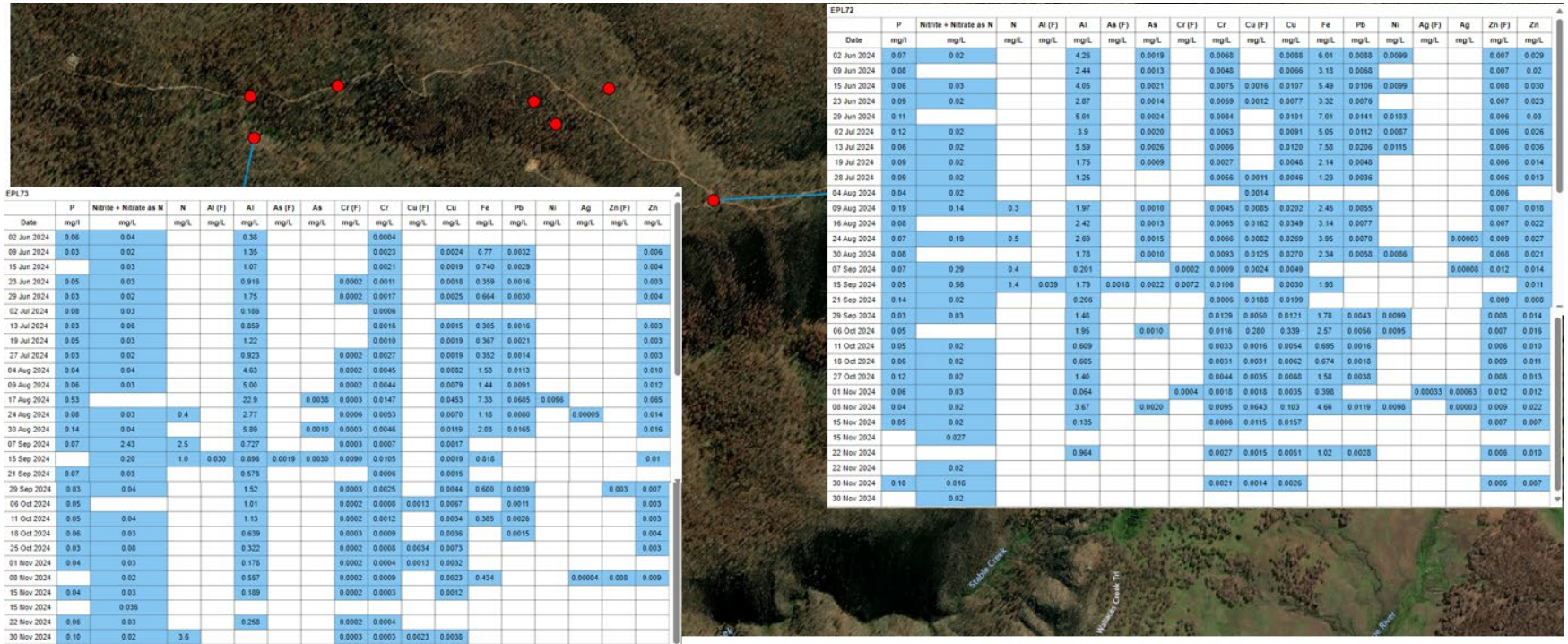
Date	Nitrite + Nitrate as N	N	Al	As	Cr (F)	Cr	Cu	Fe	Pb	Mn	Ni	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
02 Jun 2024			0.862			0.0012		0.873				
09 Jun 2024			0.834			0.0014	0.0012	0.807				0.004
16 Jun 2024			3.74	0.0013		0.0063	0.0049	4.42			0.0138	0.011
23 Jun 2024	0.06	0.4	1.15			0.0020	0.0017	1.18				0.005
29 Jun 2024			1.17			0.0019	0.0013	1.22				0.003
02 Jul 2024			2			0.0038	0.0027	2.16				0.004
13 Jul 2024	0.02		3.3	0.0012		0.0060	0.0043	3.66			0.0113	0.008
19 Jul 2024			1.92			0.0037	0.0026	2.26				0.005
27 Jul 2024			2.11			0.0039	0.0029					0.004
04 Aug 2024			1.07			0.0021		1.21				0.003
09 Aug 2024			0.734		0.0013	0.0013	0.0011	0.712				
17 Aug 2024	0.09		140	0.0158	0.0004	0.281	0.255	188	0.0268	3.47	0.777	0.374
24 Aug 2024		0.3	6.36	0.0011		0.0122	0.0090	8.24	0.0012		0.0263	0.015
30 Aug 2024			1.25			0.0023	0.0020	1.39				0.003
07 Sep 2024	0.09	0.5	8.25	0.0022		0.0161	0.0118	10.4	0.0023		0.0340	0.018
15 Sep 2024			2.94			0.0050	0.0043	3.23			0.0107	0.007
21 Sep 2024	0.11		0.278			0.0005						
29 Sep 2024			1.68			0.0030	0.0024	1.77				0.004
06 Oct 2024	0.02		1.67			0.0029	0.0022	1.89				0.004
11 Oct 2024			1.13			0.0019	0.0015	1.20				0.003
18 Oct 2024	3.51	4.2	3.50	0.0016	0.0003	0.0059	0.0059	4.02	0.0011		0.0167	0.012
25 Oct 2024			1.22			0.0017	0.0016	1.16				0.003
01 Nov 2024			0.708			0.0013	0.0011	0.654				
08 Nov 2024			0.739			0.0016		0.733				
15 Nov 2024			2.00	0.0012		0.0030	0.0030	2.09				0.004
22 Nov 2024			1.01	0.0009		0.0017	0.0016	1.07				
30 Nov 2024	2.81	3.8					0.0011					
30 Nov 2024	2.86											

EPL101

Date	Nitrite + Nitrate as N	CN-	N	Al (F)	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ni	Ag (F)	Ag	Zn (F)	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
13 Jul 2024	0.24		0.7		0.601	0.0016	0.0020	0.0070	0.0079		0.0014	0.459						0.003
19 Jul 2024	0.38		0.7		0.227	0.0016	0.0019	0.0060	0.0061									0.003
09 Aug 2024	0.89		1.6		0.110	0.0018	0.0020	0.0122	0.0128		0.0011							
17 Aug 2024	0.63		2.1		2.69	0.0016	0.0031	0.0124	0.0178		0.0047	3.17	0.0019	0.0086				0.012
24 Aug 2024	0.24		0.9		1.42	0.0016	0.0020	0.0103	0.0134		0.0026	1.85						0.008
30 Aug 2024			0.5	0.031	1.37	0.0024	0.0032	0.0098	0.0122		0.0028	1.63						0.009
07 Sep 2024	0.78		2.3	0.033	5.31	0.0016	0.0037	0.0080	0.0174	0.0011	0.0083	7.09	0.0037	0.0187				0.025
15 Sep 2024	6.12	0.028	9.2	0.028	1.03	0.0022	0.0026	0.0071	0.0090	0.0058	0.0136	0.978			0.00003	0.00004		0.003
28 Sep 2024	0.84		1.3		0.508	0.0039	0.0041	0.0067	0.0075	0.0011	0.0016	0.503						0.004
06 Oct 2024	1.09		1.7		0.774	0.0017	0.0019	0.0058	0.0069	0.0012	0.0019	0.761					0.003	0.005
11 Oct 2024	1.88		2.5		0.105	0.0015	0.0015	0.0061	0.0065	0.0012	0.0014						0.003	0.004
18 Oct 2024	6.15		7.8	0.034	13.0	0.0025	0.0067	0.0095	0.0300	0.0014	0.0182	15.7	0.0085	0.0462				0.057
25 Oct 2024	9.11		12.4	0.049	0.489	0.0041	0.0044	0.0203	0.0232		0.0017	0.349						0.003
01 Nov 2024	7.06		8.8	0.042	0.178	0.0041	0.0044	0.0232	0.0246		0.0014							
08 Nov 2024	13.6		18.3	0.028	0.638	0.0046	0.0047	0.0210	0.0232		0.0018	0.648						
15 Nov 2024	5.97		7.9	0.028	0.237	0.0027	0.0027	0.0124	0.0133		0.0013							
15 Nov 2024	12.4																	
22 Nov 2024	3.17		4.8	0.036	0.258	0.0026	0.0028	0.0090	0.0098		0.0011							
22 Nov 2024	8.28																	
30 Nov 2024	6.33		8.0			0.0030	0.0030	0.0036	0.0037	0.0011								
30 Nov 2024	6.49																	

EPL100

Date	Nitrite + Nitrate as N	N	Al (F)	Al	As (F)	As	Cr (F)	Cr	Cu	Fe	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
19 Jul 2024	0.19	0.6		0.436	0.0015	0.0021	0.0068	0.0073	0.0013	0.464	0.004
28 Jul 2024	0.33	0.5		0.450	0.0015	0.0019	0.0044	0.0052		0.356	
04 Aug 2024	0.25	0.4		0.264	0.0017	0.0019	0.0048	0.0054			
09 Aug 2024	0.20	0.5		0.311	0.0017	0.0021	0.0047	0.0056			
17 Aug 2024	0.20	0.6		0.768	0.0019	0.0032	0.0048	0.0062	0.0011	0.474	
24 Aug 2024	0.34	1.1		0.802	0.0019	0.0030	0.0062	0.0080	0.0015	0.923	0.006
30 Aug 2024	0.19	0.9	0.033	0.607	0.0019	0.0024	0.0088	0.0097	0.0014	0.512	0.003
07 Sep 2024		1.1		0.568		0.0025	0.0083	0.0094	0.0013	0.468	0.003
15 Sep 2024				0.069				0.0005			
21 Sep 2024	0.20	1.0	0.030	0.398	0.0020	0.0024	0.0082	0.0087	0.0014		0.004
29 Sep 2024	0.85	1.4		0.861	0.0022	0.0026	0.0048	0.0060	0.0015	0.810	0.004
06 Oct 2024	1.16	1.6		0.211	0.0021	0.0024	0.0045	0.0046			
11 Oct 2024	1.21	1.7		0.260	0.0021	0.0022	0.0043	0.0048			
18 Oct 2024	0.81	1.3	0.073	0.711	0.0028	0.0032	0.0037	0.0051	0.0021	0.633	0.008
25 Oct 2024	3.57	4.5	0.036	0.390	0.0023	0.0024	0.0071	0.0083			
01 Nov 2024	2.75	3.8		0.252	0.0023	0.0026	0.0075	0.0083			
08 Nov 2024	1.77	2.5		0.164	0.0026	0.0026	0.0066	0.0075			
15 Nov 2024	2.35	3.2		0.655	0.0026	0.0037	0.0080	0.0092	0.0015	0.696	0.003
15 Nov 2024	2.57										
22 Nov 2024	1.69	2.3		0.870	0.0026	0.0040	0.0072	0.0089	0.0017	0.717	0.003
22 Nov 2024	1.78										
30 Nov 2024	3.05	4.0			0.0024	0.0025	0.0057	0.0061			
30 Nov 2024	5.68										

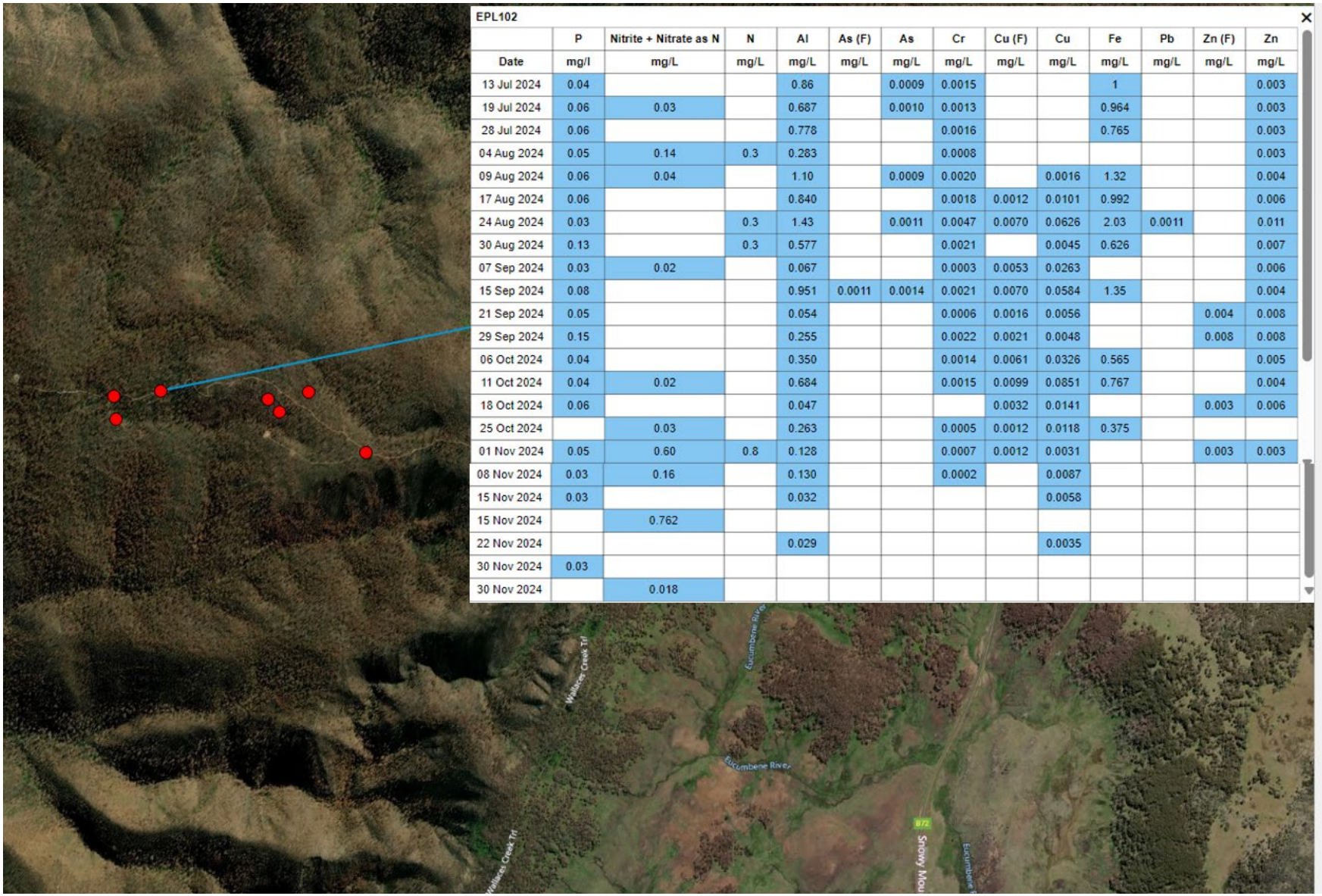


EPL73

	P	Nitrite + Nitrate as N	N	Al (F)	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
02 Jun 2024	0.06	0.04			0.38				0.0004								
09 Jun 2024	0.03	0.02			1.35				0.0023		0.0024	0.77	0.0032				0.006
15 Jun 2024		0.03			1.07				0.0021		0.0019	0.740	0.0029				0.004
23 Jun 2024	0.05	0.03			0.916			0.0002	0.0011		0.0018	0.359	0.0016				0.003
29 Jun 2024	0.03	0.02			1.75			0.0002	0.0017		0.0025	0.664	0.0030				0.004
02 Jul 2024	0.08	0.03			0.186				0.0006								
13 Jul 2024	0.03	0.06			0.859				0.0016		0.0015	0.305	0.0016				0.003
19 Jul 2024	0.05	0.03			1.22				0.0010		0.0019	0.367	0.0021				0.003
27 Jul 2024	0.03	0.02			0.923			0.0002	0.0027		0.0019	0.352	0.0014				0.003
04 Aug 2024	0.04	0.04			4.63			0.0002	0.0045		0.0082	1.53	0.0113				0.010
09 Aug 2024	0.06	0.03			5.00			0.0002	0.0044		0.0079	1.44	0.0091				0.012
17 Aug 2024	0.53				22.9		0.0038	0.0003	0.0147		0.0453	7.33	0.0685	0.0096			0.065
24 Aug 2024	0.08	0.03	0.4		2.77			0.0006	0.0053		0.0070	1.18	0.0080		0.00005		0.014
30 Aug 2024	0.14	0.04			5.89		0.0010	0.0003	0.0046		0.0119	2.03	0.0165				0.016
07 Sep 2024	0.07	2.43	2.5		0.727			0.0003	0.0007		0.0017						
15 Sep 2024		0.20	1.0	0.030	0.896	0.0019	0.0030	0.0090	0.0105		0.0019	0.818					0.01
21 Sep 2024	0.07	0.03			0.578				0.0006		0.0015						
29 Sep 2024	0.03	0.04			1.52			0.0003	0.0025		0.0044	0.600	0.0039			0.003	0.007
06 Oct 2024	0.05				1.01			0.0002	0.0008	0.0013	0.0067		0.0011				0.003
11 Oct 2024	0.05	0.04			1.13			0.0002	0.0012		0.0034	0.385	0.0026				0.003
18 Oct 2024	0.06	0.03			0.639			0.0003	0.0009		0.0036		0.0015				0.004
25 Oct 2024	0.03	0.08			0.322			0.0002	0.0008	0.0034	0.0073						0.003
01 Nov 2024	0.04	0.03			0.178			0.0002	0.0004	0.0013	0.0032						
08 Nov 2024		0.02			0.557			0.0002	0.0009		0.0023	0.434			0.00004	0.008	0.009
15 Nov 2024	0.04	0.03			0.189			0.0002	0.0003		0.0012						
15 Nov 2024		0.036															
22 Nov 2024	0.06	0.03			0.258			0.0002	0.0004								
30 Nov 2024	0.10	0.02	3.6					0.0003	0.0003	0.0023	0.0038						
30 Nov 2024		0.026															

EPL72

	P	Nitrite + Nitrate as N	N	Al (F)	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ni	Ag (F)	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
02 Jun 2024	0.07	0.02			4.26		0.0019		0.0068		0.0068	6.01	0.0088	0.0099			0.007	0.029
09 Jun 2024	0.08				2.44		0.0013		0.0048		0.0066	3.18	0.0068				0.007	0.02
15 Jun 2024	0.06	0.03			4.05		0.0021		0.0075	0.0016	0.0107	5.49	0.0106	0.0099			0.008	0.030
23 Jun 2024	0.09	0.02			2.87		0.0014		0.0059	0.0012	0.0077	3.32	0.0076				0.007	0.023
29 Jun 2024	0.11				5.01		0.0024		0.0084		0.0101	7.01	0.0141	0.0103			0.006	0.03
02 Jul 2024	0.12	0.02			3.9		0.0020		0.0063		0.0091	5.05	0.0112	0.0087			0.006	0.026
13 Jul 2024	0.06	0.02			5.59		0.0026		0.0086		0.0120	7.58	0.0206	0.0115			0.006	0.036
19 Jul 2024	0.09	0.02			1.75		0.0009		0.0027		0.0048	2.14	0.0048				0.006	0.014
28 Jul 2024	0.09	0.02			1.25				0.0056	0.0011	0.0046	1.23	0.0036				0.006	0.013
04 Aug 2024	0.04	0.02								0.0014							0.006	
09 Aug 2024	0.19	0.14	0.3		1.97		0.0010		0.0045	0.0085	0.0202	2.45	0.0055				0.007	0.018
16 Aug 2024	0.08				2.42		0.0013		0.0065	0.0162	0.0349	3.14	0.0077				0.007	0.022
24 Aug 2024	0.07	0.19	0.5		2.69		0.0015		0.0066	0.0082	0.0269	3.95	0.0070			0.00003	0.009	0.027
30 Aug 2024	0.08				1.78		0.0010		0.0093	0.0125	0.0270	2.34	0.0058	0.0086			0.008	0.021
07 Sep 2024	0.07	0.29	0.4		0.201			0.0002	0.0009	0.0024	0.0049					0.00008	0.012	0.014
15 Sep 2024	0.05	0.56	1.4	0.039	1.79	0.0018	0.0022	0.0072	0.0106		0.0030	1.93						0.011
21 Sep 2024	0.14	0.02			0.206				0.0006	0.0188	0.0199						0.009	0.008
29 Sep 2024	0.03	0.03			1.48				0.0129	0.0050	0.0121	1.78	0.0043	0.0099			0.008	0.014
06 Oct 2024	0.05				1.95		0.0010		0.0116	0.200	0.339	2.57	0.0056	0.0095			0.007	0.016
11 Oct 2024	0.05	0.02			0.609				0.0033	0.0016	0.0054	0.695	0.0016				0.006	0.010
18 Oct 2024	0.06	0.02			0.605				0.0031	0.0031	0.0062	0.674	0.0018				0.009	0.011
27 Oct 2024	0.12	0.02			1.40				0.0044	0.0035	0.0068	1.58	0.0038				0.008	0.013
01 Nov 2024	0.06	0.03			0.064			0.0004	0.0018	0.0018	0.0035	0.398			0.00033	0.00063	0.012	0.012
08 Nov 2024	0.04	0.02			3.67		0.0020		0.0095	0.0643	0.103	4.66	0.0119	0.0098		0.00003	0.009	0.022
15 Nov 2024	0.05	0.02			0.135				0.0006	0.0115	0.0157						0.007	0.007
15 Nov 2024		0.027																
22 Nov 2024					0.964				0.0027	0.0015	0.0051	1.02	0.0028				0.006	0.010
22 Nov 2024		0.02																
30 Nov 2024	0.10	0.016							0.0021	0.0014	0.0026						0.006	0.007
30 Nov 2024		0.02																



EPL102

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr	Cu (F)	Cu	Fe	Pb	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
13 Jul 2024	0.04			0.86		0.0009	0.0015			1			0.003
19 Jul 2024	0.06	0.03		0.687		0.0010	0.0013			0.964			0.003
28 Jul 2024	0.06			0.778			0.0016			0.765			0.003
04 Aug 2024	0.05	0.14	0.3	0.283			0.0008						0.003
09 Aug 2024	0.06	0.04		1.10		0.0009	0.0020		0.0016	1.32			0.004
17 Aug 2024	0.06			0.840			0.0018	0.0012	0.0101	0.992			0.006
24 Aug 2024	0.03		0.3	1.43		0.0011	0.0047	0.0070	0.0626	2.03	0.0011		0.011
30 Aug 2024	0.13		0.3	0.577			0.0021		0.0045	0.626			0.007
07 Sep 2024	0.03	0.02		0.067			0.0003	0.0053	0.0263				0.006
15 Sep 2024	0.08			0.951	0.0011	0.0014	0.0021	0.0070	0.0584	1.35			0.004
21 Sep 2024	0.05			0.054			0.0006	0.0016	0.0056			0.004	0.008
29 Sep 2024	0.15			0.255			0.0022	0.0021	0.0048			0.008	0.008
06 Oct 2024	0.04			0.350			0.0014	0.0061	0.0326	0.565			0.005
11 Oct 2024	0.04	0.02		0.684			0.0015	0.0099	0.0851	0.767			0.004
18 Oct 2024	0.06			0.047				0.0032	0.0141			0.003	0.006
25 Oct 2024		0.03		0.263			0.0005	0.0012	0.0118	0.375			
01 Nov 2024	0.05	0.60	0.8	0.128			0.0007	0.0012	0.0031			0.003	0.003
08 Nov 2024	0.03	0.16		0.130			0.0002		0.0087				
15 Nov 2024	0.03			0.032					0.0058				
15 Nov 2024		0.762											
22 Nov 2024				0.029					0.0035				
30 Nov 2024	0.03												
30 Nov 2024		0.018											

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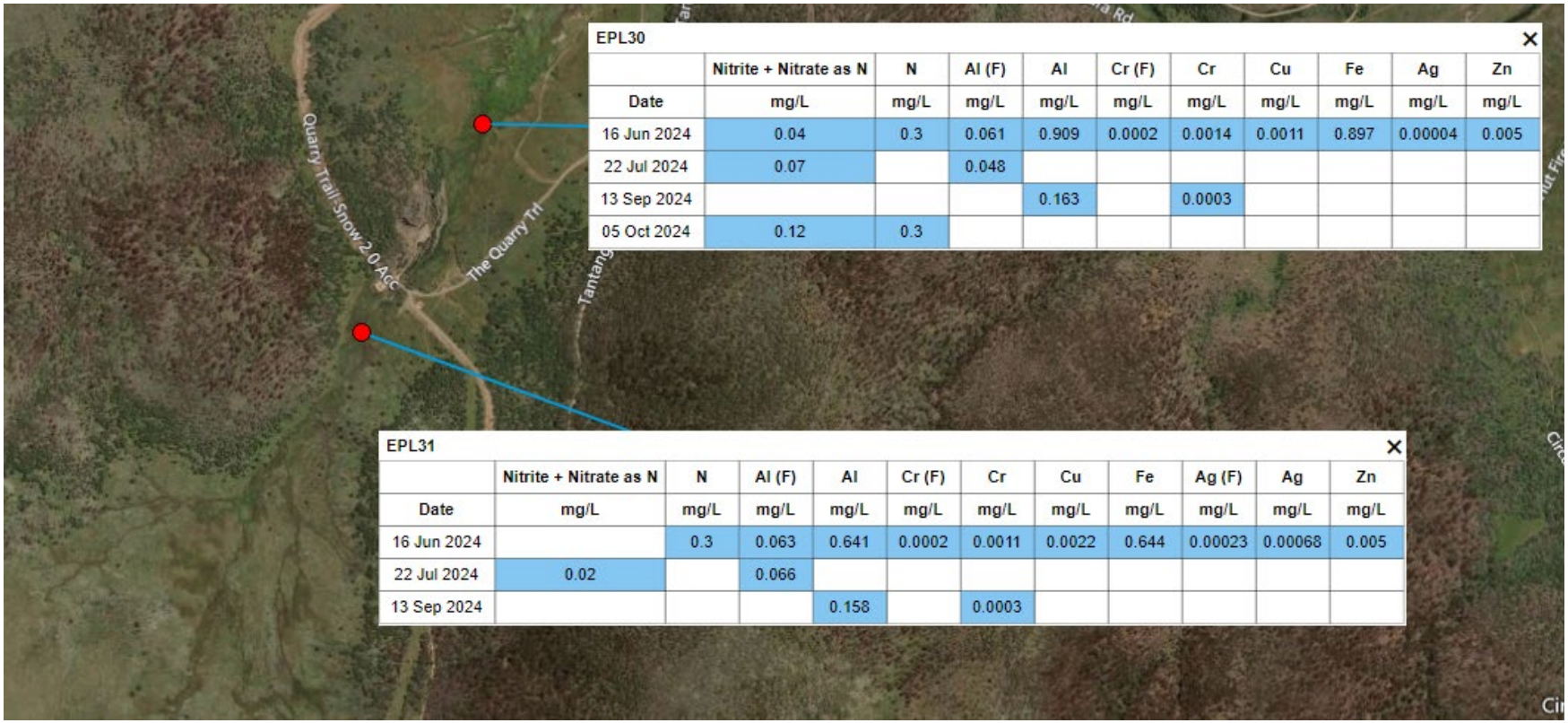
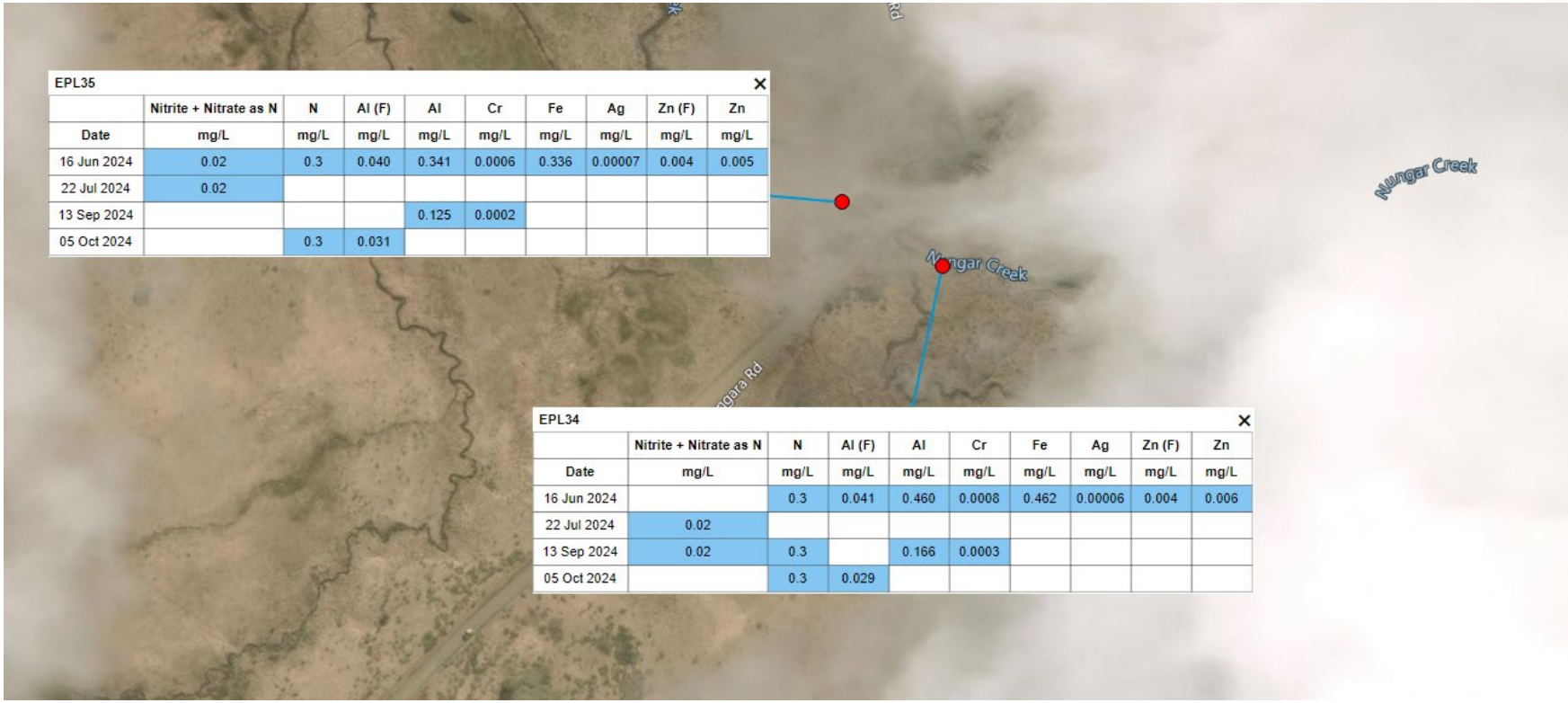


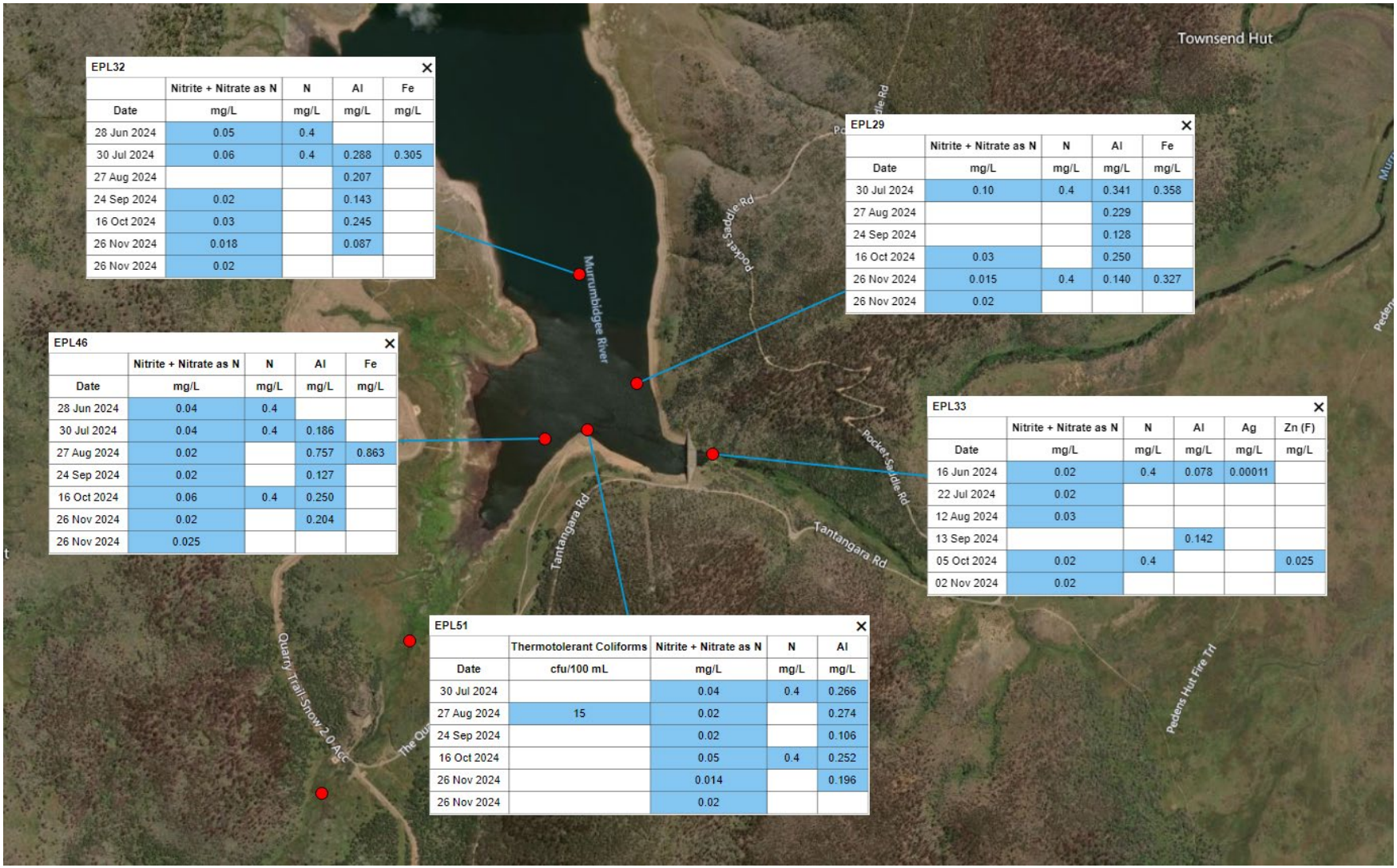
EPL30

	Nitrite + Nitrate as N	N	Al (F)	Al	Cr (F)	Cr	Cu	Fe	Ag	Zn
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
16 Jun 2024	0.04	0.3	0.061	0.909	0.0002	0.0014	0.0011	0.897	0.00004	0.005
22 Jul 2024	0.07		0.048							
13 Sep 2024				0.163		0.0003				
05 Oct 2024	0.12	0.3								

EPL31

	Nitrite + Nitrate as N	N	Al (F)	Al	Cr (F)	Cr	Cu	Fe	Ag (F)	Ag	Zn
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
16 Jun 2024		0.3	0.063	0.641	0.0002	0.0011	0.0022	0.644	0.00023	0.00068	0.005
22 Jul 2024	0.02		0.066								
13 Sep 2024				0.158		0.0003					


EPL35
Nitrite + Nitrate as N | N | Al (F) | Al | Cr | Fe | Ag | Zn (F) | Zn
Date | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L
16 Jun 2024 | 0.02 | 0.3 | 0.040 | 0.341 | 0.0006 | 0.336 | 0.00007 | 0.004 | 0.005
22 Jul 2024 | 0.02
13 Sep 2024 | | | | 0.125 | 0.0002
05 Oct 2024 | | 0.3 | 0.031
Nungar Creek
Nungar Creek
EPL34
Nitrite + Nitrate as N | N | Al (F) | Al | Cr | Fe | Ag | Zn (F) | Zn
Date | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L
16 Jun 2024 | | 0.3 | 0.041 | 0.460 | 0.0008 | 0.462 | 0.00006 | 0.004 | 0.006
22 Jul 2024 | 0.02
13 Sep 2024 | 0.02 | 0.3 | | 0.166 | 0.0003
05 Oct 2024 | | 0.3 | 0.029



EPL32

	Nitrite + Nitrate as N	N	Al	Fe
Date	mg/L	mg/L	mg/L	mg/L
28 Jun 2024	0.05	0.4		
30 Jul 2024	0.06	0.4	0.288	0.305
27 Aug 2024			0.207	
24 Sep 2024	0.02		0.143	
16 Oct 2024	0.03		0.245	
26 Nov 2024	0.018		0.087	
26 Nov 2024	0.02			

EPL29

	Nitrite + Nitrate as N	N	Al	Fe
Date	mg/L	mg/L	mg/L	mg/L
30 Jul 2024	0.10	0.4	0.341	0.358
27 Aug 2024			0.229	
24 Sep 2024			0.128	
16 Oct 2024	0.03		0.250	
26 Nov 2024	0.015	0.4	0.140	0.327
26 Nov 2024	0.02			

EPL46

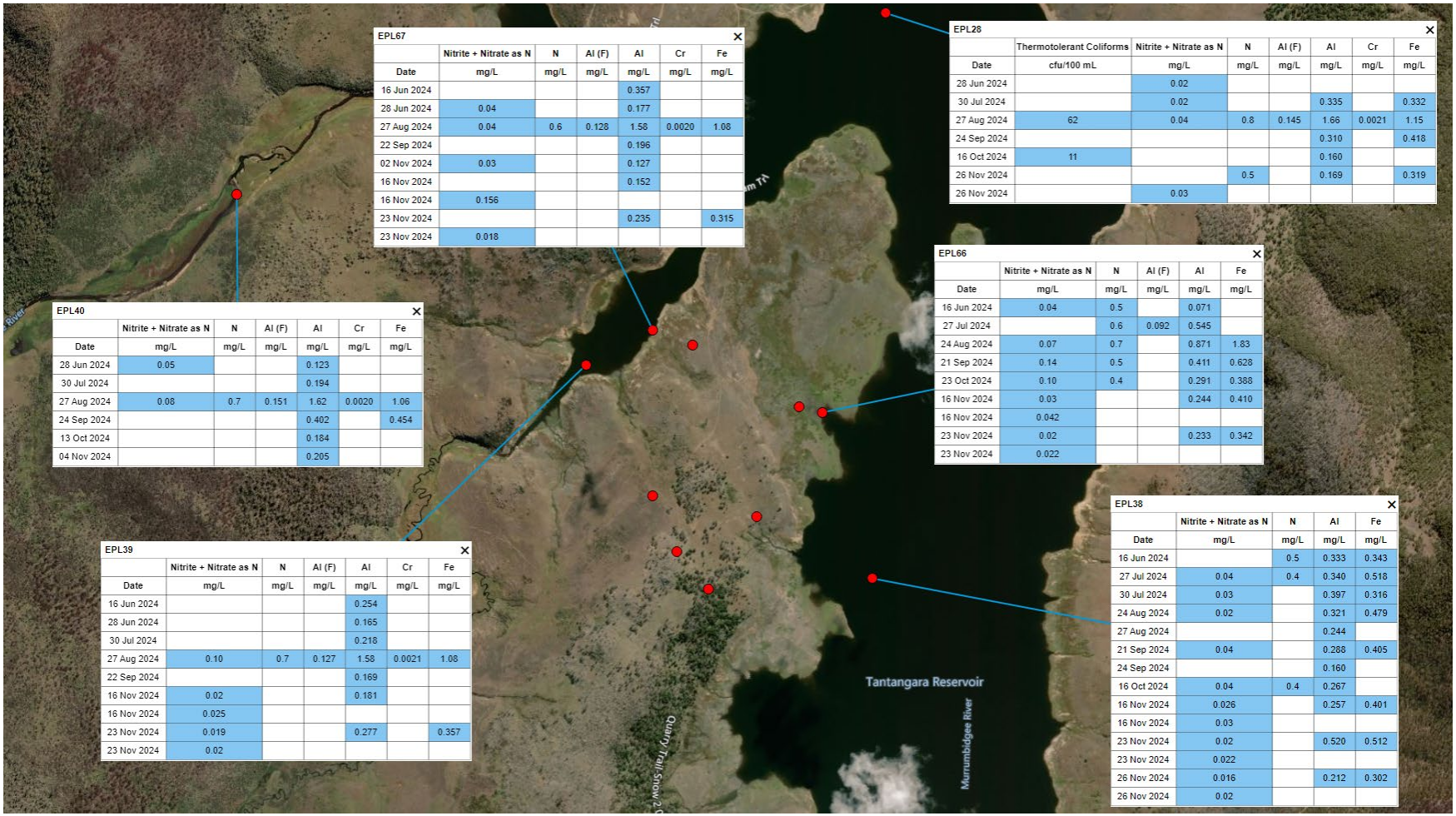
	Nitrite + Nitrate as N	N	Al	Fe
Date	mg/L	mg/L	mg/L	mg/L
28 Jun 2024	0.04	0.4		
30 Jul 2024	0.04	0.4	0.186	
27 Aug 2024	0.02		0.757	0.863
24 Sep 2024	0.02		0.127	
16 Oct 2024	0.06	0.4	0.250	
26 Nov 2024	0.02		0.204	
26 Nov 2024	0.025			

EPL33

	Nitrite + Nitrate as N	N	Al	Ag	Zn (F)
Date	mg/L	mg/L	mg/L	mg/L	mg/L
16 Jun 2024	0.02	0.4	0.078	0.00011	
22 Jul 2024	0.02				
12 Aug 2024	0.03				
13 Sep 2024			0.142		
05 Oct 2024	0.02	0.4			0.025
02 Nov 2024	0.02				

EPL51

	Thermotolerant Coliforms	Nitrite + Nitrate as N	N	Al
Date	cfu/100 mL	mg/L	mg/L	mg/L
30 Jul 2024		0.04	0.4	0.266
27 Aug 2024	15	0.02		0.274
24 Sep 2024		0.02		0.106
16 Oct 2024		0.05	0.4	0.252
26 Nov 2024		0.014		0.196
26 Nov 2024		0.02		



EPL67

	Nitrite + Nitrate as N	N	Al (F)	Al	Cr	Fe
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
16 Jun 2024				0.357		
28 Jun 2024	0.04			0.177		
27 Aug 2024	0.04	0.6	0.128	1.58	0.0020	1.08
22 Sep 2024				0.196		
02 Nov 2024	0.03			0.127		
16 Nov 2024				0.152		
16 Nov 2024	0.156					
23 Nov 2024				0.235		0.315
23 Nov 2024	0.018					

EPL28

	Thermotolerant Coliforms	Nitrite + Nitrate as N	N	Al (F)	Al	Cr	Fe
Date	cfu/100 mL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
28 Jun 2024		0.02					
30 Jul 2024		0.02			0.335		0.332
27 Aug 2024	62	0.04	0.8	0.145	1.66	0.0021	1.15
24 Sep 2024					0.310		0.418
16 Oct 2024	11				0.160		
26 Nov 2024			0.5		0.169		0.319
26 Nov 2024		0.03					

EPL40

	Nitrite + Nitrate as N	N	Al (F)	Al	Cr	Fe
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
28 Jun 2024	0.05			0.123		
30 Jul 2024				0.194		
27 Aug 2024	0.08	0.7	0.151	1.62	0.0020	1.06
24 Sep 2024				0.402		0.454
13 Oct 2024				0.184		
04 Nov 2024				0.205		

EPL66

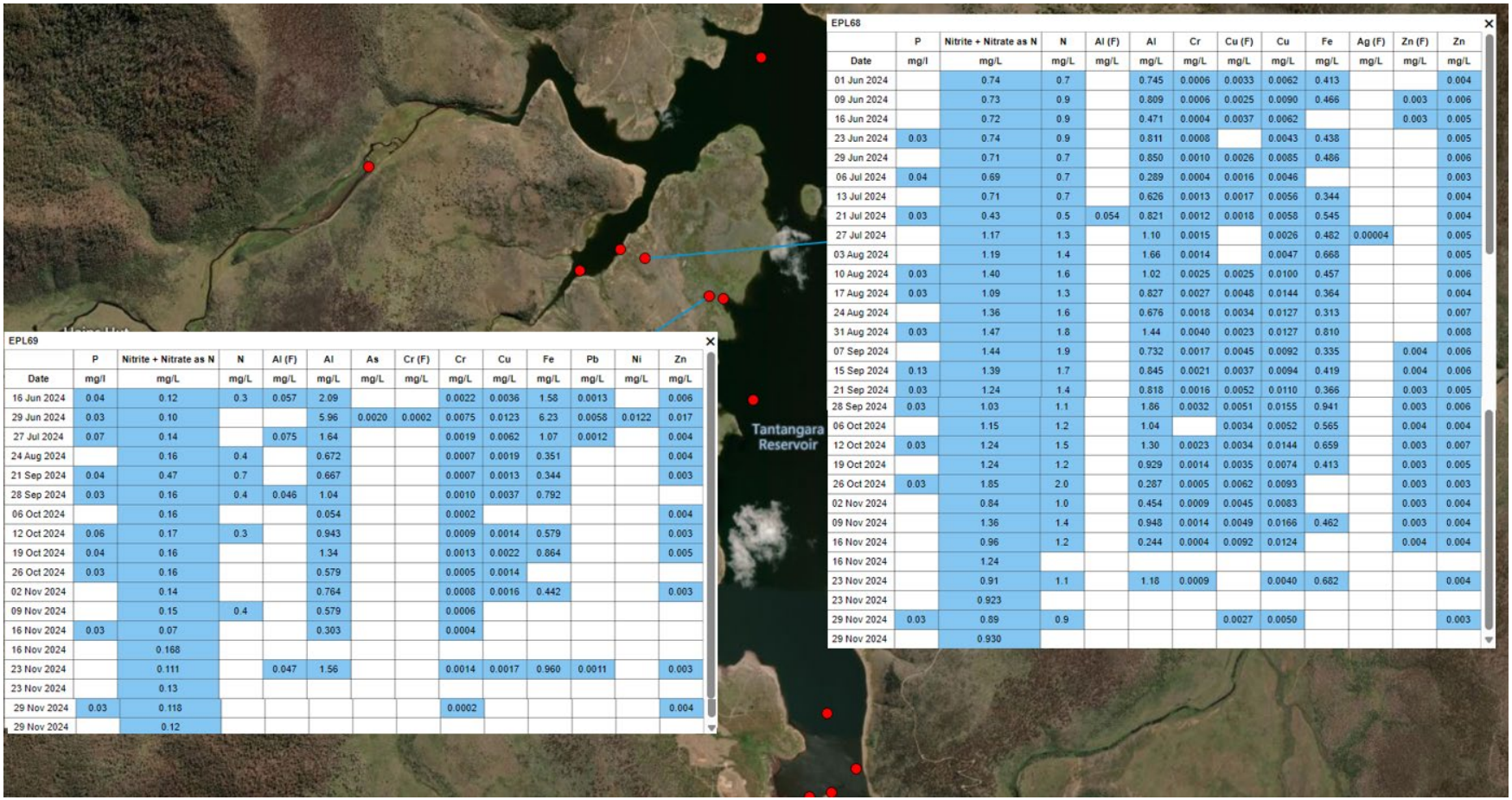
	Nitrite + Nitrate as N	N	Al (F)	Al	Fe
Date	mg/L	mg/L	mg/L	mg/L	mg/L
16 Jun 2024	0.04	0.5		0.071	
27 Jul 2024		0.6	0.092	0.545	
24 Aug 2024	0.07	0.7		0.871	1.83
21 Sep 2024	0.14	0.5		0.411	0.628
23 Oct 2024	0.10	0.4		0.291	0.388
16 Nov 2024	0.03			0.244	0.410
16 Nov 2024	0.042				
23 Nov 2024	0.02			0.233	0.342
23 Nov 2024	0.022				

EPL39

	Nitrite + Nitrate as N	N	Al (F)	Al	Cr	Fe
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
16 Jun 2024				0.254		
28 Jun 2024				0.165		
30 Jul 2024				0.218		
27 Aug 2024	0.10	0.7	0.127	1.58	0.0021	1.08
22 Sep 2024				0.169		
16 Nov 2024	0.02			0.181		
16 Nov 2024	0.025					
23 Nov 2024	0.019			0.277		0.357
23 Nov 2024	0.02					

EPL38

	Nitrite + Nitrate as N	N	Al	Fe
Date	mg/L	mg/L	mg/L	mg/L
16 Jun 2024		0.5	0.333	0.343
27 Jul 2024	0.04	0.4	0.340	0.518
30 Jul 2024	0.03		0.397	0.316
24 Aug 2024	0.02		0.321	0.479
27 Aug 2024			0.244	
21 Sep 2024	0.04		0.288	0.405
24 Sep 2024			0.160	
16 Oct 2024	0.04	0.4	0.267	
16 Nov 2024	0.026		0.257	0.401
16 Nov 2024	0.03			
23 Nov 2024	0.02		0.520	0.512
23 Nov 2024	0.022			
26 Nov 2024	0.016		0.212	0.302
26 Nov 2024	0.02			

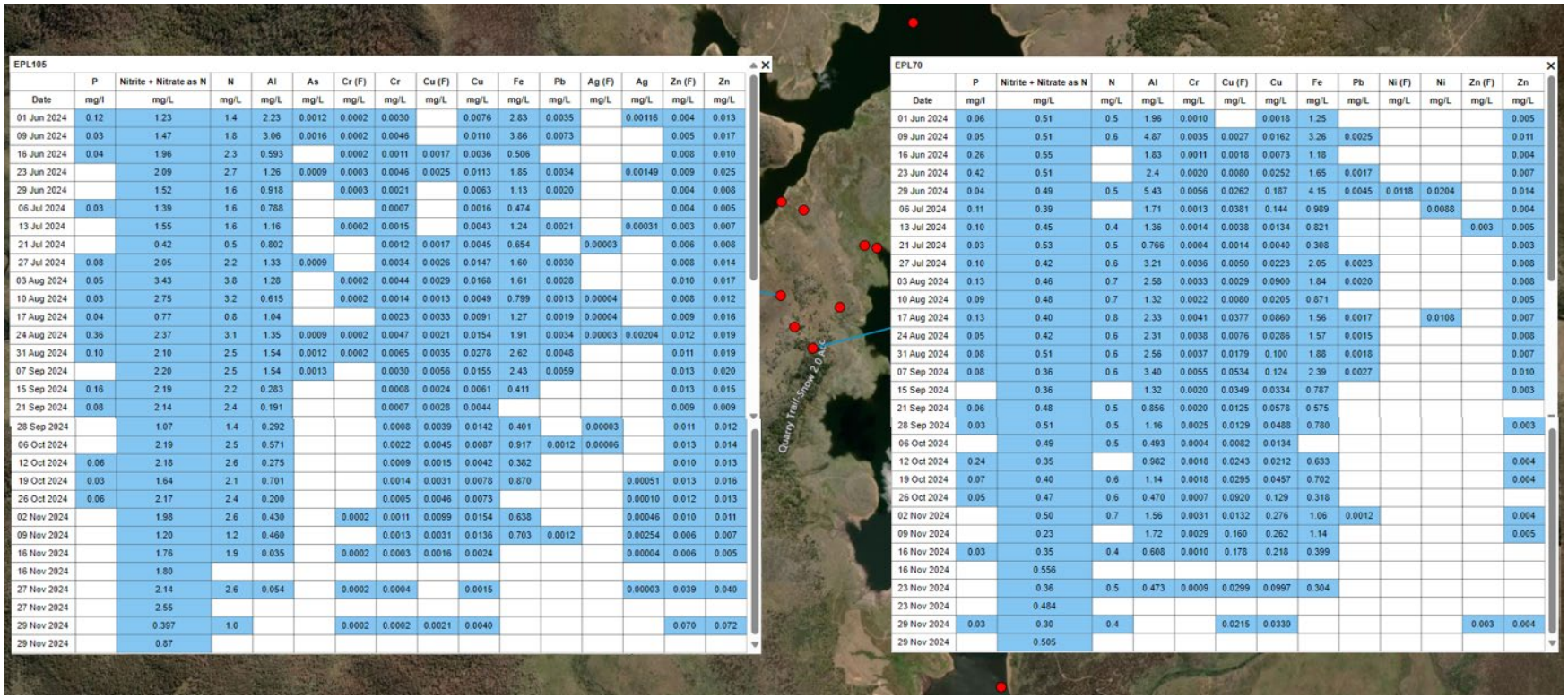


EPL68

	P	Nitrite + Nitrate as N	N	Al (F)	Al	Cr	Cu (F)	Cu	Fe	Ag (F)	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
01 Jun 2024		0.74	0.7		0.745	0.0006	0.0033	0.0062	0.413			0.004
09 Jun 2024		0.73	0.9		0.809	0.0006	0.0025	0.0090	0.466		0.003	0.006
16 Jun 2024		0.72	0.9		0.471	0.0004	0.0037	0.0062			0.003	0.005
23 Jun 2024	0.03	0.74	0.9		0.811	0.0008		0.0043	0.438			0.005
29 Jun 2024		0.71	0.7		0.850	0.0010	0.0026	0.0085	0.486			0.006
06 Jul 2024	0.04	0.69	0.7		0.289	0.0004	0.0016	0.0046				0.003
13 Jul 2024		0.71	0.7		0.626	0.0013	0.0017	0.0056	0.344			0.004
21 Jul 2024	0.03	0.43	0.5	0.054	0.821	0.0012	0.0018	0.0058	0.545			0.004
27 Jul 2024		1.17	1.3		1.10	0.0015		0.0026	0.482	0.00004		0.005
03 Aug 2024		1.19	1.4		1.66	0.0014		0.0047	0.668			0.005
10 Aug 2024	0.03	1.40	1.6		1.02	0.0025	0.0025	0.0100	0.457			0.006
17 Aug 2024	0.03	1.09	1.3		0.827	0.0027	0.0048	0.0144	0.364			0.004
24 Aug 2024		1.36	1.6		0.676	0.0018	0.0034	0.0127	0.313			0.007
31 Aug 2024	0.03	1.47	1.8		1.44	0.0040	0.0023	0.0127	0.810			0.008
07 Sep 2024		1.44	1.9		0.732	0.0017	0.0045	0.0092	0.335		0.004	0.006
15 Sep 2024	0.13	1.39	1.7		0.845	0.0021	0.0037	0.0094	0.419		0.004	0.006
21 Sep 2024	0.03	1.24	1.4		0.818	0.0016	0.0052	0.0110	0.366		0.003	0.005
28 Sep 2024	0.03	1.03	1.1		1.86	0.0032	0.0051	0.0155	0.941		0.003	0.006
06 Oct 2024		1.15	1.2		1.04		0.0034	0.0052	0.565		0.004	0.004
12 Oct 2024	0.03	1.24	1.5		1.30	0.0023	0.0034	0.0144	0.659		0.003	0.007
19 Oct 2024		1.24	1.2		0.929	0.0014	0.0035	0.0074	0.413		0.003	0.005
26 Oct 2024	0.03	1.85	2.0		0.287	0.0005	0.0062	0.0093			0.003	0.003
02 Nov 2024		0.84	1.0		0.454	0.0009	0.0045	0.0083			0.003	0.004
09 Nov 2024		1.36	1.4		0.948	0.0014	0.0049	0.0166	0.462		0.003	0.004
16 Nov 2024		0.96	1.2		0.244	0.0004	0.0092	0.0124			0.004	0.004
16 Nov 2024		1.24										
23 Nov 2024		0.91	1.1		1.18	0.0009		0.0040	0.682			0.004
23 Nov 2024		0.923										
29 Nov 2024	0.03	0.89	0.9				0.0027	0.0050				0.003
29 Nov 2024		0.930										

EPL69

	P	Nitrite + Nitrate as N	N	Al (F)	Al	As	Cr (F)	Cr	Cu	Fe	Pb	Ni	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
16 Jun 2024	0.04	0.12	0.3	0.057	2.09			0.0022	0.0036	1.58	0.0013		0.006
29 Jun 2024	0.03	0.10			5.96	0.0020	0.0002	0.0075	0.0123	6.23	0.0058	0.0122	0.017
27 Jul 2024	0.07	0.14		0.075	1.64			0.0019	0.0062	1.07	0.0012		0.004
24 Aug 2024		0.16	0.4		0.672			0.0007	0.0019	0.351			0.004
21 Sep 2024	0.04	0.47	0.7		0.667			0.0007	0.0013	0.344			0.003
28 Sep 2024	0.03	0.16	0.4	0.046	1.04			0.0010	0.0037	0.792			
06 Oct 2024		0.16			0.054			0.0002					0.004
12 Oct 2024	0.06	0.17	0.3		0.943			0.0009	0.0014	0.579			0.003
19 Oct 2024	0.04	0.16			1.34			0.0013	0.0022	0.864			0.005
26 Oct 2024	0.03	0.16			0.579			0.0005	0.0014				
02 Nov 2024		0.14			0.764			0.0008	0.0016	0.442			0.003
09 Nov 2024		0.15	0.4		0.579			0.0006					
16 Nov 2024	0.03	0.07			0.303			0.0004					
16 Nov 2024		0.168											
23 Nov 2024		0.111		0.047	1.56			0.0014	0.0017	0.960	0.0011		0.003
23 Nov 2024		0.13											
29 Nov 2024	0.03	0.118						0.0002					0.004
29 Nov 2024		0.12											

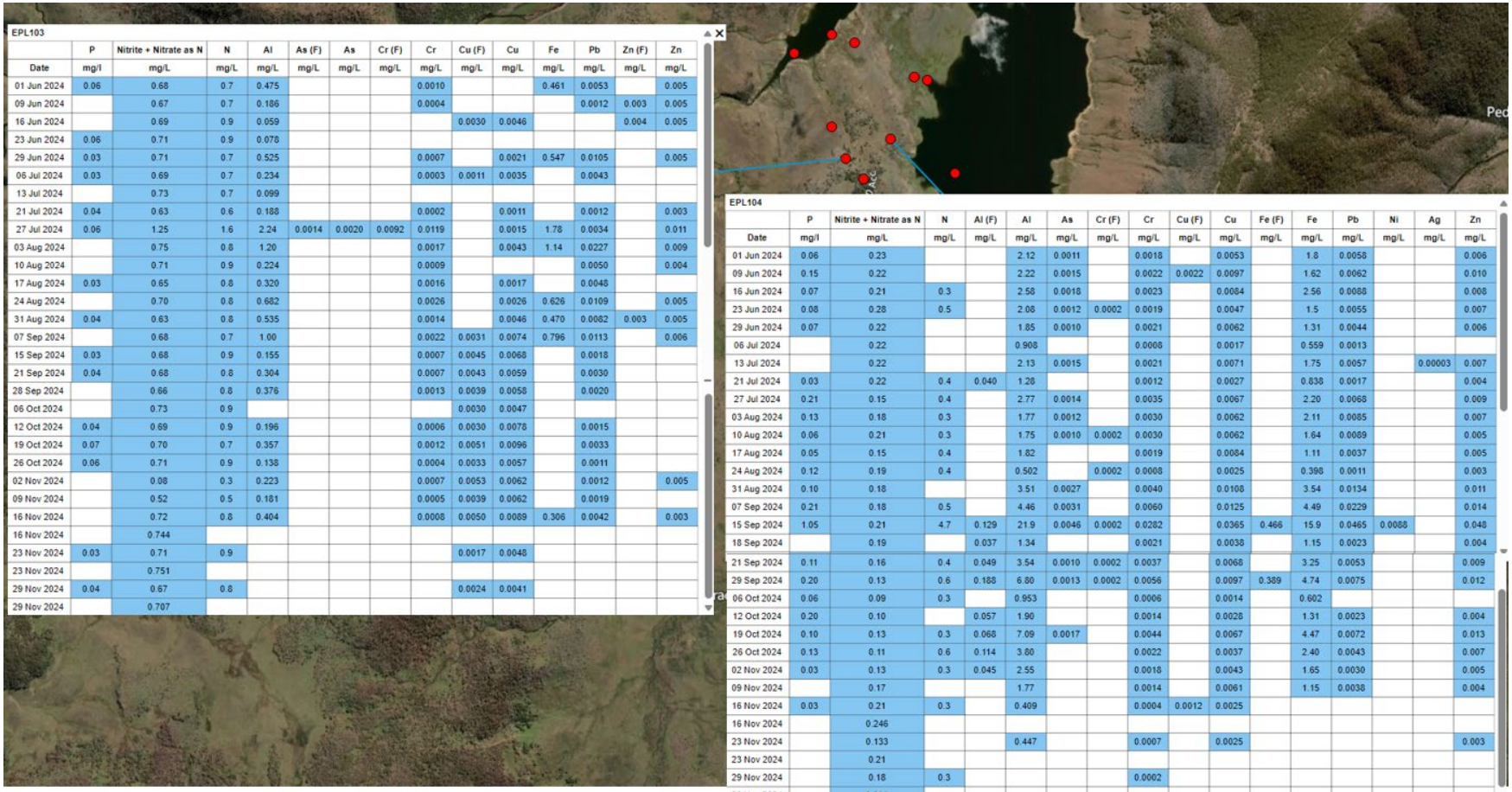


EPL105

	P	Nitrite + Nitrate as N	N	Al	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ag (F)	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
01 Jun 2024	0.12	1.23	1.4	2.23	0.0012	0.0002	0.0030		0.0076	2.83	0.0035		0.00116	0.004	0.013
09 Jun 2024	0.03	1.47	1.8	3.06	0.0016	0.0002	0.0046		0.0110	3.86	0.0073			0.005	0.017
16 Jun 2024	0.04	1.96	2.3	0.593		0.0002	0.0011	0.0017	0.0036	0.506				0.008	0.010
23 Jun 2024		2.09	2.7	1.26	0.0009	0.0003	0.0046	0.0025	0.0113	1.85	0.0034		0.00149	0.009	0.025
29 Jun 2024		1.52	1.6	0.918		0.0003	0.0021		0.0063	1.13	0.0020			0.004	0.008
06 Jul 2024	0.03	1.39	1.6	0.788			0.0007		0.0016	0.474				0.004	0.005
13 Jul 2024		1.55	1.6	1.16		0.0002	0.0015		0.0043	1.24	0.0021		0.00031	0.003	0.007
21 Jul 2024		0.42	0.5	0.802			0.0012	0.0017	0.0045	0.654		0.00003		0.006	0.008
27 Jul 2024	0.08	2.05	2.2	1.33	0.0009		0.0034	0.0026	0.0147	1.60	0.0030			0.008	0.014
03 Aug 2024	0.05	3.43	3.8	1.28		0.0002	0.0044	0.0029	0.0168	1.61	0.0028			0.010	0.017
10 Aug 2024	0.03	2.75	3.2	0.615		0.0002	0.0014	0.0013	0.0049	0.799	0.0013	0.00004		0.008	0.012
17 Aug 2024	0.04	0.77	0.8	1.04			0.0023	0.0033	0.0091	1.27	0.0019	0.00004		0.009	0.016
24 Aug 2024	0.36	2.37	3.1	1.35	0.0009	0.0002	0.0047	0.0021	0.0154	1.91	0.0034	0.00003	0.00204	0.012	0.019
31 Aug 2024	0.10	2.10	2.5	1.54	0.0012	0.0002	0.0065	0.0035	0.0278	2.62	0.0048			0.011	0.019
07 Sep 2024		2.20	2.5	1.54	0.0013		0.0030	0.0056	0.0155	2.43	0.0059			0.013	0.020
15 Sep 2024	0.16	2.19	2.2	0.283			0.0008	0.0024	0.0061	0.411				0.013	0.015
21 Sep 2024	0.08	2.14	2.4	0.191			0.0007	0.0028	0.0044					0.009	0.009
28 Sep 2024		1.07	1.4	0.292			0.0008	0.0039	0.0142	0.401		0.00003		0.011	0.012
06 Oct 2024		2.19	2.5	0.571			0.0022	0.0045	0.0087	0.917	0.0012	0.00006		0.013	0.014
12 Oct 2024	0.06	2.18	2.6	0.275			0.0009	0.0015	0.0042	0.382				0.010	0.013
19 Oct 2024	0.03	1.64	2.1	0.701			0.0014	0.0031	0.0078	0.870			0.00051	0.013	0.016
26 Oct 2024	0.06	2.17	2.4	0.200			0.0005	0.0046	0.0073				0.00010	0.012	0.013
02 Nov 2024		1.98	2.6	0.430		0.0002	0.0011	0.0099	0.0154	0.638			0.00046	0.010	0.011
09 Nov 2024		1.20	1.2	0.460			0.0013	0.0031	0.0136	0.703	0.0012		0.00254	0.006	0.007
16 Nov 2024		1.76	1.9	0.035		0.0002	0.0003	0.0016	0.0024				0.00004	0.006	0.005
16 Nov 2024		1.80													
27 Nov 2024		2.14	2.6	0.054		0.0002	0.0004		0.0015				0.00003	0.039	0.040
27 Nov 2024		2.55													
29 Nov 2024		0.397	1.0			0.0002	0.0002	0.0021	0.0040					0.070	0.072
29 Nov 2024		0.87													

EPL70

	P	Nitrite + Nitrate as N	N	Al	Cr	Cu (F)	Cu	Fe	Pb	Ni (F)	Ni	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
01 Jun 2024	0.06	0.51	0.5	1.96	0.0010		0.0018	1.25					0.005
09 Jun 2024	0.05	0.51	0.6	4.87	0.0035	0.0027	0.0162	3.26	0.0025				0.011
16 Jun 2024	0.26	0.55		1.83	0.0011	0.0018	0.0073	1.18					0.004
23 Jun 2024	0.42	0.51		2.4	0.0020	0.0080	0.0252	1.65	0.0017				0.007
29 Jun 2024	0.04	0.49	0.5	5.43	0.0056	0.0262	0.187	4.15	0.0045	0.0118	0.0204		0.014
06 Jul 2024	0.11	0.39		1.71	0.0013	0.0381	0.144	0.989			0.0088		0.004
13 Jul 2024	0.10	0.45	0.4	1.36	0.0014	0.0038	0.0134	0.821				0.003	0.005
21 Jul 2024	0.03	0.53	0.5	0.766	0.0004	0.0014	0.0040	0.308					0.003
27 Jul 2024	0.10	0.42	0.6	3.21	0.0036	0.0050	0.0223	2.05	0.0023				0.008
03 Aug 2024	0.13	0.46	0.7	2.58	0.0033	0.0029	0.0900	1.84	0.0020				0.008
10 Aug 2024	0.09	0.48	0.7	1.32	0.0022	0.0080	0.0205	0.871					0.005
17 Aug 2024	0.13	0.40	0.8	2.33	0.0041	0.0377	0.0860	1.56	0.0017		0.0108		0.007
24 Aug 2024	0.05	0.42	0.6	2.31	0.0038	0.0076	0.0286	1.57	0.0015				0.008
31 Aug 2024	0.08	0.51	0.6	2.56	0.0037	0.0179	0.100	1.88	0.0018				0.007
07 Sep 2024	0.08	0.36	0.6	3.40	0.0055	0.0534	0.124	2.39	0.0027				0.010
15 Sep 2024		0.36		1.32	0.0020	0.0349	0.0334	0.787					0.003
21 Sep 2024	0.06	0.48	0.5	0.856	0.0020	0.0125	0.0578	0.575					
28 Sep 2024	0.03	0.51	0.5	1.16	0.0025	0.0129	0.0488	0.780					0.003
06 Oct 2024		0.49	0.5	0.493	0.0004	0.0082	0.0134						
12 Oct 2024	0.24	0.35		0.982	0.0018	0.0243	0.0212	0.633					0.004
19 Oct 2024	0.07	0.40	0.6	1.14	0.0018	0.0295	0.0457	0.702					0.004
26 Oct 2024	0.05	0.47	0.6	0.470	0.0007	0.0920	0.129	0.318					
02 Nov 2024		0.50	0.7	1.56	0.0031	0.0132	0.276	1.06	0.0012				0.004
09 Nov 2024		0.23		1.72	0.0029	0.160	0.262	1.14					0.005
16 Nov 2024	0.03	0.35	0.4	0.608	0.0010	0.178	0.218	0.399					
16 Nov 2024		0.556											
23 Nov 2024		0.36	0.5	0.473	0.0009	0.0299	0.0997	0.304					
23 Nov 2024		0.484											
29 Nov 2024	0.03	0.30	0.4			0.0215	0.0330					0.003	0.004
29 Nov 2024		0.505											



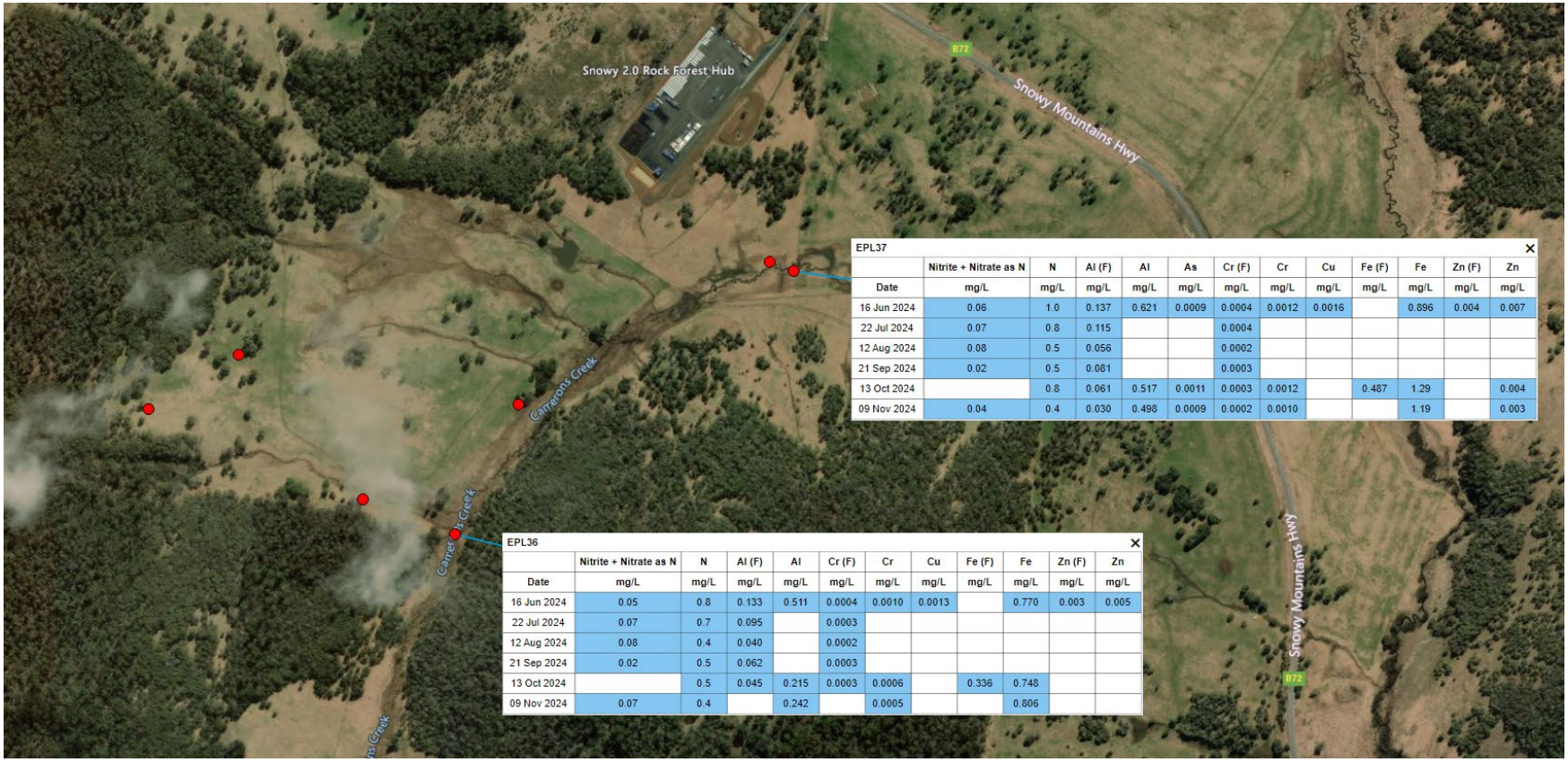
EPL103

	P	Nitrite + Nitrate as N	N	Al	As (F)	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
01 Jun 2024	0.06	0.68	0.7	0.475				0.0010			0.461	0.0053		0.005
09 Jun 2024		0.67	0.7	0.186				0.0004				0.0012	0.003	0.005
16 Jun 2024		0.69	0.9	0.059					0.0030	0.0046			0.004	0.005
23 Jun 2024	0.06	0.71	0.9	0.078										
29 Jun 2024	0.03	0.71	0.7	0.525				0.0007		0.0021	0.547	0.0105		0.005
06 Jul 2024	0.03	0.69	0.7	0.234				0.0003	0.0011	0.0035		0.0043		
13 Jul 2024		0.73	0.7	0.099										
21 Jul 2024	0.04	0.63	0.6	0.188				0.0002		0.0011		0.0012		0.003
27 Jul 2024	0.06	1.25	1.6	2.24	0.0014	0.0020	0.0092	0.0119		0.0015	1.78	0.0034		0.011
03 Aug 2024		0.75	0.8	1.20				0.0017		0.0043	1.14	0.0227		0.009
10 Aug 2024		0.71	0.9	0.224				0.0009				0.0050		0.004
17 Aug 2024	0.03	0.65	0.8	0.320				0.0016		0.0017		0.0048		
24 Aug 2024		0.70	0.8	0.682				0.0026		0.0026	0.626	0.0109		0.005
31 Aug 2024	0.04	0.63	0.8	0.535				0.0014		0.0046	0.470	0.0082	0.003	0.005
07 Sep 2024		0.68	0.7	1.00				0.0022	0.0031	0.0074	0.796	0.0113		0.006
15 Sep 2024	0.03	0.68	0.9	0.155				0.0007	0.0045	0.0068		0.0018		
21 Sep 2024	0.04	0.68	0.8	0.304				0.0007	0.0043	0.0059		0.0030		
28 Sep 2024		0.66	0.8	0.376				0.0013	0.0039	0.0058		0.0020		
06 Oct 2024		0.73	0.9						0.0030	0.0047				
12 Oct 2024	0.04	0.69	0.9	0.196				0.0006	0.0030	0.0078		0.0015		
19 Oct 2024	0.07	0.70	0.7	0.357				0.0012	0.0051	0.0096		0.0033		
26 Oct 2024	0.06	0.71	0.9	0.138				0.0004	0.0033	0.0057		0.0011		
02 Nov 2024		0.08	0.3	0.223				0.0007	0.0053	0.0062		0.0012		0.005
09 Nov 2024		0.52	0.5	0.181				0.0005	0.0039	0.0062		0.0019		
16 Nov 2024		0.72	0.8	0.404				0.0008	0.0050	0.0089	0.306	0.0042		0.003
16 Nov 2024		0.744												
23 Nov 2024	0.03	0.71	0.9						0.0017	0.0048				
23 Nov 2024		0.751												
29 Nov 2024	0.04	0.67	0.8						0.0024	0.0041				
29 Nov 2024		0.707												

EPL104

	P	Nitrite + Nitrate as N	N	Al (F)	Al	As	Cr (F)	Cr	Cu (F)	Cu	Fe (F)	Fe	Pb	Ni	Ag	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
01 Jun 2024	0.06	0.23			2.12	0.0011		0.0018		0.0053		1.8	0.0058			0.006
09 Jun 2024	0.15	0.22			2.22	0.0015		0.0022	0.0022	0.0097		1.62	0.0062			0.010
16 Jun 2024	0.07	0.21	0.3		2.58	0.0018		0.0023		0.0084		2.56	0.0088			0.008
23 Jun 2024	0.08	0.28	0.5		2.08	0.0012	0.0002	0.0019		0.0047		1.5	0.0055			0.007
29 Jun 2024	0.07	0.22			1.85	0.0010		0.0021		0.0062		1.31	0.0044			0.006
06 Jul 2024		0.22			0.908			0.0008		0.0017		0.559	0.0013			
13 Jul 2024		0.22			2.13	0.0015		0.0021		0.0071		1.75	0.0057		0.00003	0.007
21 Jul 2024	0.03	0.22	0.4	0.040	1.26			0.0012		0.0027		0.838	0.0017			0.004
27 Jul 2024	0.21	0.15	0.4		2.77	0.0014		0.0035		0.0067		2.20	0.0068			0.009
03 Aug 2024	0.13	0.18	0.3		1.77	0.0012		0.0030		0.0062		2.11	0.0085			0.007
10 Aug 2024	0.06	0.21	0.3		1.75	0.0010	0.0002	0.0030		0.0062		1.64	0.0089			0.005
17 Aug 2024	0.05	0.15	0.4		1.82			0.0019		0.0084		1.11	0.0037			0.005
24 Aug 2024	0.12	0.19	0.4		0.502		0.0002	0.0008		0.0025		0.398	0.0011			0.003
31 Aug 2024	0.10	0.18			3.51	0.0027		0.0040		0.0108		3.54	0.0134			0.011
07 Sep 2024	0.21	0.18	0.5		4.46	0.0031		0.0060		0.0125		4.49	0.0229			0.014
15 Sep 2024	1.05	0.21	4.7	0.129	21.9	0.0046	0.0002	0.0282		0.0365	0.466	15.9	0.0465	0.0088		0.048
18 Sep 2024		0.19		0.037	1.34			0.0021		0.0038		1.15	0.0023			0.004
21 Sep 2024	0.11	0.16	0.4	0.049	3.54	0.0010	0.0002	0.0037		0.0068		3.25	0.0053			0.009
29 Sep 2024	0.20	0.13	0.6	0.188	6.80	0.0013	0.0002	0.0056		0.0097	0.389	4.74	0.0075			0.012
06 Oct 2024	0.06	0.09	0.3		0.953			0.0006		0.0014		0.602				
12 Oct 2024	0.20	0.10		0.057	1.90			0.0014		0.0028		1.31	0.0023			0.004
19 Oct 2024	0.10	0.13	0.3	0.068	7.09	0.0017		0.0044		0.0067		4.47	0.0072			0.013
26 Oct 2024	0.13	0.11	0.6	0.114	3.80			0.0022		0.0037		2.40	0.0043			0.007
02 Nov 2024	0.03	0.13	0.3	0.045	2.55			0.0018		0.0043		1.65	0.0030			0.005
09 Nov 2024		0.17			1.77			0.0014		0.0061		1.15	0.0038			0.004
16 Nov 2024	0.03	0.21	0.3		0.409			0.0004	0.0012	0.0025						
16 Nov 2024		0.246														
23 Nov 2024		0.133			0.447			0.0007		0.0025						0.003
23 Nov 2024		0.21														
29 Nov 2024		0.18	0.3					0.0002								
29 Nov 2024		0.203														

ROCK FOREST

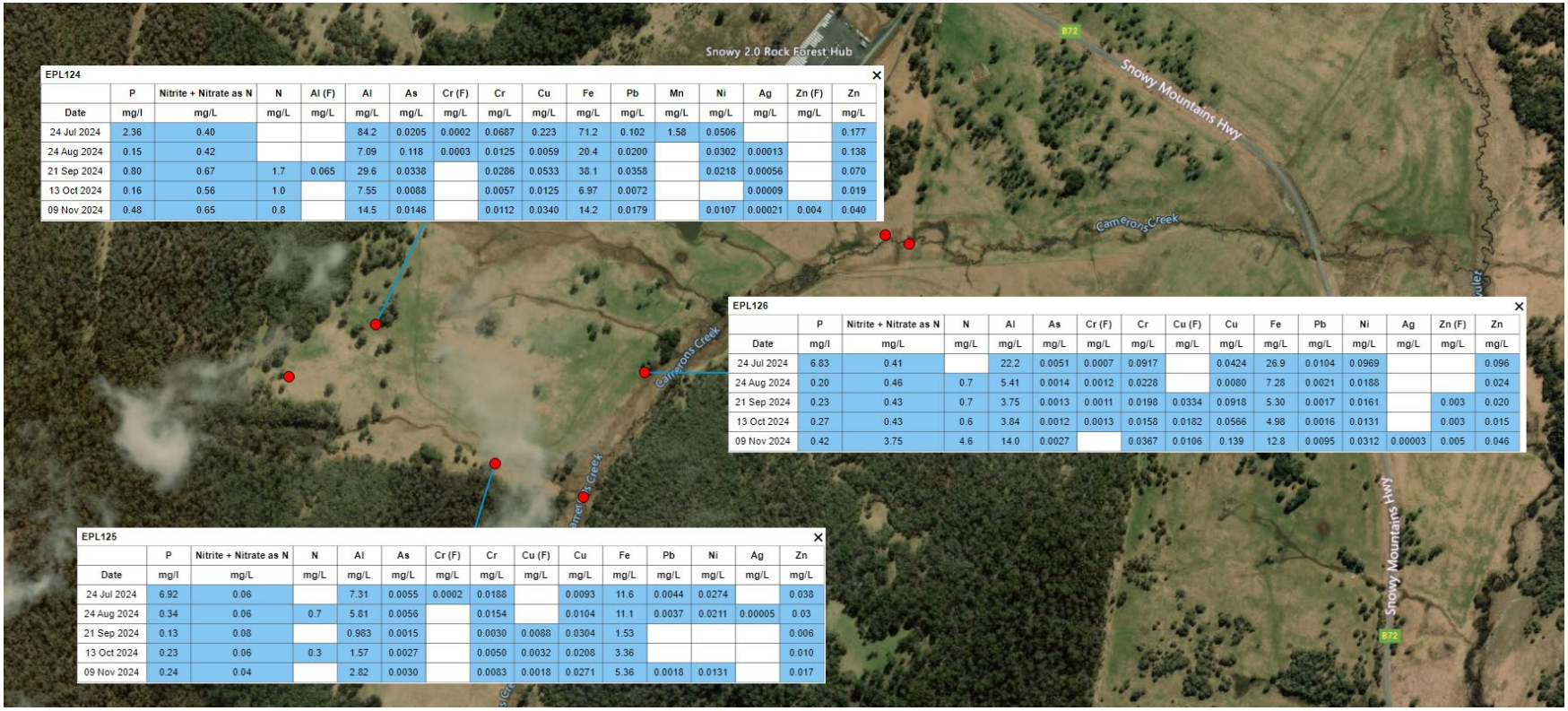


EPL37

	Nitrite + Nitrate as N	N	Al (F)	Al	As	Cr (F)	Cr	Cu	Fe (F)	Fe	Zn (F)	Zn
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
16 Jun 2024	0.06	1.0	0.137	0.621	0.0009	0.0004	0.0012	0.0016		0.896	0.004	0.007
22 Jul 2024	0.07	0.8	0.115			0.0004						
12 Aug 2024	0.08	0.5	0.056			0.0002						
21 Sep 2024	0.02	0.5	0.081			0.0003						
13 Oct 2024		0.8	0.061	0.517	0.0011	0.0003	0.0012		0.487	1.29		0.004
09 Nov 2024	0.04	0.4	0.030	0.498	0.0009	0.0002	0.0010			1.19		0.003

EPL36

	Nitrite + Nitrate as N	N	Al (F)	Al	Cr (F)	Cr	Cu	Fe (F)	Fe	Zn (F)	Zn
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
16 Jun 2024	0.05	0.8	0.133	0.511	0.0004	0.0010	0.0013		0.770	0.003	0.005
22 Jul 2024	0.07	0.7	0.095		0.0003						
12 Aug 2024	0.08	0.4	0.040		0.0002						
21 Sep 2024	0.02	0.5	0.062		0.0003						
13 Oct 2024		0.5	0.045	0.215	0.0003	0.0006		0.336	0.748		
09 Nov 2024	0.07	0.4		0.242		0.0005			0.806		



EPL124

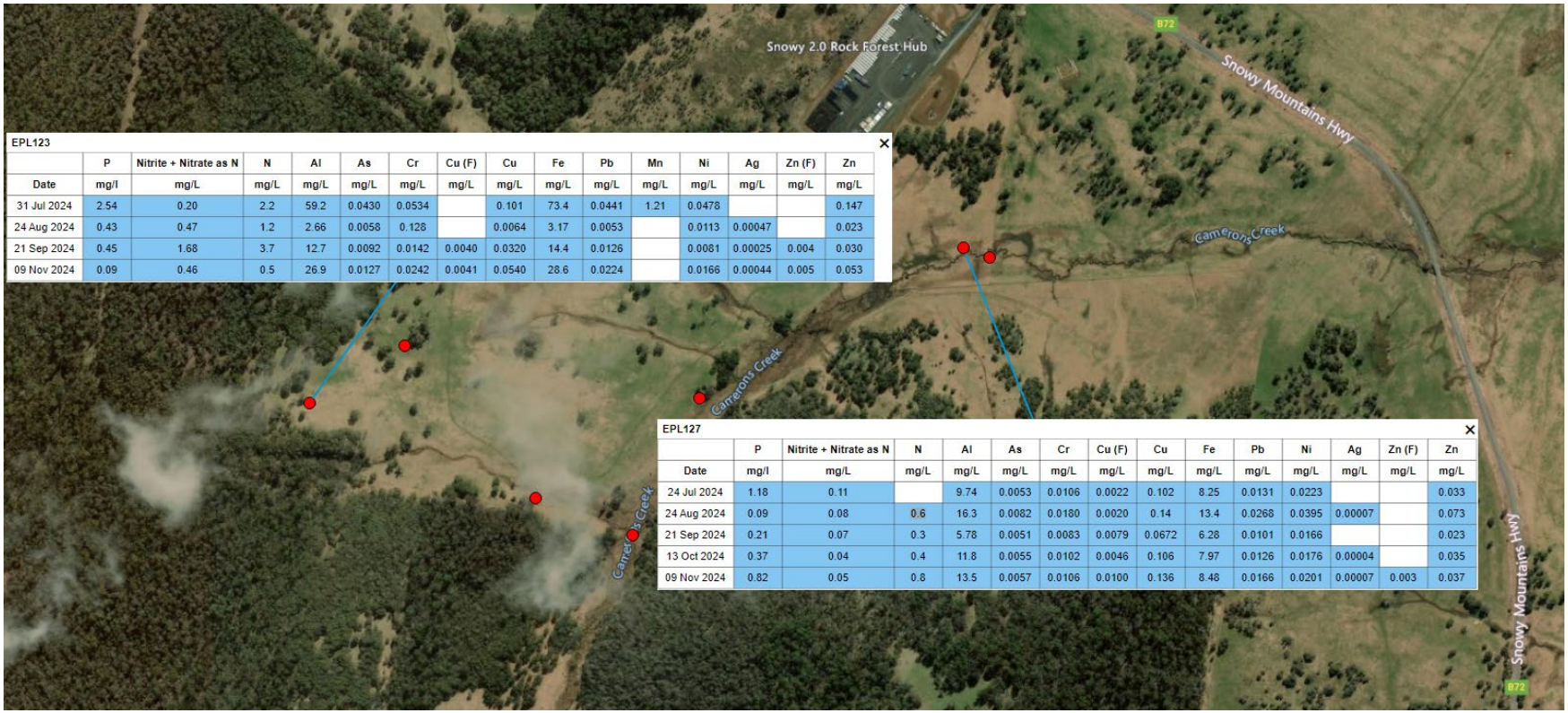
	P	Nitrite + Nitrate as N	N	Al (F)	Al	As	Cr (F)	Cr	Cu	Fe	Pb	Mn	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
24 Jul 2024	2.36	0.40			84.2	0.0205	0.0002	0.0687	0.223	71.2	0.102	1.58	0.0506			0.177
24 Aug 2024	0.15	0.42			7.09	0.118	0.0003	0.0125	0.0059	20.4	0.0200		0.0302	0.00013		0.138
21 Sep 2024	0.80	0.67	1.7	0.065	29.6	0.0338		0.0286	0.0533	38.1	0.0358		0.0218	0.00056		0.070
13 Oct 2024	0.16	0.56	1.0		7.55	0.0088		0.0057	0.0125	6.97	0.0072			0.00009		0.019
09 Nov 2024	0.48	0.65	0.8		14.5	0.0146		0.0112	0.0340	14.2	0.0179		0.0107	0.00021	0.004	0.040

EPL126

	P	Nitrite + Nitrate as N	N	Al	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
24 Jul 2024	6.83	0.41		22.2	0.0051	0.0007	0.0917		0.0424	26.9	0.0104	0.0969			0.096
24 Aug 2024	0.20	0.46	0.7	5.41	0.0014	0.0012	0.0228		0.0080	7.28	0.0021	0.0188			0.024
21 Sep 2024	0.23	0.43	0.7	3.75	0.0013	0.0011	0.0198	0.0334	0.0918	5.30	0.0017	0.0161		0.003	0.020
13 Oct 2024	0.27	0.43	0.6	3.84	0.0012	0.0013	0.0158	0.0182	0.0566	4.98	0.0016	0.0131		0.003	0.015
09 Nov 2024	0.42	3.75	4.6	14.0	0.0027		0.0367	0.0106	0.139	12.8	0.0095	0.0312	0.00003	0.005	0.046

EPL125

	P	Nitrite + Nitrate as N	N	Al	As	Cr (F)	Cr	Cu (F)	Cu	Fe	Pb	Ni	Ag	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
24 Jul 2024	6.92	0.06		7.31	0.0055	0.0002	0.0188		0.0093	11.6	0.0044	0.0274		0.038
24 Aug 2024	0.34	0.06	0.7	5.81	0.0056		0.0154		0.0104	11.1	0.0037	0.0211	0.00005	0.03
21 Sep 2024	0.13	0.08		0.983	0.0015		0.0030	0.0088	0.0304	1.53				0.006
13 Oct 2024	0.23	0.06	0.3	1.57	0.0027		0.0050	0.0032	0.0208	3.36				0.010
09 Nov 2024	0.24	0.04		2.82	0.0030		0.0083	0.0018	0.0271	5.36	0.0018	0.0131		0.017



EPL123

	P	Nitrite + Nitrate as N	N	Al	As	Cr	Cu (F)	Cu	Fe	Pb	Mn	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
31 Jul 2024	2.54	0.20	2.2	59.2	0.0430	0.0534		0.101	73.4	0.0441	1.21	0.0478			0.147
24 Aug 2024	0.43	0.47	1.2	2.66	0.0058	0.128		0.0064	3.17	0.0053		0.0113	0.00047		0.023
21 Sep 2024	0.45	1.68	3.7	12.7	0.0092	0.0142	0.0040	0.0320	14.4	0.0126		0.0081	0.00025	0.004	0.030
09 Nov 2024	0.09	0.46	0.5	26.9	0.0127	0.0242	0.0041	0.0540	28.6	0.0224		0.0166	0.00044	0.005	0.053

EPL127

	P	Nitrite + Nitrate as N	N	Al	As	Cr	Cu (F)	Cu	Fe	Pb	Ni	Ag	Zn (F)	Zn
Date	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
24 Jul 2024	1.18	0.11		9.74	0.0053	0.0106	0.0022	0.102	8.25	0.0131	0.0223			0.033
24 Aug 2024	0.09	0.08	0.6	16.3	0.0082	0.0180	0.0020	0.14	13.4	0.0268	0.0395	0.00007		0.073
21 Sep 2024	0.21	0.07	0.3	5.78	0.0051	0.0083	0.0079	0.0672	6.28	0.0101	0.0166			0.023
13 Oct 2024	0.37	0.04	0.4	11.8	0.0055	0.0102	0.0046	0.106	7.97	0.0126	0.0176	0.00004		0.035
09 Nov 2024	0.82	0.05	0.8	13.5	0.0057	0.0106	0.0100	0.136	8.48	0.0166	0.0201	0.00007	0.003	0.037

APPENDIX D – EPL SAMPLING POINTS SPECIFICATIONS

SURFACE WATER

SITE	EPL POINT	FRECUENCY
LobsHole	EPL 5	Monthly
LobsHole	EPL 6	Monthly
LobsHole	EPL 8	Monthly
LobsHole	EPL9	Monthly
LobsHole	EPL 12	Monthly
LobsHole	EPL 14	Monthly
LobsHole	EPL 15	Monthly
LobsHole	EPL16	Monthly
LobsHole	EPL 24	Monthly
Marica	EPL 26	Monthly
Marica	EPL 27	Monthly
Tantangara	EPL 30	Monthly
Tantangara	EPL 31	Monthly
Tantangara	EPL 33	Monthly
Tantangara	EPL 34	Monthly
Tantangara	EPL 35	Monthly
Rock Forest	EPL 36	Monthly
Rock Forest	EPL 37	Monthly
LobsHole	EPL 52	Monthly
LobsHole	EPL 53	Monthly
LobsHole	EPL 54	Monthly
LobsHole	EPL 55	Monthly
Tantangara	EPL 59*	Monthly
Tantangara	EPL 60*	Monthly
Tantangara	EPL 61*	Monthly
Tantangara	EPL 62*	Monthly
Tantangara	EPL 63*	Monthly
Tantangara	EPL 64*	Monthly
Tantangara	EPL 65*	Monthly

Tantangara	EPL 66	Monthly
Tantangara	EPL 67	Monthly
Marica	EPL 71	Monthly
Rock Forest	EPL 79*	Monthly
Rock Forest	EPL 77*	Monthly
Rock Forest	EPL 78*	Monthly
Rock Forest	EPL 79*	Monthly
LobsHole	EPL 84	Monthly
LobsHole	EPL 85	Monthly
LobsHole	EPL 86	Monthly

* Not triggered yet

GROUND WATER

SITE	EPL POINT	FRECUENCY
LobsHole	EPL 1	Quarterly
LobsHole	EPL 2	Quarterly
LobsHole	EPL 4	Quarterly
LobsHole	EPL 25	Quarterly
LobsHole	EPL 56	Monthly
LobsHole	EPL 57	Monthly
LobsHole	EPL 58	Monthly
Tantangara	EPL 68	Monthly
Tantangara	EPL 69	Monthly
Tantangara	EPL 70	Monthly
Marica	EPL 72	Monthly
Marica	EPL 73	Monthly
LobsHole	EPL 80	Monthly
LobsHole	EPL 81	Monthly
LobsHole	EPL 82	Monthly
LobsHole	EPL 83	Monthly
LosHole	EPL 87	Monthly
LobsHole	EPL 88	Monthly
LobsHole	EPL 89	Monthly
LobsHole	EPL 90	Monthly

LobsHole	EPL 91	Monthly
LobsHole	EPL 92	Monthly
LobsHole	EPL 93	Monthly
LobsHole	EPL 94	Monthly
LobsHole	EPL 95	Monthly
LobsHole	EPL 96	Monthly
LobsHole	EPL 97	Monthly

RESERVOIR WATER EPL SAMPLING POINTS

SITE	EPL POINT	FRECUENCY
LobsHole	EPL 10	Monthly
LobsHole	EPL 11	Monthly
Tantangara	EPL 28	Monthly
Tantangara	EPL 29	Monthly
Tantangara	EPL 32	Monthly
Tantangara	EPL 38	Monthly
Tantangara	EPL 39	Monthly
Tantangara	EPL 40	Monthly
LobsHole	EPL 41*	Monthly
Tantangara	EPL 46	Monthly
Tantangara	EPL 50	Monthly
Tantangara	EPL 51*	Monthly

*Discharge points

SURFACE WATER EPL WQO

ANALYTE	UNIT	WQO
pH	-	6.5-8
Electrical Conductivity	µS/cm	30-350
Oxidation Reduction Potential	mV	-
Temperature	°C	-
Dissolved Oxygen	%saturation	90-110
Turbidity	NTU	2-25
TSS	mg/L	-
Hardness as CaCO3	mg/L	-
Ammonia as N	µg/L	13
Nitrite+Nitrate as N (NOx)	µg/L	15
Kjeldahi Nitrogen Total	µg/L	-
Nitrogen (Total)	µg/L	250

Reactive Phosphorus	µg/L	15
Phosphorus (Total)	µg/L	20
Cyanide Total	µg/L	4
Oil and Grease	mg/L	5
Aluminium (dissolved)	µg/L	27
Aluminium (total)	µg/L	-
Arsenic (dissolved)	µg/L	0.8
Arsenic (total)	µg/L	-
Chorium Chromium (III+VI) (dissolved)	µg/L	0.01
Chromium (III+VI) (total)	µg/L	1
Copper (dissolved)	µg/L	1
Copper (total)	µg/L	-
Iron (dissolved)	µg/L	50
Iron (total)	µg/L	-
Lead (dissolved)	µg/L	1
Lead (total)	µg/L	-
Manganese (dissolved)	µg/L	1,200
Maganese (total)	µg/L	-
Nickel (dissolved)	µg/L	8
Nickel (total)	µg/L	-
Silver (dissolved)	µg/L	0.02
Silver (total)	µg/L	-
Zinc (dissolved)	µg/L	2.4
Zinc (total)	µg/L	-

GROUND WATER EPL WQO

ANALYTE	UNIT	WQO
pH	-	6.5-8
Electrical Conductivity	µS/cm	30-350
Oxidation Reduction Potential	mV	-

Temperature	°C	-
Dissolved Oxygen	%saturation	-
Turbidity	NTU	-
TSS	mg/L	-
Hardness as CaCO3	mg/L	-
Ammonia as N	µg/L	13
Nitrite+Nitrate as N (NOx)	µg/L	15
Kjeldahi Nitrogen Total	µg/L	-
Nitrogen (Total)	µg/L	250
Reactive Phosphorus	µg/L	15
Phosphorus (Total)	µg/L	20
Cyanide Total	µg/L	4
Oil and Grease	mg/L	5
Aluminium (dissolved)	µg/L	27
Aluminium (total)	µg/L	-
Arsenic (dissolved)	µg/L	0.8
Arsenic (total)	µg/L	-
Chorium Chromium (III+VI) (dissolved)	µg/L	0.01
Chromium (III+VI) (total)	µg/L	1
Copper (dissolved)	µg/L	1
Copper (total)	µg/L	-
Iron (dissolved)	µg/L	50
Iron (total)	µg/L	-
Lead (dissolved)	µg/L	1
Lead (total)	µg/L	-
Manganese (dissolved)	µg/L	1,200
Maganese (total)	µg/L	-
Nickel (dissolved)	µg/L	8
Nickel (total)	µg/L	-
Silver (dissolved)	µg/L	0.02

Silver (total)	µg/L	-
Zinc (dissolved)	µg/L	2.4
Zinc (total)	µg/L	-

RESERVOIR WQO

ANALYTE	UNIT	WQO
pH	-	6.5-8
Electrical Conductivity	µS/cm	20-30
Oxidation Reduction Potential	mV	-
Temperature	°C	-
Dissolved Oxygen	%saturation	90-110
Turbidity	NTU	1-20
TSS	mg/L	-
Hardness as CaCO3	mg/L	-
Ammonia as N	µg/L	10
Nitrite+Nitrate as N (NOx)	µg/L	10
Kjeldahi Nitrogen Total	µg/L	-
Nitrogen (Total)	µg/L	350
Reactive Phosphorus	µg/L	5
Phosphorus (Total)	µg/L	10
Cyanide Total	µg/L	7
Oil and Grease	mg/L	5
Aluminium (dissolved)	µg/L	55
Arsenic (dissolved)	µg/L	13
Chorium Chromium (III+VI) (dissolved)	µg/L	1
Copper (dissolved)	µg/L	14
Iron (dissolved)	µg/L	300
Lead (dissolved)	µg/L	3.4
Manganese (dissolved)	µg/L	1,900

Nickel (dissolved)	µg/L	11
Silver (dissolved)	µg/L	0.05
Zinc (dissolved)	µg/L	8
Faecal Coliforms	CFU/100mL	10/100^
Biochemical Oxygen Demand	mg/L	1/5^

DISCHARGE POINTS WQO

ANALYTE	UNIT	WQO
pH	-	6.5-8.5
Electrical Conductivity	µS/cm	700(EPL41) / 200 (EPL50)
Oxidation Reduction Potential	mV	-
Temperature	°C	15
Dissolved Oxygen	%saturation	-
Turbidity	NTU	<25
TSS	mg/L	5/10
Hardness as CaCO3	mg/L	-
Ammonia as N	µg/L	200/2000^
Kjeldahi Nitrogen Total	µg/L	-
Nitrogen (Total)	µg/L	350/-^
Reactive Phosphorus	µg/L	100/300^
Phosphorus (Total)	µg/L	10
Cyanide Total	µg/L	2/5^
Oil and Grease	mg/L	5
Aluminium (dissolved)	µg/L	55
Arsenic (dissolved)	µg/L	13
Chorium Chromium (III+VI) (dissolved)	µg/L	1
Copper (dissolved)	µg/L	14
Iron (dissolved)	µg/L	300
Lead (dissolved)	µg/L	3.4

Manganese (dissolved)	µg/L	1,900
Nickel (dissolved)	µg/L	11
Silver (dissolved)	µg/L	0.05
Zinc (dissolved)	µg/L	8
Faecal Coliforms	CFU/100mL	10/100^
Biochemical Oxygen Demand	mg/L	5

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.

^ 90 Percentile concentration limit/100 Percentile limit

PARAMETERS AND SAMPLING METHODS

IN-SITU

PARAMETER	FRECUENCY	EPL	SAMPLING METHOD
Dissolved Oxygen	MONTHLY	56,57,58,68,69,70,72,73	In-situ
Elctrical Conductivity			
Oxidation Reduction Potential			
pH			
Temperature			
Turbidity			

PARAMETER	FRECUENCY	EPL	SAMPLING METHOD
Electrical conductivity	MONTHLY	5,6,8,9,10,11,12,14,15,16,24,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,50,51,52,53,54,55,59,60,61,62,63,64,65,66,67,71,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97	In situ
pH			
Oxidation Reduction Potential		5,6,8,9,10,11,12,14,15,16,24,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,52,53,54,55,59,60,61,62,63,64,65,66,67,71,76,77,78,79	
Temperature			
Dissolved Oxygen		5,6,8,9,10,11,12,14,15,16,24,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,52,53,54,55,59,60,61,62,63,64,65,66,67,71,76,77,78,79,84,85,86	
Turbidity			

LABORATORY

PARAMETER	FRECUENCY	EPL	SAMPLING METHOD
Dissolved Oxygen	Quarterly	1,2,4,25	Grab Sample
Electrical conductivity	Quarterly		
Oxidation Reduction Potential	Quarterly		
Turbidity	Quarterly		
Aluminium (Dissolved)	Quarterly		
Copper (Dissolved)	Quarterly		
Iron (Dissolved	Quarterly		
Lead (Dissolved)	Quarterly		
Manganese (Dissolved)	Quarterly		
Nickel (Dissolved)	Quarterly		
Nitrogen (total)	Quarterly		
Silver (Dissolved)	Quarterly		
Zinc (Dissolved)	Quarterly		
Reactive Phosphorus	Quarterly		

PARAMETER	FRECUENCY	EPL	SAMPLING METHOD
Aluminium (Dissolved)	Monthly	5,6,8,9,10,11,12,14,15,16,24,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97	Grab Sample
Copper (Dissolved)			
Iron (Dissolved)			
Lead (Dissolved)			
Manganese (Dissolved)			
Nickel (Dissolved)			
Nitrogen (Total)			
Reactive Phosphorus			
Silver (Dissolved)			
Zinc (Dissolved)			
Arsenic (Dissolved)		5,6,8,9,10,11,12,14,15,16,24,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97	
Chorium (Dissolved)			
Cydane (Total)			
Hardness (As calcium carbonate)			
Oil and grease			
Phosphorus (Total)			
Total Kjeldahi Nitrogen			
Total suspended solids			
Arsenic (Total)		52,53,54,55,,56,57,58,59,60,61,62,63,64,65,67,68,69,70	
Chorium (Total)			
Copper (Total)			
Lead (Total)			
Nickel (Total)			
Silver (Total)			
Iron (Total)			
Mangenese (Total)			
Zinc (Total)			
Aluminium (Total)		52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,72,73	
Ammonia		5,6,8,9,10,11,12,14,15,16,24,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,50,51,52,53,54,55,59,60,61,62,63,64,65,66,67,71,76,77,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97	
Oxidised nitrogen			
Nitrate+Nitrite (Oxidised nitrogen)		36,37,52,53,54,55,59,60,61,62,63,664,65,66,67,71,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97	
BOD		10,11,28,41,50,51	
Faecal Coliforms			