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REPORT

QUARTERLY ENVIRONMENTAL WATER REPORT MARCH 2025 – MAY 2025

S2-FGJV-ENV-REP-0131

REV A

JULY 2025

This Report has been prepared to satisfy the reporting requirements in the Main Works – Water Management Plan (WMP) and to meet Condition of Approval (CoA) 31(c)(d) of the Infrastructure Approval Schedule which requires publicly available reporting of the outcomes of the WMP. The Report provides commentary on the performance of the monitoring programs as part of the WMP.

Revision Record

Rev.	Date	Reason for Issue	Responsible	Accountable	Endorsed
A	07/07/2025	Issued for information	S. Lang	E. Porter	D. Drummond

Document Verification

RACIE Record

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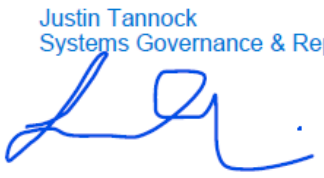
E ndorsed:	Name: David Drummond Job Title: QHSE Director Signed:  Justin Tannock Systems Governance & Reporting Manager 09/07/2025 Date:

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Date	Format (1)	Addressee / Job Title	Company	Location (2)
June 2025	EC	Environmental Team	SHL	Cooma

NOTE: ***(1) OHC*** *– Original Hard Copy /* ***EC****–Electronic Copy /* ***HC*** *– Hard Copy /* ***Aconex*** *–Electronic Document Management System*

Revision Tracking

Rev.	Date	Description of Revision
A	07/08/2025	Issued for information

CONTENTS

TABLE OF TABLES

ABBREVIATIONS AND DEFINITIONS

Acronym	Definition
AWS	Automatic weather stations
BoM	Bureau of Meteorology
CoA	Condition of Approval
ECVT	Emergency Cable and Ventilation Tunnel
EPL	Environmental Protection Licence
FGJV	Future Generation Joint Venture
MAT	Main Access Tunnel
MDB	Murray Darling Basin
NEM	National Electricity Market
SHL	Snowy Hydro Limited
Snowy Scheme	Snowy Mountains Hydro-electric Scheme
SWMP	Surface Water Management Plan
TARP	Trigger Action Response Plan
TBM	Tunnel Boring Machine
WMP	Water Management Plan
WQO	Water Quality Objectives

1. INTRODUCTION

Snowy Hydro Limited (SHL) is constructing a pumped hydro-electric expansion of the Snowy Mountains Hydro-electric Scheme (Snowy Scheme), called Snowy 2.0. Snowy 2.0 will be built by the delivery of two projects: Exploratory Works and Snowy 2.0 Main Works (which is ongoing).

Snowy 2.0 is a pumped hydro-electric project that will link the existing Tantangara and Talbingo reservoirs through a series of new underground tunnels and a hydro-electric power station. Most of the project's facilities will be built underground, with approximately 27 kilometres of concrete-lined tunnels constructed to link the two reservoirs and a further 20 kilometres of tunnels required to support the facility. Intake and outlet structures will be built at both Tantangara and Talbingo Reservoirs.

Snowy 2.0 will increase the generation capacity of the Snowy Scheme by an additional 2,200 MW, and at full capacity will provide approximately 350,000 MWh of large-scale energy storage to the National Electricity Market (NEM). This will be enough to ensure the stability and reliability of the NEM, even during prolonged periods of adverse weather conditions.

WeBuild, Clough and Lane have formed the Future Generation Joint Venture (FGJV) and have been engaged to deliver both Stage 2 of Exploratory Works and Snowy 2.0 Main Works.

2. PURPOSE

This Environmental Water Report has been prepared to satisfy the reporting requirements in the Main Works – Water Management Plan (WMP) and to meet Infrastructure Approval CSSI 9687 (CoA) Schedule 3, Condition 31(c)(d) which requires publicly available reporting of the outcomes of the WMP. This Environmental Water Report is intended to provide commentary on the performance of the monitoring programs as part of the WMP (identified in Table 2-1).

A report detailing the management of the SHL controlled groundwater network is to be provided separately by SHL.

Table 2-1: Monitoring Overview

Aspect	Objective
Surface Water Monitoring Program	
Routine receiving surface water quality monitoring	• Inform and assess the performance of management processes/measures that seek to minimise the Project's impact on surface water quality • Help determine source and extent of any water quality changes • Collect baseline data to characterise water quality and determine site specific values
Event based wet weather overtopping water quality monitoring	
Groundwater Monitoring Program	
Groundwater quality monitoring	• Inform and assess the performance of management • Processes/measures that seek to minimise the Project's impact on regional and local (including alluvial) aquifers and GDEs
Water extraction monitoring	• Inform and assess water consumption, site water balance and compliance with water access licences

3. OVERVIEW

3.1. Reporting Period

This Environmental Water Report covers the monitoring period from 01 March to 31 May 2025.

3.2. Construction Progress

Table 3-1 summarises the key construction activities which have been undertaken during the reporting period.

Table 3-1: Key Construction Activities

Location	Key Construction Activities
Lobs Hole	**ECVT / MAT PORTAL** • Basin liner upgrades complete. • Drilling subcontractor's scope complete at Marica West, the area has been deconstructed. • MAT portal spoil yard construction works ongoing. **MAIN OFFICE** • Construction works on structural office complete, office fit out and service connections on going. • Septic and sewerage installation complete. • Car park and pad expansion complete. **MAIN YARD** • Coverings installed over Pad D storage area within proximity to MY07. **GF01** • Spoil placement practically completed with final landform implementation works underway. • GF01 leachate basin relined and sealed. • Basin F10.5 reconstructed and relined. **TALBINGO** • Stage 2 excavation is ongoing. • Transition C1 Invert slab CS01 completed. • Preparation works for micro piling scope commenced. **RAVINE BAY** • Placement of spoil across GCL lined portions of stage 1. lined cells ongoing. • Further GCL liner installations across Cell 2 and 3. • Leachate basins SB02 and SB03 constructed. • Middle creek Bridge construction works, including rock filter dam.
Marica	• Civil works associated with TBM 4 works progressing. Clearing and Grubbing works and civil preparation works complete for all temporary spoil placement pads. • Sediment and leachate basin constructions complete. • Adit portal excavations ongoing. • Marica camp expansion works continuing. • Groundwater monitoring bores BH5411, BH5412, BH5413 installed and commissioned. • USS excavation works ongoing.
Rock Forest	• Construction of access roadway to PSE area complete. No further works occurred throughout the reporting period.

Location	Key Construction Activities
Tantangara	• Construction of GCL lined PSE. Including 2 lined leachate basins and works progressed to include additional lined leachate basins completed and GCL lined cells nearing capacity. • S2 expansions works commenced. • Intake stage 2 works ongoing, with Stage 3 under review by SHL.

4. WEATHER CONDITIONS

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

- "Lobs Hole" - which is an Automatic Weather Station managed by FGJV in Lobs Hole construction site.
- "Cabramurra" - an Automatic Weather Station located near the lookout in the Cabramurra township managed by the Bureau of Meteorology
- "Tantangara" - an Automatic Weather Station managed by FGJV in Tantangara construction site.

The Tantangara and Cabramurra gauges are in sub-alpine environments, with elevations of approximately 1220 m and 1475 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.

A summary of climate data for the ravine and plateau areas is provided in Table 4.1.

Table 4-1: Weather Conditions

Parameter	Lobs Hole[1]			Marica (Cabramurra)			Tantangara[2]		
	Mar	Apr	May	Mar	Apr	May	Mar	Apr	May
Temperature									
Mean maximum (°C)	28.1	22.7	17.3	20.3	15.2	10.4	24.3	18.7	13.9
Mean minimum (°C)	12.3	7.1	2.9	11.3	7.8	4.0	8.6	3.8	0.5
Rainfall									
Monthly	62.4	12	46.8	0	0	41.4	74.2	35.2	83.8
Long Term Average	55.6	59.4	75.4	86.5	77.7	90	56.3	46.7	47.3

1. Lobs Hole long term average rainfall is taken from the Tumbarumba weather station.
2. Tantangara long term average rainfall is taken from the Adaminaby Alpine Tourist Park weather station.

Weather conditions observed during the reporting period were typical of the transition from the summer weather influenced systems into the cooler autumn conditions across the Snowy Mountains. Autumn reflective conditions such as decreasing maximum temperatures and potential rainfall volume reductions across sites throughout the reporting period.

The highest mean temperatures observed across Lobs Hole (28.1°C), Marica (20.3°C) and Tantangara (24.3°C) were recorded during March prior to a downward trajectory throughout the remainder of the reporting period.

The total rainfall volumes for each month are notably different from the previous reporting period with Lobs Hole recording a highest monthly rainfall volume of 62.4 mm, Tantangara recording 83.8 mm and Marica recording only 41.4 mm following two months of no rainfall recordings.

5. SURFACE WATER MONITORING PROGRAM

5.1. Surface Water Quality

Routine surface water monitoring is undertaken in accordance with CoA Condition 31 and Environmental Protection Licence 21266 (EPL - 21266) to determine if project activities may be promoting negative impacts to receiving water quality and the adopted Water Quality Objectives (WQO). The NATA accredited laboratory analytical results have been included in Appendix B.

Publicly available surface water quality monitoring results undertaken in accordance with EPL - 21266 can be accessed through the SHL website.

Throughout the reporting period, temperatures in tributaries such as the Yarrangobilly River, Wallaces Creek and Nungar Creek were observed to decrease from period commencement to conclusion. Tributary temperatures in March are understood to influence the lingering algal presence observed in both reservoir water bodies in the early stages of the reporting period. This is consistent with frequency of Dissolved oxygen (DO) reports below the acceptance criteria during the early stages of the reporting period and the reduction in frequency as the temperatures dropped in the subsequent months.

Nutrient concentrations were typically reflective of available water quantities, flow velocities, animal and plant matter presence (within observable proximity to sample collection) in tributary and Reservoir locations, with exception to location immediately adjacent or within proximity to emplacement areas (such as EPL24).

Examples of natural influences are consistently reported within EPL31 (up gradient of works), EPL34 (up gradient of works), EPL35 (down gradient) and EPL36 (up gradient of works) which contain minor nutrient concentrations, low DO, pH and elevated turbidity (at times) irrespective of being above or below gradient to the project works.

Other such influences could be proximity to spoil emplacement areas and overtopping leachate or sediment basins such as EPL122.

5.2. Event Based Monitoring

Event based wet weather overtopping water quality monitoring is undertaken in accordance with the SWMP Trigger Action Response Plan (TARP 2) to monitor stormwater overtopping sediment basin discharges. Sediment basins for the Project have been designed to meet, at a minimum, the 85th percentile 5-day rainfall volume (mm). The respective volumes are listed below in Table 5-1.

Table 5-1: Design Rainfall Depths (SWMP Section 5.1.1)

Catchment	Description	85th percentile, 5-day rainfall (mm)	90th percentile, 5-day rainfall (mm)	95th percentile, 5-day rainfall (mm)
Yarrangobilly River	Surface works at Lobs Hole and Marica	28.1	35.6	49.0
Upper Eucumbene River	Surface works between Marica and the Snowy Mountain Highway	35.2	43.4	56.9
Tantangara construction compound	Surface works adjacent to the southern portion of Tantangara Reservoir	30.5	37.0	51.0
Goorudee Rivulet	Surface works at Rock Forest	20.0	25.7	36.1

During the reporting period, occurrences of rainfall exceeding site design capacities of the 85th percentile 5 – day rainfall and resulting in a basin overtopping are listed below:

- 23 May 2025 – Tantangara – Batch plant and CH1000 basins overtopped following 49.4 mm of rainfall since.
- 27 May 2025 – Lobs Hole – Basin 10b overtopped following a total of 41.6 mm of rainfall since 22 May 2025.
- 28 May 2025 – Lobs Hole – EPL84 overtopped following a total of 45 mm of rainfall since 22 May 2025.

Following the design exceedances across Lobs Hole and Tantangara, basic physio-chemical and comprehensive analytical results reported pH, turbidity, electrical conductivity, and dissolved oxygen (DO) levels outside the acceptability limits of the adopted WQO's. Comprehensive results typically reported nutrient conditions outside acceptability ranges alongside key dissolved metals.

In response to these conditions, water samples were collected for analysis and the EPA was notified of the releases in accordance with R4.1 of EPL 21266.

6. GROUNDWATER MONITORING PROGRAM

6.1. Groundwater Quality

Exceedances in EC, pH, and DO nutrients were frequently recorded across project sites with the most pronounced fluctuations observed down gradient of target spoil emplacement works or within locations under TARP management, such as EPL24

Key observations throughout the reporting period continued to include frequent sedimentation load commentary, which was accompanied by nutrient presences, dissolved and total select heavy metals and an overall increase in EC reports. Surface water ingress, maintenance requirements and upgradient occurrences are understood to influence such water quality behaviours.

Nutrient exceedances were reported in numerous groundwater sampling locations adjacent to emplacement areas during this reporting period. Groundwater has been extracted and treated from EPL68 and EPL105 while extraction pumps at EPL58, EPL95, EPL90, EPL87 and EPL81 are in the final stages of commissioning.

Three new groundwater monitoring bores were commissioned in Marica during this reporting period to ensure comprehensive monitoring of the TBM 4 site.

Bore maintenance and development works were undertaken at Ravine Bay, key GF01 bores and within Marica groundwater locations to realign reporting accuracies throughout these locations. Further maintenance works will be occurring in the next reporting period.

6.2. Groundwater Levels

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

6.3. Groundwater Inflows

Groundwater inflow into the tunnels is monitored during construction. This data is required to monitor the volume of extracted groundwater against water access licence limits (Table 6-1).

Table 6-1: Water Access Licence

Water Access Licence	Project	Water Source	Share (ML)
WAL42407 – Specific Purpose Access Licence	Exploratory Works	Upper Tumut water source	227
WAL42408 – Groundwater Licence	Exploratory Works	Lachlan Fold Belt MDB	0
WAL42960 – Groundwater Licence	Exploratory Works	Lachlan Fold Belt MDB	354
RO13-19-093 – via Controlled Allocation	Main Works	Lachlan Fold Belt MDB	3,375
RO1-19-092 – via Controlled Allocation	Main Works	Lachlan Fold Belt South Coast	1,722
Specific Purpose Access Licence	Main Works	Tantangara Water Source	532

7. TRENDS

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

Data from the previous quarter (six months total) of water monitoring data was analysed to provide context to the March to May quarter and ensure sufficient data is available for most sites.

7.1. Decreasing Trends

TSS: EPL104, EPL126, EPL127, EPL58, EPL68, EPL82, EPL83, EPL87, EPL91, EPL92, EPL95, EPL97

Hardness as CaCO3: EPL124, EPL24, EPL36, EPL37, EPL68, EPL86, EPL89, EPL92, EPL96, EPL27

Ammonia as N: EPL41, EPL84

Nitrite + Nitrate as N (NOx): EPL10, EPL101, EPL115, EPL122, EPL123, EPL127, EPL128, EPL15, EPL16, EPL24, EPL35, EPL37, EPL41, EPL5, EPL52, EPL68, EPL80, EPL81, EPL82, EPL86, EPL89, EPL91, EPL94, EPL96, EPL97

Kjeldahl Nitrogen Total: EPL126, EPL31, EPL37, EPL39, EPL41, EPL50, EPL69, EPL87, EPL88, EPL97

Nitrogen (Total): EPL10, EPL122, EPL126, EPL31, EPL37, EPL41, EPL50, EPL68, EPL86, EPL89, EPL96

Reactive Phosphorus (Filtered): EPL10, EPL104, EPL105, EPL106, EPL113, EPL117, EPL123, EPL124, EPL128, EPL14, EPL15, EPL24, EPL27, EPL36, EPL37, EPL39, EPL41, EPL5, EPL52, EPL56, EPL58, EPL68, EPL69, EPL80, EPL81, EPL82, EPL84, EPL86, EPL89, EPL9, EPL90, EPL92, EPL93, EPL94, EPL95, EPL97, EPL99

Phosphorus (Total): EPL127, EPL29, EPL34, EPL58, EPL83, EPL87, EPL95

Nitrate (as N): EPL10, EPL101, EPL115, EPL122, EPL123, EPL127, EPL128, EPL16, EPL24, EPL35, EPL41, EPL52, EPL68, EPL80, EPL82, EPL86, EPL89, EPL91, EPL94, EPL96, EPL97

Nitrite (as N): EPL24, EPL27, EPL41, EPL84, EPL86, EPL89, EPL91, EPL92, EPL97

Aluminium: EPL104, EPL14, EPL16, EPL51, EPL58, EPL82, EPL91, EPL92, EPL97

Aluminium (Filtered): EPL107, EPL123, EPL128, EPL30, EPL31, EPL32, EPL34, EPL35, EPL38, EPL46, EPL51, EPL69, EPL84, EPL85, EPL90

Arsenic: EPL104, EPL58, EPL92, EPL99

Arsenic (Filtered): EPL100, EPL101, EPL36, EPL80, EPL92, EPL93, EPL97

Calcium: EPL27

Chromium (hexavalent): EPL83

Chromium (hexavalent) (Filtered): EPL101, EPL84

Chromium (III+VI): EPL103, EPL104, EPL29, EPL58, EPL68, EPL82, EPL84, EPL92, EPL97

Chromium (III+VI) (Filtered): EPL101, EPL106, EPL52, EPL58, EPL84, EPL87

Chromium (Trivalent): EPL123, EPL126, EPL127, EPL58, EPL70, EPL81, EPL82, EPL83, EPL84, EPL85, EPL86, EPL87, EPL89, EPL90, EPL91, EPL92, EPL93, EPL94, EPL95, EPL97

Copper: EPL56, EPL57, EPL68, EPL92

Copper (Filtered): EPL113, EPL114, EPL123, EPL56, EPL57, EPL68, EPL96

Iron: EPL104, EPL14, EPL16, EPL29, EPL32, EPL51, EPL58, EPL92, EPL97

Iron (Filtered): EPL10, EPL104, EPL107, EPL108, EPL109, EPL11, EPL30, EPL31, EPL36, EPL46, EPL69, EPL86

Lead: EPL104, EPL57, EPL58, EPL80, EPL82, EPL91, EPL92

Manganese: EPL104, EPL106, EPL38, EPL41, EPL58, EPL68, EPL82, EPL88, EPL92, EPL94, EPL97

Manganese (Filtered): EPL104, EPL106, EPL113, EPL12, EPL14, EPL15, EPL30, EPL31, EPL38, EPL41, EPL52, EPL58, EPL8, EPL94, EPL97

Nickel: EPL103, EPL58, EPL68, EPL82, EPL88, EPL92, EPL97

Nickel (Filtered): EPL68, EPL71, EPL82, EPL89, EPL92, EPL94, EPL97

Silver: EPL58

Zinc: EPL104, EPL41, EPL58, EPL82, EPL92

Zinc (Filtered): EPL102, EPL104, EPL106, EPL113, EPL123, EPL126, EPL128, EPL41, EPL68, EPL72, EPL91, EPL92, EPL94, EPL97, EPL99

Thermotolerant Coliforms: EPL10, EPL11

7.2. Increasing Trends Identified:

TSS: EPL36, EPL81, EPL84, EPL86, EPL93

Hardness as CaCO3 (Filtered): EPL103, EPL105, EPL106, EPL12, EPL123, EPL14, EPL15, EPL16, EPL38, EPL6, EPL69, EPL8, EPL80, EPL81, EPL83, EPL87, EPL88, EPL9, EPL90, EPL95

Ammonia as N: EPL106, EPL113, EPL115, EPL116, EPL117, EPL123, EPL128, EPL46, EPL52, EPL56, EPL80, EPL83, EPL86, EPL91, EPL94, EPL96, EPL97

Nitrite + Nitrate as N (NOx): EPL106, EPL56, EPL57, EPL70, EPL85, EPL87, EPL90, EPL95

Kjeldahl Nitrogen Total: EPL106, EPL115, EPL38, EPL51, EPL57, EPL81

Nitrogen (Total): EPL103, EPL106, EPL115, EPL33, EPL38, EPL51, EPL57, EPL70, EPL81, EPL85, EPL95

Reactive Phosphorus (Filtered): EPL125, EPL72

Phosphorus (Total): EPL84, EPL86

Biochemical Oxygen Demand: EPL11, EPL28

Cyanide Total: EPL99

Nitrate (as N): EPL106, EPL56, EPL57, EPL70, EPL72, EPL85, EPL87, EPL90, EPL95,

Nitrite (as N): EPL52, EPL87

Aluminium: EPL124, EPL27, EPL52, EPL93

Aluminium (Filtered): EPL124

Arsenic: EPL80

Arsenic (Filtered): EPL106, EPL117, EPL125, EPL126, EPL32, EPL33, EPL38, EPL46, EPL5, EPL51, EPL57, EPL81, EPL82, EPL83, EPL84, EPL85, EPL86, EPL88, EPL9, EPL91

Chromium (III+VI): EPL124, EPL24

Chromium (III+VI) (Filtered): EPL105, EPL122, EPL26, EPL27, EPL95

Chromium (Trivalent): EPL69

Copper: EPL101, EPL103, EPL124, EPL24, EPL50, EPL69, EPL93

Copper (Filtered): EPL103, EPL106, EPL122, EPL24, EPL50, EPL58, EPL69, EPL84, EPL85, EPL90, EPL95

Iron: EPL27, EPL52

Iron (Filtered): EPL122, EPL24, EPL81, EPL83, EPL88, EPL91

Lead: EPL105, EPL124, EPL24

Lead (Filtered): EPL122, EPL24, EPL84, EPL86

Manganese: EPL10, EPL101, EPL27

Manganese (Filtered): EPL101, EPL123, EPL124, EPL126, EPL57, EPL81, EPL83, EPL84, EPL87, EPL91, EPL96

Nickel: EPL105, EPL124, EPL24, EPL93

Nickel (Filtered): EPL100, EPL105, EPL24, EPL58, EPL81, EPL83, EPL84, EPL85, EPL87, EPL93, EPL96, PSE_L1

Silver: EPL124, EPL69, EPL93

Zinc: EPL101, EPL105, EPL124

Zinc (Filtered): EPL100, EPL105, EPL122, EPL27, EPL37, EPL81, EPL83, EPL84, EPL87, EPL88, EPL96

E. Coli: EPL41

Thermotolerant Coliforms: EPL41

7.3. Trend Summary

Results from the trend analysis show a greater number of decreasing trends (338 total analyte occurrences) as opposed to increasing trends (199 total analyte occurrences). Notable increasing trends include Biochemical Oxygen Demand in the Talbingo and Tantangara Reservoirs associated with algae blooms, tributary and water body temperatures especially during the early reporting periods.

Nutrient presence in groundwater monitoring sites adjacent to GF01, target Mainyard locations and the Tantangara (temporary) spoil emplacement areas reported increasing trends consistent with surface lead water ingress within Locations within the Ravine Bay emplacement area were observed increasing however are attributed to the observed sediment load within the water column during the sampling of such areas.

8. CONCLUSION

The reporting period reflected typical autumnal climatic conditions in the Snowy Mountains, with declining temperatures and reduced rainfall across all monitoring sites. These seasonal changes, combined with decreased water flows contributed to exceedances in key water quality parameters such as pH, electrical conductivity, turbidity, and nutrients at several locations. Algae blooms observed in Tantangara and Talbingo Reservoirs during March and April were likely driven by elevated water temperatures and significantly low water volumes, with associated nutrient and dissolved oxygen fluctuations present. It is noted the blooms subsided with cooler temperatures in May.

Elevated nutrient levels and physicochemical parameters were consistent with conditions likely to occur in leachate basins as part of the design’s intention.

Where groundwater monitoring has revealed nutrient exceedances adjacent to emplacement areas, extraction efforts are in action to prevent harm to the environment.

Bore maintenance is continuing to result in sediment load reductions across bore water columns and will continue throughout the Main Works phase of the Snowy 2.0 Project.

The commissioning of new monitoring bores in Marica enhances oversight of the temporary spoiling works understood to result from the Modification 3 TBM works.

Overall, the trend analysis indicated a higher frequency of decreasing analytical trends as opposed to increasing trends, though notable increases in Biochemical Oxygen Demand and nutrients are potentially linked to seasonal changes, algae activity, and sediment loads. These findings demonstrate the importance of continued monitoring, maintenance to mitigate impacts across the project.

APPENDIX A – BACKGROUND CONDITIONS

SURFACE WATER

	PLATEAU	RAVINE
Major watercourses1 (Dry weather)	• pH generally ranges between 6.2 and 8.5, with occasional lower and upper bound exceedances. • Carbonate and salinity vary seasonally, with higher levels occurring in summer/autumn than winter/spring. • Low concentrations of suspended solids and low turbidity. • Total nitrogen and phosphorus concentrations exceeded WQO values occasionally. • Aluminium concentrations exceeded the WQO value on a frequent basis. Some exceedances were more than 4 x WQO values. • Copper, iron, lead and zinc concentrations exceeded WQO values on an occasional basis. Other metals are generally below WQO values • The water quality during wet weather conditions is poorly understood. It is expected that concentrations of suspended sediment, nutrients, and some metals would be higher than dry weather concentrations.	• pH ranges between 6.2 to 8.5, with occasional lower and upper bound exceedances. • Low concentrations of suspended solids and low turbidity. • Carbonate and salinity vary seasonally, with higher levels occurring in summer/autumn than winter/spring. • Total nitrogen and phosphorus concentrations exceeded WQO values occasionally. • Aluminium concentrations in the Yarrangobilly River exceeded WQO values frequently in winter/spring and occasionally in summer/autumn. Some exceedances were more than 4 x WQO values. • Copper, chromium and zinc concentrations exceeded WQO values occasionally. Other metals are generally below WQO values. • The understanding of water quality during wet weather conditions is informed by data from monitoring undertaken in March and May 2019 following moderate rainfall. Available data indicates that receiving water quality during wet weather conditions is generally poorer relative to dry weather conditions with higher turbidity, lower pH, higher nutrients and metals such as copper and zinc. The median (from five samples) copper concentration was 6 x the WQO value.
Minor watercourses (near proposed surface infrastructure	The water quality of minor watercourses near the Tantangara construction compound is generally poorer than major watercourses, with total phosphorus, total nitrogen	The water quality of minor watercourses in Lobs Hole is generally poorer than major watercourses, with turbidity, total phosphorus, copper and zinc exceeding WQO values on a

	and aluminium all exceeding WQO values on a frequent basis. Turbidity, copper and iron exceeded WQO values on an occasional basis.	frequent basis. Total nitrogen, arsenic and aluminium exceeded WQO values on an occasional basis.
Runoff from existing disturbed areas	No sampling from existing disturbed areas has been undertaken at plateau.	Runoff samples were collected from existing disturbed areas in Lobs Hole such as access tracks and remnant copper mining areas in May and March 2019. Disturbed area runoff is characterised as being mildly acidic, having very high suspended sediment and turbidity levels, high total nitrogen and total phosphorous, and very high aluminium and copper concentrations. During wet weather conditions (when runoff is occurring to local watercourses in Lobs Hole), the water quality in the Yarrangobilly River is expected to be degraded as it passes through Lobs Hole.

Notes: 1. Major watercourses in plateau refer to the Murrumbidgee and Eucumbene rivers, Tantangara, Gooandra, Nungar and Kellys Plain creeks. Major watercourses in ravine refers to the Yarrangobilly River and Wallaces Creek.
2. General note: exceedances are described in the WCR as:
- frequent if the WQO value was exceeded in 20% or more of samples; and
- occasional if the WQO value was exceeded in at least one sample, but in less than 20% of samples.

RESERVOIR

TALBINGO

Water quality characteristics are described as follows:

- pH ranges between 6.3 and 8.2, with occasional lower and upper bound exceedances.
- Low concentrations of suspended solids and low turbidity.
- Carbonate and salinity vary seasonally, with higher levels occurring in summer/autumn, correl ating with the higher salinity of streamflow over summer and autumn months.
- Oxidised nitrogen concentrations exceeded WQO values frequently in winter/spring and occasionally in summer/autumn. This is the opposite trend to the Yarrangobilly River, were ex ceedances are more likely to occur in summer/autumn.
- Ammonia concentrations frequently exceed WQO values during winter/spring, corelating with t he elevated oxidised nitrogen.
- Total phosphorus concentrations exceed WQO values in all summer/autumn samples and in a pproximately 25% of winter/spring samples.
- All dissolved metal concentrations were below WQO values except for:
- *Copper and zinc concentrations exceeded WQO values frequently in summer/autumn an d occasionally in winter/spring; and
- *Chromium (total) and lead concentrations occasionally exceeded WQO values in summer/aut umn.

It is noted that all but one of the copper and zinc exceedances occurred during March 2018 sampli ng, where 80% of samples exceeded the WQO values. Different analysis methods (consistent with the methods applied more broadly to EIS sampling) were applied to subsequent sampling (post-March 2018).

Reservoir water quality during and following wet weather conditions is poorly understood. There is potential for turbidity, nutrients, and some metals to fluctuate within watercourse inflow locations for several weeks following a substantial runoff event.

TANTANGARA

Water quality characteristics are described as follows:

- pH ranges between 6.6 and 8.0, with one lower and upper bound exceedance occurring.
- Low levels of suspended solids and low turbidity.
- Carbonate and salinity vary seasonally, with higher levels occurring in summer/autumn.
- Oxidised nitrogen and ammonia occasionally exceeded WQO values in summer/autumn.
- Total phosphorus frequently exceeded WQO values in summer/autumn and winter/spring whil e reactive phosphorus occasionally exceeded WQO values.
- All dissolved metal concentrations were below WQO values except for:
- * aluminium concentrations exceeded WQO values on a frequent babasis;
- *copper, iron and zinc exceeded WQO values on a frequent basis during summer/autumn; and
- *chromium (total), cobalt and lead exceeded WQO values on an occasional basis durin g summer/autumn.

It is noted that all of the copper exceedances and the zinc exceedances occurred during March 2018 sampling, where 100% of samples exceeded the WQO values. Different analysis met hods (consistent with the methods applied more broadly to EIS sampling) were applied to subsequ ent sampling (post-March 2018).

- Reservoir water quality during and following wet weather conditions is poorly understood. The potential for elevated turbidity, nutrients and some metals to occur near watercourse inflo w locations for several weeks following a substantial runoff event.

APPENDIX B – EPL RESULTS

EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring March 2025

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
3/3/2025, 8:22 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	17.93	88.4	8.39	219	142	8.02	90	8	Clear sunny day, no recent rain, regular flow of water	This sample point is upstream of works and is therefore representative of background conditons.
3/3/2025, 9:03 am	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	16.42	63.3	6.19	123	80	7.9	118	3.7	Sunny clear day, regular flow clear water	This sample point is upstream of works and is therefore representative of background conditons.
3/3/2025, 11:48 am	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	21.61	68.7	6.05	221	144	7.86	139	4.6	Clear sunny day, no wind, no recent rain. A slight ploom of sediment is close to the edge of the river, there seems to be runoff seeping into river from the ground at stairs. - shown in photo 1	Low DO aligns with reults upstream of works and reduced flow.
3/3/2025, 11:17 am	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	20.07	84	7.62	177	115	8.14	146	10.1	Sunny clear day no wind no recent rain Water flow regular	Low DO aligns with reults upstream of works and reduced flow.
3/3/2025, 8:43 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	17.47	66.2	6.33	172	112	8.06	101	1.6	Clear sunny day, no recent rain, regular flow of water	Low DO aligns with reults upstream of works and reduced flow.
3/3/2025, 9:22 am	EPL14	Yarrangobilly River, downstream of road construction areas	17.39	107.4	10.29	166	108	7.99	121	3.3	Sunny day no wind regular flow of water	All reading are within WQO limits.
3/3/2025, 9:47 am	EPL15	Yarrangobilly River, downstream of road construction areas	17.77	71.5	6.8	170	1.7	8.05	125	1.7	Sunny clear day, no wind, no recent rain, regular flow of water	Marginally elevated pH and low DO align with the upgradient conditions for March 2025.
3/3/2025, 12:08 pm	EPL16	Yarrangobilly River, downstream of road construction areas	22.66	65.2	5.63	175	114	8.25	137	3.3	Clear sunny day no wind no recent rain, regular flow of river	Low DO and high pH aligns with reults upstream of works and the reduction of water available.
7/3/2025, 10:26 am	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	18.43	65.1	6.09	1,270.00	811	6.7	134	0.4	Sunny day, clear water, no smell, very low flow	This location has been an objective of constant monitoring and reporting. High EC potentially attributed to low flows at this location.
18/3/2025, 11:10 am	EPL26	Eucumbene River downstream of Marica Road	11.98	74.2	8	37	24	7.86	190	5.3	Low steady flow , clear water, no odor. Very high traffic area for horses churned up banks as a result. Cool sunny day slight breeze. Lower level of algae present compared to upstream.	Low DO aligns with the baseline data and remains with the upstream conditions.
18/3/2025, 10:52 am	EPL27	Eucumbene River upstream of Marica Road	11	71.2	7.85	36	23	8.23	164	7.65	Clear water, low flow, steady stream, no odor. Sign of animal activity around the banks. The algae is brown. Slight breeze, sunny, cool morning. Qa done here	This sample point is upstream of works and is therefore representative of background conditons.
1/3/2025, 9:07 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	13.43	61.4	6.4	40	26	6.89	298	5.1	Sunny day, clear, slow flow, no smell	This location aligns with the upgradient conditions for March 2025.
1/3/2025, 8:49 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	13.5	69.4	7.23	32	20	7.12	285	8.8	Sunny day, clear, slow flow, no odour	This sample point is upstream of works and is therefore representative of background conditons.
1/3/2025, 8:24 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	17.83	68.3	6.49	31	20	7.23	239	13.2	Sunny day, clear water, slow flow, no odour	This location aligns with the upgradient conditions for March 2025.
1/3/2025, 7:35 am	EPL34	Nungar Creek, upstream of Tantangara Road	12.18	66.3	7.12	48	31	8.19	136	71.9	Sunny day,clear, low flow, the level of water reduced notably, no odour	This sample point is upstream of works and is therefore representative of background conditons.
1/3/2025, 7:48 am	EPL35	Nungar Creek, downstream of Tantangara Road	11.71	68.8	7.46	40.0	26	7.87	155	14.9	Sunny day, clear, very low flow, the water level has reduced notably, note something oily in the water but may not be grease and no smell	Low DO aligns with the upstream conditions for March 2025.
8/3/2025, 10:04 am	EPL 36	Camerons Creek, upstream of works in Rock Forest	16.06	58.2	5.74	52	34	7.29	126	7.8	Sunny day, clear water, no odour, slow and low flow	This sample point is upstream of works and is therefore representative of background conditons.
8/3/2025, 9:35 am	EPL 37	Camerons Creek, downstream of works in Rock Forest	15.75	63.6	6.31	54	35	7.35	145	9.2	Sunny day, slow and low flow, no odour	Low DO remains the historical data and aligns with the upgradient conditions for March 2025.
4/3/2025, 10:43 am	EPL52	GF01 leachate basin	23.49	80.4	6.81	863.00	552	9.21	93	47.1	Smells like organic rotting subtly , Green tinge,Dry hot weather	The leachate storage infrastructure is expected to have spikes in in-situ reading results.
-	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	This location is dry	-
-	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	This location is dry	-
-	EPL55	GF01 surface water downstream	-	-	-	-	-	-	-	-	This location is dry	-
-	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	-	-	-	-	-	-	-	-	The reservoir level at Tantangara is low and is not representative sample.	-
-	EPL71	Surface water downstream of Marica emplacement	-	-	-	-	-	-	-	-	Unable to access site due to land clearing activities.	-
13/3/2025, 2:06 pm	EPL84	F8 Basin	28.62	128.5	9.92	966.00	618	9.29	115	782	No rainfall in last 24 hrs	The leachate storage infrastructure is expected to have spikes in in-situ reading results.
13/3/2025, 2:17 pm	EPL85	MY07 Basin	23.51	56	4.75	561	359	8.85	129	1,000.00	Basin is cutrently being relined. Cannot take sample.	The leachate storage infrastructure is expected to have spikes in in-situ reading results.
13/3/2025, 2:26 pm	EPL86	LHG01 Basin	27.8	80.4	6.29	1,130.00	724	8.67	147	56.5	No rainfall in last 24 hours	The leachate storage infrastructure is expected to have spikes in in-situ reading results.
-	EPL98	Rock blanket diversion monitoring under GF01 liner	-	-	-	-	-	-	-	-	This location is dry	-
18/3/2025, 9:50 am	EPL99	Marica Leachete Basin- Turkey's Nest	12.29	69.8	7.46	511	327	10.45	59	170	A green/grey tinge. No odor. Sunny cool morning. No wind. Evidence of grime/gunk on the surface.	Low DO and elevated turbidity can be attributed to the runoff accumulating in the sediment basin. Water was taken for treatment at the process water treatment plant or re-use where parameters where met.
-	EPL100	Marica Lower Leachate Basin USS Shaft	-	-	-	-	-	-	-	-	Too low to sample	Due to leachate management process upgrades, this location is managed at water levels that prohibit water sampling.
-	EPL101	Marica Leachate Basin Spoil Pad	-	-	-	-	-	-	-	-	Too low to sample	Due to leachate management process upgrades, this location is managed at water levels that prohibit water sampling.
5/3/2025, 8:10 am	EPL106	Ravine Bay Leachate basin 1	21.14	101.9	9.02	1,379.00	875	7.66	196	20.8	Clear, no odour, 95% full	The leachate storage infrastructure is expected to have spikes in in-situ reading results.

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring March 2025

-	EPL110	Upstream monitoring of Ravine Bay emplacement area	-	-	-	-	-	-	-	-	Could not sample, low water level	-
-	EPL118	Ravine Bay Leachate basin 2	-	-	-	-	-	-	-	-	Water level too low.	-
-	EPL120	Ravine Bay Leachate basin 4	-	-	-	-	-	-	-	-	Water level too low.	-
7/3/2025, 10:52 am	EPL122	GF01 Drainage Line (Formerly EPL 55b)	17.55	78.8	7.51	539	345	7.86	123	100	Sunny day, clear water, no smell, very low flow	This location has been an objective of constant monitoring and reporting.

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
16/3/2025, 8:07 am	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	22.97	64.8	5.56	102	66	8.1	191	1.61	Breeze is constant. Cloud overhead and cool morning. No odor. Some visible gunk around the area on the surface. No visible difference in colour.	Elevated EC and pH align with results upstream of works. EC and pH are consistent with upgradient conditions in the Yarrangobilly River for March 2025.
16/3/2025, 7:54 am	EPL11	Talbingo Reservoir, downstream of outlet	22.84	70.6	6.08	63	41	8.01	192	1.15	Visible dusty scum, and bubbles on the surface but no sheen. The dusk build up was a lot worse downstream on the curve of the reservoir where the wind was less. There is a slight breeze, it's a cool morning. Relatively clear water. No odor.	Elevated EC and pH align with results upstream of works. EC and pH are consistent with upgradient conditions in the Yarrangobilly River for March 2025.
26/3/2025, 9:38 am	EPL28	Tantangara Reservoir, upstream of works in the mouth of the Murrumbidgee River	18.43	93.2	8.74	27	17	7.82	130	7.3	Foggy day. Water very green. Visable algal bloom. No odor. Rain over the weekend.	This sample point is upstream of works and is therefore representative of background conditons.
26/3/2025, 10:15 am	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	20.14	95.5	8.66	26	17	8.42	140	13.4	Water very green. Visible algal bloom. No odor. Foggy day. Rain last weekend.	This sample point is upstream of works and is therefore representative of background conditons.
26/3/2025, 10:07 am	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	20.19	91.5	8.29	26	17	8.18	14	12.9	Water very green, visible algal bloom. Foggy day. No odor. Rain last weekend.	This location aligns with the upgradient conditions for March 2025.
1/3/2025, 1:04 pm	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	22.63	54.1	4.67	36	23	7.94	174	8.8	Sunny day, clear water, no odour	Low DO and elevated EC with turbidity can be attributed to low reservoir levels in preparation for intake works.
8/3/2025, 10:18 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	17.6	62.1	5.93	29.6	22.4	6.34	664.1	7.17	Low water, low velocity flow. Sunny morning, no fog. Light winds, picking up. Visibly clear water.	Low DO and pH can be attributed to low reservoir levels in preparation for intake works.
9/3/2025, 9:00 am	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	16.5	75.3	7.35	31.7	24.6	8.95	625.5	2.63	Sunny morning, no fog, minimal winds. Low water level, foam observed on surface. Visible sediment and slightly turbid water. Low velocity flow.	Low DO and pH with elevated EC can be attributed to low reservoir levels in preparation for intake works.
26/3/2025, 10:32 am	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	20.29	97.1	8.78	26	17	8.5	139	12.5	Water very green. Visible algal bloom. No odor. Foggy day. Rain last weekend.	The elevated pH can be attributed to the significant water level reduction and changes in the surrounding conditions in March 2025.
26/3/2025, 10:23 am	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	20.21	93.8	8.49	26	17	8.43	140	10.7	Water very green. Visible algal bloom. No odor. Foggy day. Rain last weekend.	The elevated pH can be attributed to the significant water level reduction and changes in the surrounding conditions in March 2025.
16/3/2025, 7:40 am	EPL107	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River	22.01	72.6	6.35	40	26	7.79	193	0.76	Clear water, no visible signs of sheen, bubbles or algae on the surface. No works going on at the pse area currently. Slight breeze. Overcast and cool morning. No odors.	Low DO and elevated EC align with results upstream of works. EC is consistent with background conditions in the Yarrangobilly River.
16/3/2025, 7:33 am	EPL108	Monitoring of Ravine Bay emplacement area (center of PSE) within Yarrangobilly River	21.97	67.8	5.93	38	25	7.72	190	0.85	No odors. Slight breeze. Cool, slightly overcast morning. No visible sheen, algae,or bubbles on surface. Clear water colour.	Low DO and elevated EC align with results upstream of works. EC is consistent with background conditions in the Yarrangobilly River.
16/3/2025, 7:18 am	EPL109	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River	21.7	75.6	6.65	36	24	7.77	180	0.66	No visible surface sheen, bubbles, or algae. No odors. Breeze seen on water. Clear water. Cool morning, some clouds overhead.	Low DO and elevated EC align with results upstream of works. EC is consistent with background conditions in the Yarrangobilly River.

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
16/3/2025, 8:13 am	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	25.15	73.6	6.07	6	4	7.84	507	0.9	Horiba5 was used. Clear, no odour. Three samples taken. Plant running for 6+ hours	All reading 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
12/3/2025, 8:34 am	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	16.1	55.2	5.44	18.6	14.6	7.92	701	0.53	Water sample taken from RO Out.	All reading are within WQO limits.

Table 5 - Groundwater Quality Data
GF01 Surface Water and Groundwater

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

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
4/3/2025, 9:05 am	EPL56	GF01 groundwater upstream east	16.12	15.8	1.55	206	134	7.64	197	54.2	SWL- 10.19m. Breezy day, sunny, dry weather	All reading are within WQO limits.
4/3/2025, 9:24 am	EPL57	GF01 groundwater upstream west	18.01	19.6	1.85	197	128	7.17	247	62.6	SWL- 14.9m water depth. Sunny breezy day	All reading are within WQO limits.
4/3/2025, 11:09 am	EPL58	GF01 groundwater downstream	20.63	17.5	1.57	952	609	6.07	199	127	SWL- 6.68m. No recent rain, Hot dry weather	Elavated EC and low pH are generally consistent with historical range for this location. However, borehole pump extraction method is in the process of being upgraded.
15/3/2025, 8:35 am	EPL68	Tantangara groundwater downstream West	14.56	55.2	5.62	22	14	5.99	228	2.9	Water is running clear. The flow of water is continuous. No obvious odors. Sunny dry weather. PSE works are developing up gradient of the bore.	Low pH and EC met the historical ranges for March 2025. These fall in line with current seasonal changes.

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring March 2025

15/3/2025, 8:50 am	EPL69	Tantangara groundwater downstream East	15.55	45.3	4.52	22	14	6.3	231	24.1	Silt colour was orange tinge. No obvious odor. Pse works developing up gradient/adjacent. Sunny dry day.	Low pH and EC met the historical ranges for March 2025. These fall in line with current seasonal changes.
15/3/2025, 11:46 am	EPL70	Tantangara groundwater upstream	18.1	45.4	4.3	121	79	6.49	217	142	Lots of settled orange coloured sediment at bottom of hydra sleeve. Clear at top. No odors. Hot sunny weather	This location is upgradient of works and therefore representative of background conditions.
18/3/2025, 9:25 am	EPL 72	Marica groundwater upstream	12.39	80	8.55	53	35	5.89	204	68	SWL- 36.75m. Low turbidity orange tinge, clear at top. No odor. Sunny cool dry morning. Bore is in tact no leaks.	This location is upgradient of works and therefore representative of background conditions.
-	EPL73	Marica groundwater downstream	-	-	-	-	-	-	-	-	-	Due to the ongoing work in the PSE area, this location has been decommissioned and relocated. The new location will be sampled in the following months.
19/3/2025, 7:35 am	EPL80	LHG groundwater upstream	13.97	22.3	2.29	737	472	6.45	76	72.3	SWL- 20.53m. Strong smell of sulphuric acid, Very orange, floating particles - hadn't settled. No recent rain, sunny days. Was a slight leak at the bottom of hydrasleeve. Base of the bore needs to be repaired, concrete cracked.	This location is upgradient of works and therefore representative of background conditions.
19/3/2025, 8:26 am	EPL81	LHG groundwater downstream	15.04	106.3	10.69	809	518	6.68	-28	209	SWL - 3.85m (top of casing). Swampy odour. Sediment present	Elevated EC aligns with results upgradient of works.
19/3/2025, 7:54 am	EPL82	MY groundwater upstream	13.76	18.7	1.92	2850	1820	7.08	8	29.1	SWL- 9.04m. Clear water, sulphuric acid smell. Dry sunny weather. Bore in tact, no holes.	This location is upgradient of works and therefore representative of background conditions.
19/3/2025, 7:55 am	EPL83	MY groundwater downstream	16.29	49	4.8	757	485	6.27	59	168	SWL - 3.89m (from casing). Turbid water. Swampy odour	Elevated EC and low pH align with results upgradient of works for March 2025, however borehole pump extraction method is currently being upgraded.
19/3/2025, 7:05 am	EPL87	MY groundwater downstream	16.46	124.7	12.45	797	510	6.4	238	1000	SWL - 3.98m (top of casing)	Elevated EC and low pH align with results upgradient of works for March 2025, however borehole pump extraction method is currently being upgraded.
19/3/2025, 7:40 am	EPL88	MY groundwater downstream	15.36	75.9	7.58	900	576	6.79	-62	14.1	SWL - 3.34m (top of casing). Sulfuric odour, visibly low NTU	Elevated EC aligns with results upgradient conditions for this reporting period.
19/3/2025, 7:08 am	EPL89	LHG groundwater downstream	15.23	39.1	3.92	303	197	6.86	230	6.86	SWL- 3.30 m .Turbidity towards bottom, orange tinge. Clear up top. No odors. No recent rain, dry, cool weather.	All reading are within WQO limits.
4/3/2025, 8:42 am	EPL 90	GF01 groundwater downstream	18.09	47	4.44	53	34	5.84	252	96	SWL- 13.98 m depth. Water stank, smelled gross unt we purged it. Smell calmed down, but was still slightly there, Smelt like mangroves - rotting organic matter maybe. Not sulphuric, Sunny day, slight wind. Weather has been clear and dry recently	Low pH is generally consistent with the historical data for this location. Borehole extraction method is currently being upraded at this location
4/3/2025, 11:24 am	EPL 91	GF01 groundwater downstream	19.39	17.4	1.6	193	126	6.42	16	7.4	SWL- 8.62 m. No recent weather events	Low pH is generally consistent with the historical data for this location.
4/3/2025, 9:43 am	EPL 92	GF01 groundwater downstream	16.84	35.4	3.43	96	62	5.92	200	564	SWL- 13.62m. Sunny clear weather	Low pH is generally consistent with the historical data for this location.
4/3/2025, 9:50 am	EPL 93	GF01 groundwater downstream	16.93	10	0.97	207	134	6.41	17	160	SWL- 13.5 m. Super strong smell of sulphuric acid. More turbid than usual New works of taking height off of stockpile upstream.	Low pH is generally consistent with the historical data for this location.
4/3/2025, 10:06 am	EPL 94	GF01 groundwater downstream	16.67	15.7	1.52	142	92	6.39	80	50.4	WL- 13.34m depth of water. Works upstream of taking height off of gf01 Sunny dry weather otherwise	Low pH is generally consistent with the historical data for this location.
4/3/2025, 10:52 am	EPL 95	GF01 groundwater downstream	21.79	18.2	1.59	592	397	6.13	202	79.1	SWL- 6.89 m depth. No new works, Sunny dry weather recently	Elevated EC and low pH have been consistent at this location for this reporting period. This location is currently undergoing upgrades in it's extraction method.
4/3/2025, 10:21 am	EPL 96	GF01 groundwater downstream	18.5	50.7	4.72	1420	911	7.06	163	1000	SWL- 5.10 m water depth. No new works around. Sunny dry weather recently Turbidity above 1000	Elevated EC is consistent with the historical ranges for March 2025.
4/3/2025, 11:43 am	EPL 97	GF01 groundwater downstream	19.48	53	5.8	377	245	6.39	109	7.4	SWL- 6.48 m. Dry sunny weather	Elavated EC and low pH have been consistent at this location for this current seasonal range.
-	EPL102	Groundwater monitoring associated with the Marica emplacement area on Marica Trail	-	-	-	-	-	-	-	-	-	Due to the ongoing work in the PSE area, this location has been decommissioned and relocated. The new location will be sampled in the following months.
15/3/2025, 9:58 am	EPL103	Upstream groundwater monitoring west of the Tantangara emplacement area	14.7	41.7	4.23	46	30	6.38	222	2.8	SWL- 11.19m. Visible particles floating around otherwise very clear water. No odor. Sunny dry day.	This location is upgradient of works and therefore representative of background conditions.
15/3/2025, 10:20 am	EPL104	Dowslope groundwater monitoring east of the Tantangara emplacement area	15.98	43.1	4.25	40	26	6.03	238	14.4	SWL- 3.28 m.Rabbit warren running under the concrete that's securing the bore - exposed holes, Very low sediment seen at the bottom of the hydra sleeve otherwise the water was very clear. No odor. Sunny dry weather. Down gradient of pse development.	Low pH aligns with results upgradient of PSE.
15/3/2025, 10:53 am	EPL105	Dowslope groundwater monitoring east of the Tantangara emplacement area	16.85	46.5	4.5	163	106	5.78	243	15.6	Water was running slow out of pump, during rinsing the hose it was very cloudy. Once we rinsed the hose it was clear water flow. No odor. Sample taken from the end of the hose rather than the tap. Due to concern of water being syphined out of tank prev.	Low pH aligns with results upgradient of PSE.
20/3/2025, 11:31 am	EPL113	Upstream east monitoring of Ravine Bay emplacement area	14.73	126.5	12.82	127	83	7.39	201	566	3.14m SWL (from topof casing). Horiba 5 used to sample. Visibly clear water with slight swampy odour	All reading are within WQO limits.
20/3/2025, 10:25 am	EPL114	Upstream west monitoring of Ravine Bay emplacement area	16.66	88.8	8.63	327	213	7.55	-35	327	SWL -31.83 (from top of casing). Clear water, no sheen	All reading are within WQO limits.
20/3/2025, 11:14 am	EPL115	Downstream east monitoring of Ravine Bay emplacement area	15.88	97.5	9.64	298	194	7.5	-21	172	Sampled using Horiba 5. SWL 10.95m (from top of casing). Sulfuric odour. No sheen. Water visibly turbid	All reading are within WQO limits.
20/3/2025, 10:05 am	EPL116	Downstream west monitoring of Ravine Bay emplacement area	15.27	157.7	15.8	187	0.121	7.47	228	1,000	Horiba 5 used. SWL 8.49m (top of casing). Very turbid water. No sheen or odour	All reading are within WQO limits.
20/3/2025, 11:00 am	EPL117	Downstream monitoring of Ravine Bay emplacement area	15.66	108.4	10.77	121	10.77	7.41	-17	1000	15.87 SWL (from top of casing). Turbid and cloudy water. Swampy odour. Tested on Horiba 5	All reading 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.

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 March 2025 - 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	EPL102	EPL103	EPL104	EPL105	EPL113	EPL114	EPL115	EPL116	EPL117
Physiochemical				4/03/25	4/03/25	4/03/25	15/03/25	15/03/25	15/03/25	18/03/25	-	19/03/25	19/03/25	19/03/25	19/03/25	19/03/25	19/03/25	19/03/25	4/03/25	4/03/25	4/03/25	4/03/25	4/03/25	4/03/25	4/03/25	4/03/25	-	15/03/25	15/03/25	15/03/25	20/03/25	20/03/25	20/03/25	20/03/25	20/03/25
pH	pH Unit	-	6.5-8	7.68	7.17	6.07	5.99	6.3	6.48	5.89	-	6.46	6.68	7.08	6.27	6.4	6.79	6.86	5.84	6.42	5.92	6.41	6.39	6.13	7.06	6.39	-	6.38	6.03	5.78	7.39	7.55	7.5	7.47	7.41
Electrical Conductivity	µS/cm	-	30-350	206	197	952	22	22	121	53	-	737	809	2850	757	797	900	303	53	193	96	207	142	592	1420	377	-	46	40	163	127	327	298	187	121
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	197	247	199	228	231	217	209	-	76	-28	8	59	238	-62	230	252	16	200	17	80	202	163	109	-	222	238	243	201	-35	-21	228	-17
Temperature	°C	-	No Water Quality Objective Value	16.12	18.01	20.63	14.56	15.55	18.1	12.39	-	13.97	15.04	13.76	16.29	16.46	15.36	15.23	18.9	19.38	16.84	16.93	16.67	21.79	18.5	19.48	-	14.7	15.98	16.85	14.73	14.66	15.88	15.21	15.66
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	15.8	19.6	17.5	55.2	45.3	45.4	80	-	22.3	106.3	18.7	49	124.7	75.9	39.1	47	17.4	35.4	10	15.7	18.2	50.7	53	-	41.7	43.1	46.5	126.5	88.8	97.5	157.7	108.4
Turbidity	NTU	-	No Water Quality Objective Value	54.2	62.6	127	2.9	24.1	142	69	-	72.3	209	29.1	168	1000	14.1	6.86	96	7.4	564	160	50.4	79.1	1000	7.4	-	2.8	14.4	15.6	566	327	172	1000	1000
Laboratory analytes																																			
TSS	mg/L	5	No Water Quality Objective Value	16	9	204	<5	23	30	<5	-	21	349	218	62	1,870	6	20	171	21	194	3,020	86	190	2,100	41	-	<5	<5	15	153	6	2,460	10,200	6,410
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	106	105	391	<1	9	30	11	-	308	435	1,100	120	181	137	66	16	102	42	303	74	257	559	124	-	2	9	54	48	201	173	85	39
Nutrients																																			
Ammonia as N	µg/L	10	13	10	40	20	10	10	<10	<10	-	30	110	100	10	30	230	10	10	60	20	60	90	20	30	<10	-	20	80	30	10	50	30	100	20
Nitrite + Nitrate as N (NOx)	µg/L	10	15	50	960	44,400	840	160	930	20	-	<10	<10	<10	10	9,620	<10	<10	280	<10	40	<10	<10	29,500	54,100	140	-	690	260	7,510	40	<10	<10	40	<10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	100	5,900	<100	<100	<100	<100	-	200	300	400	300	5,400	400	100	<100	100	<100	<100	200	4,400	4,700	<100	-	<100	200	1,300	<1,000	<100	<1,000	<10,000	<5,000
Nitrogen (Total)	µg/L	100	250	<100	1,100	50,300	800	200	900	<100	-	200	300	400	300	13,000	400	100	300	100	<100	<100	200	33,900	58,800	100	-	700	500	8,800	<1,000	<100	<1,000	<10,000	<5,000
Reactive Phosphorus	µg/L	1	15	<10	10	<10	<10	<10	20	20	-	<10	<10	<10	<10	<10	20	<10	<10	10	<10	20	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	20	<10
Phosphorus (Total)	µg/L	10	20	<10	40	190	60	50	100	40	-	170	290	50	90	1,310	130	50	80	40	70	400	20	110	1,360	110	-	40	50	60	<100	30	<100	4,540	6,420
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	<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	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals																																			
Aluminium (total)	µg/L	5	No Water Quality Objective Value	23	1,560	5,330	141	1,440	3,360	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	6	<5	7	-	<5	<5	<5	<5	<5	<5	<5	<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	<0.2	3.6	10.0	<0.2	0.5	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (dissolved)	µg/L	0.2	0.8	<0.2	2.5	<0.2	<0.2	<0.2	<0.2	<0.2	-	2.0	25.4	25.2	2.6	0.2	35.1	0.3	<0.2	1.4	0.4	2.8	1.1	0.5	0.2	0.2	-	<0.2	<0.2	<0.2	0.3	<0.2	0.3	1.0	0.9
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	<0.2	3.8	18.1	0.4	1.5	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (III+VI) (dissolved)	µg/L	0.2	0.01	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	0.6	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	-	<0.2	0.2	0.4	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (total)	µg/L	0.5	No Water Quality Objective Value	5.2	45.1	9.5	<0.5	4.1	29.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper (dissolved)	µg/L	0.5	1	2.2	2.0	<0.5	<0.5	<0.5	4.0	1.0	-	<0.5	<0.5	<0.5	2.4	<0.5	<0.5	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	<0.5	-	16.7	<0.5	<0.5	2.0	<0.5	<0.5	<0.5	<0.5
Iron (total)	µg/L	2	No Water Quality Objective Value	18	1,610	10,700	173	979	2,580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	µg/L	2	300	<2	<2	<2	<2	9	<2	<2	-	<2	1,820	2,070	4	<2	822	2	<2	386	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	61	<2	<2	337
Lead (total)	µg/L	0.1	No Water Quality Objective Value	0.1	5.2	92.9	0.1	0.8	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	0.3	<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
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	14.6	212	329	3.8	24.6	53.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	µg/L	0.5	1,200	10.6	61.2	37.3	1.4	2.1	2.7	4.6	-	174	211	362	48.4	54.4	151	3.1	5.9	567	41.0	155	352	550	0.8	415	-	0.8	3.3	10.0	92.3	356	467	114	391
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	<0.5	5.4	19.8	0.6	1.2	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (dissolved)	µg/L	0.5	8	<0.5	<0.5	3.4	<0.5	<0.5	<0.5	0.9	-	14.1	2.3	0.9	6.3	1.7	2.6	1.3	2.2	0.8	1.4	1.2	1.1	8.1	1.2	2.7	-	<0.5	<0.5	4.0	<0.5	43.1	<0.5	<0.5	1.9
Silver (total)	µg/L	0.01	No Water Quality Objective Value	<0.01	<0.01	0.96	<0.01	0.04	<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	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (total)	µg/L	1	No Water Quality Objective Value	6	14	45	4	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (dissolved)	µg/L	1	2.4	1	<1	4	2	2	<1	4	-	<1	2	1	2	<1	<1	<1	8	<1	6	<1	4	19	<1	26	-	<1	<1	51	3	<1	<1	1	<1

* 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: 01-31 March 2025 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51	EPL107	EPL108	EPL109
Field				2/3/25	2/3/25	26/3/25	26/3/25	26/3/25	1/3/25	9/3/25	9/3/25	26/3/25	26/3/25	16/3/25	16/3/25	16/3/25
pH	pH Unit	-	6.5-8	8.1	8.01	7.82	8.42	8.18	7.94	6.34	8.95	8.5	8.43	7.79	7.72	7.77
Electrical Conductivity	µS/cm	-	20-30	102	63	27	26	26	36	29.6	31.7	26	26	40	38	36
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	191	192	130	140	14	174	664.1	625.5	139	140	193	190	180
Temperature	°C	-	No Water Quality Objective Value	22.97	22.84	18.43	20.14	20.19	22.63	17.6	16.5	20.29	20.21	22.01	21.97	21.7
Dissolved Oxygen	% saturation	-	90-110	64.8	70.6	93.2	95.5	91.5	54.1	62.1	75.3	97.1	93.8	72.6	67.8	75.6
Turbidity	NTU	-	1-20	1.61	1.15	7.3	13.4	12.9	8.8	7.17	2.63	12.5	10.7	0.76	0.85	0.66
Laboratory analytes																
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	<5	<5	<5	5	<5	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	46	28	9	9	9	9	13	16	9	9	14	14	14
Nutrients																
Ammonia as N	µg/L	10	10	<10	<10	70	<10	<10	20	30	140	90	<10	<10	40	20
Nitrite + Nitrate as N (NOx)	µg/L	10	10	<10	<10	10	<10	<10	<10	290	20	10	<10	<10	10	<10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	100	300	400	400	300	100	200	300	400	100	100	100
Nitrogen (Total)	µg/L	100	350	100	100	300	400	400	300	400	200	300	400	100	100	100
Reactive Phosphorus	µg/L	1	5	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Phosphorus (Total)	µg/L	10	10	20	10	20	30	30	20	<10	<10	40	30	20	20	10
Inorganics																
Cyanide Total	µg/L	4	7	<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	<1.0	<1.0	<1.0	<1.0	<1.0
Metals																
Aluminium (dissolved)	µg/L	5	55	<5	<5	12	9	11	40	26	19	10	10	<5	<5	<5
Arsenic (dissolved)	µg/L	0.2	13	0.7	0.5	0.4	0.4	0.4	0.4	0.2	<0.2	0.4	0.4	0.3	0.4	0.4
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	<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	<0.5	<0.5	<0.5
Iron (dissolved)	µg/L	2	300	20	6	141	90	92	218	98	89	96	91	4	3	3
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	<0.1	<0.1	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	<0.5	0.6	<0.5	<0.5	1.7	3.4	3.4	0.5	<0.5	<0.5	<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	<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	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biological																
Faecal Coliforms	CFU/100mL	1	10/100^	75	230	7	-	-	-	-	-	-	5	-	-	-
Biochemical Oxygen Demand	mg/L	2	1/5^	4	3	3	-	-	-	-	-	-	2	-	-	-

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

** Algal blooms can present as feacal coliforms

^ 90th percentile concentration limits / 100 percentile concentration limits

\- Sample not required at this location.

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 March 2025 - 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	EPL98	EPL99	EPL100	EPL101	EPL106	EPL110	EPL118	EPL120	EPL122
Field				3/03/25	3/03/25	3/03/25	3/03/25	3/03/25	3/03/25	3/03/25	3/03/25	7/03/25	18/03/25	18/03/25	1/03/25	1/03/25	1/03/25	1/03/25	1/03/25	8/03/25	8/03/25	4/03/25	Dry	Dry	Dry	Dry	Dry	13/03/25	13/03/25	13/03/25	Dry	18/03/25	Dry	Dry	5/3/25	Dry	Dry	Dry	7/03/25
pH	-	-	6.5-8	8.02	7.9	7.86	8.14	8.06	7.99	8.05	8.25	6.7	7.86	8.23	6.89	7.12	7.23	8.19	7.87	7.29	7.35	9.21	Dry	Dry	Dry	Dry	Dry	9.29	8.85	8.67	Dry	10.45	Dry	Dry	7.66	Dry	Dry	Dry	7.86
Electrical Conductivity	µS/cm	-	30-350	219	123	221	177	172	166	170	175	1270	37	36	40	32	31	48	40	52	54	863	Dry	Dry	Dry	Dry	Dry	966	561	1130	Dry	511	Dry	Dry	1379	Dry	Dry	Dry	539
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	90	118	139	146	101	121	125	137	134	190	164	298	285	239	136	155	126	145	93	Dry	Dry	Dry	Dry	Dry	115	129	147	Dry	59	Dry	Dry	196	Dry	Dry	Dry	123
Temperature	°C	-	No Water Quality Objective Value	17.93	16.42	21.61	20.07	17.47	17.39	17.77	22.66	18.43	11.98	11	13.43	13.5	17.83	12.18	11.71	16.06	15.75	23.49	Dry	Dry	Dry	Dry	Dry	28.62	23.51	27.8	Dry	12.29	Dry	Dry	21.14	Dry	Dry	Dry	17.55
Dissolved Oxygen	% saturation	-	90-110	88.4	63.3	68.7	84	66.2	107.4	71.5	65.2	65.1	74.2	71.2	61.4	69.4	68.3	66.3	68.8	58.2	63.2	80.4	Dry	Dry	Dry	Dry	Dry	128.5	56	80.4	Dry	69.8	Dry	Dry	101.9	Dry	Dry	Dry	78.8
Turbidity	NTU	-	2-25	8	3.7	4.6	10.1	1.6	3.3	1.7	3.3	0.4	5.3	7.65	5.1	8.8	13.2	71.9	14.9	7.8	9.2	47.1	Dry	Dry	Dry	Dry	Dry	782	1000	56.5	Dry	170	Dry	Dry	20.8	Dry	Dry	Dry	100
Laboratory analytes																																							
TSS	mg/L	5	No Water Quality Objective Value	7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	36	<5	<5	<5	<5	<5	24	Dry	Dry	Dry	Dry	Dry	223	418	26	Dry	72	Dry	Dry	6	Dry	Dry	Dry	87
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	212	60	90	82	87	85	85	85	330	18	18	13	13	9	16	16	17	17	260	Dry	Dry	Dry	Dry	Dry	44	31	217	Dry	198	Dry	Dry	420	Dry	Dry	Dry	86
Nutrients																																							
Ammonia as N	µg/L	10	13	20	10	20	<10	<10	10	<10	<10	10	20	<10	40	<10	20	80	30	20	20	390	Dry	Dry	Dry	Dry	Dry	20	50	20	Dry	130	Dry	Dry	<10	Dry	Dry	Dry	70
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	380	20	<10	10	10	20	61,400	<10	<10	10	<10	10	<10	<10	20	10	38,100	Dry	Dry	Dry	Dry	Dry	2,140	5,520	11,900	Dry	6,360	Dry	Dry	43,500	Dry	Dry	Dry	9,180
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	<100	<100	<100	<100	<100	100	<100	5,100	<100	<100	200	<100	300	400	300	100	300	7,000	Dry	Dry	Dry	Dry	Dry	800	1,400	1,700	Dry	2,200	Dry	Dry	6,600	Dry	Dry	Dry	400
Nitrogen (Total)	µg/L	100	250	<100	<100	400	<100	<100	<100	100	<100	66,300	<100	<100	200	<100	300	400	300	100	300	41,100	Dry	Dry	Dry	Dry	Dry	2,900	6,900	13,600	Dry	8,600	Dry	Dry	50,100	Dry	Dry	Dry	9,600
Reactive Phosphorus	µg/L	1	15	<10	<10	<10	<10	<10	<10	<10	<10	<30	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	Dry	Dry	Dry	Dry	Dry	<10	20	<10	Dry	<10	Dry	Dry	<10	Dry	Dry	Dry	<10
Phosphorus (Total)	µg/L	10	20	10	30	50	40	<10	30	40	30	20	10	40	150	20	20	40	<10	40	30	30	Dry	Dry	Dry	Dry	Dry	150	160	90	Dry	130	Dry	Dry	20	Dry	Dry	Dry	200
Inorganics																																							
Cyanide Total	µg/L	4	4	<4	<4	<4	<4	14	<4	<4	<4	<4	5	<4	<4	<4	<4	<4	<4	<4	<4	<4	Dry	Dry	Dry	Dry	Dry	<4	<4	<4	Dry	<4	Dry	Dry	<4	Dry	Dry	Dry	<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	Dry	Dry	<1.0	<1.0	<1.0	Dry	<1.0	Dry	Dry	<1.0	Dry	Dry	Dry	<1.0
Metals																																							
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	164	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	11	12	24	16	15	16	23	<5	Dry	Dry	Dry	Dry	Dry	19	19	5	Dry	65	Dry	Dry	<5	Dry	Dry	Dry	<5
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (dissolved)	µg/L	0.2	0.8	0.7	0.3	0.7	0.6	0.7	0.7	0.7	0.7	0.4	<0.2	<0.2	<0.2	<0.2	0.4	0.2	0.2	0.3	0.4	<0.2	Dry	Dry	Dry	Dry	Dry	20.5	21.9	6.2	Dry	1.4	Dry	Dry	2.3	Dry	Dry	Dry	0.3
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
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	0.3	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	Dry	Dry	Dry	Dry	Dry	8.6	15.6	9.3	Dry	76.6	Dry	Dry	2.1	Dry	Dry	Dry	<0.2
Copper (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
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	Dry	Dry	4.0	1.9	0.8	Dry	0.7	Dry	Dry	<0.5	Dry	Dry	Dry	<0.5
Iron (total)	µg/L	2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	132	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	µg/L	2	300	6	22	11	12	6	8	9	13	2	22	15	46	35	145	213	221	324	269	<2	Dry	Dry	Dry	Dry	Dry	27	36	<2	Dry	5	Dry	Dry	<2	Dry	Dry	Dry	4
Lead (total)	µg/L	0.1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
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	Dry	Dry	<0.1	<0.1	<0.1	Dry	<0.1	Dry	Dry	<0.1	Dry	Dry	Dry	<0.1
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	µg/L	0.5	1,200	0.6	2.4	1.5	5.0	0.8	0.8	1.5	2.9	275	5.2	2.8	3.5	2.0	0.9	11.8	5.6	43.2	0.8	<0.5	Dry	Dry	Dry	Dry	Dry	0.8	<0.5	<0.5	Dry	<0.5	Dry	Dry	<0.5	Dry	Dry	Dry	<0.5
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (dissolved)	µg/L	0.5	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dry	Dry	Dry	Dry	Dry	1.2	0.6	0.6	Dry	<0.5	Dry	Dry	1.9	Dry	Dry	Dry	<0.5
Silver (total)	µg/L	0.01	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
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	Dry	Dry	<0.01	<0.01	<0.01	Dry	<0.01	Dry	Dry	<0.01	Dry	Dry	Dry	<0.01
Zinc (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	Dry	Dry	Dry	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (dissolved)	µg/L	1	2.4	<1	<1	<1	<1	<1	<1	<1	<1	7	<1	<1	8	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	Dry	Dry	Dry	<1	2	<1	Dry	<1	Dry	Dry	<1	Dry	Dry	Dry	<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 (2018), they are not pollutant limits imposed by EPL 21266.
- Samples not required

Monthly EPL Sampling: 01-31 March 2025 - Discharge 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				16/03/2025							12/03/2025
Inflow#	ML/day	-	-	-	0.0000	0.2650	0.0512	0.2177	0.0970	0.7472	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	7.84	-	-	-	-	-	-	7.92
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	6	-	-	-	-	-	-	18.6
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	507	-	-	-	-	-	-	701
Temperature	°C	-	15	25.15	-	-	-	-	-	-	16.1
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	73.6	-	-	-	-	-	-	55.2
Turbidity	NTU	-	<25	0.9	-	-	-	-	-	-	0.53
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	-	-	-	-	-	-	<10
Nitrite + Nitrate as N (NOx)	µg/L	10	10	100	-	-	-	-	-	-	<10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	-	-	-	-	-	-	<100
Nitrogen (Total)	µg/L	100	350/-^	100	-	-	-	-	-	-	<100
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	<10	-	-	-	-	-	-	<10
Phosphorus (Total)	µg/L	10	100/300^	<10	-	-	-	-	-	-	10
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
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	<0.2	-	-	-	-	-	-	<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	-	-	-	-	-	-	<0.01
Zinc (dissolved)	µg/L	1	8	<1	-	-	-	-	-	-	<1
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	11.00	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	2	5	<2	-	-	-	-	-	-	<1

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 March 2025 - Volumes

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/03/2025	-	-	0.14	0.06	0.16	0.12	0.62
2/03/2025	0.44	-	0.15	0.06	0.20	0.05	0.52
3/03/2025	-	-	0.15	0.07	0.21	0.08	0.71
4/03/2025	-	-	0.15	0.06	0.20	0.24	0.86
5/03/2025	-	-	0.11	0.04	0.22	0.08	0.79
6/03/2025	-	-	0.12	0.04	0.21	0.09	0.75
7/03/2025	-	-	0.15	0.05	0.21	0.08	0.76
8/03/2025	-	-	0.22	0.03	0.23	0.09	0.79
9/03/2025	-	-	0.16	0.04	0.21	0.09	0.69
10/03/2025	-	-	0.21	0.07	0.18	0.08	0.86
11/03/2025	-	-	0.13	0.03	0.20	0.09	0.59
12/03/2025	-	-	0.13	0.05	0.18	0.08	0.53
13/03/2025	0.20	-	0.13	0.05	0.20	0.07	0.83
14/03/2025	-	-	0.73	0.05	0.20	0.09	0.92
15/03/2025	-	-	0.42	0.04	0.20	0.07	0.98
16/03/2025	-	-	0.49	0.06	0.17	0.01	0.68
17/03/2025	-	-	0.41	0.07	0.29	0.07	0.52
18/03/2025	-	-	0.42	0.07	0.23	0.16	0.87
19/03/2025	-	-	0.40	0.06	0.25	0.04	0.72
20/03/2025	-	-	0.42	0.06	0.25	0.06	0.64
21/03/2025	-	-	0.28	0.03	0.19	0.06	0.58
22/03/2025	0.12	-	0.24	0.04	0.20	0.06	0.78
23/03/2025	0.57	-	0.39	0.06	0.20	0.01	0.73
24/03/2025	-	-	0.24	0.04	0.22	0.04	0.76
25/03/2025	0.38	-	0.25	0.04	0.22	0.08	0.81
26/03/2025	1.14	-	0.16	0.05	0.23	0.25	0.52
27/03/2025	0.27	0.73	0.28	0.05	0.22	0.08	0.83
28/03/2025	-	0.63	0.13	0.04	0.24	0.08	0.83
29/03/2025	-	-	0.24	0.05	0.21	0.17	0.50
30/03/2025	14.85	0.28	0.30	0.05	0.21	0.16	0.67
31/03/2025	0.39	-	0.21	0.05	0.21	0.17	0.78

\- 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 8.45 L/s

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 11.34 L/s

-- Water not discharged on this day

EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring April 2025

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
11/4/2025, 9:22 am	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	12.21	92.3	9.89	150	98	8.14	173	3.83	Clear day, no recent rain. Flow and water level average. Low turb. No odours. No unusual algae growth.	Results align with historically recorded data, and seasonal changes at time of sampling.
11/4/2025, 10:02 am	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	12.56	96.7	10.29	127	83	8.09	173	0.59	Clear day. No recent rain. Water level and flow average. No odour or unusual algal growth.	The results in this location is indicative of data recorded historically. The changes occurred in temperature and flow is in alignment with seasonal change.
11/4/2025, 11:35 am	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	16.69	89.3	8.69	153	99	8.18	175	0.86	Clear day. Average flow and water level. No odour or unusual algae growth. Low turb.	The results align with historical data and are within expectations for seasonal change.
11/4/2025, 11:53 am	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	15.83	97.9	9.69	149	97	8.18	176	0.69	Sunny day. Water level and flow average. Low turb. No odour or unusual algae growth. No recent rain.	The results consistent with previous sample rounds and are within expectations for seasonal conditions.
11/4/2025, 9:42 am	EPL12	Yarrangobilly River, immediately downstream of portal pad	12.36	93.3	9.96	147	95	8.18	167	0.4	Sunny day. No recent rain. Water level and flow average. Low turb. No odour or unusual algae growth.	Results for this location are representative of previous rounds of sampling. Large decrease in temperature compared to last month consistent with seasonal change.
11/4/2025, 10:19 am	EPL14	Yarrangobilly River, downstream of road construction areas	13.31	95.1	9.94	144	94	8.2	173	1.11	Sunny day. No recent rain. Water level and flow average. No odour. No unusual algae growth. Low turb.	The results for this location align with data recorded during previous sampling rounds, and are within expectations for seasonal conditions.
11/4/2025, 10:39 am	EPL15	Yarrangobilly River, downstream of road construction areas	13.84	97.2	10.05	146	95	8.17	176	0.3	Sunny day. No recent rain. Low turb. Water level and flow average. No odour or unusual algal growth.	Results for this location are representative of the location according to previous sample rounds. Large decrease in temperature compared to last month consistent with seasonal change.
11/4/2025, 12:07 pm	EPL16	Yarrangobilly River, downstream of road construction areas	15.63	93.8	9.32	147	95	8.34	170	0.3	Sunny day. Average flow and water level. No recent rain. No odour or unusual algae growth.	The results for this location align with historical data recorded previously as well as seasonal conditions.
9/4/2025, 9:29 am	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	14.29	50.6	5.17	922.00	590	6.83	112	18.6	Stream is extremely low, no odour, clear colour. No prev rainfall. Lots of vegetation in and around the creek. Watercarts spray the batters within 30m of site and upstream of site.	Results are consistent with previous samples taken here the stream has been at low levels. High electrical conductivity and low DO is typical of very low stream flows.
13/4/2025, 8:21 AM	EPL26	Eucumbene River downstream of Marica Road	10.46	74.3	8.29	37	24	8.23	124	16.4	Obvious animal tracks around banks of stream. Clear water no odours, low stream. Dry sunny weather no wind, no prev rainfall	Low DO aligns is consistent with upstream data and previous results recorded.
13/4/2025, 8:30 AM	EPL27	Eucumbene River upstream of Marica Road	9.27	77.7	8.92	32	21	8.09	133	14.2	Water steady flow, brown algae at the bottom. Water is clear and odorless. No prev rainfall.	Location is upstream of any works. Results are consistent with previous sampling.
6/4/2025, 8:56 am	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	8.13	75	8.88	11	7	7.66	236	6.3	Low steady flow, no odours, clear water, sunny dry cool day. No prev rainfall	Low DO is consistent with upstream data and previous results recorded. The Low Electrical conductivity results are lower then the results we have previously sampled, though it is still within range thoughout our sampled data.
6/4/2025, 9:13 am	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	7.87	58.8	6.99	1	1	7.53	244	3.6	Low steady flow, clear water no odour, cool dry day, no prev rain. Evidence of horse activity around the banks.	The dissolved oxygen results are toward the lower end of the data recorded from previous sampling rounds, although it has been recorded previously.
6/4/2025, 8:33 am	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	14.11	63.2	6.5	7	4	7.51	229	30.8	High flowing, normal level water. Clear, no odours. Overcast cool day.	Low DO results are consistent with the levels recorded by us in previous sampling rounds. Lower EC reports will be investigated.
6/4/2025, 7:56 am	EPL34	Nungar Creek, upstream of Tantangara Road	9.3	81	9.3	13	9	7.87	182	9.4	Water levels normal, flowing steadily. No visible sheen, no odours, clear water. Dry sunny weather, cool temps.	These results are consistent with the data we have recorded in this location, although the low EC is outside the norm.
6/4/2025, 8:03 am	EPL35	Nungar Creek, downstream of Tantangara Road	7.54	68.9	8.25	7.0	4	7.69	180	3.6	Dry, sunny, cool weather. Low, steady stream. In the parts where there is no flow, there is evidence of biological sheen. Water is clear and odorless otherwise.	Low DO is consistent with previous results and typical of low flow.
5/4/2025, 11:40 am	EPL 36	Camerons Creek, upstream of works in Rock Forest	13.57	52	5.41	17	11	6.84	167	5.2	Sunny day. Low flow. Biological sheen present. No odour. Some cattle faeces and hoof marks around waters edge.	The data recorded is representative of low water levels and slow flow recorded at the time of the sample. Low EC has been recorded previously in our sample collections.
5/4/2025, 11:09 am	EPL 37	Camerons Creek, downstream of works in Rock Forest	12.21	64.9	6.96	22	14	7.45	201	23.5	Sunny day. Low flow. Cattle nearby. Smells of cattle faeces/urine. Muddy water.	Low DO is consistent with previous results and typical of low flow. Low EC has been recorded previously within our sample collections.
9/4/2025, 8:09 am	EPL52	GF01 leachate basin	13.56	69.5	7.21	960.00	614	8.71	165	73.2	Basin slightly green, normal smell. No prev rainfall, sunny calm morning. Workings ongoing in gf01	The leachate storage infrastructure is in line with the design function, therefore the high levels of EC and low DO is within range of samples collected previously. .
-	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	This location is dry	This location is dry.
-	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	This location is dry	This location is dry.
-	EPL55	GF01 surface water downstream	-	-	-	-	-	-	-	-	This location is dry	This location is dry.
-	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	-	-	-	-	-	-	-	-	Location is dry	Location is dry.
-	EPL71	Surface water downstream of Marica emplacement	-	-	-	-	-	-	-	-	This location is dry	This location is dry.
18/4/2024, 12:16 PM	EPL84	F8 Basin	23.65	109.1	9.22	704.00	451	9.19	103	1000	Sunny, no recent rainfall, 65% capacity, brown colour, turbid, no odour	These results are conclusive of the design functions of the leachate infrastructure.
25/4/2025, 11:12 AM	EPL85	MY07 Basin	22.51	77.9	6.73	583	373	9.02	13	1,000.00	Visibly turbid water, no odour	These results are conclusive of the design functions of the leachate infrastructure.
11/4/2025, 10:20 AM	EPL86	LHG01 Basin	19.01	90.2	8.1	871.00	557	8.85	-15	190	No sheen or odour	These results are conclusive of the design functions of the leachate infrastructure.

EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring April 2025

-	EPL98	Rock blanket diversion monitoring under GFO1 liner	-	-	-	-	-	-	-	-	This location is dry	This location is dry - GF01 basin was being reconstructed.
13/4/2025, 12:12 PM	EPL99	Marica Leachate Basin- Turkey's Nest	17.66	94.9	9.03	479	312	9.5	4	26.6	Blue water, no algae growth. Evidence of ducks. No prev rainfall, dry sunny day. Water is being pumped out by dewatering	These results are conclusive of the design functions of the leachate infrastructure.
9/4/25, 12:34 PM	EPL100	Marica Lower Leachate Basin USS Shaft	16.25	62.3	6.1	1050	670	8.74	74	167	Sunny day, low level of water in the basin, no smell, turbid water	These results are conclusive of the design functions of the leachate infrastructure. They are also representative of the low levels at time of the samples being taken.
13/4/2025, 11:58 AM	EPL101	Marica Leachate Basin Spoil Pad	18.34	5.33	56.9	1330	848	7.17	115	41.3	Very low water level, green basin colour. Visible sheen in water, rainbow. Algae growth around edge. Breezy, sunny day no prev rainfall.	These results are conclusive of the design functions of the leachate infrastructure. They are also representative of the low levels at time of the samples being taken.

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring April 2025

12/4/2025, 9:28 AM	EPL106	Ravine Bay Leachate basin 1	17.44	89.2	8.5	1,660.00	1,060.00	8.85	44	17	Horiba 5 used for sampling. Water is a dark green colour	These results are conclusive of the design functions of the leachate infrastructure.
-	EPL110	Upstream monitoring of Ravine Bay emplacement area	-	-	-	-	-	-	-	-	Location dry	Location dry.
-	EPL118	Ravine Bay Leachate basin 2	-	-	-	-	-	-	-	-	Location dry	Location dry.
-	EPL120	Ravine Bay Leachate basin 4	-	-	-	-	-	-	-	-	Location dry	Location dry.
11/4/25,2:30 PM	EPL122	GFO1 Drainage Line (Formerly EPL 55b)	17.13	88.8	8.54	492	320	8.18	149	129	Sunny day. No recent rain. No odour. Low flow and water level. Milky colour, grey sediment on vegetation around site from when water level was higher.	These results have been previously seen in past sampling rounds, the low DO is conclusive of the low water levels seen.

Table 2 - Reservoir Water Quality Data
Talbingo and Tantangara Reservoirs

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

Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
13/4/2025, 8:54 AM	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	18.32	87.2	8.2	47	30	7.35	193	5.1	Sunny day. No wind. No recent rain. Water has green colour, more than ravine bay. Water warmer than ravine bay. No odour.	The high EC is in line with results previously recorded by our samples.
13/4/2025, 8:25 AM	EPL11	Talbingo Reservoir, downstream of outlet	18.42	91.2	8.56	41	27	7.35	190	9.5	Sunny day, slightly greener than ravine bay, water temp slightly warmer than ravine bay, no recent rainfall, no odour, zero wind, dusty layer across surface near intake.	This data aligns with data recorded in previous rounds of sampling, the high EC is within range when reviewing previous samples taken.
16/4/2025, 9:46 AM	EPL28	Tantangara Reservoir, upstream of works in the mouth of the Murrumbidgee River	15.3	89.7	9	13.9	11	8.93	110.1	6.85	Sunny; no wind; no previous rainfall. Organic material (including algae) present; no odours or oily sheen; algae causing water to have blue-green colouration. SHORELINE SAMPLE.	DO and EC results are in line with previously recorded data at this location. pH levels recorded are within range of data recorded from previous samples taken.
15/4/2025, 10:24 AM	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	14.65	60.1	6.11	27	18	7.82	134	0.2	Clear sunny day, moderate wind. Visible algae, water is green. No odour or sheen.	Although low levels of DO have been recorded in our samples taken previously, it is lower than usual. The low DO could be attributed to the algae bloom recorded at the time of the sample.
15/4/2025, 10:19 AM	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	14.7	101.6	10.31	27	17	8.13	110	3.3	Clear sunny day, moderate wind. Visible algae, water is green. No odour or sheen.	These results are consistent with previous sampling rounds.
12/4/2025, 9:23 AM	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	14.9	89.1	9	27	17	8.59	113	57.9	Sunny day. No recent rainfall. Water very green. Visible algae bloom, bright green. Algae concentrated on western side of reservoir. No odour. Water level low.	These results are consistent with previous sampling rounds. The slight elevation of pH and turbidity could be attributed to the low levels of water.
6/4/2025, 11:49 am	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	11.75	65	7.04	2	1	7.2	259	6	Low level, constant flow of stream. No odour. Evidence of animal activity on banks. Clear water. Some bubbles on surface, windy, sunny day. No prev rainfall	Low DO levels are within range for previous samples recorded. EC was also observed below the norm.
12/4/2025, 11:45 PM	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	16.2	101.3	9.96	32.5	25	7.72	143.5	3.28	Clear sunny day with minimal wind. Low flow water with visible organic material. Sampled from shore due to low reservoir level and inaccessibility via boat. No odour or sheen. Public campers (6 vehicles) 400m away from sample point.	These results are consistent with previous sampling rounds.
15/4/2025, 10:52 AM	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	13.84	93.6	9.67	28	18	7.74	165	8.2	Clear sunny day, moderate wind. Visible algae, water is green. No odour or sheen.	These results are consistent with previous sampling rounds.
16/4/25, 10:54 AM	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	16.6	91	8.86	27.5	21	7.87	144.7	10.96	Sunny; no wind; no previous rainfall. Organic material present (not as much as further upstream) no odour or oily sheen. SHORELINE SAMPLE	These results are consistent with previous sampling rounds.
13/4/2025, 8:05 AM	EPL107	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River	17.75	85	8.09	38	25	7.24	183	0.5	Sunny day, no recent rain, water is slightly green but not visible algae growth, clearing occurring at pse	These results are consistent with previous sampling rounds.
13/4/2025, 7:50 AM	EPL108	Monitoring of Ravine Bay emplacement area (centre of PSE) within Yarrangobilly River	17.4	89.2	8.53	33	21	7.29	175	11	Sunny day. No odour. Water green but no visible algae. No recent rain. Clearing occurring at ravine bay.	These results are consistent with previous sampling rounds.
13/4/2025, 7:40 AM	EPL109	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River	17.27	85.7	8.23	35	23	7.90	145	15.9	Sunny day. Light breeze. Water green but no visible algae. No odour	These results are consistent with previous sampling rounds.

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
23/4/2025, 9:19 AM	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	19.91	56	5.1	19	13	7.64	156	0.25	Clear water. No odour.	These results are consistent with previous sampling rounds.

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
27/4/2025, 11:57 AM	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	17.7	88.8	8.64	19.1	15	7.71	97.8	0.58	Sample taken from RO Plant. Water clear; no turbidity; no visible sediment present; no odour or oily sheen	These results are consistent with previous sampling rounds.

EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring April 2025
GF01 Surface Water and Groundwater

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
14/4/2025, 2:47 PM	EPL56	GF01 groundwater upstream east	18.47	24.6	2.3	214	139	7.4	186	4.9	SWL 8.65m. Some cloud cover. No recent rainfall. No odour. Clear water. Concrete disintegrating around bore cap. Top of GF01 being shaped.	These results are consistent with previous sampling rounds.
14/4/2025, 3:01 PM	EPL57	GF01 groundwater upstream west	16.29	15.7	1.54	194	126	7.44	264	91.9	SWL 15.06m. Clear water. Clear day. No recent rain. No odour. New track right next to bore recently built as part of GF01 shaping.	These results are consistent with previous sampling rounds.

EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring April 2025

14/4/25, 8:22 AM	EPL58	GF01 groundwater downstream	15.62	27.4	2.72	962	616	6.11	134	95.2	SWL- 7.39m, very clear water, no odour, sunny day, works ongoing in GF01	Elevated results for EC have been increasing recently, and could be a result of being a downstream location of the PSE area. pH for this location has regularly recorded lower concentrations.
6/4/2025, 12:08 pm	EPL68	Tantangara groundwater downstream West	12.34	72.6	7.77	2	1	5.72	288	15.1	Running fine, clear water, no odours. No prev rainfall. Windy sunny day. Works continuing on pse	EC results are below WQO's. Low pH levels are consistent with previous monitoring data.
6/4/2025, 12:19 pm	EPL69	Tantangara groundwater downstream East	12.4	42.1	4.5	9	6	5.9	289	23.8	Water level 2.45m, Depth of well 8.43m. Clear water, very little sediment build up at bottom. No odours. Works ongoing adjacent to bore. No prev rainfall	The results for EC are outside of the range of recorded in previous monitoring event, possibly resulting from agitation during sampling. The low pH levels are consistent with previous samples taken.
6/4/2025, 11:03 am	EPL70	Tantangara groundwater upstream	12.4	42.1	4.5	9	6	5.9	289	23.8	Water level 2.45m, Depth of well 8.43m. Clear water, very little sediment build up at bottom. No odours. Works ongoing adjacent to bore. No prev rainfall	The results for EC are outside of the range of recorded in previous monitoring event, possibly resulting from agitation during sampling. The low pH levels are consistent with previous samples taken.
13/4/2025, 11:36 AM	EPL 72	Marica groundwater upstream	14.68	50.9	5.16	46	30	7.21	105	206	SWL 37.71m, BBL 44.60m. Cloudy at bottom with grey colouring. No odours. No prev rainfall. Borehole well intact.	These results are within historic records for this location. The elevated turbidity is an outlier for data recorded in previous sample rounds.
-	EPL73	Marica groundwater downstream	-	-	-	-	-	-	-	-	This site has been decommissioned.	This site has been decommissioned.
11/4/2025, 10:23 AM	EPL80	LHG groundwater upstream	18.13	20.8	1.96	685	438	6.8	-41	14.3	Water level - 29.49 m	These results are consistent with previous sampling rounds.
11/4/25, 10:38 AM	EPL81	LHG groundwater downstream	19.05	27.1	2.51	859	550	7.1	-167	669	Turbid muddy water. Depth to water 3.99m from top of casing.	The elevated EC results have been recorded in previous sampling rounds. The elevated turbidity is within data recorded in previous sampling rounds.
11/4/2025, 10:28 AM	EPL82	MY groundwater upstream	17.18	17.4	1.67	2190	1400	6.65	-50	43.9	Water level 6.02 m	The elevated EC results are consistent with sampling rounds within the past year.
11/4/25, 9:43 AM	EPL83	MY groundwater downstream	17.36	42.8	4.1	815	521	6.78	-32	74.7	Depth of water is to top of casing 3.94m. Horiba 5 used.	The elevated EC results are consistent with sampling rounds within the past year.
11/4/2025, 10:32 AM	EPL87	MY groundwater downstream	17.43	40.3	3.85	651	417	6.72	152	1000	Water level 4.3 m	The elevated EC results are consistent with previous samples taken.
11/4/2025, 9:16 AM	EPL88	MY groundwater downstream	16.1	37.7	3.71	788	519	7.14	-215	18.7	Depth of water 3.37m (top of casing). Horiba 5 used. Water is visibly turbid with a strong sulfuric smell	The elevated EC results are consistent with previous sampling rounds.
11/4/2025, 10:34 AM	EPL89	LHG groundwater downstream	16.01	60.6	5.98	302	196	6.81	145	14.8	Water level 3.29 m	These results are consistent with previous sampling rounds.
14/4/2025, 7:47 am	EPL 90	GF01 groundwater downstream	13.59	73.8	7.67	62	40	7.23	130	100	SWL 13.14m. Sunny day. No recent rain. Bore directly below batter where water carts irrigate.	These results are consistent with previous sampling rounds.
14/4/2025, 8:01 AM	EPL 91	GF01 groundwater downstream	14.51	37.1	3.78	218	142	6.98	-108	11.2	SWL 8.14M. Sunny day. No recent rain. Slight sulphur odour.	These results are consistent with previous sampling rounds.
14/4/2025, 7:47 AM	EPL 92	GF01 groundwater downstream	13.56	93.8	9.76	134	87	7.87	142	930	SWL- 19.95m, muddy water, no smell, sunny day	These results are consistent with previous sampling rounds. Elevated turbidity to be managed through upcoming bore development program.
14/4/2025, 7:58 AM	EPL 93	GF01 groundwater downstream	13.81	91	9.41	207	134	7.84	114	895	SWL- 14.18m, turbid water, no odour, sunny day	These results are consistent with previous sampling rounds. The high turbidity could be attributed to bore development, this will be monitored.
14/4/2025, 8:02 AM	EPL 94	GF01 groundwater downstream	13.88	91	9.4	151	98	7.78	12	107	SWL- 13.54m, sunny day, a bit turbid water, no odour	These results are consistent with previous sampling rounds.
14/4/2025, 8:14 AM	EPL 95	GF01 groundwater downstream	15	89.9	9.04	821	526	7.89	94	151	SWL- 7.32m, very clear water, no odours, sunny day, works ongoing in GF01	These results are consistent with previous sampling rounds.
9/4/2025, 7:54 am	EPL 96	GF01 groundwater downstream	11.79	99.4	10.75	291	189	6.72	216	869	SWL5.30m, BBL14.45m. No concrete, or lid on bore. The pipe is cracked. Orange colour, no odour, no prev rainfall. Likely ingress of surface water. Works ongoing at gf01.	These results are consistent with previous sampling rounds. The high turbidity could be attributed to bore development, this will be monitored.
14/4/2025, 9:26 AM	EPL 97	GF01 groundwater downstream	15.49	22.7	2.26	363	236	6.84	113	1.3	SWL 6.35m. Sunny day. No recent rain. Bore plinth loose, concrete unstable. Low turb.	These results are consistent with previous sampling rounds.
-	EPL102	Groundwater monitoring associated with the Marica emplacement area on Marica Trail	-	-	-	-	-	-	-	-	This location has been decommissioned.	This location has been decommissioned.
6/4/2025, 10:47 am	EPL103	Upstream groundwater monitoring west of the Tantangara emplacement area	11.05	39.2	4.31	13	8	6.01	296	8.6	Water level 11.31m, Depth of well 22.24m. Clear water, no sediment build up. No odours. Works continuing on pse.	The results, including the low EC, is consistent with samples previously taken.
6/4/2025, 12:34 pm	EPL104	Downslope groundwater monitoring east of the Tantangara emplacement area	12.6	39.7	4.22	14	9	5.95	296	11.7	Water level 4.44m, Depth of well 6.82. Cool sunny day, no prev rainfall. Clear water, runny sediment particles orange at very bottom. No odour.	The results, including the low EC, is consistent with samples previously taken.
6/4/2025, 11:30 am	EPL105	Downslope groundwater monitoring east of the Tantangara emplacement area	12.64	40	4.25	130	84	5.83	310	168	No odour, clear colour, running slowly out of bore. Pump is preventing dipping and depth sounding.	The results, including the low EC, is consistent with samples previously taken.
4/4/2025, 12:11 PM	EPL113	Upstream east monitoring of Ravine Bay emplacement area	15.08	17.7	1.78	168	109	6.31	154	437	Water level reading: 3.07	These results are consistent with previous sampling rounds.

EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring April 2025

4/4/2025, 12:56 PM	EPL114	Upstream west monitoring of Ravine Bay emplacement area	15.49	21.6	2.15	397	258	7.41	27	20.4	WLR: 31.83	These results are consistent with previous sampling rounds.
4/4/2025, 12:33 PM	EPL115	Downstream east monitoring of Ravine Bay emplacement area	15.51	13.2	1.32	363	236	7.38	36	220	Water level reading: 10.98	These results are consistent with previous sampling rounds.
4/4/2025, 1:25 PM	EPL116	Downstream west monitoring of Ravine Bay emplacement area	15.55	54.5	5.43	178	115	6.88	128	1,000	WLR: 8.23	These results are consistent with previous sampling rounds.
4/4/2025, 2:16 PM	EPL117	Downstream monitoring of Ravine Bay emplacement area	15.82	10.8	1.07	149	97	6.34	0	1000	WLR: 15.70	These results are consistent with previous sampling rounds.

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.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-30 April 2025 - Groundwater

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL56	EPL57	EPL58	EPL68	EPL69	EPL70	EPL72	EPL73 (decommissioned)	EPL80	EPL81	EPL82	EPL83	EPL87	EPL88	EPL89	EPL 90	EPL 91	EPL92	EPL93	EPL94	EPL95	EPL96	EPL97	EPL102 (Decommissioned)	EPL103	EPL104	EPL105	EPL113	EPL114	EPL115	EPL116	EPL117
Physiochemical				14/04/2025	14/04/2025	14/04/2025	6/04/2025	6/04/2025	6/04/2025	13/04/2025	-	11/04/2025	11/04/2025	11/04/2025	11/04/2025	11/04/2025	11/04/2025	11/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025	14/04/2025	9/04/2025	14/04/2025	-	6/04/2025	6/04/2025	6/04/2025	4/04/2025	4/04/2025	4/04/2025	4/04/2025	4/04/2025
pH	pH Unit	-	6.5-8	7.4	7.44	6.11	5.72	5.9	5.9	7.21	-	6.8	7.1	6.65	6.78	6.72	7.14	6.81	7.23	6.98	7.87	7.84	7.78	7.89	6.72	6.84	-	6.01	5.95	5.83	6.31	7.41	7.38	6.88	6.34
Electrical Conductivity	µS/cm	-	30-350	214	194	962	2	9	9	46	-	685	859	2190	815	651	788	302	62	218	134	207	151	821	291	363	-	13	14	130	168	397	363	178	149
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	186	264	134	288	289	289	105	-	-41	-167	-50	-32	152	-215	145	130	-108	142	114	12	94	216	113	-	296	296	310	154	27	36	128	-
Temperature	°C	-	No Water Quality Objective Value	18.47	16.29	15.62	12.34	12.4	12.4	14.68	-	18.13	19.05	17.18	17.36	17.43	16.1	16.01	13.59	14.51	13.56	13.81	13.88	15	11.79	15.49	-	11.05	12.6	12.64	15.08	15.49	15.51	15.55	15.82
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	24.6	15.7	27.4	72.6	42.1	42.1	50.9	-	20.8	27.1	17.4	42.8	40.3	37.7	60.6	73.8	37.1	93.8	91	91	89.9	99.4	22.7	-	39.2	39.7	40	17.7	21.6	13.2	54.5	10.8
Turbidity	NTU	-	No Water Quality Objective Value	4.9	91.9	95.2	15.1	23.8	23.8	206	-	14.3	669	43.9	74.7	1000	18.7	14.8	100	11.2	930	895	107	151	869	1.3	-	8.6	11.7	168	437	20.4	220	1000	1000
Laboratory analytes																																			
TSS	mg/L	5	No Water Quality Objective Value	<5	79	68	<5	17	18	88	-	14	2,030	71	54	11,700	46	223	71	10	593	2,190	193	134	510	<5	-	<5	<5	43	42	9	222	6,400	32
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	95	112	372	<1	9	26	13	-	372	460	1,240	143	200	154	64	20	126	36	104	72	346	126	140	-	2	9	50	48	190	177	71	43
Nutrients																																			
Ammonia as N	µg/L	10	13	20	<10	30	<10	<10	<10	10	-	60	60	100	30	420	40	70	10	40	10	30	20	140	420	20	-	<10	<10	<10	10	70	30	30	20
Nitrite + Nitrate as N (NOx)	µg/L	10	15	90	1,230	63,800	760	140	890	40	-	<10	30	<10	10,100	8,110	8,260	<10	340	<10	30	20	<10	49,700	9,150	70	-	850	230	5,700	20	<10	<10	40	<10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	100	2,700	<100	<100	<500	100	-	200	600	200	300	2,000	600	100	100	<100	200	500	100	2,600	<100	<100	-	100	<100	500	400	<100	100	1,600	300
Nitrogen (Total)	µg/L	100	250	200	1,300	66,500	800	100	900	100	-	200	600	200	10,400	10,100	8,900	100	400	<100	200	500	100	52,300	9,200	<100	-	1,000	200	6,200	400	<100	100	1,600	300
Reactive Phosphorus	µg/L	1	15	<1	<1	<1	<1	<1	20	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	20	<1	<1	<1	<1	20	20	-	1	<1	<1	<1	<1	<1	10	<1.0
Phosphorus (Total)	µg/L	10	20	50	50	190	<10	<10	130	150	-	220	300	<10	20	540	80	10	60	70	280	1,020	100	180	460	70	-	20	<10	<10	80	20	60	1,770	1,650
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	<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	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Metals																																			
Aluminium (total)	µg/L	5	No Water Quality Objective Value	94	743	516	315	976	1,110	764	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	<5	<5	5	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	7	<5	<5	<5	<5
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	<0.2	2.4	0.6	<0.2	0.2	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (dissolved)	µg/L	0.2	0.8	<0.2	2.4	<0.2	<0.2	<0.2	<0.2	<0.2	-	5.6	6.9	8.7	2.3	0.5	18.9	0.4	<0.2	0.5	<0.2	0.8	1.3	0.5	0.3	0.2	-	<0.2	<0.2	<0.2	0.4	0.4	0.4	0.5	0.9
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	0.4	1.4	1.6	0.3	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	<0.2	<0.2	0.3	<0.2	-	<0.2	<0.2	0.3	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (total)	µg/L	0.5	No Water Quality Objective Value	6.2	9.9	3.8	0.6	3.5	22.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper (dissolved)	µg/L	0.5	1	1.0	1.2	0.8	<0.5	<0.5	6.9	4.2	-	<0.5	0.6	<0.5	3.3	0.7	<0.5	6.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	-	6.2	<0.5	<0.5	2.0	<0.5	<0.5	<0.5	<0.5
Iron (total)	µg/L	2	No Water Quality Objective Value	125	708	860	152	611	646	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	µg/L	2	300	<2	<2	<2	<2	4	<2	<2	-	<2	<2	379	<2	<2	48	<2	<2	2	<2	<2	<2	<2	4	<2	-	<2	<2	<2	13	2	<2	<2	1,450
Lead (total)	µg/L	0.1	No Water Quality Objective Value	1.0	1.6	8.6	0.1	0.4	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead (dissolved)	µg/L	0.1	1	<0.1	<0.1	0.3	<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	0.3	<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
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	31.9	102	212	4.3	17.2	12.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	µg/L	0.5	1,200	12.6	58.9	175	2.1	1.3	1.6	5.0	-	198	267	355	51.6	336	176	15.6	5.3	466	61.6	128	363	901	105	295	-	<0.5	3.4	17.0	80.7	392	369	49.0	309
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	0.5	2.4	6.6	0.8	0.9	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (dissolved)	µg/L	0.5	8	<0.5	<0.5	4.2	<0.5	<0.5	<0.5	1.0	-	17.4	2.5	1.4	8.4	3.4	3.0	2.0	1.5	<0.5	1.1	0.8	0.9	10.0	8.8	1.1	-	<0.5	<0.5	3.5	<0.5	54.2	<0.5	0.6	1.4
Silver (total)	µg/L	0.01	No Water Quality Objective Value	<0.01	<0.01	0.16	<0.01	<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	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (total)	µg/L	1	No Water Quality Objective Value	7	6	16	4	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (dissolved)	µg/L	1	2.4	1	<1	7	2	<1	<1	4	-	1	3	2	2	111	1	<1	7	<1	6	<1	4	23	10	17	-	<1	<1	21	2	3	<1	3	<1

* 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 April 2025 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51	EPL107	EPL108	EPL109
Field				13/04/2025	13/04/2025	16/04/2025	15/04/2025	15/04/2025	12/04/2025	6/04/2025	12/04/2025	15/04/2025	16/04/2025	13/04/2025	13/04/2025	13/04/2025
pH	pH Unit	-	6.5-8	7.35	7.35	8.93	7.82	8.13	8.59	7.2	7.72	7.74	7.87	7.24	7.29	7.9
Electrical Conductivity	µS/cm	-	20-30	47	41	13.9	27	27	27	2	32.5	28	27.5	38	33	35
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	193	190	110.1	134	110	113	259	143.5	165	144.7	183	175	145
Temperature	°C	-	No Water Quality Objective Value	18.32	18.42	15.3	14.65	14.7	14.9	11.75	16.2	13.84	16.6	17.75	17.4	17.27
Dissolved Oxygen	% saturation	-	90-110	87.2	91.2	89.7	60.1	101.6	89.1	65	101.3	93.6	91	85	89.2	85.7
Turbidity	NTU	-	1-20	5.1	9.5	6.85	0	3.3	57.9	6	3.28	8.2	10.96	0.5	11	15.9
Laboratory analytes																
Total suspended solids	mg/L	5	No Water Quality Objective Value	<5	<5	17	<5	<5	18	<5	<5	<5	<5	<5	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	22	19	9	9	9	9	7	9	9	9	10	10	10
Nutrients																
Ammonia as N	µg/L	10	10	30	30	<10	10	10	<10	<10	<10	20	<10	<10	<10	<10
Nitrite + Nitrate as N (NOx)	µg/L	10	10	<10	<10	10	<10	<10	<10	80	<10	<10	<10	<10	<10	<10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	100	1,200	500	300	800	100	<100	300	400	<100	<100	<100
Nitrogen (Total)	µg/L	100	350	100	100	1,200	500	300	800	200	<100	300	400	<100	<100	<100
Reactive Phosphorus	µg/L	1	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phosphorus (Total)	µg/L	10	10	30	20	70	30	30	40	150	20	20	50	20	20	<10
Inorganics																
Cyanide Total	µg/L	4	7	<4	<4	<4	<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	<1	<1	<1
Metals																
Aluminium (dissolved)	µg/L	5	55	<5	<5	15	9	9	9	12	13	8	9	<5	<5	<5
Arsenic (dissolved)	µg/L	0.2	13	0.4	0.4	0.3	0.3	0.4	0.4	<0.2	<0.2	0.4	0.4	0.4	0.4	0.3
Chromium (III+VI) (dissolved)	µg/L	0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	<0.5	<0.5	<0.5
Iron (dissolved)	µg/L	2	300	6	4	72	55	56	52	77	58	61	58	4	4	4
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	<0.1	<0.1	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	2.4	<0.5	<0.5	<0.5	<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	<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	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biological																
Faecal Coliforms	CFU/100mL	1	10/100^	28	21	100	-	-	-	-	-	-	1	-	-	-
Biochemical Oxygen Demand	mg/L	2	1/5^	4	3	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.

** Algal blooms can present as faecal coliforms

^ 90th percentile concentration limits / 100 percentile concentration limits

\- Sample not required at this location.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-30 April 2025 - 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	EPL98	EPL99	EPL100	EPL101	EPL106	EPL110	EPL118	EPL120	EPL122
Field				11/04/2025	11/04/2025	11/04/2025	11/04/2025	11/04/2025	11/04/2025	11/04/2025	9/04/2025	13/04/2025	13/04/2025	6/04/2025	6/04/2025	6/04/2025	6/04/2025	6/04/2025	22/04/2025	5/04/2025	9/04/2025	Dry	Dry	Dry	Dry	Dry	29/04/2025	29/04/2025	11/04/2025	Dry	13/04/2025	19/04/2025	13/04/2025	12/04/2025	Dry	Dry	Dry	22/04/2025
pH	-	-	6.5-8	8.14	8.09	8.18	8.18	8.18	8.2	8.17	8.34	6.83	8.23	8.09	7.66	7.53	7.51	7.87	7.69	6.76	7.45	8.71	Dry	Dry	Dry	Dry	Dry	9.02	9.04	8.85	Dry	9.5	8.74	7.17	8.85	Dry	Dry	Dry	8.26
Electrical Conductivity	µS/cm	-	30-350	150	127	153	149	147	144	146	147	922	37	32	11	1	7	13	7	40	22	960	Dry	Dry	Dry	Dry	Dry	937	679	871	Dry	479	1050	1330	1660	Dry	Dry	Dry	656
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	173	173	175	176	167	173	176	170	112	124	133	236	244	229	182	180	201	201	165	Dry	Dry	Dry	Dry	Dry	94	113	-15	Dry	4	74	115	44	Dry	Dry	Dry	135
Temperature	°C	-	No Water Quality Objective Value	12.21	12.56	16.69	15.83	12.36	13.31	13.84	15.63	14.29	10.46	9.27	8.13	7.87	14.11	9.3	7.54	11.89	12.21	13.56	Dry	Dry	Dry	Dry	Dry	18.89	18.05	19.01	Dry	17.66	16.25	18.34	17.44	Dry	Dry	Dry	15.06
Dissolved Oxygen	% saturation	-	90-110	92.3	96.7	89.3	97.9	93.3	95.1	97.2	93.8	50.6	74.3	77.7	75	58.8	63.2	81	68.9	51.8	64.9	69.5	Dry	Dry	Dry	Dry	Dry	89.8	72.6	90.2	Dry	94.9	62.3	5.33	89.2	Dry	Dry	Dry	59.3
Turbidity	NTU	-	2-25	3.83	0.59	0.86	0.69	0.4	1.11	0.3	0.3	18.6	16.4	14.2	6.3	3.6	30.8	9.4	3.6	15.2	23.5	73.2	Dry	Dry	Dry	Dry	Dry	1000	1000	190	Dry	26.6	167	41.3	17	Dry	Dry	Dry	1000
Laboratory analytes																																							
TSS	mg/L	5	No Water Quality Objective Value	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	<5	<5	16	29	34	Dry	Dry	Dry	Dry	Dry	349	571	77	Dry	<5	60	<5	<5	Dry	Dry	Dry	577
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	81	72	81	85	83	87	87	-	282	18	14	13	9	9	16	16	13	17	285	Dry	Dry	Dry	Dry	Dry	39	46	144	Dry	170	276	303	460	Dry	Dry	Dry	61
Nutrients																																							
Ammonia as N	µg/L	10	13	40	<10	50	20	20	20	10	6	<10	20	10	<10	<10	20	30	<10	10	20	30	Dry	Dry	Dry	Dry	Dry	50	60	20	Dry	12,300	690	2,110	20	Dry	Dry	Dry	20
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	120	80	<10	<10	<10	2	39,100	10	<10	10	<10	60	20	<10	60	<10	32,600	Dry	Dry	Dry	Dry	Dry	8,220	7,580	10,200	Dry	33,400	37,800	38,000	10,300	Dry	Dry	Dry	6,820
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	200	100	200	200	100	100	100	400	5,200	<100	<100	<100	<100	400	100	100	200	600	100	Dry	Dry	Dry	Dry	Dry	3,800	1,700	2,500	Dry	15,000	4,200	7,200	8,000	Dry	Dry	Dry	2,500
Nitrogen (Total)	µg/L	100	250	200	100	300	300	100	100	100	400	44,300	<100	<100	<100	<100	500	100	100	300	600	32,700	Dry	Dry	Dry	Dry	Dry	12,000	9,300	12,700	Dry	48,400	42,000	45,200	18,300	Dry	Dry	Dry	9,300
Reactive Phosphorus	µg/L	1	15	<1	<1	<1	<1	<1	<1	<1	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	Dry	Dry	Dry	<10	<10	<10	Dry	<10	<10	<10	<10	Dry	Dry	Dry	<10
Phosphorus (Total)	µg/L	10	20	<10	<10	<10	30	<10	<10	20	9	20	<10	30	10	<10	20	10	20	20	40	60	Dry	Dry	Dry	Dry	Dry	850	630	60	Dry	20	100	30	<10	Dry	Dry	Dry	730
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	Dry	Dry	<4	<4	<4	Dry	116	<4	7	<4	Dry	Dry	Dry	
Hydrocarbons																																							
Oil and Grease	mg/L	1	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	Dry	Dry	Dry	<1	<1	<1	Dry	<1	<1	<1	<1	Dry	Dry	Dry	<1
Metals																																							
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	7	8	9	8	8	16	16	31	Dry	Dry	Dry	Dry	Dry	11	9	8	Dry	16	20	8	6	Dry	Dry	Dry	6
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (dissolved)	µg/L	0.2	0.8	0.7	0.3	0.7	0.7	0.7	0.6	0.6	<1	1.1	<0.2	<0.2	<0.2	<0.2	0.4	<0.2	<0.2	0.3	0.3	4.4	Dry	Dry	Dry	Dry	Dry	19.5	21.4	15.4	Dry	1.3	1.9	2.3	2.5	Dry	Dry	Dry	2.0
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (III+VI) (dissolved)	µg/L	0.2	0.01	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<1	1.6	0.3	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2.3	Dry	Dry	Dry	Dry	Dry	15.0	21.2	11.0	Dry	14.1	7.2	13.6	1.6	Dry	Dry	Dry	0.3
Copper (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper (dissolved)	µg/L	0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	Dry	Dry	Dry	Dry	Dry	6.2	2.0	2.0	Dry	2.0	1.5	1.7	<0.5	Dry	Dry	Dry	1.0
Iron (total)	µg/L	2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	µg/L	2	300	48	21	7	9	3	4	6	<50	8	14	9	33	25	83	118	134	211	136	3	Dry	Dry	Dry	Dry	Dry	20	5	<2	Dry	<2	<2	<2	<2	Dry	Dry	Dry	8
Lead (total)	µg/L	0.1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead (dissolved)	µg/L	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Dry	Dry	Dry	Dry	Dry	0.5	0.1	<0.1	Dry	<0.1	<0.1	<0.1	<0.1	Dry	Dry	Dry	<0.1
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	µg/L	0.5	1,200	3.2	3.8	1.3	3.4	0.6	0.6	1.4	<5	238	3.3	1.0	4.4	2.1	<0.5	6.7	9.3	36.2	4.1	1.7	Dry	Dry	Dry	Dry	Dry	0.8	<0.5	<0.5	Dry	2.1	42.0	116	<0.5	Dry	Dry	Dry	7.9
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (dissolved)	µg/L	0.5	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	4.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	Dry	Dry	Dry	Dry	Dry	1.8	0.8	0.8	Dry	0.6	1.8	1.9	1.9	Dry	Dry	Dry	1.1
Silver (total)	µg/L	0.01	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (dissolved)	µg/L	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5	<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	Dry	Dry	<0.01	<0.01	<0.01	Dry	0.02	<0.01	<0.01	<0.01	Dry	Dry	Dry	<0.01
Zinc (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (dissolved)	µg/L	1	2.4	<1	<1	<1	<1	<1	<1	<1	<5	14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Dry	Dry	Dry	Dry	Dry	1	<1	<1	Dry	<1	<1	<1	<1	Dry	Dry	Dry	<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 (2018), they are not pollutant limits imposed by EPL 21266.

\- Samples not required

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-30 April 2025 - Volumes

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/04/2025	-	0.12	0.21	0.05	0.19	0.06	1.10
2/04/2025	0.52	0.63	0.25	0.06	0.23	0.08	0.95
3/04/2025	0.46	-	0.22	0.05	0.23	0.09	0.62
4/04/2025	0.38	0.82	0.14	0.07	0.28	0.10	0.60
5/04/2025	0.28	-	0.04	0.03	0.24	0.07	0.33
6/04/2025	-	0.74	0.19	0.06	0.21	0.10	0.72
7/04/2025	-	-	0.30	0.06	0.25	0.07	0.59
8/04/2025	-	0.34	0.46	0.06	0.22	0.09	0.76
9/04/2025	-	0.58	0.48	0.06	0.23	0.05	0.52
10/04/2025	-	-	0.51	0.08	0.17	0.09	0.71
11/04/2025	-	0.44	0.25	0.07	0.18	0.28	0.71
12/04/2025	0.17	0.33	0.41	0.05	0.30	0.08	0.48
13/04/2025	-	0.37	0.27	0.05	0.23	0.04	0.53
14/04/2025	-	0.61	0.27	0.05	0.39	0.03	0.66
15/04/2025	0.28	-	0.59	0.05	0.22	0.08	0.52
16/04/2025	-	0.55	0.29	0.04	0.20	0.25	0.46
17/04/2025	-	0.18	0.16	0.04	0.19	0.09	0.52
18/04/2025	-	-	0.28	0.06	0.18	0.05	0.56
19/04/2025	-	-	0.28	0.04	0.20	0.07	0.54
20/04/2025	-	-	0.31	0.05	0.19	0.09	0.64
21/04/2025	-	-	0.36	0.05	0.19	0.10	0.51
22/04/2025	-	0.07	0.50	0.06	0.20	0.06	0.35
23/04/2025	-	-	0.41	0.09	0.19	0.03	0.62
24/04/2025	0.43	0.14	0.28	0.06	0.20	0.02	0.33
25/04/2025	0.56	-	0.19	0.05	0.23	0.08	0.36
26/04/2025	-	-	0.27	0.05	0.21	0.08	0.29
27/04/2025	0.37	-	0.47	0.06	0.22	0.02	0.58
28/04/2025	-	-	0.20	0.06	0.26	0.05	0.54
29/04/2025	0.46	-	0.49	0.05	0.22	0.09	0.71
30/04/2025	-	-	0.22	0.04	0.21	0.07	0.60

- 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 8.45 L/s

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 11.34 L/s

-- Water not discharged on this day

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring May 2025

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
7/5/2025, 7:12 AM	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	9.84	81	9.18	135	88	8.17	172	0.3	Clear sky. Average flow. Clear water. No recent rain.	These results are consistent with previous samples taken for this location.
7/5/2025, 7:49 AM	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	8.14	80.5	9.49	130	84	8.12	228	1.1	Clear sky. Clear water. No recent rain. Lower than usual flow.	These results are consistent with our previous samples taken for this location.
7/5/2025, 7:11 AM	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	9.99	70.5	7.96	138	90	8.11	47	41.3	Clear sunny morning, no recent rainfall event. Water is clear, no odour. No sheen. No signs of algae.	Turbidity is elevated, however not uncommon within our data previously recorded. This could potentially affect the slightly lower DO recorded.
7/5/2025, 7:29 AM	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	9.3	63.9	7.33	141	92	8.01	119	7.1	Clear sunny morning, no recent rainfall. No visible algae, no sheen, no odour. Water is very clear	These results are consistent with our previous samples taken. The DO results which are below WQO's.
7/5/2025, 7:28 AM	EPL12	Yarrangobilly River, immediately downstream of portal pad	9.26	68.1	7.82	135	88	8.17	208	5.9	Clear sky. Clear water. No recent rain. Average flow.	These results are consistent with our previous samples taken for this location.
7/5/2025, 8:09 AM	EPL14	Yarrangobilly River, downstream of road construction areas	8.54	73.8	8.62	138	89	8.13	234	5.8	Clear sky. Clear water. No recent rain. Average flow.	These results align with the decrease in temperatures, remaining consistent with data we have recorded in previous sample rounds.
7/5/2025, 8:26 AM	EPL15	Yarrangobilly River, downstream of road construction areas	8.73	90.3	10.5	139	90	8.14	238	0.3	Clear sky. Clear water. No recent rain. Average flow.	These results are consistent with our previous samples taken for this location.
7/5/2025, 7:52 AM	EPL16	Yarrangobilly River, downstream of road construction areas	8.87	63.2	7.32	142	92	8.08	142	6.2	Clear sunny morning, no recent rainfall. Clear water, no visible algae, no sheen, no odour.	These results are consistent with our previous samples taken for this location.
3/5/2025, 2:38 PM	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	14.55	54.2	5.51	956.00	612	6.71	205	4.8	Clear sunny day. No recent rain events. Works continuing to expand F10.5 basin just upstream of sample location. Water is very clear, no odour and no sheen.	Low DO and elevated EC is commonly seen with data recorded from previous sample rounds; these numbers are consistent with these results.
2/5/2025, 8:48 AM	EPL26	Eucumbene River downstream of Marica Road	4.43	82.6	10.7	29	19	8	217	9.01	Sunny cool day. Low flow and water level. Horse poo and hoof marks on stream bank. Low turb, confirmed with Hach.	The results are consistent with our previous samples taken for this location.
18/5/2025, 10:36 AM	EPL27	Eucumbene River upstream of Marica Road	6.05	92.8	11.57	21	13	5.92	216	29.4	Windy cold day, low level water, slow flow, evidence of animal activity, no odors, clear water	The low pH although has been recorded in our previous sample rounds, is less commonly seen. The other parameters are consistent with our previous sample rounds.
21/5/2025, 7:34 AM	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	7.5	92.9	11.14	32	21	8.09	205	11.6	Clear sunny conditions, frost in the morning with limited rain over the previous week. Clear waterway with no signs of odour or other anomalies.	Slightly elevated pH is within trends of data recorded from previous samples taken.
21/5/2025, 7:39 AM	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	7.59	84.4	10.09	21	14	7.78	244	8.1	Clear sunny conditions, frost in the morning with limited rain over the previous week. Clear waterway with no signs of odour or other anomalies.	These results are consistent with previous samples recorded for this location.
21/5/2025, 7:42 AM	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	9.59	67.1	7.64	21	13	7.59	264	18	Clear sunny conditions, frost in the morning with limited rain over the previous week. Green coloured waterway, looks to be algae with no signs of odour or other anomalies.	These results are consistent with results previously recorded for this location, low DO and EC is commonly recorded here and therefore isn't outside of results.
21/5/2025, 7:46 AM	EPL34	Nungar Creek, upstream of Tantangara Road	7.2	82.2	9.93	23	15	7.52	277	5.9	Clear sunny conditions, frost in the morning with limited rain over the previous week. Clear waterway with no signs of odour or other anomalies.	These results are consistent with results previously recorded for this location, low DO and EC is commonly recorded here and therefore isn't outside of results.
21/5/2025, 7:50 AM	EPL35	Nungar Creek, downstream of Tantangara Road	7.38	65.8	7.91	22.0	14	7.43	262	4.5	Clear sunny conditions, frost in the morning with limited rain over the previous week. Clear waterway with no signs of odour or other anomalies.	These results are consistent with results previously recorded for this location, low DO and EC is commonly recorded here and therefore isn't outside of results.
27/5/2025, 11:13 AM	EPL 36	Camerons Creek, upstream of works in Rock Forest	8.58	99.8	11.66	47	30	6.83	298	23.5	Sunny day, a bit turbid water it can be attributed to the recent precipitations, no odour	These results are consistent with previous samples recorded for this location.
27/5/2025, 9:35 AM	EPL 37	Camerons Creek, downstream of works in Rock Forest	6.77	101	12.33	60	39	7.28	305	15.6	Sunny day, clear water, the stream a bit more turbulent it can be attributed to the recent precipitation, no smell	These results are consistent with previous samples recorded for this location.
26/5/2025, 11:36 AM	EPL52	GF01 leachate basin	-	-	-	-	-	-	-	-	DRY	DRY
-	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	DRY	This location is dry.
-	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	DRY	This location is dry.
19/5/2025, 9:46 AM	EPL55	GF01 surface water downstream	-	-	-	-	-	-	-	-	DRY	This location is dry.
-	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	-	-	-	-	-	-	-	-	DRY	Location is dry.
-	EPL71	Surface water downstream of Marica emplacement	-	-	-	-	-	-	-	-	DRY	This location is dry.

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring May 2025

5/5/2025, 11:53 AM	EPL84	F8 Basin	18.2	123.6	11.62	969.00	620	9.18	61	1000	Clear sunny day, no recent rainfall events. Basin level very low, soon to be desilted and relined. Water is very brown & turbid. Exceeding 1000NTU. Slight odour due to low water level.	Elevated EC and pH have been recorded in previous sample rounds in this location; therefore these results are not outside of range recorded previously.
24/5/2025, 11:51 AM	EPL85	MY07 Basin	12.17	50.4	5.4	730	467	8.97	133	1,000.00	Overcast day. Recent rain event. Water brown and turbid over 1000 NTU. Water has no odour or sheen. Minor inflows off road. Basin at 75%.	Low DO, elevated EC and pH have been recorded in previous sample rounds in this location; therefore these results are not outside of range recorded previously.
24/5/2025, 12:02 PM	EPL86	LHG01 Basin	12.32	58.7	6.26	929.00	595	8.39	152	448	Overcast day. Recent rain event. Water slightly turbid. No odour or sheen. No current inflows.	Low DO, elevated EC and pH have been recorded in previous sample rounds in this location; therefore these results are not outside of range recorded previously.
12/5/2025, 10:29 AM	EPL98	Rock blanket diversion monitoring under GFO1 liner	-	-	-	-	-	-	-	-	DRY	Location is dry.
2/5/2025, 11:18 AM	EPL99	Marica Leachete Basin- Turkey's Nest	10.47	60.6	6.76	354	230	10.62	-13	63.6	Clear sunny day. No odor. Milky colour. Basin half full.	Low DO, elevated EC and pH have been recorded in previous sample rounds in this location; therefore, these results are not outside of range recorded previously.
23/5/2025, 2:51 PM	EPL100	Marica Lower Leachate Basin USS Shaft	9.72	60.9	6.9	541	246	8.62	132	991	Rainy day. High turb. Brown water. No odor. Minor oily sheen visible.	Low DO, elevated EC and pH have been recorded in previous sample rounds in this location, therefore these results are not outside of range recorded previously.
2/5/2025, 11:28 AM	EPL101	Marica Leachate Basin Spoil Pad	8.82	92.5	10.72	635	406	9.06	84	89.7	Sunny clear day. Milky coloured water. Algae. Fuel spill into basin 3weeks ago. Basin water level very low.	Elevated EC and pH have been recorded in previous sample rounds in this location, therefore these results are not outside of range recorded previously.
3/5/2025, 8:15 AM	EPL106	Ravine Bay Leachate basin 1	11.81	90.1	9.71	1,460.00	936.00	8.92	151	192	Cold clear morning. No recent rain events. Basin level is lower than normal. Water is clear with suspended solids. No odour. No sheen.	Elevated EC and pH have been recorded in previous sample rounds in this location, therefore these results are not outside of range recorded previously.
16/5/2025, 10:50 AM	EPL110	Upstream monitoring of Ravine Bay emplacement area	-	-	-	-	-	-	-	-	DRY	Location dry.
-	EPL118	Ravine Bay Leachate basin 2	-	-	-	-	-	-	-	-	DRY	Location dry.
-	EPL120	Ravine Bay Leachate basin 4	-	-	-	-	-	-	-	-	DRY	Location dry.
28/5/2025, 9:04 AM	EPL122	GFO1 Drainage Line (Formerly EPL 55b)	11.64	87.5	9.49	658	421	8.64	244	499	Recent heavy rain. More flow than usual. Milky colour. High turb.	The consistently low levels found when sampling this location can impact sample results, though we have consistently seen these results in previous sample rounds recorded.

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
4/5/2025, 8:46 AM	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	14.96	59.7	6.02	54	35	7.58	205	4.3	Clear sunny morning, no recent rainfall. Bit of dust across surface. No odour, water is clear	Results including the lower DO and EC results lie within data records for previous sample rounds.
4/5/2025, 8:32 AM	EPL11	Talbingo Reservoir, downstream of outlet	14.97	57	5.75	50	32	7.47	206	5.2	Clear sunny morning, no recent rainfall. Less algae then previous month, no odour, no sheen.	Results including the lower DO and EC results lie within data records for previous sample rounds.
25/5/2025, 9:14 AM	EPL28	Tantangara Reservoir, upstream of works in the mouth of the Murrumbidgee River	8.37	104.7	12.29	31	20	7.26	318	13.9	Sunny day. Heavy recent rainfall. Greenish, grey water colour. No odor. Hach meter turb	Results including the lower DO and EC results lie within data records for previous sample rounds.
25/5/2025, 9:43 AM	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	9	104.1	12.03	30	20	7.19	349	17.3	Heavy recent rainfall. No odor. Greenish grey water colour. Less algae tham previous month. Hach meter turb.	These results are consistent with previous samples recorded for this location .
25/5/2025, 9:36 AM	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	8.88	76.3	8.85	30	20	7.22	353	17.7	Heavy recemt rain. Green grey water colour. No odor. Hach meter turb.	These results are consistent with previous samples recorded for this location .

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring May 2025

17/5/2025, 12:40 PM	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	13.16	68.6	7.21	23	15	7.63	243	40.3	Clearer water, windy breeze, sunny day, cool temp. No recent rain. No odors. Green colour - surface of water is clear.	The low DO, EC, and higher turbidity seen within this round is consistent with the water levels of the reservior at the time of samples taken. These results still remain within range from previously recorded samples taken.
17/5/2025, 9:04 AM	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	9.63	68.6	7.81	27	18	8.76	156	22.6	Low level water, slow flow, cloudy foggy morning. No sun. Some bubbles on surface. Evidence of duck activity in the stream.	Low DO and EC could be attributed to the algae bloom recorded near sample location, but isn't outside of ranges we've recorded in previous samples taken in this location.
4/5/2025, 11:56 AM	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	10.9	96.7	10.7	40.4	36	8.31	138.4	4.38	Taken from shoreline, reservoir too low for boat access. Clear flowing water. No odour or sheen.	These results are consistent with previous samples recorded for this location .
25/5/2025, 10:02 AM	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	8.8	84.3	9.8	34	22	7.1	367	0.8	Heavy rain in recent days. Greenish grey water colour. Less algae than previous months.	These results are consistent with previous samples recorded for this location .
25/5/2025, 9:49 AM	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	8.94	85.6	9.91	30	20	7.18	349	14.3	Heavy recent rain. Green grey water colour. Less algae than previous months. Hach meter turb.	These results are consistent with previous samples recorded for this location .
4/5/2025, 8:01 AM	EPL107	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River	15.03	63.9	6.44	28	18	7.47	197	10.1	Clear sunny morning, no recent rainfall. Less algae then previous month. No odour, no sheen	These results are consistent with previous samples recorded for this location .
4/5/2025, 7:49 AM	EPL108	Monitoring of Ravine Bay emplacement area (center of PSE) within Yarrangobilly River	15.27	75.3	7.55	24	16	7.5	192	18	Clear sunny morning. No recent rainfall. Less algae then previous month, no odour, no sheen.	These results are consistent with previous samples recorded for this location .
4/5/2025, 7:40 AM	EPL109	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River	14.6	84.4	8.62	25	16	7.63	186	21.4	Sunny day, clear morning. Less algae then previous months. Clear water. No odour,no sheen, no recent rain	These results are consistent with previous samples recorded 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
25/5/2025, 9:21 AM	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	14.59	68.7	6.99	16	10	8.01	147	18.9	Nitrile gloves, alcohol wipes, correct methodology with QC sampling. QA1 and 2 taken from here too. Water is very clear, no odour. Water was purged for 2 minutes before sampling.	These results are consistent with previous samples recorded for this location .

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
26/5/2025, 9:26 AM	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	7.3			46.18		7.58		0.39	Dewatering team completed sampling at 1:30am on 25/05/2025. Insitu readings are from their fixed unit, not Horiba or YSI. No anomalies noted.	These results are consistent with previous samples recorded for this location .

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
6/5/2025, 2:27 PM	EPL1	Wallace Creek Bridge	16.56	84.9	8.26	916	586	8.18	-128	188	Overcast. Soil over well cap. No recent rain. No odour. SWL 2.99. Slightly turbid. Faint Metallic smell. Metallic sediment present in hydrasleeve. Stock pile present on uphill pad. Basin desilting recently completed.	Elevated EC and pH are within the previously recorded range for this location. Presence of sediment and increased turbidity suggests bore is due for development.
6/5/2025, 2:14 PM	EPL2	Wallace Creek Bridge	15.75	90.4	8.96	490	319	8.17	7	224	Overcast day. No recent rain. No odour. 3.3m swl. Sediment in bottom. Slightly turbid.	Elevated EC and pH is within historical range for this location. Presence of sediment and increased turbidty suggests bore is due for development.

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring May 2025

6/5/2025, 3:13 PM	EPL4	Portal Access	-	-	-	-	-	-	-	-	Bore cap underwater. Uncontaminated sample not possible.	-
6/5/2025, 2:53 PM	EPL25	Portal Access	15.51	89.2	8.88	420	273	8.16	-43	60.3	Overcast day. No recent rain. SWL 3.71. Water over ground at monument base. Slightly turbid. Metallic sediment in hydrasleeve. Slight metallic smell	Elevated EC is within historical range. Increased pH and turbidity potentially due to surface water ingress.
5/5/2025, 7:23 AM	EPL56	GF01 Upstream east groundwater well	12.62	25.7	2.73	234	152	7.9	102	22	Clear day. No recent rain. SWL 10.72m. Concrete cracked around cap. Low turb. No odor. Shaping of PSE occuring down gradient.	Elevated EC and pH are within historical range. Fluctuations in these values can potentially be attributed to surface water ingress due to degradation of plinth. Due to the final design of the PSE, this site may no longer be representative of upstream conditions.
19/5/2025, 9:11 AM	EPL57	GF01 upstream west groundwater well	12.72	22.8	2.42	226	147	8.69	-96	85.7	No odors, no colour, clear water, no prev rainfall, no works going on today.	Elevated EC and pH is within the previously recorded range. Fluctuations in these values can potentially be attributed to surface water ingress due to degradation of plinth. Due to the final design of the PSE, this site may no longer be representative of upstream conditions.
19/5/2025, 9:48 AM	EPL58	GF01 Downstream Groundwater well	15.39	25.2	2.51	936	599	5.97	235	61.3	Water was warm, clear, odorless, no rain prev, no works current at time of sample	Exceedances in pH and EC are within the previously recorded range. Site has been reported as impacted by GF01.
17/5/2025, 9:23 AM	EPL68	Leachate detection BH downstream East	11.68	56	6.08	15	9	6.6	274	18.9	Clear water, no odors, cloudy day, no prev rainfall	Results are consistent with the previously recorded range
17/5/2025, 9:35 AM	EPL69	Tantangara groundwater downstream East	11.28	54.2	5.94	30	19	6.56	292	36.5	No odors, clear water with slight sediment that is orange in colour. No prev rainfall, foggy morning	Results are consistent with the previously recorded range
24/5/2025, 12:23 PM	EPL70	Tantangara groundwater upstream	10.84	53.4	5.91	134	87	6.5	370	45.2	Rainy day, rain overnight, some sediment in the bottom of the sleeve, no odour	Results are consistent with previously recorded data. Location upstream of any works.
2/5/2025, 9:04 AM	EPL 72	Marica groundwater upstream	8.84	52.8	6.13	58	38	6.52	-2	54.3	SWL 37.05m. Sunny cool day. No odor. Small amount of sediment at bottom of hydrasleeve.	Results are consistent with historical range. Location upstream of any works.
5/5/2025, 2:18 PM	EPL73	Marica groundwater downstream	-	-	-	-	-	-	-	-	-	This site has been decommissioned.
24/5/2025, 12:42 PM	EPL80	LHG groundwater upstream	15.2	19.5	1.95	924	591	6.73	-17	229	Overcast day. Recent rain event. SWL unable to measure due to dipper malfunction. Water clear with sediment settling at bottom of hydrasleeve and visible suspended solids. No odour.	Location upstream of works, representative of background conditions. Elevated EC is within the previously recorded range.
7/5/2025, 6:58 AM	EPL81	LHG groundwater downstream	13.35	18.2	1.89	851	545	6.87	2	1000	SWL: 4.17m Sunny clear morning. No recent rainfall. No odour. Water is very turbid, exceeding 1000 NTU. Usually sample taken with hydro sleeve however bore pump is installed but not working, samplw collect using waterra hose and foot valve hence high NTU	High NTU recorded due to sampling methodology. High EC consistent with upstream site.
5/5/2025, 11:20 AM	EPL82	MY groundwater upstream	17.44	13.7	1.31	2340	1500	6.74	-2	47.1	SWL: 9.07m Clear sunny day, no recent rainfall events. Clear water, no odour. High EC as per previous samples.	Location upstream of works, representative of background conditions. Elevated EC is within the previously recorded range.
05/05/2025, 2:29 PM	EPL83	MY groundwater downstream	17.41	6.34	1.83	529	339	6.34	39	19.3	Sunny, partly cloudy, no recent rainfall. No odour, clear water.	Low pH and elevated EC within previously recorded data range and consistent with upstream locations.
24/5/2025, 10:57 AM	EPL87	MY groundwater downstream	15.63	18.8	1.87	827	529	6.4	193	92.8	SWL:unable to measure due to bore pump. Overcast day. Recent rain event. Water clear. No odour. Water extracted using bore pump.	Low pH and elevated EC within previously recorded data range and consistent with upstream locations.
5/5/2025, 2:18 PM	EPL88	MY groundwater downstream	17.05	25.9	2.5	716	458	6.9	-76	2.2	SWL: 3.43m Cloudy day, no recent rainfall. Sulphur odour,clear water.	Elevated EC within previously recorded data range and consistent with upstream site.
5/5/2025, 10:37 AM	EPL89	LHG groundwater downstream	14.94	24.6	2.48	320	208	6.91	163	112	SWL: 3.3m Clear sunny day. No recent rain events. Water is very clear, slightly viscous. No odour.	These results are consistent with previous sampling rounds.
6/5/2025, 3:40 PM	EPL 90	GF01 groundwater downstream	15.26	90	9.02	66	43	8.18	169	1000	Overcast day. Bore pump not operational. Slightly turbid. No odour.	These results are consistent with previous sampling rounds. High turbidity due to temporary sampling methodology (foot valve and hose).
19/5/2025, 8:00 AM	EPL 91	GF01 groundwater downstream	14.22	23.9	2.45	192	125	6.87	2	37.4	Sulphuric smell, no color/sediment, no prev rainfall, cool morning. Bore hole not fully enclosed see photos	These results are consistent with previous sampling rounds.
19/5/2025, 8:39 AM	EPL 92	GF01 groundwater downstream	10.18	77.4	8.69	497	323	8.13	30	161	Purged the pump for a minute, brown sediment laden water was comjng out then it cleared up. Still orange in color, not as thick. No odors, no prev rainfall	These results are consistent with previous sampling rounds. Elevated turbidity to be managed through upcoming bore development program.
19/5/2025, 8:51 AM	EPL 93	GF01 groundwater downstream	13.09	19.6	2.06	208	135	7.1	150	915	Heavy orange sediment was purged before we collected sample. Still came ouf orange colour, but clearer than becore. No odor. No prev rainfall.	These results are consistent with previous sampling rounds. The high turbidity could be attributed to sampling methodology (foot valve and hose).
19/5/2025, 8:59 AM	EPL 94	GF01 groundwater downstream	13.11	33.4	3.51	150	97	6.85	0.1	119	ORPMV = -10, CLEAR WATER LITTLE COLOUR. no prev rain. No odors.	These results are consistent with previous sampling rounds.
19/5/2025, 9:56 AM	EPL 95	GF01 groundwater downstream	15.3	101.3	10.11	1,001.00	644	6.09	238	24.5	No odor, no prev rainfall, no works current at time of sample, no colours	These results are consistent with previous sampling rounds.
19/5/2025, 10:06 AM	EPL 96	GF01 groundwater downstream	14.52	30.3	3.08	811	519	7.32	197	915	Orange colour, smelt like landfill. Open at the top of bore, no constructuon works happening at time of sample	These results are consistent with previous sampling rounds. The high turbidity could be attributed to sampling methodology (foot valve and hose).
19/5/2025, 10:36 AM	EPL 97	GF01 groundwater downstream	15.22	54.8	5.49	424	276	6.89	213	23.7	Noodors, no prev rainfall, clear water, no sediment, no need to purge.	These results are consistent with previous sampling rounds.
-	EPL102	Groundwater monitoring associated with the Marica emplacement area on Marica Trail	-	-	-	-	-	-	-	-	EPL Point Decommisioned	This location has been decommissioned.
17/5/2025, 10:35 AM	EPL103	Upstream groundwater monitoring west of the Tantangara emplacement area	11.44	71.7	7.82	34	22	6.21	285	33.3	No odor, no sediment, clear water. No prev rainfall.	The results, including the low pH is consistent with samples previously taken

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring May 2025

17/5/2025, 10:00 AM	EPL104	Downslope groundwater monitoring east of the Tantangara emplacement area	11.66	44.9	4.87	41	26	6.27	294	23.7	No prev rainfall no odors, clear hydra sleeve - no sediment. No works happening today.	The results, including the low pH is consistent with samples previously taken
24/5/2025, 11:16 AM	EPL105	Downslope groundwater monitoring east of the Tantangara emplacement area	11.1	95.9	10.55	131	85	6.41	386	177	Rainy day, rain overnight, no smelly, water taken from the pump	The results, including the low pH is consistent with samples previously taken
3/5/2025, 9:34 AM	EPL113	Upstream east monitoring of Ravine Bay emplacement area	12.26	22.5	2.41	129	84	6.13	120	556	SWL: 3.04m Clear cold morning. Continual works ongoing at PSE. No recent rain events. Water is slightly turbid, a bit of a milky consistency, no odour.	The results, including the low pH is consistent with samples previously taken
3/5/2025, 9:07 AM	EPL114	Upstream west monitoring of Ravine Bay emplacement area	12.05	26.7	2.87	341	221	7.27	-28	34.8	SWL: 31.91m Clear cold morning. No recent rain events. Water is clear, no odour. Continual works ongoing at PSE	These results are consistent with previous sampling rounds.
3/5/2025, 9:56 AM	EPL115	Downstream east monitoring of Ravine Bay emplacement area	12.55	18.7	1.99	316	206	7.4	61	176	SWL: 11.2m Cold clear morning. No recent rain events. Ground disturbance nearby with a digger in the basin. Water is clear, no odour.	These results are consistent with previous sampling rounds.
3/5/2025, 7:50 AM	EPL116	Downstream west monitoring of Ravine Bay emplacement area	12.8	61	6.45	167	108	7.27	188	1,000	SWL: 8.33m. Verycold, clear morning. Frost on the ground. Water is brown turbid exceeding 1000 NTU, no odour. Recent ground disrurbance nearby at spillway. Access created for mulch distrubution	These results are consistent with previous sampling rounds. High turbidity potentially due to sampling methodology (foot valve and hose).
3/5/2025, 8:50 AM	EPL117	Downstream monitoring of Ravine Bay emplacement area	12.34	17.6	1.88	122	79	6.72	-25	167	SWL: 15.90m. Cold clear morning. No recent rain events. Water is slightly cloudly, milky viscous consistency, clogging the large filters up, no odour. Ongoing works at PSE	These results are consistent with previous sampling rounds.
10/5/2025, 8:41 AM	EPL123	GW Upstream W Rockforest	11.52	48.3	5.26	36	23	6.59	236	1000	SWL- 7.88m, sunny day, turbid water, sediment in the bottom of the sleeve	These results are consistent with previous sampling rounds. High turbidity potentially due to sampling methodology (foot valve and hose).
21/5/2025, 8:01 AM	EPL124	GW upsteam (NE) Rockforest	12.18	63	6.76	22	14	5.82	328	193	Clear sunny conditions, frost in the morning with limited rain over the previous week. Minor/moderate turbid sleeve, with no signs of odour or other anomalies.	The low EC and pH is within range for previously recorded data for this location.
27/5/2025, 10:59 AM	EPL125	GW Downstream (S) Rockforest	11.44	92.4	10.09	109	71	6.34	348	902	Sunny day and cold, turbid water and sediment placed at the bottom of the sleeve	These results are consistent with previous sampling rounds.
10/5/2025, 9:54 AM	EPL126	GW Downstream (SE) Rockforest	10.42	17.6	1.07	307	200	7.57	214	1000	SWL6.18M Milky colour sediment No odor No prev rainfall	These results are consistent with previous sampling rounds. High turbidity potentially due to bore requiring development.
27/5/2025, 9:21 AM	EPL127	GW Downstream Rockforest	11.34	38.1	4.16	118	77	6.8	340	39.8	Sunny day, very cold, no odors,clear water	These results are consistent with previous sampling rounds.

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.

Environmental Protection Licence No:	21266
Licensee:	Snowy Hydro Limited
Licensee address:	PO Box 332, Cooma, NSW 2630
Premises:	Snowy 2.0 Pumped Hydro Power Station Talbingo and Tantangara, Kosciuszko National Park and Rock Forest, Kosciuszko NSW 2642
EPA Public Register:	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=21266&id=21266&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=Issued

Monthly water sampling and analysis is performed as part of the Snowy 2.0 Approval Conditions, Environmental Protection Licence No 21266 - Variation 20 December 2024, and the approved Water Management Plan to ensure that works are not impacting on nearby receiving waters.

A map showing the location of each of the EPL named sampling points is provided after the results tables.

Surface Water Results: Ammonia concentrations were slightly elevated in some EPL locations along Wallaces Creek, Yarrangobily River, and Murrumbidgee River. EPL24 is reported elevated nutrient and select heavy metal concentrations alongside elevated EC concentrations which have been recorded previous sampling rounds. These results are consistent with low flowing, shallow waterway that was observed at the time of sampling. There are exceedances noted from EPL122 where the concentrations of Nutrients, Electrical Conductivity, Phosphorus, and Ammonia are exceeding our WQO's and could be attributed to environmental conditions of shallow waterways and low flows, with lots of surrounding vegetation.

Reservoir Results: Tantangara and Talbingo Reservoirs report consistent elevations in nitrogen in line with those data captures from previous monitoring events. Reduced water levels, consistent Nitrogen concentrations and the developing algal cycle within the Tantangara and Talbingo water bodies are understood to heavily influence the fluctuations in dissolved oxygen levels, such as those reported at EPL10, EPL29 and EPL39. EPL39 was captured during an extremely low water level time and is understood to be unrepresentative of the water quality at the time of monitoring. Elevated levels of Faecal coliforms, EC and Ammonia are potentially attributed to the fluctuations in water levels and the collection of samples from the waters.

Discharge Results: Results for the discharge locations met the adopted WQO's for the periods of discharge. The disdharge from EPL50 on the 26th was registered in the early hours of the morning prior to results returning. FGJV is in the process of finalising the discahrge procedure which returns monitoring back to the EPL license for greater clarity.

Groundwater Results: Results for groundwater bores surrounding Lickhole Gully have reported elevated concentrations of nutrients and select dissolved heavy metals. These heavy metals have been reported previously as being above adopted WQO's and are possibly influenced by the historic mining activities in the immediate vicinity. GF01 down gradient locations comprise similar characteristics These elevations are not only seen in LHG PSE area but also in GF01 PSE down gradient locations. EPL1 which is sampled quarterly has returned elevated Electrical Conductivity, Ammonia, and Nutrient levels although this is not outside of data recorded from previous sample rounds.

Leachate results: The exceedances found within the leachate basin results are in line with intended design functionality for the storage of PSE generated leachate water. GF01 basin has previously been reconstructed and has not since had water in it to sample.

Snowy Hydro 2.0 Main Works

Monthly EPL Sampling: 01-31 May 2025 - Groundwater

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*
Physiochemical			
pH	pH Unit	-	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	-	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
Nutrients			
Ammonia as N	µg/L	10	13
Nitrite + Nitrate as N (NOx)	µg/L	10	15
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value
Nitrogen (Total)	µg/L	100	250
Reactive Phosphorus	µg/L	1	15
Phosphorus (Total)	µg/L	10	20
Inorganics			
Cyanide Total	µg/L	4	4
Hydrocarbons			
Oil and Grease	mg/L	1	5
Metals			
Aluminium (total)	µg/L	5	No Water Quality Objective Value
Aluminium (dissolved)	µg/L	5	27
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value
Arsenic (dissolved)	µg/L	0.2	0.8
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value
Chromium (III+VI) (dissolved)	µg/L	0.2	0.01
Copper (total)	µg/L	0.5	No Water Quality Objective Value
Copper (dissolved)	µg/L	0.5	1
Iron (total)	µg/L	2	No Water Quality Objective Value
Iron (dissolved)	µg/L	2	300
Lead (total)	µg/L	0.1	No Water Quality Objective Value
Lead (dissolved)	µg/L	0.1	1
Manganese (total)	µg/L	0.5	No Water Quality Objective Value
Manganese (dissolved)	µg/L	0.5	1,200
Nickel (total)	µg/L	0.5	No Water Quality Objective Value
Nickel (dissolved)	µg/L	0.5	8
Silver (total)	µg/L	0.01	No Water Quality Objective Value
Silver (dissolved)	µg/L	0.01	0.02
Zinc (total)	µg/L	1	No Water Quality Objective Value
Zinc (dissolved)	µg/L	1	2.4

Analyte	EPL1	EPL2	EPL4	EPL25	EPL56	EPL57	EPL58	EPL68	EPL69
Physiochemical	6/05/2024	6/05/2024	6/05/2024	6/05/2024	5/05/2025	19/05/2025	19/05/2025	17/05/2025	17/05/2025
pH	8.18	8.17	-	8.16	7.9	8.69	5.97	6.6	6.56
Electrical Conductivity	556	490	-	420	234	226	936	15	30
Oxidation Reduction Potential	-128	7	-	-43	102	-96	235	274	292
Temperature	16.56	15.75	-	15.51	12.62	12.72	15.39	11.68	11.28
Dissolved Oxygen	84.9	90.4	-	89.2	25.7	22.8	25.2	56	54.2
Turbidity	188	224	-	60.3	22	85.7	61.3	18.9	36.5
Laboratory analytes									
TSS	124	316	-	20	14	18	5	<5	212
Hardness as CaCO3	-	-	-	-	-	-	-	-	-
Nutrients									
Ammonia as N	460	70	-	30	10	<10	<10	<10	<10
Nitrite + Nitrate as N (NOx)	<10	<10	-	110	120	1,520	64,700	740	120
Kjeldahl Nitrogen Total	700	100	-	100	<100	100	7,200	100	<100
Nitrogen (Total)	700	100	-	200	100	1,600	71,900	800	100
Reactive Phosphorus	<10	<10	-	<10	<10	<10	<10	<10	<10
Phosphorus (Total)	170	100	-	30	20	60	<10	40	30
Inorganics									
Cyanide Total	-	-	-	-	<4	<4	<4	<4	<4
Hydrocarbons									
Oil and Grease	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
Metals									
Aluminium (total)	-	-	-	-	159	120	112	166	2,090
Aluminium (dissolved)	<5	<5	-	<5	<5	<5	<5	<5	<5
Arsenic (total)	-	-	-	-	<0.2	2.4	<0.2	<0.2	0.8
Arsenic (dissolved)	1.4	2.2	-	0.2	<0.2	2.5	<0.2	<0.2	<0.2
Chromium (III+VI) (total)	-	-	-	-	0.8	0.4	5.5	0.3	2.8
Chromium (III+VI) (dissolved)	0.3	<0.2	-	<0.2	<0.2	<0.2	0.2	<0.2	0.2
Copper (total)	-	-	-	-	13.5	5.7	17.2	<0.5	7.7
Copper (dissolved)	0.7	15.2	-	27.0	0.5	1.2	10.0	<0.5	<0.5
Iron (total)	-	-	-	-	207	106	164	80	1,970
Iron (dissolved)	12	<2	-	<2	<2	<2	2	<2	5
Lead (total)	-	-	-	-	3.8	0.3	2.9	<0.1	1.6
Lead (dissolved)	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.9	<0.1	<0.1
Manganese (total)	-	-	-	-	34.5	95.5	16.2	2.5	112
Manganese (dissolved)	110	431	-	791	3.3	67.0	13.4	1.6	2.1
Nickel (total)	-	-	-	-	0.8	0.8	8.0	0.9	3.3
Nickel (dissolved)	2.6	5.3	-	24.8	<0.5	<0.5	5.7	<0.5	<0.5
Silver (total)	-	-	-	-	<0.01	<0.01	0.02	<0.01	0.03
Silver (dissolved)	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (total)	-	-	-	-	7	3	13	4	9
Zinc (dissolved)	<1	3	-	188	2	<1	14	2	3

Analyte	EPL70	EPL72	EPL73 (decommissioned)	EPL80	EPL81	EPL82	EPL83	EPL87
Physiochemical	24/05/2025	2/05/2025	-	24/05/2025	7/05/2025	5/05/2025	5/05/2025	24/05/2025
pH	6.5	6.52	-	6.73	6.87	6.74	6.34	6.4
Electrical Conductivity	134	58	-	524	851	2340	529	827
Oxidation Reduction Potential	370	-2	-	-17	2	-2	39	193
Temperature	10.84	8.84	-	13.35	13.35	17.44	17.41	15.63
Dissolved Oxygen	53.4	52.8	-	18.2	18.2	13.7	6.34	18.8
Turbidity	45.2	54.3	-	229	1000	47.1	19.3	92.8
Laboratory analytes								
TSS	17	24	-	16	23,200	108	9	33
Hardness as CaCO3	-	-	-	-	-	-	-	-
Nutrients								
Ammonia as N	<10	30	-	30	270	120	60	<10
Nitrite + Nitrate as N (NOx)	810	40	-	<10	<10	<10	<10	9,860
Kjeldahl Nitrogen Total	<100	<100	-	100	14,300	200	200	600
Nitrogen (Total)	800	<100	-	100	14,300	200	200	10,500
Reactive Phosphorus	20	20	-	<10	20	10	<10	10
Phosphorus (Total)	60	10	-	210	7,730	40	40	40
Inorganics								
Cyanide Total	<4	<4	-	<4	<4	<4	<4	<4
Hydrocarbons								
Oil and Grease	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0
Metals								
Aluminium (total)	1,040	48	-	-	-	-	-	-
Aluminium (dissolved)	<5	7	-	<5	<5	<5	<5	<5
Arsenic (total)	<0.2	<0.2	-	-	-	-	-	-
Arsenic (dissolved)	<0.2	<0.2	-	2.2	7.0	18.5	19.6	0.3
Chromium (III+VI) (total)	0.8	0.3	-	-	-	-	-	-
Chromium (III+VI) (dissolved)	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (total)	80.6	3.1	-	-	-	-	-	-
Copper (dissolved)	5.9	1.2	-	<0.5	<0.5	<0.5	1.4	7.9
Iron (total)	645	28	-	-	-	-	-	-
Iron (dissolved)	<2	<2	-	<2	419	2,130	87	<2
Lead (total)	0.5	0.3	-	-	-	-	-	-
Lead (dissolved)	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese (total)	15.7	6.5	-	-	-	-	-	-
Manganese (dissolved)	1.2	5.4	-	212	250	350	75.1	129
Nickel (total)	0.6	2.8	-	-	-	-	-	-
Nickel (dissolved)	<0.5	1.7	-	17.6	2.0	0.9	17.7	14.3
Silver (total)	<0.01	<0.01	-	-	-	-	-	-
Silver (dissolved)	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (total)	2	7	-	-	-	-	-	-
Zinc (dissolved)	<1	5	-	1	2	2	4	2

Analyte	EPL88	EPL89	EPL 90	EPL 91	EPL92	EPL93	EPL94	EPL95	EPL96
Physiochemical	5/05/2025	5/05/2025	6/05/2025	19/05/2025	19/05/2025	19/05/2025	19/05/2025	19/05/2025	19/05/2025
pH	6.9	6.91	8.18	6.87	8.13	7.1	6.85	6.09	7.32
Electrical Conductivity	716	320	66	192	497	208	150	1001	811
Oxidation Reduction Potential	-76	163	169	2	30	150	0.1	238	197
Temperature	17.05	14.94	15.26	16.22	10.18	13.09	13.11	15.3	14.52
Dissolved Oxygen	25.9	24.6	90	23.9	77.4	19.6	33.4	101.3	30.3
Turbidity	2.2	112	1000	37.6	161	915	119	24.5	915
Laboratory analytes									
TSS	<5	12	424	26	654	206	53	6	1,110
Hardness as CaCO3	-	-	-	-	-	-	-	-	-
Nutrients									
Ammonia as N	240	10	20	60	120	20	30	30	350
Nitrite + Nitrate as N (NOx)	<10	30	610	<10	40	20	30	56,200	16,400
Kjeldahl Nitrogen Total	300	<100	<1,000	100	<1,000	100	200	5,800	6,300
Nitrogen (Total)	300	<100	<1,000	100	<1,000	100	200	62,000	22,700
Reactive Phosphorus	<10	<10	<10	<10	<10	<10	<10	<10	<10
Phosphorus (Total)	90	60	6,030	130	430	50	60	40	2,710
Inorganics									
Cyanide Total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons									
Oil and Grease	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals									
Aluminium (total)	-	-	-	-	-	-	-	-	1,560
Aluminium (dissolved)	<5	<5	<5	<5	<5	<5	<5	<5	<5
Arsenic (total)	-	-	-	-	-	-	-	-	1.6
Arsenic (dissolved)	28.5	0.4	<0.2	0.9	0.3	1.1	0.8	0.8	0.8
Chromium (III+VI) (total)	-	-	-	-	-	-	-	-	15.8
Chromium (III+VI) (dissolved)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	12.9
Copper (total)	-	-	-	-	-	-	-	-	8.7
Copper (dissolved)	<0.5	1.9	1.3	<0.5	<0.5	<0.5	<0.5	60.9	1.3
Iron (total)	-	-	-	-	-	-	-	-	1,660
Iron (dissolved)	522	<2	<2	8	<2	<2	<2	<2	2
Lead (total)	-	-	-	-	-	-	-	-	8.1
Lead (dissolved)	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	0.1	0.5
Manganese (total)	-	-	-	-	-	-	-	-	194
Manganese (dissolved)	188	6.1	6.7	446	55.0	29.8	292	338	112
Nickel (total)	-	-	-	-	-	-	-	-	9.1
Nickel (dissolved)	2.6	1.6	2.7	0.8	1.4	<0.5	0.7	14.0	4.6
Silver (total)	-	-	-	-	-	-	-	-	<0.01
Silver (dissolved)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (total)	-	-	-	-	-	-	-	-	29
Zinc (dissolved)	1	<1	12	1	5	<1	3	41	12

Analyte	EPL97	EPL102 (Decommisioned)	EPL103	EPL104	EPL105	EPL113	EPL114	EPL115	EPL116	EPL117
Physiochemical	19/05/2025	-	17/05/2025	17/05/2025	24/05/2025	3/05/2025	3/05/2025	3/05/2025	3/05/2025	3/05/2025
pH	6.89	-	6.21	6.27	6.41	6.13	7.27	7.4	7.27	6.72
Electrical Conductivity	811	-	34	41	131	129	341	316	167	122
Oxidation Reduction Potential	197	-	285	294	386	120	130	61	188	-25
Temperature	14.52	-	11.44	11.66	11.1	12.26	12.05	12.55	12.8	12.38
Dissolved Oxygen	30.3	-	71.7	44.9	95.9	22.5	26.7	18.7	61	17.6
Turbidity	23.7	-	33.3	21.7	177	556	34.8	176	1000	167
Laboratory analytes										
TSS	12	-	18	9	37	403	18	216	6,910	1,670
Hardness as CaCO3	-	-	-	-	-	-	-	-	-	-
Nutrients										
Ammonia as N	90	-	<10	<10	<10	20	40	30	40	30
Nitrite + Nitrate as N (NOx)	280	-	870	220	2,510	40	<10	<10	30	<10
Kjeldahl Nitrogen Total	<100	-	<100	<100	100	1,500	100	200	2,300	200
Nitrogen (Total)	300	-	900	200	2,600	1,500	100	200	2,300	200
Reactive Phosphorus	<10	-	<10	<10	<10	<10	<10	<10	<10	<10
Phosphorus (Total)	20	-	60	50	20	100	40	60	1,920	650
Inorganics										
Cyanide Total	<4	-	<4	<4	<4	<4	<4	<4	<4	<4
Hydrocarbons										
Oil and Grease	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals										
Aluminium (total)	-	-	-	-	-	-	-	-	-	-
Aluminium (dissolved)	<5	-	<5	<5	<5	7	<5	27	<5	<5
Arsenic (total)	-	-	-	-	-	-	-	-	-	-
Arsenic (dissolved)	0.3	-	<0.2	<0.2	<0.2	0.4	0.4	0.4	0.8	2.1
Chromium (III+VI) (total)	-	-	-	-	-	-	-	-	-	-
Chromium (III+VI) (dissolved)	0.6	-	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Copper (total)	-	-	-	-	-	-	-	-	-	-
Copper (dissolved)	<0.5	-	9.1	<0.5	1.8	2.0	<0.5	<0.5	<0.5	<0.5
Iron (total)	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	<2	-	<2	<2	<2	12	9	<2	<2	4,510
Lead (total)	-	-	-	-	-	-	-	-	-	-
Lead (dissolved)	<0.1	-	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Manganese (total)	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	337	-	0.9	3.2	44.0	73.5	365	375	28.9	403
Nickel (total)	-	-	-	-	-	-	-	-	-	-
Nickel (dissolved)	1.8	-	<0.5	<0.5	5.4	<0.5	22.0	<0.5	0.7	1.7
Silver (total)	-	-	-	-	-	-	-	-	-	-
Silver (dissolved)	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (total)	-	-	-	-	-	-	-	-	-	-
Zinc (dissolved)	30	-	<1	<1	25	3	5	<0.1	2	<1

* 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: 01-31 May 2025 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51	EPL107	EPL108	EPL109
Field				4/05/2025	4/05/2025	25/05/2025	25/05/2025	25/05/2025	17/05/2025	17/05/2025	12/04/2025	15/04/2025	16/04/2025	13/04/2025	13/04/2025	13/04/2025
pH	pH Unit	-	6.5-8	7.58	7.47	7.26	7.19	7.22	7.63	8.76	8.31	7.1	7.18	7.47	7.5	7.63
Electrical Conductivity	µS/cm	-	20-30	54	50	31	30	30	23	27	40.4	34	30	28	24	25
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	205	206	318	349	353	243	156	138.4	367	349	197	192	186
Temperature	°C	-	No Water Quality Objective Value	14.96	14.97	8.37	9	8.88	13.16	9.63	10.9	8.8	8.94	15.03	15.27	14.6
Dissolved Oxygen	% saturation	-	90-110	59.7	57	104.7	104.1	76.3	68.6	68.6	96.7	84.3	85.6	63.9	75.3	84.4
Turbidity	NTU	-	1-20	4.3	5.2	13.9	17.3	17.7	40.3	22.6	4.38	0.8	14.3	10.1	18	14.6
Laboratory analytes																
Total suspended solids	mg/L	5	No Water Quality Objective Value	28	14	6	<5	<5	12	8	<5	<5	<5	8	<5	<5
Hardness as $CaCO_3$ (filtered)	mg/L	1	No Water Quality Objective Value	33	33	9	9	9	9	7	9	9	9	17	14	14
Nutrients																
Ammonia as N	µg/L	10	10	30	30	60	60	60	<10	<10	40	100	60	80	40	70
Nitrite + Nitrate as N (NOx)	µg/L	10	10	10	30	20	10	10	10	50	<10	50	10	10	20	<10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	100	200	500	500	400	1,000	<100	<100	500	500	200	200	200
Nitrogen (Total)	µg/L	100	350	100	200	500	500	400	1,000	<100	<100	600	500	200	200	200
Reactive Phosphorus	µg/L	1	5	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Phosphorus (Total)	µg/L	10	10	<10	10	10	20	<10	60	50	<10	10	20	20	<10	<10
Inorganics																
Cyanide Total	µg/L	4	7	<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	<1.0	<1.0	<1.0	<1.0	<1.0
Metals																
Aluminium (dissolved)	µg/L	5	55	<5	<5	30	26	26	26	14	14	26	27	<5	<5	<5
Arsenic (dissolved)	µg/L	0.2	13	0.4	0.4	0.3	0.4	0.4	0.4	<0.2	<0.2	0.4	0.4	0.3	0.3	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	0.3	<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	<0.5	<0.5	<0.5
Iron (dissolved)	µg/L	2	300	5	5	96	96	97	107	53	47	92	95	3	<2	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	<0.1	<0.1	<0.1
Manganese (dissolved)	µg/L	0.5	1,900	<0.5	<0.5	1.8	1.4	1.4	2.0	1.8	3.0	1.4	1.5	<0.5	<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	<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	<0.01	<0.01	<0.01
Zinc (dissolved)	µg/L	1	8	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1
Biological																
Faecal Coliforms	CFU/100mL	1	10/100^	6	3	22	-	-	-	-	-	-	11	-	-	-
Biochemical Oxygen Demand	mg/L	2	1/5^	3	4	8	-	-	-	-	-	-	6	-	-	-

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

** Algal blooms can present as feacal coliforms

^ 90th percentile concentration limits / 100 percentile concentration limits

\- Sample not required at this location.

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 May 2025 - Surface Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*	EPL1	EPL6	EPL8	EPL9	EPL12	EPL14	EPL15	EPL16	EPL24	EPL26	EPL27	EPL30	EPL31	EPL33	EPL34	EPL35	EPL36	EPL37	EPL53	EPL13	EPL54	EPL55	EPL67	EPL71	EPL86	EPL85	EPL86	EPL98	EPL99	EPL100	EPL101	EPL106	EPL110	EPL118	EPL120	EPL122
				7/05/2025	7/05/2025	7/05/2025	7/05/2025	7/05/2025	7/05/2025	7/05/2025	7/05/2025	3/05/2025	3/05/2025	14/05/2025	21/05/2025	21/05/2025	21/05/2025	21/05/2025	21/05/2025	21/05/2025	27/05/2025	27/05/2025	Dry	Dry	Dry	Dry	Dry	23/05/2025	6/05/2025	24/05/2025	24/05/2025	Dry	3/05/2025	23/05/2025	3/05/2025	3/05/2025	Dry	Dry	Dry	28/05/2025
Field																																							
pH	-	-	6.5-8	8.17	8.12	8.11	8.01	8.17	8.13	8.14	8.08	6.71	8	5.92	8.09	7.76	7.59	7.52	7.43	6.83	7.28	Dry	Dry	Dry	Dry	Dry	7.7	9.18	8.97	8.39	Dry	10.62	8.42	9.06	8.92	Dry	Dry	Dry	8.44
Electrical Conductivity	µS/cm	-	30-350	195	190	198	141	195	198	199	142	956	29	21	32	21	21	23	22	47	60	Dry	Dry	Dry	Dry	Dry	216	969	730	929	Dry	354	541	635	1460	Dry	Dry	Dry	658
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	172	228	47	119	208	234	238	142	205	217	216	205	244	264	277	282	298	305	Dry	Dry	Dry	Dry	Dry	148	61	133	153	Dry	-13	150	84	151	Dry	Dry	Dry	164
Temperature	°C	-	No Water Quality Objective Value	9.84	8.14	9.99	9.3	9.26	8.54	8.73	8.87	14.55	4.43	6.05	7.5	7.59	9.59	7.2	7.38	8.58	6.77	Dry	Dry	Dry	Dry	Dry	9.9	18.2	12.17	12.32	Dry	10.47	9.72	8.82	11.81	Dry	Dry	Dry	11.64
Dissolved Oxygen	% saturation	-	90-110	81	80.5	70.5	63.9	73.8	73.8	90.3	63.2	54.2	82.6	92.8	92.9	84.4	67.1	82.2	65.8	99.8	101	Dry	Dry	Dry	Dry	Dry	66.9	123.6	50.4	58.7	Dry	60.6	60.9	92.5	90.1	Dry	Dry	Dry	87.5
Turbidity	NTU	-	2-25	0.3	1.1	41.3	7.1	5.8	5.8	5.2	6.2	4.8	9.01	29.4	11.6	6.1	18	5.9	4.5	23.5	15.6	Dry	Dry	Dry	Dry	Dry	1000	1000	1000	448	Dry	63.6	391	89.7	192	Dry	Dry	Dry	409
Laboratory analytes																																							
TSS	mg/L	5	No Water Quality Objective Value	<5	<5	<5	<5	<5	<5	<5	<5	13	<5	<5	<5	<5	<5	7	<5	<5	10	13	Dry	Dry	Dry	Dry	Dry	Dry	658	340	1,200	Dry	27	363	21	44	Dry	Dry	Dry	104
Hardness as CaCO3	mg/L	1	No Water Quality Objective Value	78	72	62	60	88	90	80	81	276	18	16	13	9	9	9	9	13	13	Dry	Dry	Dry	Dry	Dry	Dry	40	41	18	Dry	120	191	205	485	Dry	Dry	Dry	80
Nutrients																																							
Ammonia as N	µg/L	10	13	<10	30	10	10	40	10	<10	30	30	10	<10	10	10	40	20	<10	10	20	Dry	Dry	Dry	Dry	Dry	Dry	30	30	20	Dry	1,980	60	100	20	Dry	Dry	Dry	80
Nitrite + Nitrate as N (NOx)	µg/L	10	15	<10	<10	<10	<10	<10	<10	<10	<10	34,600	<10	<10	20	<10	10	10	<10	70	70	Dry	Dry	Dry	Dry	Dry	Dry	1,200	8,030	7,380	Dry	9,230	12,300	17,600	12,300	Dry	Dry	Dry	6,800
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	<100	<100	<100	<100	<100	<100	<100	7,300	<100	<100	100	<100	600	100	100	500	500	Dry	Dry	Dry	Dry	Dry	Dry	800	5,200	4,300	Dry	3,000	2,800	5,600	12,800	Dry	Dry	Dry	500
Nitrogen (Total)	µg/L	100	250	<100	<100	<100	<100	<100	<100	<100	<100	41,900	<100	<100	100	<100	600	100	100	600	600	Dry	Dry	Dry	Dry	Dry	Dry	2,000	13,200	8,400	Dry	11,300	14,900	23,200	65,100	Dry	Dry	Dry	7,200
Reactive Phosphorus	µg/L	1	15	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	Dry	Dry	Dry	Dry	Dry	Dry	20	<10	20	Dry	<10	30	<10	<10	Dry	Dry	Dry	<10
Phosphorus (Total)	µg/L	10	20	20	50	10	50	20	10	40	40	<10	10	<10	10	20	50	<10	<10	40	40	Dry	Dry	Dry	Dry	Dry	Dry	1,350	1,110	1,380	Dry	20	540	30	<10	Dry	Dry	Dry	110
Inorganics																																							
Cyanide Total	µg/L	4	8	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	Dry	Dry	Dry	Dry	Dry	Dry	<4	<4	<4	Dry	46	<4	12	<4	Dry	Dry	Dry	<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	Dry	Dry	Dry	Dry	Dry	Dry	<1.0	<1.0	<1.0	Dry	<1.0	<1.0	<1.0	<1.0	Dry	Dry	Dry	<1.0
Metals																																							
Aluminium (total)	µg/L	5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34,900	-	-	-	-	-	-	-	-	-	-	-
Aluminium (dissolved)	µg/L	5	27	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	10	10	25	10	9	116	119	Dry	Dry	Dry	Dry	Dry	Dry	13	8	8	Dry	44	13	9	8	Dry	Dry	Dry	8
Arsenic (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.8	-	-	-	-	-	-	-	-	-	-	-
Arsenic (dissolved)	µg/L	0.2	0.8	0.7	0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.3	<0.2	<0.2	<0.2	<0.2	0.4	<0.2	<0.2	0.4	0.5	Dry	Dry	Dry	Dry	Dry	Dry	0.5	20.4	16.3	Dry	1.2	1.8	2.3	2.1	Dry	Dry	Dry	0.6
Chromium (III+VI) (total)	µg/L	0.2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62.2	-	-	-	-	-	-	-	-	-	-	-
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	0.4	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	0.5	Dry	Dry	Dry	Dry	Dry	Dry	0.8	12.7	13.2	Dry	56.9	5.9	11.1	1.6	Dry	Dry	Dry	0.6
Copper (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54.7	-	-	-	-	-	-	-	-	-	-	-
Copper (dissolved)	µg/L	0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	Dry	Dry	Dry	Dry	Dry	Dry	0.9	5.8	1.9	Dry	<0.5	1.1	3.1	<0.5	Dry	Dry	Dry	1.3
Iron (total)	µg/L	2	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44,600	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	µg/L	2	300	5	11	5	7	4	4	6	6	2	18	10	35	28	127	92	97	332	324	Dry	Dry	Dry	Dry	Dry	Dry	35	15	3	Dry	<2	<2	<2	3	Dry	Dry	Dry	23
Lead (total)	µg/L	0.1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.7	-	-	-	-	-	-	-	-	-	-	-
Lead (dissolved)	µg/L	0.1	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Dry	Dry	Dry	Dry	Dry	Dry	<0.1	0.3	0.1	Dry	<0.1	<0.1	0.1	<0.1	Dry	Dry	Dry	0.6
Manganese (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,020	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	µg/L	0.5	1,900	1.3	3.5	1.2	2.9	0.5	0.7	1.3	1.5	309	2.6	0.9	2.9	1.4	1.0	3.5	6.7	102	14.4	Dry	Dry	Dry	Dry	Dry	Dry	18.0	1.3	1.4	Dry	<0.5	7.9	12.8	<0.5	Dry	Dry	Dry	39.0
Nickel (total)	µg/L	0.5	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	-	-	-	-	-	-	-	-	-	-	-
Nickel (dissolved)	µg/L	0.5	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	0.8	Dry	Dry	Dry	Dry	Dry	Dry	0.9	2.0	0.9	Dry	<0.5	1.0	1.9	1.8	Dry	Dry	Dry	1.3
Silver (total)	µg/L	0.01	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	-	-	-	-	-	-	-	-	-	-	-
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	Dry	Dry	Dry	Dry	Dry	Dry	<0.01	<0.01	<0.01	Dry	0.01	<0.01	<0.01	<0.01	Dry	Dry	Dry	<0.01
Zinc (total)	µg/L	1	No Water Quality Objective Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	136	-	-	-	-	-	-	-	-	-	-	-
Zinc (dissolved)	µg/L	1	2.4	<1	<1	<1	<1	<1	<1	<1	<1	9	<1	<1	<1	<1	<1	<1	<1	3	1	Dry	Dry	Dry	Dry	Dry	Dry	8	1	<1	Dry	<1	<1	3	<1	Dry	Dry	Dry	2

* 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 (2018), they are not pollutant limits imposed by EPL 21266.
- Samples not required

Monthly EPL Sampling: 01-31 May 2025 - Discharge 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				25/05/2025							26/5/2025
Inflow#	ML/day	-	-	-	0.0000	#REF!	#REF!	#REF!	#REF!	#REF!	-
Outflow#	ML/day	-	4.32 (EPL 43 / 50)	-	-	-	-	-	-	-	-
Field											
pH	pH Unit	-	6.5-8.5	8.01	-	-	-	-	-	-	7.58
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)	16	-	-	-	-	-	-	46.18
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value	147	-	-	-	-	-	-	-
Temperature	°C	-	15	14.59	-	-	-	-	-	-	7.3
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value	68.7	-	-	-	-	-	-	-
Turbidity	NTU	-	<25	18.9	-	-	-	-	-	-	0.39
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
Nutrients											
Ammonia as N	µg/L	10	200/2000^	<10	-	-	-	-	-	-	50
Nitrite + Nitrate as N (NOx)	µg/L	10	10	50	-	-	-	-	-	-	<10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value	<100	-	-	-	-	-	-	<100
Nitrogen (Total)	µg/L	100	350/-^	<100	-	-	-	-	-	-	<100
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value	<10	-	-	-	-	-	-	<10
Phosphorus (Total)	µg/L	10	100/300^	10	-	-	-	-	-	-	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	-	-	-	-	-	-	<5
Arsenic (dissolved)	µg/L	0.2	13	<0.2	-	-	-	-	-	-	<0.2
Chromium (III+VI) (dissolved)	µg/L	0.2	1	<0.2	-	-	-	-	-	-	1.5
Copper (dissolved)	µg/L	0.5	14	<0.5	-	-	-	-	-	-	1.3
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	-	-	-	-	-	-	2
Biological											
Faecal Coliforms	CFU/100mL	1	10/100^	<1	-	-	-	-	-	-	<1
Biological Oxygen Demand	mg/L	2	5	5	-	-	-	-	-	-	3

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

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

\- Samples not required

^ 90 Percentile concentration limit/100 Percentile limit

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

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 May 2025 - Volumes

Date	EPL 43 *	EPL 50 ^	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
	Discharge volume (Megalitres)		Discharge volume (Megalitres)				
1/05/2025	0.85	-	0.37	0.05	0.22	0.07	0.67
2/05/2025	0.93	-	0.30	0.05	0.22	0.09	0.65
3/05/2025	-	-	0.24	0.05	0.22	0.08	0.45
4/05/2025	1.07	-	0.45	0.05	0.22	0.07	0.80
5/05/2025	0.68	-	0.18	0.03	0.18	0.10	1.00
6/05/2025	0.70	-	0.60	0.05	0.26	0.07	0.31
7/05/2025	-	-	0.21	0.05	0.17	0.08	0.37
8/05/2025	0.87	-	0.26	0.04	0.25	0.55	0.36
9/05/2025	-	-	0.13	0.05	0.25	0.01	0.31
10/05/2025	-	-	0.44	0.08	0.16	0.10	0.50
11/05/2025	-	-	0.43	0.05	0.21	0.06	0.45
12/05/2025	1.60	-	0.39	0.05	0.21	0.08	0.67
13/05/2025	-	0.14	0.11	0.04	0.23	0.01	0.67
14/05/2025	0.86	0.59	0.74	0.04	0.22	0.01	0.64
15/05/2025	-	-	0.29	0.05	0.26	0.21	0.55
16/05/2025	0.32	0.23	0.50	0.05	0.16	0.07	0.56
17/05/2025	-	0.41	0.23	0.04	0.24	0.07	0.64
18/05/2025	-	0.72	0.32	0.06	0.23	0.52	0.68
19/05/2025	-	0.50	0.43	0.08	0.27	0.62	0.34
20/05/2025	-	-	0.29	0.07	0.20	0.08	0.20
21/05/2025	0.51	-	0.30	0.03	0.09	0.06	0.05
22/05/2025	0.59	0.74	0.24	0.03	0.09	0.06	0.85
23/05/2025	-	0.67	0.57	0.21	0.52	0.02	0.80
24/05/2025	0.83	0.89	0.44	0.07	0.27	0.01	0.71
25/05/2025	-	0.45	0.35	0.05	0.22	0.26	1.40
26/05/2025	1.04	0.36	0.46	0.06	0.26	0.08	1.37
27/05/2025	0.40	-	0.32	0.04	0.21	0.10	0.79
28/05/2025	-	-	0.25	0.02	0.12	0.13	0.52
29/05/2025	0.54	-	0.25	0.02	0.12	0.06	0.21
30/05/2025	-	-	0.28	0.12	0.37	0.07	0.61
31/05/2025	-	-	0.36	0.05	0.20	0.13	0.90

- 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 6.02 L/s
- The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 16.20 L/s
- Water not discharged on this day

APPENDIX C – MANN-KENDALL RESULTS

Site	Location Code	TSS mg/L	Hardness as CaCO3 (Filtered) mg/L	Hardness as CaCO3 mg/L	Ammonia as N µg/L	Nitrite + Nitrate as N (NOx) µg/L	Kjeldahl Nitrogen Total µg/L	Nitrogen (Total) µg/L	Reactive Phosphorus (Filtered) µg/L	Reactive Phosphorus µg/L	Phosphorus (Total) µg/L	Chlorine - Total Residual mg/L	Biochemical Oxygen Demand mg/L	Cyanide Total µg/L	Nitrate (as N) mg/L	Nitrate (as NO3-) mg/L	Nitrite (as N) mg/L	Nitrite (as NO2-) mg/L	Oil and Grease mg/L	Aluminium µg/L	Aluminium (Filtered) µg/L	Arsenic µg/L	Arsenic (Filtered) µg/L	Calcium µg/L	Chromium (hexavalent) µg/L
LOB	EPL41	NT, S=-27, N=23	NT, S=-26, N=23		TDn, S=-135, N=23	TDn, S=-92, N=23	TDn, S=-136, N=23	TDn, S=-126, N=23	TDn, S=-59, N=22		NT, S=-53, N=23	NT, S=-9, N=22	NT, S=23, N=22	NT, S=-9, N=23	TDn, S=-89, N=23	TDn, S=-47, N=14	TDn, S=-92, N=23	TDn, S=-32, N=14	NT, S=0, N=23	NT, S=-33, N=17	NT, S=-24, N=23	NT, S=-13, N=17	NT, S=-19, N=23		NT, S=-5, N=17
LOB	EPL91	TDn, S=-143, N=26	NT, S=10, N=26		TUp, S=102, N=26	TDn, S=-178, N=26	NT, S=14, N=26	NT, S=-30, N=26	NT, S=-55, N=25		NT, S=-54, N=26	TDn, S=-17, N=9		NT, S=0, N=26	TDn, S=-176, N=26	TDn, S=-18, N=10	TDn, S=-62, N=26	NT, S=0, N=10	NT, S=0, N=26	TDn, S=-48, N=17	NT, S=0, N=26	NT, S=12, N=17	TUp, S=143, N=26		NT, S=-14, N=17
LOB	EPL96	NT, S=13, N=11	TDn, S=-27, N=11		TUp, S=29, N=11	TDn, S=-25, N=11	NT, S=-20, N=11	TDn, S=-25, N=11	NT, S=-15, N=11		NT, S=14, N=11	NT, S=-1, N=5		NT, S=0, N=11	TDn, S=-25, N=11		NT, S=18, N=11		NT, S=0, N=11	NT, S=-4, N=9	NT, S=0, N=11	NT, S=-6, N=9	NT, S=-16, N=11		NT, S=-1, N=9
LOB	EPL52	NT, S=-19, N=19	NT, S=-6, N=19		TUp, S=76, N=19	TDn, S=-57, N=19	NT, S=-33, N=19	NT, S=-29, N=19	TDn, S=-84, N=18		NT, S=17, N=19	NT, S=-2, N=16		NT, S=-14, N=19	TDn, S=-55, N=19	NT, S=-5, N=10	TUp, S=50, N=19	NT, S=-10, N=10	NT, S=0, N=19	TUp, S=57, N=18	NT, S=13, N=19	NT, S=-7, N=18	NT, S=-14, N=19		NT, S=-29, N=18
LOB	EPL95	TDn, S=-124, N=26	TUp, S=222, N=26		NT, S=-17, N=26	TUp, S=206, N=26	NT, S=53, N=26	TUp, S=183, N=26	TDn, S=-99, N=25		TDn, S=-82, N=26	NT, S=-3, N=10		NT, S=0, N=26	TUp, S=207, N=26	NT, S=1, N=10	NT, S=-23, N=26	NT, S=0, N=10	NT, S=0, N=26	NT, S=4, N=17	NT, S=-11, N=26	NT, S=-5, N=17	NT, S=-36, N=26		NT, S=-14, N=17
LOB	EPL58	TDn, S=-140, N=24	NT, S=67, N=24		NT, S=7, N=24	NT, S=-24, N=24	NT, S=48, N=24	NT, S=48, N=24	TDn, S=-110, N=23		TDn, S=-78, N=24	NT, S=-5, N=7		NT, S=0, N=24	NT, S=-9, N=24	NT, S=-9, N=8	NT, S=43, N=24	NT, S=-6, N=8	NT, S=0, N=24	TDn, S=-144, N=24	NT, S=-9, N=24	TDn, S=-167, N=24	NT, S=7, N=24		NT, S=-21, N=24
LOB	EPL56	NT, S=-71, N=26	NT, S=66, N=26		TUp, S=75, N=26	TUp, S=201, N=26	NT, S=35, N=26	NT, S=66, N=26	TDn, S=-146, N=25		NT, S=12, N=26	NT, S=2, N=9		NT, S=-21, N=26	TUp, S=185, N=26	NT, S=19, N=10	NT, S=29, N=26	NT, S=-3, N=10	NT, S=0, N=25	NT, S=-52, N=25	NT, S=0, N=26	NT, S=-2, N=25	NT, S=0, N=26		NT, S=0, N=25
LOB	EPL57	NT, S=-6, N=24	NT, S=52, N=24		NT, S=44, N=24	TUp, S=111, N=24	TUp, S=91, N=24	TUp, S=172, N=24	NT, S=-52, N=23		NT, S=-5, N=24	NT, S=1, N=8		NT, S=-19, N=24	TUp, S=108, N=24	NT, S=10, N=8	NT, S=48, N=24	NT, S=-5, N=8	NT, S=0, N=24	NT, S=-34, N=23	NT, S=-18, N=24	NT, S=34, N=23	TUp, S=103, N=24		NT, S=0, N=23
LOB	EPL92	TDn, S=-109, N=26	TDn, S=-112, N=26		NT, S=43, N=26	NT, S=-51, N=26	NT, S=31, N=26	NT, S=37, N=26	TDn, S=-86, N=25		NT, S=-56, N=26	NT, S=9, N=9		NT, S=0, N=26	NT, S=-38, N=26	NT, S=-5, N=10	TDn, S=-44, N=26	NT, S=0, N=10	NT, S=0, N=26	TDn, S=-74, N=17	NT, S=0, N=26	TDn, S=-82, N=17	TDn, S=-106, N=26		NT, S=-14, N=17
LOB	EPL93	TUp, S=163, N=26	NT, S=28, N=26		NT, S=60, N=26	NT, S=51, N=26	NT, S=38, N=26	NT, S=38, N=26	TDn, S=-146, N=25		NT, S=71, N=26	NT, S=1, N=10		NT, S=0, N=26	NT, S=57, N=26	NT, S=7, N=10	NT, S=-3, N=26	NT, S=0, N=10	NT, S=0, N=26	TUp, S=48, N=17	NT, S=0, N=26	NT, S=8, N=17	TDn, S=-198, N=26		NT, S=0, N=17
LOB	EPL94	NT, S=-42, N=26	NT, S=56, N=26		TUp, S=99, N=26	TDn, S=-77, N=26	NT, S=46, N=26	NT, S=46, N=26	TDn, S=-104, N=25		NT, S=-10, N=26	NT, S=-3, N=9		NT, S=0, N=26	TDn, S=-77, N=26	NT, S=0, N=10	NT, S=0, N=26	NT, S=0, N=10	NT, S=0, N=26	NT, S=-27, N=17	NT, S=0, N=26	NT, S=3, N=17	NT, S=18, N=26		NT, S=12, N=17
LOB	EPL97	TDn, S=-184, N=26	NT, S=52, N=26		TUp, S=88, N=26	TDn, S=-87, N=26	TDn, S=-71, N=26	NT, S=-52, N=26	TDn, S=-97, N=25		NT, S=-44, N=26	NT, S=7, N=10		NT, S=0, N=26	TDn, S=-79, N=26	NT, S=8, N=10	TDn, S=-146, N=26	NT, S=1, N=10	NT, S=0, N=26	TDn, S=-46, N=17	NT, S=0, N=26	NT, S=-30, N=17	TDn, S=-114, N=26		NT, S=0, N=17
LOB	EPL90	NT, S=-55, N=23	TUp, S=86, N=23		NT, S=28, N=23	TUp, S=79, N=23	NT, S=3, N=23	NT, S=27, N=23	TDn, S=-118, N=22		NT, S=-36, N=23	NT, S=13, N=8		NT, S=0, N=23	TUp, S=87, N=23	TUp, S=25, N=10	NT, S=-18, N=23	NT, S=0, N=10	NT, S=0, N=23	NT, S=-17, N=17	TDn, S=-71, N=23	NT, S=-27, N=17	NT, S=22, N=23		NT, S=12, N=17
LOB	EPL5	NT, S=-6, N=7	NT, S=7, N=7		NT, S=5, N=7	TDn, S=-12, N=7	NT, S=-4, N=7	NT, S=-4, N=7	TDn, S=-11, N=7		NT, S=-1, N=7	NT, S=-5, N=6		NT, S=0, N=7	NT, S=-10, N=7	NT, S=0, N=3	NT, S=0, N=7	NT, S=0, N=3	NT, S=0, N=7		NT, S=-7, N=7		TUp, S=14, N=7		
LOB	EPL12	NT, S=-5, N=6	TUp, S=11, N=6		NT, S=9, N=6	NT, S=-8, N=6	NT, S=-9, N=6	NT, S=-9, N=6	NT, S=-8, N=6		NT, S=-6, N=6	NT, S=-2, N=5		NT, S=1, N=6	NT, S=-8, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=-5, N=6		NT, S=9, N=6		
LOB	EPL84	TUp, S=83, N=27	NT, S=-30, N=27		TDn, S=-84, N=27	NT, S=-13, N=27	NT, S=57, N=27	NT, S=1, N=27	TDn, S=-93, N=26		TUp, S=91, N=27	TDn, S=-45, N=25		NT, S=-22, N=27	NT, S=5, N=27	NT, S=-1, N=11	TDn, S=-160, N=27	NT, S=6, N=11	NT, S=0, N=27	NT, S=-3, N=15	TDn, S=-97, N=27	NT, S=17, N=15	TUp, S=84, N=27		NT, S=-10, N=15
LOB	EPL86	TUp, S=57, N=19	TDn, S=-49, N=19		TUp, S=89, N=19	TDn, S=-67, N=19	NT, S=-8, N=19	TDn, S=-53, N=19	TDn, S=-72, N=19		TUp, S=55, N=19	NT, S=-12, N=18		NT, S=-14, N=19	TDn, S=-65, N=19	NT, S=7, N=7	TDn, S=-64, N=19	NT, S=2, N=7	NT, S=0, N=19	NT, S=-4, N=9	NT, S=-8, N=19	NT, S=15, N=9	TUp, S=85, N=19		NT, S=16, N=9
LOB	EPL81	TUp, S=79, N=23	TUp, S=95, N=23		NT, S=44, N=23	TDn, S=-79, N=23	TUp, S=70, N=23	TUp, S=70, N=23	TDn, S=-59, N=22		NT, S=-1, N=23	NT, S=1, N=13		NT, S=-31, N=23	NT, S=-54, N=23	NT, S=0, N=9	NT, S=-8, N=23	NT, S=0, N=9	NT, S=0, N=23	NT, S=13, N=15	NT, S=0, N=23	NT, S=7, N=15	TUp, S=113, N=23		NT, S=0, N=15
LOB	EPL6	NT, S=-5, N=6	TUp, S=10, N=6		NT, S=7, N=6	NT, S=-6, N=6	NT, S=1, N=6	NT, S=1, N=6	NT, S=-6, N=6		NT, S=4, N=6	NT, S=-6, N=5		NT, S=0, N=6	NT, S=-6, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=-5, N=6		NT, S=-5, N=6		
LOB	EPL88	NT, S=-39, N=25	TUp, S=132, N=25		NT, S=8, N=25	NT, S=-57, N=25	TDn, S=-80, N=25	NT, S=-61, N=25	NT, S=-44, N=24		NT, S=10, N=25	NT, S=-2, N=14		NT, S=-20, N=25	NT, S=-57, N=25	NT, S=3, N=9	NT, S=0, N=25	NT, S=0, N=9	NT, S=0, N=25	NT, S=8, N=15	NT, S=20, N=25	NT, S=-18, N=15	TUp, S=81, N=25		NT, S=6, N=15
LOB	EPL14	NT, S=-5, N=6	TUp, S=13, N=6		NT, S=5, N=6	NT, S=-6, N=6	NT, S=-3, N=6	NT, S=-3, N=6	TDn, S=-9, N=6		NT, S=-8, N=6	NT, S=-2, N=5		NT, S=0, N=6	NT, S=-6, N=6		NT, S=0, N=6		NT, S=0, N=6	TDn, S=-6, N=4	NT, S=-5, N=6	NT, S=5, N=4	NT, S=8, N=6		NT, S=0, N=4
LOB	EPL83	TDn, S=-185, N=23	TUp, S=69, N=22		TUp, S=99, N=23	NT, S=-40, N=23	NT, S=-48, N=23	NT, S=-44, N=23	NT, S=-30, N=21		TDn, S=-136, N=23	NT, S=-20, N=14		NT, S=-12, N=23	NT, S=-48, N=23	NT, S=0, N=9	NT, S=-27, N=23	NT, S=4, N=9	NT, S=0, N=23	NT, S=-10, N=12	NT, S=-17, N=22	NT, S=4, N=12	TUp, S=68, N=23		TDn, S=-21, N=12
LOB	EPL85	NT, S=-16, N=17	NT, S=15, N=17		NT, S=-3, N=17	TUp, S=56, N=17	NT, S=-3, N=17	TUp, S=63, N=17	NT, S=-10, N=17		NT, S=16, N=17	NT, S=-10, N=15		NT, S=-12, N=17	TUp, S=68, N=17	NT, S=9, N=6	NT, S=-15, N=17	NT, S=-3, N=6	NT, S=0, N=17	NT, S=-2, N=8	TDn, S=-53, N=17	NT, S=14, N=8	TUp, S=54, N=17		NT, S=-13, N=8
LOB	EPL15	NT, S=-5, N=6	TUp, S=14, N=6		NT, S=2, N=6	TDn, S=-11, N=6	NT, S=-5, N=6	NT, S=-5, N=6	TDn, S=-9, N=6		NT, S=7, N=6	NT, S=-2, N=5		NT, S=0, N=6	NT, S=-8, N=6		NT, S=-1, N=6		NT, S=0, N=6		NT, S=-5, N=6		NT, S=8, N=6		
LOB	EPL8	NT, S=-5, N=6	TUp, S=11, N=6		NT, S=4, N=6	NT, S=-5, N=6	NT, S=-3, N=6	NT, S=-1, N=6	NT, S=-7, N=6		NT, S=-1, N=6	TDn, S=-8, N=5		NT, S=0, N=6	NT, S=-5, N=6		NT, S=0, N=6		NT, S=0, N=6	NT, S=-2, N=4	NT, S=-5, N=6	NT, S=5, N=4	NT, S=9, N=6		NT, S=0, N=4
LOB	EPL9	NT, S=-5, N=6	TUp, S=14, N=6		NT, S=7, N=6	NT, S=-2, N=6	NT, S=-5, N=6	NT, S=-3, N=6	TDn, S=-9, N=6		NT, S=3, N=6	NT, S=-2, N=5		NT, S=0, N=6	NT, S=-2, N=6		NT, S=-5, N=6		NT, S=0, N=6		NT, S=-5, N=6		TUp, S=10, N=6		
LOB	EPL16	NT, S=-6, N=7	TUp, S=11, N=6		NT, S=4, N=7	TDn, S=-12, N=7	NT, S=-4, N=7	NT, S=-4, N=7	NT, S=-3, N=6		NT, S=-5, N=7	NT, S=-2, N=5		NT, S=0, N=7	TDn, S=-11, N=7		NT, S=0, N=7		NT, S=0, N=7	TDn, S=-6, N=4	NT, S=-6, N=7	NT, S=5, N=4	NT, S=6, N=7		NT, S=0, N=5
LOB	EPL107	NT, S=1, N=6	NT, S=-5, N=6		NT, S=5, N=6	NT, S=-1, N=6	NT, S=-1, N=6	NT, S=-1, N=6	NT, S=-7, N=6		NT, S=1, N=6	NT, S=-4, N=5		NT, S=0, N=6	NT, S=-1, N=6		NT, S=0, N=6		NT, S=0, N=6	NT, S=-4, N=4	TDn, S=-9, N=6	NT, S=-1, N=4	NT, S=5, N=6		NT, S=0, N=4
LOB	EPL108	NT, S=-5, N=6	NT, S=-7, N=6		NT, S=7, N=6	NT, S=-2, N=6	NT, S=-5, N=6	NT, S=-5, N=6	NT, S=-8, N=6		NT, S=1, N=6	NT, S=4, N=5		NT, S=0, N=6	NT, S=-2, N=6		NT, S=-3, N=6		NT, S=0, N=6	NT, S=-2, N=4	NT, S=-5, N=6	NT, S=-1, N=4	NT, S=4, N=6		NT, S=0, N=4
LOB	EPL109	NT, S=-7, N=6	NT, S=-3, N=6		NT, S=6, N=6	NT, S=-5, N=6	NT, S=-5, N=6	NT, S=-5, N=6	NT, S=-8, N=6		NT, S=-5, N=6	NT, S=0, N=5		NT, S=0, N=6	NT, S=-5, N=6		NT, S=0, N=6		NT, S=0, N=6	NT, S=-2, N=4	NT, S=-5, N=6	NT, S=-1, N=4	NT, S=2, N=6		NT, S=0, N=4
LOB	EPL10	NT, S=1, N=7	NT, S=-1, N=7		NT, S=5, N=7	TDn, S=-13, N=7	NT, S=-11, N=7	TDn, S=-14, N=7	TDn, S=-11, N=7		NT, S=-1, N=7	NT, S=-3, N=6	NT, S=9, N=7	NT, S=0, N=7	TDn, S=-13, N=7	NT, S=-2, N=3	NT, S=-6, N=7	NT, S=0, N=3	NT, S=0, N=7	NT, S=-4, N=4	NT, S=-6, N=7	NT, S=1, N=4	NT, S=-5, N=7		NT, S=0, N=4
LOB	EPL11	NT, S=1, N=7	NT, S=-6, N=7		NT, S=1, N=7	NT, S=-5, N=7	NT, S=-5, N=7	NT, S=-7, N=7	NT, S=-6, N=7		NT, S=5, N=7	NT, S=-1, N=6	TUp, S=14, N=7	NT, S=0, N=7	NT, S=-5, N=7	NT, S=0, N=3	NT, S=-6, N=7	NT, S=0, N=3	NT, S=-6, N=7	NT, S=-2, N=4	NT, S=-6, N=7	NT, S=-1, N=4	NT, S=6, N=7		NT, S=0, N=4
LOB	EPL106	NT, S=78, N=30	TUp, S=319, N=30		TUp, S=133, N=30	TUp, S=267, N=30	TUp, S=115, N=30	TUp, S=256, N=30	TDn, S=-189, N=30		NT, S=73, N=30	NT, S=-69, N=27		NT, S=-15, N=30	TUp, S=262, N=30	TUp, S=18, N=8	NT, S=78, N=30	NT, S=-1, N=8	NT, S=0, N=30	NT, S=2, N=5	NT, S=87, N=30	NT, S=0, N=5	TUp, S=96, N=30		NT, S=-3, N=5
TAN	EPL30	NT, S=-5, N=6	NT, S=-8, N=6		NT, S=5, N=6	NT, S=-2, N=6	NT, S=-5, N=6	NT, S=-5, N=6	NT, S=-8, N=6		NT, S=-6, N=6	NT, S=-5, N=6		NT, S=0, N=6	NT, S=-2, N=6		NT, S=0, N=6		NT, S=0, N=6		TDn, S=-13, N=6		NT, S=0, N=6		
TAN	EPL31	NT, S=-3, N=6	NT, S=-2, N=6		NT, S=0, N=6	NT, S=-5, N=6	TDn, S=-11, N=6	TDn, S=-11, N=6	NT, S=-8, N=6		NT, S=-7, N=6	NT, S=0, N=6		NT, S=0, N=6	NT, S=-5, N=6		NT, S=-5, N=6		NT, S=0, N=6		TDn, S=-11, N=6		NT, S=0, N=6		
MAR	EPL26	NT, S=0, N=6	NT, S=5, N=6		NT, S=1, N=6	NT, S=-9, N=6	NT, S=-5, N=6	NT, S=-5, N=6	NT, S=-7, N=6		NT, S=-6, N=6	NT, S=-2, N=5		NT, S=1, N=6	NT, S=-5, N=6		NT, S=-5, N=6		NT, S=0, N=6	NT, S=2, N=4	NT, S=-7, N=6	NT, S=0, N=4	NT, S=0, N=6		NT, S=0, N=4
MAR	EPL27	NT, S=11, N=30	NT, S=1, N=24	TDn, S=-10, N=6	NT, S=14, N=30	NT, S=-79, N=30	NT, S=30, N=30	NT, S=29, N=30	TDn, S=-122, N=24	NT, S=0, N=6	NT, S=62, N=30	NT, S=-8, N=19		NT, S=-9, N=30	NT, S=-44, N=30	NT, S=-4, N=7	TDn, S=-47, N=30	NT, S=0, N=7	NT, S=0, N=30	TUp, S=56, N=15	NT, S=18, N=30	NT, S=-12, N=17	NT, S=5, N=30	TDn, S=-11, N=6	NT, S=-15, N=20
MAR	EPL73	NT, S=6, N=9	NT, S=0, N=9		NT, S=4, N=9	NT, S=-3, N=9	NT, S=1, N=9	NT, S=1, N=9	NT, S=-3, N=9		NT, S=2, N=9			NT, S=0, N=9	NT, S=-2, N=9	NT, S=-3, N=3	NT, S=0, N=9	NT, S=0, N=3	NT, S=0, N=9	NT, S=1, N=9	NT, S=0, N=9	NT, S=9, N=9	NT, S=0, N=9		NT, S=0, N=9
MAR	EPL71	NT, S=0, N=4	NT, S=2, N=4		NT, S=3, N=4	NT, S=4, N=4	NT, S=3, N=4	NT, S=3, N=4	NT, S=4, N=4		NT, S=2, N=4	NT, S=-3, N=4		NT, S=0, N=4	NT, S=4, N=4		NT, S=3, N=4		NT, S=0, N=4	NT, S=0, N=4	NT, S=0, N=4	NT, S=0, N=4	NT, S=-1, N=4		NT, S=0, N=4
MAR	EPL102	NT, S=-4, N=12	NT, S=3, N=12		NT, S=16, N=12	NT, S=-7, N=12	NT, S=9, N=12	NT, S=8, N=12	NT, S=8, N=12		NT, S=1, N=12	NT, S=1, N=3		NT, S=0, N=12	NT, S=-7, N=12	NT, S=3, N=4	NT, S=0, N=12	NT, S=0, N=4	NT, S=0, N=12	NT, S=-8, N=12	NT, S=0, N=12	NT, S=-2, N=12	NT, S=2, N=12		NT, S=0, N=12
MAR	EPL100	NT, S=-3, N=13	NT, S=6, N=13		NT, S=8, N=13	NT, S=2, N=13	NT, S=21, N=13	NT, S=2, N=13	NT, S=-18, N=13		NT, S=7, N=13	NT, S=10, N=10		NT, S=-10, N=13	NT, S=2, N=13		NT, S=-14, N=13		NT, S=0, N=13	NT, S=-6, N=8	NT, S=-26, N=13	NT, S=-4, N=8	TDn, S=-46, N=13		NT, S=0, N=8
MAR	EPL99	NT, S=-6, N=21	NT, S=-22, N=21		NT, S=26, N=21	NT, S=-22, N=21	NT, S=17, N=21	NT, S=-2, N=21	TDn, S=-96, N=21		NT, S=9, N=21	TDn, S=-37, N=16		TUp, S=59, N=21	NT, S=-23, N=21	NT, S=-1, N=6	NT, S=4, N=21	NT, S=-7, N=6	NT, S=0, N=21	NT, S=20, N=12	NT, S=0, N=21	TDn, S=-30, N=12	NT, S=-48, N=21		NT, S=19, N=12
MAR	EPL72	NT, S=22, N=22	NT, S=-9, N=22		NT, S=-13, N=22	NT, S=13, N=22	NT, S=-37, N=22	NT, S=-37, N=22	TUp, S=76, N=22		NT, S=28, N=22	NT, S=-3, N=8		NT, S=0, N=22	TUp, S=65, N=22	NT, S=1, N=6	NT, S=0, N=22	NT, S=0, N=6	NT, S=0, N=22	NT, S=16, N=21	NT, S=7, N=22	NT, S=-6, N=21	NT, S=-13, N=22		NT, S=0, N=21
LOB	EPL87	TDn, S=-146, N=24	TUp, S=149, N=24		NT, S=-61, N=24	TUp, S=104, N=24	TDn, S=-74, N=24	NT, S=36, N=24	NT, S=-60, N=23		TDn, S=-162, N=24	NT, S=-11, N=16		NT, S=-19, N=24	TUp, S=99, N=24	NT, S=10, N=8	TUp, S=76, N=24	NT, S=8, N=8	NT, S=0, N=24	NT, S=-11, N=14	NT, S=0, N=24	NT, S=-13, N=14	NT, S=-60, N=24		NT, S=-16, N=14
LOB	EPL82	TDn, S=-96, N=26	NT, S=17, N=26		NT, S=65, N=26	TDn, S=-101, N=26	NT, S=-8, N=26	NT, S=-18, N=26	TDn, S=-114, N=25		NT, S=-26, N=26	TUp, S=43, N=16		NT, S=-21, N=26	TDn, S=-85, N=26	NT, S=-5, N=10	NT, S=-25, N=26	NT, S=0, N=10	NT, S=0, N=26	TDn, S=-43, N=15	NT, S=0, N=26	NT, S=-26, N=15	TUp, S=130, N=26		NT, S=-12, N=15
LOB	EPL80	NT, S=12, N=24	TUp, S=81, N=24		TUp, S=78, N=24	TDn, S=-72, N=24	NT, S=40, N=24	NT, S=40, N=24	TDn, S=-125, N=23		NT, S=33, N=24	NT, S=9, N=14		NT, S=-19, N=24	TDn, S=-69, N=24	NT, S=-1, N=8	NT, S=-19, N=24	NT, S=0, N=8	NT, S=0, N=24	NT, S=11, N=15	NT, S=0, N=24	TUp, S=35, N=15	TDn, S=-93, N=24		NT, S=0, N=15
LOB	EPL89	NT, S=-39, N=25	TDn, S=-138, N=25		NT, S=-42, N=25	TDn, S=-98, N=25	NT, S=-54, N=25	TDn, S=-86, N=25	TDn, S=-123, N=24		NT, S=-22, N=25	NT, S=-11, N=15		NT, S=-20, N=25	TDn, S=-98, N=25	NT, S=-8, N=9	TDn, S=-68, N=25	NT, S=0, N=9	NT, S=0, N=25	NT, S=-3, N=14	NT, S=0, N=25	NT, S=-4, N=14	NT, S=-3, N=25		NT, S=0, N=14
TAN	EPL34	NT, S=-5, N=6	NT, S=4, N=6		NT, S=0, N=6	NT, S=-2, N=6	NT, S=-5, N=6	NT, S=-5, N=6	NT, S=-3, N=6		TDn, S=-10, N=6	NT, S=-4, N=6		NT, S=0, N=6	NT, S=-2, N=6		NT, S=-3, N=6		NT, S=0, N=6		TDn, S=-13, N=6		NT, S=-7, N=6		
TAN	EPL35	NT, S=-5, N=6	NT, S=4, N=6		NT, S=1, N=6	TDn, S=-9, N=6	NT, S=-9, N=6	NT, S=-9, N=6	NT, S=-3, N=6		NT, S=-9, N=6	NT, S=-7, N=6		NT, S=0, N=6	TDn, S=-9, N=6		NT, S=-5, N=6		NT, S=0, N=6		TDn, S=-12, N=6		NT, S=-7, N=6		
TAN	EPL33	NT, S=4, N=6	NT, S=5, N=6		NT, S=5, N=6	NT, S=-2, N=6	NT, S=8, N=6	TUp, S=10, N=6	NT, S=-5, N=6		NT, S=-3, N=6	NT, S=2, N=6		NT, S=0, N=6	NT, S=-2, N=6		NT, S=-5, N=6		NT, S=0, N=6		NT, S=-5, N=6		TUp, S=11, N=6		
TAN	EPL39	NT, S=3, N=8	NT, S=2, N=8		NT, S=-10, N=8	NT, S=9, N=8	TDn, S=-21, N=8	NT, S=-8, N=8	TDn, S=-13, N=8		NT, S=2, N=8	NT, S=-1, N=8		NT, S=0, N=8	NT, S=9, N=8		NT, S=-7, N=8		NT, S=0, N=8	NT, S=-9, N=7	NT, S=-9, N=8	NT, S=-10, N=7	NT, S=-3, N=8		NT, S=0, N=7
TAN	EPL38	NT, S=13, N=9	TUp, S=17, N=9		NT, S=-7, N=9	NT, S=-8, N=9	TUp, S=18, N=9	TUp, S=18, N=9	NT, S=-12, N=9		NT, S=7, N=9	NT, S=-4, N=8		NT, S=0, N=9	NT, S=-8, N=9		NT, S=0, N=9		NT, S=0, N=9	NT, S=-2, N=5	TDn, S=-21, N=9	NT, S=4, N=5	TUp, S=24, N=9		NT, S=0, N=5
LOB	EPL55	NT, S=0, N=3	NT, S=1, N=3		NT, S=2, N=3	NT, S=1, N=3	NT, S=-1, N=3	NT, S=1, N=3	NT, S=-3, N=3		NT, S=1, N=3	NT, S=0, N=3		NT, S=0, N=3	NT, S=1, N=3		NT, S=3, N=3		NT, S=0, N=3	NT, S=-1, N=3	NT, S=0, N=3	NT, S=3, N=3	NT, S=3, N=3		NT, S=0, N=3
TAN	EPL68	TDn, S=-74, N=24	TDn, S=-60, N=24	NT, S=0, N=5	NT, S=7, N=24	TDn, S=-105, N=24	NT, S=-15, N=24	TDn, S=-85, N=24	TDn, S=-55, N=24		NT, S=-51, N=24	NT, S=-11, N=14		NT, S=0, N=24	TDn, S=-107, N=24	NT, S=10, N=8	NT, S=15, N=24	NT, S=0, N=8	NT, S=0, N=24	NT, S=-53, N=23	NT, S=-13, N=24	NT, S=-26, N=23	NT, S=0, N=24		NT, S=0, N=23
TAN	EPL69	NT, S=44, N=25	TUp, S=122, N=25	NT, S=4, N=5	NT, S=58, N=25	NT, S=-6, N=25	TDn, S=-73, N=25	NT, S=-40, N=25	TDn, S=-104, N=25		NT, S=-18, N=25	NT, S=16, N=14		NT, S=0, N=25	NT, S=-3, N=25	NT, S=-5, N=9	NT, S=-24, N=25	NT, S=0, N=9	NT, S=0, N=25	NT, S=32, N=24	TDn, S=-158, N=25	NT, S=40, N=24	NT, S=0, N=25		NT, S=0, N=23
TAN	EPL105	NT, S=46, N=21	TUp, S=97, N=21	NT, S=1, N=4	NT, S=18, N=21	NT, S=44, N=21	NT, S=28, N=21	NT, S=51, N=21	TDn, S=-95, N=21		NT, S=-7, N=21	NT, S=7, N=10		NT, S=0, N=21	NT, S=45, N=21	NT, S=-2, N=9	NT, S=0, N=21	NT, S=0, N=9	NT, S=0, N=21	NT, S=5, N=18	NT, S=7, N=21	NT, S=10, N=18	NT, S=0, N=21		NT, S=15, N=18
TAN	EPL70	NT, S=1, N=26	NT, S=34, N=26	NT, S=-2, N=5	NT, S=-2, N=26	TUp, S=90, N=26	NT, S=-31, N=26	TUp, S=83, N=26	NT, S=-31, N=26		NT, S=-1, N=26	NT, S=11, N=14		NT, S=0, N=26	TUp, S=81, N=26	TUp, S=21, N=9	NT, S=0, N=26	NT, S=0, N=9	NT, S=0, N=26	NT, S=-8, N=25	NT, S=0, N=26	NT, S=-5, N=25	NT, S=0, N=26		NT, S=0, N=25
TAN	EPL103	NT, S=-34, N=25	TUp, S=55, N=25	NT, S=0, N=5	NT, S=25, N=25	NT, S=11, N=25	NT, S=45, N=25	TUp, S=75, N=25	NT, S=-31, N=25		NT, S=28, N=25	NT, S=0, N=13		NT, S=0, N=25	NT, S=20, N=25	NT, S=11, N=9	NT, S=2, N=25	NT, S=0, N=9	NT, S=0, N=25	NT, S=-5, N=20	NT, S=0, N=25	NT, S=0, N=20	NT, S=0, N=25		NT, S=0, N=20
TAN	EPL104	TDn, S=-93, N=26	NT, S=37, N=26	NT, S=-2, N=5	NT, S=24, N=26	NT, S=-67, N=26	NT, S=-2, N=26	NT, S=-2, N=26	TDn, S=-136, N=26		NT, S=-5, N=26	NT, S=-11, N=15		NT, S=0, N=26	NT, S=-67, N=26	NT, S=8, N=9	NT, S=-25, N=26	NT, S=0, N=9	NT, S=0, N=26	TDn, S=-80, N=21	NT, S=-50, N=26	TDn, S=-49, N=21	NT, S=0, N=26		NT, S=0, N=20
LOB	EPL24	NT, S=24, N=22	TDn, S=-75, N=22		NT, S=32, N=22	TDn, S=-100, N=22	NT, S=55, N=22	NT, S=-9, N=22	TDn, S=-102, N=22		NT, S=-24, N=22	TUp, S=65, N=16		NT, S=0, N=22	TDn, S=-97, N=22	NT, S=-3, N=7	TDn, S=-64, N=22	TUp, S=14, N=7	NT, S=0, N=22	NT, S=9, N=7	NT, S=25, N=22	NT, S=10, N=7	NT, S=-17, N=22		NT, S=4, N=7
TAN	EPL50	NT, S=0, N=6	NT, S=0, N=6	NT, S=0, N=4	NT, S=-3, N=5	NT, S=-7, N=5	TDn, S=-7, N=5	TDn, S=-7, N=5	NT, S=0, N=5		NT, S=-1, N=5	NT, S=0, N=5	NT, S=5, N=6	NT, S=0, N=6	NT, S=-7, N=5		NT, S=-4, N=5		NT, S=0, N=6	NT, S=5, N=6	NT, S=0, N=6	NT, S=0, N=6	NT, S=0, N=6		NT, S=0, N=6
LOB	EPL110	NT, S=1, N=4	NT, S=5, N=4		NT, S=-3, N=4	NT, S=2, N=4	NT, S=-4, N=4	NT, S=-4, N=4	NT, S=0, N=4		NT, S=1, N=4	NT, S=-3, N=4		NT, S=0, N=4	NT, S=2, N=4		NT, S=0, N=4		NT, S=0, N=4		NT, S=-1, N=4		NT, S=1, N=4		
LOB	EPL113	NT, S=-3, N=6	NT, S=9, N=6		TUp, S=11, N=6	NT, S=5, N=6	NT, S=2, N=6	NT, S=2, N=6	TDn, S=-9, N=6		NT, S=-5, N=6	NT, S=1, N=5		NT, S=0, N=6	NT, S=6, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=-8, N=6		NT, S=-1, N=6		
LOB	EPL115	NT, S=-9, N=6	NT, S=-4, N=6		TUp, S=9, N=6	TDn, S=-9, N=6	TUp, S=9, N=6	TUp, S=9, N=6	NT, S=-7, N=6		NT, S=3, N=6	NT, S=1, N=5		NT, S=0, N=6	TDn, S=-9, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=-1, N=6		
LOB	EPL128	NT, S=2, N=9	NT, S=1, N=9		TUp, S=19, N=9	TDn, S=-18, N=9	NT, S=1, N=9	NT, S=-4, N=9	TDn, S=-17, N=9		NT, S=1, N=9	NT, S=3, N=8		NT, S=0, N=9	TDn, S=-18, N=9		NT, S=4, N=9		NT, S=0, N=9		TDn, S=-23, N=9		NT, S=-1, N=9		
LOB	PSE_GWS	NT, S=19, N=23	TUp, S=160, N=23		TUp, S=63, N=23	NT, S=-20, N=23	TUp, S=60, N=23	NT, S=50, N=23	TDn, S=-137, N=23		NT, S=29, N=23	NT, S=-6, N=21		NT, S=0, N=23	NT, S=-20, N=23	NT, S=6, N=8	NT, S=-10, N=23	NT, S=0, N=8	NT, S=22, N=23		NT, S=0, N=23		NT, S=-22, N=23		
LOB	EPL116	NT, S=-3, N=6	NT, S=-1, N=6		TUp, S=10, N=6	NT, S=-8, N=6	NT, S=2, N=6	NT, S=2, N=6	NT, S=-6, N=6		NT, S=7, N=6	TUp, S=8, N=5		NT, S=0, N=6	NT, S=-6, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=-1, N=6		
LOB	EPL114	NT, S=1, N=6	NT, S=-6, N=6		NT, S=5, N=6	NT, S=-4, N=6	NT, S=-1, N=6	NT, S=-1, N=6	NT, S=-7, N=6		NT, S=7, N=6	NT, S=-5, N=5		NT, S=0, N=6	NT, S=-3, N=6		NT, S=-3, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=-9, N=6		
LOB	EPL117	NT, S=1, N=6	NT, S=-5, N=6		TUp, S=13, N=6	NT, S=-7, N=6	NT, S=7, N=6	NT, S=7, N=6	TDn, S=-10, N=6		NT, S=5, N=6	NT, S=-2, N=5		NT, S=0, N=6	NT, S=-3, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6		TUp, S=12, N=6		
MAR	EPL101	NT, S=11, N=9	NT, S=-14, N=9		NT, S=10, N=9	TDn, S=-22, N=9	NT, S=-4, N=9	NT, S=-16, N=9	NT, S=10, N=9		NT, S=6, N=9	NT, S=-3, N=7		NT, S=1, N=9	TDn, S=-20, N=9		NT, S=-16, N=9		NT, S=0, N=9	NT, S=4, N=5	NT, S=-12, N=9	NT, S=-4, N=5	TDn, S=-20, N=9		NT, S=-4, N=5
TAN	CH2900	NT, S=-17, N=10	NT, S=18, N=10		NT, S=1, N=10	NT, S=5, N=10	NT, S=-9, N=10	NT, S=11, N=10	NT, S=6, N=10		NT, S=-3, N=10	NT, S=-7, N=9		NT, S=0, N=10	NT, S=5, N=10	NT, S=0, N=5	NT, S=-1, N=10	NT, S=0, N=5	NT, S=0, N=10	NT, S=-6, N=8	NT, S=-15, N=10	NT, S=6, N=8	TUp, S=22, N=10		NT, S=3, N=8
LOB	PSE_L1	TUp, S=69, N=25	TUp, S=222, N=25		TDn, S=-82, N=25	TUp, S=94, N=25	TUp, S=73, N=25	TUp, S=115, N=25	NT, S=7, N=25		NT, S=45, N=25	NT, S=-1, N=22		TDn, S=-140, N=25	TUp, S=101, N=25	NT, S=12, N=8	TDn, S=-194, N=25	NT, S=-13, N=8	NT, S=0, N=25		NT, S=0, N=25		TDn, S=-100, N=25		
TAN	EPL40	NT, S=0, N=6	NT, S=1, N=6		NT, S=6, N=6	NT, S=-8, N=6	NT, S=-8, N=6	NT, S=-8, N=6	NT, S=-5, N=5		NT, S=-5, N=6	NT, S=-2, N=5		NT, S=0, N=6	NT, S=-6, N=6		NT, S=0, N=6		NT, S=0, N=6	NT, S=-5, N=6	NT, S=-6, N=6	NT, S=-3, N=6	NT, S=-1, N=6		NT, S=0, N=6
ROC	EPL127	TDn, S=-41, N=12	NT, S=20, N=12		NT, S=-11, N=12	TDn, S=-30, N=12	NT, S=-20, N=12	NT, S=-16, N=12	NT, S=-8, N=12		TDn, S=-30, N=12	NT, S=1, N=4		NT, S=0, N=12	TDn, S=-30, N=12	NT, S=2, N=3	NT, S=0, N=12	NT, S=0, N=3	NT, S=0, N=12	NT, S=-9, N=6	NT, S=0, N=12	NT, S=-6, N=6	NT, S=3, N=12		NT, S=0, N=6
ROC	EPL37	NT, S=13, N=14	TDn, S=-45, N=12		NT, S=5, N=14	TDn, S=-31, N=14	TDn, S=-36, N=14	TDn, S=-35, N=14	TDn, S=-19, N=12		NT, S=-8, N=14	TDn, S=-9, N=6		NT, S=0, N=14	NT, S=-13, N=14	NT, S=0, N=3	NT, S=-13, N=14	NT, S=0, N=3	NT, S=0, N=14	NT, S=1, N=3	NT, S=21, N=14	NT, S=-4, N=4	NT, S=-17, N=14		NT, S=0, N=4
ROC	EPL126	TDn, S=-44, N=12	NT, S=-9, N=12		NT, S=8, N=12	NT, S=-11, N=12	TDn, S=-25, N=12	TDn, S=-25, N=12	NT, S=20, N=12		NT, S=-17, N=12	NT, S=1, N=4		NT, S=0, N=12	NT, S=-11, N=12	NT, S=-3, N=3	NT, S=0, N=12	NT, S=0, N=3	NT, S=0, N=12	NT, S=5, N=6	NT, S=-19, N=12	NT, S=-3, N=6	TUp, S=45, N=12		NT, S=0, N=6
ROC	EPL36	TUp, S=26, N=12	TDn, S=-42, N=12		NT, S=20, N=12	NT, S=19, N=12	NT, S=6, N=12	NT, S=22, N=12	TDn, S=-21, N=12		NT, S=-11, N=12	NT, S=-9, N=6		NT, S=0, N=12	NT, S=22, N=12	NT, S=0, N=3	NT, S=0, N=12	NT, S=0, N=3	NT, S=0, N=12	NT, S=-1, N=3	NT, S=-4, N=12	NT, S=-1, N=3	TDn, S=-28, N=12		NT, S=0, N=3
ROC	EPL125	NT, S=1, N=12	NT, S=-4, N=12		NT, S=9, N=12	NT, S=9, N=12	NT, S=-12, N=12	NT, S=-18, N=12	TUp, S=31, N=12		NT, S=-6, N=12	NT, S=-3, N=4		NT, S=0, N=12	NT, S=11, N=12	NT, S=1, N=3	NT, S=-9, N=12	NT, S=0, N=3	NT, S=0, N=12	NT, S=5, N=6	NT, S=0, N=12	NT, S=6, N=6	TUp, S=25, N=12		NT, S=0, N=6
ROC	EPL124	NT, S=8, N=12	TDn, S=-24, N=12		NT, S=12, N=12	NT, S=-12, N=12	NT, S=-7, N=12	NT, S=-10, N=12	TDn, S=-21, N=12		NT, S=-17, N=12	NT, S=5, N=5		NT, S=0, N=12	NT, S=-12, N=12	NT, S=-3, N=3	NT, S=0, N=12	NT, S=0, N=3	NT, S=0, N=12	TUp, S=11, N=6	TUp, S=28, N=12	NT, S=7, N=6	NT, S=0, N=12		NT, S=0, N=6
ROC	EPL123	NT, S=20, N=12	TUp, S=34, N=12		TUp, S=26, N=12	TDn, S=-30, N=12	NT, S=-6, N=12	NT, S=-8, N=12	TDn, S=-20, N=12		NT, S=2, N=12	NT, S=1, N=4		NT, S=0, N=12	TDn, S=-30, N=12	NT, S=-3, N=3	NT, S=5, N=12	NT, S=0, N=3	NT, S=0, N=12	NT, S=-5, N=6	TDn, S=-19, N=12	NT, S=-3, N=6	NT, S=13, N=12		NT, S=0, N=6
TAN	EPL46	NT, S=-5, N=6	NT, S=5, N=6		TUp, S=10, N=6	NT, S=6, N=6	NT, S=3, N=6	NT, S=3, N=6	NT, S=-8, N=6		NT, S=-7, N=6	NT, S=-6, N=5		NT, S=0, N=6	NT, S=6, N=6		NT, S=0, N=6		NT, S=0, N=6	NT, S=-3, N=3	TDn, S=-10, N=6	NT, S=0, N=3	TUp, S=9, N=6		
TAN	EPL32	NT, S=-5, N=6	NT, S=5, N=6		NT, S=0, N=6	NT, S=-2, N=6	NT, S=-7, N=6	NT, S=-7, N=6	NT, S=-6, N=6		NT, S=-8, N=6	NT, S=-7, N=5		NT, S=0, N=6	NT, S=-2, N=6		NT, S=0, N=6		NT, S=0, N=6	NT, S=-4, N=4	TDn, S=-10, N=6	NT, S=-3, N=4	TUp, S=9, N=6		NT, S=0, N=3
TAN	EPL51	NT, S=-2, N=6	NT, S=7, N=6		NT, S=5, N=6	NT, S=1, N=6	TUp, S=11, N=6	TUp, S=11, N=6	NT, S=-8, N=6		NT, S=-1, N=6	NT, S=-5, N=5	NT, S=5, N=6	NT, S=0, N=6	NT, S=1, N=6		NT, S=0, N=6		NT, S=0, N=6	TDn, S=-6, N=4	TDn, S=-11, N=6	NT, S=0, N=4	TUp, S=9, N=6		NT, S=0, N=3
TAN	EPL29	NT, S=-5, N=6	NT, S=5, N=6		NT, S=8, N=6	NT, S=-1, N=6	NT, S=5, N=6	NT, S=5, N=6	NT, S=-8, N=6		TDn, S=-12, N=6	NT, S=-5, N=5		NT, S=0, N=6	NT, S=-1, N=6		NT, S=0, N=6		NT, S=0, N=6	NT, S=0, N=4	NT, S=-8, N=6	NT, S=0, N=4	NT, S=6, N=6		NT, S=0, N=3
TAN	EPL28	NT, S=6, N=6	NT, S=5, N=6		NT, S=5, N=6	NT, S=-3, N=6	NT, S=7, N=6	NT, S=7, N=6	NT, S=-6, N=6		NT, S=-4, N=6	NT, S=-3, N=5	TUp, S=10, N=6	NT, S=0, N=6	NT, S=-1, N=6		NT, S=0, N=6		NT, S=0, N=6	NT, S=-2, N=4	NT, S=-6, N=6	NT, S=3, N=4	NT, S=0, N=6		NT, S=0, N=3
LOB	EPL2	NT, S=-1, N=3	NT, S=1, N=3		NT, S=-3, N=3	NT, S=0, N=3	NT, S=-3, N=3	NT, S=-3, N=3	NT, S=-1, N=3		NT, S=-3, N=3				NT, S=0, N=3		NT, S=0, N=3				NT, S=0, N=3		NT, S=1, N=3		
LOB	EPL122	NT, S=-2, N=13	NT, S=-24, N=13		NT, S=-6, N=13	TDn, S=-30, N=13	NT, S=-26, N=13	TDn, S=-32, N=13	NT, S=10, N=13		NT, S=-15, N=13	NT, S=-3, N=7		NT, S=0, N=13	TDn, S=-29, N=13	TDn, S=-6, N=4	NT, S=7, N=13	NT, S=0, N=4	NT, S=0, N=13		NT, S=22, N=13		NT, S=18, N=13		

Site	Location Code	Chromium (hexavalent) (Filtered) µg/L	Chromium (III+VI) µg/L	Chromium (III+VI) (Filtered) µg/L	Chromium (Trivalent) µg/L	Chromium (Trivalent) (Filtered) µg/L	Copper µg/L	Copper (Filtered) µg/L	Iron µg/L	Iron (Filtered) µg/L	Lead µg/L	Lead (Filtered) µg/L	Magnesium µg/L	Manganese µg/L	Manganese (Filtered) µg/L	Nickel µg/L	Nickel (Filtered) µg/L	Silver µg/L	Silver (Filtered) µg/L	Zinc µg/L	Zinc (Filtered) µg/L	E. Coli cfu/100 ml	Enterococci org/100ml	Thermotolerant Coliforms CFU/100mL
LOB	EPL41	NT, S=-9, N=23	NT, S=-20, N=17	NT, S=-9, N=23	NT, S=-4, N=23		NT, S=-2, N=17	NT, S=-4, N=23	NT, S=-5, N=17	NT, S=-4, N=23	NT, S=-16, N=17	NT, S=0, N=23		TDn, S=-48, N=17	TDn, S=-77, N=23	NT, S=-28, N=17	NT, S=-4, N=23	NT, S=-1, N=16	NT, S=-4, N=23	TDn, S=-38, N=17	TDn, S=-59, N=23	TUp, S=57, N=21	NT, S=-8, N=10	TUp, S=55, N=21
LOB	EPL91	NT, S=0, N=26	NT, S=-32, N=17	NT, S=9, N=26	TDn, S=-85, N=26		NT, S=-11, N=17	NT, S=-13, N=26	NT, S=-24, N=17	TUp, S=176, N=26	TDn, S=-74, N=17	NT, S=0, N=26		NT, S=39, N=17	TUp, S=89, N=26	NT, S=10, N=17	NT, S=35, N=26	NT, S=18, N=17	NT, S=0, N=26	NT, S=-40, N=17	TDn, S=-94, N=26			
LOB	EPL96	NT, S=3, N=10	NT, S=-2, N=9	NT, S=-22, N=11	NT, S=-18, N=11		NT, S=-4, N=9	TDn, S=-23, N=11	NT, S=-4, N=9	NT, S=7, N=11	NT, S=-2, N=9	NT, S=10, N=11		NT, S=-2, N=9	TUp, S=31, N=11	NT, S=-2, N=9	TUp, S=28, N=11	NT, S=-2, N=9	NT, S=0, N=11	NT, S=-4, N=9	TUp, S=23, N=11			
LOB	EPL52	NT, S=-19, N=19	NT, S=-18, N=18	TDn, S=-54, N=19	NT, S=18, N=19		NT, S=16, N=18	NT, S=21, N=19	TUp, S=59, N=18	NT, S=14, N=19	NT, S=3, N=18	NT, S=8, N=19		NT, S=-23, N=18	TDn, S=-58, N=19	NT, S=8, N=18	NT, S=-16, N=19	NT, S=0, N=18	NT, S=0, N=19	NT, S=-23, N=18	NT, S=-32, N=19			
LOB	EPL95	NT, S=0, N=25	NT, S=-2, N=17	TUp, S=88, N=26	TDn, S=-145, N=26		NT, S=-10, N=17	TUp, S=79, N=26	NT, S=-6, N=17	NT, S=-15, N=26	NT, S=10, N=17	NT, S=37, N=26		NT, S=3, N=17	NT, S=-51, N=26	NT, S=-17, N=17	NT, S=67, N=26	NT, S=37, N=17	NT, S=0, N=26	NT, S=34, N=17	NT, S=59, N=26			
LOB	EPL58	NT, S=0, N=23	TDn, S=-117, N=24	TDn, S=-108, N=24	TDn, S=-111, N=24		NT, S=-19, N=24	TUp, S=150, N=24	TDn, S=-158, N=24	NT, S=9, N=24	TDn, S=-165, N=24	NT, S=-3, N=24		TDn, S=-124, N=24	TDn, S=-88, N=24	TDn, S=-115, N=24	TUp, S=95, N=24	TDn, S=-120, N=24	NT, S=0, N=24	TDn, S=-127, N=24	NT, S=26, N=24			
LOB	EPL56	NT, S=0, N=26	NT, S=-60, N=25	NT, S=11, N=26	NT, S=-22, N=26		TDn, S=-141, N=25	TDn, S=-164, N=26	NT, S=-54, N=25	NT, S=0, N=26	NT, S=-25, N=25	NT, S=0, N=26		NT, S=23, N=25	NT, S=26, N=26	NT, S=-22, N=25	NT, S=34, N=26	NT, S=30, N=25	NT, S=0, N=26	NT, S=4, N=25	NT, S=-38, N=26			
LOB	EPL57	NT, S=-21, N=24	NT, S=-37, N=23	NT, S=0, N=24	NT, S=-15, N=24		TDn, S=-133, N=23	TDn, S=-132, N=24	NT, S=-45, N=23	NT, S=0, N=24	TDn, S=-63, N=23	NT, S=0, N=24		NT, S=36, N=23	TUp, S=161, N=24	NT, S=-28, N=23	NT, S=35, N=24	NT, S=27, N=23	NT, S=0, N=24	NT, S=-30, N=23	NT, S=-3, N=24			
LOB	EPL92	NT, S=0, N=26	TDn, S=-76, N=17	NT, S=11, N=26	TDn, S=-213, N=26		TDn, S=-78, N=17	NT, S=0, N=26	TDn, S=-82, N=17	NT, S=1, N=26	TDn, S=-98, N=17	NT, S=23, N=26		TDn, S=-80, N=17	NT, S=41, N=26	TDn, S=-80, N=17	TDn, S=-76, N=26	NT, S=-40, N=17	NT, S=0, N=26	TDn, S=-74, N=17	TDn, S=-85, N=26			
LOB	EPL93	NT, S=0, N=25	NT, S=36, N=17	NT, S=0, N=26	TDn, S=-92, N=26		TUp, S=57, N=17	NT, S=0, N=26	NT, S=34, N=17	NT, S=1, N=26	NT, S=39, N=17	NT, S=0, N=26		NT, S=35, N=17	NT, S=-37, N=26	TUp, S=42, N=17	TUp, S=74, N=26	TUp, S=49, N=17	NT, S=0, N=26	NT, S=36, N=17	NT, S=11, N=26			
LOB	EPL94	NT, S=-19, N=26	NT, S=-40, N=17	NT, S=0, N=26	TDn, S=-195, N=26		NT, S=-21, N=17	NT, S=0, N=26	NT, S=-6, N=17	NT, S=30, N=26	NT, S=-3, N=17	NT, S=0, N=26		TDn, S=-54, N=17	TDn, S=-125, N=26	NT, S=-20, N=17	TDn, S=-129, N=26	NT, S=26, N=17	NT, S=0, N=26	NT, S=-39, N=17	TDn, S=-148, N=26			
LOB	EPL97	NT, S=0, N=25	TDn, S=-50, N=17	NT, S=23, N=26	TDn, S=-148, N=26		NT, S=-39, N=17	NT, S=-7, N=26	TDn, S=-42, N=17	NT, S=11, N=26	NT, S=-28, N=17	NT, S=11, N=26		TDn, S=-58, N=17	TDn, S=-130, N=26	TDn, S=-50, N=17	TDn, S=-177, N=26	NT, S=-3, N=17	NT, S=-7, N=26	NT, S=-30, N=17	TDn, S=-103, N=26			
LOB	EPL90	NT, S=0, N=23	NT, S=-18, N=17	NT, S=37, N=23	TDn, S=-125, N=23		NT, S=-10, N=17	TUp, S=50, N=23	NT, S=-22, N=17	NT, S=-27, N=23	NT, S=-28, N=17	NT, S=23, N=23		NT, S=-26, N=17	NT, S=31, N=23	NT, S=-14, N=17	NT, S=-15, N=23	NT, S=-6, N=17	NT, S=0, N=23	NT, S=3, N=17	NT, S=-15, N=23			
LOB	EPL5	NT, S=0, N=6		NT, S=-4, N=7	NT, S=0, N=7			NT, S=0, N=7		NT, S=-2, N=7		NT, S=0, N=7			NT, S=1, N=7		NT, S=0, N=7		NT, S=0, N=7		NT, S=0, N=7			
LOB	EPL12	NT, S=0, N=5		NT, S=-1, N=6	NT, S=0, N=6			NT, S=0, N=6		NT, S=-6, N=6		NT, S=0, N=6			TDn, S=-12, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			
LOB	EPL84	TDn, S=-96, N=27	TDn, S=-45, N=15	TDn, S=-116, N=27	TDn, S=-174, N=27		NT, S=1, N=15	TUp, S=246, N=27	NT, S=-1, N=15	NT, S=42, N=27	NT, S=-1, N=15	TUp, S=162, N=27		NT, S=-5, N=15	TUp, S=153, N=27	NT, S=-3, N=15	TUp, S=172, N=27	NT, S=14, N=15	NT, S=0, N=27	NT, S=3, N=15	TUp, S=153, N=27			
LOB	EPL86	NT, S=24, N=19	NT, S=13, N=9	NT, S=-1, N=19	TDn, S=-68, N=19		NT, S=-8, N=9	NT, S=20, N=19	NT, S=-2, N=9	TDn, S=-59, N=19	NT, S=-4, N=9	TUp, S=56, N=19		NT, S=-6, N=9	NT, S=-36, N=19	NT, S=-3, N=9	NT, S=31, N=19	NT, S=7, N=9	NT, S=0, N=19	NT, S=-1, N=9	NT, S=0, N=19			
LOB	EPL81	NT, S=29, N=23	NT, S=13, N=15	NT, S=0, N=23	TDn, S=-109, N=23		NT, S=14, N=15	NT, S=26, N=23	NT, S=6, N=15	TUp, S=65, N=23	NT, S=8, N=15	NT, S=0, N=23		NT, S=13, N=15	TUp, S=140, N=23	NT, S=11, N=15	TUp, S=98, N=23	NT, S=22, N=15	NT, S=0, N=23	NT, S=5, N=15	TUp, S=154, N=23			
LOB	EPL6	NT, S=0, N=5		NT, S=0, N=6	NT, S=0, N=6			NT, S=-1, N=6		NT, S=-2, N=6		NT, S=0, N=6			NT, S=-8, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			
LOB	EPL88	NT, S=-41, N=25	NT, S=-4, N=15	NT, S=5, N=25	NT, S=-9, N=25		NT, S=-25, N=15	NT, S=0, N=25	NT, S=20, N=15	TUp, S=77, N=25	NT, S=-1, N=15	NT, S=0, N=25		TDn, S=-68, N=15	NT, S=31, N=25	TDn, S=-49, N=15	NT, S=-27, N=25	NT, S=8, N=15	NT, S=0, N=25	NT, S=6, N=15	TUp, S=70, N=25			
LOB	EPL14	NT, S=0, N=6	NT, S=-3, N=4	NT, S=0, N=6	NT, S=0, N=6		NT, S=-3, N=4	NT, S=0, N=6	TDn, S=-6, N=4	NT, S=-9, N=6	NT, S=-3, N=4	NT, S=0, N=6		NT, S=-4, N=4	TDn, S=-11, N=6	NT, S=-1, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6			
LOB	EPL83	NT, S=-20, N=23	NT, S=-19, N=12	NT, S=-34, N=23	TDn, S=-142, N=22		NT, S=-8, N=12	NT, S=-24, N=23	NT, S=-8, N=12	TUp, S=88, N=23	NT, S=-8, N=12	NT, S=6, N=23		NT, S=-8, N=12	TUp, S=66, N=22	NT, S=-2, N=12	TUp, S=146, N=23	NT, S=-6, N=12	NT, S=0, N=23	NT, S=-10, N=12	TUp, S=104, N=23			
LOB	EPL85	NT, S=-4, N=17	NT, S=-4, N=8	NT, S=-5, N=17	TDn, S=-77, N=17		NT, S=2, N=8	TUp, S=73, N=17	NT, S=-5, N=8	NT, S=-37, N=17	NT, S=-6, N=8	NT, S=30, N=17		NT, S=-8, N=8	NT, S=-32, N=17	NT, S=-3, N=8	TUp, S=92, N=17	NT, S=11, N=8	NT, S=0, N=17	NT, S=3, N=8	NT, S=18, N=17			
LOB	EPL15	NT, S=0, N=6		NT, S=-1, N=6	NT, S=0, N=6			NT, S=-5, N=6		NT, S=-5, N=6		NT, S=0, N=6			TDn, S=-12, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			
LOB	EPL8	NT, S=0, N=6	NT, S=-2, N=4	NT, S=-5, N=6	NT, S=0, N=6		NT, S=0, N=4	NT, S=0, N=6	NT, S=-2, N=4	NT, S=-8, N=6	NT, S=-3, N=4	NT, S=0, N=6		NT, S=-2, N=4	TDn, S=-11, N=6	NT, S=1, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=-3, N=4	NT, S=0, N=6			
LOB	EPL9	NT, S=0, N=5		NT, S=-1, N=6	NT, S=0, N=6			NT, S=-5, N=6		NT, S=-6, N=6		NT, S=0, N=6			NT, S=-7, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			
LOB	EPL16	NT, S=0, N=7	NT, S=-5, N=5	NT, S=-6, N=7	NT, S=-6, N=7		NT, S=-3, N=4	NT, S=-6, N=7	TDn, S=-6, N=4	NT, S=-6, N=7	NT, S=-3, N=4	NT, S=0, N=7		NT, S=0, N=4	NT, S=-11, N=7	NT, S=-3, N=4	NT, S=0, N=7	NT, S=0, N=4	NT, S=0, N=7	NT, S=-3, N=4	NT, S=0, N=7			
LOB	EPL107	NT, S=0, N=6	NT, S=-3, N=4	NT, S=0, N=6	NT, S=0, N=6		NT, S=0, N=4	NT, S=0, N=6	NT, S=-4, N=4	TDn, S=-13, N=6	NT, S=-3, N=4	NT, S=0, N=6		NT, S=-2, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6			
LOB	EPL108	NT, S=0, N=6	NT, S=-3, N=4	NT, S=0, N=6	NT, S=-5, N=6		NT, S=0, N=4	NT, S=0, N=6	NT, S=-2, N=4	TDn, S=-12, N=6	NT, S=-3, N=4	NT, S=0, N=6		NT, S=-2, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=-3, N=4	NT, S=0, N=6			
LOB	EPL109	NT, S=0, N=6	NT, S=-3, N=4	NT, S=0, N=6	NT, S=0, N=6		NT, S=0, N=4	NT, S=0, N=6	NT, S=-2, N=4	TDn, S=-12, N=6	NT, S=0, N=4	NT, S=0, N=6		NT, S=-2, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=-3, N=4	NT, S=-5, N=6			
LOB	EPL10	NT, S=0, N=7	NT, S=-3, N=4	NT, S=0, N=7	NT, S=-6, N=7		NT, S=-3, N=4	NT, S=0, N=7	NT, S=-4, N=4	TDn, S=-21, N=7	NT, S=-3, N=4	NT, S=0, N=7		TUp, S=6, N=4	NT, S=-9, N=7	NT, S=-3, N=4	NT, S=0, N=7	NT, S=0, N=4	NT, S=0, N=7	NT, S=0, N=4	NT, S=0, N=7	NT, S=-9, N=7	NT, S=-2, N=3	TDn, S=-13, N=7
LOB	EPL11	NT, S=0, N=7	NT, S=-3, N=4	NT, S=0, N=7	NT, S=0, N=7		NT, S=-3, N=4	NT, S=0, N=7	NT, S=-2, N=4	TDn, S=-17, N=7	NT, S=-3, N=4	NT, S=0, N=7		NT, S=-2, N=4	NT, S=-6, N=7	NT, S=0, N=4	NT, S=0, N=7	NT, S=0, N=4	NT, S=0, N=7	NT, S=0, N=4	NT, S=0, N=7	NT, S=-11, N=7	NT, S=-2, N=3	TDn, S=-15, N=7
LOB	EPL106	NT, S=-60, N=30	NT, S=-6, N=5	TDn, S=-195, N=30	NT, S=32, N=30		NT, S=-2, N=5	TUp, S=52, N=30	NT, S=2, N=5	NT, S=0, N=30	NT, S=-2, N=5	NT, S=0, N=30		TDn, S=-8, N=5	TDn, S=-192, N=30	NT, S=-2, N=5	NT, S=-21, N=30	NT, S=0, N=5	NT, S=0, N=30	NT, S=-3, N=5	TDn, S=-43, N=30			
TAN	EPL30	NT, S=0, N=6		NT, S=0, N=6	NT, S=-5, N=6			NT, S=0, N=6		TDn, S=-11, N=6		NT, S=0, N=6			TDn, S=-10, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=1, N=6			
TAN	EPL31	NT, S=0, N=6		NT, S=0, N=6	NT, S=0, N=6			NT, S=0, N=6		TDn, S=-11, N=6		NT, S=0, N=6			TDn, S=-12, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			
MAR	EPL26	NT, S=0, N=6	NT, S=3, N=4	TUp, S=9, N=6	NT, S=0, N=6		NT, S=3, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=-7, N=6	NT, S=0, N=4	NT, S=0, N=6		NT, S=2, N=4	NT, S=-3, N=6	NT, S=-3, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6			
MAR	EPL27	NT, S=-18, N=30	NT, S=27, N=21	TUp, S=130, N=30	NT, S=0, N=29	NT, S=0, N=6	NT, S=0, N=17	NT, S=13, N=30	TUp, S=39, N=15	NT, S=11, N=30	NT, S=0, N=17	NT, S=5, N=30	NT, S=-8, N=6	TUp, S=55, N=15	NT, S=35, N=30	NT, S=0, N=17	NT, S=0, N=30	NT, S=0, N=15	NT, S=13, N=30	NT, S=0, N=17	TUp, S=43, N=30			
MAR	EPL73	NT, S=0, N=9	NT, S=0, N=9	NT, S=-3, N=9	NT, S=9, N=9		NT, S=0, N=9	NT, S=-8, N=9	NT, S=0, N=9	NT, S=0, N=9	NT, S=5, N=9	NT, S=0, N=9		NT, S=1, N=9	NT, S=-14, N=9	NT, S=4, N=9	NT, S=-11, N=9	NT, S=0, N=9	NT, S=0, N=9	NT, S=6, N=9	NT, S=-9, N=9			
MAR	EPL71	NT, S=0, N=4	NT, S=0, N=4	NT, S=3, N=4	NT, S=0, N=4		NT, S=0, N=4	NT, S=3, N=4	NT, S=0, N=4	NT, S=0, N=4	NT, S=0, N=4	NT, S=0, N=4		NT, S=0, N=4	NT, S=-2, N=4	NT, S=0, N=4	TDn, S=-6, N=4	NT, S=3, N=4	NT, S=0, N=4	NT, S=2, N=4	NT, S=5, N=4			
MAR	EPL102	NT, S=0, N=12	NT, S=-22, N=12	NT, S=0, N=12	NT, S=-15, N=12		NT, S=-20, N=12	NT, S=-11, N=12	NT, S=-14, N=12	NT, S=0, N=12	NT, S=-20, N=12	NT, S=0, N=12		NT, S=8, N=12	NT, S=2, N=12	NT, S=-15, N=12	NT, S=-17, N=12	NT, S=-3, N=12	NT, S=0, N=12	NT, S=-21, N=12	TDn, S=-19, N=12			
MAR	EPL100	NT, S=-8, N=13	NT, S=4, N=8	NT, S=-2, N=13	NT, S=-11, N=13		NT, S=-5, N=8	NT, S=21, N=13	NT, S=-6, N=8	NT, S=0, N=13	NT, S=-8, N=8	NT, S=0, N=13		NT, S=-2, N=8	NT, S=23, N=13	NT, S=-8, N=8	TUp, S=38, N=13	NT, S=0, N=8	NT, S=0, N=13	NT, S=-3, N=8	TUp, S=20, N=13			
MAR	EPL99	NT, S=18, N=21	NT, S=14, N=12	NT, S=25, N=21	NT, S=-41, N=21		NT, S=2, N=12	NT, S=5, N=21	NT, S=10, N=12	NT, S=50, N=21	NT, S=18, N=12	NT, S=0, N=21		NT, S=-2, N=12	NT, S=-23, N=21	NT, S=3, N=12	NT, S=-8, N=21	NT, S=3, N=12	NT, S=37, N=21	NT, S=1, N=12	TDn, S=-50, N=21			
MAR	EPL72	NT, S=0, N=22	NT, S=14, N=21	NT, S=0, N=22	NT, S=4, N=22		NT, S=10, N=21	NT, S=-28, N=22	NT, S=4, N=21	NT, S=0, N=22	NT, S=7, N=21	NT, S=5, N=22		NT, S=2, N=21	NT, S=-55, N=22	NT, S=5, N=21	NT, S=1, N=22	NT, S=21, N=21	NT, S=-13, N=22	NT, S=-30, N=21	TDn, S=-71, N=22			
LOB	EPL87	NT, S=-42, N=24	NT, S=-21, N=14	TDn, S=-119, N=24	TDn, S=-161, N=24		NT, S=-16, N=14	NT, S=30, N=24	NT, S=-24, N=14	NT, S=-10, N=24	NT, S=-27, N=14	NT, S=0, N=24		NT, S=-21, N=14	TUp, S=122, N=24	NT, S=-19, N=14	TUp, S=143, N=24	NT, S=-17, N=14	NT, S=0, N=24	NT, S=-15, N=14	TUp, S=109, N=24			
LOB	EPL82	NT, S=-13, N=26	TDn, S=-44, N=15	NT, S=11, N=26	TDn, S=-103, N=26		NT, S=-18, N=15	NT, S=0, N=26	NT, S=-25, N=15	NT, S=56, N=26	TDn, S=-49, N=15	NT, S=0, N=26		TDn, S=-45, N=15	NT, S=-58, N=26	TDn, S=-58, N=15	TDn, S=-109, N=26	NT, S=-8, N=15	NT, S=0, N=26	TDn, S=-49, N=15	NT, S=-70, N=26			
LOB	EPL80	NT, S=9, N=24	NT, S=-20, N=15	NT, S=0, N=24	NT, S=-29, N=24		NT, S=23, N=15	NT, S=-3, N=24	NT, S=28, N=15	NT, S=-13, N=24	TDn, S=-42, N=15	NT, S=0, N=24		NT, S=-31, N=15	NT, S=32, N=24	NT, S=-15, N=15	NT, S=50, N=24	NT, S=15, N=15	NT, S=0, N=24	NT, S=21, N=15	NT, S=48, N=24			
LOB	EPL89	NT, S=0, N=25	NT, S=-9, N=14	NT, S=0, N=25	TDn, S=-161, N=25		NT, S=-21, N=14	NT, S=-54, N=25	NT, S=-3, N=14	NT, S=65, N=25	NT, S=-8, N=14	NT, S=0, N=25		NT, S=-7, N=14	NT, S=-17, N=25	NT, S=-10, N=14	TDn, S=-136, N=25	NT, S=5, N=14	NT, S=0, N=25	NT, S=-19, N=14	NT, S=-31, N=25			
TAN	EPL34	NT, S=0, N=6		NT, S=-5, N=6	NT, S=0, N=6			NT, S=0, N=6		NT, S=-9, N=6		NT, S=0, N=6			NT, S=1, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			
TAN	EPL35	NT, S=0, N=6		NT, S=-5, N=6	NT, S=0, N=6			NT, S=0, N=6		NT, S=-9, N=6		NT, S=0, N=6			NT, S=9, N=6		NT, S=-5, N=6		NT, S=0, N=6		NT, S=0, N=6			
TAN	EPL33	NT, S=0, N=6		NT, S=0, N=6	NT, S=0, N=6			NT, S=0, N=6		NT, S=-6, N=6		NT, S=0, N=6			NT, S=-9, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			
TAN	EPL39	NT, S=0, N=8	NT, S=-8, N=7	NT, S=0, N=8	NT, S=0, N=8		NT, S=0, N=7	NT, S=0, N=8	NT, S=-7, N=7	NT, S=-14, N=8	NT, S=-7, N=7	NT, S=0, N=8		NT, S=-3, N=7	NT, S=-10, N=8	NT, S=-9, N=7	NT, S=0, N=8	NT, S=0, N=7	NT, S=0, N=8	NT, S=-6, N=7	NT, S=0, N=8			
TAN	EPL38	NT, S=0, N=9	NT, S=-4, N=5	NT, S=0, N=9	NT, S=0, N=9		NT, S=6, N=5	NT, S=0, N=9	NT, S=2, N=5	NT, S=-14, N=9	NT, S=5, N=5	NT, S=0, N=9		TDn, S=-8, N=5	TDn, S=-25, N=9	NT, S=0, N=5	NT, S=0, N=9	NT, S=0, N=5	NT, S=0, N=9	NT, S=4, N=5	NT, S=8, N=9			
LOB	EPL55	NT, S=0, N=3	NT, S=-3, N=3	NT, S=-2, N=3	NT, S=-2, N=3		NT, S=-2, N=3	NT, S=0, N=3	NT, S=-1, N=3	NT, S=0, N=3	NT, S=-1, N=3	NT, S=0, N=3		NT, S=-1, N=3	NT, S=-1, N=3	NT, S=0, N=3	NT, S=-1, N=3	NT, S=0, N=3	NT, S=0, N=3	NT, S=-2, N=3	NT, S=-2, N=3			
TAN	EPL68	NT, S=0, N=24	TDn, S=-64, N=23	NT, S=0, N=24	NT, S=-30, N=24		TDn, S=-160, N=23	TDn, S=-93, N=24	NT, S=-59, N=23	NT, S=-18, N=24	NT, S=-60, N=23	NT, S=0, N=24		TDn, S=-104, N=23	NT, S=-59, N=24	TDn, S=-85, N=23	TDn, S=-73, N=24	NT, S=-23, N=23	NT, S=0, N=24	NT, S=-61, N=23	TDn, S=-60, N=24			
TAN	EPL69	NT, S=0, N=25	NT, S=60, N=24	NT, S=-2, N=25	TUp, S=95, N=25		TUp, S=74, N=24	TUp, S=51, N=25	NT, S=39, N=24	TDn, S=-120, N=25	NT, S=21, N=24	NT, S=-6, N=25		NT, S=55, N=24	NT, S=-43, N=25	NT, S=63, N=24	NT, S=16, N=25	TUp, S=79, N=24	NT, S=0, N=25	NT, S=9, N=24	NT, S=37, N=25			
TAN	EPL105	NT, S=0, N=21	NT, S=16, N=18	TUp, S=55, N=21	NT, S=13, N=21		NT, S=23, N=18	NT, S=-6, N=21	NT, S=11, N=18	NT, S=-7, N=21	TUp, S=46, N=18	NT, S=31, N=21		NT, S=-3, N=18	NT, S=13, N=21	TUp, S=55, N=18	TUp, S=60, N=21	NT, S=25, N=18	NT, S=7, N=21	TUp, S=51, N=18	TUp, S=66, N=21			
TAN	EPL70	NT, S=0, N=26	NT, S=-62, N=25	NT, S=0, N=26	TDn, S=-74, N=26		NT, S=-2, N=25	NT, S=23, N=26	NT, S=-12, N=25	NT, S=0, N=26	NT, S=-25, N=25	NT, S=0, N=26		NT, S=-20, N=25	NT, S=-17, N=26	NT, S=-70, N=25	NT, S=-4, N=26	NT, S=27, N=25	NT, S=0, N=26	NT, S=-31, N=25	NT, S=-45, N=26			
TAN	EPL103	NT, S=0, N=25	TDn, S=-49, N=20	NT, S=0, N=25	NT, S=-24, N=25		TUp, S=84, N=20	TUp, S=129, N=25	NT, S=-6, N=20	NT, S=0, N=25	NT, S=-15, N=20	NT, S=-2, N=25		NT, S=-16, N=20	NT, S=-30, N=25	TDn, S=-58, N=20	NT, S=0, N=25	NT, S=0, N=20	NT, S=0, N=25	NT, S=-45, N=20	NT, S=-2, N=25			
TAN	EPL104	NT, S=0, N=26	TDn, S=-62, N=21	NT, S=12, N=26	NT, S=-5, N=26		NT, S=-49, N=21	NT, S=-32, N=26	TDn, S=-88, N=21	TDn, S=-72, N=26	TDn, S=-118, N=21	NT, S=0, N=26		TDn, S=-117, N=21	TDn, S=-126, N=26	NT, S=-23, N=21	NT, S=0, N=26	NT, S=0, N=21	NT, S=0, N=26	TDn, S=-92, N=21	TDn, S=-134, N=26			
LOB	EPL24	NT, S=-23, N=21	TUp, S=12, N=7	NT, S=6, N=22	NT, S=1, N=22		TUp, S=15, N=7	TUp, S=124, N=22	NT, S=9, N=7	TUp, S=118, N=22	TUp, S=14, N=7	TUp, S=104, N=22		NT, S=7, N=7	NT, S=-15, N=22	TUp, S=15, N=7	TUp, S=100, N=22	NT, S=6, N=7	NT, S=0, N=22	NT, S=7, N=7	NT, S=22, N=22			
TAN	EPL50	NT, S=0, N=5	NT, S=5, N=6	NT, S=5, N=6	NT, S=5, N=6		TUp, S=9, N=6	TUp, S=9, N=6	NT, S=6, N=6	NT, S=0, N=6	NT, S=0, N=6	NT, S=0, N=6		NT, S=1, N=6	NT, S=-3, N=6	NT, S=0, N=6	NT, S=0, N=6	NT, S=0, N=6	NT, S=0, N=6	NT, S=3, N=6	NT, S=6, N=6	NT, S=0, N=6		NT, S=0, N=6
LOB	EPL110	NT, S=0, N=4		NT, S=0, N=4	NT, S=0, N=4			NT, S=0, N=4		NT, S=0, N=4		NT, S=0, N=4			NT, S=-3, N=4		NT, S=0, N=4		NT, S=0, N=4		NT, S=1, N=4			
LOB	EPL113	NT, S=0, N=6		NT, S=0, N=6	NT, S=-5, N=6			TDn, S=-10, N=6		NT, S=-9, N=6		NT, S=-8, N=6			TDn, S=-13, N=6		NT, S=-9, N=6		NT, S=0, N=6		TDn, S=-11, N=6			
LOB	EPL115	NT, S=0, N=6		NT, S=0, N=6	NT, S=-5, N=6			NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			NT, S=-7, N=6		NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			
LOB	EPL128	NT, S=0, N=9		NT, S=0, N=9	NT, S=0, N=9			NT, S=3, N=9		NT, S=-10, N=9		NT, S=-2, N=9			NT, S=4, N=9		NT, S=5, N=9		NT, S=0, N=9		TDn, S=-23, N=9			
LOB	PSE_GWS	NT, S=0, N=23		NT, S=0, N=23	NT, S=0, N=23			NT, S=0, N=23		NT, S=-43, N=23		NT, S=0, N=23			TUp, S=155, N=23		NT, S=15, N=23		NT, S=0, N=23		TDn, S=-67, N=23			
LOB	EPL116	NT, S=0, N=6		NT, S=-6, N=6	NT, S=-5, N=6			NT, S=0, N=6		NT, S=0, N=6		NT, S=0, N=6			NT, S=-7, N=6		NT, S=-7, N=6		NT, S=0, N=6		NT, S=-8, N=6			
LOB	EPL114	NT, S=0, N=6		NT, S=0, N=6	NT, S=-5, N=6			TDn, S=-9, N=6		NT, S=8, N=6		NT, S=0, N=6			NT, S=3, N=6		NT, S=7, N=6		NT, S=0, N=6		NT, S=-4, N=6			
LOB	EPL117	NT, S=0, N=6		NT, S=0, N=6	NT, S=-5, N=6			NT, S=0, N=6		NT, S=9, N=6		NT, S=0, N=6			NT, S=1, N=6		NT, S=-1, N=6		NT, S=0, N=6		NT, S=0, N=6			
MAR	EPL101	TDn, S=-17, N=9	NT, S=-2, N=5	TDn, S=-22, N=9	NT, S=-10, N=9		TUp, S=9, N=5	NT, S=7, N=9	NT, S=4, N=5	NT, S=6, N=9	NT, S=5, N=5	NT, S=4, N=9		TUp, S=8, N=5	TUp, S=20, N=9	NT, S=6, N=5	NT, S=5, N=9	NT, S=0, N=5	NT, S=0, N=9	TUp, S=8, N=5	NT, S=11, N=9			
TAN	CH2900	NT, S=8, N=10	NT, S=-2, N=8	NT, S=13, N=10	TDn, S=-22, N=10		NT, S=-6, N=8	NT, S=-10, N=10	NT, S=-6, N=8	NT, S=-9, N=10	NT, S=-6, N=8	NT, S=5, N=10		NT, S=-6, N=8	NT, S=7, N=10	NT, S=-6, N=8	NT, S=10, N=10	NT, S=-4, N=8	NT, S=0, N=10	NT, S=-6, N=8	NT, S=-1, N=10			
LOB	PSE_L1	NT, S=-27, N=25		TDn, S=-131, N=25	NT, S=-2, N=25			TUp, S=120, N=25		NT, S=-1, N=25		NT, S=0, N=25			TDn, S=-189, N=25		TUp, S=144, N=25		NT, S=0, N=25		NT, S=0, N=25			
TAN	EPL40	NT, S=0, N=6	NT, S=3, N=6	NT, S=0, N=6	NT, S=0, N=6		NT, S=0, N=6	NT, S=0, N=6	NT, S=-3, N=6	NT, S=-3, N=6	NT, S=-1, N=6	NT, S=0, N=6		NT, S=-7, N=6	NT, S=-7, N=6	NT, S=0, N=6	NT, S=0, N=6	NT, S=0, N=6	NT, S=0, N=6	NT, S=3, N=6	NT, S=0, N=6			
ROC	EPL127	NT, S=0, N=12	NT, S=-6, N=6	NT, S=0, N=12	TDn, S=-19, N=12		NT, S=-7, N=6	NT, S=-18, N=12	NT, S=-7, N=6	NT, S=11, N=12	NT, S=-2, N=6	NT, S=0, N=12		NT, S=-5, N=6	NT, S=22, N=12	NT, S=-1, N=6	NT, S=13, N=12	NT, S=-1, N=6	NT, S=0, N=12	NT, S=-1, N=6	NT, S=18, N=12			
ROC	EPL37	NT, S=-17, N=14	NT, S=1, N=5	NT, S=13, N=14	NT, S=0, N=13		NT, S=-3, N=4	NT, S=13, N=14	NT, S=-1, N=3	NT, S=-8, N=14	NT, S=3, N=4	NT, S=0, N=14		NT, S=1, N=3	NT, S=9, N=14	NT, S=1, N=4	NT, S=1, N=14	NT, S=0, N=3	NT, S=0, N=14	NT, S=-1, N=4	TUp, S=22, N=14			
ROC	EPL126	NT, S=0, N=12	NT, S=5, N=6	NT, S=-20, N=12	TDn, S=-29, N=12		NT, S=-7, N=6	NT, S=-7, N=12	NT, S=3, N=6	NT, S=7, N=12	NT, S=-1, N=6	NT, S=3, N=12		NT, S=3, N=6	TUp, S=26, N=12	NT, S=-1, N=6	NT, S=-6, N=12	NT, S=-2, N=6	NT, S=0, N=12	NT, S=1, N=6	TDn, S=-25, N=12			
ROC	EPL36	NT, S=0, N=12	NT, S=-1, N=3	NT, S=11, N=12	NT, S=0, N=12		NT, S=0, N=3	NT, S=11, N=12	NT, S=-1, N=3	TDn, S=-26, N=12	NT, S=0, N=3	NT, S=0, N=12		NT, S=1, N=3	NT, S=14, N=12	NT, S=-2, N=3	NT, S=11, N=12	NT, S=0, N=3	NT, S=0, N=12	NT, S=-1, N=3	NT, S=8, N=12			
ROC	EPL125	NT, S=0, N=12	NT, S=5, N=6	NT, S=5, N=12	NT, S=-17, N=12		NT, S=3, N=6	NT, S=-23, N=12	NT, S=5, N=6	NT, S=0, N=12	NT, S=6, N=6	NT, S=0, N=12		NT, S=5, N=6	NT, S=9, N=12	NT, S=3, N=6	NT, S=-6, N=12	NT, S=3, N=6	NT, S=0, N=12	NT, S=6, N=6	NT, S=-11, N=12			
ROC	EPL124	NT, S=0, N=12	TUp, S=11, N=6	NT, S=5, N=12	NT, S=-23, N=12		TUp, S=11, N=6	NT, S=21, N=12	NT, S=9, N=6	NT, S=0, N=12	TUp, S=10, N=6	NT, S=0, N=12		NT, S=9, N=6	TUp, S=25, N=12	TUp, S=10, N=6	NT, S=9, N=12	TUp, S=10, N=6	NT, S=0, N=12	TUp, S=10, N=6	NT, S=14, N=12			
ROC	EPL123	NT, S=0, N=12	NT, S=-5, N=6	NT, S=0, N=12	TDn, S=-39, N=12		NT, S=-3, N=6	TDn, S=-31, N=12	NT, S=-5, N=6	NT, S=0, N=12	NT, S=-5, N=6	NT, S=0, N=12		NT, S=-5, N=6	TUp, S=48, N=12	NT, S=-5, N=6	NT, S=10, N=12	NT, S=-5, N=6	NT, S=0, N=12	NT, S=-5, N=6	TDn, S=-37, N=12			
TAN	EPL46	NT, S=0, N=6	NT, S=-2, N=3	NT, S=5, N=6	NT, S=0, N=6		NT, S=-1, N=3	NT, S=0, N=6	NT, S=-3, N=3	TDn, S=-11, N=6	NT, S=0, N=3	NT, S=0, N=6		NT, S=-3, N=3	NT, S=-9, N=6	NT, S=0, N=3	NT, S=0, N=6	NT, S=0, N=3	NT, S=0, N=6	NT, S=0, N=3	NT, S=0, N=6			
TAN	EPL32	NT, S=0, N=6	NT, S=-5, N=4	NT, S=0, N=6	NT, S=-5, N=6		NT, S=-5, N=4	NT, S=0, N=6	TDn, S=-6, N=4	NT, S=-9, N=6	NT, S=-3, N=4	NT, S=0, N=6		NT, S=-1, N=4	NT, S=-8, N=6	NT, S=-3, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=-3, N=4	NT, S=0, N=6			
TAN	EPL51	NT, S=0, N=6	NT, S=-3, N=4	NT, S=0, N=6	NT, S=0, N=6		NT, S=0, N=4	NT, S=0, N=6	TDn, S=-6, N=4	NT, S=-9, N=6	NT, S=-1, N=4	NT, S=0, N=6		NT, S=-4, N=4	NT, S=-8, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=3, N=4	NT, S=0, N=6	NT, S=2, N=6		NT, S=0, N=6
TAN	EPL29	NT, S=0, N=6	TDn, S=-6, N=4	NT, S=0, N=6	NT, S=0, N=6		NT, S=-3, N=4	NT, S=0, N=6	TDn, S=-6, N=4	NT, S=-7, N=6	NT, S=-3, N=4	NT, S=0, N=6		NT, S=-2, N=4	NT, S=-8, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=3	NT, S=0, N=6	NT, S=1, N=4	NT, S=0, N=6			
TAN	EPL28	NT, S=0, N=6	NT, S=-5, N=4	NT, S=0, N=6	NT, S=0, N=6		NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=-7, N=6	NT, S=-2, N=4	NT, S=0, N=6		NT, S=0, N=4	NT, S=-5, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=0, N=4	NT, S=0, N=6	NT, S=1, N=4	NT, S=0, N=6	NT, S=-1, N=6		NT, S=0, N=6
LOB	EPL2			NT, S=-2, N=3				NT, S=3, N=3		NT, S=-1, N=3		NT, S=0, N=3			NT, S=1, N=3		NT, S=-1, N=3		NT, S=0, N=3		NT, S=1, N=3			
LOB	EPL122	NT, S=0, N=13		TUp, S=30, N=13	NT, S=-3, N=13			TUp, S=30, N=13		TUp, S=56, N=13		TUp, S=23, N=13			NT, S=14, N=13		NT, S=21, N=13		NT, S=-2, N=13		TUp, S=22, N=13			