



DECEMBER 2025

MONTHLY CONSTRUCTION WATER QUALITY MONITORING REPORT

December 2025
Project No.: 3200-0645
Project: Transgrid Maragle 500/330 kV Substation
Private & Confidential

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APPENDIX A: FIELD SHEET (UGL, 2025)

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ABBREVIATIONS

Acronym	Full Form
°C	degrees Celsius
µS/cm	micro Siemens per centimetre
%	percent
4WD	Four wheel drive
Ag	Silver
Al	Aluminium
ALS	ALS Limited
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZG	Australian and New Zealand Guidelines
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
As	Arsenic
Baseline Report	'Baseline Water Quality Report' (NGH, 2024)
CaCO ₃	Total Hardness
Cd	Cadmium
COA	'Certificate of Analysis' (ALS, 2025a)
COC	Chain of Custody
Cr	Chromium
Cu	Copper
DGV	Default Guideline Values
DO	Dissolved Oxygen
EC	Electrical Conductivity
EIS	Environmental Impact Statement
EPL	Environmental Protection Licence
Fe	Iron
Field Sheet	'Water Quality Monitoring Field Data Sheet' (UGL, 2025)
Hg	Mercury
km	kilometres
KNP	Kosciuszko National Park
kV	kilovolt
LOR	limit of reporting
mg/L	milligram per litre
mm	millimetre
Mn	Manganese
mV	millivolt
NATA	National Association of Testing Authorities, Australia

ABBREVIATIONS

Acronym	Full Form
NEM	National Energy Market
NGH	NGH Pty Ltd
Ni	Nickel
NSW	New South Wales
NTU	Nephelometric Turbidity Unit
Pb	Lead
ppm	parts per million
Pty Ltd	Proprietary Limited
QA/QC Assessment	'QA/QC Compliance Assessment to assist with Quality Review' (ALS, 2025b)
QCR	'Quality Control Report' (ALS, 2025c)
RP	reactive phosphorus
RS	Reference Site
Snowy 2.0	Snowy Scheme expansion project (EPBC 2018/8322)
Snowy Hydro	Snowy Hydro Limited
Snowy Scheme	Snowy Mountains Hydro-electric Scheme
SPC	specific conductance
SSGV	Site Specific Guideline Values
SW	surface water
SWQ	surface water quality
TDS	Total Dissolved Solids
The Methodology	'Pre-construction Water Quality Monitoring Program and Methodology' (NGH, 2022)
The Project	Construction of a 330 kV substation and overhead transmission lines between Nurenmerenmong, NSW and Cabramurra, NSW
TKN	Total Kjeldahl Nitrogen
TN	Total Nitrogen
TP	Total Phosphorus
Transgrid	The Trustee for the NSW Electricity Operations Trust
TSS	Total Suspended Solids
UGL	UGL Limited
WQO	water quality objectives
Zn	Zinc

1 BACKGROUND

In 2020 Snowy Hydro Limited (Snowy Hydro) obtained approval (EPBC 2018/8322) to expand the existing Snowy Mountains Hydro-electric Scheme (Snowy Scheme), by linking the existing Tantangara and Talbingo reservoirs through a series of underground tunnels and constructing a new underground hydro-electric power station (Snowy 2.0).

To connect Snowy 2.0 to the National Energy Market (NEM), a new transmission connection was required. The Trustee for the New South Wales (NSW) Electricity Operations Trust (TransGrid) is constructing a 330 kilovolt (kV) substation and overhead transmission lines (the Project) to facilitate the connection of Snowy 2.0 to the existing electrical transmission network. The Project is located within Kosciuszko National Park (KNP) between Nurenmerenmong and Cabramurra, NSW, approximately 27 kilometres (km) east of Tumbarumba, NSW (Figure 1). UGL Limited (UGL) has been engaged on behalf of Transgrid to undertake the Project.

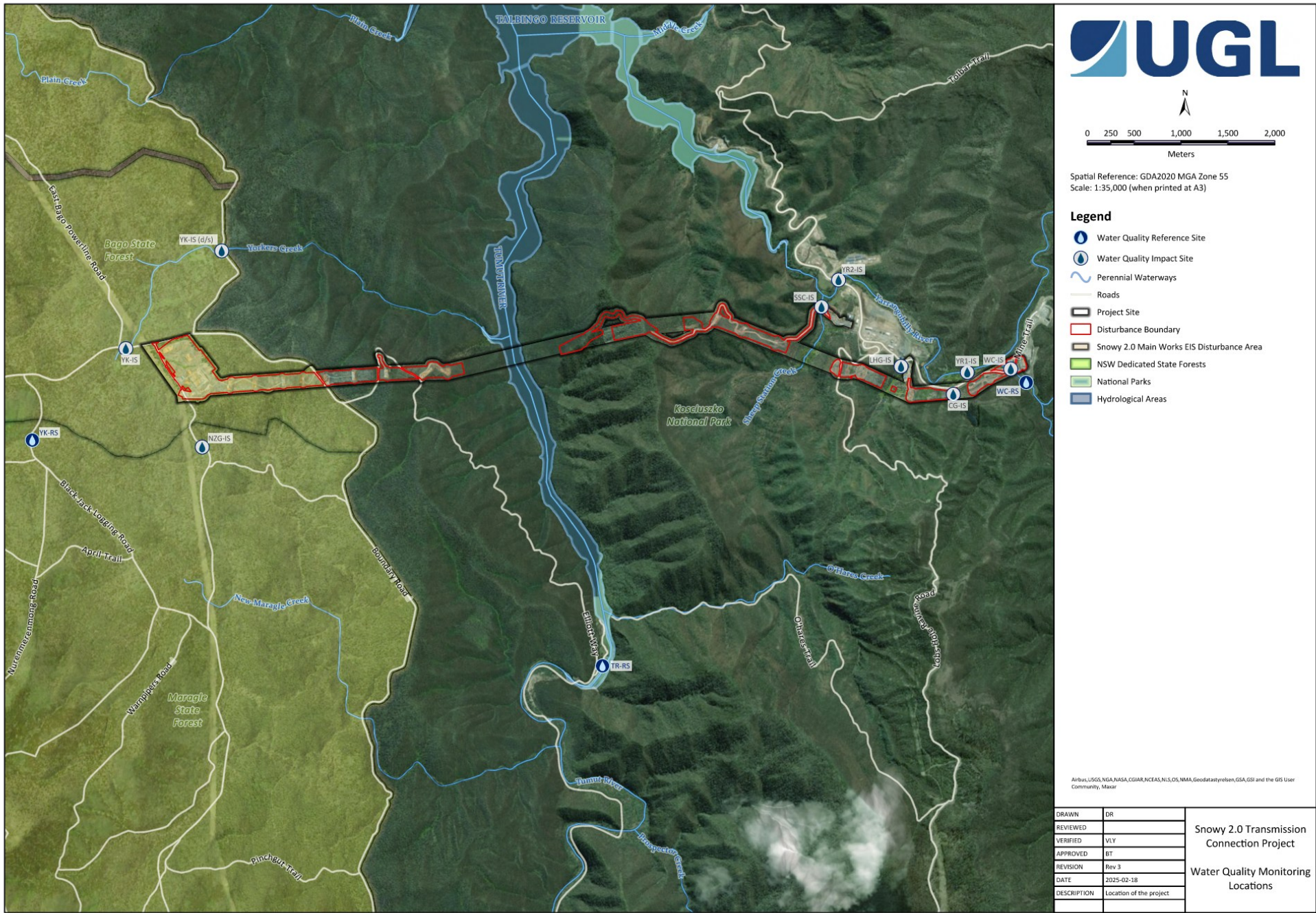


FIGURE 1 LOCALITY OF THE PROJECT AND SWQ MONITORING LOCATIONS

2 INTRODUCTION

The Project is adjacent to, and forms part of, the Snowy 2.0 project area and is located within KNP, an area of high conservation value. A total of 22 mapped waterways, tributaries of Yarrangobilly River and Tumut River, transect the Project Boundary (Figure 1).

One of the conditions of approval to meet the requirements outlined in the 'Environmental Impact Statement' (EIS) (Jacobs, 2020) and the Project's Environmental Protection Licence (EPL 21753) is to undertake regular surface water quality (SWQ) monitoring to mitigate environmental impacts on SWQ.

Pre-construction SWQ monitoring was undertaken by NGH Pty Ltd (NGH) between March 2022 and February 2024 to determine site specific baseline values for SWQ parameters prior to Project construction works. The pre-construction SWQ monitoring was undertaken using the 'Pre-construction Water Quality Monitoring Program and Methodology' (the Methodology) developed by NGH in 2022 (refer Section 3). Two years of pre-construction SWQ monitoring was analysed and summarised in the 'Baseline Water Quality Report' (Baseline Report) (NGH, 2024). The results were used to determine seasonal Site Specific Guideline Values (SSGV) for ongoing SWQ monitoring during the construction phase.

Construction for the Project commenced in March 2024. Construction SWQ monitoring will be undertaken by UGL on a monthly basis as per the revised methodology outlined in Section 3 to identify potential changes to SWQ that may be associated with the Project. SW samples from the construction SWQ monitoring would be analysed and presented in monthly Construction Water Quality Monitoring Reports.

3 METHODOLOGY

The Methodology was prepared by NGH in 2022 to support the pre-construction SWQ monitoring for the Project. The Methodology detailed the water quality objectives (WQO) for the Project, identified the monitoring locations and outlined the methodology for surface water (SW) sampling during the pre-construction phase. The Methodology (NGH, 2022) took into account the Project location within an area of high conservation value where the WQO for physical and chemical stressors, as outlined in the ‘Australian and New Zealand Guidelines for Fresh and Marine Water Quality’ (ANZG) (ANZG, 2018), includes no change in biodiversity beyond natural variability and where possible, there should also be no change in water/sediment chemical and physical properties, including toxicants.

Monitoring locations are outlined in Table 1. Figure 2 and Figure 3 show the water quality monitoring locations in relation to the Project and Snowy 2.0.

The Methodology (NGH, 2022) has been revised for construction SWQ monitoring by taking into account the seasonal SSGV set out in the Baseline Report (NGH, 2024) (refer to Section 4.2).

Construction SWQ monitoring would be analysed against the seasonal SSGV where available and appropriate. The Default Guideline Values (DGV) for Upland Rivers (ANZG, 2018) would be applied to water quality parameters that were not assessed in the Baseline Report (NGH, 2024) or where a guideline range is more appropriate. Table 2 outlines the seasonal SSGV and DGV used to compare construction SWQ to pre-construction SWQ.

Table 1 SWQ monitoring locations outlined in the Methodology (NGH, 2022)

WATER QUALITY MONITORING LOCATIONS					
ID	Waterway	Site Type	Catchment	Latitude	Longitude
WC-RS	Wallace Creek	Reference	Yarrangobilly River	-35.794258	148.415253
WC-IS	Wallace Creek	Impact		-35.792982	148.413404
CG-IS	Cave Gully	Impact		-35.795495	148.406665
YR1-IS	Yarrangobilly River	Impact		-35.793358	148.408277
LHG-IS	Lick Hole Gully	Impact		-35.792890	148.400445
YR2-IS	Yarrangobilly River	Impact		-35.784656	148.392921
SSC-IS	Sheep Station Creek	Impact		-35.793243	148.391046
TR-RS	Talbingo Reservoir	Reference	Talbingo Reservoir	-35.822094	148.365690
YK-RS	Yorkers Creek	Reference	Yorkers Creek	-35.801126	148.297979
YK-IS (D/S)	Yorkers Creek	Impact		-35.782684	148.320040
NZG-IS	New Zealand Gully	Impact		-35.801575	148.318051
YK-IS	Yorkers Creek	Impact		-35.792209	148.308878

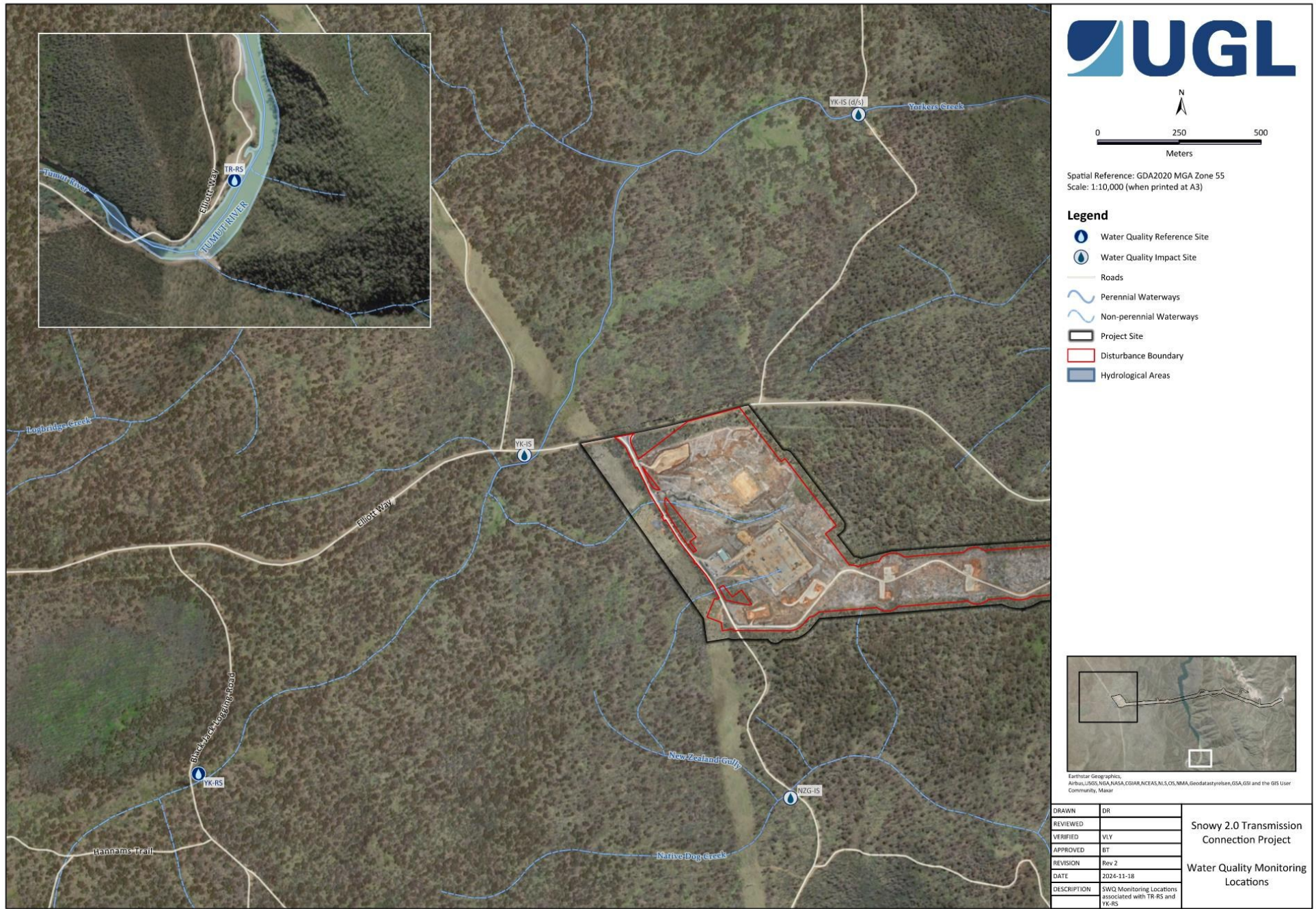


FIGURE 2 WATER QUALITY MONITORING LOCATIONS ASSOCIATED WITH REFERENCE SITE YR-RS AND TR-RS IN RELATION TO THE PROJECT

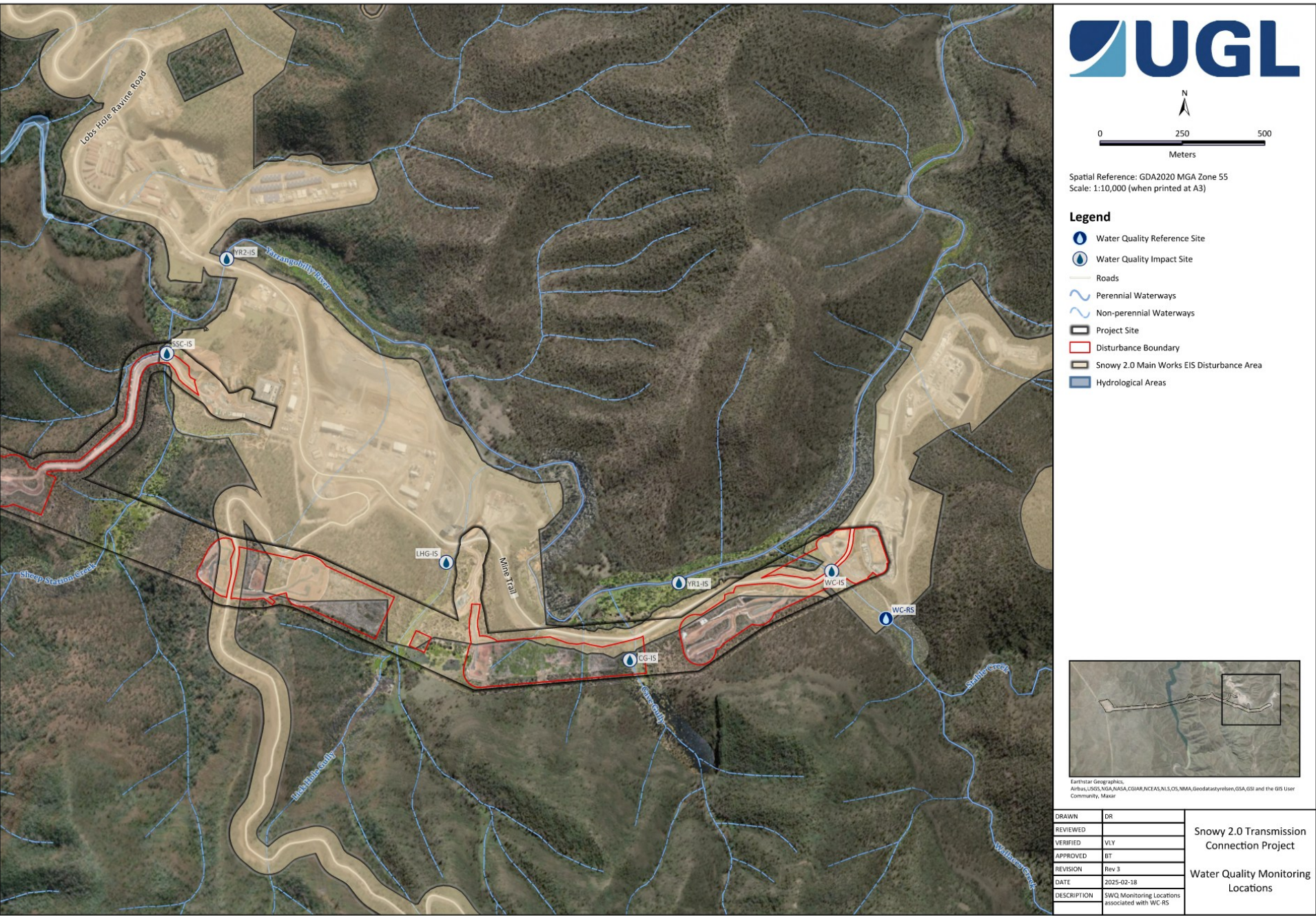


FIGURE 3 WATER QUALITY MONITORING LOCATIONS ASSOCIATED WITH REFERENCE SITE WC-RS IN RELATION TO THE PROJECT

Table 2 Seasonal SSGV (NGH, 2024) and DGV (ANZG, 2018) for water quality parameters

SURFACE WATER QUALITY GUIDELINE VALUES								
Parameter	Unit	WC-RS		TR-RS		YK-RS		DGV
		SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	
Temperature	°C*	-	-	-	-	-	-	-
Dissolved Oxygen (DO) ***	%#	96.2	89.7	91.3	95.5	89.6	88.7	90-110
DO	ppm ⁺	9.08	10.28	8.79	11.53	8.35	10.2	-
Specific Electrical Conductivity (EC)***	SPC [^] μS/cm ^{^^}	115	88	24	38.7	31	27.9	30-350
EC***	μS/cm	93.2	60.85	20.3	26.2	24	20.5	30-350
pH***	-	7.85	7.62	7.59	7.59	6.79	6.61	6.5-8
Redox	mV ^{##}	79.1	98.4	91.2	95.4	94.6	106.1	-
Turbidity***	NTU ^{**}	0.37	5.12	0.09	1.56	9	7.87	2-25
Dissolved Aluminium (Al)	mg/L ⁺⁺	0.03	0.04	0.03	0.015	0.36	0.32	0.027
Dissolved Arsenic (As)	mg/L	0.003	0.0003	0.003	0.0003	0.003	0.0003	0.0008
Dissolved Cadmium (Cd)	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0006
Dissolved Chromium (Cr)	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Dissolved Copper (Cu)	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.001
Cyanide	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.004
Dissolved Iron (Fe)	mg/L	0.03	0.02	0.04	0.02	0.41	0.23	0.3
Dissolved Lead (Pb)	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Dissolved Manganese (Mn)	mg/L	0.002	0.002	0.003	0.002	0.005	0.003	1.2
Dissolved Mercury (Hg)	mg/L	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00006

SURFACE WATER QUALITY GUIDELINE VALUES

Parameter	Unit	WC-RS		TR-RS		YK-RS		DGV
		SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	
Dissolved Nickel (Ni)	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.008
Total Nitrogen (TN)	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.25
Total Phosphorus (TP)	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Dissolved Silver (Ag)	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
Dissolved Zinc (Zn)	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.0024
Ammonia	mg/L	0.013	0.013	0.013	0.013	0.013	0.013	0.013
Nitrogen Oxides	mg/L	0.015	0.015	0.015	0.015	0.015	0.015	0.015
Reactive Phosphorus (RP)	mg/L	0.02	0.015	0.02	0.015	0.02	0.02	0.015
Total Hardness (CaCO ₃)	mg/L	47	30	7.5	8	1	7	-
Total Kjeldahl Nitrogen (TKN)	mg/L	0.2	0.2	0.1	0.2	0.1	0.2	-
Total Dissolved Solids (TDS)	mg/L	52	39	12.5	15	30	10	-
Total Suspended Solids (TSS)	mg/L	0.2	1	0.2	0.2	3	0.2	0.2
Total Al [@]	mg/L	-	-	-	-	-	-	0.027
Total As [@]	mg/L	-	-	-	-	-	-	0.0008
Total Cd [@]	mg/L	-	-	-	-	-	-	0.0006
Total Cr [@]	mg/L	-	-	-	-	-	-	0.00001
Total Cu [@]	mg/L	-	-	-	-	-	-	0.001
Total Pb [@]	mg/L	-	-	-	-	-	-	0.001
Total Mn [@]	mg/L	-	-	-	-	-	-	1.2
Total Ni [@]	mg/L	-	-	-	-	-	-	0.008

SURFACE WATER QUALITY GUIDELINE VALUES

Parameter	Unit	WC-RS		TR-RS		YK-RS		DGV
		SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	
Total Ag [@]	mg/L	-	-	-	-	-	-	0.00002
Total Zn [@]	mg/L	-	-	-	-	-	-	0.0024
Total Fe [@]	mg/L	-	-	-	-	-	-	0.3
Total Hg [@]	mg/L	-	-	-	-	-	-	0.00006

* °C = degrees Celsius

% = percent

mV = millivolt

+ ppm = parts per million

^ SPC = specific conductance

** mg/L = milligram per litre

** NTU = Nephelometric Turbidity Unit

^^ μS/cm = micro Siemens per centimetre

@ parameter not analysed by NGH

*** assessed against DGV where guideline range is more appropriate for the parameter

4 BASELINE WATER QUALITY

4.1 Water Quality Objectives

Water quality objectives are outlined in Section 2.1 of the Baseline Report (NGH, 2024).

4.2 Site Specific Guideline Values

In accordance with the ANZG (ANZG, 2018), SSGV for the three Reference Sites (RS) (WC-RS, TR-RS and YK-RS) were derived from the results collected during the 24-month pre-construction SWQ monitoring period. The SSGV reflect the seasonality observed in the baseline data and are characterised by the drier months of Summer/Autumn (December to May) and wetter months of Winter/Spring (June to November) in accordance with the 'Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) (2000) methodology and derivatives developed to 2018 of the ANZG (ANZG, 2018).

Table 2 outlines the seasonal SSGV provided in the Baseline Report (NGH, 2024).

5 DECEMBER 2025 MONITORING

SW sampling was undertaken at 11 monitoring locations from 14 December 2025. SSC-IS and CG-IS were dry or had no flow at the time of monitoring.

In accordance with the methodology outlined in Section 3, SW samples were either measured in situ using a calibrated YSI ProDSS Sonde Multiparameter Digital Water Quality Meter (refer to Appendix D) or analysed by National Association of Testing Authorities, Australia (NATA) accredited ALS Limited (ALS) laboratory.

The 'Water Quality Monitoring Field Data Sheet' (Field Sheet) (UGL, 2025) is provided in Appendix A. The 'Certificate of Analysis' (COA) (ALS, 2025a), 'QA/QC Compliance Assessment to assist with Quality Review' (QA/QC Assessment) (ALS, 2025b) and 'Quality Control Report' (QCR) (ALS, 2025c) are attached in Appendix B.



5.1 Observations

Field observations during sampling are summarised in Table 3.

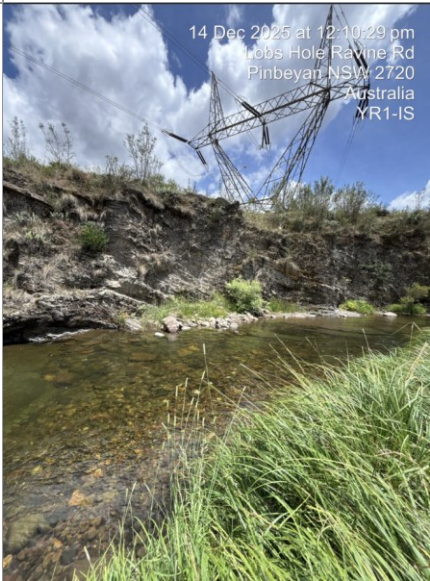

Table 3 Field observations during sampling

FIELD OBSERVATIONS		
Date	14 December 2025	
Weather	<p>The weather forecast for 12 October was 8°C with 60 percent of <1 millimetres (mm) of rain. The previous 48 hours were cloudy and experienced a total of 0.00mm of rainfall across 10 to 11 October.</p> <p>The weather forecast for 13 October was 5°C with 5 percent if <1 millimetre (mm). At the time of The previous 48 hours was cloudy and experienced a total of 0.00mm of rainfall across 11 to 12 October. At the time of sampling, the weather was fine and sunny.</p>	
ID	Observations	Photo
WC-RS	<ul style="list-style-type: none"> • Moderate volume and flow rate. • Clear visibility with rocky bed • Presence of aquatic vegetation in the water channel. • Presence of vegetative detritus in the waterbody. • Rocky and eroded banks with exposed roots from a large tree. • Riparian vegetation comprised of groundcover species, shrubs and mature trees. • Moderate weed density, including blackberry (<i>Rubus fruticosus</i>). 	

FIELD OBSERVATIONS

ID	Observations	Photo
WC-IS	<ul style="list-style-type: none"> • Low volume and flow rate. • Water clear with no visible discolouration. • Presence of aquatic vegetation in water channel. • Presence of vegetative detritus in waterbody. • Rocky and undercut banks present. • Riparian vegetation, comprised of trees and grass. • High weed density, including blackberry (<i>Rubus fruticosus</i>). • Monitoring location is situated adjacent to bridge and Mine Trail Road which is frequently used by snowy 2.0 vehicles, plant and machinery. • Foam visible in back eddies 	 <p>12 Oct 2025 9:46:24 am Lobs Hole Ravine Road Pinbeyan Snowy Valleys Council New South Wales WC-IS</p>
CG-IS	<ul style="list-style-type: none"> • Dry, no flow 	 <p>14 Dec 2025 at 2:09:01 pm Cabramurra NSW 2629 Australia Kosciuszko National Park CG-IS</p>



FIELD OBSERVATIONS

ID	Observations	Photo
YR1-IS	<ul style="list-style-type: none"> • Moderate water volume and flow rate. • Clear visibility. • Rocky and pebbly bed visible. • Riparian vegetation comprised of groundcover species, shrubs and trees. • Moderate weed density including thistle (<i>Cirsium spp.</i>) and blackberry (<i>Rubus fruticosus</i>) • Monitoring location is situated adjacent to bridge and electrical transmission tower on top of rocky cliff and Snowy 2.0 laydown area 	 <p>14 Dec 2025 at 12:10:29 pm Robs Hole Ravine Rd Pinbeyan NSW 2720 Australia YR1-IS</p>
LHG-IS	<ul style="list-style-type: none"> • Low water volume and flow rate. • Slight discolouration in water – yellow tinge. • Presence of aquatic vegetation within channel. • Vegetation of vegetative detritus in waterbody. • Presence of silt and grass seed husks on stream bed. • Slight sulphur smell to water. • Overgrown vegetation, predominantly groundcover species. • Monitoring location is adjacent to Mine Trail Road which is frequently used by Snowy 2.0 vehicles, plant and machinery. 	 <p>14 Dec 2025 at 1:47:47 pm Cabramurra NSW 2629 Australia Kosciuszko National Park LHG-IS</p>



FIELD OBSERVATIONS

ID	Observations	Photo
YR2-IS	<ul style="list-style-type: none"> • Low water volume and flow rate. • Clear visibility. • Presence of vegetative detritus • Rocky bed with no defined banks. • Riparian vegetation comprised of groundcover species, shrubs and trees. • Moderate weed density, including blackberry (<i>Rubus fruticosus</i>). • Presence of road washout from Mine Trail Road in vegetation adjacent to river. 	
SSC-IS	<ul style="list-style-type: none"> • Dry; no flow at the time of sampling. 	


FIELD OBSERVATIONS

ID	Observations	Photo
TR-RS	<ul style="list-style-type: none"> • Moderate water volume and flow rate. • Clear visibility. • Presence of aquatic invertebrates and vegetation in water channel. • Presence of vegetative detritus in waterbody. • Sandy bed and rocky banks. • Riparian vegetation comprised of groundcover and trees. • Presence of landslips. • Monitoring location is situated adjacent to publicly accessible O'Hares Campground and Talbingo Reservoir ancillary infrastructure. 	 <p>14 Dec 2025 at 9:12:35 am TR-RS</p>
YK-RS	<ul style="list-style-type: none"> • Very low water volume and flow rate. • Turbid water. • Muddy banks • Presence of aquatic vegetation (including algae) in water channel. • Presence of vegetative detritus in waterbody. • Eroded and undercut banks. • Ground cover is comprised of shrubs and grasses. 	 <p>14 Dec 2025 at 7:07:49 am NZG-IS</p>

FIELD OBSERVATIONS

ID	Observations	Photo
YK-IS (D/S)	<ul style="list-style-type: none"> • Low water volume and flow rate. • Yellow and brown tinge observed in water. • Presence of aquatic vegetation (including algae) in water channel. • Presence of vegetative detritus observed in waterbody. • Evidence of undermined banks • Rocky and sandy stream bed • Riparian vegetation consisted of groundcover species and trees. • Overhanging and overgrown vegetation. • Foam forming on surface of water • Monitoring location is situated adjacent to publicly accessible 4WD track. 	
NZG-IS	<ul style="list-style-type: none"> • Very low water volume and flow rate. • Slight yellow tinge observed in water. • Presence of aquatic vegetation (including algae) in water channel. • Presence of organic detritus in waterbody. • Evidence of eroded and undermined banks. • Pebbly stream bed. • Riparian vegetation consisted of groundcover species and trees. • Moderate weed density including thistle (<i>Cirsium</i> spp.) and blackberry (<i>Rubus fruticosus</i>) • Monitoring location is situated adjacent to publicly accessible 4WD track. 	

FIELD OBSERVATIONS

ID	Observations	Photo
YK-IS	<ul style="list-style-type: none"> • Very low water volume and flow rate. • Yellow tinge observed in water. • Presence of aquatic vegetation in water channel. • Presence of vegetative detritus in waterbody. • Rocky and sandy stream bed. • Eroded and muddy banks. • Overhanging vegetation. • Riparian vegetation consisted of groundcover species, shrubs and trees. • Moderate weed density. • Foam forming on surface of water • Monitoring location is situated adjacent to Elliot Way, leading towards culvert. 	

5.2 Results

The results from the construction SWQ monitoring program have been reported for each respective catchment: Yarrangobilly River, Talbingo Reservoir, and Yorkers Creek.

- **Yarrangobilly River catchment** monitoring includes the reference site at Wallace Creek and impact sites at Yarrangobilly River, Wallace Creek, Cave Gully, Lick Hole Gully, and Sheep Station Creek.
- **Yorkers Creek catchment** monitoring includes the reference site at Yorkers Creek and impact sites at Yorkers Creek and New Zealand Gully.
- **Talbingo Reservoir** features a reference site located upstream within the reservoir, serving as an overall reference for monitoring sites in the Yarrangobilly River and Yorkers Creek catchments.

This reference site provides a baseline for the SWQ monitoring program.

The SWQ monitoring results for key physical and chemical parameters, along with site-specific trigger values, are detailed in Section 5.2.1. Results for dissolved and total metals, including site-specific trigger values, are covered in Sections 5.2.2 and 5.2.3. Upon review of the data, observations were noted between the reference and impact sites.

The complete table of results is attached in Appendix C.

5.2.1 Key Physical and Chemical Parameters

See below for results of key physical and chemical parameters.

5.2.1.1 Temperature

In December 2025, Yarrangobilly River Catchment exhibited an increase in mean temperature (°C) by $\approx 3^{\circ}\text{C}$ to $\approx 19^{\circ}\text{C}$ (Figure 4). In contrast, the temperature at Talbingo Reservoir in December 2025 remained on-par with November 2025 (Figure 5). A notable temperature change during the December 2025 sampling period was exhibited at Yorkers Creek Catchment, where the mean temperature reduced by $\approx 5^{\circ}\text{C}$ to $\approx 13^{\circ}\text{C}$ (Figure 6).

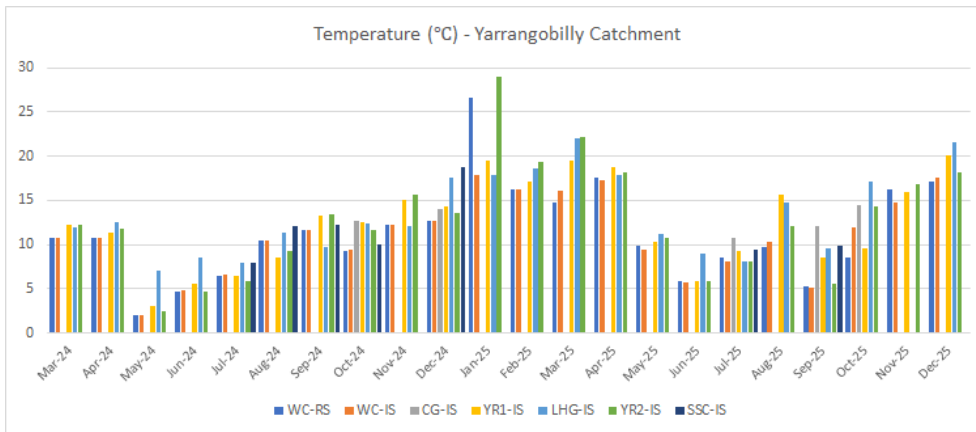


FIGURE 4 : TEMPERATURE FOR YARRANGOBILLY RIVER CATCHMENT

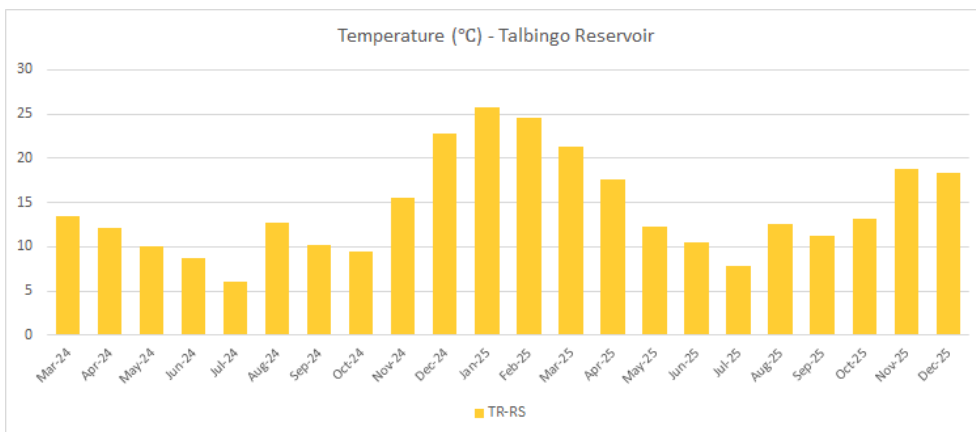


FIGURE 5: TEMPERATURE FOR TALBINGO RESERVOIR

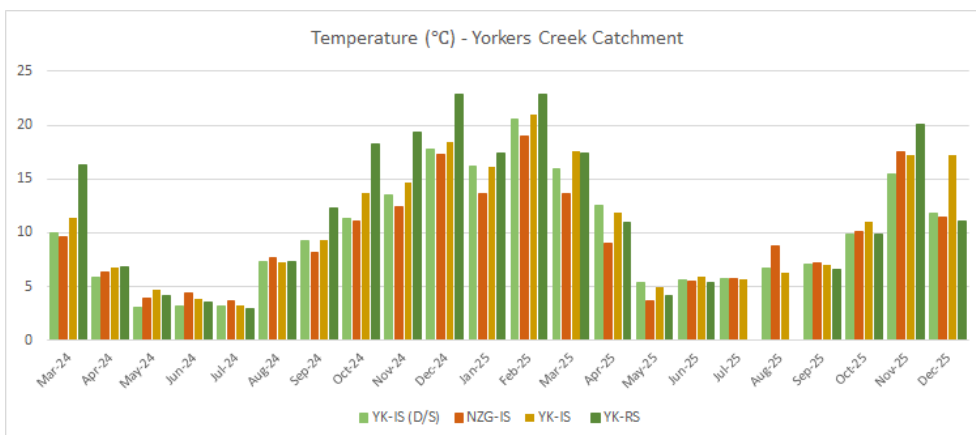


FIGURE 6: TEMPERATURE FOR YORKERS CREEK CATCHMENT

5.2.1.2 pH

During the December 2025 sampling period, pH values at most sites across the catchments (Yarrangobilly River Catchment, Talbingo Reservoir, Yorkers Creek Catchment) exhibited an increase compared to November 2025 (Figure 7 – Figure 9). All sites exceeded the December-May SSGV, except LHG-IS and TR-RS, which recorded values below the SSGV.

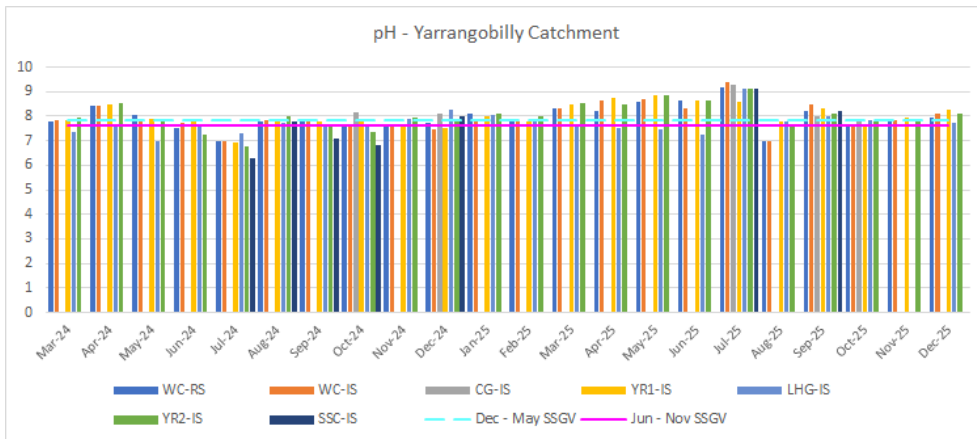


FIGURE 7: PH FOR YARRANGOBILLY RIVER CATCHMENT

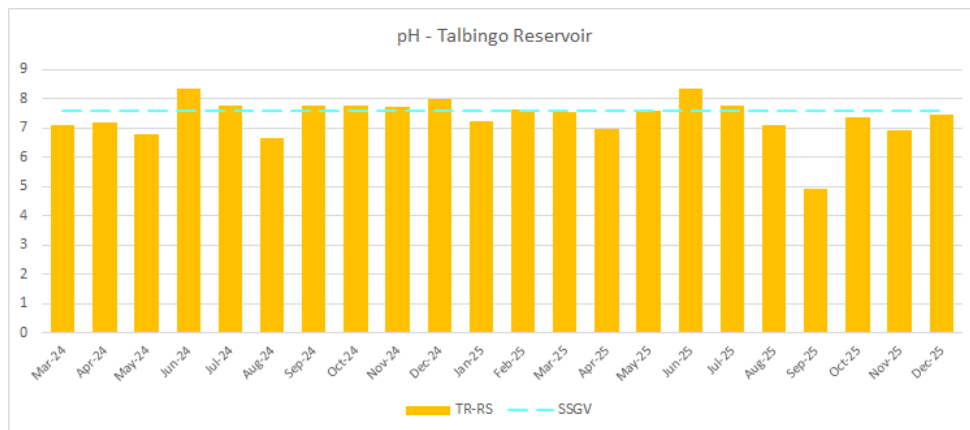


FIGURE 8: PH FOR TALBINGO RESERVOIR

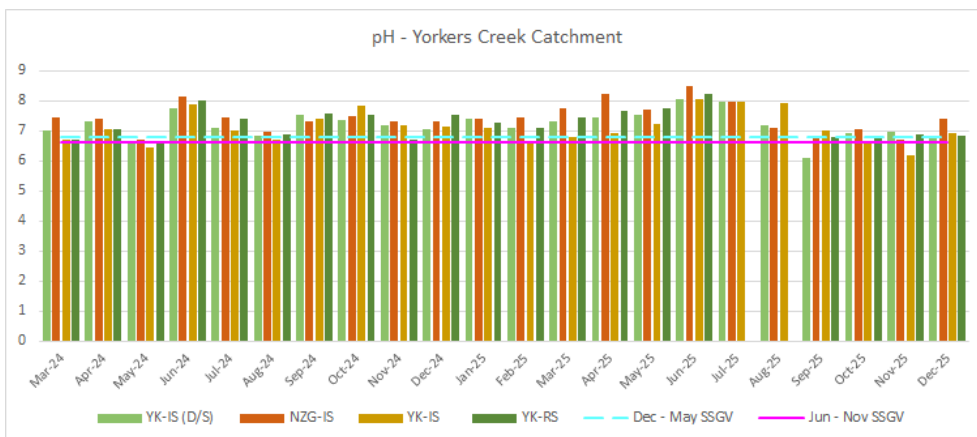


FIGURE 9: PH FOR YORKERS CREEK CATCHMENT

5.2.1.3 Dissolved Oxygen

During the December 2025 sampling period, DO (%) values generally improved across Yarrangobilly River Catchment and Yorkers Creek Catchment compared to November 2025. Talbingo Reservoir pH values were marginally lower. All sites were below the December-May SSGV (Figure 10–12).

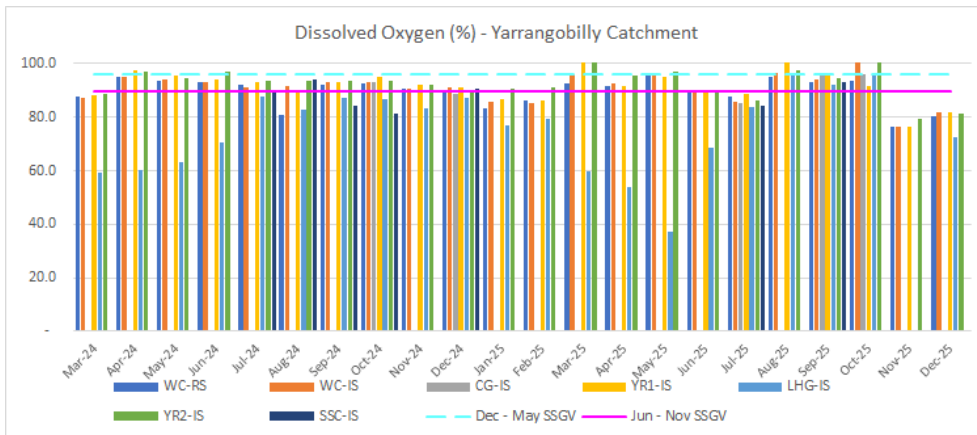


FIGURE 10: DO FOR YARRANGOBILLY RIVER CATCHMENT

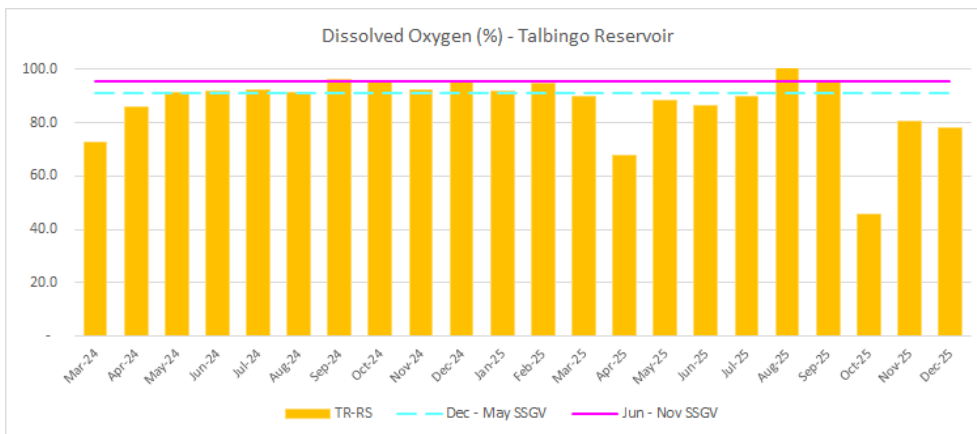


FIGURE 11: DO FOR TALBINGO RESERVOIR

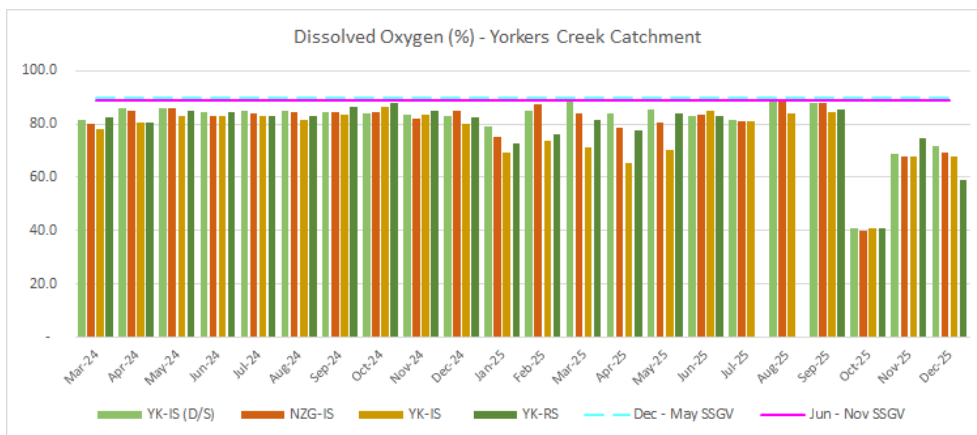


FIGURE 12: DO FOR YORKERS CREEK CATCHMENT

5.2.1.4 Specific Conductance

December 2025 specific conductance ($\mu\text{S}/\text{cm}$) results varied across all sampling locations. Exceedance of the December-May SSGV was recorded in Yarrangobilly River Catchment at YR1-IS (Figure 13). Exceedance of the SSGV was recorded at Talbingo Reservoir (Figure 14) and all sites across Yorkers Creek Catchment, except YK-IS which was within the SSGV (Figure 15).

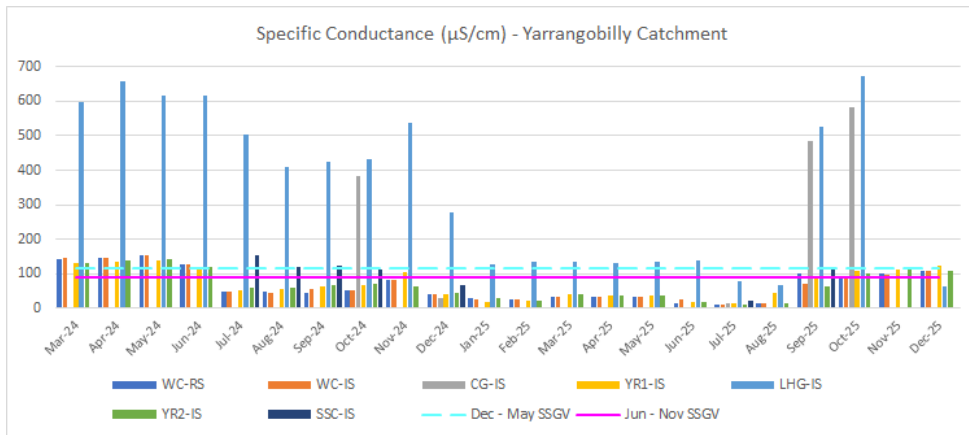


FIGURE 13: SPC FOR YARRANGOBILLY RIVER CATCHMENT

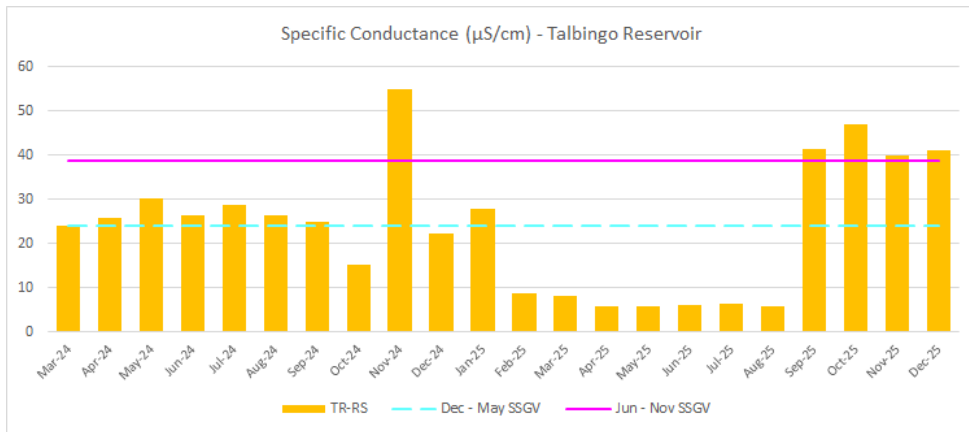


FIGURE 14: SPC FOR TALBINGO RESERVOIR

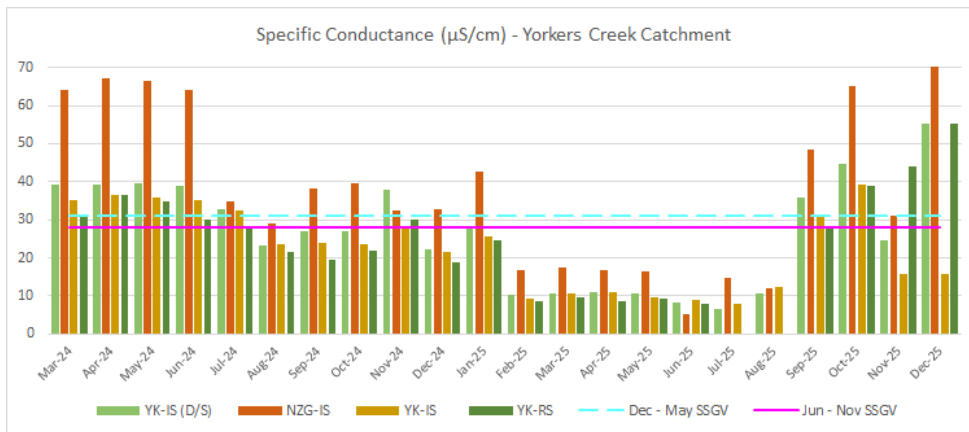


FIGURE 15: SPC FOR YORKERS CREEK CATCHMENT

5.2.1.5 Electrical Conductivity

In December 2025, Electrical Conductivity (EC, $\mu\text{S}/\text{cm}$) exceeded SSGV values across all three catchments (Yarrangobilly River Catchment, Talbingo Reservoir and Yorkers Creek Catchment), except at LHG-IS which was below the SSGV (Figure 16—18).

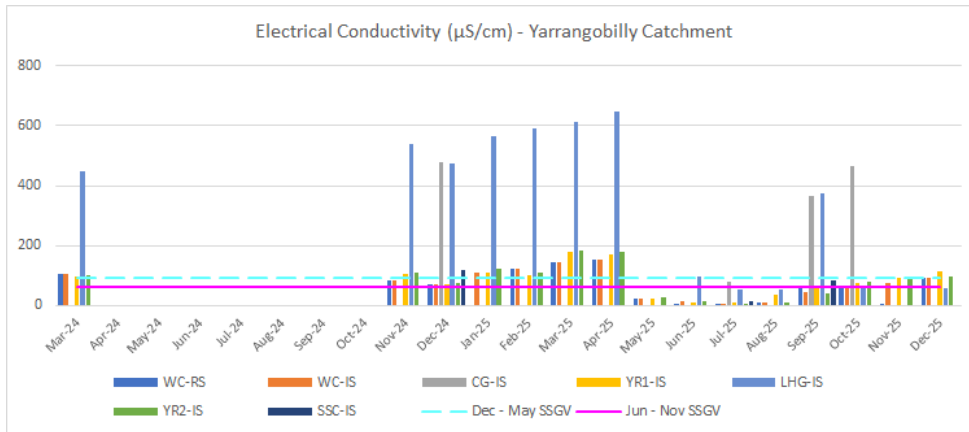


FIGURE 16: EC FOR YARRANGOBILLY RIVER CATCHMENT

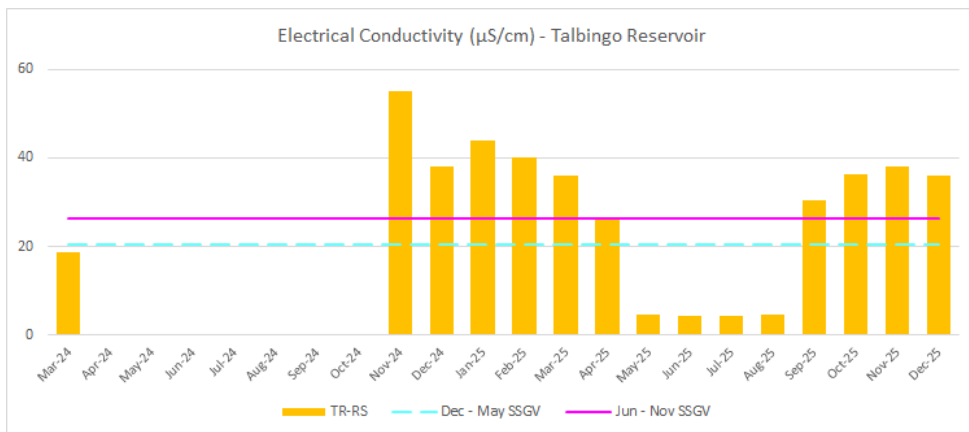


Figure 17: EC for Talbingo Reservoir

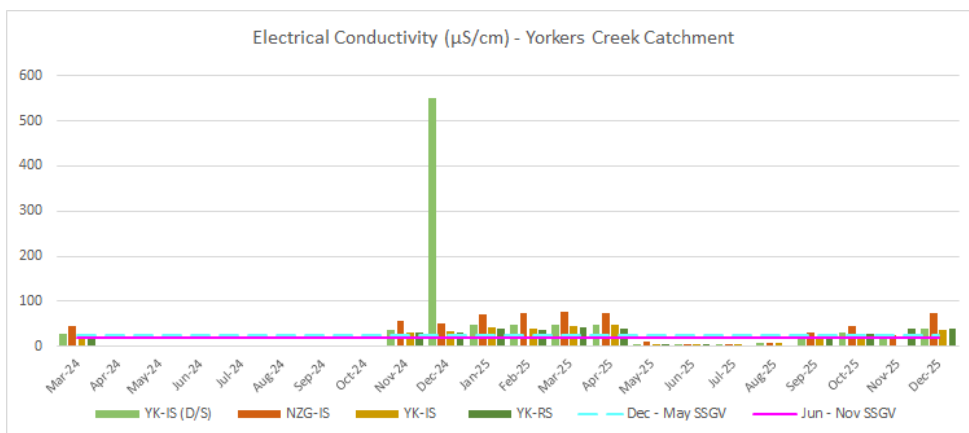


FIGURE 18: EC FOR YORKERS CREEK CATCHMENT

5.2.1.6 Turbidity

In December 2025, results generally exceeded the December – May SSGV (Figure 19–21). A marked increase in turbidity was recorded at YR1-IS in Yarrangobilly River Catchment (31.04 NTU). Two sites (NZG-IS and YK-IS) in Yorkers Creek catchment were below the SSGV (Figure 21).

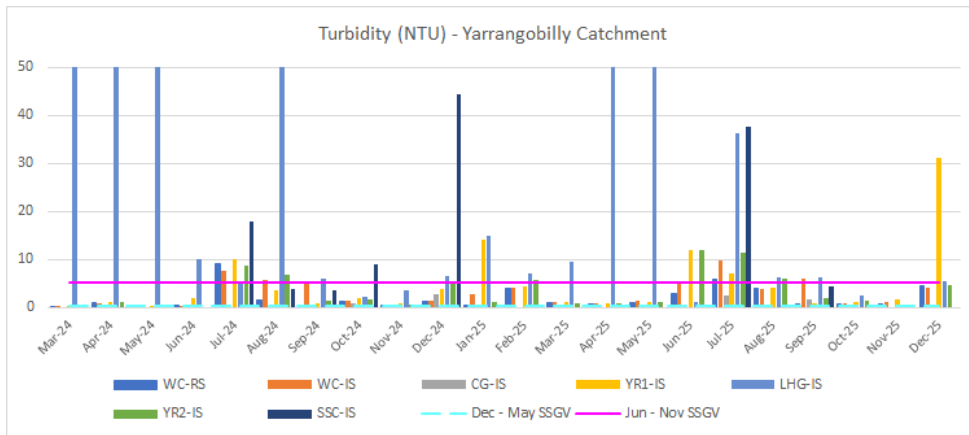


FIGURE 19: TURBIDITY FOR YARRANGOBILLY RIVER CATCHMENT

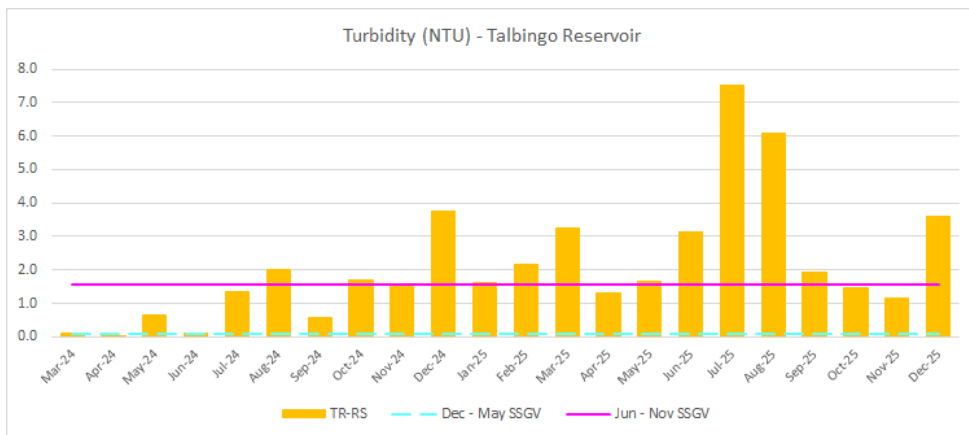


FIGURE 20: TURBIDITY FOR TALBINGO RESERVOIR

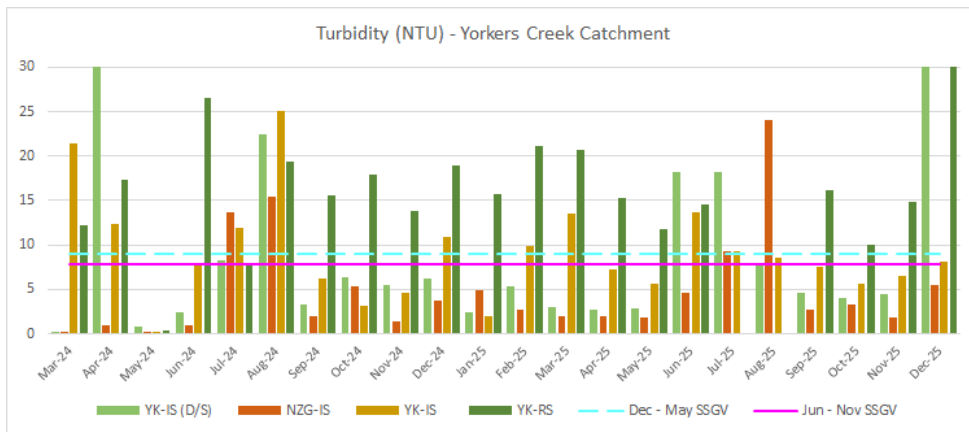


FIGURE 21: TURBIDITY FOR YORKERS CREEK CATCHMENT

5.2.1.7 Total Suspended Solids

Total Suspended Solids (mg/L) exceeded the December-May SSGV at all sites except YR1-IS and YR2-IS in Yarrangobilly River Catchment and TR-RS at Talbingo Reservoir, which were below the LOR (Figure 22- Figure 24).

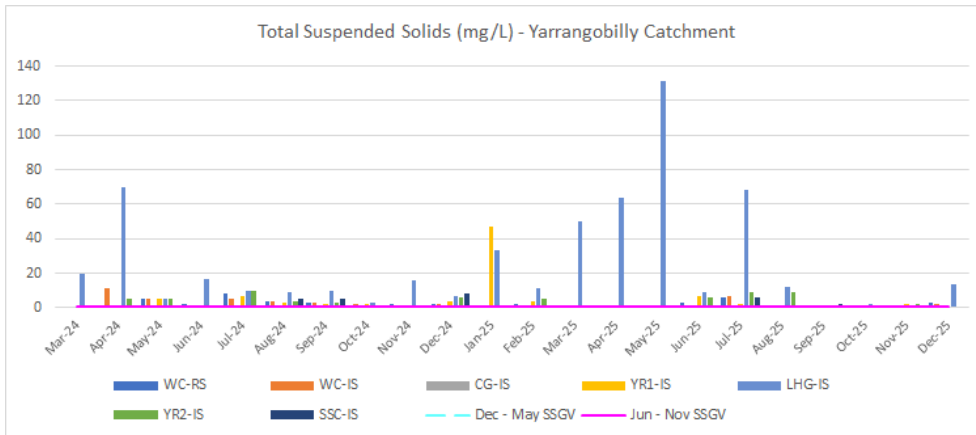


FIGURE 22: TSS FOR YARRANGOBILLY RIVER CATCHMENT

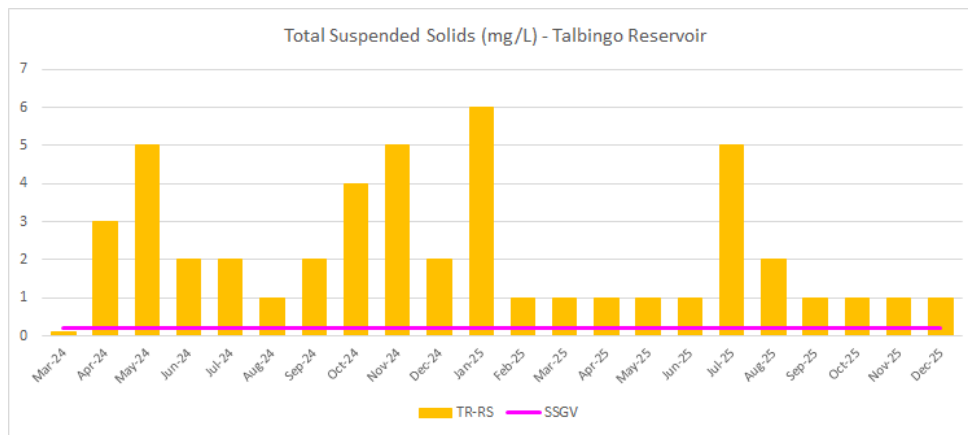


FIGURE 23: TSS FOR TALBINGO RESERVOIR

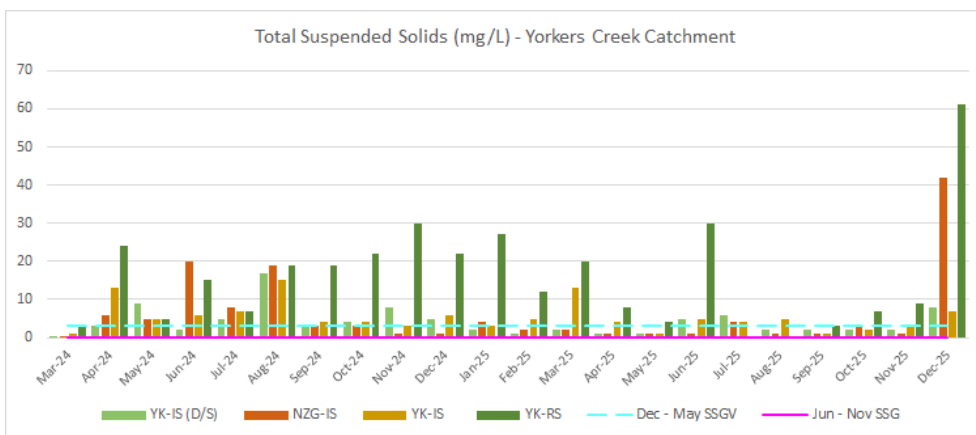


FIGURE 24: TSS FOR YORKERS CREEK CATCHMENT

5.2.1.8 Total Dissolved Solids

In December 2025, Total Dissolved Solids (mg/L) increased at each site compared with November 2025 values. All sites exceeded the December-May SSGV (Figure 25-Figure 27).

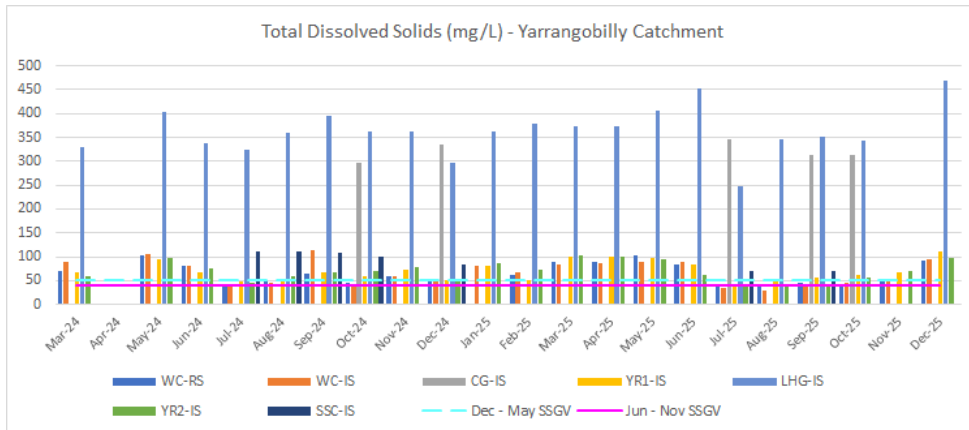


FIGURE 25: TDS FOR YARRANGOBILLY RIVER CATCHMENT

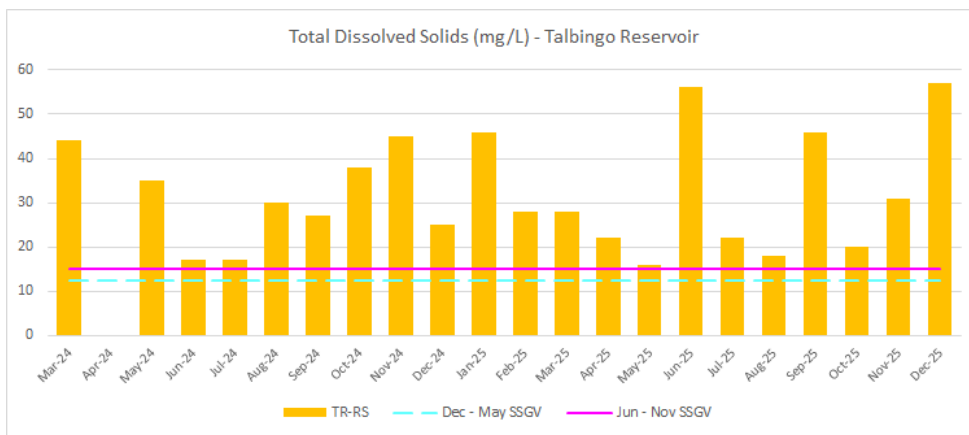


FIGURE 26: TDS FOR TALBINGO RESERVOIR

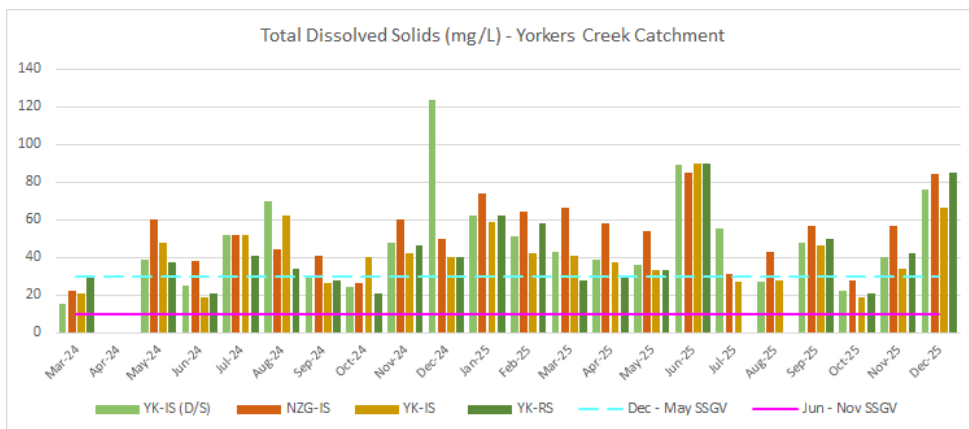


FIGURE 27: TDS FOR YORKERS CREEK CATCHMENT

5.2.1.9 Redox

Redox (mV) results exhibited a general decrease during the December 2025 sampling period (Figure 28 – Figure 30). All sites across all catchments recorded values above the December – May SSGV.

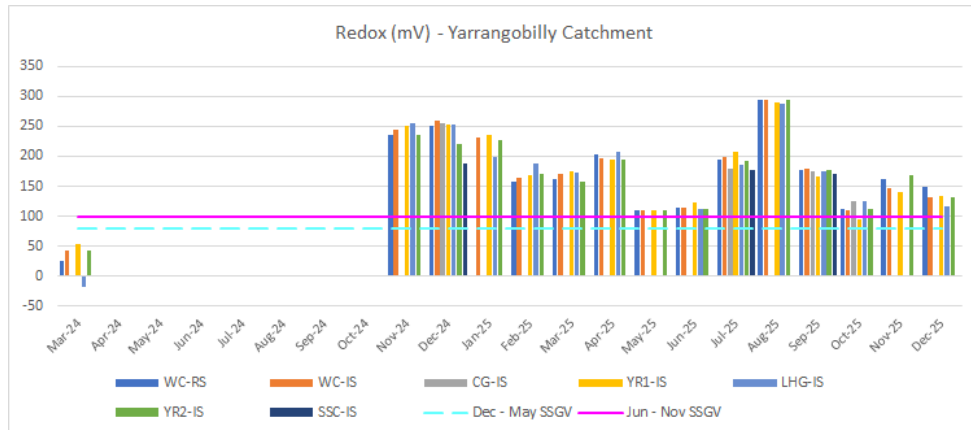


FIGURE 28: REDOX FOR YARRANGOBILLY RIVER CATCHMENT

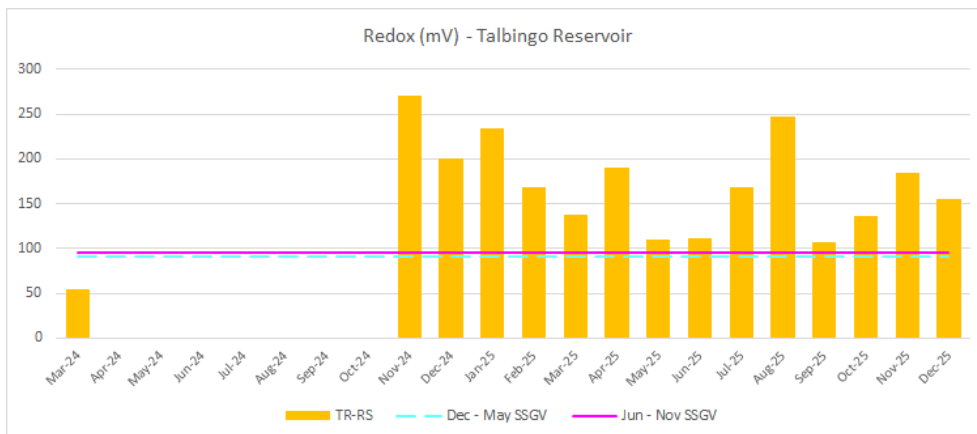


Figure 29: Redox for Talbingo Reservoir

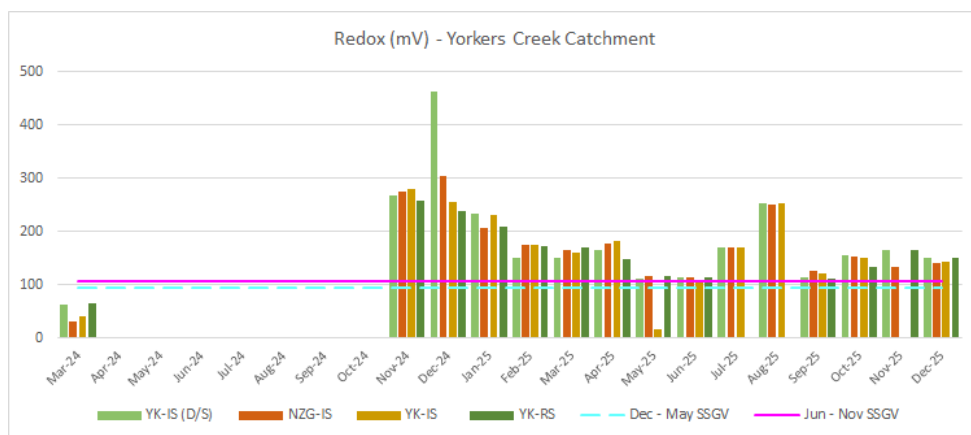


FIGURE 30: REDOX FOR YORKERS CREEK CATCHMENT

5.2.1.10 Nitrogen Oxides

Nitrogen Oxides (mg/L) levels remained below the LOR during the December 2025 sampling period across all sites, except the reference sites at Yarrangobilly River Catchment (WC-RS) and Yorkers Creek Catchment (YK-RS), which were both above the December-May SSGV (Figure 31 – 33)

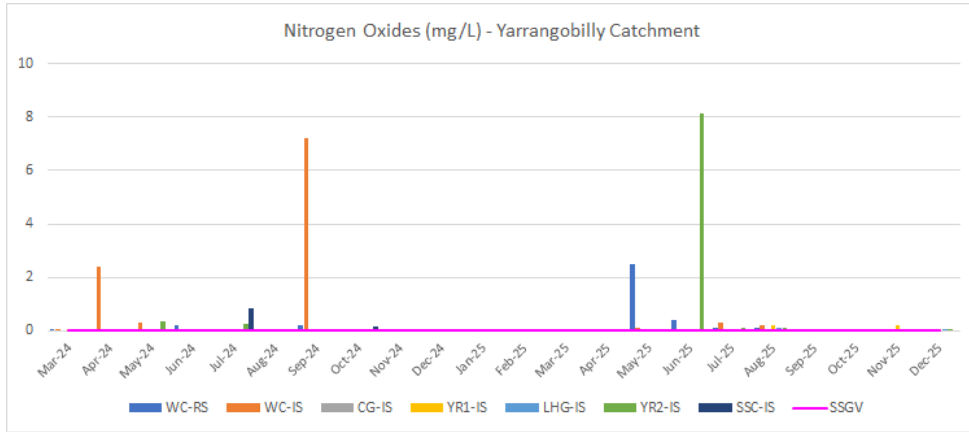


FIGURE 31: NITROGEN OXIDES FOR YARRANGOBILLY RIVER CATCHMENT

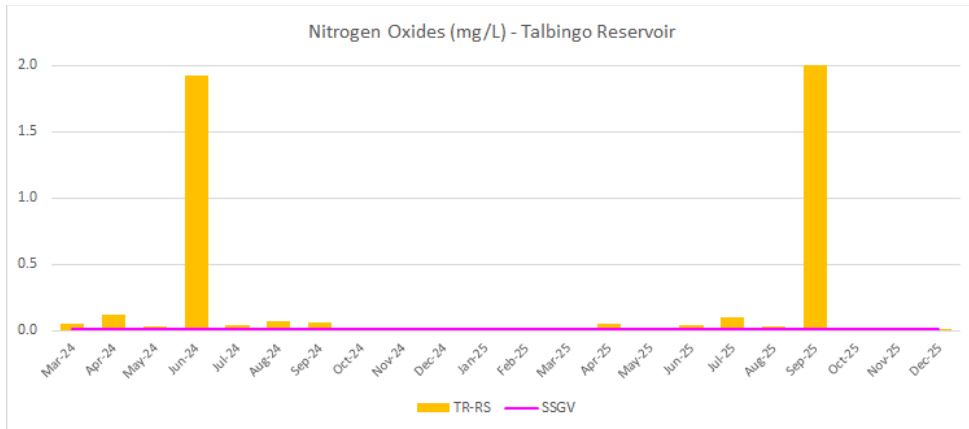


FIGURE 32: NITROGEN OXIDES FOR TALBINGO RESERVOIR

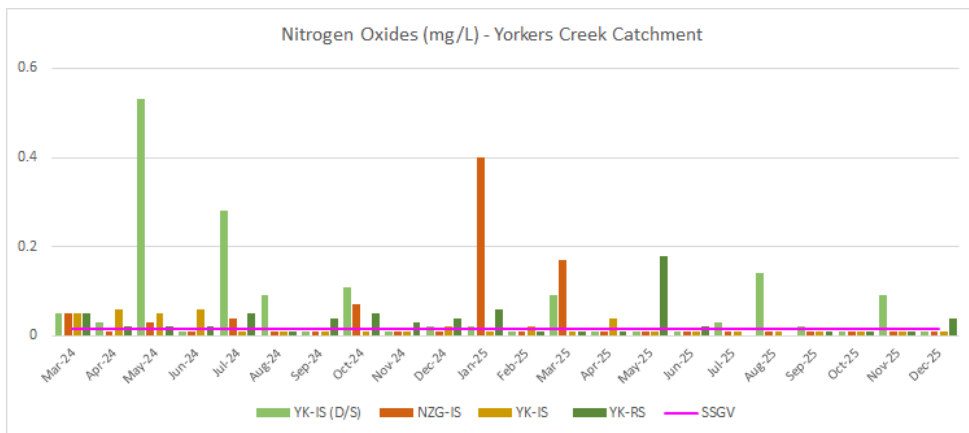


FIGURE 33: NITROGEN OXIDES FOR YORKERS CREEK CATCHMENT

5.2.1.11 Ammonia

During the December 2025 sampling period, Ammonia (mg/L) concentrations exceeded the SSGV at all sites within Yarrangobilly River Catchment (Figure 34). Talbingo Reservoir recorded values below the LOR (Figure 35). Exceedances were identified at YK-RS and YK-IS(D/S) in Yorkers Creek Catchment, with the remaining sites below the LOR (Figure 36).

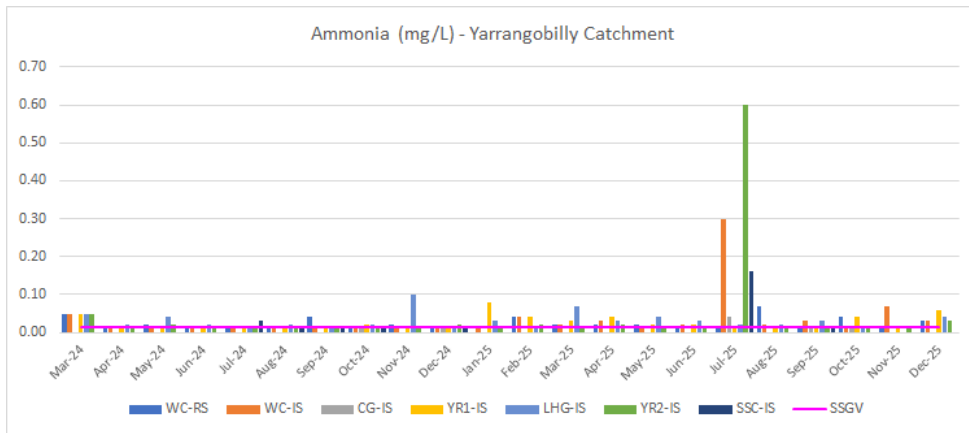


FIGURE 34: AMMONIA FOR YARRANGOBILLY RIVER CATCHMENT

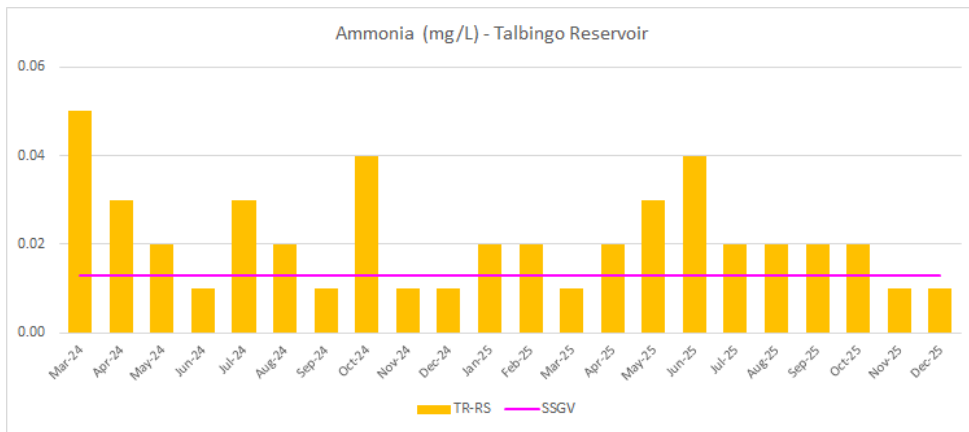


FIGURE 35: AMMONIA FOR TALBINGO RESERVOIR

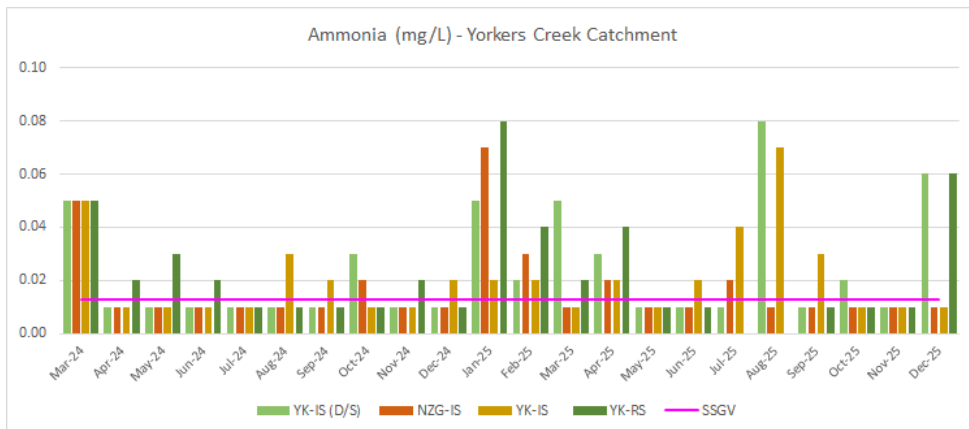


FIGURE 36: AMMONIA FOR YORKERS CREEK CATCHMENT

5.2.1.12 Cyanide

Cyanide (mg/L) concentration was below the LOR at all sites across all three catchments, refer Figure 37 to Figure 38.

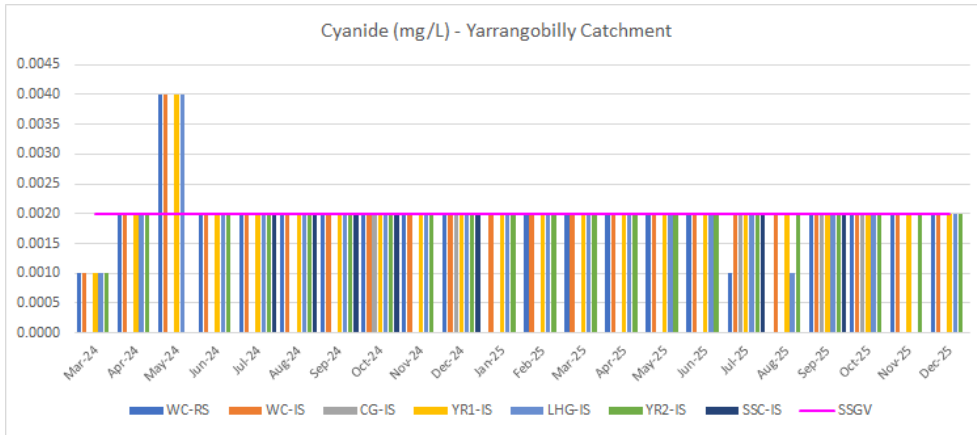


FIGURE 37: CYANIDE FOR YARRANGOBILLY RIVER CATCHMENT

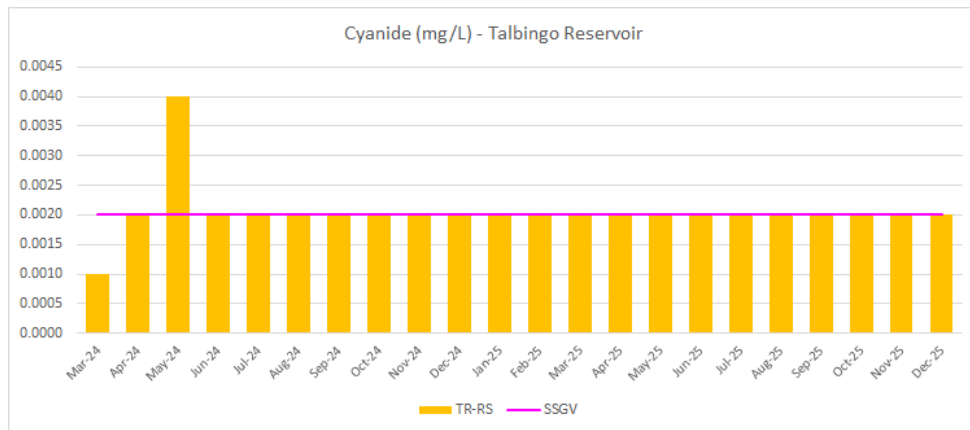


FIGURE 38: CYANIDE FOR TALBINGO RESERVOIR

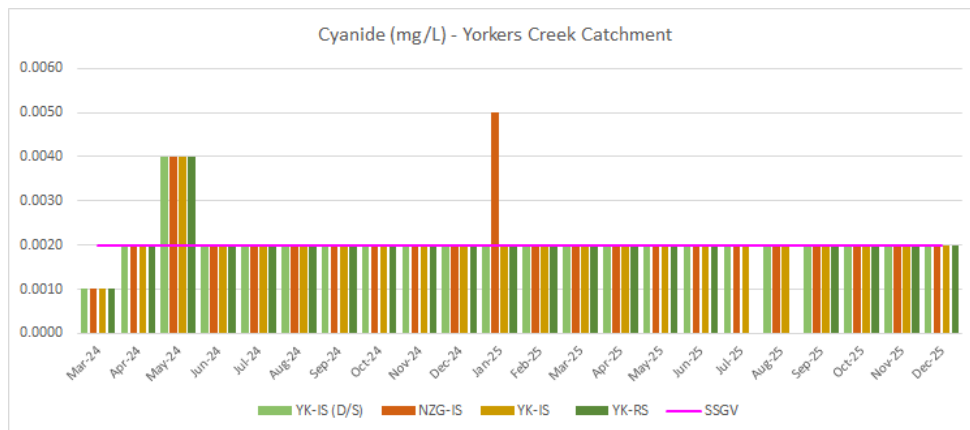


FIGURE 38: CYANIDE FOR YORKERS CREEK CATCHMENT

5.2.1.13 Total Hardness

December 2025 Total Hardness results were below the December-May SSGV in Yarrangobilly River Catchment, except for LHG-IS and YR1-IS, which exceeded the SSGV (Figure 40). Similar to previous reporting periods, LGH-IS values were markedly high. All sites at Talbingo Reservoir and Yorkers Creek Catchment exceeded the December-May SSGV (Figure 41—42).

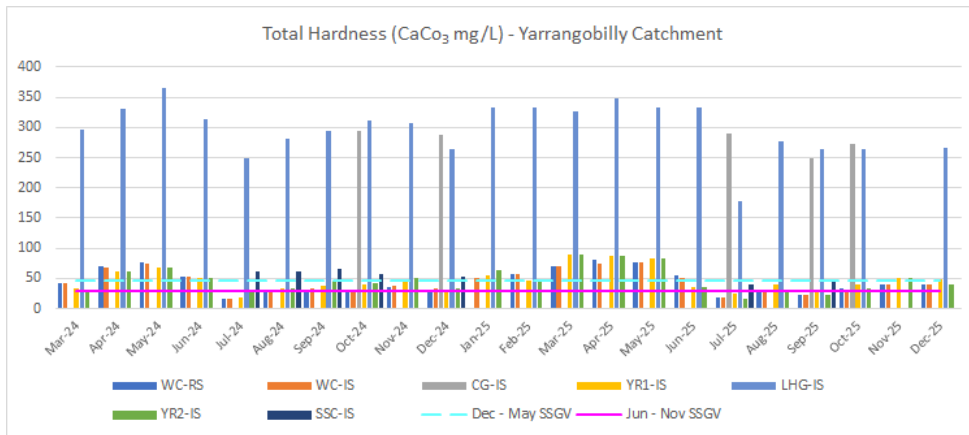


FIGURE 39: CaCO₃ FOR YARRANGOBILLY RIVER CATCHMENT

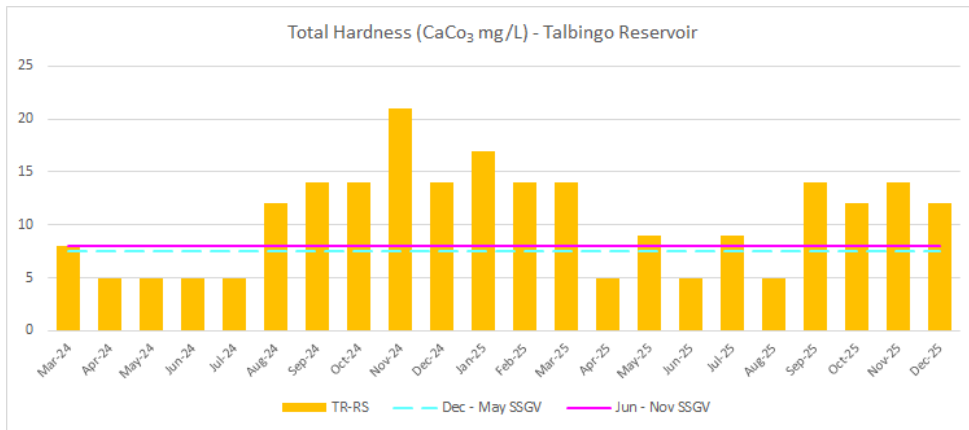


FIGURE 40: CaCO₃ FOR TALBINGO RESERVOIR

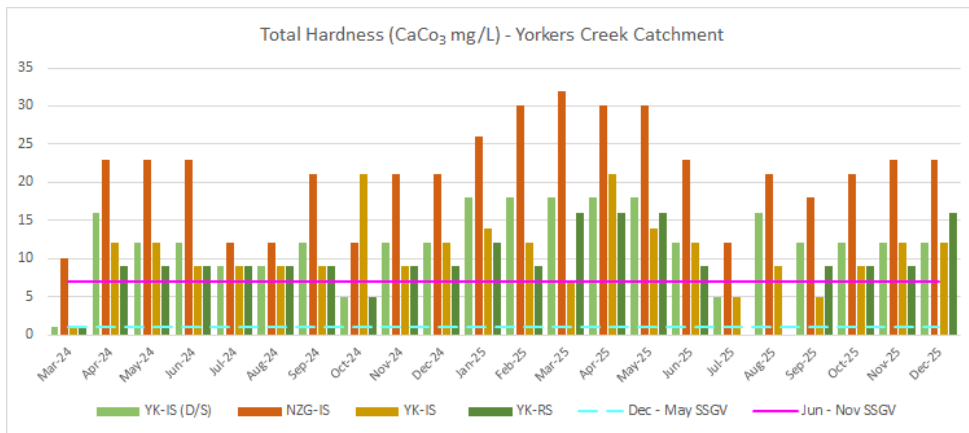


FIGURE 41: CaCO₃ FOR YORKERS CREEK CATCHMENT

5.2.1.14 Total Kjeldahl Nitrogen

During the December 2025 sampling period, all sites within Yarrangobilly River Catchment recorded values for Total Kjeldahl Nitrogen (mg/L) on-par with the SSGV or below the LOR (Figure 43). In contrast, sites at Talbingo Reservoir and Yorkers Creek Catchment exceeded the SSGV, with a notable increase at the Yorkers Creek Catchment reference site (YK-RS), refer Figure 44—45.

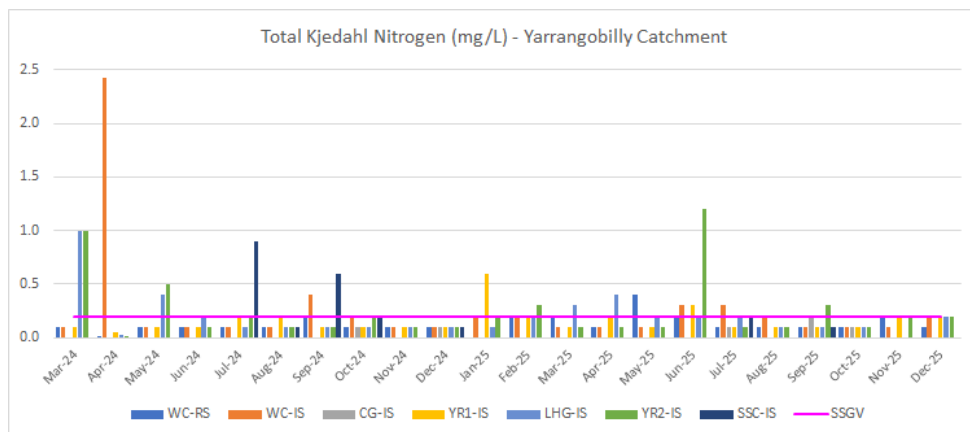


FIGURE 42: TKN FOR YARRANGOBILLY RIVER CATCHMENT

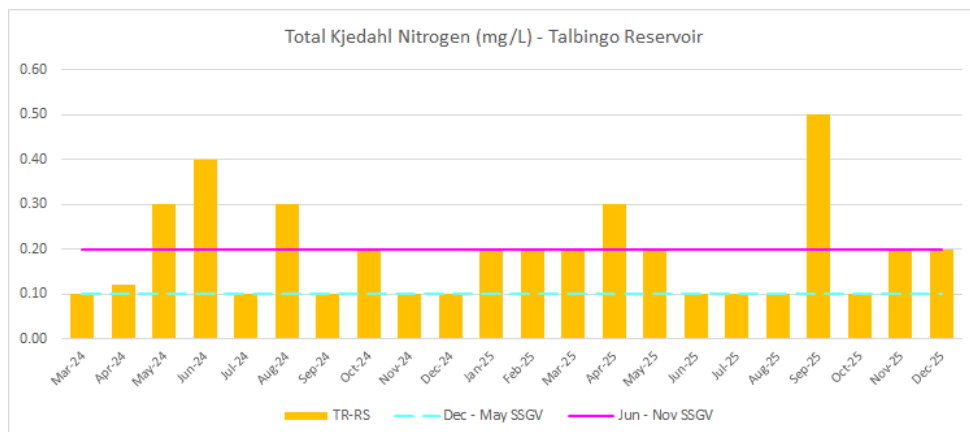


FIGURE 43: TKN FOR TALBINGO RESERVOIR

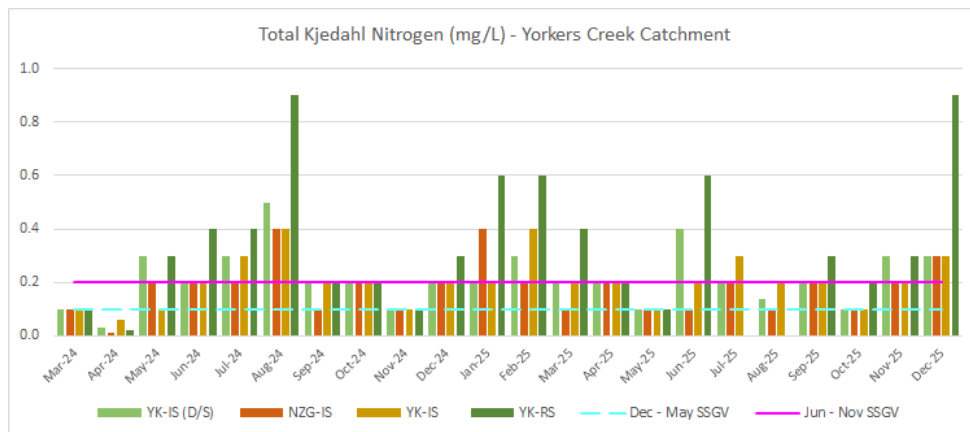


FIGURE 44: TKN FOR YORKERS CREEK CATCHMENT

5.2.1.15 Total Nitrogen

TN (mg/L) results for the December 2025 sampling period were on-par with the SSGV or below the LOR at all sites across Yarrangobilly River Catchment and Talbingo Reservoir (Figure 46-Figure 47). A marked increase in TN was exhibited at YK-RS, which increased from 0.3mg/L to 0.9mg/L (Figure 48).

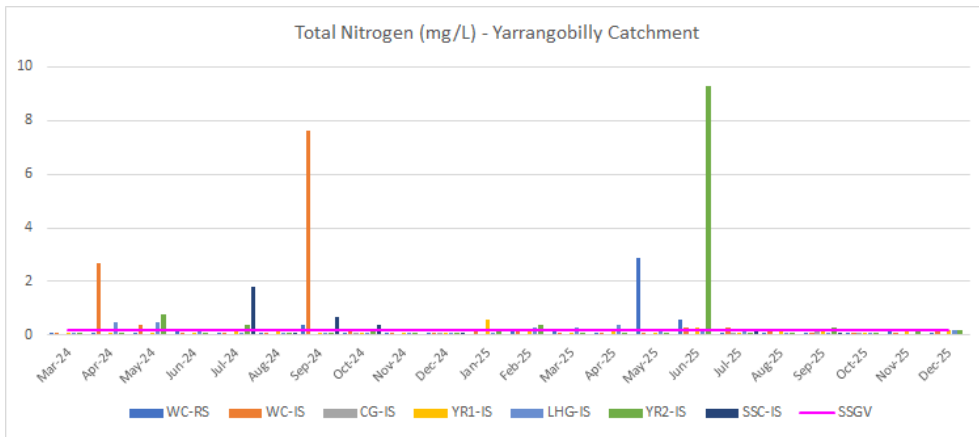


FIGURE 45: TN FOR YARRANGOBILLY RIVER CATCHMENT

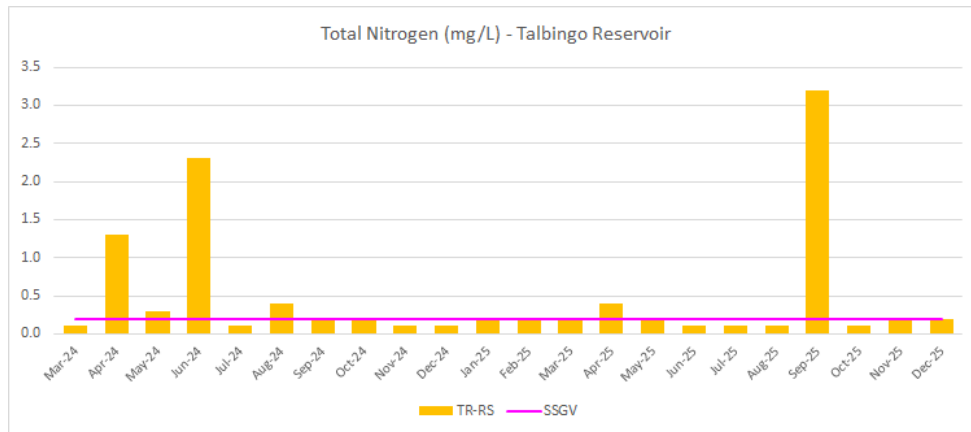


FIGURE 46: TN FOR TALBINGO RESERVOIR

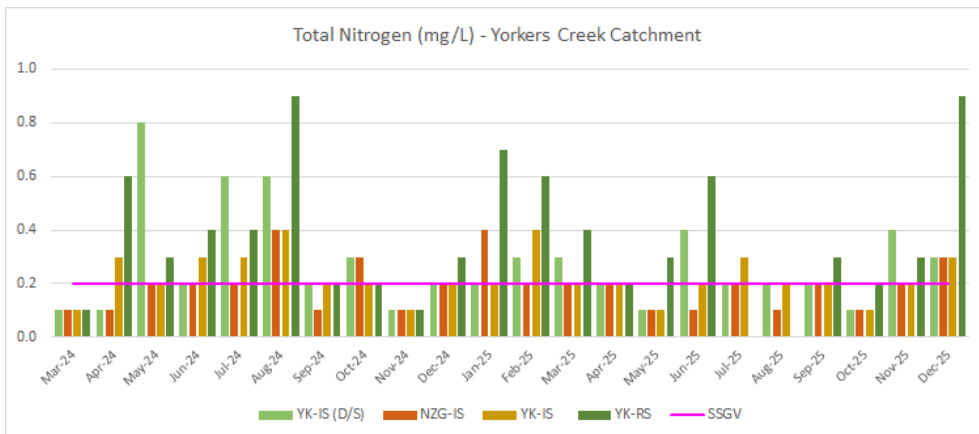


FIGURE 47: TN FOR YORKERS CREEK CATCHMENT

5.2.1.16 Total Phosphorus

During the December 2025 sampling period, a marginal Total Phosphorus (TP, mg/L) SSGV exceedance was recorded at LHG-IS in Yarrangobilly River Catchment (Figure 49). Talbingo Reservoir (TR-RS) recorded a TP value on-par with the SSGV (Figure 50). All sites across Yorkers Creek Catchment exceeded the SSGV and exhibited a marked increase compared to November 2025 values (Figure 51).

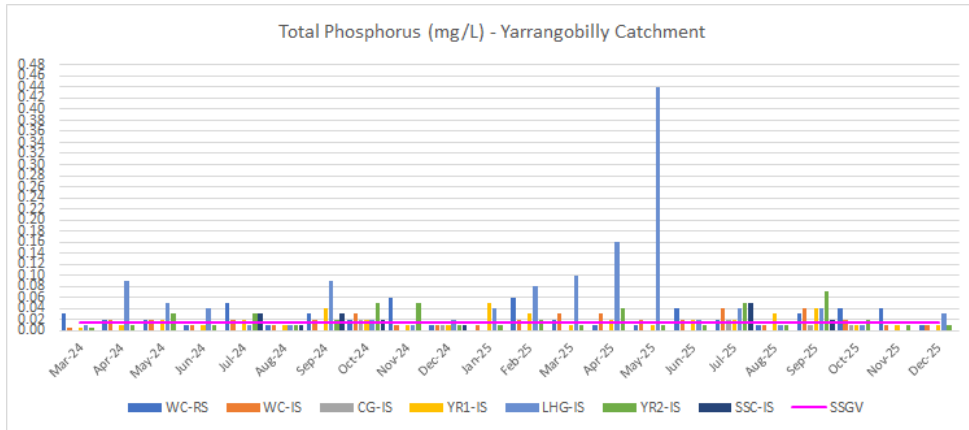


FIGURE 48: TP FOR YARRANGOBILLY RIVER CATCHMENT

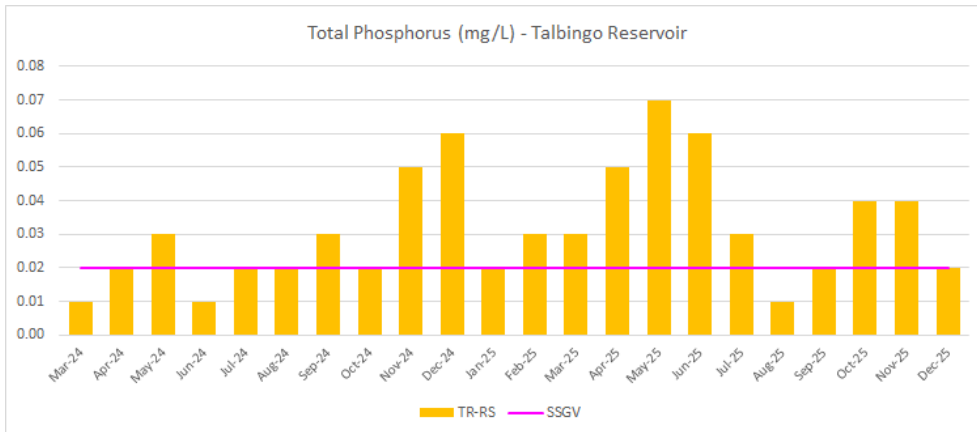


FIGURE 49: TP FOR TALBINGO RESERVOIR

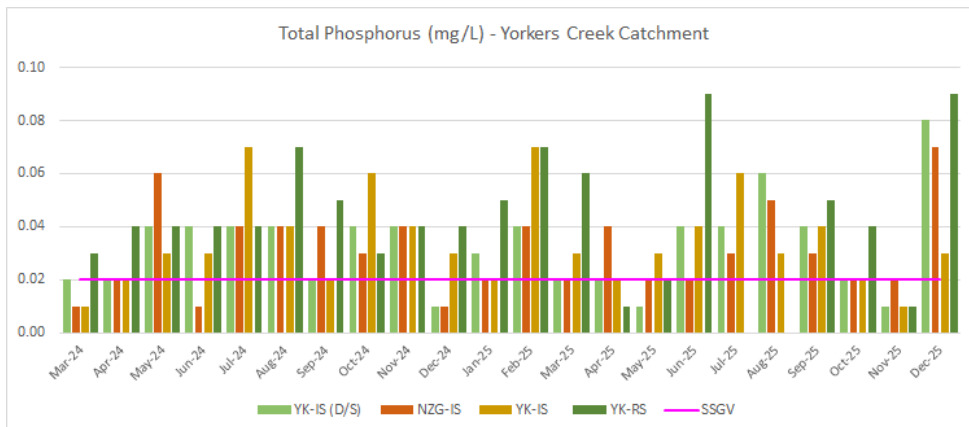


FIGURE 50: TP FOR YORKERS CREEK CATCHMENT

5.2.1.17 Reactive Phosphorus

All sites measured below the LOR for RP (mg/L), refer to Figure 51 to Figure 53.

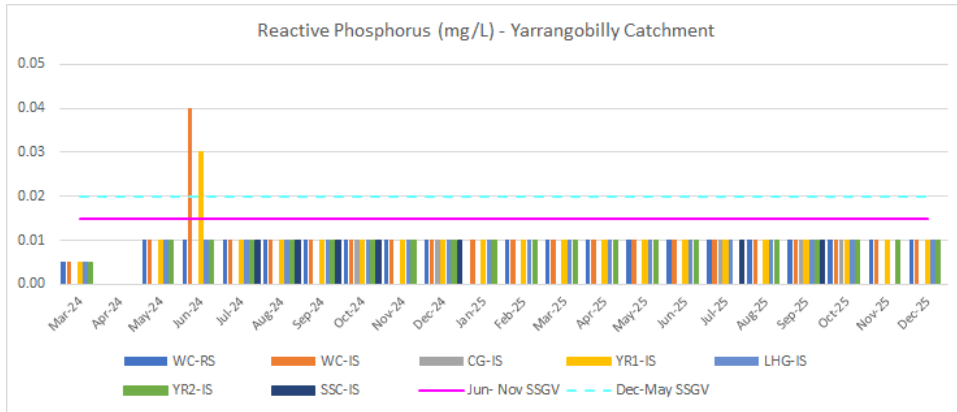


FIGURE 51: RP FOR YARRANGOBILLY RIVER CATCHMENT

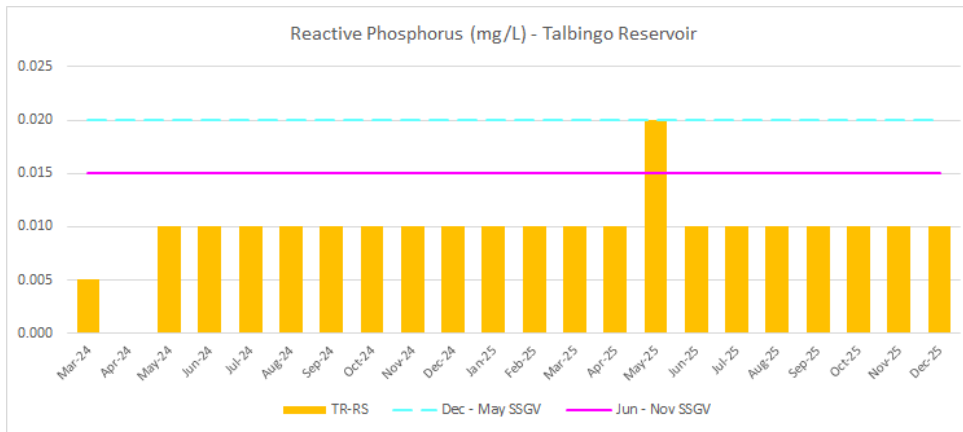


FIGURE 52: RP FOR TALBINGO RESERVOIR

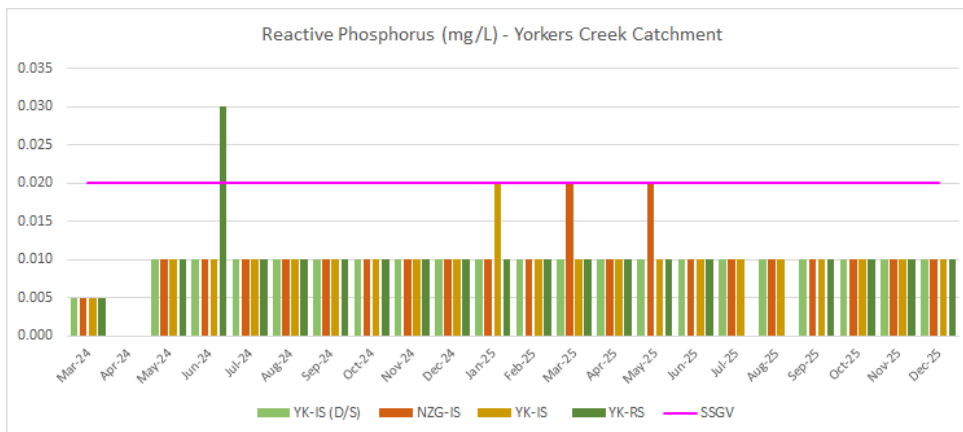


FIGURE 53: RP FOR YORKERS CREEK CATCHMENT

5.2.2 Dissolved Metals

Dissolved metals exceeding the relevant SSGV are listed in Table 4.

Table 4: Results for Dissolved Metals

DISSOLVED METALS RESULTS				
Analyte	Site	Result (mg/L)	SSGV (mg/L)	Comment
Al	YR2-IS	0.10	0.03	YR2-IS within Yarrangobilly River Catchment recorded a greater value than the December-May SSGV (0.03mg/L) for dissolved Al. All other samples collected were within the respective SSGV value or below the LOR.
Fe	LHG-IS	0.16	0.03	LHG-IS and YR2-IS within Yarrangobilly River Catchment exceeded the dissolved Fe SSGV value (0.03mg/L). YK-RS within Yorkers Creek Catchment exceeded the SSGV value (0.41mg/L). All other samples were within the respective SSGV values or below the LOR.
	YR2-IS	0.06		
	YK-RS	1.04	0.41	
Mn	WC-RS	0.003	0.002	All sites across all catchments exceeded the respective SSGV for Mn(mg/L) during the December 2025 sampling period, except YR1-IS in Yarrangobilly River Catchment and TR-RS at Talbingo Reservoir, which were below or on-par with the SSGV value.
	WC-IS	0.003		
	LHG-IS	0.113		
	YR2-IS	0.005		
	YK-RS	0.132	0.005	
	YK-IS(D/S)	0.011		
	NZG-IS	0.025		
Zn	YK-IS	0.025	0.002	All sites across Yorkers Creek Catchment exceeded the SSGV for Zn(mg/L), except NZG-IS which was below the LOR.
	YK-RS	0.024		
	YK-IS(D/S)	0.007		
	YK-IS	0.013		

5.2.3 Total Metals

Total metals exceeding the DGV are listed in Table 5.

Table 5: Results for Total Metals

TOTAL METALS RESULTS				
Analyte	Site	Result (mg/L)	DGV (mg/L)	Comment
Al	WC-RS	0.11	0.027	All listed sampling locations exceeded the DGV value for Total Al (0.027mg/L).
	WC-IS	0.10		
	YR1-IS	0.03		
	LHG-IS	0.10		
	YR2-IS	0.09		
	TR-RS	0.03		
	YK-RS	1.36		
	YK-IS(D/S)	0.37		
	NZG-IS	0.43		
	YK-IS	0.42		
Cd	LHG-IS	0.001	0.0006	LHG-IS in Yarrangobilly River Catchment exceeded the DGV value for Cd (mg/L). All other sites were below the LOR.
Cr	YK-RS	0.002	0.00001	The reference site at Yorkers Creek Catchment (YK-RS) exceeded the DGV for Cr(mg/L) for the second consecutive month. All other sites were below the LOR.
Cu	YK-RS	0.002	0.001	The reference site at Yorkers Creek Catchment (YK-RS) exceeded the DGV for Cu(mg/L). All other sites were below the LOR.
Zn	YK-RS	0.017	0.0024	YK-RS and YK-IS(D/S) in Yorkers Creek Catchment exceeded the DGV of 0.0024mg/L. All other samples were below the LOR.
	YK-IS(D/S)	0.006		
Fe	LHG-IS	0.38	0.30	During the December 2025 sampling period, LHG-IS in Yarrangobilly River Catchment and all sites across Yorkers Creek Catchment exceeded the DGV for Fe(mg/L). A notable increase was recorded at YK-RS at 2.43mg/L. All other sites were below the DGV or below the LOR.
	YK-RS	2.43		
	YK-IS(D/S)	0.43		
	NZG-IS	0.68		
	YK-IS	0.64		

6 DISCUSSION

Below is a summary of key observations and discussion points from the December 2025 monitoring results:

- Potential impacts to SWQ:
 - » Transmission line clearing and bulk earthworks activities were ongoing within the Yarrangobilly and Yorkers Creek catchment areas
 - » Impact sites within the Yarrangobilly River catchment are influenced by other activities associated with the Snowy 2.0
 - » TR-RS is located in O'Hares Campground, a popular public recreational area for water based activities including boating. It is also located adjacent to ancillary infrastructure associated with Talbingo Reservoir
 - » Many reference sites and impact sites are located adjacent to publicly accessible tracks used for maintenance and recreational activities
 - » Hoof marks, fauna scats and aquatic fauna indicate presence of fauna in and around waterways increasing potential for erosion of banks and sedimentation into waterways
 - » Vegetative debris and materials in the water have potential to leach nutrients into waterways
 - » Existing eroded banks increase potential for sedimentation into waterways
 - » Waterways with shallow water depth are more prone to SWQ impacts due to lack of volume
 - » Overhanging vegetation has potential to fall into waterways and influence water parameters
 - » Vegetation cover along the riparian zone can influence the stability of the banks and groundwater which in turn may influence the waterways
 - » A sheen from organic decomposition observed on the surface of the water at LHG-IS may impact WQ parameters
- Sampling and analysis:
 - » A number of parameters were recorded below (<) the LOR
 - » Some parameters remain constrained by laboratory LOR relative to SSGV/DGV thresholds
 - » Shallow water depth increased the likelihood of sample disturbance during collection
 - » Redox, RP and DO (ppm) analyses may be subject to reduced reliability due to holding time exceedances
 - » SSC-IS and CG-IS were dry at the time of monitoring, limiting dataset completeness
- SWQ parameters:
 - » Since March 2024, sites at the Yarrangobilly River catchment, including the reference site WC-RS, have consistently exceeded the relevant SSGV/DGV for the following parameters: CaCO₃, TSS, TDS, redox and total Al
 - » Since March 2024, Talbingo Reservoir has consistently exceeded the relevant SSGV/DGV for the following parameters: DO, pH, turbidity, ammonia, nitrogen oxides, CaCO₃, TSS, TDS, redox and total Al

- » Since March 2024, sites at the Yorkers Creek catchment, including the reference site YK-RS, have consistently exceeded the relevant SSGV/DGV for the following parameters: DO, pH, turbidity, dissolved Mn, TP, nitrogen oxides, CaCO₃, TSS, TDS, redox, total Al and total Fe
- » Temperature:
 - Increased in Yarrangobilly River catchment (~19°C)
 - Remained consistent at Talbingo Reservoir
 - Decreased in Yorkers Creek catchment (~13°C)
- » pH:
 - Increased across most sites compared to November
 - Majority of sites exceeded the December–May SSGV
 - LHG-IS and TR-RS recorded values below SSGV
- » DO (%):
 - Improved in Yarrangobilly River and Yorkers Creek catchments
 - Slightly decreased at Talbingo Reservoir
 - Remained below SSGV across all sites
- » SPC and EC:
 - Exceedances recorded across most sites and catchments
 - Minor variability between sites, with isolated compliance
- » Turbidity:
 - Generally exceeded SSGV across catchments
 - Significant increase at YR1-IS (31.04 NTU)
- » TSS:
 - Exceeded SSGV at most sites
 - Some sites below LOR (YR1-IS, YR2-IS, TR-RS)
- » TDS:
 - Increased across all sites compared to November
 - Exceeded SSGV at all locations
- » Redox:
 - Decreased compared to November
 - Remained above SSGV across all sites
- » Nitrogen oxides:

- Below LOR at most sites
- Exceedances recorded at WC-RS and YK-RS
- » Ammonia:
 - Exceeded SSGV across all Yarrangobilly River catchment sites
 - Below LOR at Talbingo Reservoir
 - Exceedances at YK-RS and YK-IS (D/S)
- » TKN:
 - Generally compliant within Yarrangobilly River catchment
 - Exceedances recorded at Talbingo Reservoir and Yorkers Creek catchment
- » TN:
 - Generally compliant across Yarrangobilly River and Talbingo Reservoir
 - Notable increase at YK-RS
- » TP:
 - Marginal exceedance at LHG-IS
 - Talbingo Reservoir on-par with SSGV
 - Exceeded SSGV across all Yorkers Creek sites with notable increase
- » RP:
 - Below LOR across all sites
- » Dissolved metals:
 - Dissolved Mn exceeded SSGV across most sites and catchments
 - Dissolved Zn exceeded SSGV across most Yorkers Creek sites
 - Isolated exceedances of Al and Fe within Yarrangobilly River catchment
 - Elevated Fe recorded at YK-RS
- » Total metals:
 - Total Al exceeded DGV across all sites
 - Cd exceeded DGV at LHG-IS
 - Cr and Cu exceeded DGV at YK-RS
 - Zn exceeded DGV at YK-RS and YK-IS (D/S)
 - Fe exceeded DGV at LHG-IS and all Yorkers Creek sites, with significant increase at YK-RS
- »

- » Exceedances remain widespread and consistent with baseline trends observed since March 2024
- » Results continue to be influenced by:
 - Low flow and shallow water conditions
 - Natural catchment characteristics (sediment, organics, geology)
 - Ongoing disturbance from project and external activities
- » Increased turbidity, TDS and nutrient concentrations in some locations (particularly Yarrangobilly and Yorkers Creek catchments) may reflect:
 - Reduced dilution capacity
 - Mobilisation of sediments and organic matter
- » Elevated metals concentrations are consistent with historical results and likely influenced by natural geology and low flow conditions
- » Despite exceedances, field observations (clear water at several sites, presence of aquatic vegetation and fauna) indicate that waterways continue to function and support aquatic ecosystems

7 CONCLUSION

Monthly construction SWQ monitoring was undertaken in December 2025 in accordance with EPL 21753 and the revised methodology outlined in Section 3, across the monitoring locations listed in Table 1.

The results indicate that exceedances of SSGV and DGV continue to be recorded across all catchments (Yarrangobilly River, Talbingo Reservoir and Yorkers Creek), consistent with trends observed since the commencement of construction monitoring in March 2024. These exceedances are present at both reference and impact sites, indicating that water quality is influenced by a combination of natural catchment conditions, low flow environments, existing disturbances and broader project-related activities.

During the December 2025 sampling period, variability in temperature was observed across catchments, with increases recorded in the Yarrangobilly River catchment and decreases in the Yorkers Creek catchment. pH generally increased across most sites, with the majority exceeding the seasonal SSGV, while dissolved oxygen improved in some catchments but remained below guideline values across all sites.

Parameters including specific conductance, electrical conductivity, total dissolved solids and redox continued to exceed guideline values at multiple locations. Turbidity and total suspended solids exhibited exceedances at several sites, with a notable increase in turbidity recorded at YR1-IS. Nutrient concentrations were generally low or below detection limits at most locations, with isolated exceedances observed for ammonia, total Kjeldahl nitrogen and total phosphorus, particularly within the Yarrangobilly River and Yorkers Creek catchments.

Exceedances of dissolved and total metals were recorded across multiple sites, with elevated concentrations of aluminium, manganese, iron, zinc and copper consistent with historical monitoring results. These exceedances are likely influenced by natural geology, low flow conditions and catchment disturbance.

Overall, the December 2025 monitoring results do not indicate a significant deterioration in surface water quality attributable solely to construction activities. Observations of clear water at several sites, along with the presence of aquatic vegetation and fauna, indicate that waterways remain capable of supporting aquatic ecosystems.

Continued implementation of erosion and sediment controls, together with ongoing monitoring, will ensure that potential impacts to surface water quality are identified and appropriately managed throughout the construction phase.

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Appendix A: Field Sheet (UGL, 2025)



WATER QUALITY MONITORING FIELD SHEET

Date: 14.12.25 Personnel: EH & SVB Sampling Purpose: DEC W W W MONTHLY

Site	Time	Temp (°C)	Water Pressure (mmHg)	DO (%)	SPC (µs/cm)	pH	Turbidity (NTU)	TSS (mg/L)	Observations
DGV:		-	-	90 - 110	30 - 350	6.5 - 8	2 - 25	0.2	Weather Pre 24 hrs: 0.00mm in 24 hr (Lobs)
Dec - May SSGV:		-	-	96.2	115	7.85	0.37	0.2	Weather Forecast: 60.1. 1-5mm
Jun - Nov SSGV:		-	-	89.7	88	7.62	5.12	1	Weather Time of Sampling: Overcast
WC-RS Wallace Creek	11:18	17.2	704.6	80.1	109.9 EC	7.95 mV	4.54	0.00	<ul style="list-style-type: none"> low level & moderate flow Clear visibility eroded bank & exposed rocky fine bed aquatic veg tree root prior company sampling overhanging veg & outgrown low level & flow overhanging veg
WC-IS Wallace Creek	11:32	17.6	704.6	81.8	109.0 EC	8.10 mV	4.29	0.00	<ul style="list-style-type: none"> clear visibility eroded bank foam collecting waters surface rocky/pebbly bed under cut bank
CG-IS Cave Gully	<p>Very low level Dry, no flow</p>								
YR1-IS Yarrangobilly River	12:09	20.1	706.7	81.9	124.8 EC	8.28 mV	31.04	0.00	<ul style="list-style-type: none"> moderate level & flow clear visibility rocky & pebbly bed adjacent to transmission line aquatic veg moderate weed presence underneath bridge



WATER QUALITY MONITORING FIELD SHEET

Date: 14.12.25 Personnel: EH & SVB

Sampling Purpose: DEC MON MONTHLY

Site	Time	Temp (°C)	Water Pressure (mmHg)	DO (%)	SPC (µs/cm)	pH	Turbidity (NTU)	TSS (mg/L)	Observations
	DGV:	-	-	90 - 110	30 - 350	6.5 - 8	2 - 25	0.2	Weather Pre 24 hrs: 0.00mm in 24hr (Lobs)
	Dec - May SSGV:	-	-	96.2	115	7.85	0.37	0.2	Weather Forecast: 60-115mm in 24hr.
	Jun - Nov SSGV:	-	-	89.7	88	7.62	5.12	1	Weather Time of Sampling: OVERCAST
LHG-IS Lick Hole Gully	1:54	21.6	703.4	72.3	61.9 EC 57.9	7.72 mV 117.0	5.58	0.00	<ul style="list-style-type: none"> very low level odour like sulphur smell moderate visibility slight yellow tinge to water rocky bed sandy eroded & undercut banks aquatic vegetation
YR2-IS Yarrangobilly River	11:49	18.2	704.9	81.4	109.7 EC 95.5	8.13 mV 131.5	4.63	0.00	<ul style="list-style-type: none"> very low level & flow clear visibility rocky bed pebbly bed overhanging vegetation eroded & undercut banks aquatic vegetation
SSC-IS Sheep Station Creek									<ul style="list-style-type: none"> DRY, NO FLOW
TR-RS Talbingo Reservoir	9:13	18.3	708.8	78.1	41.2 EC 36.0	7.45 mV 155.3	3.59	0.00	<ul style="list-style-type: none"> moderate level, low flow clear visibility W dispensed sediment presence of cambers, fire, ducts & dead fish at time of sampling grass & shrubs adjacent to public accessible road.



WATER QUALITY MONITORING FIELD SHEET

Date: 14.12.25 Personnel: EH & SD Sampling Purpose: DEC WQM MONTHLY

Site	Time	Temp (°C)	Water Pressure (mmHg)	DO (%)	SPC (µS/cm)	pH	Turbidity (NTU)	TSS (mg/L)	Observations
	DGV:	-	-	90 - 110	30 - 350	6.5 - 8	2 - 25	0.2	Weather Pre 24 hrs: 0.5mm in 24hr
	Dec - May SSGV:	-	-	96.2	115	7.85	0.37	0.2	Weather Forecast: Overcast Variable 60% 1-5mm
	Jun - Nov SSGV:	-	-	89.7	88	7.62	5.12	1	Weather Time of Sampling: Overcast
YK-RS Yorkers Creek	7:42	11.1	659.9	58.9	55.2 EC	6.84 mV	32.56	0.00	Very low level & flow Brown water Turbid water muddy banks adjacent to public access track overhanging veg eroded banks new track work sandy bed
YK-IS (D/S) Yorkers Creek	8:08	11.8	663.5	71.6	48.1 EC	7.06 mV	7.49	0.00	Low flow & level Brown tinge to water Low visibility Foil collecting on water surface adjacent to public access track overgrown & overhanging veg aquatic veg grass, shrubs, trees eroded muddy bank
NZG-IS New Zealand Gully	7:07	11.5	665.2	69.2	101.2	7.41 EC	5.55 mV	0.00	High mod blackberry adjacent to public access track eroded muddy bank Very low & flow Yellow & brown tinge to water rocky/sandy bed adjacent to river Low visibility
YK-IS Yorkers Creek	7:27	10.9	661.8	64.3	49.0	6.90 EC	8.09 mV	0.00	Foam collecting on water surface moderate weed density



Appendix B: COA (ALS, 2025a), QA/QC Assessment (ALS, 2025b) and QCR (ALS, 2025c)



CERTIFICATE OF ANALYSIS

Work Order	: ES2540098	Page	: 1 of 8
Client	: UGL LIMITED	Laboratory	: Environmental Division Sydney
Contact	: EBONY HAMES	Contact	: Customer Services ES
Address	: Level 4, 40 Miller Street North Sydney 2060	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: ----	Date Samples Received	: 16-Dec-2025 09:50
Order number	: 4501837828	Date Analysis Commenced	: 16-Dec-2025
C-O-C number	: ----	Issue Date	: 23-Dec-2025 16:13
Sampler	: EBONY HAMES		
Site	: Cabramurra/Tumbarumba NSW		
Quote number	: ES24UGLLIM0001_V4		
No. of samples received	: 11		
No. of samples analysed	: 11		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EG020: It is recognised that total concentration is less than dissolved for some metal analytes. However, the difference is within experimental variation of the methods.
- TDS by method EA-015 may bias high for various samples due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	TR-RS	WC-RS	YR2-IS	YR1-IS	YK-RS
Sampling date / time				14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	
Compound	CAS Number	LOR	Unit	ES2540098-001	ES2540098-002	ES2540098-003	ES2540098-004	ES2540098-005	
				Result	Result	Result	Result	Result	
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L	57	93	98	110	85	
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	1	mg/L	1	3	<1	<1	61	
ED093F: SAR and Hardness Calculations									
Total Hardness as CaCO3	----	1	mg/L	12	41	41	48	16	
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	<0.01	0.01	0.10	0.02	0.26	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.001	
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.005	<0.005	0.024	
Manganese	7439-96-5	0.001	mg/L	0.002	0.003	0.005	0.002	0.132	
Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.06	<0.05	1.04	
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.03	0.11	0.09	0.03	1.36	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.002	
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.002	
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.002	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	0.017	
Manganese	7439-96-5	0.001	mg/L	0.008	0.008	0.005	0.003	0.161	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	TR-RS	WC-RS	YR2-IS	YR1-IS	YK-RS
Sampling date / time				14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	
Compound	CAS Number	LOR	Unit	ES2540098-001	ES2540098-002	ES2540098-003	ES2540098-004	ES2540098-005	
				Result	Result	Result	Result	Result	
EG020T: Total Metals by ICP-MS - Continued									
Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Iron	7439-89-6	0.05	mg/L	0.05	0.12	0.09	<0.05	2.43	
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
EK026SF: Total CN by Segmented Flow Analyser									
Total Cyanide	57-12-5	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.03	0.03	0.06	0.06	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.02	<0.01	0.01	0.04	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.02	<0.01	0.01	0.04	
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.2	0.1	0.2	0.2	0.9	
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
[^] Total Nitrogen as N	----	0.1	mg/L	0.2	0.1	0.2	0.2	0.9	
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L	0.02	<0.01	<0.01	<0.01	0.09	
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.01	0.01	<0.01	<0.01	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	YK-IS (D/S)	WC-IS	TR-RS (DUPLICATE)	NZG-IS	LHG-IS
Sampling date / time				14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	
Compound	CAS Number	LOR	Unit	ES2540098-006	ES2540098-007	ES2540098-008	ES2540098-009	ES2540098-010	
				Result	Result	Result	Result	Result	
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L	76	94	48	84	470	
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	1	mg/L	8	2	3	42	14	
ED093F: SAR and Hardness Calculations									
Total Hardness as CaCO3	----	1	mg/L	12	41	12	23	267	
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.10	0.02	<0.01	0.04	<0.01	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Zinc	7440-66-6	0.005	mg/L	0.007	<0.005	<0.005	<0.005	<0.005	
Manganese	7439-96-5	0.001	mg/L	0.011	0.003	0.002	0.005	0.113	
Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Iron	7439-89-6	0.05	mg/L	0.16	<0.05	<0.05	0.07	0.16	
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.37	0.10	0.07	0.43	0.10	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	0.001	<0.001	
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	0.001	<0.001	
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Zinc	7440-66-6	0.005	mg/L	0.006	<0.005	<0.005	<0.005	<0.005	
Manganese	7439-96-5	0.001	mg/L	0.015	0.006	0.011	0.025	0.110	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	YK-IS (D/S)	WC-IS	TR-RS (DUPLICATE)	NZG-IS	LHG-IS
Sampling date / time				14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	14-Dec-2025 00:00	
Compound	CAS Number	LOR	Unit	ES2540098-006	ES2540098-007	ES2540098-008	ES2540098-009	ES2540098-010	
				Result	Result	Result	Result	Result	
EG020T: Total Metals by ICP-MS - Continued									
Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Iron	7439-89-6	0.05	mg/L	0.43	0.13	0.11	0.68	0.38	
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
EK026SF: Total CN by Segmented Flow Analyser									
Total Cyanide	57-12-5	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	0.06	0.03	<0.01	<0.01	0.04	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	0.01	<0.01	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	0.01	<0.01	<0.01	0.01	<0.01	
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.3	0.2	0.4	0.3	0.2	
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
[^] Total Nitrogen as N	----	0.1	mg/L	0.3	0.2	0.4	0.3	0.2	
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L	0.08	<0.01	0.03	0.07	0.03	
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.01	<0.01	<0.01	0.01	0.01	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	YK-IS	----	----	----	----
Sampling date / time				14-Dec-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2540098-011	-----	-----	-----	-----	-----
				Result	---	---	---	---	---
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L	66	----	----	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	1	mg/L	7	----	----	----	----	----
ED093F: SAR and Hardness Calculations									
Total Hardness as CaCO3	----	1	mg/L	12	----	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.14	----	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.013	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.025	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	0.23	----	----	----	----	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.42	----	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.005	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.031	----	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	YK-IS	----	----	----	----
Sampling date / time				14-Dec-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	ES2540098-011	-----	-----	-----	-----	
				Result	---	---	---	---	
EG020T: Total Metals by ICP-MS - Continued									
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	
Iron	7439-89-6	0.05	mg/L	0.64	----	----	----	----	
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	
EK026SF: Total CN by Segmented Flow Analyser									
Total Cyanide	57-12-5	0.002	mg/L	<0.002	----	----	----	----	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	0.01	----	----	----	----	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	----	----	----	----	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	----	----	----	----	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	----	----	----	----	
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.3	----	----	----	----	
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
[^] Total Nitrogen as N	----	0.1	mg/L	0.3	----	----	----	----	
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L	0.03	----	----	----	----	
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	----	----	----	----	



Appendix C: December 2025 SWQ Monitoring Results



Appendix D: Calibration Certificate

Oct-24	No	11.1	84.1	38.1	7.27	5.3	0.08	0.001	0.0002	0.001	0.001	0.002	0.11	0.001	0.003	0.0001	0.001	0.01	0.01	0.001	0.005	0.020	0.01	0.01	11	0.2	26	3	0.17	0.001	0.0002	0.001	0.001	0.001	0.01	0.002	0.001	0.005	0.27	0.0001		
Nov-24	No	12.4	82.1	38.6	7.28	27.1	1.4	0.04	0.001	0.001	0.001	0.002	0.08	0.001	0.006	0.0001	0.001	0.01	0.001	0.001	0.005	0.020	0.01	0.01	21	0.1	68	1	0.18	0.001	0.0002	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.14	0.0002		
Dec-24	No	17.3	84.9	9.3	52.1	62	7.50	384	3.79	0.04	0.001	0.0002	0.001	0.002	0.06	0.005	0.001	0.001	0.001	0.002	0.01	0.001	0.001	0.01	21	0.1	68	1	0.18	0.001	0.0002	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.16	0.0001		
Jan-25	No	13.6	76.9	9.3	42.1	72	7.40	288	4.83	0.02	0.001	0.0002	0.001	0.001	0.05	0.001	0.004	0.0001	0.001	0.001	0.005	0.010	0.01	0.01	26	0.4	74	6	0.16	0.001	0.0002	0.001	0.001	0.001	0.008	0.001	0.001	0.005	0.16	0.0001		
Feb-25	No	19	87.1	9.3	16.6	76	7.82	178	2.72	0.07	0.001	0.0001	0.001	0.001	0.09	0.001	0.004	0.0001	0.001	0.001	0.005	0.010	0.01	0.01	30	0.9	64	2	0.17	0.001	0.0002	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.14	0.0001		
Mar-25	No	13.6	84.1	9.6	17.4	76	7.75	268	1.91	0.03	0.001	0.0001	0.001	0.001	0.07	0.001	0.005	0.0001	0.001	0.001	0.005	0.010	0.01	0.02	21	0.1	68	2	0.18	0.001	0.0002	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.18	0.0001		
Apr-25	No	9	78.4	10.7	16.6	76	8.24	178	2.03	0.05	0.001	0.0001	0.001	0.001	0.1	0.001	0.001	0.0001	0.001	0.001	0.005	0.010	0.01	0.01	30	0.2	68	1	0.14	0.001	0.0002	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.12	0.0001		
May-25	No	3.7	80.3	-	16.4	9.7	7.71	117.1	1.78	0.02	0.001	0.0002	0.001	0.001	0.02	0.05	0.001	0.004	0.0001	0.001	0.01	0.02	0.01	0.02	30	0.1	68	1	0.11	0.001	0.0002	0.001	0.001	0.001	0.008	0.001	0.001	0.005	0.16	0.0001		
Jun-25	No	5.5	83.9	-	5.1	5.1	8.47	114.1	4.66	0.06	0.001	0.0002	0.001	0.001	0.14	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.02	23	0.1	68	1	0.14	0.001	0.0002	0.001	0.001	0.001	0.005	0.001	0.001	0.005	0.18	0.0001			
Jul-25	No	5.7	81.8	-	14.8	5.1	7.67	105.1	9.38	0.18	0.001	0.0001	0.001	0.001	0.15	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.02	14	0.2	61	4	0.21	0.001	0.0002	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.21	0.0001			
Aug-25	No	8.8	89.4	-	12.1	8.4	7.30	210.1	23.16	0.12	0.001	0.0002	0.001	0.001	0.08	0.001	0.001	0.0001	0.001	0.01	0.01	0.005	0.010	0.01	0.01	21	0.1	68	1	0.13	0.001	0.0002	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.17	0.0001	
Sep-25	No	7.2	87.9	-	48.4	31.8	6.80	126.1	2.68	0.04	0.001	0.0001	0.001	0.001	0.06	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.01	18	0.2	61	1	0.16	0.001	0.0002	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.18	0.0001			
Oct-25	No	10.1	88.6	-	45.1	45.6	7.08	153.1	3.28	0.08	0.001	0.0001	0.001	0.001	0.07	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.01	24	0.1	68	1	0.18	0.001	0.0002	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.17	0.0001			
Nov-25	No	17.5	87.8	-	11.1	26.7	4.71	113.1	1.81	0.08	0.001	0.0002	0.001	0.001	0.06	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.01	21	0.2	60	1	0.11	0.001	0.0002	0.001	0.001	0.001	0.008	0.001	0.001	0.005	0.18	0.0001			
Dec-25	No	11.5	89.2	-	151.1	73	7.61	142.1	5.56	0.04	0.001	0.0002	0.001	0.001	0.07	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.01	23	0.3	64	48	0.18	0.001	0.0002	0.001	0.001	0.001	0.025	0.001	0.001	0.005	0.18	0.0001			
YK-15	Mar-24	No	11.4	74.9	8.53	16	28	6.70	41.1	21.44	0.04	0.00015	0.0001	0.000005	0.001	0.001	0.4	0.0005	0.01	0.00015	0.0005	0.01	0.01	0.0001	0.004	0.001	1	0.1	21	1	0.1	0.001	0.0002	0.001	0.001	0.001	0.005	0.16	0.0001			
Apr-24	No	6.8	86.1	-	16.8	-	7.84	1	32.6	0.9	0.001	0.0001	0.001	0.001	0.002	0.15	0.001	0.014	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	14	0.06	1	0.1	0.001	0.0002	0.001	0.001	0.001	0.014	0.001	0.001	0.005	0.16	0.0001	
May-24	No	4.7	82.7	-	6.43	-	6.43	0.2	0.06	0.001	0.0002	0.001	0.001	0.001	0.001	0.1	0.001	0.011	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	11	0.1	16	5	0.16	0.001	0.0002	0.001	0.001	0.001	0.014	0.001	0.001	0.005	0.16	0.0001
Jun-24	No	3.9	83.1	-	16.1	-	7.88	7.88	0.08	0.001	0.0002	0.001	0.001	0.002	0.15	0.001	0.011	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	9	0.2	19	6	0.16	0.001	0.0002	0.001	0.001	0.001	0.014	0.001	0.001	0.005	0.16	0.0001	
Jul-24	No	3.2	82.8	-	16.8	-	7.88	7.88	0.11	0.001	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8	0.2	12	6	0.16	0.001	0.0002	0.001	0.001	0.001	0.015	0.001	0.001	0.005	0.16	0.0001	
Aug-24	No	7.2	81.3	-	23.5	-	4.38	25.32	0.01	0.0001	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	9	0.4	62	15	0.12	0.001	0.0002	0.001	0.001	0.001	0.026	0.001	0.001	0.005	0.16	0.0001		
Sep-24	No	9.3	83.4	-	23.8	-	7.41	6.24	0.09	0.001	0.0002	0.001	0.001	0.002	0.13	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	6	0.2	26	4	0.16	0.001	0.0002	0.001	0.001	0.001	0.012	0.001	0.001	0.005	0.26	0.0001	
Oct-24	No	13.7	86.3	-	23.7	-	7.81	3.1	0.07	0.001	0.0002	0.001	0.001	0.002	0.06	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	21	0.2	40	4	0.14	0.001	0.0002	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.23	0.0001	
Nov-24	No	14.7	85.1	8.3	27.7	-	7.17	27.1	4.6	0.06	0.001	0.0001	0.001	0.002	0.12	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	9	0.1	42	5	0.18	0.001	0.0002	0.001	0.001	0.001	0.022	0.001	0.001	0.005	0.28	0.0001	
Dec-24	No	18.4	88.9	8.7	21.4	35	7.35	256	10.81	0.08	0.001	0.0001	0.001	0.001	0.002	0.16	0.001	0.011	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	12	0.2	40	6	0.16	0.001	0.0002	0.001	0.001	0.001	0.026	0.001	0.001	0.005	0.16	0.0001
Jan-25	No	16.1	89.9	8.7	25.7	43	7.02	231	1.98	0.01	0.001	0.0001	0.001	0.001	0.02	0.12	0.001	0.011	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	14	0.2	38	3	0.17	0.001	0.0002	0.001	0.001	0.001	0.005	0.001	0.001	0.005	0.16	0.0001
Feb-25	No	21	73.6	8.8	6.1	46	6.61	116	13.85	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	14	0.4	42	6	0.14	0.001	0.0002	0.001	0.001	0.001	0.048	0.001	0.001	0.005	0.18	0.0001		
Mar-25	No	17.8	71.4	8.8	10.5	46	6.77	161	13.84	0.02	0.001	0.0001	0.001	0.001	0.002	0.19	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	7	0.2	41	13	0.18	0.001	0.0002	0.001	0.001	0.001	0.054	0.001	0.001	0.005	0.18	0.0001
Apr-25	Yes	11.9	65.4	9.7	10.9	46	6.93	161	7.27	0.07	0.001	0.0001	0.001	0.001	0.002	0.19	0.001	0.001	0.0001	0.001	0.01	0.02	0.01	0.005	0.010	0.01	21	0.3	37	4	0.15	0.001	0.0002	0.001	0.001	0.001	0.095					

CALIBRATION CERTIFICATE - WATER

Invoice No: 17218 Equipment Received: YSI ProDSS

Handheld S/N 23H104391

Cable S/N:

Included Items:

SENSOR CALIBRATION DETAILS

	Pre Calibration	Post Calibration	Accuracy	Pass	Fail
Temp	Factory	Calibrated	+/- 0.2C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
pH	4.1	pH 4.00	+/- 0.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
pH	7	pH 7.00	+/- 0.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ORP	220	225.3mV@24.3	+/- 30mV	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Conductivity <input type="checkbox"/>	12950uS/cm	12900uS/cm	+/- 0.5%	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DO <input type="checkbox"/>	98%	100% @763.3	+/- 2%	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Turbidity	0	0 FNU	+/- 0.3 FNU	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Turbidity	118	124 FNU	+/- 20 FNU	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			+/-	<input type="checkbox"/>	<input type="checkbox"/>
			+/-	<input type="checkbox"/>	<input type="checkbox"/>
			+/-	<input type="checkbox"/>	<input type="checkbox"/>

Findings/ Recommendations /Comments:

- 1/ DO cap and calibration cup seal replaced.
- 2/ Firmware version upgraded.
- 3/ Calibrated.
- 4/

This is to certify that where possible, this instrument has been calibrated in accordance with the manufacturer's calibration procedure as recommended in the instrument service manual.

Regards,

Navid Black

 Equipment Specialist
 ECO Environmental Holdings

06-Nov-2025