Pre-construction Water Quality Monitoring Report

Event 20 2023

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1. Introduction

In 2020 Snowy Hydro Limited (Snowy Hydro) obtained approval (application number SSI 9208 and 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 (referred to as 'Snowy 2.0').

To connect Snowy 2.0 to the National Energy Market (NEM), a new transmission connection is required. NSW Electricity Networks Operations Pty Ltd as a trustee for NSW Electricity Operations Trust (known as TransGrid and the Proponent) will construct a substation and overhead transmission lines (the Project) to facilitate the connection of Snowy 2.0 to the existing electrical transmission network. The Project location is approximately 27 kilometres (km) east of Tumbarumba, New South Wales (NSW). UGL has been engaged on behalf of the Proponent to undertake the Project.

The purpose of the pre-construction water quality monitoring is to address the requirements of the Environmental Impact Statement (EIS) (Jacobs 2020) that was prepared by the Proponent under Part 5, Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* to assess the environmental impacts of the proposed Project. Subsequently, an Amendment Report (TransGrid 2021b) was submitted with the Response to Submissions (TransGrid 2021a) to the Department of Planning and Environment (DPE) with updated mitigation measures for the Project.

The objective of the pre-construction surface water quality monitoring is to collect baseline data prior to Project construction works. Baseline data will be compared to ANZG (2018) guidelines to characterise the existing surface water quality. The data will be compared to the water quality objectives (WQO) for the Project area.

2. Program and methodology

The Pre-construction Water Quality Monitoring Program and Methodology (the Program) (NGH 2022) has been prepared to detail the WQOs for the Project, the location of the monitoring locations and the methodology for water sampling.

The Project area within Kosciuszko National Park is an area of high conservation value. Therefore, the water quality objectives for physical and chemical stressors includes **no change beyond natural variability** (ANZG 2018). The Default Guideline Values (DGV) for Upland Rivers has been provided for physical and chemical stressors and is detailed in the Program (NGH 2022).

The location of the sampling points in relation to the Project footprint is provided in Figure 2-1.

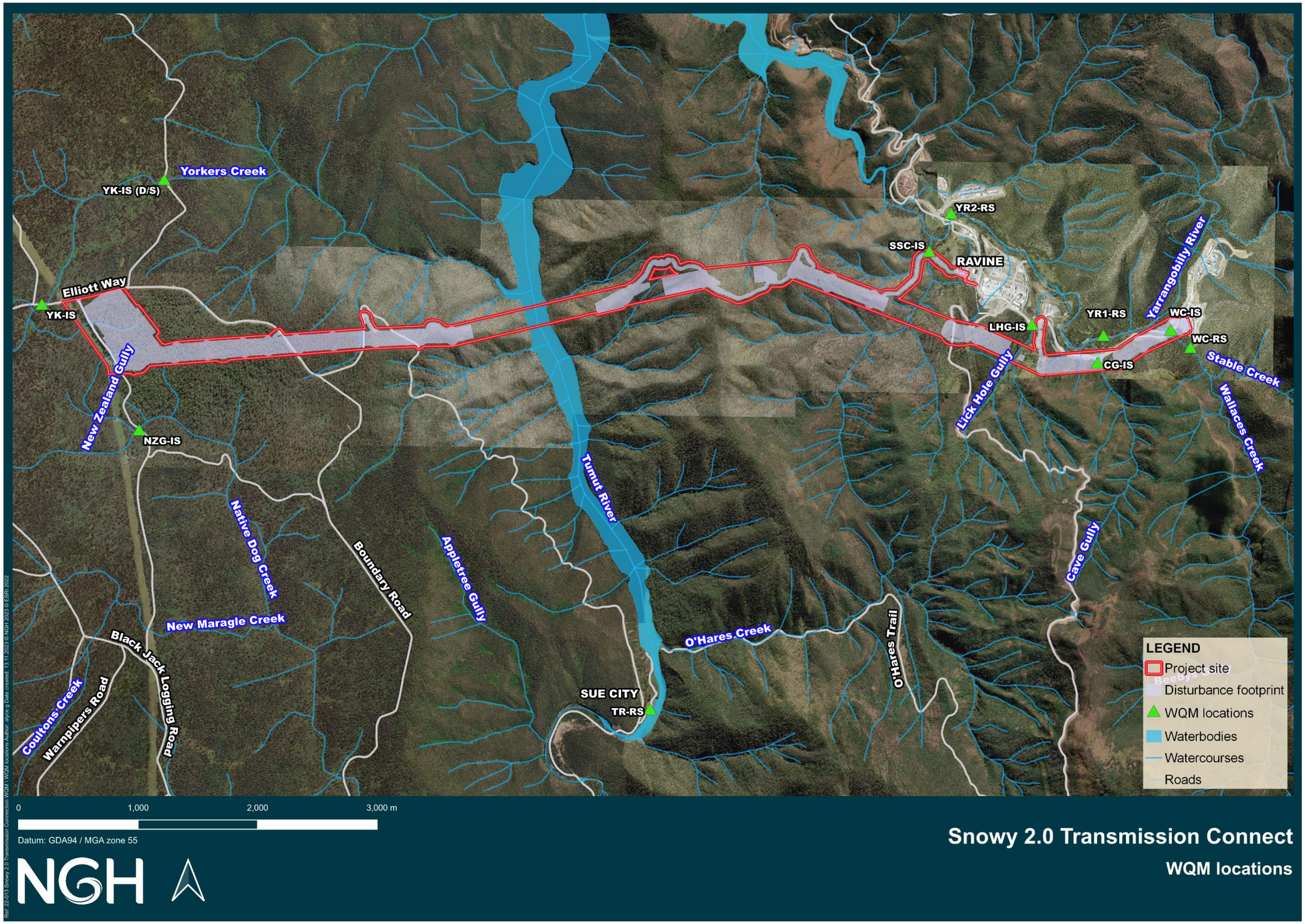

Figure 2-1 WQM locations

3. Monitoring event observations and results

Images for Yarrangobilly River, New Zealand Gully and Wallaces Creek are provided as Figure 3-1 to Figure 3-3. Water quality results for each site are provided in Appendix A. Results are highlighted where they exceed the default guideline value (refer to the Program (NGH 2022)). Table 3-1 identifies exceedances of the DGVs for metals, cyanide and nutrients. Physico-chemical results have been provided in Figure 3-4 to Figure 3-33. Field data and observations are provided in Appendix B.

3.1. Event 20

NGH has conducted monthly sampling events since March 2022 (Event 1). Reports for each event were prepared following receival of the laboratory results (NGH 2022a – 2023i). The results of Event 1 through to Event 19 have been compared in this report to the results of Event 20.

NGH Environmental Scientist Martin Wyburn conducted monitoring for Event 20 with a UGL representative on 30 and 31 October 2023. On 30 October 2023 the weather was partly cloudy with no wind. Data from the Cabramurra SMHEA automatic weather station (Station ID 072161) indicates that morning winds were from the north-northwest, with speeds of 33 km/hr. During the afternoon, winds were from the west-northwest with speeds of 20 km/hr. Temperatures on the day included a low of 9.7°C and a high of 9.9°C. On 31 October 2023 the weather was overcast with light showers and a slight breeze. Data from the Tumbarumba weather station (Station ID 072043) indicates that winds were from the west, with speeds of 9 km/hr and temperatures ranging from a low of 5.0°C to a high of 19.0°C.

Clear flows were observed at most locations. Algae was noted at CG-IS. No hydrocarbon sheen or odours were noted. The banks of each channel were well vegetated, with the vegetation matrix weedier in some locations. Evidence of bank erosion from hooved animals was observed at the New Zealand Gully site, the Yorkers Creek impact site and the Yorkers Creek reference site. Water was observed to have moderate to fast flows. Water levels have decreased at most locations when compared to Event 19.

Figure 3-1 Yarrangobilly River (YR2-RS)

Figure 3-2 New Zealand Gully (NZG-IS)

Figure 3-3 Wallaces Creek (WC-RS)

3.1.1. Results

The results indicate that the water quality in the locations where samples were taken generally meets the DGVs for Upland Rivers with a 99% species protection level for toxicants. Locations where a laboratory result was returned for a physical or chemical stressor above the DGV are provided in Table 3-1.

Table 3-1 Results above the DGV for Upland Rivers with 99% species protection level

Site identification	Analyte	DGV	Result	Comment
WC-RS	Total Suspended Solids mg/L	0.2	1	The results for Total Suspended Solids have decreased, when compared with Event 19.
CG-IS	Aluminium mg/L	0.027	0.04	The results for Aluminium have slightly decreased, when compared to Event 19.
	Zinc mg/L	0.0024	0.006	The results for Zinc have slightly increased, when compared to Event 19.
	Total Dissolved Solids mg/L	-	257	The results for Total Dissolved Solids are elevated, when compared with Event 19.
LHG-IS	Aluminium mg/L	0.027	0.04	The results for Aluminium have decreased, when compared with results for Event 19.
	Copper mg/L	0.001	0.003	Results for Zinc have increased, when compared with results for Event 19.
	Zinc mg/L	0.0024	0.008	The results for Copper have remained relatively consistent with the results from Event 19.
	Total Dissolved Solids mg/L	-	316	The results for Total Dissolved Solids are elevated, when compared with Event 19.
YK-IS (D/S)	Aluminium mg/L	0.027	0.26	Results for Aluminium have decreased, when compared with Event 19.
NZG-IS	Aluminium mg/L	0.027	0.13	Results for Aluminium have decreased, when compared with Event 19.
	Copper mg/L	0.001	0.002	The results for Copper have increased, when compared with Event 19. Located within Bago State Forest. Sample taken upstream of timber supported unsealed track bridge. Banks heavily vegetated, shallow channel.
YK-RS	Aluminium mg/L	0.027	0.47	Results for Aluminium and Total Phosphorous have decreased, when compared to Event 19. Located within Bago State Forest and adjacent to an unsealed track. Unknown activities within the State Forest upstream. Sample taken downstream of culvert under unsealed track.
	Total Phosphorus	0.02	0.03	

Site identification	Analyte	DGV	Result	Comment
	mg/L			Flow through culvert is restricted upstream causing a wetland environment.
YK-IS	Aluminium mg/L	0.027	0.35	Results for Aluminium have decreased, when compared with Event 19.
	Copper mg/L	0.001	0.002	Results for Copper have remained consistent with Event 19.
YR2-RS	Aluminium mg/L	0.027	0.03	Result for Aluminium have decreased, when compared to Event 19.
	Copper mg/L	0.001	0.002	The results for Copper and Zinc have increased, when compared with Event 19.
	Zinc mg/L	0.0024	0.003	
SSC-IS	Aluminium mg/L	0.027	0.2	Results for Aluminium and Total Suspended Solids have decreased, when compared to Event 19.
	Copper mg/L	0.001	0.002	Results for Chromium and Total Phosphorous have remained consistent with Event 19.
	Zinc mg/L	0.0024	0.003	Results for Zinc have increased, when compared with Event 19.
	Total Phosphorus mg/L	0.02	0.04	
	Total Suspended Solids mg/L	0.2	3	
TR-RS	Copper mg/L	0.001	0.02	Results for Copper and Total Dissolved Solids are elevated, which is atypical for this location.
	Total Dissolved Solids mg/L	-	297	

Water temperatures ranged from 9.1 degrees Celsius at SSC-IS and YK-IS (D/S) to 15 degrees Celsius at TR-RS, refer to Figure 3-4 and Figure 3-5.

Many of the results are recorded as below (<) the limit of detection. To enable calculation of the statistics, the *Limit of Detection Divided by Two (LOD/2) Method* (Cohen and Ryan 1989) has been applied. This data is provided in Appendix A.

The following figures, Figure 3-4 to Figure 3-33 display physico-chemical water quality through time for monitoring events 1 (March 2022) to 19 (September 2023). Where a DGV is available, these values are shown on the graph and have been included for dissolved oxygen (%), conductivity, pH and turbidity.

Although the Talbingo Reservoir is the ultimate catchment for both the Yarrangobilly River and tributaries, and Yorkers Creek and tributaries, the data has been divided into the Talbingo Reservoir catchment, which include the Talbingo Reservoir reference site sampling location and the Yarrangobilly River and its tributaries. These are all located in the Kosciuszko National Park. The Yorkers Creek catchment includes the three sampling locations along Yorkers Creek and New Zealand Gully, which are all located in the Bago

State Forest. The confluence of Yorkers Creek with Tumut River (Talbingo Reservoir) is downstream of sampling location TR-RS but upstream of the confluence of the Yarrangobilly River and Tumut River.

Temperatures within the Talbingo Reservoir catchment have generally decreased when compared with Event 19. The highest temperature was recorded at TR-RS (15°C), refer to Figure 3-4. Temperatures within the Yorkers Creek catchment have also decreased. YK-RS recorded the most notable decrease in temperature, from 16°C during Event 19 to 10.1°C during Event 20, refer to Figure 3-5.

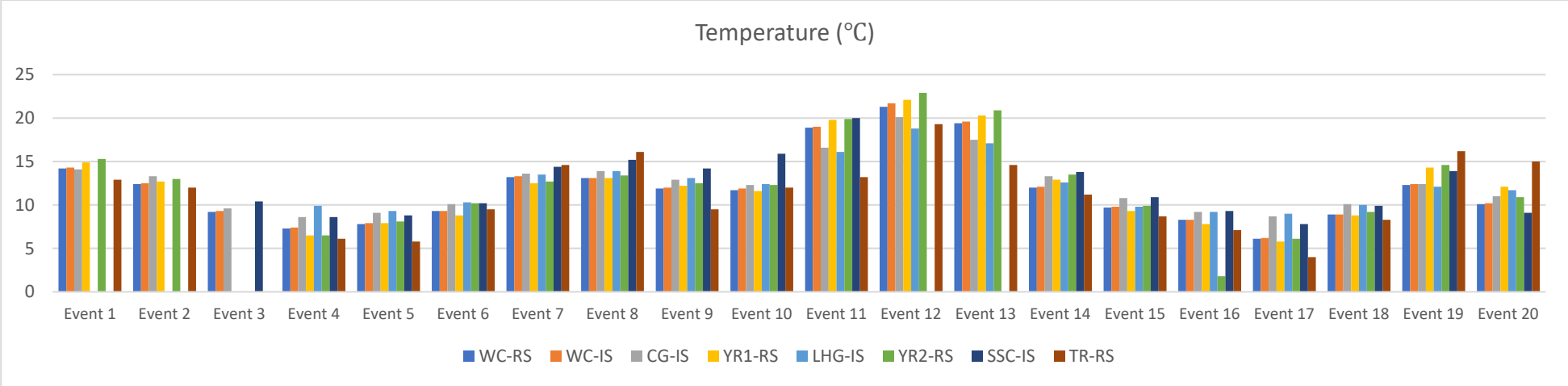

Figure 3-4 Temperature for Talbingo Reservoir catchment

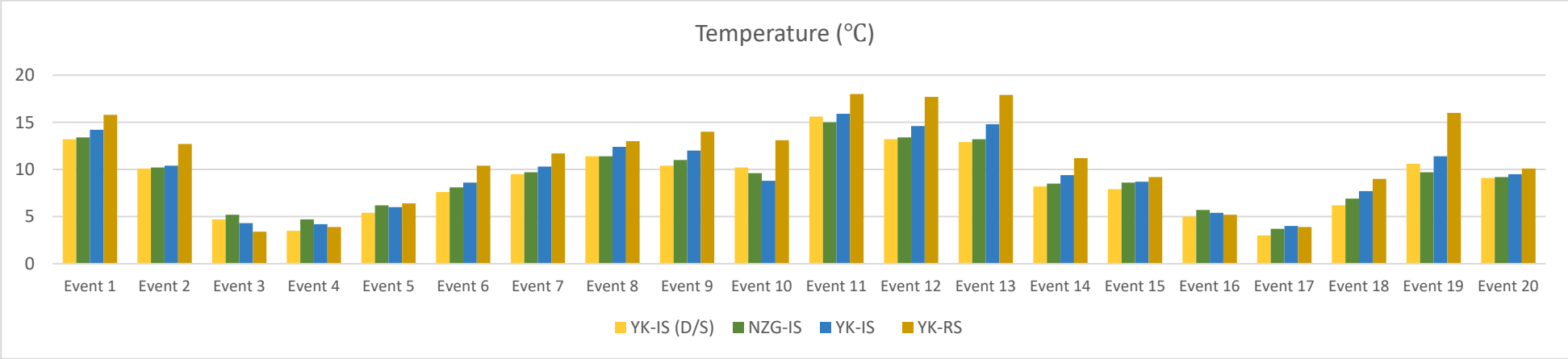

Figure 3-5 Temperature for Yorkers Creek catchment

All DO (%) results for the Talbingo Reservoir catchment within the acceptable DGV range (90-110%) for Event 20. CG-IS recorded the highest DO (%) reading of 101.8%. DO (%) results for the Yorkers Creek catchment were all within the acceptable DGV value (90-110%), refer to Figure 3-7.

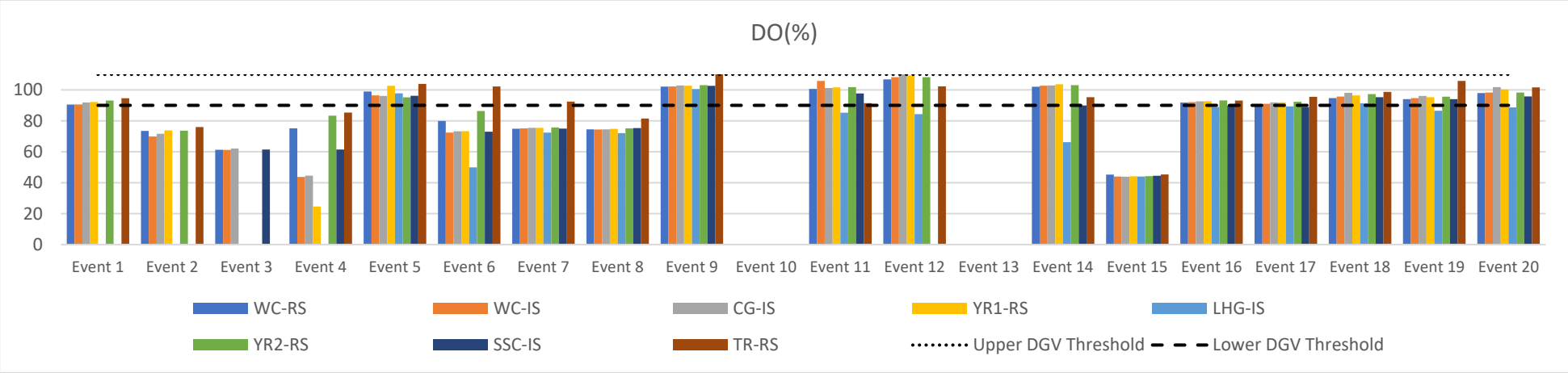

Figure 3-6 Dissolved oxygen (DO%) for Talbingo Reservoir catchment

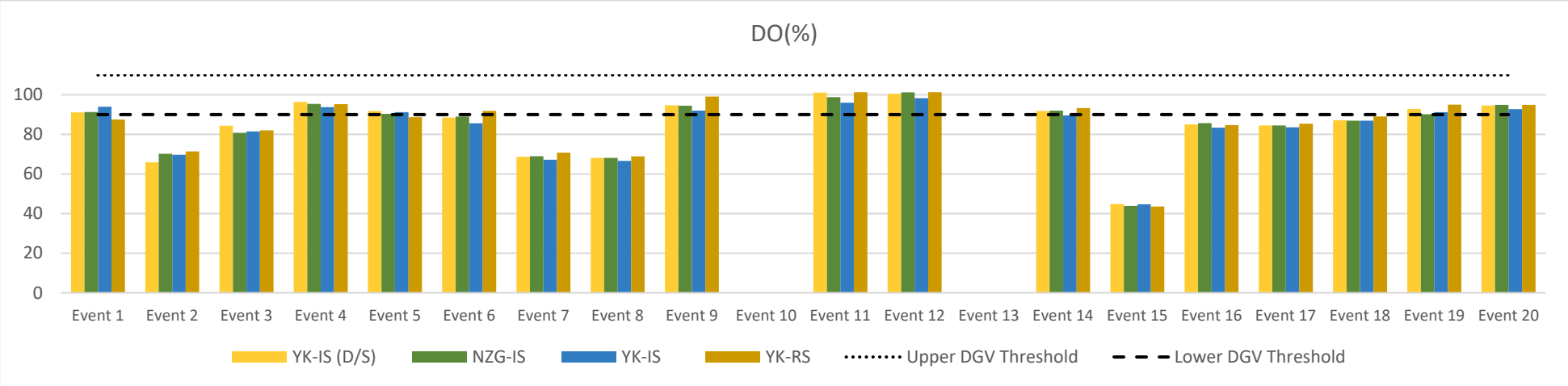

Figure 3-7 Dissolved oxygen (DO%) for Yorkers Creek catchment

The results for DO (ppm) for the Talbingo Reservoir catchment have slightly increased when compared with Event 19, refer to Figure 3-8. The highest reading for DO (ppm) was recorded at SSC-IS (10.32 ppm). Results for DO (ppm) within the Yorkers Creek catchment have also increased since Event 19; the highest reading for DO (ppm) was at YK-IS (D/S) (9.54 ppm), refer to Figure 3-9.

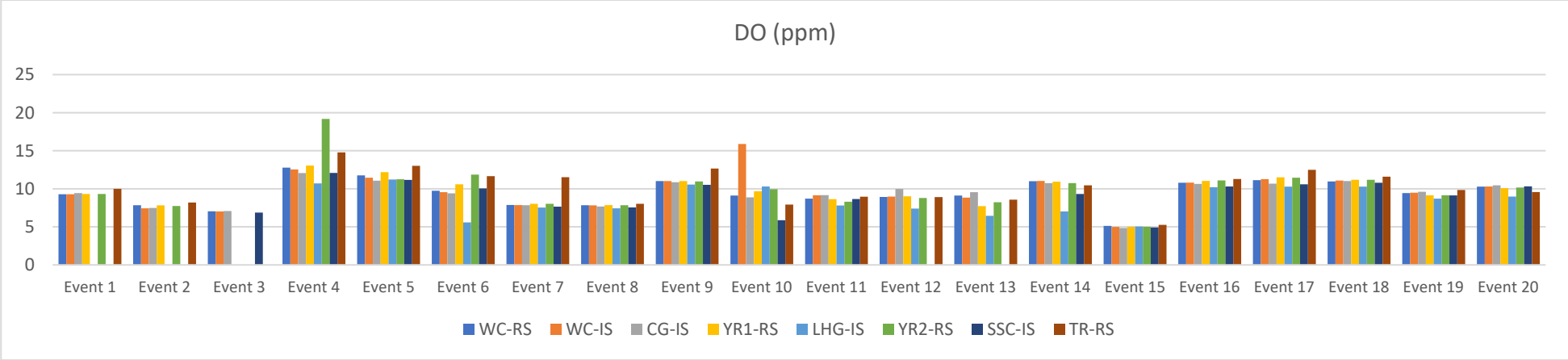

Figure 3-8 Dissolved Oxygen (ppm) for Talbingo Reservoir catchment

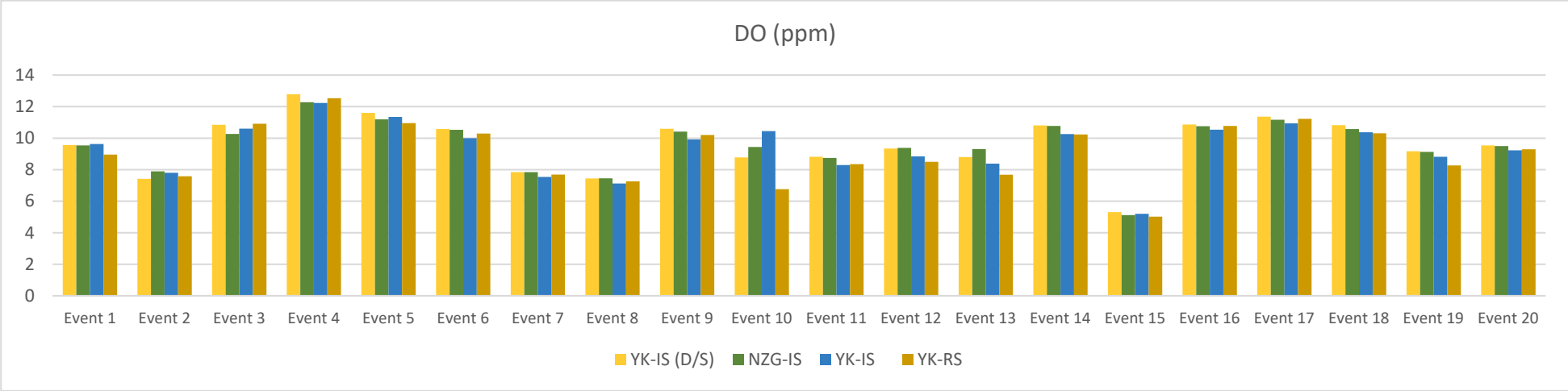

Figure 3-9 Dissolved Oxygen (ppm) for Yorkers Creek catchment

Results for specific conductance within the Talbingo Reservoir catchment have remained relatively consistent across the last four sampling events, refer to Figure 3-10. LHG-IS and CG-IS returned elevated results of 535 µS/cm and 478.2 µS/cm respectively. Results for specific conductance within the Yorkers Creek catchment for Event 20 have also remained relatively consistent across the last three sampling events, refer to Figure 3-11.

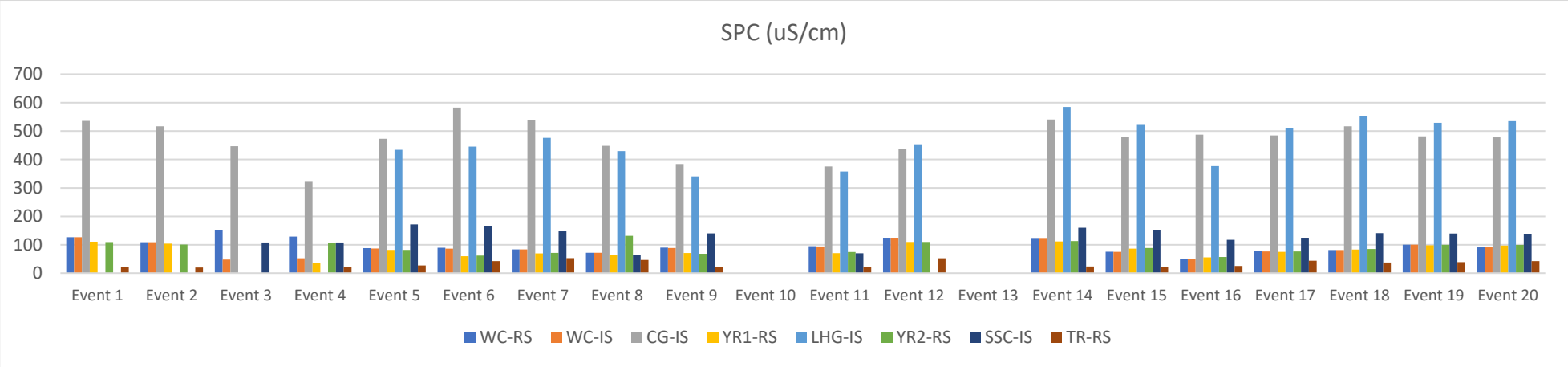

Figure 3-10 Specific Conductance (SPC µS/cm) for Talbingo Reservoir catchment

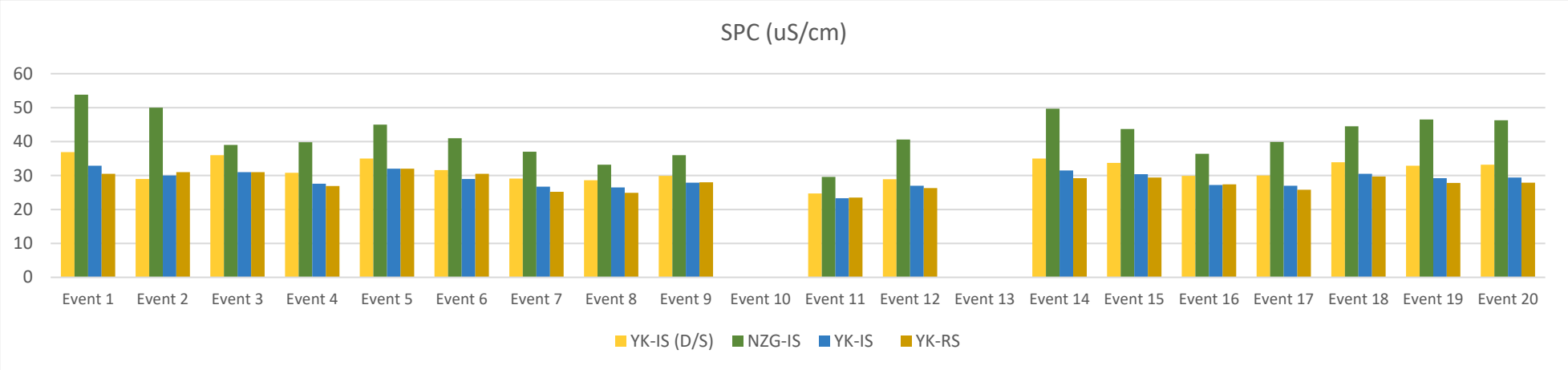

Figure 3-11 Specific Conductance (SPC µS/cm) for Yorkers Creek catchment

Conductivity readings within the Talbingo Reservoir catchment have remained relatively consistent across the last three sampling events, refer to Figure 3-12. Conductivity (µS/cm) results for CG-IS and LHG-IS continues to be notably higher than the other sites, with readings above the upper DGV value (350 µS/cm). Conductivity readings within the Yorkers Creek catchment have also remained relatively consistent, refer to Figure 3-13. NZG-IS continues to return the highest reading for this catchment (32.3 µS/cm), with a reading above the lower DGV value (30 µS/cm).

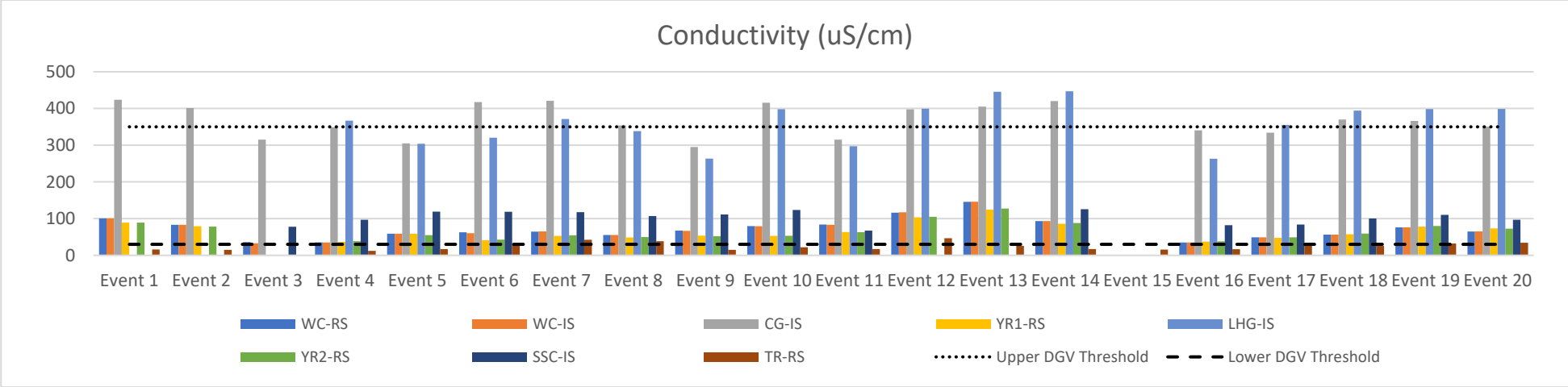

Figure 3-12 Conductivity (µS/cm) for Talbingo Reservoir catchment

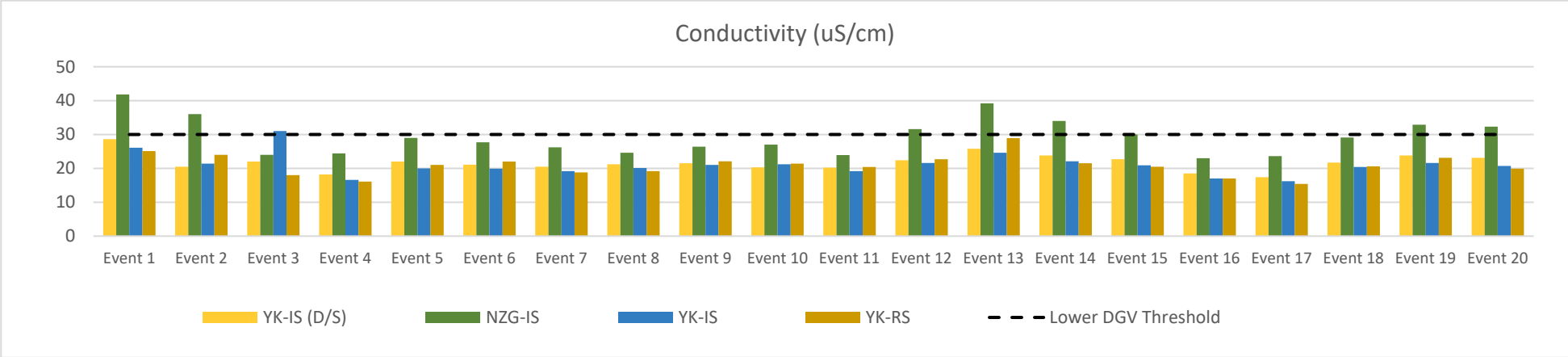

Figure 3-13 Conductivity (µS/cm) for Yorkers Creek catchment

Turbidity values were predominantly below the lower DGV thresholds (2 - 25 NTU) for the Talbingo Reservoir catchment, except for WC-RS (2.3 NTU) and SSC-IS (3.5 NTU). Turbidity readings within the Talbingo Reservoir catchment have slightly decreased from Event 19, with the exception of SSC-IS, refer to Figure 3-14.

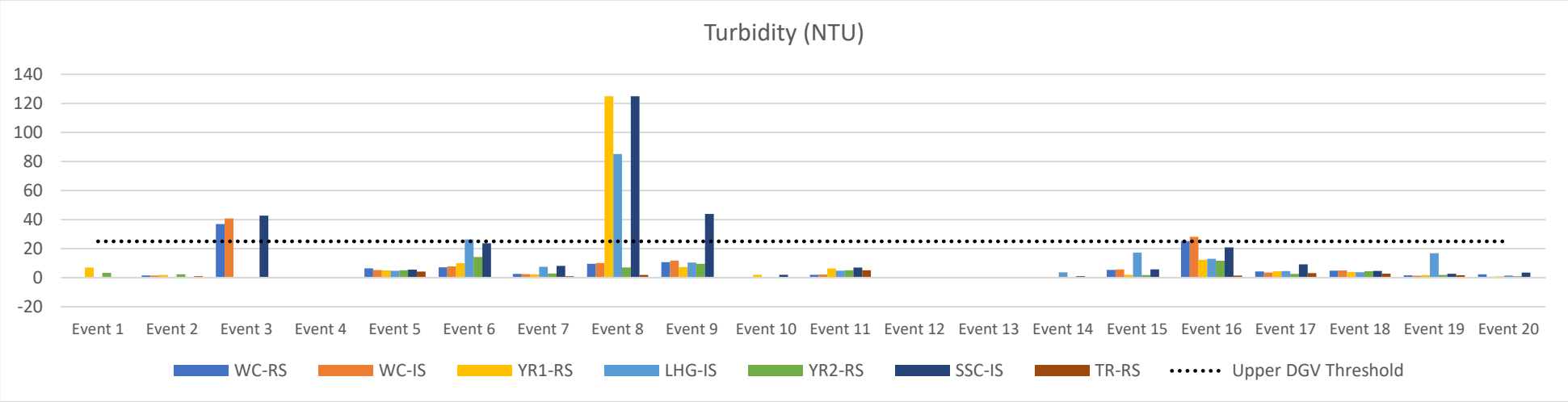

Figure 3-14 Turbidity (NTU) for the Talbingo Reservoir catchment

Turbidity (NTU) readings at CG-IS (0.8 NTU) continue to be below the lower DGV threshold (2 NTU), refer to Figure 3-15.

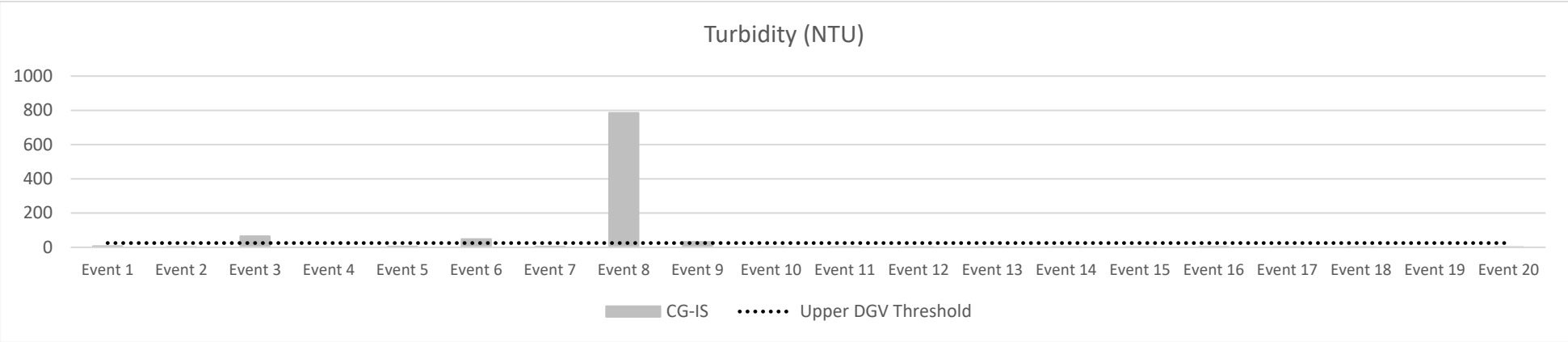

Figure 3-15 Turbidity (NTU) readings for CG-IS, within the Talbingo Reservoir catchment

Turbidity readings within the Yorkers Creek catchment have slightly decreased since Event 19, refer to Figure 3-15. YK-RS registered the highest reading (13.5 NTU).

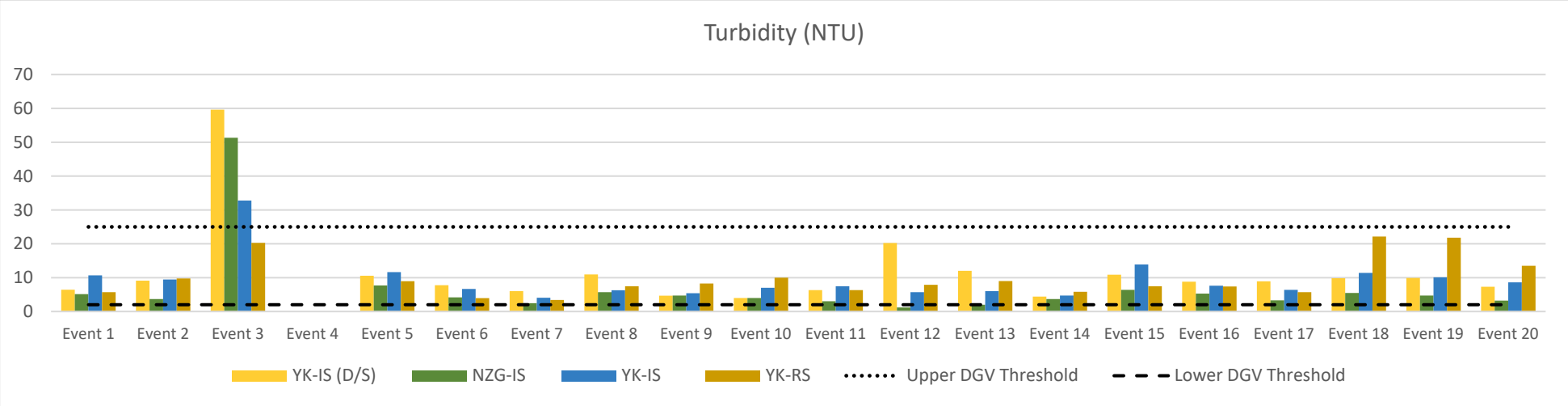

Figure 3-16 Turbidity (NTU) for the Yorkers Creek catchment

Results for total suspended solids (TSS) within the Talbingo Reservoir catchment for Event 20 were below the Limit of Reporting (LOR), with the exception of WC-RS (1 mg/L) and SSC-IS (3 mg/L), refer to Figure 3-17. Similarly, results for CG-IS for Event 20 were below the LOR, refer to Figure 3-18.

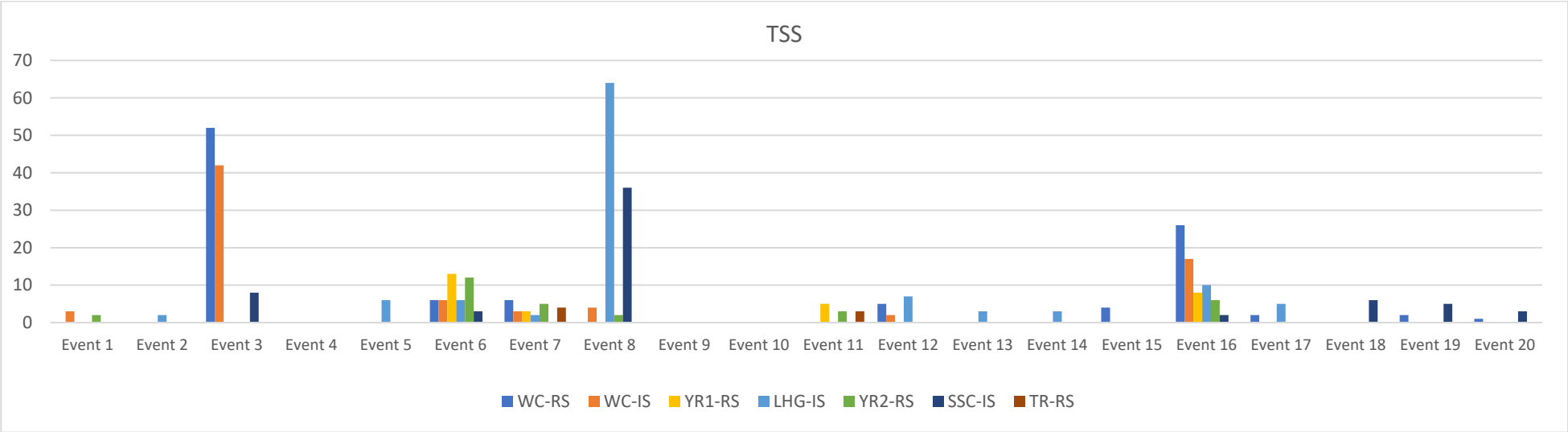

Figure 3-17 Total Suspended Solids for the Talbingo Reservoir catchment

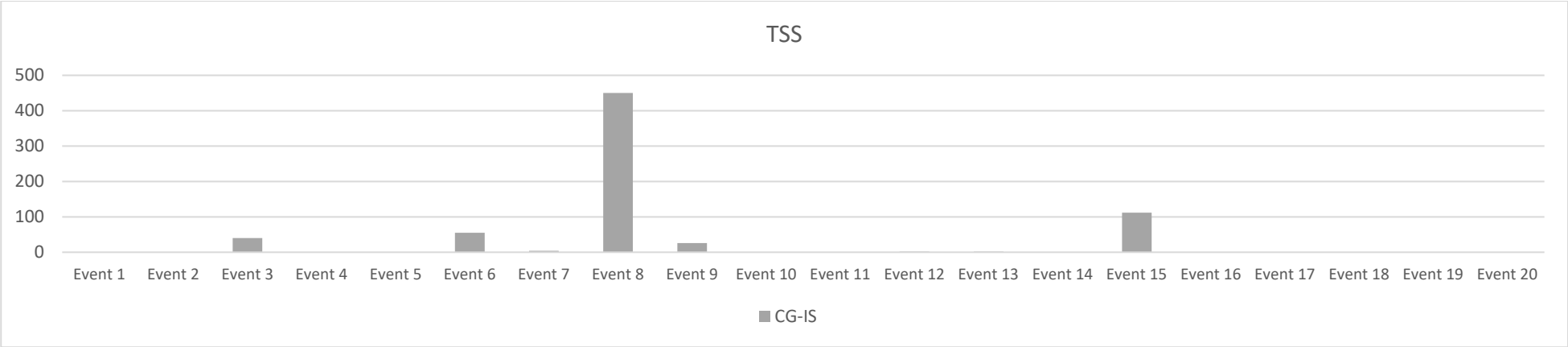

Figure 3-18 Total Suspended Solids for CG-IS, within the Talbingo Reservoir catchment

Results for total suspended solids were all below the LOR within the Yorkers Creek Catchment, refer to Figure 3-19.

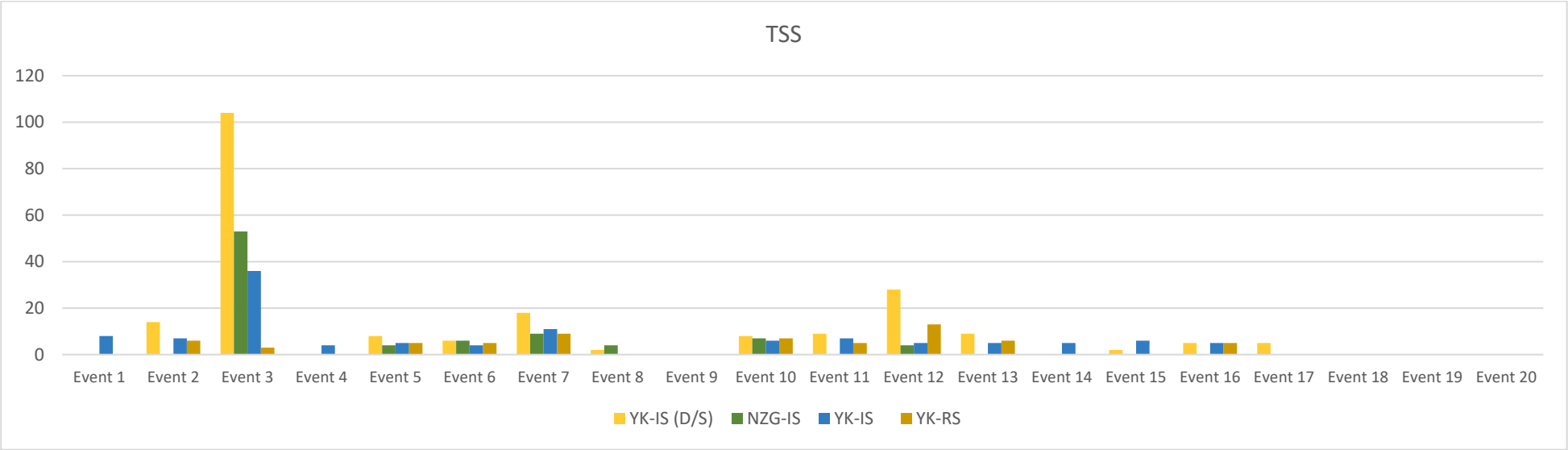

Figure 3-19 Total Suspended Solids for the Yorkers Creek catchment

Values of pH for the Talbingo Reservoir catchment have decreased when compared to Event 19. All sites had values of pH within the DGV range (6.5 – 8 pH units), refer to Figure 3-20. Values of pH for the Yorkers Creek catchment have decreased at all sites, refer to Figure 3-21. All sites, apart from NZG-IS (6.55) had values of pH below the lower DGV threshold (6.5 pH units).

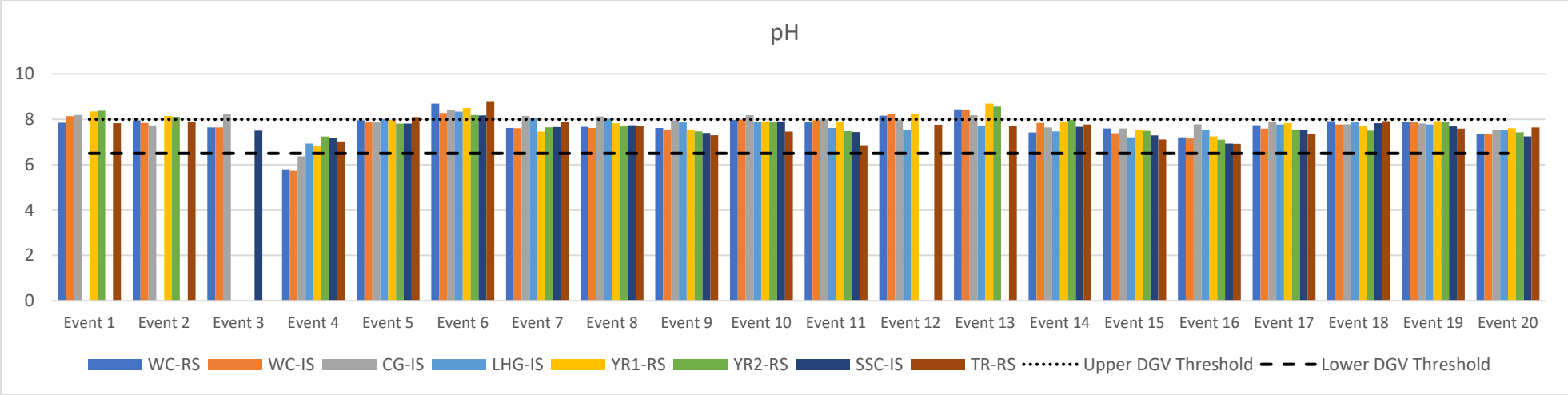

Figure 3-20 Potential of Hydrogen (pH) for Talbingo Reservoir catchment

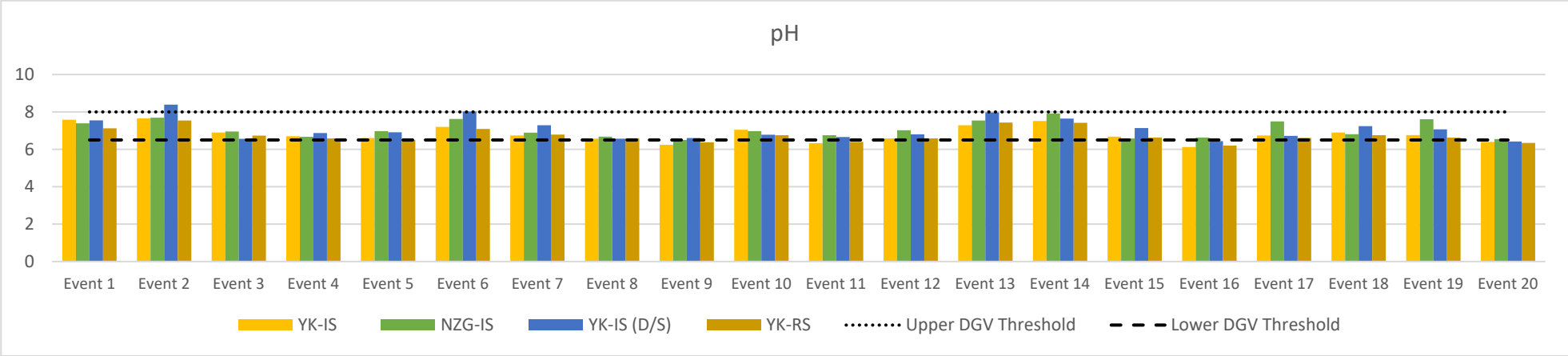

Figure 3-21 Potential of Hydrogen (pH) for Yorkers Creek catchment

The values for oxygen redox potential (ORP) within the Talbingo Reservoir catchment have increased at all sites with the exception of TR-RS (70.2 mV), which is down from 89.5 mV (E19), refer to Figure 3-22. Within the Yorkers Creek catchment, ORP has increased at all sites with the exception of YK-IS (D/S), which slightly decreased from 113.9 mV during Event 19 to 113.1 mV during Event 20, refer to Figure 3-23.

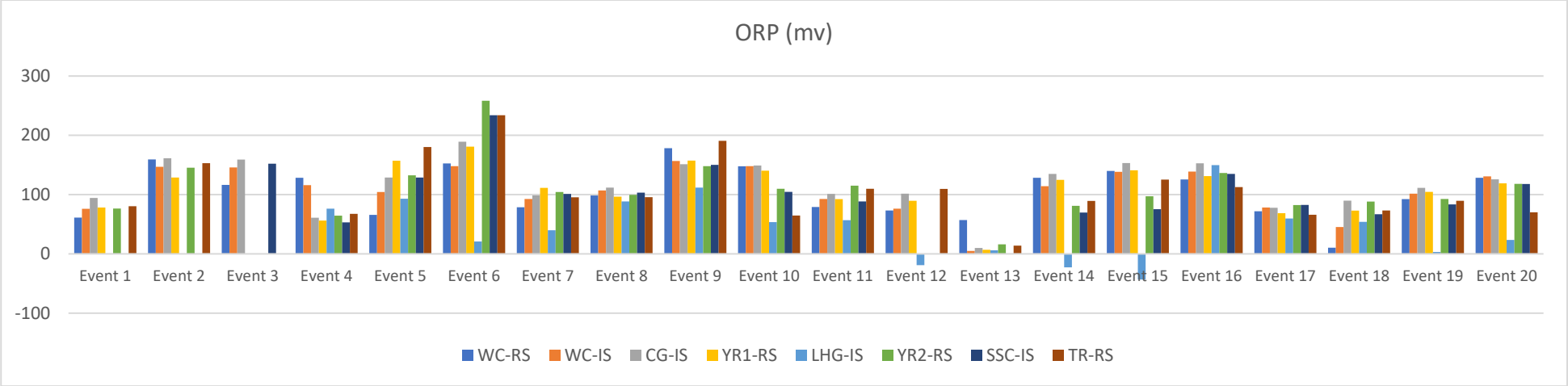

Figure 3-22 Oxygen Redox Potential (ORP) for Talbingo Reservoir catchment

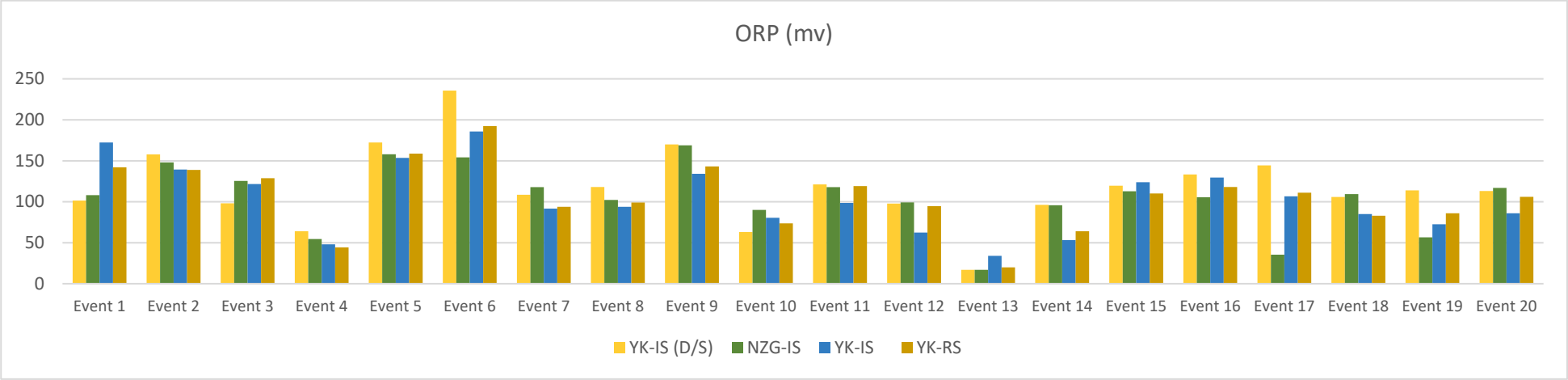

Figure 3-23 Oxygen Redox Potential (ORP) for Yorkers Creek catchment

Within the Talbingo Reservoir Catchment, Nitrogen Oxides (mg/L) were all below the laboratory LOR, refer to Figure 3-24. All results were below the DGV value of 0.15 mg/L. Similarly, results for the Yorkers Creek catchment were below the DGV (0.15 mg/L) across all sites, refer to Figure 3-25.

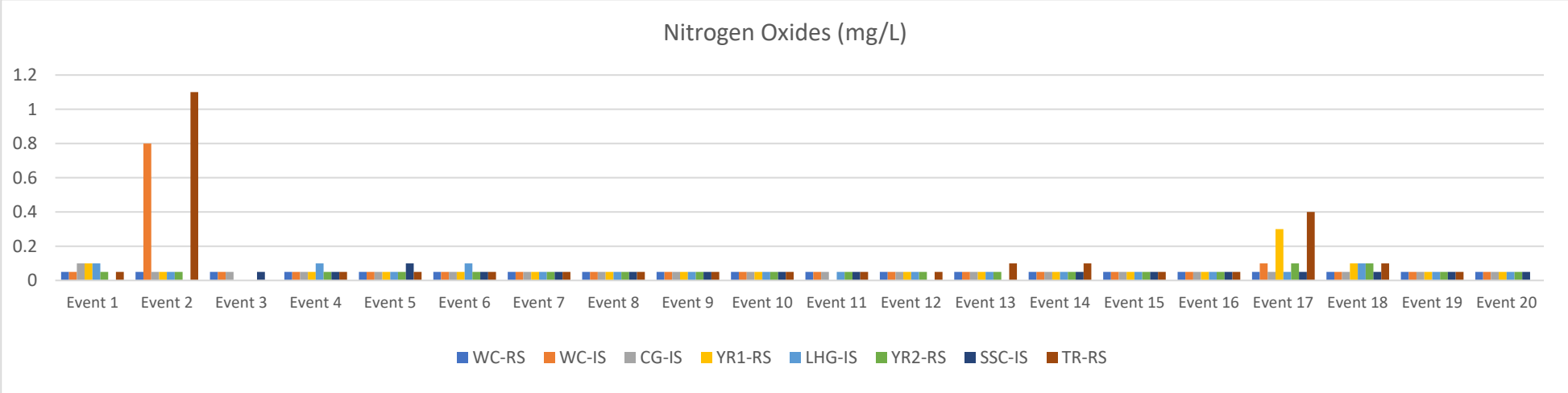

Figure 3-24 Nitrogen Oxides (mg/L) for the Talbingo Reservoir catchment

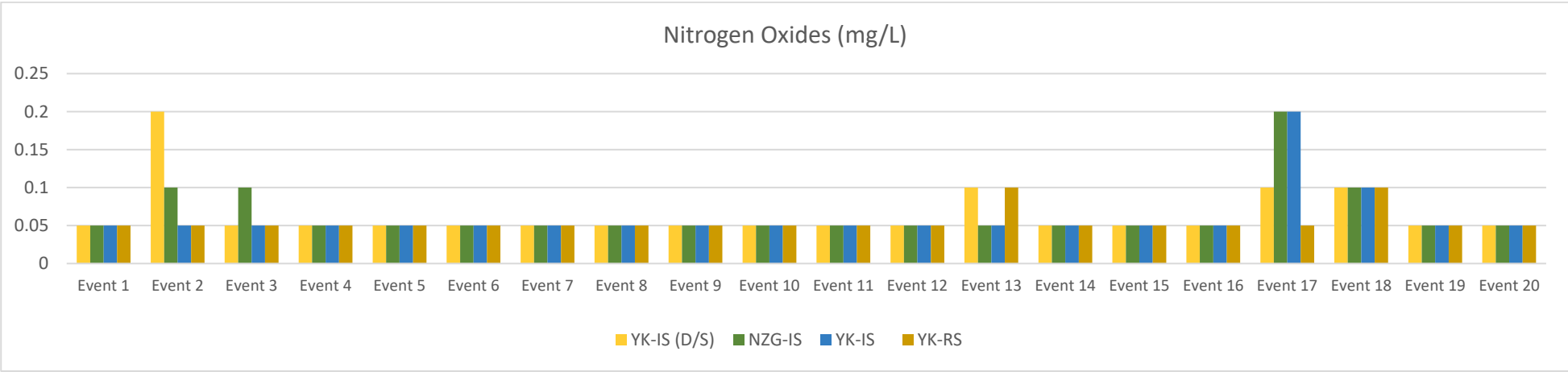

Figure 3-25 Nitrogen Oxides (mg/L) for the Yorkers Creek catchment

Results for Reactive Phosphorous (mg/L) were all below the laboratory's LOR, with the exception of SSC-IS (0.01 mg/L) within the Talbingo Reservoir catchment, refer to Figure 3-26. Results for Reactive Phosphorous within the Yorkers Creek catchment were below the LOR, with the exception of NZG-IS (0.01 mg/L), refer to Figure 3-27.

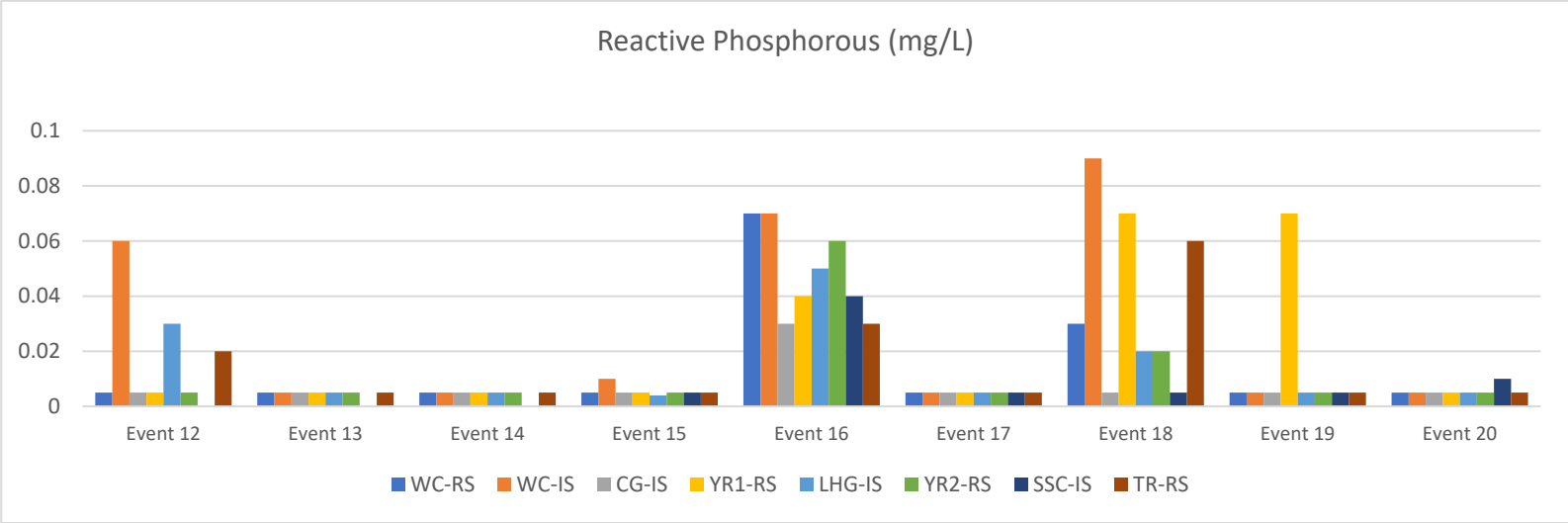

Figure 3-26 Reactive Phosphorous (mg/L) for the Talbingo Reservoir catchment

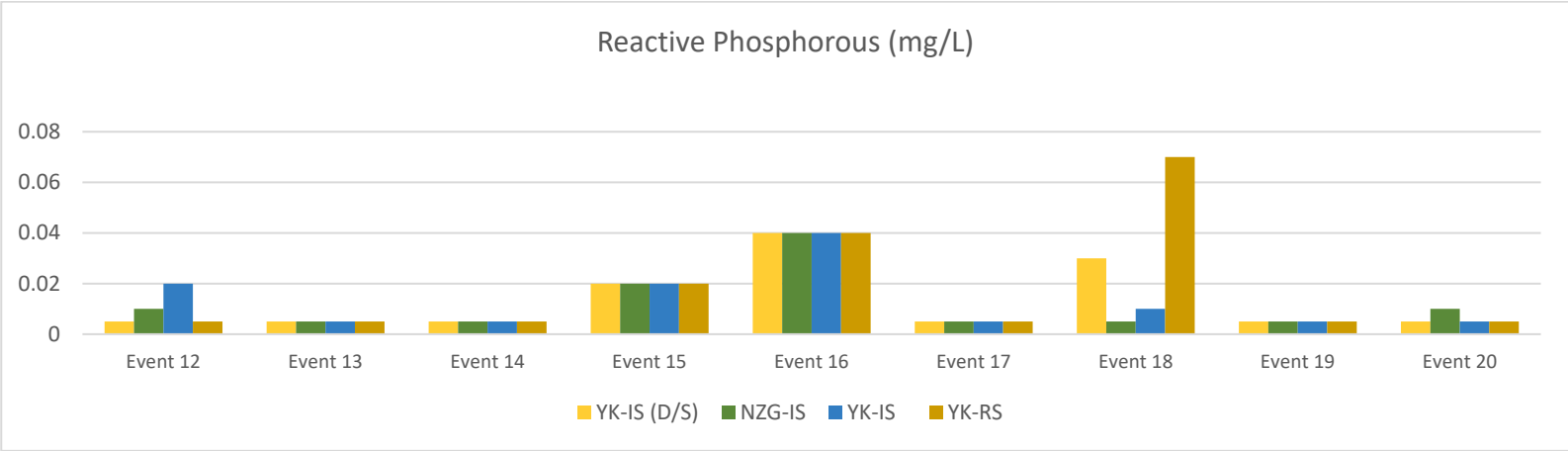

Figure 3-27 Reactive Phosphorous (mg/L) for the Yorkers Creek catchment

Total Hardness ($CaCO_3$, mg/L) within the Talbingo Reservoir catchment has remained consistent, with results varying from very soft at TR-RS (6 mg/L) to hard at LHG-IS (280 mg/L), refer to Figure 3-28. Results for Total Hardness ($CaCO_3$, mg/L) within the Yorkers Creek catchment were all below the laboratory's LOR, except for NZG-IS. NZG-IS recorded a decrease (6 mg/L) when compared to Event 19 (8 mg/L), refer to Figure 3-29.

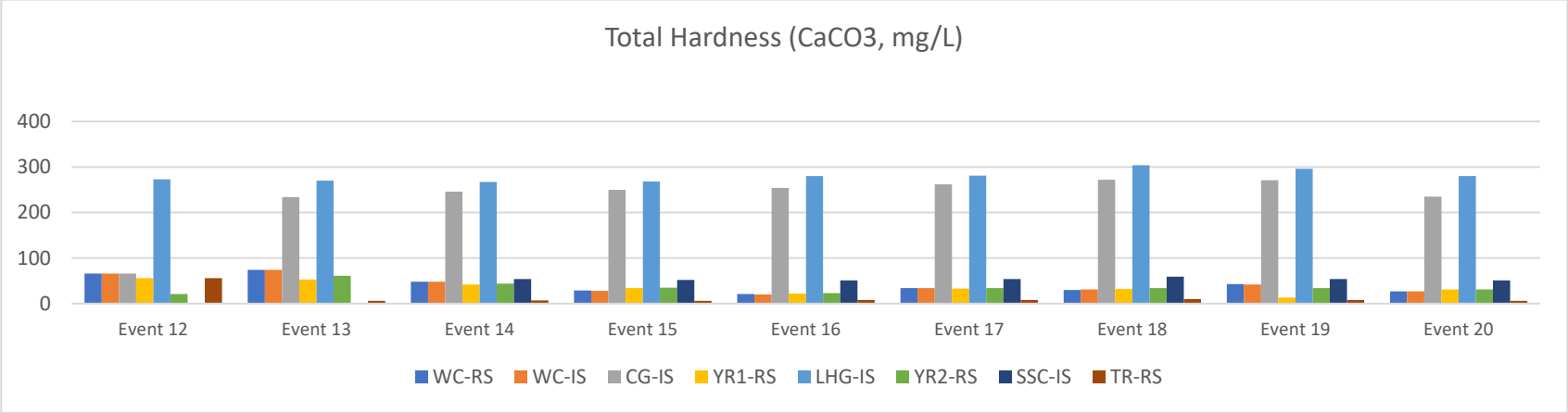

Figure 3-28 Total Hardness ($CaCO_3$) for the Talbingo Reservoir catchment

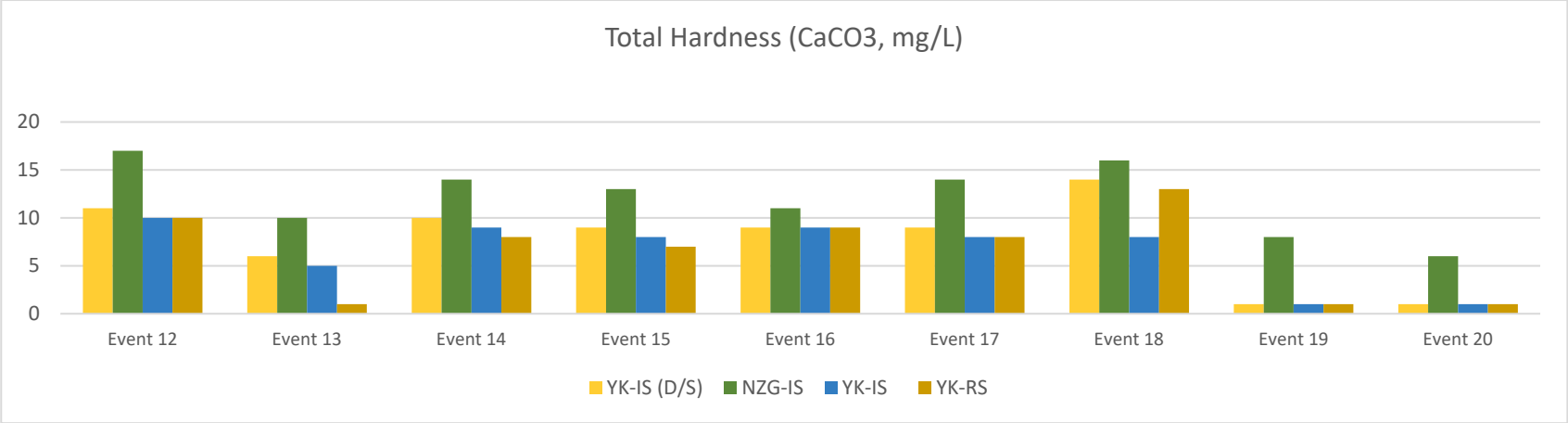

Figure 3-29 Total Hardness ($CaCO_3$) for the Yorkers Creek catchment

Results for Total Kjeldahl Nitrogen (TKN, mg/L) were below the LOR for all sites within the Talbingo Reservoir, refer to Figure 3-30. TKN results for the Yorkers Creek catchment were below the LOR for all sites, refer to Figure 3-31.

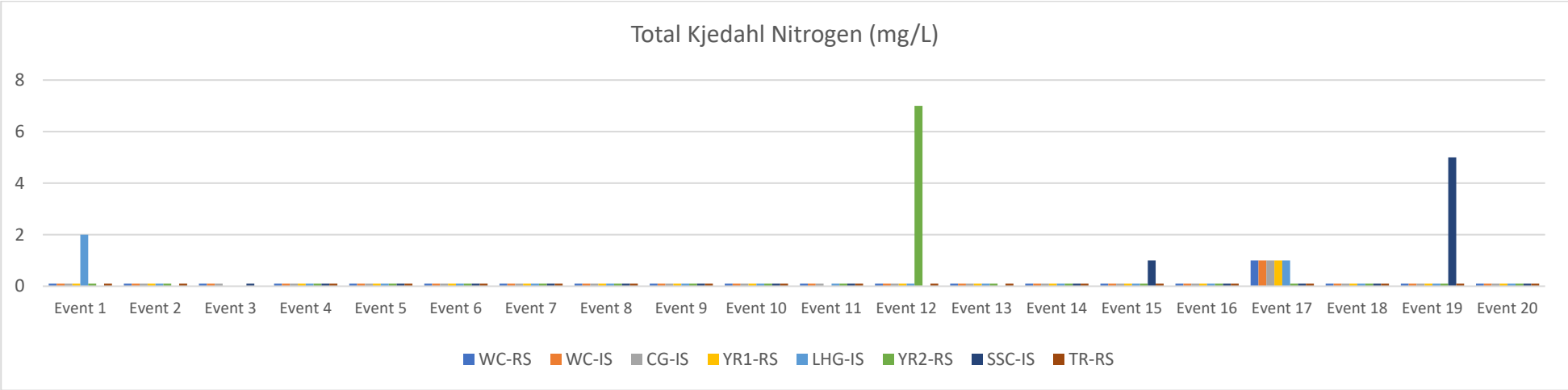

Figure 3-30 Total Kjeldahl Nitrogen (TKN) for the Talbingo Reservoir catchment

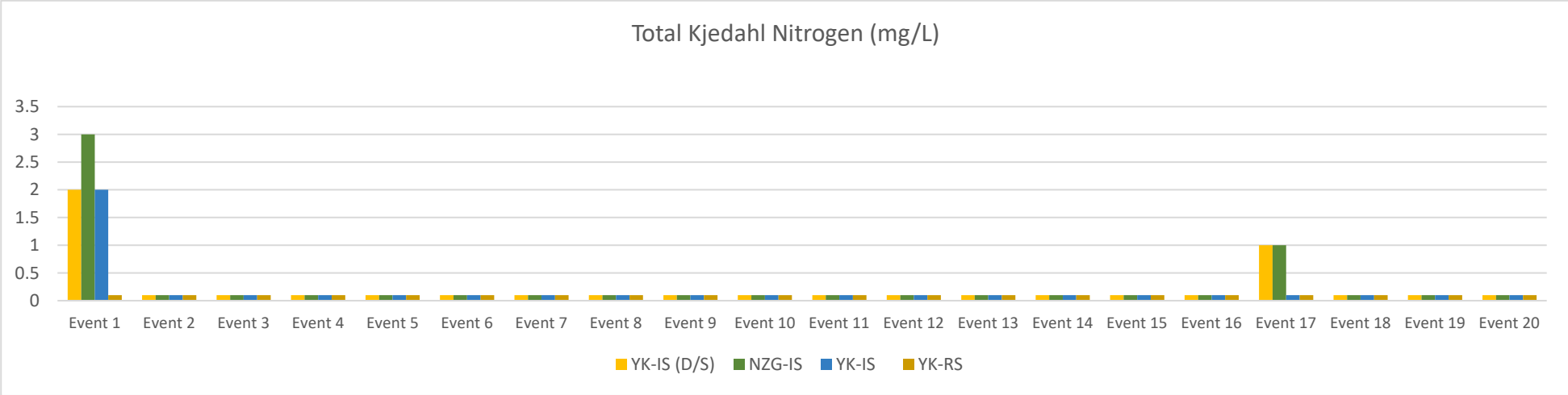

Figure 3-31 Total Kjeldahl Nitrogen (TKN) for the Yorkers Creek catchment

Ammonia (mg/L) levels were below the LOR for all sites within the Talbingo Reservoir and Yorkers Creek catchments for Event 20, refer to Figure 3-32 and Figure 3-33.

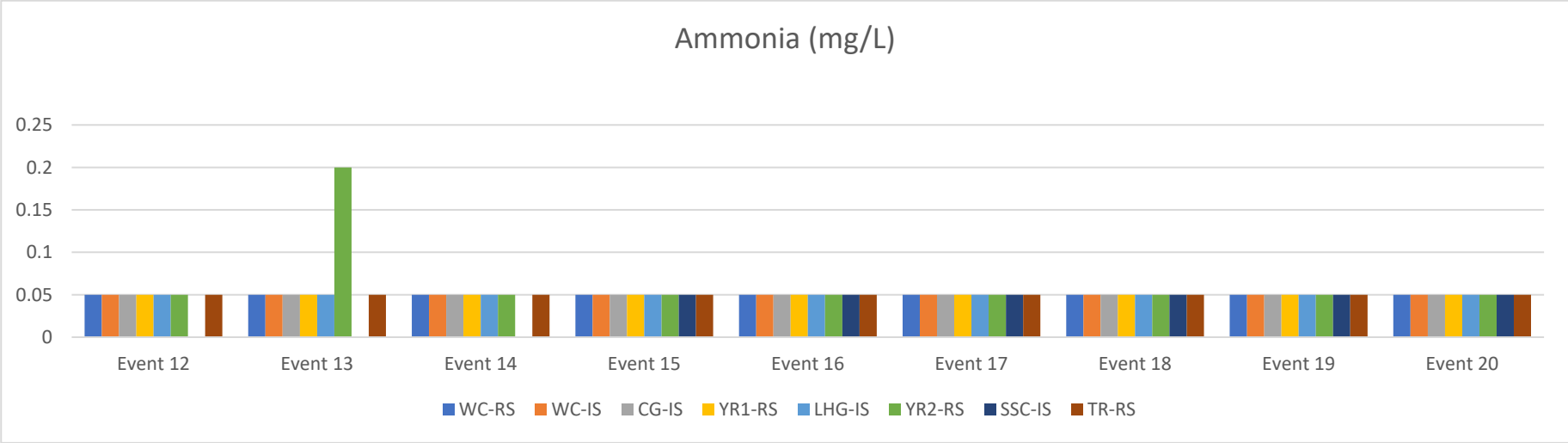

Figure 3-32 Ammonia (mg/L) for the Talbingo Reservoir catchment

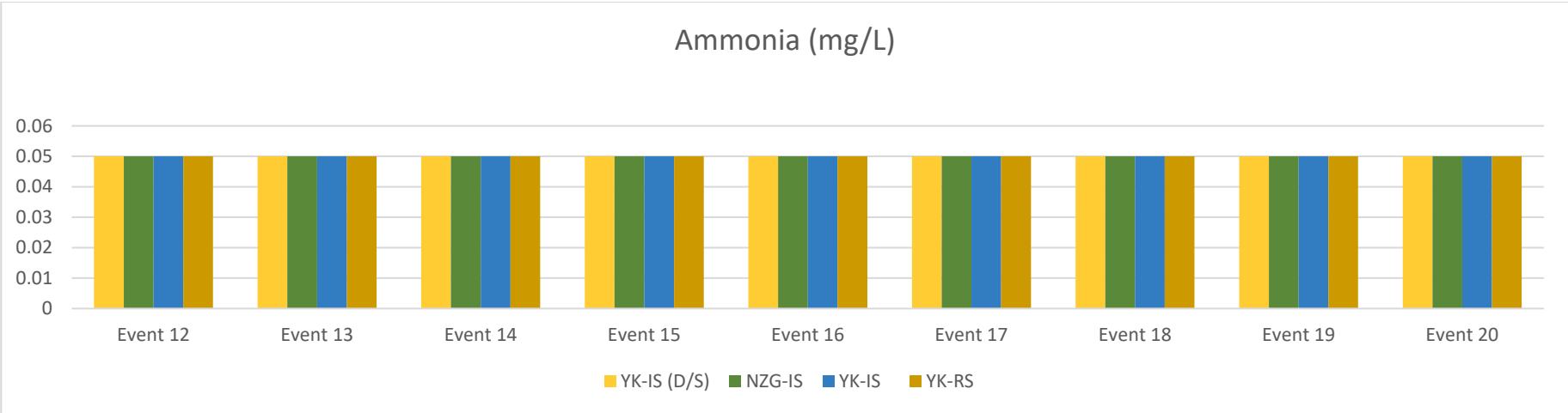

Figure 3-33 Ammonia (mg/L) for the Yorkers Creek catchment

3.1.2. Quality Assurance / Quality Control

A Quality Assurance and Quality Control (QA/QC) program was undertaken as part of this investigation including:

- A field duplicate sample, at a rate of one per 20 samples, was taken (DUP01) from the WQM site WC-RS on 31 October 2023. DUP01 was analysed for metals and metalloids. The duplicate sample has been compared against the WC-RS sample by Relative Percentage Difference (RPD) and has returned within an acceptable range (less than 30% for inorganic or less than 5 times the laboratory LOR).
- A water blank was supplied by the laboratory. The water blank sample was analysed for metals and metalloids. There were no exceedances of the sample results above the LORs.

NGH consider the QA/QC program to have been effective and the data reliable and representative to achieve the objectives of the investigation.

Refer to Appendix C for the laboratory analysis certificate, Appendix D for the RPD Table and Appendix E for the calibration certificates.

4. Conclusion

Water temperatures for Event 20 have decreased across both catchments when compared to water temperatures for Event 19. Water temperatures within the area are considered to be consistent with seasonal changes.

Results for DO (%) have remained consistent across both catchments during Event 20. DO (ppm) has slightly increased across both catchments.

Similarly, specific conductance (µS/cm) and conductivity readings have remained consistent across both catchments when compared with results for Event 19. Results for CG-IS (350.6 µS/cm) and LHG-IS (398.8 µS/cm) continue to be notably higher than other sites within the Talbingo Reservoir catchment, while NZG-IS (32.3 µS/cm) continues to return the highest reading for the Yorkers Creek catchment. The pattern between sites is mostly reflective of the pattern for specific conductance.

pH has decreased across both catchments. All sites within the Yorkers Creek catchment, apart from NZG-IS (6.55), had values of pH below the lower DGV threshold (6.5 pH units).

Turbidity values were predominantly below the lower DGV thresholds (2 - 25 NTU) for the Talbingo Reservoir catchment, except for WC-RS (2.3 NTU) and SSC-IS (3.5 NTU). Turbidity readings within the Yorkers Creek catchment have slightly decreased, when compared to Event 19.

The values for oxygen redox potential (ORP) have increased at all sites, with the exception of TR-RS (70.2 mV) within the Talbingo Reservoir catchment and YK-IS (D/S) (113.1 mV) within the Yorkers Creek catchment, which slightly decreased during Event 20.

Results for TSS were below the laboratory LOR, except for WC-RS (1 mg/L) and SSC-IS (3 mg/L).

Nitrogen Oxides (mg/L) were below the laboratory LOR for both catchments. Results for all sites were below the DGV (0.15 mg/L).

Reactive Phosphorous (mg/L) were below the laboratory LOR at all sites within the Talbingo Reservoir catchment, with the exception of SSC-IS (0.01 mg/L) and the Yorkers Creek catchment, with the exception of NZG-IS (0.01 mg/L).

Total Hardness ($CaCO_3$) remained consistent within the Talbingo Reservoir catchment for Event 19, varying from very soft at TR-RS (6 mg/L) to hard at LHG-IS (280 mg/L). Results were all below the laboratory's LOR within the Yorkers Creek catchment, with the exception for NZG-IS (6 mg/L).

Results for Total Kjeldahl Nitrogen (TKN, mg/L) and Ammonia (mg/L) were below the laboratory LOR for both catchments.

Laboratory results for Event 20 were generally consistent with the results of the previous monitoring events, with most analytes reported below the Limit of Reporting. Results exceeded the DGV for:

- Aluminium (0.027 mg/L) at CG-IS, LHG-IS, YK-IS (D/S), NZG-IS, YK-RS, YK-IS, YR2-RS and SSC-IS
- Copper (0.001 mg/L) at LHG-IS, NZG-IS, YK-IS, YR2-RS, SSC-IS and TR-RS
- Zinc (0.0024 mg/L) at CG-IS, LHG-IS, YR2-RS and SSC-IS
- Total Phosphorus (0.02 mg/L) at YK-RS and SSC-IS
- Total Suspended Solids (0.2 mg/L) at WC-RS, SSC-IS
- Total Dissolved Solids at CG-IS, LHG-IS and TR-RS.

All results and statistics are provided in Appendix A.

5. References

Jacobs Pty Ltd. 2020. *Snowy 2.0 Transmission Connection Project EIS.*

NGH Pty Ltd. 2022. *Pre-construction Water Quality Monitoring Program and Methodology*.

NGH Pty Ltd. 2022a. *Pre-construction Water Quality Monitoring Report: Event 1 April 2022*.

NGH Pty Ltd. 2022b. *Pre-construction Water Quality Monitoring Report: Event 2 April 2022*.

NGH Pty Ltd. 2022c. *Pre-construction Water Quality Monitoring Report: Event 3 May and June 2022*.

NGH Pty Ltd. 2022d. *Pre-construction Water Quality Monitoring Report: Event 4 June 2022*.

NGH Pty Ltd. 2022e. *Pre-construction Water Quality Monitoring Report: Event 5 July 2022*.

NGH Pty Ltd. 2022f. *Pre-construction Water Quality Monitoring Report: Event 6 August 2022*.

NGH Pty Ltd. 2022g. *Pre-construction Water Quality Monitoring Report: Event 7 October 2022.*

NGH Pty Ltd. 2022h. *Pre-construction Water Quality Monitoring Report: Event 8 October 2022.*

NGH Pty Ltd. 2022i. *Pre-construction Water Quality Monitoring Report: Event 9 November 2022.*

NGH Pty Ltd. 2022j. *Pre-construction Water Quality Monitoring Report: Event 10 December 2022.*

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NGH Pty Ltd. 2023b. *Pre- construction Water Quality Monitoring Report: Event 12 February 2023.*

NGH Pty Ltd. 2023c. *Pre- construction Water Quality Monitoring Report: Event 13 March 2023.*

NGH Pty Ltd. 2023d. *Pre- construction Water Quality Monitoring Report: Event 14 April 2023.*

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NGH Pty Ltd. 2023f. *Pre- construction Water Quality Monitoring Report: Event 16 June 2023.*

NGH Pty Ltd. 2023g. *Pre- construction Water Quality Monitoring Report: Event 17 July 2023.*

NGH Pty Ltd. 2023h. *Pre- construction Water Quality Monitoring Report: Event 18 August 2023.*

NGH Pty Ltd. 2023i. *Pre- construction Water Quality Monitoring Report: Event 19 September 2023.*

TransGrid. 2021a. *Snowy 2.0 Transmission Connection Project Submissions Report.*

TransGrid. 2021b. *Snowy 2.0 Transmission Connection Project Amendment Report*.

APPENDIX A EVENT DATA TABLE

22-013 Pre-construction WQM		Sheen/ oil/ grease	Temp. ( )	Dissolved Oxygen (DO %)	DO (ppm)	Specific EC (SPC uS/cm)	EC (uS/cm)	pH	Redox (mV)	Turbidity (NTU)	Al (mg/L)	As (mg/L)	Cd (mg/L)	Cr (mg/L)	Cu (mg/L)	Cyanide (mg/L)	Fe (mg/L)	Pb (mg/L)	Mn (mg/L)	Hg (mg/L)	Ni (mg/L)	TN (mg/L)	TP (mg/L)	Ag (mg/L)	Zn (mg/L)	Ammonia (mg/L)	Nitrogen Oxides	Reactive Phosphorous	Total Hardness (CaCO3)	Total Kjedahl Nitrogen (TKN)	TDS mg/L	TSS (mg/L)
DGV (Default Guideline Value)		No	-	90-110	-	-	30-350	6.5-8	-	2-25	0.027	0.0008	0.0006	0.00001	0.001	0.004	0.3	0.001	1.2	0.0001	0.008	0.25	0.02	0.00002	0.0024	0.013	0.015	0.015	-	-	-	0.2
WC-RS	Event 1	No	14.2	90.5	9.28	126.8	100.7	7.85	61.2	0.37	0.01	0.00015	0.00001	0.00001	0.0001	0.001	0.03	0.0005	0.011	0.00002	0.0005	3	0.005	0.00001	0.001		0.05			0.1	12	0.1
	Event 2	No but on sediment	12.4	73.5	7.84	109	83.1	7.95	159.4	1.49	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.001	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	1	0.1
	Event 3	No	9.2	61.3	7.05	151	36	7.64	116.3	36.96	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	50	52
	Event 4	No	7.3	75.1	12.78	128.9	35.3	5.8	128.4		0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	19	0.1
	Event 5	No	7.8	98.9	11.76	88	59	7.96	65.8	6.45	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	56	0.1
	Event 6	No	9.3	79.86	9.74	89.6	62.7	8.69	152.6	7.15	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	44	6
	Event 7	no	13.2	74.9	7.87	83.5	64.6	7.62	78.7	2.62	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	53	6
	Event 8	no	13.1	74.5	7.84	71.8	55.4	7.67	98.4	9.52	0.079	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.002	0.00002	0.0005	0.1	0.08	0.00001	0.001		0.05			0.1	39	0.1
	Event 9	No	11.9	102.1	11.02	90	67.5	7.62	178.4	10.72	0.36	0.00015	0.00001	0.00001	0.0001	0.001	0.08	0.0005	0.004	0.00002	0.0005	0.1	0.02	0.00001	0.001		0.05			0.1	24	0.1
	Event 10	No	11.7		9.12		79.5	7.97	147.8	0.05	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.08	0.0005	0.004	0.00002	0.0005	0.1	0.005	0.00001	0.019		0.05			0.1	74	0.1
	Event 11	No	18.9	100.6	8.7	94.9	83.9	7.86	79.1	1.94	0.03	0.00015	0.00001	0.00001	0.0001	0.001	0.02	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	52	0.1
	Event 12	No	21.3	106.8	8.92	124.9	116.1	8.16	73.1	0.1	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001	0.05	0.05	0.005	66	0.1	1	5
	Event 13	No	19.4		9.11		145.8	8.44	57	0.05	0.03	0.00015	0.00001	0.00001	0.0001	0.001	0.02	0.0005	0.0005	0.00002	0.0005	0.1	0.03	0.00001	0.003	0.05	0.05	0.005	74	0.1	129	0.1
	Event 14	No	12	102	11	124.1	93.2	7.42	128.3	0.08	0.04	0.00015	0.00001	0.00001	0.0001	0.001	0.03	0.0005	0.0005	0.00002	0.0005	0.1	0.5	0.00001	0.002	0.05	0.05	0.005	48	0.1	79	0.1
	Event 15	No	9.7	45.2	5.13	75.6		7.6	139.9	5.39	0.11	0.00015	0.00001	0.00001	0.0001	0.001	0.09	0.0005	0.001	0.00002	0.0005	0.1	0.03	0.00001	0.001	0.05	0.05	0.005	29	0.1	1	4
	Event 16	No	8.3	91.8	10.8	51.3	34.9	7.21	125.5	25.22	0.75	0.00015	0.00001	0.00001	0.0001	0.001	0.46	0.0005	0.004	0.00002	0.0005	0.1	0.05	0.00001	0.002	0.05	0.05	0.07	21	0.1	1	26
	Event 17	No	6.1	89.7	11.13	76.7	49	7.74	71.9	4.29	0.11	0.00015	0.00001	0.00001	0.0001	0.001	0.08	0.0005	0.003	0.00002	0.0005	1	0.06	0.00001	0.001	0.05	0.05	0.005	34	1	178	2
	Event 18	No	8.9	94.7	10.97	81.6	56.5	7.92	10.4	4.85	0.19	0.00015	0.00001	0.00001	0.0001	0.001	0.09	0.0005	0.002	0.00002	0.001	0.1	0.005	0.00001	0.003	0.05	0.05	0.03	30	0.1	5	0.1
	Event 19	No	12.3	94	9.43	100.5	76.1	7.87	92.4	1.6	0.04	0.00015	0.00001	0.004	0.0001	0.001	0.02	0.0005	0.002	0.00002	0.0005	0.1	0.04	0.00001	0.001	0.05	0.05	0.005	43	0.1	6	2
	Event 20	No	10.1	97.9	10.28	90.8	65	7.34	128.4	2.3	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.01	0.0005	0.0005	0.00002	0.001	0.1	0.005	0.00001	0.002	0.05	0.05	0.005	27	0.1	69	1
	Min		6.10	45.20	5.13	51.30	34.90	5.80	10.40	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	21.00	0.10	1.00	0.10
	Max		21.30	106.80	12.78	151.00	145.80	8.69	178.40	36.96	0.75	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.01	0.00	0.00	3.00	0.50	0.00	0.02	0.05	0.05	0.07	74.00	1.00	178.00	52.00
	Mean		11.86	86.30	9.49	97.72	71.81	7.72	104.65	6.38	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.29	0.04	0.00	0.00	0.05	0.05	0.02	41.33	0.15	44.65	5.26
	Count		20.00	18.00	20.00	18.00	19.00	20.00	20.00	19.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	9.00	20.00	9.00	9.00	20.00	20.00	20.00
	St. Dev		4.09	16.30	1.81	25.11	28.33	0.57	42.45	9.49	0.18	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.67	0.11	0.00	0.00	0.00	0.00	0.02	18.29	0.20	46.27	12.46
WC-IS	Event 1	No	14.3	90.6	9.28	126.7	100.8	8.14	76	0.32	0.01	0.00015	0.00001	0.00001	0.0001	0.001	0.03	0.0005	0.011	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	80	3
	Event 2	No	12.5	69.9	7.44	109	83.3	7.84	146.8	1.39	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.002	0.00002	0.0005	0.8	0.005	0.00001	0.001		0.8			0.1	63	0.1
	Event 3	No	9.3	61.2	7.03	48	33	7.64	145.8	40.77	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.02	0.00001	0.001		0.05			0.1	41	42
	Event 4	No	7.4	43.7	12.55	52.3	35	5.73	115.9		0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.02	0.00001	0.001		0.05			0.1	27	0.1
	Event 5	No	7.9	96.4	11.45	87	59	7.86	104.3	5.24	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	48	0.1
	Event 6	No	9.3	72.36	9.55	86.6	60.3	8.28	148	7.78	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	47	6
	Event 7	No	13.3	75.1	7.86	83.8	65.1	7.61	92.6	2.41	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	4	3
	Event 8	No	13.1	74.4	7.82	71.7	55.4	7.62	107.1	10.1	0.076	0.00015	0.00001	0.00001	0.0001	0.001	0.005	0.0005	0.001	0.00002	0.0005	0.1	0.01	0.00001	0.001		0.05			0.1	1	4
	Event 9	No	12	102.2	11.02	88.7	66.6	7.55	156.8	11.79	0.36	0.00015	0.00001	0.00001	0.0001	0.001	0.08	0.0005	0.003	0.00002	0.0005	0.1	0.02	0.00001	0.001		0.05			0.1	6	0.1
	Event 10	No	11.9		15.88		79.2	7.99	148	0.05	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.08	0.0005	0.004	0.00002	0.0005	0.1	0.005	0.00001	0.02		0.05			0.1	68	0.1
	Event 11	No	19	105.8	9.15	94	83.2	7.96	92.6	2.15	0.03	0.00015	0.00001	0.00001	0.0001	0.001	0.03	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	43	0.1
	Event 12	No	21.7	108.2	8.98	125	117.1	8.24	76.2	0.1	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.02	0.0005	0.003	0.00002	0.0005	0.1	0.005	0.00001	0.02	0.05	0.05	0.06	66	0.1	80	2
	Event 13	No	19.6		8.85		146.1	8.43	5	0.05	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.02	0.0005	0.0005	0.00002	0.0005	0.1	0.01	0.00001	0.003	0.05	0.05	0.005	74	0.1	94	0.1
	Event 14	No	12.1	102.7	11.03	124	93.5	7.84	114.1	0.03	0.04	0.00015	0.00001	0.00001	0.0001	0.001	0.03	0.0005	0.0005	0.00002	0.0005	0.1	0.03	0.00001	0.002	0.05	0.05	0.005	48	0.1	57	0.1
	Event 15	No	9.8	44	4.99	75.3		7.39	138.4	5.64	0.1	0.00015	0.00001	0.00001	0.0001	0.001	0.06	0.0005	0.001	0.00002	0.0005	0.1	0.13	0.00001	0.001	0.05	0.05	0.01	28	0.1	1	0.1
	Event 16	No	8.3	92.1	10.82	51.2	34.9	7.16	138.9	28.1	0.67	0.00015	0.00001	0.00001	0.0001	0.001	0.39	0.0005	0.004	0.00002	0.0005	0.1	0.15	0.00001	0.001	0.05	0.05	0.07	20	0.1	9	17
	Event 17	No	6.2	91	11.27	76.4	48.9	7.59	78.2	3.54	0.1	0.00015	0.00001	0.00001	0.004	0.001	0.06	0.0005	0.002	0.00002	0.0005	1.1	0.07	0.00001	0.002	0.05	0.1	0.005	34	1	44	0.1
	Event 18	No	8.9	95.7	11.08	81.3	56.4	7.77	45.2	5.01	0.18	0.00015	0.00001	0.00001	0.0001	0.001	0.08	0.001	0.002	0.00002	0.0005	0.1	0.005	0.00001	0.003	0.05	0.05	0.09	31	0.1	21	0.1
	Event 19	No	12.4	94.7	9.48	100.5	76.1	7.89	101.6	1.3	0.04	0.00015	0.00001	0.003	0.0001	0.001	0.02	0.0005	0.002	0.00002	0.0005	0.1	0.005	0.00001	0.001	0.05	0.05	0.005	42	0.1	15	0.1
	Event 20	No	10.2	98.3	10.3	91.5	65.4	7.34	130.7	0.6	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.01	0.0005	0.001	0.00002	0.001	0.1	0.005	0.00001	0.002	0.05	0.05	0.005	27	0.1	72	0.1
	Min		6.20	43.70	4.99	48.00	33.00	5.73	5.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	20.00	0.10	1.00	0.10
	Max		21.70	108.20	15.88	126.70	146.10	8.43	156.80	40.77	0.67	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.01	0.00	0.00	1.10	0.15	0.00	0.02	0.05	0.80	0.09	74.00	1.00	94.00	42.00
	Mean		11.96	84.35	9.79	87.37	71.54	7.69	108.11	6.65	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.19	0.03	0.00	0.00	0.05	0.09	0.03	41.11	0.15	41.05	3.92
	Count		20.00	18.00	20.00	18.00	19.00	20.00	20.00	19.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	9.00	20.00	9.00	9.00	20.00	20.00	20.00
	St. Dev		4.15	19.94	2.32	23.83	28.75	0.56	39.08	10.60	0.16	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.27	0.04	0.00	0.01	0.00	0.17	0.03	18.44	0.20	29.44	9.79
CG-IS	Event 1	No	14.1	91.8	9.43	536	423.6	8.19	94.3	6.47	0.01	0.00015	0.00001	0.000005	0.005	0.001	0.005	0.0005	0.002	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.1			0.1	317	0.1
	Event 2	No	13.3	71.6	7.48	517	401.2	7.73	161.4	1.36	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.001	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	293	0.1
	Event 3	No	9.6	62.1	7.07	447	315	8.22	159.2	65.1	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	270	40
	Event 4	No	8.6	44.57	12.06	321.3	349	6.37	61.1		0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.05	0.00001	0.001		0.05			0.1	266	0.1
	Event 5	No	9.1	96.1	11.07	473	305	7.86	128.7	4.22	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	293	0.1
	Event 6	No	10.1	73.2	9.4	583	417.2	8.42	189.2	48.5	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	293	55
	Event 7	No	13.6	75.5	7.84	538	420.8	8.15	98.8	3.75	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.002		0.05			0.1	243	4
	Event 8	No	13.9	74.5	7.68	448.3	353.6	8.13	111.9	785.48	1.06	0.00015	0.00001	0.000005	0.0001	0.001	0.52	0.0005	0.011	0.00002	0.0005	0.1	0.35	0.00001	0.002		0.05			0.1	277	450
	Event 9	No	12.9	102.9	10.86	384	294.9	7.95	151.2	32.04	0.44	0.00015	0.00001	0.000005	0.0001	0.001	0.09	0.0005	0.002	0.00002	0.0005	0.1	0.02	0.00001	0.001		0.05			0.1	232	26
	Event 10	No	12.3		8.87		415.7	8.18	149.1	0.05	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.002	0.00002	0.0005	0.1	0.005	0.00001	0.042		0.05			0.1	299	0.1
	Event 11	No	16.6	101.2	9.17	375.2	315.2	8	101.1	1.2	0.05	0.00015	0.00001	0.000005	0.0001	0.001	0.01	0.0005	0.001	0.00002	0.0005	0.1	0.005	0.00001	0.004		0.05			0.1	288	0.1
	Event 12	No	20.1	116.9	9.98	438.4	397.7	7.97	101.5	0.1	0.04	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.005	0.00001	0.004	0.05	0.05	0.005	66	0.1	292	2
	Event 13	No	17.5		9.56		404.9	8.18	10	0.05	0.11	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	2	0.005	0.00001	0.005	0.05	0.05	0.005	234	0.1	271	2
	Event 14	No	13.3	102.9	10.75	541	420.2	7.64	135	0.01	0.05	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	2	0.005	0.00001	0.004	0.05	0.05	0.005	246	0.1	271	0.1
	Event 15	No	10.8	43.9	4.86	479.3		7.6	153.2	0.001	0.005	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.0005	0.1	0.1	0.00001	0.004	0.05	0.05	0.005	250	0.1	161	112
	Event 16	No	9.2	92.6	10.64	487.5	340.3	7.78	152.8	2.65	0.16	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.0005	0.0005	0.00002	0.002	0.1	0.005	0.00001	0.005	0.05	0.05	0.03	254	0.1	242	0.1
	Event 17	No	8.7	91.9	10.68	484.7	334.1	7.9	77.8	0.002	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.001	0.00002	0.001	1.3	0.005	0.00001	0.004	0.05	0.05	0.005	262	1	232	0.1
	Event 18	No	10.1	98.1	11.02	517	369.9	7.78	89.7	0.41	0.06	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.004	0.001	0.00002	0.002	0.1	0.005	0.00001	0.006	0.05	0.05	0.005	272	0.1	224	0.1
	Event 19	No	12.4	96.1	9.6	481.4	366	7.82	111.4	0	0.06	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.00002	0.002	0.1	0.005	0.00001	0.004	0.05	0.05	0.005	271	0.1	155	0.1
	Event 20	No	11	101.8	10.45	478.2	350.6	7.55	125.8	0.8	0.04	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.001	0.00002	0.002	0.1	0.005	0.00001	0.006	0.05	0.05	0.005	235	0.1	257	0.1
	Min		8.60	43.90	4.86	321.30	294.90	6.37	10.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	66.00	0.10	155.00	0.10
	Max		20.10	116.90	12.06	583.00	423.60	8.42	189.20	785.48	1.06	0.00	0.00	0.00	0.01	0.00	0.52	0.00	0.01	0.00	0.00	2.00	0.35	0.00	0.04	0.05	0.10	0.03	272.00	1.00	317.00	450.00
	Mean		12.36	85.43	9.42	473.91	368.15	7.87	118.16	50.12	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.35	0.03	0.00	0.00	0.05	0.05	0.01	232.22	0.15	258.80	34.61
	Count		20.00	18.00	20.00	18.00	19.00	20.00	20.00	19.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	9.00	20.00	9.00	9.00	20.00	20.00	20.00
	St. Dev		3.11	20.49	1.73	65.19	43.68	0.42	41.37	179.03	0.24	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.62	0.08	0.00	0.01	0.00	0.01	0.01	63.83	0.20	42.79	101.67
YR1-RS	Event 1	No	14.9	92.2	9.31	110.7	89.3	8.35	78.3	6.94	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.06	0.0005	0.003	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.1			0.1	69	0.1
	Event 2	No	12.7	73.8	7.83	104	79.2	8.15	128.8	1.85	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	50	0.1
	Event 3	No sample																														
	Event 4	No	6.5	24.6	13.05	34.7	36.9	6.84	56.3		0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	33	0.1
	Event 5	No	7.9	102.6	12.18	82	59	7.97	157.1	5	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	53	0.1
	Event 6	No	8.8	73.3	10.59	59.7	41.2	8.5	180.9	10	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	36	13
	Event 7	No	12.5	75.5	8.03	69.6	53.1	7.46	111.4	2.19	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	38	3
	Event 8	No	13.1	74.8	7.86	62.9	48.6	7.83	96.6	124.93	0.088	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.01	0.00001	0.001		0.05			0.1	35	0.1
	Event 9	No	12.2	102.7	11.02	70.8	53.5	7.53	157.4	7.3	0.3	0.00015	0.00001	0.000005	0.0001	0.001	0.07	0.0005	0.002	0.000015	0.0005	0.1	0.01	0.00001	0.001		0.05			0.1	30	0.1
	Event 10	No	11.6		9.68		53.1	7.91	140.3	2	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.15	0.0005	0.003	0.000015	0.0005	0.1	0.01	0.00001	0.006		0.05			0.1	67	0.1
	Event 11	No	19.8	101.6	8.64	70.5	63.5	7.87	92.3	6.31	0.22	0.00015	0.00001	0.000005	0.0001	0.001	0.16	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.002						50	5
	Event 12	No	22.1	109.4	9.01	109.7	103.7	8.25	89.5	0.1	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.002	0.05	0.05	0.005	56	0.1	12	0.1
	Event 13	No	20.3		7.73		124.6	8.69	7	0.05	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.01	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.002	0.05	0.05	0.005	53	0.1	73	0.1
	Event 14	No	12.9	103.6	10.93	111.7	85.9	7.88	124.8	-0.1	0.06	0.00015	0.00001	0.000005	0.0001	0.001	0.04	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001	0.05	0.05	0.005	42	0.1	58	0.1
	Event 15	No	9.3	44.1	5	86.3		7.54	141	1.97	0.08	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.0005	0.001	0.000015	0.0005	0.1	0.03	0.00001	0.001	0.05	0.05	0.005	34	0.1	21	0.1
	Event 16	No	7.8	92.7	11.04	55.6	37.3	7.25	131.1	12.25	0.47	0.00015	0.00001	0.000005	0.0001	0.001	0.3	0.0005	0.003	0.000015	0.0005	0.1	0.02	0.00001	0.001	0.05	0.05	0.04	22	0.1	6	8
	Event 17	No	5.8	91.9	11.5	75	47.5	7.83	68.7	4.33	0.1	0.00015	0.00001	0.000005	0.0001	0.001	0.07	0.0005	0.002	0.000015	0.0005	1.3	0.18	0.00001	0.001	0.05	0.3	0.005	33	1	41	0.1
	Event 18	No	8.8	96.4	11.19	83.2	57.5	7.69	72.9	3.81	0.17	0.00015	0.00001	0.000005	0.0001	0.001	0.09	0.005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.002	0.05	0.1	0.07	32	0.1	4	0.1
	Event 19	No	14.3	95.3	9.15	98.2	78.1	7.92	104.5	1.8	0.06	0.00015	0.00001	0.002	0.0001	0.001	0.03	0.0005	0.001	0.000015	0.0005	0.1	0.38	0.00001	0.001	0.05	0.05	0.07	13.3	0.1	3	0.1
	Event 20	No	12.1	100.3	10.08	97.3	73.3	7.61	119	0.9	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.001	0.000015	0.001	0.1	0.005	0.00001	0.003	0.05	0.05	0.005	31	0.1	67	0.1
	Min		5.80	24.60	5.00	34.70	36.90	6.84	7.00	-0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	13.30	0.10	3.00	0.10
	Max		22.10	109.40	13.05	111.70	124.60	8.69	180.90	124.93	0.47	0.00	0.00	0.00	0.00	0.00	0.30	0.01	0.00	0.00	0.00	1.30	0.38	0.00	0.01	0.05	0.30	0.07	56.00	1.00	73.00	13.00
	Mean		12.28	85.58	9.67	81.29	65.85	7.85	108.31	10.65	0.09	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.16	0.04	0.00	0.00	0.05	0.07	0.02	35.14	0.15	39.26	1.61
	Count		19.00	17.00	19.00	17.00	18.00	19.00	19.00	18.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	9.00	18.00	9.00	9.00	18.00	19.00	19.00
	St. Dev		4.58	22.69	1.92	21.97	23.91	0.44	41.46	28.74	0.12	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.28	0.09	0.00	0.00	0.00	0.06	0.03	13.62	0.21	22.65	3.48
LHG-IS	Event 1	No									0.01	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.001	0.000015	0.0005	2	0.005	0.00001	0.001		0.1			2	348	0.1
	Event 2	No									0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	353	2
	Event 3	No sample																														
	Event 4	No	9.9	0	10.71	0	366.9	6.93	76.3		0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.01	0.00001	0.001		0.1			0.1	295	0.1
	Event 5	No	9.3	97.8	11.22	434	304	8.01	93.1	4.75	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	319	6
	Event 6	No	10.3	49.9	5.59	445.4	320.5	8.34	20.9	26.33	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.1			0.1	268	6
	Event 7	No	13.5	72.4	7.54	476.2	371.3	8.07	39.9	7.45	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.002		0.05			0.1	271	2
	Event 8	No	13.9	72	7.43	429.4	338.3	8.02	88.4	85.15	0.41	0.00015	0.00001	0.000005	0.0001	0.001	0.11	0.0005	0.005	0.000015	0.0005	0.1	0.07	0.00001	0.002		0.05			0.1	273	64
	Event 9	No	13.1	100.5	10.55	340.6	263.3	7.86	111.7	10.46	0.18	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.003	0.000015	0.0005	0.1	0.02	0.00001	0.001		0.05			0.1	200	0.1
	Event 10	No	12.4		10.31		397.9	7.89	53.5	0.05	0.06	0.00015	0.00001	0.000005	0.0001	0.001	0.1	0.0005	0.017	0.000015	0.0005	0.1	0.005	0.00001	0.005		0.05			0.1	310	0.1
	Event 11	No	16.1	85.2	7.8	357.9	297	7.62	56.9	4.82	0.05	0.00015	0.00001	0.000005	0.0001	0.001	0.08	0.0005	0.005	0.000015	0.0005	0.1	0.005	0.00001	0.003		0.05			0.1	311	0.1
	Event 12	No	18.8	84.3	7.4	453.4	399.3	7.53	-19.1	0.1	0.05	0.00015	0.00001	0.000005	0.0001	0.001	0.13	0.0005	0.073	0.000015	0.0005	0.1	0.005	0.00001	0.004	0.05	0.05	0.03	273	0.1	280	7
	Event 13	No	17.1		6.45		445.6	7.7	6	0.05	0.13	0.00015	0.00001	0.000005	0.0001	0.001	0.08	0.0005	0.08	0.000015	0.0005	0.1	0.02	0.00001	0.005	0.05	0.05	0.005	270	0.1	293	3
	Event 14	No	12.6	66.2	7.03	585	446.8	7.47	-22.7	3.65	0.06	0.00015	0.00001	0.000005	0.0001	0.001	0.13	0.0005	0.039	0.000015	0.0005	0.1	0.005	0.00001	0.004	0.05	0.05	0.005	267	0.1	293	3
	Event 15	No	9.8	44	5.04	522		7.21	-43.2	17.27	0.07	0.00015	0.00001	0.000005	0.002	0.001	0.04	0.0005	0.007	0.000015	0.0005	0.1	0.03	0.00001	0.004	0.05	0.05	0.004	268	0.1	316	0.1
	Event 16	No	9.2	88.9	10.2	376.6	263.2	7.54	149.8	13.03	0.38	0.00015	0.00001	0.000005	0.013	0.001	0.19	0.0005	0.013	0.000015	0.006	0.1	0.01	0.00001	0.008	0.05	0.05	0.05	280	0.1	228	10
	Event 17	No	9	89.3	10.29	511	355	7.77	59.7	4.57	0.09	0.00015	0.00001	0.000005	0.0001	0.001	0.04	0.0005	0.005	0.000015	0.002	1	0.03	0.00001	0.005	0.05	0.05	0.005	281	1	272	5
	Event 18	No	10	91.3	10.29	553	394.3	7.88	54.1	3.73	0.14	0.00015	0.00001	0.000005	0.003	0.001	0.07	0.007	0.009	0.000015	0.004	0.1	0.005	0.00001	0.008	0.05	0.1	0.02	304	0.1	312	0.1
	Event 19	No	12.1	86.5	8.71	529	398.2	7.77	3.3	16.8	0.07	0.00015	0.00001	0.003	0.002	0.001	0.05	0.005	0.012	0.000015	0.002	0.1	0.005	0.00001	0.004	0.05	0.05	0.005	296	0.1	144	0.1
	Event 20	No	11.7	88.7	8.98	535	398.8	7.53	23.4	1.5	0.04	0.00015	0.00001	0.000005	0.003	0.001	0.01	0.0005	0.004	0.000015	0.003	0.1	0.005	0.00001	0.008	0.05	0.05	0.005	280	0.1	316	0.1
	Min		9.00	0.00	5.04	0.00	263.20	6.93	-43.20	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.00	267.00	0.10	144.00	0.10
	Max		18.80	100.50	11.22	585.00	446.80	8.34	149.80	85.15	0.41	0.00	0.00	0.00	0.01	0.00	0.19	0.01	0.08	0.00	0.01	2.00	0.07	0.00	0.01	0.05	0.10	0.05	304.00	2.00	353.00	64.00
	Mean		12.28	74.47	8.56	436.57	360.03	7.71	44.24	12.48	0.10	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00	0.00	0.25	0.01	0.00	0.00	0.05	0.06	0.01	279.89	0.25	284.32	5.73
	Count		17.00	15.00	17.00	15.00	16.00	17.00	17.00	16.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	9.00	19.00	9.00	9.00	19.00	19.00	19.00
	St. Dev		2.91	26.25	1.93	140.98	57.76	0.34	51.18	20.76	0.12	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.02	0.00	0.00	0.47	0.02	0.00	0.00	0.00	0.02	0.02	12.72	0.47	50.05	14.42
YR2-RS	Event 1	No	15.3	93.1	9.32	109.4	89.2	8.38	76.5	3.28	0.01	0.00015	0.00001	0.000005	0.0001	0.001	0.06	0.0005	0.003	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	74	2
	Event 2	No	13	73.6	7.74	101	78.3	8.11	145.4	2.29	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	39	0.1
	Event 3	No sample																														
	Event 4	No	6.5	83.35	19.18	105.2	38.4	7.24	64.5		0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	38	0.1
	Event 5	No	8.1	95.2	11.26	82	55	7.81	132.6	5.05	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.02	0.00001	0.001		0.05			0.1	57	0.1
	Event 6	No	10.2	86.3	11.87	62	42.9	8.19	258.3	14.21	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	47	12
	Event 7	No	12.7	75.7	8.02	71.3	54.6	7.65	104.3	2.84	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	67	5
	Event 8	No	13.4	75.1	7.84	131.6	49.7	7.71	99.5	7.06	0.1	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	48	2
	Event 9	No	12.5	103	10.97	68.4	52.1	7.47	148.1	9.56	0.29	0.00015	0.00001	0.000005	0.0001	0.001	0.08	0.0005	0.003	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	22	0.1
	Event 10	No	12.3		9.94		53.3	7.86	109.8	0.05	0.22	0.00015	0.00001	0.000005	0.0001	0.001	0.16	0.0005	0.003	0.000015	0.0005	0.1	0.005	0.00001	0.004		0.05			0.1	63	0.1
	Event 11	No	19.9	101.8	8.3	74.5	63.1	7.48	115	5.07	0.1	0.00015	0.00001	0.000005	0.0001	0.001	0.08	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	92	3
	Event 12	No	22.9	108.2	8.79	109.7	105			0.1	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.002	0.05	0.05	0.005	21	7	1	0.1
	Event 13	No	20.9		8.24		127.4	8.56	16	0.05	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.01	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001	0.2	0.05	0.005	61	0.1	72	0.1
	Event 14	No	13.5	103	10.74	112.9	88	7.97	81.1	0.18	0.06	0.00015	0.00001	0.000005	0.0001	0.001	0.04	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.002	0.05	0.05	0.005	44	0.1	59	0.1
	Event 15	No	9.9	44.2	5	88.7		7.49	97.2	1.83	0.07	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.001	0.05	0.05	0.005	35	0.1	56	0.1
	Event 16	No	1.8	93.2	11.1	56.9	38.2	7.1	136.4	11.65	0.46	0.00015	0.00001	0.000005	0.0001	0.001	0.29	0.0005	0.003	0.000015	0.001	0.1	0.05	0.00001	0.002	0.05	0.05	0.06	23	0.1	11	6
	Event 17	No	6.1	92.3	11.46	76.6	49	7.55	82.3	2.59	0.1	0.00015	0.00001	0.000005	0.0001	0.001	0.07	0.0005	0.002	0.000015	0.0005	0.1	0.017	0.00001	0.001	0.05	0.1	0.005	34	0.1	51	0.1
	Event 18	No	9.2	97.3	11.19	85	59.4	7.5	88.3	4.45	0.17	0.00015	0.00001	0.000005	0.0001	0.001	0.09	0.0005	0.002	0.000015	0.001	0.1	0.005	0.00001	0.005	0.05	0.1	0.02	34	0.1	132	0.1
	Event 19	No	14.6	95.6	9.14	99.9	80	7.88	92.7	1.9	0.06	0.00015	0.00001	0.000005	0.0001	0.001	0.04	0.001	0.001	0.000015	0.0005	0.1	0.02	0.00001	0.001	0.05	0.05	0.005	34	0.1	10	0.1
	Event 20	No	10.9	98.3	10.17	99.3	72.5	7.43	118.1	1	0.03	0.00015	0.00001	0.000005	0.002	0.001	0.02	0.0005	0.001	0.000015	0.001	0.1	0.005	0.00001	0.003	0.05	0.05	0.005	31	0.1	60	0.1
	Min		1.80	44.20	5.00	56.90	38.20	7.10	16.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	21.00	0.10	1.00	0.10
	Max		22.90	108.20	19.18	131.60	127.40	8.56	258.30	14.21	0.46	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.01	0.20	0.10	0.06	61.00	7.00	132.00	12.00
	Mean		12.30	89.37	10.01	90.26	66.45	7.74	109.23	4.06	0.09	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.07	0.06	0.01	35.22	0.46	52.58	1.65
	Count		19.00	17.00	19.00	17.00	18.00	18.00	18.00	18.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	9.00	19.00	9.00	9.00	19.00	19.00	19.00
	St. Dev		5.18	15.53	2.82	20.56	24.23	0.39	48.93	4.14	0.12	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.02	0.02	11.81	1.58	30.49	3.08
SSC-IS	Event 1	No flow																														
	Event 2	No flow																														
	Event 3	No	10.4	61.4	6.87	108	78	7.5	152.2	42.72	0.00015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	84	8
	Event 4	No	8.6	61.4	12.09	108	96.9	7.19	53.1		0.00015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	69	0.1
	Event 5	No	8.8	96.2	11.17	172	119	7.81	128.7	5.49	0.00015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.01	0.00001	0.001		0.1			0.1	84	0.1
	Event 6	No	10.2	73	10.04	165.5	118.7	8.17	233.8	23.7	0.00015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	81	3
	Event 7	No	14.4	75	7.66	147.5	117.6	7.66	101.1	8.09	0.00015	0.00015	0.00001	0.000005	0.0001	0.001	0.25	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.002		0.05			0.1	96	0.1
	Event 8	No	15.2	75.3	7.56	63.8	106.9	7.74	103.3	124.93	1.73	0.00015	0.00001	0.000005	0.0001	0.001	0.69	0.0005	0.011	0.000015	0.0005	0.1	0.005	0.00001	0.002		0.05			0.1	81	36
	Event 9	No	14.2	102.6	10.52	140.1	111.2	7.4	150.1	43.88	1.58	0.00015	0.00001	0.000005	0.0001	0.001	0.56	0.0005	0.019	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	47	0.1
	Event 10	No	15.9		5.87		123.7	7.91	104.5	2	0.3	0.00015	0.00001	0.000005	0.0001	0.001	0.14	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.007		0.05			0.1	189	0.1
	Event 11	No	20	97.7	8.66	69.9	67.3	7.44	88.5	6.93	0.04	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	38	0.1
	Event 12	No flow																														
	Event 13	No flow																														
	Event 14	No	13.8	89.9	9.31	159.9	125.6	7.67	69.8	1	0.18	0.00015	0.00001	0.000005	0.0001	0.001	0.07	0.0005	0.001	0.000015	0.0005	0.1	0.05	0.00001	0.001		0.05		54	0.1	38	0.1
	Event 15	No	10.9	44.5	4.92	151.7		7.29	75.4	5.7	0.11	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.0005	0.0005	0.000015	0.0005	1	0.01	0.00001	0.001	0.05	0.05	0.005	52	1	83	0.1
	Event 16	No	9.3	89.8	10.31	117.4	82.2	6.93	135	20.87	1.49	0.00015	0.00001	0.000005	0.0001	0.001	0.72	0.0005	0.007	0.000015	0.003	0.1	0.005	0.005	0.003	0.05	0.05	0.04	51	0.1	24	2
	Event 17	No	7.8	88.9	10.59	125	83.8	7.53	82.6	9.14	0.74	0.00015	0.00001	0.000005	0.0001	0.001	0.3	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.005	0.001	0.05	0.05	0.005	54	0.1	7	0.1
	Event 18	No	9.9	95.3	10.79	141.1	100.3	7.83	66.8	4.62	0.4	0.00015	0.00001	0.000005	0.0001	0.001	0.15	0.006	0.001	0.000015	0.0005	0.1	0.005	0.005	0.003	0.05	0.05	0.005	59	0.1	1	6
	Event 19	No	13.9	94	9.13	139.8	110.1	7.69	83.4	2.7	0.25	0.00015	0.00001	0.002	0.002	0.001	0.09	0.001	0.001	0.000015	0.001	5	0.04	0.00001	0.001	0.05	0.05	0.005	54	5	1	5
	Event 20	No	9.1	95.8	10.32	138.7	96.7	7.25	117.8	3.5	0.2	0.00015	0.00001	0.000005	0.002	0.001	0.08	0.0005	0.001	0.000015	0.001	0.1	0.04	0.005	0.003	0.05	0.05	0.01	51	0.1	54	3
	Min		7.80	44.50	4.92	63.80	67.30	6.93	53.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	51.00	0.10	1.00	0.10
	Max		20.00	102.60	12.09	172.00	125.60	8.17	233.80	124.93	1.73	0.00	0.00	0.00	0.00	0.00	0.72	0.01	0.02	0.00	0.00	5.00	0.05	0.01	0.01	0.05	0.10	0.04	59.00	5.00	189.00	36.00
	Mean		12.03	82.72	9.11	129.89	102.53	7.56	109.13	20.35	0.44	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.46	0.01	0.00	0.00	0.05	0.05	0.01	53.57	0.46	61.06	3.99
	Count		16.00	15.00	16.00	15.00	15.00	16.00	16.00	15.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	6.00	16.00	6.00	7.00	16.00	16.00	16.00
	St. Dev		3.40	16.85	2.03	31.89	18.07	0.31	44.52	32.12	0.61	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.01	0.00	0.00	1.23	0.02	0.00	0.00	0.00	0.01	0.01	2.76	1.23	46.76	8.90
TR-RS	Event 1	No	12.9	94.6	9.99	21.1	16.2	7.83	80.5	0.07	0.01	0.00015	0.00001	0.000005	0.0001	0.001	0.03	0.0005	0.003	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	43	0.1
	Event 2	No	12	76	8.2	20	15	7.87	153	1.02	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.001	0.000015	0.0005	1.1	0.005	0.00001	0.001		1.1			0.1	12	0.1
	Event 3	No Sample																														
	Event 4	No	6.1	85.3	14.78	20.55	12.3	7.03	67.6		0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.01	0.00001	0.001		0.05			0.1	7	0.1
	Event 5	No	5.8	103.9	13.01	27	17	8.1	180.3	4.15	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	20	0.1
	Event 6	No	9.5	102.2	11.66	42.4	29.8	8.8	233.9	0.2	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	27	0.1
	Event 7	No	14.6	92.4	11.53	52.9	42.5	7.87	95.4	1.01	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	52	4
	Event 8	No	16.1	81.5	8.02	46.4	38.6	7.7	95.7	1.84	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	37	0.1
	Event 9	No	9.5	111	12.67	21.5	15.1	7.3	190.8	0	0.08	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	1	0.1
	Event 10	No	12		7.92		22	7.46	64.6	0.05	0.05	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.007		0.05			0.1	37	0.1
	Event 11	No	13.2	91.4	8.97	22.3	17.2	6.86	109.9	5.08	0.06	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	1	3
	Event 12	No	19.3	102.3	8.41	52.3	46.7	7.76	109.6	0.1	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.07	0.0005	0.003	0.000015	0.0005	7	0.005	0.00001	0.001	0.05	0.05	0.02	56	0.1	1	0.1
	Event 13	No	14.6		8.57		26	7.7	14	0.05	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.0005	0.003	0.000015	0.0005	0.1	0.02	0.00001	0.001	0.05	0.1	0.005	6	0.1	41	0.1
	Event 14	No	11.2	95.3	10.46	23.4	17.2	7.77	89.3	-0.31	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.001	0.05	0.1	0.005	7	0.1	9	0.1
	Event 15	No	8.7	45.3	5.27	22.7	15.7	7.11	125.3	0.42	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.04	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001	0.05	0.05	0.005	6	0.1	1	0.1
	Event 16	No	7.1	93.1	11.29	25.3	16.6	6.92	112.6	1.42	0.05	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.0005	0.002	0.000015	0.0005	0.1	0.03	0.00001	0.001	0.05	0.05	0.03	8	0.1	3	0.1
	Event 17	No	4	95.5	12.5	43.8	26.2	7.36	66.1	3.15	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.0005	0.005	0.000015	0.0005	0.4	0.05	0.00001	0.001	0.05	0.4	0.005	8	0.1	5	0.1
	Event 18	No	8.3	98.7	11.59	37.5	25.6	7.92	73.3	2.77	0.11	0.00015	0.00001	0.000005	0.0001	0.001	0.1	0.0005	0.005	0.000015	0.0005	0.1	0.005	0.00001	0.002	0.05	0.1	0.06	10	0.1	71	0.1
	Event 19	No	16.2	105.8	9.85	38.7	32.2	7.59	89.5	1.7	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.1	0.02	0.002	0.000015	0.0005	0.1	0.03	0.00001	0.001	0.05	0.05	0.005	8	0.1	11	0.1
	Event 20	No	15	101.6	9.57	42.3	34.2	7.64	70.2	0.3	0.015	0.00015	0.00001	0.000005	0.002	0.001	0.02	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.002	0.05	0.05	0.005	6	0.1	297	0.1
	Min		4.00	45.30	5.27	20.00	12.30	6.86	14.00	-0.31	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	6.00	0.10	1.00	0.10
	Max		19.30	111.00	14.78	52.90	46.70	8.80	233.90	5.08	0.11	0.00	0.00	0.00	0.00	0.00	0.10	0.02	0.01	0.00	0.00	7.00	0.05	0.00	0.01	0.05	1.10	0.06	56.00	0.10	297.00	4.00
	Mean		11.37	92.70	10.25	32.95	24.53	7.61	106.40	1.28	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.53	0.01	0.00	0.00	0.05	0.13	0.02	12.78	0.10	35.58	0.46
	Count		19.00	17.00	19.00	17.00	19.00	19.00	19.00	18.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	9.00	19.00	9.00	9.00	19.00	19.00	19.00
	St. Dev		4.11	15.12	2.26	11.98	10.30	0.46	52.03	1.57	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	1.58	0.01	0.00	0.00	0.00	0.25	0.02	16.26	0.00	66.56	1.08
YK-IS (D/S)	Event 1	No	13.2	91.1	9.56	36.9	28.6	7.55	101.4	6.42	0.26	0.00015	0.00001	0.000005	0.0001	0.001	0.39	0.0005	0.006	0.000015	0.0005	2	0.005	0.00001	0.001		0.05			2	22	0.1
	Event 2	No	10.1	65.9	7.42	29	20.5	8.39	157.8	9.1	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.15	0.0005	0.001	0.000015	0.0005	0.2	0.005	0.00001	0.001		0.2			0.1	1	14
	Event 3	No	4.7	84.4	10.85	36	22	6.56	98.2	59.63	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.17	0.00001	0.001		0.05			0.1	44	104
	Event 4	No	3.5	96.4	12.79	30.8	18.2	6.87	64		0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.03	0.00001	0.001		0.05			0.1	18	0.1
	Event 5	No	5.4	91.8	11.6	35	22	6.91	172.4	10.56	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.06	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	31	8
	Event 6	No	7.6	88.5	10.58	31.6	21.1	8.02	235.6	7.75	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	24	6
	Event 7	No	9.5	68.7	7.84	29.1	20.5	7.29	108.6	6	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	43	18
	Event 8	No	11.4	68.1	7.44	28.6	21.2	6.57	118	10.96	0.16	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.01	0.00001	0.001		0.05			0.1	27	2
	Event 9	No	10.4	94.7	10.59	29.9	21.5	6.6	170	4.67	0.26	0.00015	0.00001	0.000005	0.0001	0.001	0.1	0.0005	0.002	0.000015	0.0005	0.1	0.01	0.00001	0.001		0.05			0.1	1	0.1
	Event 10	No	10.2		8.78		20.3	6.78	63.1	4	0.25	0.00015	0.00001	0.000005	0.0001	0.001	0.23	0.0005	0.004	0.000015	0.0005	0.1	0.01	0.00001	0.003		0.05			0.1	30	8
	Event 11	No	15.6	101.1	8.82	24.7	20.2	6.66	121.2	6.32	0.42	0.00015	0.00001	0.000005	0.0001	0.001	0.47	0.0005	0.003	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	12	9
	Event 12	No	13.2	100.5	9.34	28.9	22.4	6.8	97.8	20.22	0.28	0.00015	0.00001	0.000005	0.0001	0.001	0.37	0.0005	0.006	0.000015	0.0005	0.1	0.02	0.00001	0.001	0.05	0.05	0.005	11	0.1	1	28
	Event 13	No	12.9		8.8		25.8	7.97	17	12	0.26	0.00015	0.00001	0.000005	0.0001	0.001	0.31	0.0005	0.003	0.000015	0.0005	9	0.02	0.00001	0.001	0.05	0.1	0.005	6	0.1	1	9
	Event 14	No	8.2	91.8	10.81	35	23.8	7.64	96.2	4.41	0.27	0.00015	0.00001	0.000005	0.0001	0.001	0.27	0.0005	0.005	0.000015	0.0005	0.1	0.02	0.00001	0.001	0.05	0.05	0.005	10	0.1	25	0.1
	Event 15	No	7.9	44.8	5.31	33.7	22.7	7.14	119.6	10.85	0.34	0.00015	0.00001	0.000005	0.0001	0.001	0.31	0.0005	0.005	0.000015	0.0005	0.1	0.06	0.00001	0.001	0.05	0.05	0.02	9	0.1	1	2
	Event 16	No	5	85	10.86	29.9	18.5	6.44	133.3	8.79	0.4	0.00015	0.00001	0.000005	0.005	0.001	0.27	0.0005	0.005	0.000015	0.001	0.1	0.05	0.00001	0.003	0.05	0.05	0.04	9	0.1	1	5
	Event 17	No	3	84.5	11.36	30	17.4	6.72	144.4	8.93	0.32	0.00015	0.00001	0.000005	0.0001	0.001	0.25	0.0005	0.0005	0.000015	0.0005	1.1	0.005	0.00001	0.001	0.05	0.1	0.005	9	1	12	5
	Event 18	No	6.2	87.2	10.82	33.9	21.7	7.24	105.9	9.82	0.36	0.00015	0.00001	0.000005	0.0001	0.001	0.24	0.0005	0.012	0.000015	0.0005	0.1	0.005	0.00001	0.022	0.05	0.1	0.03	14	0.1	19	0.1
	Event 19	No	10.6	92.8	9.17	32.9	23.8	7.07	113.9	9.9	0.34	0.00015	0.00001	0.007	0.0001	0.001	0.26	0.0005	0.003	0.000015	0.0005	0.1	0.02	0.00001	0.001	0.05	0.05	0.005	1	0.1	9	0.1
	Event 20	No	9.1	94.6	9.54	33.2	23.1	6.42	113.1	7.3	0.26	0.00015	0.00001	0.000005	0.0001	0.001	0.2	0.0005	0.002	0.000015	0.001	0.1	0.005	0.00001	0.001	0.05	0.05	0.005	1	0.1	106	0.1
	Min		3.00	44.80	5.31	24.70	17.40	6.42	17.00	4.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	1.00	0.10	1.00	0.10
	Max		15.60	101.10	12.79	36.90	28.60	8.39	235.60	59.63	0.42	0.00	0.00	0.01	0.01	0.00	0.47	0.00	0.01	0.00	0.00	9.00	0.17	0.00	0.02	0.05	0.20	0.04	14.00	2.00	106.00	104.00
	Mean		8.89	85.11	9.61	31.62	21.77	7.08	117.58	11.45	0.21	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.70	0.02	0.00	0.00	0.05	0.07	0.01	7.78	0.24	21.40	10.94
	Count		20.00	18.00	20.00	18.00	20.00	20.00	20.00	19.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	9.00	20.00	9.00	9.00	20.00	20.00	20.00
	St. Dev		3.50	14.46	1.75	3.17	2.57	0.57	45.87	12.22	0.14	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	2.01	0.04	0.00	0.00	0.00	0.04	0.01	4.38	0.46	24.28	23.07
NZG-IS	Event 1	No	13.4	91.3	9.54	53.8	41.8	7.39	108.1	5.14	0.14	0.00015	0.00001	0.000005	0.0001	0.001	0.21	0.0005	0.005	0.000015	0.0005	3	0.005	0.00001	0.001		0.05			3	43	0.1
	Event 2	No	10.2	70.2	7.89	50	36	7.69	148	3.67	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.1			0.1	52	0.1
	Event 3	No	5.2	80.8	10.27	39	24	6.95	125.4	51.33	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.1			0.1	48	53
	Event 4	No	4.7	95.4	12.28	39.8	24.4	6.67	54.6		0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.03	0.00001	0.001		0.05			0.1	22	0.1
	Event 5	No	6.2	90.4	11.19	45	29	6.97	158	7.68	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	34	4
	Event 6	No	8.1	89	10.53	41	27.7	7.62	154.2	4.18	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.01	0.00001	0.001		0.05			0.1	31	6
	Event 7	No	9.7	69	7.84	37	26.2	6.89	117.9	2.46	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.03	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	44	9
	Event 8	No	11.4	68.1	7.45	33.2	24.6	6.68	102.2	5.7	0.1	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	27	4
	Event 9	No	11	94.5	10.41	36	26.4	6.5	168.8	4.7	0.19	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.0005	0.002	0.000015	0.0005	0.1	0.01	0.00001	0.001		0.05			0.1	13	0.1
	Event 10	No	9.6		9.44		27	6.97	90	4	0.17	0.00015	0.00001	0.000005	0.0001	0.001	0.15	0.0005	0.003	0.000015	0.0005	0.1	0.005	0.00001	0.002		0.05			0.1	39	7
	Event 11	No	15	98.8	8.74	29.6	23.9	6.75	117.8	3.03	0.23	0.00015	0.00001	0.000005	0.0001	0.001	0.22	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	79	0.1
	Event 12	No	13.4	101.2	9.38	40.6	31.6	7.02	99.3	1.2	0.12	0.00015	0.00001	0.000005	0.0001	0.001	0.14	0.0005	0.003	0.000015	0.0005	0.1	0.005	0.00001	0.001	0.05	0.05	0.01	17	0.1	1	4
	Event 13	No	13.2		9.31		39.2	7.54	17	2	0.11	0.00015	0.00001	0.000005	0.0001	0.001	0.14	0.0005	0.0005	0.000015	0.0005	0.1	0.02	0.00001	0.001	0.05	0.05	0.005	10	0.1	1	0.1
	Event 14	No	8.5	92	10.77	49.7	34	7.92	95.8	3.68	0.26	0.00015	0.00001	0.000005	0.0001	0.001	0.2	0.0005	0.003	0.000015	0.0005	0.1	0.06	0.00001	0.001	0.05	0.05	0.005	14	0.1	32	0.1
	Event 15	No	8.6	43.9	5.12	43.7	30	6.58	112.8	6.41	0.21	0.00015	0.00001	0.000005	0.004	0.001	0.18	0.0005	0.0005	0.000015	0.0005	0.1	0.03	0.00001	0.001	0.05	0.05	0.02	13	0.1	8	0.1
	Event 16	No	5.7	85.7	10.76	36.4	23	6.63	105.6	5.3	0.3	0.00015	0.00001	0.000005	0.0001	0.001	0.21	0.0005	0.004	0.000015	0.002	0.1	0.005	0.00001	0.001	0.05	0.05	0.04	11	0.1	9	0.1
	Event 17	No	3.7	84.5	11.17	39.9	23.6	7.49	35.5	3.29	0.15	0.00015	0.00001	0.000005	0.0001	0.001	0.16	0.0005	0.006	0.000015	0.0005	1.2	0.07	0.00001	0.001	0.05	0.2	0.005	14	1	23	0.1
	Event 18	No	6.9	86.9	10.58	44.5	29.1	6.81	109.4	5.48	0.22	0.00015	0.00001	0.000005	0.0001	0.001	0.14	0.004	0.004	0.000015	0.0005	0.1	0.005	0.00001	0.003	0.05	0.1	0.005	16	0.1	1	0.1
	Event 19	No	9.7	90.2	9.13	46.5	32.9	7.61	56.6	4.7	0.19	0.00015	0.00001	0.000005	0.0001	0.001	0.14	0.004	0.002	0.000015	0.0005	0.1	0.04	0.00001	0.001	0.05	0.05	0.005	8	0.1	1	0.1
	Event 20	No	9.2	94.9	9.5	46.3	32.3	6.55	116.9	3.2	0.13	0.00015	0.00001	0.000005	0.002	0.001	0.1	0.0005	0.001	0.000015	0.0005	0.1	0.01	0.00001	0.003	0.05	0.05	0.01	6	0.1	24	0.1
	Min		3.70	43.90	5.12	29.60	23.00	6.50	17.00	1.20	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	6.00	0.10	1.00	0.10
	Max		15.00	101.20	12.28	53.80	41.80	7.92	168.80	51.33	0.30	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.01	0.00	0.00	3.00	0.07	0.00	0.00	0.05	0.20	0.04	17.00	3.00	79.00	53.00
	Mean		9.17	84.82	9.57	41.78	29.34	7.06	104.70	6.69	0.13	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.30	0.02	0.00	0.00	0.05	0.07	0.01	12.11	0.29	26.60	4.42
	Count		20.00	18.00	20.00	18.00	20.00	20.00	20.00	19.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	9.00	20.00	9.00	9.00	20.00	20.00	20.00
	St. Dev		3.16	14.10	1.62	6.25	5.38	0.45	39.69	10.92	0.09	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.68	0.02	0.00	0.00	0.00	0.04	0.01	3.66	0.67	20.75	11.77
YK-IS	Event 1	No	14.2	94	9.63	32.9	26.1	7.58	172.4	10.66	0.41	0.00015	0.00001	0.000005	0.0001	0.001	0.49	0.0005	0.011	0.000015	0.0005	2	0.005	0.00001	0.001		0.05			2	20	8
	Event 2	No	10.4	69.7	7.8	30	21.4	7.65	139.3	9.44	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.2	0.0005	0.001	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	24	7
	Event 3	No	4.3	81.5	10.6	31	31	6.9	121.6	32.77	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	46	36
	Event 4	No	4.2	93.8	12.23	27.6	16.6	6.7	48.1		0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	14	4
	Event 5	No	6	91.2	11.35	32	20	6.6	153.5	11.62	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	19	5
	Event 6	No	8.6	85.6	10	29	19.9	7.2	185.8	6.67	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	34	4
	Event 7	No	10.3	67.2	7.54	26.7	19.2	6.74	91.7	4.04	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.09	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	39	11
	Event 8	No	12.4	66.6	7.12	26.5	20.1	6.57	93.8	6.29	0.18	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.1	0.03	0.00001	0.001		0.05			0.1	27	0.1
	Event 9	No	12	92	9.92	27.9	21	6.24	134.2	5.39	0.28	0.00015	0.00001	0.000005	0.0001	0.001	0.12	0.0005	0.003	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	1	0.1
	Event 10	No	8.8		10.45		21.2	7.05	80.5	7	0.33	0.00015	0.00001	0.000005	0.0001	0.001	0.26	0.0005	0.006	0.000015	0.0005	0.1	0.01	0.00001	0.002		0.05			0.1	35	6
	Event 11	No	15.9	96	8.29	23.3	19.2	6.33	98.6	7.47	0.36	0.00015	0.00001	0.000005	0.0001	0.001	0.4	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	2	7
	Event 12	No	14.6	98.3	8.84	27	21.6	6.58	62.5	5.72	0.3	0.00015	0.00001	0.000005	0.0001	0.001	0.39	0.0005	0.007	0.000015	0.0005	0.1	0.005	0.00001	0.001	0.05	0.05	0.02	10	0.1	1	5
	Event 13	No	14.8		8.38		24.6	7.29	34	6	0.32	0.00015	0.00001	0.000005	0.0001	0.001	0.35	0.0005	0.003	0.000015	0.0005	5	0.02	0.00001	0.001	0.05	0.05	0.005	5	0.1	1	5
	Event 14	No	9.4	89.6	10.26	31.5	22.1	7.51	53.3	4.7	0.34	0.00015	0.00001	0.000005	0.0001	0.001	0.29	0.0005	0.007	0.000015	0.0005	0.1	0.03	0.00001	0.001	0.05	0.05	0.005	9	0.1	21	5
	Event 15	No	8.7	44.7	5.2	30.4	20.9	6.68	123.8	13.88	0.42	0.00015	0.00001	0.000005	0.0001	0.001	0.37	0.0005	0.006	0.000015	0.0005	0.1	0.03	0.00001	0.001	0.05	0.05	0.02	8	0.1	1	6
	Event 16	No	5.4	83.4	10.54	27.2	17	6.12	129.5	7.61	0.39	0.00015	0.00001	0.000005	0.0001	0.001	0.26	0.0005	0.007	0.000015	0.0005	0.1	0.05	0.00001	0.001	0.05	0.05	0.04	9	0.1	9	5
	Event 17	No	4	83.6	10.94	27	16.2	6.74	106.7	6.41	0.25	0.00015	0.00001	0.000005	0.0001	0.001	0.2	0.0005	0.007	0.000015	0.0005	0.2	0.01	0.00001	0.001	0.05	0.2	0.005	8	0.1	5	0.1
	Event 18	No	7.7	86.9	10.37	30.5	20.4	6.9	85	11.42	0.48	0.00015	0.00001	0.000005	0.0001	0.001	0.31	0.003	0.008	0.000015	0.001	0.1	0.005	0.00001	0.005	0.05	0.1	0.01	8	0.1	1	0.1
	Event 19	No	11.4	91.2	8.82	29.2	21.6	6.76	72.5	10.1	0.49	0.00015	0.00001	0.000005	0.002	0.001	0.32	0.0005	0.004	0.000015	0.0005	0.1	0.11	0.00001	0.001	0.05	0.05	0.005	1	0.1	1	0.1
	Event 20	No	9.5	92.7	9.23	29.4	20.7	6.4	85.9	8.6	0.35	0.00015	0.00001	0.000005	0.002	0.001	0.24	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.016	0.05	0.05	0.005	1	0.1	46	0.1
	Min		4.00	44.70	5.20	23.30	16.20	6.12	34.00	4.04	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	1.00	0.10	1.00	0.10
	Max		15.90	98.30	12.23	32.90	31.00	7.65	185.80	32.77	0.49	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.01	0.00	0.00	5.00	0.11	0.00	0.02	0.05	0.20	0.04	10.00	2.00	46.00	36.00
	Mean		9.63	83.78	9.38	28.84	21.04	6.83	103.64	9.25	0.25	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.45	0.02	0.00	0.00	0.05	0.06	0.01	6.56	0.20	17.35	5.73
	Count		20.00	18.00	20.00	18.00	20.00	20.00	20.00	19.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	9.00	20.00	9.00	9.00	20.00	20.00	20.00
	St. Dev		3.67	13.66	1.66	2.40	3.32	0.44	41.15	6.27	0.17	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	1.15	0.03	0.00	0.00	0.00	0.03	0.01	3.43	0.42	16.11	7.78
YK-RS	Event 1	No	15.8	87.5	8.96	30.5	25.1	7.12	142	5.71	0.35	0.00015	0.00001	0.000005	0.0001	0.001	0.45	0.0005	0.005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	20	0.1
	Event 2	No	12.7	71.4	7.58	31	24	7.54	138.9	9.77	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.19	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	30	6
	Event 3	No	3.4	82	10.91	31	18	6.73	128.8	20.28	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	40	3
	Event 4	No	3.9	95.3	12.53	26.9	16.1	6.58	44.2		0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	15	0.1
	Event 5	No	6.4	88.7	10.95	32	21	6.5	158.8	8.97	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	25	5
	Event 6	No	10.4	91.9	10.29	30.5	22	7.09	192.4	3.93	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	18	5
	Event 7	No	11.7	70.8	7.69	25.2	18.8	6.79	93.8	3.41	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.12	0.0005	0.0005	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	40	9
	Event 8	No	13	68.9	7.26	24.9	19.2	6.59	99.1	7.45	0.18	0.00015	0.00001	0.000005	0.0001	0.001	0.07	0.0005	0.003	0.000015	0.0005	0.1	0.02	0.00001	0.001		0.05			0.1	1	0.1
	Event 9	No	14	99.1	10.2	28	22.1	6.38	143.2	8.25	0.32	0.00015	0.00001	0.000005	0.0001	0.001	0.16	0.0005	0.003	0.000015	0.0005	0.1	0.02	0.00001	0.001		0.05			0.1	1	0.1
	Event 10	No	13.1		6.76		21.4	6.75	73.6	10	0.36	0.00015	0.00001	0.000005	0.0001	0.001	0.31	0.0005	0.009	0.000015	0.0005	0.1	0.01	0.00001	0.002		0.05			0.1	31	7
	Event 11	No	18	101.3	8.35	23.5	20.4	6.4	119.1	6.3	0.37	0.00015	0.00001	0.000005	0.0001	0.001	0.54	0.0005	0.002	0.000015	0.0005	0.1	0.005	0.00001	0.001		0.05			0.1	78	5
	Event 12	No	17.7	101.3	8.5	26.3	22.7	6.58	94.6	7.89	0.36	0.00015	0.00001	0.000005	0.0001	0.001	0.41	0.0005	0.004	0.000015	0.0005	0.1	0.02	0.00001	0.001	0.05	0.05	0.005	10	0.1	1	13
	Event 13	No	17.9		7.68		28.9	7.43	20	9	0.36	0.00015	0.00001	0.000005	0.0001	0.001	0.37	0.0005	0.003	0.000015	0.0005	6	0.04	0.00001	0.001	0.05	0.1	0.005	1	0.1	1	6
	Event 14	No	11.2	93.3	10.23	29.2	21.5	7.42	64	5.82	0.39	0.00015	0.00001	0.000005	0.0001	0.001	0.32	0.0005	0.005	0.000015	0.0005	0.1	0.02	0.00001	0.001	0.05	0.05	0.005	8	0.1	25	0.1
	Event 15	No	9.2	43.6	5.02	29.4	20.5	6.63	110.1	7.48	0.47	0.00015	0.00001	0.000005	0.0001	0.001	0.41	0.0005	0.012	0.000015	0.0005	0.1	0.06	0.00001	0.001	0.05	0.05	0.02	7	0.1	10	0.1
	Event 16	No	5.2	84.7	10.77	27.4	17	6.2	118	7.37	0.34	0.00015	0.00001	0.000005	0.0001	0.001	0.28	0.0005	0.013	0.000015	0.0005	0.1	0.03	0.00001	0.001	0.05	0.05	0.04	9	0.1	6	5
	Event 17	No	3.9	85.4	11.22	25.8	15.4	6.61	111	5.72	0.28	0.00015	0.00001	0.000005	0.0001	0.001	0.23	0.0005	0.009	0.000015	0.0005	0.1	0.005	0.00001	0.001	0.05	0.05	0.005	8	0.1	16	0.1
	Event 18	No	9	89.1	10.31	29.7	20.6	6.75	83	22.13	0.71	0.00015	0.00001	0.000005	0.0001	0.001	0.47	0.0005	0.037	0.000015	0.001	0.1	0.005	0.00001	0.026	0.05	0.1	0.07	13	0.1	5	0.1
	Event 19	No	16	95	8.27	27.8	23.1	6.62	85.9	21.8	0.69	0.00015	0.00001	0.000005	0.002	0.001	0.53	0.004	0.007	0.000015	0.001	0.1	0.08	0.00001	0.003	0.05	0.05	0.005	1	0.1	1	0.1
	Event 20	No	10.1	94.9	9.29	27.9	19.9	6.34	106.1	13.5	0.47	0.00015	0.00001	0.000005	0.0001	0.001	0.3	0.0005	0.003	0.000015	0.0005	0.1	0.03	0.00001	0.001	0.05	0.05	0.005	1	0.1	42	0.1
	Min		3.40	43.60	5.02	23.50	15.40	6.20	20.00	3.41	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.05	0.05	0.01	1.00	0.10	1.00	0.10
	Max		18.00	101.30	12.53	32.00	28.90	7.54	192.40	22.13	0.71	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.04	0.00	0.00	6.00	0.08	0.00	0.03	0.05	0.10	0.07	13.00	0.10	78.00	13.00
	Mean		11.13	85.79	9.14	28.17	20.89	6.75	106.33	9.73	0.29	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.01	0.00	0.00	0.40	0.02	0.00	0.00	0.05	0.06	0.02	6.44	0.10	20.30	3.25
	Count		20.00	18.00	20.00	18.00	20.00	20.00	20.00	19.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	9.00	20.00	9.00	9.00	20.00	20.00	20.00
	St. Dev		4.77	14.44	1.84	2.42	3.15	0.38	39.85	5.68	0.22	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.01	0.00	0.00	1.32	0.02	0.00	0.01	0.00	0.02	0.02	4.42	0.00	19.59	3.76

e half the Limit of reporting for statistical use (LOR/2)

APPENDIX B OBSERVATIONS AND FIELD DATA

LOBS HOLE SAMPLING (DAY 2) sunny. partly cloudy no wind

22-013 Pre-construction WQM		Grease/oil/ sheen	Temperature (°C)	Dissolved Oxygen (%)	Dissolved Oxygen (ppm)	Specific Conductivity (SPC uS/cm)	Conductivity (uS/cm)	pH	Oxidation Reduction Potential (mV)	Turbidity (NTU)
WC-RS	Month	NO	10.1	97.9	10.28	90.8	65.0	7.34	128.4	2.3
	Comment	Clear, fast flow. reduced water level bank exposed. DUP01								
WC-IS	Month	NO	10.2	98.93	10.30	~~90.8~~ 91.1	65.4	7.34	130.7	0.6
	Comment	Clear, fast flow reduced water level rocky bank exposed.								
CG-IS	Month	NO	11.0	101.8	10.45	478.2	350.6	7.55	125.8	0.8
	Comment	reduced water flow and level. high presence of algae (green) throughout water. aquatic vegetation present.								
YR1-RS	Month	NO	12.1	100.3	10.08	97.3	73.3	7.61	119.0	0.9
	Comment	Clear fast flow reduced water level vegetation on bank increased								

Maragle Sampling (DAY 1). overcast, light showers. slight breeze 30/10/23

22-013 Pre-construction WQM		Grease/oil/ sheen	Temperature (°C)	Dissolved Oxygen (%)	Dissolved Oxygen (ppm)	Specific Conductivity (SPC uS/cm)	Conductivity (uS/cm)	pH	Oxidation Reduction Potential (mV)	Turbidity (NTU)
LHG-IS	Month	NO	11.7	88.7	8.98	535	398.8	7.53	23.4	1.5
	Comment	low water level small flow. high presence of ~~ve~~ aquatic vegetation								
YR2-RS	Month	NO	10.9	98.3	10.17	99.3	72.5	7.43	118.1	1.0
	Comment	strong fast flow. reduced water level clear water.								
SSC-IS	Month	NO	9.1	95.8	10.32	138.7	96.7	7.25	117.8	3.5
	Comment	creek almost dry. very low water level. increased vegetation on bank from E19.								
TR-RS	Month	NO	15.0	101.6	9.57	42.3	34.2	7.64	70.2	0.3
	Comment	Clear. small flow. reduced water level from E19.								
YK-IS (D/S)	Month	NO	9.1	94.6	9.54	33.2	23.1	6.42	113.1	7.3
	Comment	medium flow. clear water. lots of woody debris.								

22-013 Pre-construction WQM		Grease/oil/ sheen	Temperature (°C)	Dissolved Oxygen (%)	Dissolved Oxygen (ppm)	Specific Conductivity (SPC uS/cm)	Conductivity (uS/cm)	pH	Oxidation Reduction Potential (mV)	Turbidity (NTU)
NZG-IS	Month	NO	9.2	94.9	9.50	46.3	32.3	6.55	116.9	3.2
	Comment	clear water, slow flow. reduced water level. animal tracks on bank.								
YK-IS	Month	NO	9.5	92.7	9.23	29.4	20.7	6.40	85.9	8.6
	Comment	slight turbidity to colour deposits of mica on bank animal tracks near bank increased amount of woody debris in stream								
YK-RS	Month	NO	10.1	94.9	9.29	27.9	19.9	6.34	106.1	13.5
	Comment	water ~~water~~ level reduced slightly turbid sandy deposits in middle of stream.								

APPENDIX C LABORATORY CERTIFICATES

2311-0001

Charles Sturt University

CLIENT:	NGH Pty Ltd
CONTACT:	Nicola Smith
ADDRESS:	35 Kincaid Street Wagga Wagga NSW 2650 ABN: 31 124 444 622
TELEPHONE:	0410 411 660 — E-mail: nicola.s@nghconsulting.com.au

ANALYTES REQUIRED *Complete & tick as required*

SAMPLE IDENTIFICATION	NATURE OF SAMPLE	DATE SAMPLED	TIME SAMPLED	CONTAINER TYPE	NUMBER OF CONTAINERS	Total Nitrogen	Total Phosphorus	Cyanide	Total Suspended Solids	Total Dissolved Solids	Dissolved Metals (Al, As, C	Total hardness	Ammonia	Reactive Phosphorus							
WC-RS	Water	31/10/23	9:26	JAR	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
WC-1S	"	31/10/23	9:36	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
CG-1S	"	31/10/23	9:54	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
YR1-RS	"	31/10/23	10:07	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
LHG-1S	"	31/10/23	10:24	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
SSC-1S	"	31/10/23	8:38	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
YR2-RS	"	31/10/23	8:50	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
TR-RS	"	30/10/23	1:00	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
YK-1S (dls)	"	30/10/23	1:27	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
YK-1S	"	30/10/23	1:45	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
N2G-1S	"	30/10/23	1:58	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
YK-RS	"	30/10/23	2:10	"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							
DUP01	"	31/10/23	9:26	"	1		✓		✓	✓	✓	✓	✓	✓							
Water Blank	"	—		"	3	✓	✓	✓	✓	✓	✓	✓	✓	✓							

	NAME	SIGNATURE	ORGANISATION	DATE	TIME
RELINQUISHED BY:	Martin Wyburn ~~Nicola Smith~~	MW	NGH Pty Ltd	31/10	3:30pm
Mode of Transport Include Consignment Note # if applicable	Delivery				
RECEIVED BY:	Chinnis PRATCH			31/10/23	3:39 pm

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NGH Environmental

35 Kincaid Street

Wagga Wagga NSW 2650

Attention: Nicola Smith

Friday, December 8, 2023

NATA Accredited Laboratory Number: 9597

Accredited for compliance with ISO/IEC 17025 - Testing

LABORATORY ANALYSIS REPORT

Report Number:2311-0001

For all enquiries related to this report please quote document number: 2311-0001

Facility:

Order #

Date Analysis Commenced
01-November-2023

Sample Type
Water

Collected By
Client

Date Received
01-November-2023

EAL ID	Client ID. Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0001	**WC-RS** 31.10.23 9.26am					
		Aluminium (dissolved)	**<0.03**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**10.7**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**<0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**27**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.01**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**69**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2

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Report Number:2311-0001

For all enquiries related to this report please quote document number: 2311-0001

Facility:

Order #

Date Analysis Commenced
01-November-2023

Sample Type
Water

Collected By
Client

Date Received
01-November-2023

EAL ID	Client ID. Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0001	**WC-RS** 31.10.23 9.26am					
		Total Suspended Solids	**1**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0002	**WC-IS** 31.10.23 9.36am					
		Aluminium (dissolved)	**<0.03**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**11.0**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**<0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**27**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.01**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01

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NGH Environmental

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Friday, December 8, 2023

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LABORATORY ANALYSIS REPORT

Report Number:2311-0001

For all enquiries related to this report please quote document number: 2311-0001

Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0002	**WC-IS** 31.10.23 9.36am					
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**72**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0003	**CG-IS** 31.10.23 9.54am					
		Aluminium (dissolved)	**0.04**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**85.1**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**<0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**235**	mg/L	LTM-W-038	2
		Iron (dissolved)	**<0.01**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**5.46**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000

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Friday, December 8, 2023

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LABORATORY ANALYSIS REPORT

Report Number:2311-0001

For all enquiries related to this report please quote document number: 2311-0001

Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0003	**CG-IS** 31.10.23 9.54am					
		Nickel (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**257**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.006**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0004	**YR1-RS** 31.10.23 10.07am					
		Aluminium (dissolved)	**<0.03**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**12.3**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**<0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**31**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.02**	mg/L	APHA 3030 B/3120 B	0.01

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LABORATORY ANALYSIS REPORT

Report Number:2311-0001

For all enquiries related to this report please quote document number: 2311-0001

Facility:

Order #

Date Analysis Commenced
01-November-2023

Sample Type
Water

Collected By
M. Wybum

Date Received
01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0004	**YR1-RS** 31.10.23 10.07am					
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**67**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.003**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0005	**LHG-IS** 31.10.23 10.24am					
		Aluminium (dissolved)	**0.04**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**102**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000

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LABORATORY ANALYSIS REPORT

Report Number:2311-0001

For all enquiries related to this report please quote document number: 2311-0001

Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0005	**LHG-IS** 31.10.23 10.24am					
		Copper (dissolved)	**0.003**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**280**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.01**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**6.28**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.004**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**0.003**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**316**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.008**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0006	**SSC-IS** 31.10.23 8.38am					
		Aluminium (dissolved)	**0.20**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1

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NGH Environmental

35 Kincaid Street

Wagga Wagga NSW 2650

Attention: Nicola Smith

Friday, December 8, 2023

NATA Accredited Laboratory Number: 9597

Accredited for compliance with ISO/IEC 17025 - Testing

LABORATORY ANALYSIS REPORT

Report Number:2311-0001

For all enquiries related to this report please quote document number: 2311-0001

Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0006	**SSC-IS** 31.10.23 8.38am					
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**11.6**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**51**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.08**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**5.28**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**0.04**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**54**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**3**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.003**	mg/L	APHA 3030 B/3120 B	0.002

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Report Number:2311-0001

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Facility:

Order #

Date Analysis Commenced
01-November-2023

Sample Type
Water

Collected By
M. Myburn

Date Received
01-November-2023

EAL ID	Client ID. Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0007	**YR2-RS** 31.10.23 8.50am					
		Aluminium (dissolved)	**0.03**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**12.6**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**31**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.02**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**60**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2

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LABORATORY ANALYSIS REPORT

Report Number:2311-0001

For all enquiries related to this report please quote document number: 2311-0001

Facility:

Order #

Date Analysis Commenced
01-November-2023

Sample Type
Water

Collected By
M. Myburn

Date Received
01-November-2023

EAL ID	Client ID. Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0007	**YR2-RS** 31.10.23 8.50am					
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.003**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0008	**TR-RS** 31.10.23 1.00pm					
		Aluminium (dissolved)	**<0.03**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**2.61**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**6**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.02**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01

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LABORATORY ANALYSIS REPORT

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For all enquiries related to this report please quote document number: 2311-0001

Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0008	**TR-RS** 31.10.23 1.00pm					
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**297**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0009	**YK-IS (d/s)** 31.10.23 1.27pm					
		Aluminium (dissolved)	**0.26**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**<0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**<2**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.20**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000

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LABORATORY ANALYSIS REPORT

Report Number:2311-0001
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For all enquiries related to this report please quote document number: 2311-0001

Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0009	**YK-IS (d/s)** 31.10.23 1.27pm					
		Nickel (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**106**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**<0.002**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0010	**YK-IS** 31.10.23 1.45pm					
		Aluminium (dissolved)	**0.35**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**<2**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.24**	mg/L	APHA 3030 B/3120 B	0.01

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Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0010	**YK-IS** 31.10.23 1.45pm					
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**46**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.016**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0011	**NZG-IS** 31.10.23 1.58pm					
		Aluminium (dissolved)	**0.13**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**2.57**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000

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Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0011	**NZG-IS** 31.10.23 1.58pm					
		Copper (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**6**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.10**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**0.03**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**24**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.003**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0012	**YK-RS** 31.10.23 2.10pm					
		Aluminium (dissolved)	**0.47**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1

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Report Number:2311-0001
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Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0012	**YK-RS** 31.10.23 2.10pm					
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**<0.0002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**<2**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.30**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.003**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**0.03**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**42**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**<0.002**	mg/L	APHA 3030 B/3120 B	0.002

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NGH Environmental

35 Kincaid Street

Wagga Wagga NSW 2650

Attention: Nicola Smith

Friday, December 8, 2023

NATA Accredited Laboratory Number: 9597

Accredited for compliance with ISO/IEC 17025 - Testing

LABORATORY ANALYSIS REPORT

Report Number:2311-0001
Page 15 of 17
For all enquiries related to this report please quote document number: 2311-0001

Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0013	**DUP01** 31.10.23 9.26am					
		Aluminium (dissolved)	**<0.03**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**10.6**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Total Hardness as CaCO3	**26**	mg/L	LTM-W-038	2
		Iron (dissolved)	**0.01**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**235**	mg/L	LTM-W-035	2
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**0.003**	mg/L	APHA 3030 B/3120 B	0.002
23Nov-0014	**Water Blank**					

Charles Sturt University

ENVIRONMENTAL AND ANALYTICAL LABORATORIES

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Report Number:2311-0001

For all enquiries related to this report please quote document number: 2311-0001

Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0014	**Water Blank**					
		Aluminium (dissolved)	**<0.03**	mg/L	APHA 3030 B/3120 B	0.03
		Ammonia as N	**<0.1**	mg/L	LTM-W-042	0.1
		Arsenic (dissolved)	**<0.0003**	mg/L	APHA 3030 B/3120 B	0.0003
		Cadmium (dissolved)	**<0.00002**	mg/L	APHA 3030 B/3120 B	0.0000
		Calcium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Chromium (dissolved)	**<0.00001**	mg/L	APHA 3030 B/3120 B	0.0000
		Copper (dissolved)	**<0.002**	mg/L	APHA 3030 B/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Total Hardness as CaCO3	**<2**	mg/L	LTM-W-038	2
		Iron (dissolved)	**<0.01**	mg/L	APHA 3030 B/3120 B	0.01
		Lead (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Magnesium (dissolved)	**<2.00**	mg/L	APHA 3030 B/3120 B	2
		Manganese (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Mercury (dissolved)	**<0.00003**	mg/L	APHA 3030 B/3120 B	0.0000
		Nickel (dissolved)	**<0.001**	mg/L	APHA 3030 B/3120 B	0.001
		Nitrogen, total	**<0.2**	mg/L	* APHA 4500-Norg B + 4110 B	0.2
		Nitrate/Nitrite as N	**<0.1**	mg/L	LTM-W-014	0.1
		Ortho-Phosphate as P	**<0.01**	mg/L	LTM-W-030	0.01
		Phosphorus, Total	**<0.01**	mg/L	LTM-W-030	0.01
		Silver (dissolved)	**<0.00002**	mg/L	* APHA 3030 B/3120 B	0.0000
		Total Dissolved Solids	**9**	mg/L	LTM-W-035	2
		Total Kjeldahl Nitrogen	**<0.2**	mg/L	LTM-W-034	0.2

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LABORATORY ANALYSIS REPORT

Report Number:2311-0001
Page 17 of 17
For all enquiries related to this report please quote document number: 2311-0001

Facility:	Order #	Date Analysis Commenced
		01-November-2023
Sample Type	**Collected By**	**Date Received**
Water	M. Wybum	01-November-2023

EAL ID	Client ID. Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
23Nov-0014	**Water Blank**					
		Total Suspended Solids	**<0.2**	mg/L	APHA 2540 D	0.2
		Zinc (dissolved)	**<0.002**	mg/L	APHA 3030 B/3120 B	0.002

Note:

**** NATA Accreditation does not cover the performance of this service.***

Signed ..... Michael Glazier, Laboratory Manager.

All samples analysed as received.
All soil results are reported on a dry basis.
The EAL takes no responsibility for the end use of results within this report.
This report shall not be reproduced except in full.
This report replaces any previously issued report

APPENDIX D RPD TABLE

			Al (mg/L)	As (mg/L)	Cd (mg/L)	Cr (mg/L)	Cu (mg/L)	Cyanide (mg/L)	Fe (mg/L)	Pb (mg/L)	Mn (mg/L)	Hg (mg/L)	Ni (mg/L)	Ag (mg/L)	Zn (mg/L)
DUP01	Event 1	DUP01	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.06	0.0005	0.003	0.000015	0.0005	0.00001	0.001
		YR1-IS	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.06	0.0005	0.003	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Event 2	DUP01	<0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.001	0.000015	0.0005	0.00001	0.001
		WC-IS	<0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.002	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range except Mn**	0%	0%	0%	0%	0%	0%	0%	0%	67%	0%	0%	0%	0%
	Event 3	DUP01	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		Yk-IS (D/S	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Event 4	DUP01	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		WC-RS	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Event 5	DUP01	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		WC-RS	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Event 6	DUP01	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		WC-RS	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Event 7	DUP01	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		WC-RS	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Event 8	DUP01	1.79	0.00015	0.00001	0.000005	0.0001	0.001	0.73	0.0005	0.011	0.000015	0.0005	0.00001	0.002
		SSC-IS	1.73	0.00015	0.00001	0.000005	0.0001	0.001	0.69	0.0005	0.011	0.000015	0.0005	0.00001	0.002
		RPD% - **Acceptable Range**	3.409090909	0%	0%	0%	0%	0%	5.633802817	0%	0%	0%	0%	0%	0%
	Event 9	DUP01	0.35	0.00015	0.00001	0.000005	0.0001	0.001	0.08	0.0005	0.003	0.000015	0.0005	0.00001	0.001
		WC-RS	0.36	0.00015	0.00001	0.000005	0.0001	0.001	0.08	0.0005	0.004	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	2.82	0%	0%	0%	0%	0%	28.57	0%	0%	0%	0%	0%	0%
	Event 10	DUP01	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.09	0.0005	0.005	0.000015	0.0005	0.00001	0.006
		WC-RS	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.08	0.0005	0.004	0.000015	0.0005	0.00001	0.019
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	11.76	0%	0%	0%	0%	0%	0%
	Event 11	DUP01	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		WC-RS	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Event 12	DUP01	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.006	0.000015	0.0005	0.00001	0.002
		WC-RS	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.005	0.0005	0.0005	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	60%	0%	85%	0%	0%	0%	33%
	Event 13	DUP01	0.03	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.0005	0.000015	0.0005	0.00001	0.002
		WC-IS	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.0005	0.000015	0.0005	0.00001	0.003
		RPD% - **Acceptable Range**	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%
	Event 14	DUP01	0.04	0.00015	0.00001	0.000005	0.0001	0.001	0.02	0.0005	0.0005	0.000015	0.0005	0.00001	0.002
		WC-RS	0.04	0.00015	0.00001	0.000005	0.0001	0.001	0.03	0.0005	0.0005	0.000015	0.0005	0.00001	0.05
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	92%
	Event 15	DUP01	0.08	0.00015	0.00001	0.000005	0.0001	0.001	0.06	0.0005	0.001	0.000015	0.0005	0.00001	0.001
		WC-RS	0.11	0.00015	0.00001	0.000005	0.0001	0.001	0.09	0.0005	0.001	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	16%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%
	Event 16	DUP01	0.67	0.00015	0.00001	0.000005	0.0001	0.001	0.39	0.0005	0.004	0.000015	0.0005	0.00001	0.001
		WC-IS	0.6	0.00015	0.00001	0.000005	0.0001	0.001	0.34	0.0005	0.004	0.000015	0.0005	0.00001	0.002
		RPD% - **Acceptable Range**	6%	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	33%
	Event 17	DUP01	0.4	0.00015	0.00001	0.000005	0.0001	0.001	0.3	0.0005	0.011	0.000015	0.0005	0.00001	0.001
		YK-RS	0.28	0.00015	0.00001	0.000005	0.0001	0.001	0.23	0.0005	0.009	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	18%	0%	0%	0%	0%	0%	13%	0%	10%	0%	0%	0%	0%
	Event 18	DUP01	0.72	0.00015	0.00001	0.000005	0.0001	0.001	0.49	0.001	0.021	0.000015	0.002	0.00001	0.007
		YK-RS	0.71	0.00015	0.00001	0.000005	0.0001	0.001	0.47	0.0005	0.037	0.000015	0.001	0.00001	0.026
		RPD% - **Acceptable Range**	1%	0%	0%	0%	0%	0%	2%	33%	28%	0%	33%	0%	58%
	Event 19	DUP01	0.015	0.00015	0.00001	0.000005	0.001	0.001	0.02	0.004	0.001	0.000015	0.0005	0.00001	0.001
		TR-RS	0.015	0.00015	0.00001	0.000005	0.001	0.001	0.02	0.002	0.002	0.000015	0.0005	0.00001	0.001
		RPD% - **Acceptable Range**	0%	0%	0%	0%	0%	0%	0%	33%	33%	0%	0%	0%	0%
	Event 20	DUP01	0.015	0.00015	0.00001	0.00001	0.002	0.00	0.01	0.0005	0.001	0.00002	0.00	0.00001	0.00
		WC-RS	0.015	0.00015	0.00001	0.00001	0.0001	0.001	0.01	0.0005	0.0005	0.00002	0.001	0.00001	0.002
		RPD% - **Acceptable Range**	0%	0%	0%	0%	90%	0%	0%	0%	33%	0%	0%	0%	20%
Water Blank	Event 1	**Nothing above LOR**	<0.02	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 2	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 3	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 4	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 5	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 6	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 7	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 8	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 9	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 10	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 11	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 12	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 13	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 14	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 15	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 16	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 17	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 18	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 19	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002
	Event 20	**Nothing above LOR**	<0.03	<0.0003	<0.00002	<0.00001	<0.0002	<0.002	<0.01	<0.001	<0.001	<0.00003	<0.001	<0.00002	<0.002

RPD % $|(X_2 - X_1)|/((X_2 + X_1)/2)$

How to calculate the Relative Percent Difference (RPD)

The basic equation for RPD is

$$RPD = \frac{|R1 - R2|}{\left(\frac{R1 + R2}{2}\right)} \times 100,$$

where

$R1$ is sample 1, and

$R2$ is sample 2.

R1 and R2 are your sample and duplicate values. Basically, this equation has you calculate the RPD by dividing the difference between the sample and duplicate by the average of the two. Using absolute value signs ensures the RPD doesn't end up as a negative percentage, which wouldn't make sense when looking for a percent difference.

The equation you plug into Excel looks like this:

=ABS((B3-C3)/AVERAGE(B3:C3)*100)

ABS stands for Absolute Value. Using the cell labels in the equation, as seen above (B3, C3), allows you to use the equation down for all your sample/duplicate pairs so you don't have to write a new equation each time. You can do this by clicking on the cell with the equation in it, then click and drag the bottom right corner of the cell down for the rest of your samples.

APPENDIX E CALIBRATION CERTIFICATES

Multi Parameter Water Meter

Instrument **YSI Pro DSS**
Serial No. **15J101503**

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
	Recharge OK?	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH/ORP	✓	
	2. Turbidity	✓	
	3. Conductivity	✓	
	4. D.O	✓	
	5. Temp	✓	
	6. Depth	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
2. pH 7.00		pH 7.00		406263	pH 7.00
3. pH 4.00		pH 4.00		405966	pH 4.00
4. ORP		227.78 mV		A405006/B398193	228.0 mV
5. SPC		2760uS/cm		406852	2761 uS/cm
6. D.O		0%		12111	0.00%
7. Turbidity		100 NTU		413840	100.2 NTU
8. Temp		25.1 °C		MultiTherm	25.1 °C

Calibrated by: **Sara Angelini**

Calibration date: **24/10/2023**

Next calibration due: **21/04/2024**