WATER MONITORING REPORT (JANUARY TO MARCH 2025)

CONCRUSH FACILITY, TERALBA NSW 2284

Prepared for CONCRUSH PTY LTD

Prepared by RCA Australia

RCA ref 13589a-254/0

MAY 2025

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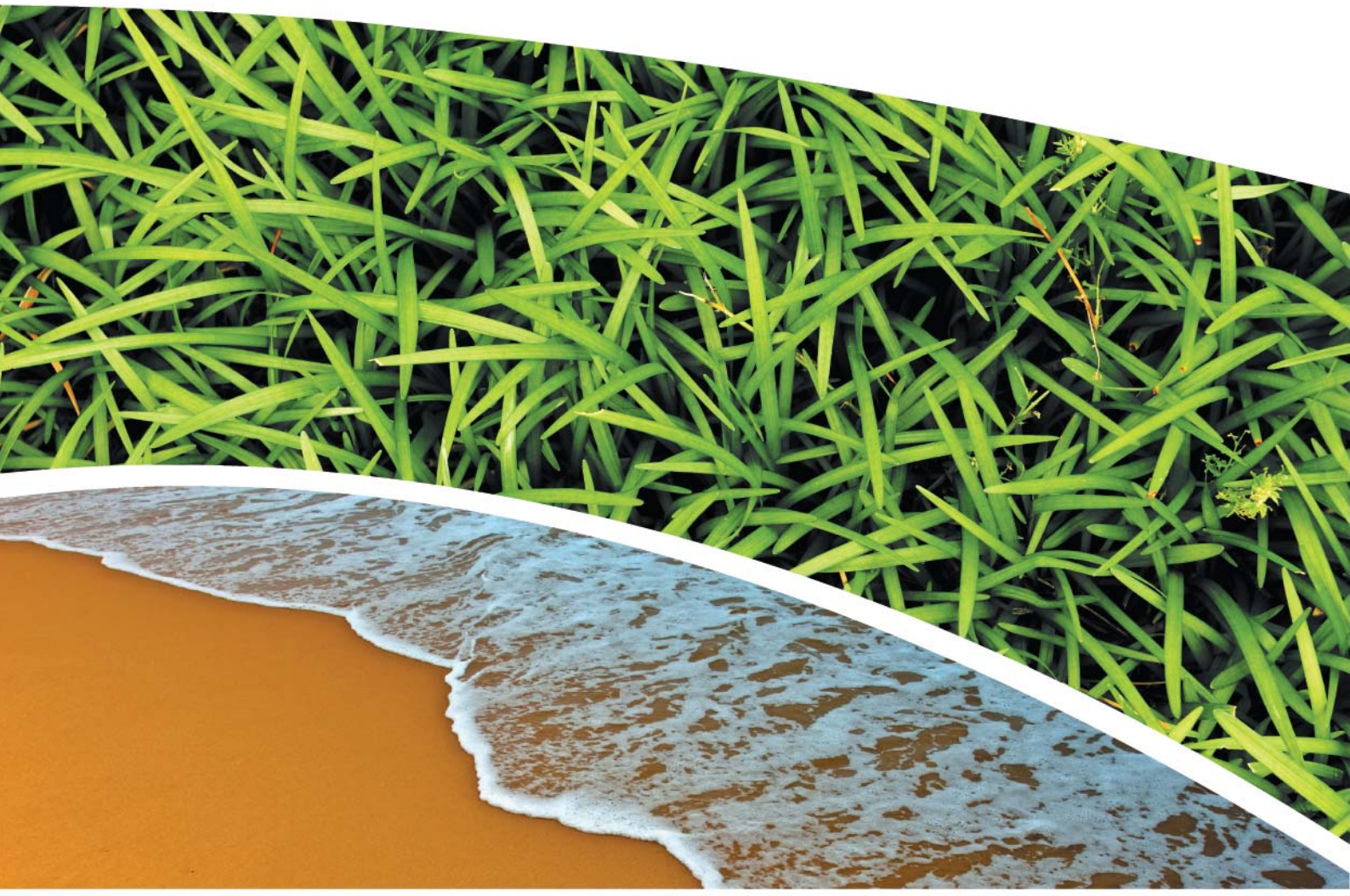

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Contents

RCA ref 13589a-254/0

16 May 2025

Concrush Pty Ltd
21 Racecourse Road
Teralba NSW 2284

Attention: Kevin Thompson
CC: Ross Lo Monaco

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WATER MONITORING REPORT (JANUARY TO MARCH 2025)
CONCRUSH FACILITY, TERALBA

1. INTRODUCTION

This report presents the findings of water monitoring conducted at the Concrush Resource Recovery Facility in Teralba, NSW, during the January, February and March 2025.

The site was an operational facility over the entirety of the monitored area for the reporting period. Some construction is ongoing in the northern portion of the site for Sediment Basin 1 and the new weighbridge.

The site's environmental protection licence, EPL13351, specifies water monitoring be undertaken at the two (2) surface water discharge locations (refer to **Figure 2** in Section 3) weekly during discharge. The remainder of monitoring was initially outlined in plans submitted as part of the State Significant Development application for an increase to the facility's capacity (as referenced on the Concrush website[1]). There has been updates to the documentation following the completion of twelve (12) months of operation, in March 2024, and at the time of writing the guidance document is considered to be the:

- Groundwater Management Plan (GMP, Ref [1]).
    - It is noted that the ongoing monitoring requirements for groundwater will be incorporated into the Operational Environmental Management Plan for the site following the finalisation of modification arrangements currently in progress.
- Discharge Verification and Management Report (DVMP, Ref [2]).

This report was undertaken at the request of Ross Lo Monaco of Concrush Pty Ltd.

[1] Concrush.com.au

2. SITE IDENTIFICATION AND DESCRIPTION

The site is described as 21 Racecourse Road, Teralba and part Lot 2, DP 220347. Additional site details are shown in **Table 1** and the site extent is shown in **Figure 1** below.

Table 1 *Site Details*

Current zoning[2]	E5 – Heavy Industrial.
Current use	Concrush resource recovery facility.
Size of site	Approximately 4.8ha.
Surrounding land use to the: **North**	Lot 1 DP220347. Industrial – storage yard for pre-cast concrete panels operated by others.
South	Part of Lot 2 DP220347. Industrial – scrap metal recycling yard operated by others.
East	Racecourse Road and then Cockle Creek.
West	Main Northern Rail line and then wetlands.
Nearest sensitive receptor (human health)	Residential housing, located approximately 360m southeast across Cockle Creek.
Nearest sensitive receptor (environmental)	Cockle Creek, located approximately 35m east and wetland approximately 30m west.

Figure 1 *Project Site Location and Layout (aerial as of 7 February 2025)*

[2] https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address

3. MONITORING DETAILS

The site's water management scheme comprises:

- Collection of runoff and seepage from the Green Waste catchment, anticipated to potentially contain nutrients, in the Leachate Pond (LP) which was lined with a flexible membrane liner with a permeability of less than 10^{-14} m/s to prevent potential contamination of groundwater.
- Treatment of nutrients via a constructed Wetland (WL) which has also been lined and populated with appropriate plants to maximise the removal of nutrients. Water is pumped into the WL from the LP.
- Collection of runoff from the remainder of the site into Sediment Dam 1 (SED1) and Sediment Dam 2 (SED2). Water from the Wetland discharges into SED2.

Concrush aims to re-use all surface water on site such that none is discharged however in high rainfall events or periods, some discharge may occur from one or both of the Sediment Dams into the un-named waterway along the western border of the site. This waterway runs to the north and Cockle Creek at the northern end of the site and to the south, wetlands and eventually Cockle Creek at the southern end of the site; the location at which the flow direction changes has not been identified and may vary with seasonal conditions.

A total of eight (8) monitoring locations are situated on-site comprising four (4) surface water locations (LP, WL, SED1 and SED2), two (2) discharge points (DIS-SED1 and DIS-SED2) and two (2) groundwater locations (GW1 and GW3). Additionally, two (2) off-site background surface water locations (SW1 and SW2) are included in the monitoring programme. These locations are shown in **Figure 2**. It is noted that, due to significant vegetation growth to the south of the site, that the sampling undertaken for SW2 during this quarter has been moved to within approximately ten (10) metres of the location of DIS-SED2.

Figure 2 *Water sampling locations (aerial as of 7 February 2025)*

Monitoring is undertaken on a monthly basis, nominally the last working day of the month however adjusted for the compliance of dust monitoring undertaken at the site, and comprises the recording of depths of water, field readings using a calibrated water quality monitor and the collection of samples for chemical analyses as detailed in **Table 2** below.

Table 2 *Analytical Scope*

Location	Monitored Parameters
GW1	• Depth to groundwater. • Field readings. • Nutrients (ammonia, nitrate, nitrite, total phosphorous). • Hydrocarbons[4] once a quarter.
GW3	
LP	• Depth of water within LP. • Field readings. • pH, electrical conductivity, total suspended solids. • Nutrients (ammonia, nitrate, nitrite, total Kjeldahl nitrogen, total phosphorous).
WL	
SED1	• Field readings. • pH, electrical conductivity, total suspended solids. • Dissolved metals[3]. • Hydrocarbons[4]. • Nutrients (ammonia, nitrate, nitrite, total Kjeldahl nitrogen, total phosphorous).
SED2	
SW1	
SW2	

In the event of discharge from one or both of the Sediment Dams, sampling is undertaken at the discharge points and the associated background surface water locations. Analyses comprise field readings, general water quality, dissolved metals, hydrocarbons and nutrients.

Field sheets are presented in **Appendix A** and laboratory reports are included in **Appendix B**.

Results of the water monitoring are compared to criteria as specified in the GMP (Ref [1]) and / or the DVMP (Ref [2]) on a monthly basis and presented to Concrush in a table and graphs.

[3] Aluminium, arsenic, cadmium, chromium, hexavalent chromium, cobalt, copper, lead, nickel, selenium, zinc, boron. Samples are 0.45μm field filtered prior to preservation for metals analyses.

[4] Benzene, toluene, ethylbenzene, xylene, naphthalene (BTEXN), total recoverable hydrocarbons (TRH) and polycyclic aromatic hydrocarbons (PAH).

4. MONITORING RESULTS

4.1 GROUNDWATER

Results of the groundwater monitoring undertaken in the quarter compared to the ecological criteria for fresh and marine waters (Ref [3]) are presented in **Table 3** below. In summary:

- The depth to groundwater varied between January and March at both wells. It is noted that at GW1, the depth was measured from ground level, whereas at GW3, the measurements included the length of the standpipe protruding above ground. Historical assessments indicate that the groundwater flow direction is from the western boundary of the site toward the eastern boundary.
- The temperature of the groundwater slightly varied over the monitoring period and between the wells.
- The pH was generally neutral to slightly alkaline at GW1 whereas it was generally neutral to slightly acidic at GW3.
- The electrical conductivity in both wells fell within the range indicative of fresh water.
- The turbidity of the groundwater was high at both wells. A non-return foot valve was used to collect the water samples, as alternative methods were not feasible due to kinks in the pipes. RCA personnel took care to avoid contact between the tip of the foot valve and the sediment at the base of the wells however it is considered that the sampling methodology may have increased the turbidity.
- The dissolved oxygen is low in both wells, indicative of anoxic conditions. It is noted that the sampling method can cause higher than representative dissolved oxygen levels.
- Ammonia (as N) and total phosphorus (as P) consistently exceeded the relevant ecological criteria however align with historical data. It is noted that the site is located in the Cockle Creek Estuary catchment that forms part of the broader Lake Macquarie catchment area, an ecosystem known for natural nutrient inflows that can contribute to higher concentrations of nitrogen and phosphorus.
- Nitrate (as N) and NO_x (as N) were either non-detected or at low concentrations below the relevant criteria, consistent with historical data.
- BTEX were non-detected, consistent with historical data.
- TRH was not detected in either well, consistent with historical data, except during the February sampling round at GW3. It is noted that the last detection of TRH occurred in August 2024 and was confirmed to be non-petroleum based. In the absence of any visual or olfactory indicators, it is considered likely that the February detection is of a similar nature.
- PAH were non-detected, consistent with historical data.

Table 3 *Groundwater Analysis Results*

Analysis	Aquatic Ecosystem Guideline [A]		GW1			GW3		
Date Sampled	95% Fresh	95% Marine	31/01	28/02	31/03	31/01	28/02	31/03
Depth to Groundwater	--	--	1.88	2.18	1.52	3.24	3.52	3.26
Temperature (°C)	--	--	22.19	23.07	22.71	21.28	23.89	21.69
pH (pH units)	--	--	7.56	7.45	7.85	6.49	6.66	6.45
Electrical Conductivity (mS/cm)	--	--	0.751	0.967	0.721	1.05	1.33	1.00
Turbidity (Nephelometric Turbidity unit)	--	--	>1000	>1000	598	208	107	119
Dissolved Oxygen	--	--	0.78	0.93	1.59	1.08	0.76	1.15
Ammonia	0.9	0.91	**1.7**	**2.1**	**1.9**	**2.8**	**3.1**	**4.1**
Nitrate	2.4		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
NOx	0.04		<0.005	<0.005	0.008	0.006	0.006	0.02
Total Phosphorus	0.025		**0.66**	**0.3**	**0.56**	**0.06**	**0.1**	**0.09**
Benzene	0.95	0.5	--	<0.001	--	--	<0.001	--
Toluene	0.18		--	<0.001	--	--	<0.001	--
Ethylbenzene	0.08	0.005	--	<0.001	--	--	<0.001	--
Meta- and para-Xylene	0.275		--	<0.002	--	--	<0.002	--
Ortho-Xylene	0.35		--	<0.001	--	--	<0.001	--
TRH C_6-C_{40}	0.007		--	0.13	--	--	**0.45**	--
Naphthalene	0.016	0.07	--	<0.0001	--	--	<0.0001	--
Phenanthrene [B]	0.002	0.002	--	<0.0001	--	--	<0.0001	--
Anthracene [B]	0.0004	0.0004	--	<0.0001	--	--	<0.0001	--
Fluoranthene [B]	0.0014	0.0014	--	<0.0001	--	--	<0.0001	--
Benzo(a)pyrene [B]	0.0002	0.0002	--	<0.0001	--	--	<0.0001	--

All units in mg/L except where otherwise noted
-- indicates no guidelines applicable and / or analyses not required during the specific month
[A] Criteria from ANZG (Ref [3]) with the exception of NOx and phosphorus for Lowland Rivers (coastal environment where available)
[B] Bio-accumulative Compounds
Results shown in **bold** more than 95% freshwater guidelines/ the lowland (coastal) river guidelines
Results shown in underline in excess of 95% marine water guidelines

4.2 SURFACE WATERS

Results of the surface water monitoring undertaken in the quarter compared to the criteria (Ref [2]) are presented in **Table 5** and **Table 4** below. It is noted that no active flow was observed at SW1 in February 2025, with only stagnant water present. Additionally, the LP was undergoing maintenance during the February monitoring period. Consequently, no samples were collected at these locations in February.

In summary:

- pH levels remained within the trigger range at WL throughout the quarter and at LP during two (2) monitoring events. In contrast, pH consistently exceeded the trigger range at both SED1 and SED2, indicating alkaline conditions. Background water results showed pH within the trigger range at SW2 during three (3) monitoring events, and at SW1 during two (2) events conducted this quarter.
- No electrical conductivity values exceeded the trigger value at any location throughout the monitoring period.
- Total suspended solids were considered low to moderate in all samples (particularly at SW1), except for the January sample at LP, which showed elevated levels.
- Ammonia concentrations remained below the trigger value at LP and WL throughout the quarter, except for one (1) monitoring event in March. Elevated concentrations were recorded during two (2) events at SED1, and during one (1) event each at SED2 and in the background waters.
    - It is noted that plant matter was difficult to exclude from the WP samples, and any elevated ammonia concentrations observed may, at least in part, reflect this material rather than the actual concentrations in the water.
- Nitrate and NOx were detected in one (1) event at LP (above the trigger values) and in one (1) event at WL (at low concentrations). Although these parameters exceeded trigger values during two (2) events at both SED1 and SED2, they were either not detected or detected at low concentrations in the background waters.
    - It is noted that high concentrations of Nitrate and NOx at LP in March may have resulted from run-off from a mulch stockpile in February as confirmed by Concrush personnel.
- Total nitrogen and total phosphorus consistently exceeded the trigger values at all monitoring locations; the most significant nitrogen compound was total Kjeldahl nitrogen.
- Aluminium exceeded the trigger value in two (2) monitoring events at both SED1 and SED2, while it was either non detected or detected at low concentrations at background waters during the monitoring period. Chromium was below the trigger value at all locations throughout the monitoring period except for one (1) event in March at SED1. Hexavalent chromium exceeded the trigger value in the Sediment Dams during the January and March monitoring rounds but was not detected in the February round. Zinc exceeded the trigger value only in the background waters during the March round. The remaining metals were either non-detected or detected at low concentrations well below the respective trigger values at all locations.
- There were no detected hydrocarbons, except for a low concentration (2.7% of the trigger value) at SW2 in March.

Table 4 *Surface Water Analysis Results – Green Waste Catchment*

Analyte	Trigger Values	LP			WL		
Date Sampled		31/01	28/02	31/03	31/01	28/02	31/03
pH (pH units)	6.5-8.0	7.1	--	7.1	7.0	7.0	7.2
Electrical Conductivity (µS/cm)	125-2200	1500	--	780	99	1500	1600
Total Suspended Solids	NA	2200	--	16	14	17	5
Ammonia	0.0264	<0.005	--	**0.065**	<0.005	<0.005	**6.6**
Nitrate	0.44	<0.01	--	**3.2**	0.02	<0.005	<0.01
NO_x	0.491	<0.01	--	**3.4**	0.02	<0.005	<0.01
Total Nitrogen	0.645	**12**	--	**4.7**	**4.5**	**5.1**	**11**
Total Phosphorus	0.0168	**3.5**	--	**0.82**	**1.9**	**1.1**	**8.0**

All units in mg/L except where otherwise noted

NA - not applicable

-- indicates no data (the location was dry)

Results shown in **bold** in excess of the trigger values (Ref [2])

Table 5 *Surface Water Analysis Results – Remainder of Site*

Analyte	Trigger Values	SED1			SW1			SED2			SW2		
Date Sampled		31/01	28/02	31/03	31/01	28/02	31/03	31/01	28/02	31/03	31/01	28/02	31/03
pH (pH units)	6.5-8.0	**8.8**	**8.4**	**9.4**	7.9	Stagnant Water – No sample	7.9	**9.1**	**8.6**	**8.9**	7.9	7.8	7.8
Electrical Conductivity (µS/cm)	125-2200	440	570	450	900		610	420	490	530	750	940	500
Total Suspended Solids	NA	14	63	34	<5		5	18	37	30	9	10	25
Ammonia	0.0264	**0.059**	**0.16**	0.008	**0.11**		0.014	**0.044**	<0.005	0.013	0.024	0.022	**0.094**
Nitrate	0.44	**0.85**	0.058	**0.65**	0.02		0.02	**0.56**	<0.005	**0.8**	<0.005	<0.005	0.05
NO_x	0.491	**1.1**	0.08	**0.92**	0.02		0.02	**0.76**	<0.005	**1.4**	<0.005	<0.005	0.06
Total Nitrogen	0.645	**1.7**	**0.8**	**1.4**	**1.0**		**0.6**	**2.0**	**1.1**	**2.1**	**2.0**	**2.2**	**0.7**
Total Phosphorus	0.0168	**0.05**	**0.1**	**0.09**	**0.06**		**0.1**	**0.1**	**0.2**	**0.3**	**0.3**	**0.3**	**0.2**
Aluminium	0.08	0.08	**0.14**	**0.26**	0.02		<0.01	**0.15**	0.08	**0.14**	<0.01	<0.01	0.03
Arsenic	0.094	0.006	0.012	0.005	0.006		0.002	0.012	0.022	0.018	0.004	0.005	0.004
Cadmium	0.0004	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	0.02	0.016	0.005	**0.021**	0.001		<0.001	0.016	0.003	0.015	<0.001	<0.001	<0.001
Hexavalent Chromium	0.0033	**0.02**	<0.005	**0.02**	<0.005		<0.005	**0.01**	<0.005	**0.02**	<0.005	<0.005	<0.005
Cobalt	0.015	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.02	0.004	0.003	0.006	0.002		0.002	0.004	0.002	0.006	<0.001	<0.001	0.005
Lead	0.0056	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	0.013	<0.001	0.003	0.001	0.002		0.001	0.001	<0.001	0.002	0.001	<0.001	<0.001
Selenium	0.018	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.015	0.002	0.015	0.002	**0.019**		0.012	0.005	0.002	0.004	0.006	0.002	**0.023**
Boron	0.68	0.09	0.1	0.07	0.1		0.1	0.1	0.1	0.07	0.08	0.1	0.08
TRH C_6-C_{40}	10	0.13	0.13	0.13	0.13		0.13	0.13	0.13	0.13	0.13	0.27	0.13

All units in mg/L except where otherwise noted
NA – Not applicable

Results shown in **bold** are in excess of the management triggers (Ref [2])

4.3 DISCHARGE

Rainfall data obtained from the Bureau of Meteorology weather station at Cooranbong indicated a total rainfall of 242.6 mm within the monitoring period (66.8 mm in January, 38.2 mm in February, and 137.6 mm in March) as presented in **Figure 3** below.

There were no discharge events in the monitoring period.

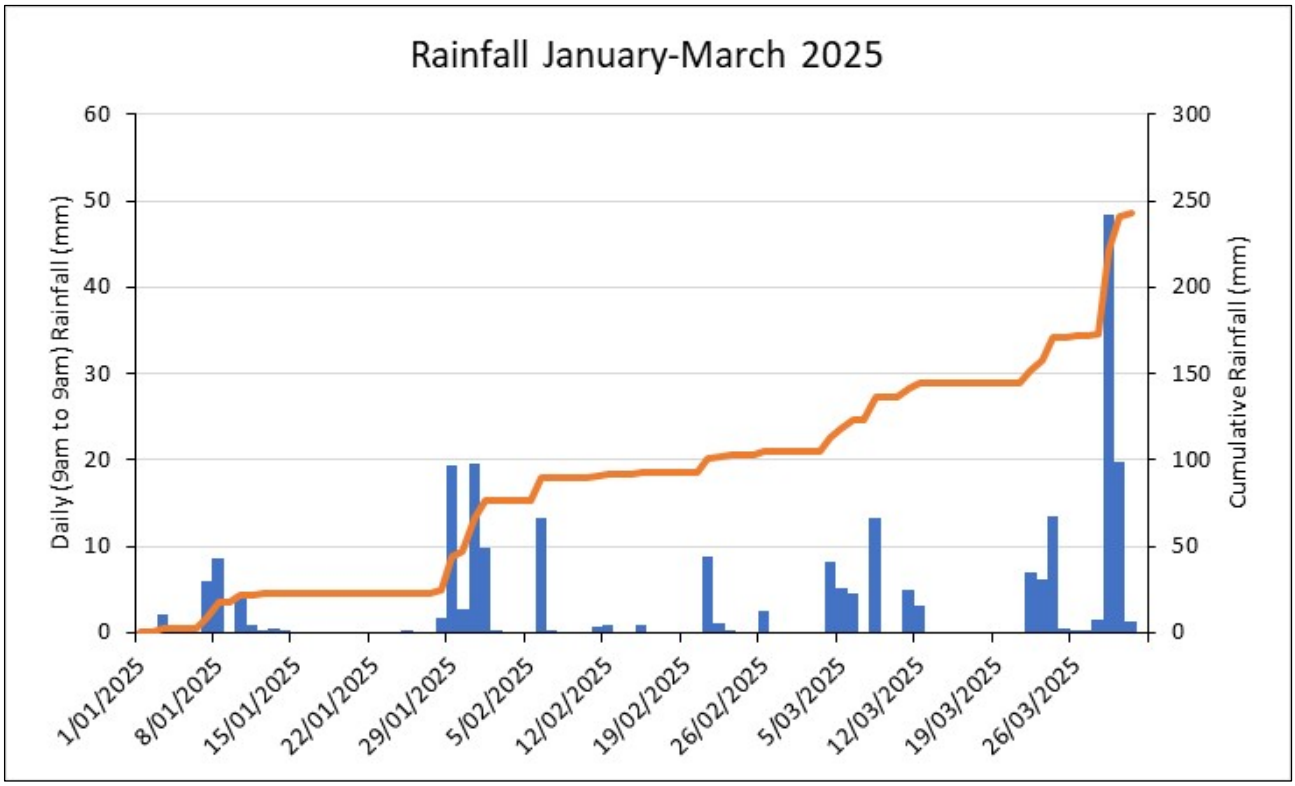

Figure 3 *Rainfall for the Monitoring Period (sourced from Bureau of Meteorology weather station at Cooranbong)*

5. CONCLUSIONS AND RECOMMENDATIONS

Water monitoring was undertaken at the Concrush Resource Recovery Facility through the January-March 2025 quarter in general compliance with the requirements of the EPL and relevant management plans (Ref [1] and Ref [2]). The absence of samples in February at SW1 due to stagnant water and at LP due to the maintenance undergoing at this location are not considered to represent non-compliance.

The following conclusions have been made with respect to this quarter's monitoring events:

- Elevated concentrations of ammonia and phosphorous were identified in groundwater exceeding their respective ecological guidelines (Ref [2]) at both GW1 and GW3. The guidelines are not directly relevant to groundwater and rather are relevant to the receiving water, considered to be Cockle Creek. The quarter's results are consistent with the historical results, including those prior to the commencement of operations in the southern portion of the site, and the results are not considered to indicate any potential impact from the Leachate Pond or Sediment Basin 2, and are rather considered to be representative of the groundwater characteristics within former wetlands.
- There are no indications of hydrocarbon contamination in the groundwater. The hydrocarbon detected at GW3 is considered likely derived from natural sources rather than petroleum-based contamination based on observations and previous testing of detected hydrocarbons in groundwater.
- The LP and WL pH results were generally neutral.
- Nutrient concentrations at LP and WL exceeded the trigger values in all the sampling rounds; the dominant form of nitrogen was organic nitrogen. It is noted that some vegetation in the WL samples may be impacting the nitrogen results.
- The pH results of both Sediment Dams were more alkaline than the trigger range in all of the sampling rounds; within the background waters, the pH values were within the trigger range at both locations.
- Nutrient concentrations at both Sediment Dams exceeded their respective trigger values for throughout the quarter. The available data for the background waters indicated concentrations exceeding the trigger values, with comparable levels observed. There were no discharge events during the quarter such that the quality of water within the Sediment Dams are not considered to have potentially impacted the background waters.
- Exceedances of aluminium and hexavalent chromium trigger values were observed in the Sediment Dams; however, these exceedances were not identified in the available background water data. All other metals were either not detected or detected at low concentrations below their respective trigger values. The only chromium exceedance occurred at SED1 in March. In the background waters, zinc exceeded the trigger value only during the March monitoring round.

Water monitoring will continue during the next quarter in accordance with the GMP (Ref [1]) and the DVMP (Ref [2]). The next quarterly report will be prepared after the completion of the June 2025 sampling.

6. LIMITATIONS

This report has been prepared for Concrush Pty Ltd in accordance with an agreement with RCA Australia (RCA). The services performed by RCA have been conducted in a manner consistent with that generally exercised by members of its profession and consulting practice.

This report has been prepared for the sole use of Concrush Pty Ltd. The report may not contain sufficient information for purposes of other uses or for parties other than Concrush Pty Ltd. This report shall only be presented in full and may not be used to support objectives other than those stated in the report without written permission from RCA Australia.

The information in this report is considered accurate at the date of issue with regard to the current conditions of the site. Conditions can vary across any site that cannot be explicitly defined by investigation. Please contact the undersigned if you have any queries.

Environmental conditions including contaminant concentrations can change in a limited period of time. This should be considered if the report is used following a significant period of time after the date of issue.

Yours faithfully

RCA AUSTRALIA

Dr. Anh Hoang
Environmental Scientist
B.S. & M.S.(Env Sci); PhD(Enviro. Remediation)

REFERENCES

[1] RCA Australia, *Groundwater Management Plan, Expansion of the Concrush Resource Recovery Facility, Teralba*, RCA ref 13589-805/1, September 2020.

[2] ENGENY, *Concrush Pty Ltd, Discharge Verification and Mitigation Report,* February 2024.

[3] ANZG, Australian and New Zealand Guidelines for Fresh and Marine Water Quality Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia., August 2018. Available at www.waterquality.gov.au/anz-guidelines.

Appendix A

Field Sheets

RCA AUSTRALIA
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ENGINEERING FIELD SHEET
WATER SAMPLING RECORD

CLIENT: Concrush Pty Ltd
DATE: 31/1/25
PROJECT: Water Quality Monitoring
PROJECT No: 13589a
LOCATION: 21 Racecourse Road, Teralba
CLIENT REF:
PERSONNEL: FB & SM

WATER METER USED: Horiba
DATE & TYPE OF LAST CALIBRATION (1PT OR FULL): Full – refer to Environment Drive for Calibration Certified
METHOD OF SAMPLING: Foot valve for Groundwater, direct for Ponds, Wetland, Basins and Surface Water
PRESERVATION & STORAGE (TICK): **Chilled (<4°C)** ☐

TESTS REQUIRED:
Groundwater: Nutrients each month, TRH, PAH and BTEX every 3 months.
Leachate Pond and Wetland: , EC, TSS and Nutrients every month.
Sediment Basins: pH, EC, TSS, metals (dissolved) and TRH every month.
Spillways: , EC, TSS, metals (dissolved) and TRH when discharging.
Background Surface water: pH, EC, TSS, metals (dissolved) and TRH every month.

Get Key for side gate from weighbridge to get to SW2

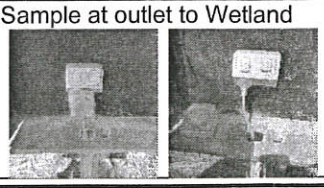
OTHER DETAILS: **Refer to Duplicate Register – name duplicate QAMonthYear.**

BORE OR LOCATION ID: BH3 (Eastern end – adjacent Racecourse Road) Label bottles 'GW3'
TIME: 9.20 **TO** 10.00
BORE DEPTH: 5.08 **HEIGHT ABOVE GROUND LEVEL:** 0.9
DEPTH TO AQUIFER: 3.24 **VOLUME PURGED:** ~~[illegible]~~ 17L
RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	6.48	1.07	699	0.95	21.51	0.053
2/ +3	6.49	1.05	208	1.08	21.28	0.052
3/						
4/						
5/						
6/						

Sample Appearance: slight sulfur odour, clear, slightly turbid during purging
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: Leachate Pond (Eastern end – adjacent Racecourse Road). Sample at outlet to Wetland Pond. Label bottles 'LP'
TIME: 10:05 **TO** 10:15
If discharge not running, remove the cord from time and put directly into power.
At the completion of sampling, return the time to the system.
RESULTS OF WATER QUALITY CHECK:



Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	7.29	1.66	163	7.17	23.54	0.083
2/						
3/						
4/						
5/						
6/						

Sample Appearance: slight green tint slight sewage odour
Duplicate Identification and Other Remarks: particulates setting in bottle

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BORE OR LOCATION ID: Wetland (Eastern end – adjacent Racecourse Road). Label bottles 'WL'
TIME: 10:20 **TO** 10:31

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	6.81	1.04	13.0	0.43	22.76	0.051
2/						
3/						
4/						
5/						
6/						

Sample Appearance: some suspended material, sampled with syringe
Duplicate Identification and Other Remarks: Duplicate collected here sewage smell – organics

BORE OR LOCATION ID: Sediment Dam 2 (South west corner – adjacent railway). Label bottles 'Sed2'
TIME: 11:35 **TO** 11:51

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	9.44	0.428	106	4.80	24.68	0.020
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Clear, milky sheen on water surface, no odour
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: Discharge of Sediment 2. Label bottles 'DIS-Sed2'
TIME: **TO** **WATCH for SNAKES**
May have to get sample from outside fence
NO Discharge

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/						
2/						
3/						
4/						
5/						
6/						

Sample Appearance:
Duplicate Identification and Other Remarks:

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BORE OR LOCATION ID: SW2 (Western end, south of site boundary, down ladder). Label bottles 'SW2'
TIME: 12:10 **TO** 12 20 **WATCH for SNAKES**
Be careful – poor footing

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	7.17	0.791	35.1	1.65	24.17	0.039
2/						
3/						
4/						
5/						
6/						

Sample Appearance: clear, no odour
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: BH1 (Western end – adjacent Railway) Label bottles 'GW1'
TIME: 10:43 **TO** 11:23
BORE DEPTH: 4.77 **HEIGHT ABOVE GROUND LEVEL:** 0
DEPTH TO AQUIFER: 1.88 **VOLUME PURGED:** 26 L
RESULTS OF WATER QUALITY CHECK:

232 1 bore volume

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/ 23	7.54	0.756	663	0.80	22.28	0.037
2/ +3	7.56	0.751	>1000	0.78	22.19	0.037
3/						
4/						
5/						
6/						

Sample Appearance: grey/green colour, very turbid, slight odour
Duplicate Identification and Other Remarks: present during purging
Surface Level up to top of pipe

BORE OR LOCATION ID: Sediment Dam 1 (North west corner – adjacent railway). Label bottles 'Sed1'
TIME: 12.38 **TO** 12:52

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	9.06	0.445	88.3	4.45	24.13	0.021
2/						
3/						
4/						
5/						
6/						

Sample Appearance: clear, no odour
Duplicate Identification and Other Remarks:

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BORE OR LOCATION ID: Discharge of Sediment 1. Label bottles 'DIS-Sed1'
TIME: _____ **TO** _____
BORE DEPTH: _____ **HEIGHT ABOVE GROUND LEVEL:** _____
DEPTH TO AQUIFER: _____ **VOLUME PURGED:** _____
RESULTS OF WATER QUALITY CHECK: _____

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/						
2/						
3/						
4/						
5/						
6/						

Sample Appearance: _____
Duplicate Identification and Other Remarks: _____

BORE OR LOCATION ID: SW1 (Western side of Racecourse Road, north of rail access drive). Label bottles 'SW'
TIME: 1115 **TO** 1130
BORE DEPTH: _____ **HEIGHT ABOVE GROUND LEVEL:** _____
DEPTH TO AQUIFER: _____ **VOLUME PURGED:** _____
RESULTS OF WATER QUALITY CHECK: _____

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	7.55	0.973	7.0	4.07	24.43	0.048
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Clear, with tadpoles, flowing
Duplicate Identification and Other Remarks: _____

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

ENGINEERING FIELD SHEET
WATER SAMPLING RECORD

CLIENT: Concrush Pty Ltd
DATE: 28/2/25
PROJECT: Water Quality Monitoring
PROJECT No: 13589a
LOCATION: 21 Racecourse Road, Teralba
CLIENT REF:
PERSONNEL: AH SH

WATER METER USED: Horiba
DATE & TYPE OF LAST CALIBRATION (1PT OR FULL): Full – refer to Environment Drive for Calibration Certified
METHOD OF SAMPLING: Foot valve for Groundwater, direct for Ponds, Wetland, Basins and Surface Water
PRESERVATION & STORAGE (TICK): **Chilled (<4°C)** ☐

TESTS REQUIRED:
Groundwater: Nutrients each month, TRH, PAH and BTEX every 3 months.
Leachate Pond and Wetland: , EC, TSS and Nutrients every month.
Sediment Basins: pH, EC, TSS, metals (dissolved) and TRH every month.
Spillways: , EC, TSS, metals (dissolved) and TRH when discharging.
Background Surface water: pH, EC, TSS, metals (dissolved) and TRH every month.

Get Key for side gate from weighbridge to get to SW2

OTHER DETAILS: **Refer to Duplicate Register – name duplicate QAMonthYear.**

BORE OR LOCATION ID: BH3 (Eastern end – adjacent Racecourse Road) Label bottles 'GW3'
TIME: 11:00 **TO** 11:30
BORE DEPTH: ~~5.89~~ 5.10 **HEIGHT ABOVE GROUND LEVEL:** 0.92
DEPTH TO AQUIFER: 3.52 **VOLUME PURGED:**
RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/ +3L	6.67	1.56	48.0	0.75	23.78	0.078
2/ +1L	6.63	1.59	958	0.28	24.32	0.080
3/ +1L	6.63	1.39	173	0.92	23.69	0.069
4/ +1L	6.66	1.33	107	0.76	23.89	0.066
5/						
6/						

Sample Appearance: Pale grey, turbid, no odour
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: Leachate Pond (Eastern end – adjacent Racecourse Road). Sample at outlet to Wetland Pond. Label bottles 'LP'
TIME: **TO**
If discharge not running, remove the cord from time and put directly into power.
At the completion of sampling, return the time to the system.
RESULTS OF WATER QUALITY CHECK:


Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/						
2/						
3/						
4/						
5/						
6/						

Sample Appearance:
Duplicate Identification and Other Remarks: Under maintenance
NO samples

RCA AUSTRALIA
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BORE OR LOCATION ID: Wetland (Eastern end – adjacent Racecourse Road). Label bottles 'WL'
TIME: 10:40 **TO** 10:55

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	7.32	1.53	7.3	0.93	23.76	0.077
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Pale yellow, clear, no odour
Duplicate Identification and Other Remarks: Algae present

BORE OR LOCATION ID: Sediment Dam 2 (South west corner – adjacent railway). Label bottles 'Sed2'
TIME: 8:15 **TO** 8:50

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	8.73	0.542	89.1	4.56	23.70	0.026
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Dark brown, turbid, no odour
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: Discharge of Sediment 2. Label bottles 'DIS-Sed2'
TIME: **TO** **WATCH for SNAKES**
May have to get sample from outside fence

RESULTS OF WATER QUALITY CHECK: No discharge

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/						
2/						
3/						
4/						
5/						
6/						

Sample Appearance:
Duplicate Identification and Other Remarks:

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BORE OR LOCATION ID: SW2 (Western end, south of site boundary, down ladder). Label bottles 'SW2'
TIME: 9:20 **TO** 10:00 **WATCH for SNAKES**
Be careful – poor footing

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	7.73	0.951	35.5	1.98	22.91	0.047
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Pale yellow, slightly turbid, no odour
Duplicate Identification and Other Remarks: suspended solids
Dup collected here

BORE OR LOCATION ID: BH1 (Western end – adjacent Railway) Label bottles 'GW1'
TIME: 8:04 **TO** 8:25
BORE DEPTH: 4.78 **HEIGHT ABOVE GROUND LEVEL:** 0
DEPTH TO AQUIFER: 2.18 **VOLUME PURGED:** 7L
RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/ +4L	7.40	0.940	168	0.53	23.10	0.046
2/ +1	7.46	0.923	149	0.99	23.48	0.045
3/ +1	7.44	0.942	367	1.01	23.08	0.046
4/ +1	7.45	0.967	71000	0.93	23.07	0.048
5/						
6/						

Sample Appearance: Dark grey, highly turbid
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: Sediment Dam 1 (North west corner – adjacent railway). Label bottles 'Sed1'
TIME: 10:07 **TO** 10:35

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	8.7	0.581	188	3.57	24.85	0.028
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Pale brown, turbid, no odour
Duplicate Identification and Other Remarks:

2.6

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

BORE OR LOCATION ID: Discharge of Sediment 1. Label bottles 'DIS-Sed1'
TIME: _____ **TO** _____ No discharge
BORE DEPTH: _____ **HEIGHT ABOVE GROUND LEVEL:** _____
DEPTH TO AQUIFER: _____ **VOLUME PURGED:** _____
RESULTS OF WATER QUALITY CHECK: _____

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/						
2/						
3/						
4/						
5/						
6/						

Sample Appearance: _____
Duplicate Identification and Other Remarks: _____

BORE OR LOCATION ID: SW1 (Western side of Racecourse Road, north of rail access drive). Label bottles 'SW'
TIME: _____ **TO** _____
BORE DEPTH: _____ **HEIGHT ABOVE GROUND LEVEL:** _____
DEPTH TO AQUIFER: _____ **VOLUME PURGED:** _____
RESULTS OF WATER QUALITY CHECK: _____

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/						
2/						
3/						
4/						
5/						
6/						

Sample Appearance: _____
Duplicate Identification and Other Remarks: Stagnant water
No sample

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

ENGINEERING FIELD SHEET
WATER SAMPLING RECORD

CLIENT: Concrush Pty Ltd
PROJECT: Water Quality Monitoring
LOCATION: 21 Racecourse Road, Teralba
PERSONNEL: _____

DATE: _____
PROJECT No: 13589a
CLIENT REF: _____

WATER METER USED: Horiba
DATE & TYPE OF LAST CALIBRATION (1PT OR FULL): Full – refer to Environment Drive for Calibration Certified
METHOD OF SAMPLING: Foot valve for Groundwater, direct for Ponds, Wetland, Basins and Surface Water
PRESERVATION & STORAGE (TICK): Chilled (<4°C) ☐

TESTS REQUIRED:
Groundwater: Nutrients each month, TRH, PAH and BTEX every 3 months.
Leachate Pond and Wetland: , EC, TSS and Nutrients every month.
Sediment Basins: pH, EC, TSS, metals (dissolved) and TRH every month.
Spillways: , EC, TSS, metals (dissolved) and TRH when discharging.
Background Surface water: pH, EC, TSS, metals (dissolved) and TRH every month.

Get Key for side gate from weighbridge to get to SW2

OTHER DETAILS: **Refer to Duplicate Register – name duplicate QAMonthYear.**

BORE OR LOCATION ID: BH3 (Eastern end – adjacent Racecourse Road) Label bottles 'GW3'
TIME: 9:55 **TO** 10:20
BORE DEPTH: 5.10m **HEIGHT ABOVE GROUND LEVEL:** 0.92m
DEPTH TO AQUIFER: 3.26m **VOLUME PURGED:** ~6L
RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/ +4L	6.52	1.06	>1000	1.68	21.34	0.052
2/ +1L	6.44	1.02	748	0.89	21.55	0.050
3/ +1L	6.45	1.00	119	1.15	21.69	0.045
4/						
5/						
6/						

Sample Appearance: Grey, turbid, no odour
Duplicate Identification and Other Remarks: Dup collected here & PAH included

BORE OR LOCATION ID: Leachate Pond (Eastern end – adjacent Racecourse Road). Sample at outlet to Wetland Pond. Label bottles 'LP'
TIME: 10:25 **TO** 10:35
If discharge not running, remove the cord from time and put directly into power.
At the completion of sampling, return the time to the system.


RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	7.68	0.789	41.2	3.64	21.65	0.039
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Pale yellow, clear, no odour
Duplicate Identification and Other Remarks:

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BORE OR LOCATION ID: Wetland (Eastern end – adjacent Racecourse Road). Label bottles 'WL'
TIME: 9:20 **TO** 9:35

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	7.33	1.63	47.3	1.55	19.54	0.082
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Brown, slightly turbid, sulphide odour
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: Sediment Dam 2 (South west corner – adjacent railway). Label bottles 'Sed2'
TIME: 10:55 **TO** 11:20

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	9.35	0.529	96.3	2.58	22.40	0.021
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Brown, turbid, no odour
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: Discharge of Sediment 2. Label bottles 'DIS-Sed2'
TIME: **TO**
WATCH for SNAKES
May have to get sample from outside fence

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/						
2/						
3/						
4/						
5/						
6/						

Sample Appearance:
Duplicate Identification and Other Remarks:

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

BORE OR LOCATION ID: SW2 (Western end, south of site boundary, down ladder). Label bottles 'SW2'
TIME: 12:00 **TO** 12:40
WATCH for SNAKES
Be careful – poor footing

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	7.22	0.527	61.8	1.90	23.98	0.025
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Pale yellow, clear, no odour
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: BH1 (Western end – adjacent Railway) Label bottles 'GW1'
TIME: 11:25 **TO** 11:50
BORE DEPTH: 4.76m **HEIGHT ABOVE GROUND LEVEL:** 0.0m
DEPTH TO AQUIFER: 1.52m **VOLUME PURGED:** 6L
RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/ +4	7.95	0.716	156	1.08	22.68	0.035
2/ +1	7.88	0.721	527	1.29	22.58	0.035
3/ +1	7.85	0.721	598	1.59	22.71	0.035
4/						
5/						
6/						

Sample Appearance: Dark grey, turbid, sulphide odour
Duplicate Identification and Other Remarks:

BORE OR LOCATION ID: Sediment Dam 1 (North west corner – adjacent railway). Label bottles 'Sed1'
TIME: 12:45 **TO** 13:10

RESULTS OF WATER QUALITY CHECK:

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	9.63	0.446	117	5.68	23.83	0.021
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Grey, turbid (slightly), no odour
Duplicate Identification and Other Remarks:

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

BORE OR LOCATION ID: Discharge of Sediment 1. Label bottles 'DIS-Sed1'
TIME: _____ **TO** _____
BORE DEPTH: _____ **HEIGHT ABOVE GROUND LEVEL:** _____
DEPTH TO AQUIFER: _____ **VOLUME PURGED:** _____
RESULTS OF WATER QUALITY CHECK: _____

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/						
2/						
3/						
4/						
5/						
6/						

Sample Appearance: _____
Duplicate Identification and Other Remarks: _____

BORE OR LOCATION ID: SW1 (Western side of Racecourse Road, north of rail access drive). Label bottles 'SW'
TIME: 13:30 **TO** 13:50
BORE DEPTH: _____ **HEIGHT ABOVE GROUND LEVEL:** _____
DEPTH TO AQUIFER: _____ **VOLUME PURGED:** _____
RESULTS OF WATER QUALITY CHECK: _____

Check No.	pH	Conductivity (mS/cm)	Turbidity	Dissolved O_2 (mg/L)	Temperature (°C)	Salinity (%)
1/	7.39	0.643	12.2	2.22	22.86	0.031
2/						
3/						
4/						
5/						
6/						

Sample Appearance: Pale yellow, clear, no odour
Duplicate Identification and Other Remarks: _____

Appendix B

Laboratory Report Sheets

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 372020

Client Details

Client	RCA Australia
Attention	Fiona Brooker
Address	PO Box 175, Carrington, NSW, 2294

Sample Details

Your Reference	**13589a**
Number of Samples	9 Water
Date samples received	04/02/2025
Date completed instructions received	04/02/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	07/02/2025
Date of Issue	24/02/2025
Reissue Details	This report replaces R00 created on 10/02/2025 due to: revised report with additional results. Cr6+ for sample 8

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Results Approved By
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist
Laura Schofield, Lab Manager
Nick Sarlamis, Assistant Operation Manager
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH in Water (C6-C9) NEPM					
Our Reference	UNITS	372020-5	372020-6	372020-7	372020-8
Your Reference		Sed-2	SW2	Sed-1	SW1
Date Sampled		31/01/2025	31/01/2025	31/01/2025	31/01/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Date analysed	-	06/02/2025	06/02/2025	06/02/2025	06/02/2025
TRH C_6 - C_9	µg/L	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10	<10
Surrogate Dibromofluoromethane	%	104	104	104	104
Surrogate Toluene-d8	%	99	99	99	99
Surrogate 4-Bromofluorobenzene	%	105	103	103	103

svTRH (C10-C40) in Water					
Our Reference		372020-5	372020-6	372020-7	372020-8
Your Reference	UNITS	Sed-2	SW2	Sed-1	SW1
Date Sampled		31/01/2025	31/01/2025	31/01/2025	31/01/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	06/02/2025	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	07/02/2025	07/02/2025	06/02/2025	06/02/2025
TRH C_{10} - C_{14}	µg/L	<50	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	<50	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100	100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50	<50	100
Surrogate o-Terphenyl	%	88	80	78	92

HM in water - dissolved					
Our Reference	UNITS	372020-5	372020-6	372020-7	372020-8
Your Reference		Sed-2	SW2	Sed-1	SW1
Date Sampled		31/01/2025	31/01/2025	31/01/2025	31/01/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	06/02/2025	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	06/02/2025	06/02/2025	06/02/2025	06/02/2025
Aluminium-Dissolved	µg/L	150	<10	80	20
Arsenic-Dissolved	µg/L	12	4	6	6
Boron-Dissolved	µg/L	100	80	90	100
Cadmium-Dissolved	µg/L	<0.1	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	16	<1	16	1
Cobalt-Dissolved	µg/L	<1	<1	<1	<1
Copper-Dissolved	µg/L	4	<1	4	2
Lead-Dissolved	µg/L	<1	<1	<1	<1
Nickel-Dissolved	µg/L	1	1	<1	2
Selenium-Dissolved	µg/L	<1	<1	<1	<1
Zinc-Dissolved	µg/L	5	6	2	19

Miscellaneous Inorganics						
Our Reference		372020-1	372020-2	372020-3	372020-4	372020-5
Your Reference	UNITS	GW1	GW3	LP	WL	Sed-2
Date Sampled		31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Ammonia as N in water	mg/L	1.7	2.8	<0.005	<0.005	0.044
Nitrate as N in water	mg/L	<0.005	0.006	<0.01	0.02	0.56
Nitrite as N in water	mg/L	<0.005	<0.005	<0.01	<0.005	0.20
NOx as N in water	mg/L	<0.005	0.006	<0.01	0.02	0.76
TKN in water	mg/L	[NA]	[NA]	12	4.5	1.3
Total Nitrogen in water	mg/L	[NA]	[NA]	12	4.5	2.0
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	[NA]	[NA]	[NA]	[NA]	0.01

Miscellaneous Inorganics					
Our Reference		372020-6	372020-7	372020-8	372020-9
Your Reference	UNITS	SW2	Sed-1	SW1	QA Jan 25
Date Sampled		31/01/2025	31/01/2025	31/01/2025	31/01/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Ammonia as N in water	mg/L	0.024	0.059	0.11	0.008
Nitrate as N in water	mg/L	<0.005	0.85	0.02	0.055
Nitrite as N in water	mg/L	<0.005	0.21	<0.005	<0.005
NOx as N in water	mg/L	<0.005	1.1	0.02	0.06
TKN in water	mg/L	2.0	0.6	1.0	5.9
Total Nitrogen in water	mg/L	2.0	1.7	1.0	6.0
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	<0.005	0.02	<0.005	[NA]

Miscellaneous Inorganics						
Our Reference	UNITS	372020-1	372020-2	372020-3	372020-4	372020-5
Your Reference		GW1	GW3	LP	WL	Sed-2
Date Sampled		31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
pH	pH Units	6.7	6.4	7.1	7.0	9.1
Electrical Conductivity	µS/cm	730	960	1,500	99	420
Total Suspended Solids	mg/L	[NA]	[NA]	2,200	14	18

Miscellaneous Inorganics					
Our Reference	UNITS	372020-6	372020-7	372020-8	372020-9
Your Reference		SW2	Sed-1	SW1	QA Jan 25
Date Sampled		31/01/2025	31/01/2025	31/01/2025	31/01/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
pH	pH Units	7.9	8.8	7.9	7.2
Electrical Conductivity	µS/cm	750	440	900	980
Total Suspended Solids	mg/L	9	14	<5	14

Metals in Waters - Acid extractable						
Our Reference		372020-1	372020-2	372020-3	372020-4	372020-5
Your Reference	UNITS	GW1	GW3	LP	WL	Sed-2
Date Sampled		31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	06/02/2025	06/02/2025	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	06/02/2025	06/02/2025	06/02/2025	06/02/2025	06/02/2025
Phosphorus - Total	mg/L	0.66	0.06	3.5	1.9	0.1

Metals in Waters - Acid extractable					
Our Reference		372020-6	372020-7	372020-8	372020-9
Your Reference	UNITS	SW2	Sed-1	SW1	QA Jan 25
Date Sampled		31/01/2025	31/01/2025	31/01/2025	31/01/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	06/02/2025	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	06/02/2025	06/02/2025	06/02/2025	06/02/2025
Phosphorus - Total	mg/L	0.3	0.05	0.06	1.9

Method ID	Methodology Summary
Ext-073_F	Analysis of pH in Water by AS 4500 H+ B and in-house method ENV-LAB006, Analysed by Envirolab Newcastle
Ext-073_G	Analysis of Conductivity in Water by AS 2510 B and in-house method ENV-LAB010, Analysed by Envirolab Newcastle
Ext-073_J	Analysis of Total Suspended Solids in Water by AS 2540 D and in-house method ENV-LAB009, Analysed by Envirolab Newcastle
Inorg-055	Nitrate - determined colourimetrically. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055	Nitrite - determined colourimetrically based on APHA latest edition NO2- B. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055/062/127	Total Nitrogen - Calculation sum of TKN and oxidised Nitrogen. Alternatively analysed by combustion and chemiluminescence.
Inorg-057	Ammonia - determined colourimetrically, based on APHA latest edition 4500-NH3 F. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a KCl extraction.
Inorg-062	TKN - determined colourimetrically based on APHA latest edition 4500 Norg. Alternatively, TKN can be derived from calculation (Total N - NOx).
Inorg-118	Hexavalent Chromium (Cr6+) - determined firstly by separation using ion chromatography followed by the colourimetric analytical finish. Water samples are ideally field filtered into alkali preserved containers prior to receipt for dissolved Cr6+ analysis. Unfiltered water samples into alkali preserved containers (or pH adjusted to pH 8-9 on receipt) can be classified as Total (unfiltered) Cr6+. Please note, for 'Total/Unfiltered' Trivalent Chromium in waters [calculated], these results may be exaggerated due to the digestive limitation of 'Total/Unfiltered' Hexavalent Chromium in NaOH at pH 8-9 compared to more comprehensive digestion for Total Chromium using the mineral acids HNO3 and HCl. Solid (includes soils, filters, paints, swabs for example) samples are extracted in a buffered catalysed solution prior to the analytical finish above. Water extractable options are available (e.g. as an option for filters) on request. Impingers may need pH adjusting to pH 8-9 prior to IC-colourimetric analytical finish.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate).

Method ID	Methodology Summary
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements. Salt forms (e.g. FeO, PbO, ZnO) are determined stoichiometrically from the base metal concentration.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: vTRH in Water (C6-C9) NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			05/02/2025	[NT]	[NT]	[NT]	[NT]	05/02/2025	[NT]
Date analysed	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate Dibromofluoromethane	%		Org-023	108	[NT]	[NT]	[NT]	[NT]	108	[NT]
Surrogate Toluene-d8	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	116	[NT]	[NT]	[NT]	[NT]	118	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
Date analysed	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	116	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	134	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	129	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	116	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	134	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	129	[NT]
Surrogate o-Terphenyl	%		Org-020	89	[NT]	[NT]	[NT]	[NT]	136	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	372020-6
Date prepared	-			06/02/2025	5	06/02/2025	06/02/2025		06/02/2025	06/02/2025
Date analysed	-			06/02/2025	5	06/02/2025	06/02/2025		06/02/2025	06/02/2025
Aluminium-Dissolved	µg/L	10	Metals-022	<10	5	150	150	0	84	90
Arsenic-Dissolved	µg/L	1	Metals-022	<1	5	12	12	0	85	84
Boron-Dissolved	µg/L	20	Metals-022	<20	5	100	100	0	110	75
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	5	<0.1	<0.1	0	86	86
Chromium-Dissolved	µg/L	1	Metals-022	<1	5	16	15	6	84	88
Cobalt-Dissolved	µg/L	1	Metals-022	<1	5	<1	<1	0	80	82
Copper-Dissolved	µg/L	1	Metals-022	<1	5	4	4	0	85	83
Lead-Dissolved	µg/L	1	Metals-022	<1	5	<1	<1	0	88	77
Nickel-Dissolved	µg/L	1	Metals-022	<1	5	1	1	0	84	86
Selenium-Dissolved	µg/L	1	Metals-022	<1	5	<1	<1	0	86	83
Zinc-Dissolved	µg/L	1	Metals-022	<1	5	5	4	22	84	95

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	372020-2
Date prepared	-			04/02/2025	1	04/02/2025	04/02/2025		04/02/2025	04/02/2025
Date analysed	-			04/02/2025	1	04/02/2025	04/02/2025		04/02/2025	04/02/2025
Ammonia as N in water	mg/L	0.005	Inorg-057	<0.005	1	1.7	1.6	6	111	#
Nitrate as N in water	mg/L	0.005	Inorg-055	<0.005	1	<0.005	<0.005	0	100	100
Nitrite as N in water	mg/L	0.005	Inorg-055	<0.005	1	<0.005	<0.005	0	113	124
NOx as N in water	mg/L	0.005	Inorg-055	<0.005	1	<0.005	<0.005	0	100	100
TKN in water	mg/L	0.1	Inorg-062	<0.1	3	12	[NT]		[NT]	[NT]
Total Nitrogen in water	mg/L	0.1	Inorg-055/062/127	<0.1	3	12	14	15	104	[NT]
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	0.005	Inorg-118	<0.005	[NT]	[NT]	[NT]	[NT]	95	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	372020-4
Date prepared	-			[NT]	3	04/02/2025	04/02/2025		[NT]	04/02/2025
Date analysed	-			[NT]	3	04/02/2025	04/02/2025		[NT]	04/02/2025
Ammonia as N in water	mg/L	0.005	Inorg-057	[NT]	3	<0.005	[NT]		[NT]	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	[NT]	3	<0.01	[NT]		[NT]	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	[NT]	3	<0.01	[NT]		[NT]	[NT]
NOx as N in water	mg/L	0.005	Inorg-055	[NT]	3	<0.01	[NT]		[NT]	[NT]
Total Nitrogen in water	mg/L	0.1	Inorg-055/062/127	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]	118

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	372020-5
Date prepared	-			[NT]	[NT]	[NT]	[NT]	[NT]	[NT]	04/02/2025
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	[NT]	04/02/2025
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	0.005	Inorg-118	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]	89

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	
Date prepared	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	[NT]
Date analysed	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	[NT]
pH	pH Units		Ext-073_F	[NT]	1	6.7	6.7	0	100	[NT]
Electrical Conductivity	µS/cm	1	Ext-073_G	[NT]	1	730	730	0	99	[NT]
Total Suspended Solids	mg/L	5	Ext-073_J	<5	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: Metals in Waters - Acid extractable						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	372020-2
Date prepared	-			06/02/2025	1	06/02/2025	06/02/2025		06/02/2025	06/02/2025
Date analysed	-			06/02/2025	1	06/02/2025	06/02/2025		06/02/2025	06/02/2025
Phosphorus - Total	mg/L	0.05	Metals-020	<0.05	1	0.66	0.66	0	106	112

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

MISC_INORG: Nitrate, Nitrite as N PQL has been raised due to matrix interferences from analytes (other than those being tested) in the sample/s. Samples were diluted and reanalysed however same results were achieved.

MISC_INORG:# Percent recovery is not applicable due to the high concentration of the analyte/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Dissolved Metals: no filtered, preserved sample was received for #8, therefore the unpreserved sample was filtered through 0.45µm filter at the lab.
Note: there is a possibility some elements may be underestimated.

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP

Company:	RCA Australia	RCA Reference Number (i.e. report title)	13589a
Contact person:	Fiona Brooker		
Project Mgr:	Fiona Brooker	PO No. (if applicable):	Not applicable
Sampler:	~~Anh Hoang~~ SH	Envirolab Quote No. :	BM8
Address:	92 Hill St Carrington, NSW 2294 0408 687 529	Date results required:	7/2/25
Phone:	02 4902 9200 Mob: ~~0410 230 644~~		
Email results to:	administrator@rca.com.au + enviro@rca.com.au	Lab comments:	
Email invoice to:			

ENVIROLAB GROUP

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
02 9910 6200 sydney@envirolab.com.au

Sample information				# Containers	Tests Required									Comments
Envirolab Sample ID	Client Sample ID	Date sampled	Type of sample		E01580 - Total Suspended Solids (TSS)	E00705-NH3, E00815-NO2, E00790-NO3, E00850-NOx, E01090-Total P)	E010300 - Nutrient Suite (NH3, NO2, NO3, NOx, TKN (calc), Total N, Total P)	E07290 and E07220 TRH C6-C40	E03010_D - Dissolved (Aluminium, Arsenic, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Nickel, Selenium, Zinc)	E05360 - Hexavalent Chromium	E01140 - pH	E01150 - Electrical Conductivity		Sediment within container to be included in analysis if X	Provide as much information about the sample as you can
1	GW1	2/01/2025	Water	4		x					x	x		x	
2	GW3	2/01/2025	Water	4		x					x	x		x	
3	LP	2/01/2025	Water	4	x		x				x	x		x	
4	WL	2/01/2025	Water	4	x		x				x	x		x	
5	Sed-2	2/01/2025	Water	9	x		x	x	x	x	x	x		x	
6	SW2	2/01/2025	Water	9	x		x	x	x	x	x	x		x	
7	Sed-1	2/01/2025	Water	9	x		x	x	x	x	x	x		x	
8	SW1	2/01/2025	Water	9	x		x	x	x	x	x	x		x	
9	QA Jan 25	2/01/2025	Water	4	x		x				x	x		x	
			Total	56	7	2	7	4	4	4	9	9		2	

Relinquished by (company):	RCA Australia	Received by (company):	Envirolab	Lab use only:	
Print Name:	Stephen Hoang	Print Name:	S. Joseph	Job Number	Cooling: Ice / Ice Pack / None
Date & Time:	31/1/25 14:15	Date & Time:	31/1/25 1410	Temperature 6.9°C	Security Seal: Intact / Broken / Not Used
Signature:		Signature:		TAT Req:	SAME DAY / 1 / 2 / 3 / 4 / STD

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 372020
Date Received: 4-02-25
Time Received: 1100
Received By: TTr
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	RCA Australia
Attention	Fiona Brooker

Sample Login Details

Your reference	13589a
Envirolab Reference	372020
Date Sample Received	04/02/2025
Date Instructions Received	04/02/2025
Date Results Expected to be Reported	07/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	9 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6.9
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH in Water (C6-C9) NEPM	svTRH (C10-C40) in Water	HM in water - dissolved	Ammonia as N in water	Nitrate as N in water	Nitrite as N in water	NOx as N in water	TKN in water	Total Nitrogen in water	Hexavalent Chromium, Cr6+ (dissolved)	Miscellaneous Inorganics	Metals in Waters -Acid extractable
GW1				✓	✓	✓	✓				✓	✓
GW3				✓	✓	✓	✓				✓	✓
LP				✓	✓	✓	✓	✓	✓		✓	✓
WL				✓	✓	✓	✓	✓	✓		✓	✓
Sed-2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SW2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sed-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SW1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
QA Jan 25				✓	✓	✓	✓	✓	✓		✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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CERTIFICATE OF ANALYSIS 374373

Client Details

Client	RCA Australia
Attention	RCA Administrator
Address	PO Box 175, Carrington, NSW, 2294

Sample Details

Your Reference	**13589a**
Number of Samples	7 Water
Date samples received	28/02/2025
Date completed instructions received	01/03/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	10/03/2025
Date of Issue	18/03/2025
Reissue Details	This report replaces R00 created on 07/03/2025 due to: revised report with additional results.

Results Approved By
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist
Laura Schofield, Lab Manager
Priya Samarawickrama, Senior Chemist
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Water						
Our Reference		374373-1	374373-2	374373-4	374373-5	374373-6
Your Reference	UNITS	GW1	GW3	Sed-2	SW2	Sed-1
Date Sampled		28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025
Date analysed	-	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025
TRH C_6 - C_9	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	<10
Benzene	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	101	101	100	99	99
Surrogate Toluene-d8	%	99	100	99	99	98
Surrogate 4-Bromofluorobenzene	%	97	97	96	96	96

vTRH(C6-C10)/BTEXN in Water		
Our Reference		374373-7
Your Reference	UNITS	QA 02 25
Date Sampled		28/02/2025
Type of sample		Water
Date extracted	-	05/03/2025
Date analysed	-	05/03/2025
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	99
Surrogate Toluene-d8	%	99
Surrogate 4-Bromofluorobenzene	%	96

svTRH (C10-C40) in Water						
Our Reference		374373-1	374373-2	374373-4	374373-5	374373-6
Your Reference	UNITS	GW1	GW3	Sed-2	SW2	Sed-1
Date Sampled		28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	04/03/2025	04/03/2025	04/03/2025	04/03/2025	04/03/2025
Date analysed	-	04/03/2025	04/03/2025	04/03/2025	05/03/2025	05/03/2025
TRH C_{10} - C_{14}	µg/L	<50	180	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	210	<100	140	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	380	<50	140	<50
TRH >C_{10} - C_{16}	µg/L	<50	220	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	170	<100	190	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	380	<50	190	<50
Surrogate o-Terphenyl	%	122	110	113	113	120

svTRH (C10-C40) in Water		
Our Reference		374373-7
Your Reference	UNITS	QA 02 25
Date Sampled		28/02/2025
Type of sample		Water
Date extracted	-	04/03/2025
Date analysed	-	05/03/2025
TRH C_{10} - C_{14}	µg/L	54
TRH C_{15} - C_{28}	µg/L	170
TRH C_{29} - C_{36}	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	220
TRH >C_{10} - C_{16}	µg/L	58
TRH >C_{16} - C_{34}	µg/L	200
TRH >C_{34} - C_{40}	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	260
Surrogate o-Terphenyl	%	125

PAHs in Water			
Our Reference	UNITS	374373-1	374373-2
Your Reference		GW1	GW3
Date Sampled		28/02/2025	28/02/2025
Type of sample		Water	Water
Date extracted	-	04/03/2025	04/03/2025
Date analysed	-	04/03/2025	04/03/2025
Naphthalene	µg/L	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	114	106

HM in water - dissolved					
Our Reference	UNITS	374373-4	374373-5	374373-6	374373-7
Your Reference		Sed-2	SW2	Sed-1	QA 02 25
Date Sampled		28/02/2025	28/02/2025	28/02/2025	28/02/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	04/03/2025	04/03/2025	04/03/2025	04/03/2025
Date analysed	-	04/03/2025	04/03/2025	04/03/2025	04/03/2025
Aluminium-Dissolved	µg/L	80	<10	140	<10
Arsenic-Dissolved	µg/L	22	5	12	5
Boron-Dissolved	µg/L	100	100	100	100
Cadmium-Dissolved	µg/L	<0.1	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	3	<1	5	<1
Cobalt-Dissolved	µg/L	<1	<1	<1	<1
Copper-Dissolved	µg/L	2	<1	3	<1
Lead-Dissolved	µg/L	<1	<1	<1	<1
Nickel-Dissolved	µg/L	<1	<1	3	<1
Selenium-Dissolved	µg/L	<1	<1	<1	<1
Zinc-Dissolved	µg/L	2	2	15	3

Miscellaneous Inorganics						
Our Reference		374373-1	374373-2	374373-3	374373-4	374373-5
Your Reference	UNITS	GW1	GW3	WL	Sed-2	SW2
Date Sampled		28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	03/03/2025	03/03/2025	03/03/2025	03/03/2025	03/03/2025
Date analysed	-	03/03/2025	03/03/2025	03/03/2025	03/03/2025	03/03/2025
Ammonia as N in water	mg/L	2.1	3.1	<0.005	<0.005	0.022
Nitrate as N in water	mg/L	<0.005	0.006	<0.005	<0.005	<0.005
Nitrite as N in water	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
NOx as N in water	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
TKN in water	mg/L	[NA]	[NA]	5.1	1.1	2.2
Total Nitrogen in water	mg/L	[NA]	[NA]	5.1	1.1	2.2
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	[NA]	[NA]	[NA]	<0.005	<0.005

Miscellaneous Inorganics			
Our Reference		374373-6	374373-7
Your Reference	UNITS	Sed-1	QA 02 25
Date Sampled		28/02/2025	28/02/2025
Type of sample		Water	Water
Date prepared	-	03/03/2025	03/03/2025
Date analysed	-	03/03/2025	03/03/2025
Ammonia as N in water	mg/L	0.16	0.018
Nitrate as N in water	mg/L	0.058	<0.005
Nitrite as N in water	mg/L	0.026	<0.005
NOx as N in water	mg/L	0.08	<0.005
TKN in water	mg/L	0.7	2.6
Total Nitrogen in water	mg/L	0.8	2.6
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	<0.005	<0.005

Miscellaneous Inorganics						
Our Reference	UNITS	374373-3	374373-4	374373-5	374373-6	374373-7
Your Reference		WL	Sed-2	SW2	Sed-1	QA 02 25
Date Sampled		28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
pH	pH Units	7.0	8.6	7.8	8.4	7.7
Electrical Conductivity	µS/cm	1,500	490	940	570	940
Total Suspended Solids	mg/L	17	37	10	63	13

Metals in Waters - Acid extractable						
Our Reference		374373-1	374373-2	374373-3	374373-4	374373-5
Your Reference	UNITS	GW1	GW3	WL	Sed-2	SW2
Date Sampled		28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025
Date analysed	-	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025
Phosphorus - Total	mg/L	0.3	0.1	1.1	0.2	0.3

Metals in Waters - Acid extractable			
Our Reference		374373-6	374373-7
Your Reference	UNITS	Sed-1	QA 02 25
Date Sampled		28/02/2025	28/02/2025
Type of sample		Water	Water
Date prepared	-	05/03/2025	05/03/2025
Date analysed	-	05/03/2025	05/03/2025
Phosphorus - Total	mg/L	0.1	0.4

Method ID	Methodology Summary
Ext-073_F	Analysis of pH in Water by AS 4500 H+ B and in-house method ENV-LAB006, Analysed by Envirolab Newcastle
Ext-073_G	Analysis of Conductivity in Water by AS 2510 B and in-house method ENV-LAB010, Analysed by Envirolab Newcastle
Ext-073_J	Analysis of Total Suspended Solids in Water by AS 2540 D and in-house method ENV-LAB009, Analysed by Envirolab Newcastle
Inorg-055	Nitrate - determined colourimetrically. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055	Nitrite - determined colourimetrically based on APHA latest edition NO2- B. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055/062/127	Total Nitrogen - Calculation sum of TKN and oxidised Nitrogen. Alternatively analysed by combustion and chemiluminescence.
Inorg-057	Ammonia - determined colourimetrically, based on APHA latest edition 4500-NH3 F. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a KCl extraction.
Inorg-062	TKN - determined colourimetrically based on APHA latest edition 4500 Norg. Alternatively, TKN can be derived from calculation (Total N - NOx).
Inorg-118	Hexavalent Chromium (Cr6+) - determined firstly by separation using ion chromatography followed by the colourimetric analytical finish. Water samples are ideally field filtered into alkali preserved containers prior to receipt for dissolved Cr6+ analysis. Unfiltered water samples into alkali preserved containers (or pH adjusted to pH 8-9 on receipt) can be classified as Total (unfiltered) Cr6+. Please note, for 'Total/Unfiltered' Trivalent Chromium in waters [calculated], these results may be exaggerated due to the digestive limitation of 'Total/Unfiltered' Hexavalent Chromium in NaOH at pH 8-9 compared to more comprehensive digestion for Total Chromium using the mineral acids HNO3 and HCl. Solid (includes soils, filters, paints, swabs for example) samples are extracted in a buffered catalysed solution prior to the analytical finish above. Water extractable options are available (e.g. as an option for filters) on request. Impingers may need pH adjusting to pH 8-9 prior to IC-colourimetric analytical finish.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

Method ID	Methodology Summary
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	
Date extracted	-			05/03/2025	[NT]	[NT]	[NT]	[NT]	05/03/2025	[NT]
Date analysed	-			05/03/2025	[NT]	[NT]	[NT]	[NT]	05/03/2025	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	103	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	104	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	99	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate Toluene-d8	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	99	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	374373-2
Date extracted	-			04/03/2025	1	04/03/2025	04/03/2025		04/03/2025	04/03/2025
Date analysed	-			04/03/2025	1	04/03/2025	04/03/2025		04/03/2025	04/03/2025
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	1	<50	<50	0	71	85
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	1	<100	<100	0	76	90
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	1	<100	<100	0	78	81
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	1	<50	<50	0	71	85
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	1	<100	<100	0	76	90
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	1	<100	<100	0	78	81
Surrogate o-Terphenyl	%		Org-020	111	1	122	106	14	90	110

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	374373-2
Date extracted	-			04/03/2025	1	04/03/2025	04/03/2025		04/03/2025	04/03/2025
Date analysed	-			04/03/2025	1	04/03/2025	04/03/2025		04/03/2025	04/03/2025
Naphthalene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	75	92
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	77	98
Fluorene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	74	95
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	90
Anthracene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	95
Pyrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	95
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	111
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	69	84
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	121	1	114	109	4	102	114

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W5	374373-5
Date prepared	-			04/03/2025	4	04/03/2025	04/03/2025		04/03/2025	04/03/2025
Date analysed	-			04/03/2025	4	04/03/2025	04/03/2025		04/03/2025	04/03/2025
Aluminium-Dissolved	µg/L	10	Metals-022	<10	4	80	80	0	91	94
Arsenic-Dissolved	µg/L	1	Metals-022	<1	4	22	21	5	88	91
Boron-Dissolved	µg/L	20	Metals-022	<20	4	100	100	0	89	100
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	4	<0.1	<0.1	0	90	98
Chromium-Dissolved	µg/L	1	Metals-022	<1	4	3	2	40	95	101
Cobalt-Dissolved	µg/L	1	Metals-022	<1	4	<1	<1	0	93	99
Copper-Dissolved	µg/L	1	Metals-022	<1	4	2	2	0	92	91
Lead-Dissolved	µg/L	1	Metals-022	<1	4	<1	<1	0	87	83
Nickel-Dissolved	µg/L	1	Metals-022	<1	4	<1	<1	0	92	98
Selenium-Dissolved	µg/L	1	Metals-022	<1	4	<1	<1	0	90	90
Zinc-Dissolved	µg/L	1	Metals-022	<1	4	2	1	67	95	111

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	374373-4
Date prepared	-			03/03/2025	1	03/03/2025	03/03/2025		03/03/2025	03/03/2025
Date analysed	-			03/03/2025	1	03/03/2025	03/03/2025		03/03/2025	03/03/2025
Ammonia as N in water	mg/L	0.005	Inorg-057	<0.005	1	2.1	2.4	13	108	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	<0.005	1	<0.005	<0.005	0	104	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	<0.005	1	<0.005	<0.005	0	92	[NT]
NOx as N in water	mg/L	0.005	Inorg-055	<0.005	1	<0.005	<0.005	0	103	[NT]
TKN in water	mg/L	0.1	Inorg-062	<0.1	3	5.1	[NT]		[NT]	[NT]
Total Nitrogen in water	mg/L	0.1	Inorg-055/062/127	<0.1	3	5.1	4.7	8	117	112
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	0.005	Inorg-118	<0.005	5	<0.005	<0.005	0	97	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	3	03/03/2025	03/03/2025		[NT]	[NT]
Date analysed	-			[NT]	3	03/03/2025	03/03/2025		[NT]	[NT]
Ammonia as N in water	mg/L	0.005	Inorg-057	[NT]	3	<0.005	[NT]		[NT]	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	[NT]	3	<0.005	[NT]		[NT]	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	[NT]	3	<0.005	[NT]		[NT]	[NT]
NOx as N in water	mg/L	0.005	Inorg-055	[NT]	3	<0.005	[NT]		[NT]	[NT]
TKN in water	mg/L	0.1	Inorg-062	[NT]	5	2.2	[NT]		[NT]	[NT]
Total Nitrogen in water	mg/L	0.1	Inorg-055/062/127	[NT]	5	2.2	[NT]		[NT]	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	5	03/03/2025	03/03/2025		[NT]	[NT]
Date analysed	-			[NT]	5	03/03/2025	03/03/2025		[NT]	[NT]
Ammonia as N in water	mg/L	0.005	Inorg-057	[NT]	5	0.022	[NT]		[NT]	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	[NT]	5	<0.005	[NT]		[NT]	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	[NT]	5	<0.005	[NT]		[NT]	[NT]
NOx as N in water	mg/L	0.005	Inorg-055	[NT]	5	<0.005	[NT]		[NT]	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			28/02/2025	3	28/02/2025	28/02/2025		28/02/2025	[NT]
Date analysed	-			28/02/2025	3	28/02/2025	28/02/2025		28/02/2025	[NT]
pH	pH Units		Ext-073_F	[NT]	3	7.0	7.0	0	100	[NT]
Electrical Conductivity	µS/cm	1	Ext-073_G	[NT]	3	1500	1500	0	99	[NT]
Total Suspended Solids	mg/L	5	Ext-073_J	<5	3	17	[NT]		95	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	4	28/02/2025	28/02/2025		[NT]	[NT]
Date analysed	-			[NT]	4	28/02/2025	28/02/2025		[NT]	[NT]
pH	pH Units		Ext-073_F	[NT]	4	8.6	[NT]		[NT]	[NT]
Electrical Conductivity	µS/cm	1	Ext-073_G	[NT]	4	490	[NT]		[NT]	[NT]
Total Suspended Solids	mg/L	5	Ext-073_J	[NT]	4	37	40	8	[NT]	[NT]

QUALITY CONTROL: Metals in Waters - Acid extractable						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	374373-5
Date prepared	-			05/03/2025	2	05/03/2025	05/03/2025		05/03/2025	05/03/2025
Date analysed	-			05/03/2025	2	05/03/2025	05/03/2025		05/03/2025	05/03/2025
Phosphorus - Total	mg/L	0.05	Metals-020	<0.05	2	0.1	0.2	67	98	113

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP

Company:	RCA Australia		
Contact person:	Fiona Brooker		
Project Mgr:	Fiona Brooker		
Sampler:	Anh Hoang		
Address:	92 Hill St Carrington, NSW 2294		
Phone:	02 4902 9200	Mob:	0410 230 644
Email results to:			
Email invoice to:	administrator@rca.com.au + enviro@rca.com.au		

RCA Reference Number (i.e. report title): 13589a

PO No. (if applicable): Not applicable

Envirolab Quote No. : Job No: 374373 BM8

Date results required: 9/03/2025

Date Received: 1/3/25 (SAT)

Time Received: 1200

Received By: CH.

Temp: Cool/Ambient 10°C

Cooling: Ice/Icepack

Security: Intact/Broken/None

Lab comments:

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

ENVIROLAB GROUP

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
02 9910 6200 sydney@envirolab.com.au

Envirolab Sample ID	Client Sample ID	Date sampled	Type of sample	# Containers	E01580 - Total Suspended Solids (TSS)	E00705-NH3, E00815-NO2, E00790-NO3, E00850-NOx, E01090-Total P)	E010300 - Nutrient Suite (NH3, NO2, NO3, NOx, TKN (calc), Total N, Total P)	E07290 and E07220 TRH C6-C40 and BTEXN	E03010_D - Dissolved (Aluminium, Arsenic, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Nickel, Selenium, Zinc)	E05360 - Hexavalent Chromium	E08310 - PAH low level	E01140 - pH	E01150 - Electrical Conductivity	Sediment within container to be included in analysis if X	Comments
		Sample information			Tests Required										
1	GW1	28/02/2025 8:25	Water	8		x		x			x			x	
2	GW3	28/02/2025 11:30	Water	8		x		x			x			x	
	LP	28/02/2025	Water	4	x		x					x	x	x	No sample
3	WL	28/02/2025 10:55	Water	4	x		x					x	x	x	
4	Sed-2	28/02/2025 8:50	Water	9	x		x	x	x	x		x	x	x	
5	SW2	28/02/2025 10:00	Water	9	x		x	x	x	x		x	x	x	
6	Sed-1	28/02/2025 10:35	Water	9	x		x	x	x	x		x	x	x	
	SW1	28/02/2025	Water	9	x		x	x	x	x		x	x	x	
7	QA02/25	28/02/2025	Water	9	x		x	x	x	x		x	x	x	No sample
			Total	69	7	2	7	7	5	5	2	7	7	9	

374373

Relinquished by (company):	RCA Australia	Received by (company):	ELS STD	Envirolab	
Print Name:	Anh Hoang	Print Name:	Christine Ho	Sunithah Joseph	
Date & Time:	28.2.25 12:00	Date & Time:	1/3/25 1200	28/2/25 12:00	
Signature:		Signature:			

Lab use only:

Job Number	374373	Cooling:	Ice / Ice Pack / None
Temperature	6.8°C	Security Seal:	Intact / Broken / Not Used
TAT Req:	SAME DAY / 1 / 2 / 3 / 4 / STD		

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	RCA Australia
Attention	RCA Administrator

Sample Login Details

Your reference	13589a
Envirolab Reference	374373
Date Sample Received	28/02/2025
Date Instructions Received	01/03/2025
Date Results Expected to be Reported	10/03/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	7 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6.8
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
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12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
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Sample ID	vTRH in Water (C6-C9) NEPM	svTRH (C10-C40) in Water	PAHs in Water	HM in water - dissolved	Ammonia as N in water	Nitrate as N in water	Nitrite as N in water	NOx as N in water	TKN in water	Total Nitrogen in water	Hexavalent Chromium, Cr6+ (dissolved)	Miscellaneous Inorganics	Metals in Waters -Acid extractable
GW1	✓	✓	✓		✓	✓	✓	✓					✓
GW3	✓	✓	✓		✓	✓	✓	✓					✓
WL					✓	✓	✓	✓	✓	✓		✓	✓
Sed-2	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SW2	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sed-1	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
QA 02 25	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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CERTIFICATE OF ANALYSIS 376973

Client Details

Client	RCA Australia
Attention	Fiona Brooker
Address	PO Box 175, Carrington, NSW, 2294

Sample Details

Your Reference	**13589a**
Number of Samples	9 Water
Date samples received	01/04/2025
Date completed instructions received	01/03/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	08/04/2025
Date of Issue	08/04/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist
Laura Schofield, Lab Manager

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Water					
Our Reference	UNITS	376973-5	376973-6	376973-7	376973-8
Your Reference		Sed-2	SW2	Sed-1	SW1
Date Sampled		31/03/2025	31/03/2025	31/03/2025	31/03/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
TRH C_6 - C_9	µg/L	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10
Benzene	µg/L	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	97	108	99	100
Surrogate Toluene-d8	%	103	106	110	103
Surrogate 4-Bromofluorobenzene	%	98	86	89	80

svTRH (C10-C40) in Water					
Our Reference		376973-5	376973-6	376973-7	376973-8
Your Reference	UNITS	Sed-2	SW2	Sed-1	SW1
Date Sampled		31/03/2025	31/03/2025	31/03/2025	31/03/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	02/04/2025	02/04/2025	02/04/2025	02/04/2025
Date analysed	-	03/04/2025	03/04/2025	03/04/2025	03/04/2025
TRH C_{10} - C_{14}	µg/L	<50	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	<50	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50	<50	<50
Surrogate o-Terphenyl	%	83	86	81	82

PAHs in Water			
Our Reference	UNITS	376973-2	376973-9
Your Reference		GW3	QA0325
Date Sampled		31/03/2025	31/03/2025
Type of sample		Water	Water
Date extracted	-	02/04/2025	02/04/2025
Date analysed	-	04/04/2025	04/04/2025
Naphthalene	µg/L	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	107	108

HM in water - dissolved					
Our Reference	UNITS	376973-5	376973-6	376973-7	376973-8
Your Reference		Sed-2	SW2	Sed-1	SW1
Date Sampled		31/03/2025	31/03/2025	31/03/2025	31/03/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Date analysed	-	04/04/2025	04/04/2025	04/04/2025	04/04/2025
Aluminium-Dissolved	µg/L	140	30	260	<10
Arsenic-Dissolved	µg/L	18	4	5	2
Boron-Dissolved	µg/L	70	80	70	100
Cadmium-Dissolved	µg/L	<0.1	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	15	<1	21	<1
Cobalt-Dissolved	µg/L	<1	<1	<1	<1
Copper-Dissolved	µg/L	6	5	6	2
Lead-Dissolved	µg/L	<1	<1	<1	<1
Nickel-Dissolved	µg/L	2	<1	1	1
Selenium-Dissolved	µg/L	<1	<1	<1	<1
Zinc-Dissolved	µg/L	4	23	2	12

Miscellaneous Inorganics						
Our Reference		376973-1	376973-2	376973-3	376973-4	376973-5
Your Reference	UNITS	GW1	GW3	LP	WL	Sed-2
Date Sampled		31/03/2025	31/03/2025	31/03/2025	31/03/2025	31/03/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	02/04/2025	02/04/2025	02/04/2025	02/04/2025	02/04/2025
Date analysed	-	02/04/2025	02/04/2025	02/04/2025	02/04/2025	02/04/2025
Ammonia as N in water	mg/L	1.9	4.1	0.065	6.6	0.013
Nitrate as N in water	mg/L	<0.005	0.02	3.2	<0.01	0.80
Nitrite as N in water	mg/L	<0.005	<0.005	0.25	<0.010	0.63
NOx as N in water	mg/L	0.008	0.02	3.4	<0.01	1.4
TKN in water	mg/L	[NA]	[NA]	1.3	11	0.7
Total Nitrogen in water	mg/L	[NA]	[NA]	4.7	11	2.1
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	[NA]	[NA]	[NA]	[NA]	0.02

Miscellaneous Inorganics					
Our Reference		376973-6	376973-7	376973-8	376973-9
Your Reference	UNITS	SW2	Sed-1	SW1	QA0325
Date Sampled		31/03/2025	31/03/2025	31/03/2025	31/03/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	02/04/2025	02/04/2025	02/04/2025	02/04/2025
Date analysed	-	02/04/2025	02/04/2025	02/04/2025	02/04/2025
Ammonia as N in water	mg/L	0.094	0.008	0.014	4.0
Nitrate as N in water	mg/L	0.05	0.65	0.02	<0.01
Nitrite as N in water	mg/L	0.011	0.27	0.006	<0.010
NOx as N in water	mg/L	0.06	0.92	0.02	<0.01
TKN in water	mg/L	0.6	0.5	0.6	4.0
Total Nitrogen in water	mg/L	0.7	1.4	0.6	4.0
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	<0.005	0.02	<0.005	[NA]

Miscellaneous Inorganics						
Our Reference		376973-1	376973-2	376973-3	376973-4	376973-5
Your Reference	UNITS	GW1	GW3	LP	WL	Sed-2
Date Sampled		31/03/2025	31/03/2025	31/03/2025	31/03/2025	31/03/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	31/03/2025	31/03/2025	31/03/2025	31/03/2025	31/03/2025
Date analysed	-	31/03/2025	31/03/2025	31/03/2025	31/03/2025	31/03/2025
pH	pH Units	7.5	6.6	7.1	7.2	8.9
Electrical Conductivity	µS/cm	710	880	780	1,600	530
Total Suspended Solids	mg/L	[NA]	[NA]	16	5	30

Miscellaneous Inorganics					
Our Reference		376973-6	376973-7	376973-8	376973-9
Your Reference	UNITS	SW2	Sed-1	SW1	QA0325
Date Sampled		31/03/2025	31/03/2025	31/03/2025	31/03/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	31/03/2025	31/03/2025	31/03/2025	31/03/2025
Date analysed	-	31/03/2025	31/03/2025	31/03/2025	31/03/2025
pH	pH Units	7.8	9.4	7.9	7.2
Electrical Conductivity	µS/cm	500	450	610	860
Total Suspended Solids	mg/L	25	34	5	140

Metals in Waters - Acid extractable						
Our Reference		376973-1	376973-2	376973-3	376973-4	376973-5
Your Reference	UNITS	GW1	GW3	LP	WL	Sed-2
Date Sampled		31/03/2025	31/03/2025	31/03/2025	31/03/2025	31/03/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Date analysed	-	03/04/2025	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Phosphorus - Total	mg/L	0.56	0.09	0.82	8.0	0.3

Metals in Waters - Acid extractable					
Our Reference		376973-6	376973-7	376973-8	376973-9
Your Reference	UNITS	SW2	Sed-1	SW1	QA0325
Date Sampled		31/03/2025	31/03/2025	31/03/2025	31/03/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Date analysed	-	03/04/2025	03/04/2025	03/04/2025	03/04/2025
Phosphorus - Total	mg/L	0.2	0.09	0.1	0.09

Method ID	Methodology Summary
Ext-073_F	Analysis of pH in Water by AS 4500 H+ B and in-house method ENV-LAB006, Analysed by Envirolab Newcastle
Ext-073_G	Analysis of Conductivity in Water by AS 2510 B and in-house method ENV-LAB010, Analysed by Envirolab Newcastle
Ext-073_J	Analysis of Total Suspended Solids in Water by AS 2540 D and in-house method ENV-LAB009, Analysed by Envirolab Newcastle
Inorg-055	Nitrate - determined colourimetrically. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055	Nitrite - determined colourimetrically based on APHA latest edition NO2- B. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055/062/127	Total Nitrogen - Calculation sum of TKN and oxidised Nitrogen. Alternatively analysed by combustion and chemiluminescence.
Inorg-057	Ammonia - determined colourimetrically, based on APHA latest edition 4500-NH3 F. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a KCl extraction.
Inorg-062	TKN - determined colourimetrically based on APHA latest edition 4500 Norg. Alternatively, TKN can be derived from calculation (Total N - NOx).
Inorg-118	Hexavalent Chromium (Cr6+) - determined firstly by separation using ion chromatography followed by the colourimetric analytical finish. Water samples are ideally field filtered into alkali preserved containers prior to receipt for dissolved Cr6+ analysis. Unfiltered water samples into alkali preserved containers (or pH adjusted to pH 8-9 on receipt) can be classified as Total (unfiltered) Cr6+. Please note, for 'Total/Unfiltered' Trivalent Chromium in waters [calculated], these results may be exaggerated due to the digestive limitation of 'Total/Unfiltered' Hexavalent Chromium in NaOH at pH 8-9 compared to more comprehensive digestion for Total Chromium using the mineral acids HNO3 and HCl. Solid (includes soils, filters, paints, swabs for example) samples are extracted in a buffered catalysed solution prior to the analytical finish above. Water extractable options are available (e.g. as an option for filters) on request. Impingers may need pH adjusting to pH 8-9 prior to IC-colourimetric analytical finish.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

Method ID	Methodology Summary
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			04/04/2025	5	04/04/2025	04/04/2025		04/04/2025	[NT]
Date analysed	-			04/04/2025	5	04/04/2025	04/04/2025		04/04/2025	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	5	<10	<10	0	108	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	5	<10	<10	0	108	[NT]
Benzene	µg/L	1	Org-023	<1	5	<1	<1	0	114	[NT]
Toluene	µg/L	1	Org-023	<1	5	<1	<1	0	119	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	5	<1	<1	0	102	[NT]
m+p-xylene	µg/L	2	Org-023	<2	5	<2	<2	0	102	[NT]
o-xylene	µg/L	1	Org-023	<1	5	<1	<1	0	97	[NT]
Naphthalene	µg/L	1	Org-023	<1	5	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	5	97	100	3	101	[NT]
Surrogate Toluene-d8	%		Org-023	103	5	103	103	0	104	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	93	5	98	94	4	96	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			02/04/2025	[NT]	[NT]	[NT]	[NT]	02/04/2025	[NT]
Date analysed	-			02/04/2025	[NT]	[NT]	[NT]	[NT]	02/04/2025	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	71	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	71	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate o-Terphenyl	%		Org-020	88	[NT]	[NT]	[NT]	[NT]	130	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	376973-9
Date extracted	-			02/04/2025	2	02/04/2025	02/04/2025		02/04/2025	02/04/2025
Date analysed	-			04/04/2025	2	04/04/2025	04/04/2025		04/04/2025	04/04/2025
Naphthalene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	76	70
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	78	70
Fluorene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	83	65
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	80	74
Anthracene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	83	77
Pyrene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	94	86
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	67	61
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	71	62
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	81	2	107	100	7	110	101

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date prepared	-			04/04/2025	[NT]	[NT]	[NT]	[NT]	04/04/2025	[NT]
Date analysed	-			04/04/2025	[NT]	[NT]	[NT]	[NT]	04/04/2025	[NT]
Aluminium-Dissolved	µg/L	10	Metals-022	<10	[NT]	[NT]	[NT]	[NT]	98	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Boron-Dissolved	µg/L	20	Metals-022	<20	[NT]	[NT]	[NT]	[NT]	90	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Cobalt-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Selenium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	376973-2
Date prepared	-			02/04/2025	1	02/04/2025	02/04/2025		02/04/2025	02/04/2025
Date analysed	-			02/04/2025	1	02/04/2025	02/04/2025		02/04/2025	02/04/2025
Ammonia as N in water	mg/L	0.005	Inorg-057	<0.005	1	1.9	1.9	0	101	100
Nitrate as N in water	mg/L	0.005	Inorg-055	<0.005	1	<0.005	<0.005	0	99	94
Nitrite as N in water	mg/L	0.005	Inorg-055	<0.005	1	<0.005	<0.005	0	100	97
NOx as N in water	mg/L	0.005	Inorg-055	<0.005	1	0.008	0.007	13	99	95
TKN in water	mg/L	0.1	Inorg-062	<0.1	5	0.7	[NT]		[NT]	[NT]
Total Nitrogen in water	mg/L	0.1	Inorg-055/062/127	<0.1	5	2.1	[NT]		82	[NT]
Hexavalent Chromium, Cr^{6+} (dissolved)	mg/L	0.005	Inorg-118	<0.005	5	0.02	0.02	0	102	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	2	02/04/2025	02/04/2025		[NT]	[NT]
Date analysed	-			[NT]	2	02/04/2025	02/04/2025		[NT]	[NT]
Ammonia as N in water	mg/L	0.005	Inorg-057	[NT]	2	4.1	[NT]		[NT]	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	[NT]	2	0.02	[NT]		[NT]	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	[NT]	2	<0.005	[NT]		[NT]	[NT]
NOx as N in water	mg/L	0.005	Inorg-055	[NT]	2	0.02	[NT]		[NT]	[NT]
TKN in water	mg/L	0.1	Inorg-062	[NT]	9	4.0	[NT]		[NT]	[NT]
Total Nitrogen in water	mg/L	0.1	Inorg-055/062/127	[NT]	9	4.0	3.8	5	[NT]	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	5	02/04/2025	02/04/2025		[NT]	[NT]
Date analysed	-			[NT]	5	02/04/2025	02/04/2025		[NT]	[NT]
Ammonia as N in water	mg/L	0.005	Inorg-057	[NT]	5	0.013	[NT]		[NT]	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	[NT]	5	0.80	[NT]		[NT]	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	[NT]	5	0.63	[NT]		[NT]	[NT]
NOx as N in water	mg/L	0.005	Inorg-055	[NT]	5	1.4	[NT]		[NT]	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	9	02/04/2025	02/04/2025		[NT]	[NT]
Date analysed	-			[NT]	9	02/04/2025	02/04/2025		[NT]	[NT]
Ammonia as N in water	mg/L	0.005	Inorg-057	[NT]	9	4.0	[NT]		[NT]	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	[NT]	9	<0.01	[NT]		[NT]	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	[NT]	9	<0.010	[NT]		[NT]	[NT]
NOx as N in water	mg/L	0.005	Inorg-055	[NT]	9	<0.01	[NT]		[NT]	[NT]

QUALITY CONTROL: Miscellaneous Inorganics					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			31/03/2025	[NT]	[NT]	[NT]	[NT]	31/03/2025	[NT]
Date analysed	-			31/03/2025	[NT]	[NT]	[NT]	[NT]	31/03/2025	[NT]
pH	pH Units		Ext-073_F	[NT]	[NT]	[NT]	[NT]	[NT]	98	[NT]
Electrical Conductivity	µS/cm	1	Ext-073_G	[NT]	[NT]	[NT]	[NT]	[NT]	105	[NT]
Total Suspended Solids	mg/L	5	Ext-073_J	<5	[NT]	[NT]	[NT]	[NT]	93	[NT]

QUALITY CONTROL: Metals in Waters - Acid extractable						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			03/04/2025	1	03/04/2025	03/04/2025		03/04/2025	[NT]
Date analysed	-			03/04/2025	1	03/04/2025	03/04/2025		03/04/2025	[NT]
Phosphorus - Total	mg/L	0.05	Metals-020	<0.05	1	0.56	0.54	4	104	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

MISC_INORG: Nitrate as N in water, Nitrite as N in water, NOx as N in water PQL has been raised due to matrix interferences from analytes (other than those being tested) in the sample/s. Samples were diluted and reanalysed however same results were achieved.

CHAIN OF COUSTODY - Client

ENVIROLAB GROUP

Company:	RCA Australia	**RCA Reference Number (i.e. report title)**	
Contact person:	Fiona Brooker	13589a	
Project Mgr:	Fiona Brooker	**PO No. (if applicable):**	Not applicable
Sampler:	Anh Hoang	**Envirolab Quote No. :**	BM8
Address:	92 Hill St Carrington, NSW 2294	**Date results required:**	
Phone:	02 4902 9200 **Mob:** 0410 230 644		
Email results to:	administrator@rca.com.au + enviro@rca.com.au	**Lab comments:**	
Email invoice to:			

ENVIROLAB GROUP

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
02 9910 6200 sydney@envirolab.com.au

Envirolab Sample ID	Client Sample ID	Date sampled (31.3-25)	Type of sample	# Containers	E01580 - Total Suspended Solids (TSS)	E00705-NH3, E00815-NO2, E00790-NO3, E00850-NOx, E01090-Total P)	E010300 - Nutrient Suite (NH3, NO2, NO3, NOx, TKN (calc), Total N, Total P)	E07290 and E07220 TRH C6-C40	E03010_D - Dissolved (Aluminium, Arsenic, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Nickel, Selenium, Zinc)	E05360 - Hexavalent Chromium	E01140 - pH	E01150 - Electrical Conductivity	E08310 - PAH low level	Sediment within container to be included in analysis if X	Comments: Provide as much information about the sample as you can
376973-1	GW1	2/01/2025 11:50	Water	4		x					x	x		x	
-2	GW3	2/01/2025 10:20	Water	4+1		x					x	x	x	x	
-3	LP	2/01/2025 10:35	Water	4	x		x				x	x		x	
-4	WL	2/01/2025 9:35	Water	4	x		x				x	x		x	
-5	Sed-2	2/01/2025 11:20	Water	9	x		x	x	x	x	x	x		x	
-6	SW2	2/01/2025 12:40	Water	9	x		x	x	x	x	x	x		x	Job No:
-7	Sed-1	2/01/2025 13.10	Water	9	x		x	x	x	x	x	x		x	0104 Date Received: 31/3/25
-8	SW1	2/01/2025 13:50	Water	9	x		x	x	x	x	x	x		x	1105 Time Received: 14:15
-9	QA03 25	2/01/2025	Water	4+1	x		x				x	x	x	x	nil Received By: ST
															Cool 12°C Intact
			Total	56+2	7	2	7	4	4	4	9	9	2	9	

Envirolab Services
92 Hill Street
Carrington Newcastle
NSW 2294
Ph: (02) 9910 6200

Relinquished by (company):	RCA Australia	**Received by (company):**	Envirolab	***Lab use only:***			
Print Name:	Anh Hoang	**Print Name:**	Santhosh Joseph	**Job Number**	[redacted]	**Cooling:**	Ice / Ice Pack / None
Date & Time:	31.3.25 - 14:10	**Date & Time:**	31/3/25 14:15	**Temperature**	8.5°C	**Security Seal:**	Intact / Broken / Not Used
Signature:	[signature]	**Signature:**	[signature]	**TAT Req:**	SAME DAY / 1 / 2 / 3 / 4 / STD		

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	RCA Australia
Attention	Fiona Brooker

Sample Login Details

Your reference	13589a
Envirolab Reference	376973
Date Sample Received	01/04/2025
Date Instructions Received	01/03/2025
Date Results Expected to be Reported	08/04/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	9 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8.5
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	HM in water - dissolved	Ammonia as N in water	Nitrate as N in water	Nitrite as N in water	NOx as N in water	TKN in water	Total Nitrogen in water	Hexavalent Chromium, Cr6+ (dissolved)	Miscellaneous Inorganics	Metals in Waters -Acid extractable
GW1					✓	✓	✓	✓				✓	✓
GW3			✓		✓	✓	✓	✓				✓	✓
LP					✓	✓	✓	✓	✓	✓		✓	✓
WL					✓	✓	✓	✓	✓	✓		✓	✓
Sed-2	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SW2	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sed-1	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SW1	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
QA0325			✓		✓	✓	✓	✓	✓	✓		✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.