Sample Identification	Aquatic Ecosystem  Guideline <sup>A</sup>		SW1	SW2			
Rainfall (mm) in preceding 24hours <sup>B</sup>	PQL		7.4	7.4			
Time of Sample Collection		95% Fresh	16:00	16:00			
Date of Sample Collection			28/10/2025				
	San	Dirty brown, little to no odour 4/10 clarity	Dirty brown, little to no odour 4/10 clarity				
Laborat	ory Re	EN2518354 EN2518354					
	S	Sample Purpose	EPL Compliance				
	Sam	ple collected by	Toll - JC				
Ammonia as N	0.01	0.9	4.24	18.4			
Nitrate <sup>C</sup>	0.01	0.04	27	59.2			
Oil and Grease	5		23	11			
Total Suspended Solds	5	1280	558				

All results are in units of mg/L

Blank Cell indicates no criterion available

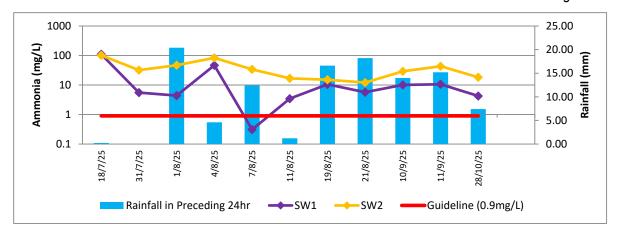
PQL = Practical Quantitation Limit.

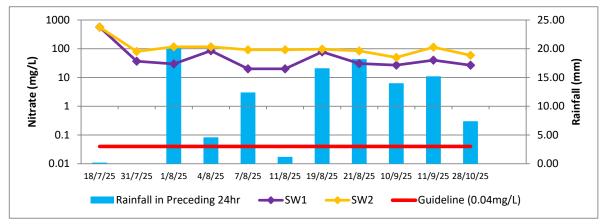
Results shown in **BOLD** are in excess of the guidelines

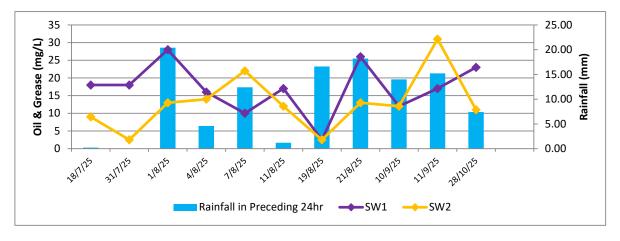
<sup>&</sup>lt;sup>A</sup> % Protection Level for Receiving Water Type.

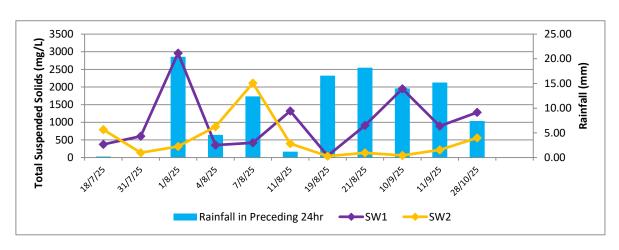
<sup>&</sup>lt;sup>B</sup> Based on BOM Williamtown data from 4:00pm 27th October to 4:00pm 28th October 2025.

<sup>&</sup>lt;sup>C</sup> Guidelines for Lowland (Coastal) Rivers in NSW











## **CERTIFICATE OF ANALYSIS**

Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L

Contact : MS FIONA BROOKER

Address : PO BOX 175

CARRINGTON NSW, AUSTRALIA 2294

Telephone : +61 02 4902 9200

Project : 12513e (Discharge Water Monitoring)

Order number : ---C-O-C number : ---Sampler : Client
Site : ----

Quote number : NSW Custom BQ 2024

No. of samples received : 2
No. of samples analysed : 2

Page : 1 of 3

Laboratory : Environmental Division Newcastle

Contact : Danae Hambly

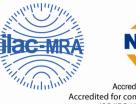
Address : 5/585 Maitland Road Mayfield West NSW Australia 2304

Telephone : +61 2 4014 2500

Date Samples Received : 29-Oct-2025 07:50

Date Analysis Commenced : 29-Oct-2025

Issue Date : 03-Nov-2025 16:47



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

### Signatories

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

Signatories Position Accreditation Category

Ankit Joshi Senior Chemist - Inorganics Sydney Inorganics, Smithfield, NSW

Page : 2 of 3 Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L
Project : 12513e (Discharge Water Monitoring)



### **General Comments**

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

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

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

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

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

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

Key: CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

- ^ = This result is computed from individual analyte detections at or above the level of reporting
- ø = ALS is not NATA accredited for these tests.
- ~ = Indicates an estimated value.

### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW1	SW2	 	
		Sampli	ng date / time	28-Oct-2025 16:00	28-Oct-2025 16:00	 	
Compound	CAS Number	LOR	Unit	EN2518354-001	EN2518354-002	 	
				Result	Result	 	
EA025: Total Suspended Solids drie	d at 104 ± 2°C						
Suspended Solids (SS)		5	mg/L	1280	558	 	
EK055G: Ammonia as N by Discrete	Analyser						
Ammonia as N	7664-41-7	0.01	mg/L	4.24	18.4	 <b></b>	
EK057G: Nitrite as N by Discrete An	alyser						
Nitrite as N	14797-65-0	0.01	mg/L	0.06	0.23	 	
EK058G: Nitrate as N by Discrete A	nalyser						
Nitrate as N	14797-55-8	0.01	mg/L	26.7	59.2	 	
EK059G: Nitrite plus Nitrate as N (N	Ox) by Discrete Ana	lyser					
Nitrite + Nitrate as N		0.01	mg/L	26.8	59.4	 	
EP020: Oil and Grease (O&G)							
Oil & Grease		5	mg/L	23	11	 	

Page : 3 of 3 Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L
Project : 12513e (Discharge Water Monitoring)



## Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry / Biology).

(WATER) EP020: Oil and Grease (O&G)

(WATER) EK058G: Nitrate as N by Discrete Analyser (WATER) EK057G: Nitrite as N by Discrete Analyser

(WATER) EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser

(WATER) EK055G: Ammonia as N by Discrete Analyser (WATER) EA025: Total Suspended Solids dried at 104  $\pm$  2°C



## **QUALITY CONTROL REPORT**

Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L

Contact : MS FIONA BROOKER

Address : PO BOX 175

CARRINGTON NSW, AUSTRALIA 2294

Telephone : +61 02 4902 9200

Project : 12513e (Discharge Water Monitoring)

 Order number
 : --- 

 C-O-C number
 : --- 

 Sampler
 : Client

Site

Quote number : NSW Custom BQ 2024

No. of samples received : 2
No. of samples analysed : 2

Page : 1 of 3

Laboratory : Environmental Division Newcastle

Contact : Danae Hambly

Address : 5/585 Maitland Road Mayfield West NSW Australia 2304

Telephone : +61 2 4014 2500

Date Samples Received : 29-Oct-2025

Date Analysis Commenced : 29-Oct-2025

Issue Date : 03-Nov-2025



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

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

### Signatories

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

Signatories Position Accreditation Category

Ankit Joshi Senior Chemist - Inorganics Sydney Inorganics, Smithfield, NSW

Page : 2 of 3 Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L
Project : 12513e (Discharge Water Monitoring)



### General Comments

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

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

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key: Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

# = Indicates failed QC

\* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

### Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit: Result between 10 and 20 times LOR: 0% - 50%: Result > 20 times LOR: 0% - 20%.

nple ID				Laboratory Duplicate (DUP) Report							
	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)			
EA025: Total Suspended Solids dried at 104 ± 2°C (QC Lot: 6967291)											
/1	EA025H: Suspended Solids (SS)		5	mg/L	1280	1230	3.8	0% - 20%			
onymous	EA025H: Suspended Solids (SS)		5	mg/L	<5	<5	0.0	No Limit			
onymous	EA025H: Suspended Solids (SS)		5	mg/L	40	40	0.0	No Limit			
onymous	EA025H: Suspended Solids (SS)		5	mg/L	14	14	0.0	No Limit			
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 6970638)											
onymous	EK055G: Ammonia as N	7664-41-7	0.01 (0.10)*	mg/L	731	730	0.2	0% - 20%			
onymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.32	0.32	0.0	0% - 20%			
Discrete Analyser (QC Lo	ot: 6966316)										
onymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	2.43	2.42	0.0	0% - 20%			
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 6970639)											
onymous	EK059G: Nitrite + Nitrate as N		0.01 (0.10)*	mg/L	0.35	0.34	2.9	No Limit			
onymous	EK059G: Nitrite + Nitrate as N		0.01	mg/L	0.02	0.02	0.0	No Limit			
/1 or or or or or or or	nymous	EA025H: Suspended Solids (SS)  (Discrete Analyser (QC Lot: 6970638)  EK055G: Ammonia as N  EK055G: Ammonia as N  EK055G: Ammonia as N  EK057G: Nitrite as N  EK057G: Nitrite as N  EK057G: Nitrite + Nitrate as N	EA025H: Suspended Solids (SS) nymous EK055G: Ammonia as N 7664-41-7 nymous EK055G: Ammonia as N 7664-41-7 niscrete Analyser (QC Lot: 6966316) nymous EK057G: Nitrite as N 14797-65-0 nymous EK059G: Nitrite + Nitrate as N nymous EK059G: Nitrite + Nitrate as N	EA025H: Suspended Solids (SS)	EA025H: Suspended Solids (SS)	EA025H: Suspended Solids (SS)	EA025H: Suspended Solids (SS) 5 mg/L 1280 1230 1230 1230 1230 1230 1230 1230 123	EA025H: Suspended Solids (SS) 5 mg/L 1280 1230 3.8 mymous EA025H: Suspended Solids (SS) 5 mg/L <-5 <-5 0.0 mymous EA025H: Suspended Solids (SS) 5 mg/L 40 40 0.0 mymous EA025H: Suspended Solids (SS) 5 mg/L 14 14 14 0.0 mymous EA025H: Suspended Solids (SS) 5 mg/L 14 14 14 0.0 mymous EK055G: Ammonia as N 7664-41-7 0.01 (0.10)* mg/L 731 730 0.2 mymous EK055G: Ammonia as N 7664-41-7 0.01 mg/L 0.32 0.32 0.0 mymous EK055G: Ammonia as N 7664-41-7 0.01 mg/L 0.32 0.32 0.0 mymous EK057G: Nitrite as N 14797-65-0 0.01 mg/L 2.43 2.42 0.0 mymous EK057G: Nitrite as N 14797-65-0 0.01 mg/L 0.35 0.34 2.9 mymous EK059G: Nitrite + Nitrate as N 0.01 (0.10)* mg/L 0.35 0.34 2.9			

Page : 3 of 3 Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L
Project : 12513e (Discharge Water Monitoring)



### Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: WATER				Method Blank (MB)	Laboratory Control Spike (LCS) Report								
				Report	Spike	Spike Recovery (%)	Acceptable	Limits (%)					
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High					
EA025: Total Suspended Solids dried at 104 ± 2°C (QCLot: 6967291)													
EA025H: Suspended Solids (SS)		5	mg/L	<5	150 mg/L	99.0	83.0	129					
				<5	1000 mg/L	99.8	82.0	110					
				<5	816 mg/L	99.5	83.0	118					
EK055G: Ammonia as N by Discrete Analyser (QCLot: 697	:K055G: Ammonia as N by Discrete Analyser (QCLot: 6970638)												
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	111	90.0	114					
EK057G: Nitrite as N by Discrete Analyser (QCLot: 69663	16)												
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	94.4	82.0	114					
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analy	ser (QCLot: 69	970639)											
EK059G: Nitrite + Nitrate as N		0.01	mg/L	<0.01	0.5 mg/L	101	91.0	113					
EP020: Oil and Grease (O&G) (QCLot: 6969786)													
EP020: Oil & Grease		5	mg/L	<5	5000 mg/L	96.5	81.0	121					
				<5	4000 mg/L	95.0	70.0	110					

### Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: WATER			Matrix Spike (MS) Report							
				Spike	SpikeRecovery(%)	Acceptable I	Limits (%)			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High			
EK055G: Ammonia	as N by Discrete Analyser (QCLot: 6970638)									
EN2518295-001	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	# Not	70.0	130			
					Determined					
EK057G: Nitrite as	N by Discrete Analyser (QCLot: 6966316)									
EN2518368-013	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	# Not	70.0	130			
					Determined					
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 6970639)										
EN2518295-001	Anonymous	EK059G: Nitrite + Nitrate as N		5 mg/L	104	70.0	130			



# QA/QC Compliance Assessment to assist with Quality Review

Work Order : **EN2518354** Page : 1 of 4

Client : ROBERT CARR & ASSOCIATES P/L Laboratory : Environmental Division Newcastle

Contact : MS FIONA BROOKER : +61 2 4014 2500
Project : 12513e (Discharge Water Monitoring) Date Samples Received : 29-Oct-2025
Site :---- Issue Date : :03-Nov-2025

Sampler : Client No. of samples received : 2
Order number : ---- No. of samples analysed : 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

# **Summary of Outliers**

### **Outliers: Quality Control Samples**

This report highlights outliers flagged in the Quality Control (QC) Report.

- NO Method Blank value outliers occur.
- NO Duplicate outliers occur.
- NO Laboratory Control outliers occur.
- Matrix Spike outliers exist please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.

### **Outliers: Analysis Holding Time Compliance**

• NO Analysis Holding Time Outliers exist.

### **Outliers: Frequency of Quality Control Samples**

NO Quality Control Sample Frequency Outliers exist.

Page : 2 of 4
Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L
Project : 12513e (Discharge Water Monitoring)

# ALS

### **Outliers: Quality Control Samples**

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

#### Matrix: WATER

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EK055G: Ammonia as N by Discrete Analyser	EN2518295001	Anonymous	Ammonia as N	7664-41-7	Not		MS recovery not determined,
					Determined		background level greater than or
							equal to 4x spike level.
EK057G: Nitrite as N by Discrete Analyser	EN2518368013	Anonymous	Nitrite as N	14797-65-0	Not		MS recovery not determined,
					Determined		background level greater than or
							equal to 4x spike level.

### **Analysis Holding Time Compliance**

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for <u>VOC in soils</u> vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive <u>or</u> Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: WATER

Evaluation: **x** = Holding time breach ; ✓ = Within holding time.

							,	
Method		Sample Date	Ex	traction / Preparation		Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA025: Total Suspended Solids dried at 104 ± 2°C								
Clear Plastic Bottle - Natural (EA025H) SW1,	SW2	28-Oct-2025				30-Oct-2025	04-Nov-2025	<b>✓</b>
EK055G: Ammonia as N by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK055G) SW1,	SW2	28-Oct-2025				31-Oct-2025	25-Nov-2025	<b>✓</b>
EK057G: Nitrite as N by Discrete Analyser								
Clear Plastic Bottle - Natural (EK057G) SW1,	SW2	28-Oct-2025				30-Oct-2025	30-Oct-2025	<b>✓</b>
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Ar	alyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G) SW1,	SW2	28-Oct-2025				31-Oct-2025	25-Nov-2025	<b>✓</b>
EP020: Oil and Grease (O&G)								
Amber Jar - Sulfuric Acid or Sodium Bisulfate (EP020) SW1,	SW2	28-Oct-2025				31-Oct-2025	25-Nov-2025	<b>√</b>

Page : 3 of 4
Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L
Project : 12513e (Discharge Water Monitoring)



# **Quality Control Parameter Frequency Compliance**

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: WATER

Evaluation: \* = Quality Control frequency not within specification; \* = Quality Control frequency within specification

Matrix: WATER				Evaluation	n: × = Quality Co	introl frequency	not within specification; ✓ = Quality Control frequency within specification
Quality Control Sample Type		C	ount		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Reaular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Ammonia as N by Discrete analyser	EK055G	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Ammonia as N by Discrete analyser	EK055G	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Oil and Grease	EP020	4	50	8.00	8.00	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	5	40	12.50	12.50	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Oil and Grease	EP020	3	50	6.00	6.00	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Page : 4 of 4 Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L
Project : 12513e (Discharge Water Monitoring)



## **Brief Method Summaries**

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Suspended Solids (High Level)	EA025H	WATER	In house: Referenced to APHA 2540D. A gravimetric procedure employed to determine the amount of
			`non-filterable` residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water,
			oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um).
			The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM Schedule B(3)
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser.
			This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser.
			This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed
			by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate
			calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by
Analyser			Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM
			Schedule B(3)
Oil and Grease	EP020	WATER	In house: Referenced to APHA 5520 B. Oil & grease is a gravimetric procedure to determine the amount of
			dissolved or emulsified oil & grease residue in an aqueous sample. The sample is serially extracted three times
			n-hexane. The resultant extracts are combined, dehydrated and concentrated prior to gravimetric determination.
			This method is compliant with NEPM Schedule B(3)



CHAIN OF CUSTODY

□ADELAIDE 21 Burma Road Pooraka SA 5095 Ph 08 8350 0890 E adelaide@alsglobal.com DBRISBANE 32 Shand Street Stafford QLD 4053

Ph 07 32/3 7222 E samples brisbane@alsglobal.com LIGLADSTONE 46 Callemondah Drive Clinton QLD 4680 MACKAY 78 Harbour Road Mackay QLD 4740 Ph 07 4944 0177 E mackay@alsglobal.com

□MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph 03 6549 9600 E. samples melbourne@alsglobal.com

UMUDGEE 27 Sydney Road Mudgee NSW 2850

UNEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph 02 4014 2500 E samples newcastle@alsglobal.com

DNOWRA 4/13 Geary Place North Nowra NSW 2541 Ph 024423 2063 E; nowra@alsglobal.com

LIDEOTH 40 Harding Addison WA 6000

DSYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph. 02 8784 8555 E. samples sydney@alsglobal.com

DTOWNSVILLE 14-15 Desma Court Bohle OLD 4818 Ph 07 4796 0600 E townsville environmental@alsglobal.com

TRAIGH ONE ONLO COLUMN COLUMN

Endironi	please tic		500 E. gladslone@alsglobal.com Ph. 02 6372 6735 E. mudgee mail@alsglobal.com							E samples perth@als		Ph 02 4225 3125 E_portkembla@alsgiobal.com		
CLIENT:	RCA Australia			ND REQUIREMENTS:	☐ Standa	ard TAT (List due d	ate):					FOR LABORA	TORY USE C	ONLY (Circle)
OFFICE:	92 Hill Street, Carrington		(Standard TAT Trace Organics	may be longer for some tests e.g. Uttra								Custody Seal Inta		Yes No (
RCA Ref No:	12513e		ALS QUOTE	NO.:	EN/222/24			COC SEQUENCE NUMBER (Circle)				Free (ce) frozen i receipt?	ce bricks prese	ent upon (es) No
								coc:	: 1			Random Sample	Temperature o	on Receipt: 4.8 °C
PROJECT MANAG	ER: Fiona Brooker		H: 0408 687 5		_			OF:	1			Other comment:		
SAMPLER: Client				475722538	RELINQUI	V.	mes		EIVED BY:			LINQUISHED BY:		RECEIVED BY:
COC emailed to ALS? (NO) EDD FORMAT (or default):					Coni	pinghom			SA	29.1	0			La su stationarie
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Email Invoice to:	as above	172		, ,	28.1	0.25 4	pm		013					
COMMENTS/SPEC	CIAL HANDLING/STORAGE OR I	DISPOSAL:												
ALS USE					ORMATION							be listed to attract s or <b>Dissolved</b> (field f		Additional Information
LAB ID	Sample ID	Date / Time	Matrix	Type & Preservative (refer to codes below)		Total Containers	EK055G - Ammonia	EK058G - Nitrate	EA025H - Total Suspended Solids	EP020 - Oil and Grease				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	SW1	28.10.25	w	Purple Glass, Purple Plastic, Gree	en Plastic	3	x	x	x	х				
	SW2	Upm	w	Purple Glass, Purple Plastic, Gree	en Plastic	3	x	x	x	×		E	nviron:	mental Division
													121MOOOT	10
							-					-	Work C	2518354
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1 6655					TOTAL		2	2	2	2				

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; N = Nitric Preserv V = VOA Vial HCI Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sodium Bisulphate Preserved Plastic; F = Formaldehyde Preserved Glass; H = HCI preserved Plastic; HS = HCI preser Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.



# **SAMPLE RECEIPT NOTIFICATION (SRN)**

Work Order : EN2518354

Client : ROBERT CARR & ASSOCIATES P/L Laboratory : Environmental Division Newcastle

Contact : MS FIONA BROOKER Contact

CARRINGTON NSW, AUSTRALIA 2294

Address : PO BOX 175 Address : 5/585 Maitland Road Mayfield West

NSW Australia 2304

: NEPM 2013 B3 & ALS QC Standard

E-mail : fionab@rca.com.au E-mail :

Telephone : +61 02 4902 9200 Telephone : +61 2 4014 2500 Facsimile : +61 02 4902 9299 Facsimile : +61 2 4967 7382

Project : 12513e (Discharge Water Monitoring) Page : 1 of 3

 Order number
 : --- Quote number
 : --- 

 C-O-C number
 • --- QC Level
 • NFPN

Site : ---Sampler : Client

**Dates** 

Client Requested Due : 05-Nov-2025 Scheduled Reporting Date : **05-Nov-2025**Date

**Delivery Details** 

 Mode of Delivery
 : Client Drop Off
 Security Seal
 : Not Available

 No. of coolers/boxes
 : --- Temperature
 : 4.8 - Ice present

Receipt Detail : No. of samples received / analysed : 2 / 2

### General Comments

This report contains the following information:

- Sample Container(s)/Preservation Non-Compliances
- Summary of Sample(s) and Requested Analysis
- Proactive Holding Time Report
- Requested Deliverables
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.
- Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.
- Sample Disposal Aqueous Chemistry (3 weeks), Aqueous Microbiological (1 week), Solid (2 months ± 1 week) from receipt of samples.

Issue Date : 29-Oct-2025

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2 of 3 EN2518354 Amendment 0 Work Order

Client : ROBERT CARR & ASSOCIATES P/L



## Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

No sample container / preservation non-compliance exists.

EN2518354-002 : 28-Oct-2025 16:00

### Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package. If no sampling time is provided, the sampling time will mmonia as N By Discrete Analyser Suspended Solids - Standard Level litrate as N by Discrete Analyser default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component Oil & Grease (O&G) VATER - EK055G VATER - EK058G VATER - EA025H Matrix: WATER Sample ID Laboratory sample Sampling date / time EN2518354-001 28-Oct-2025 16:00 SW1 EN2518354-002 28-Oct-2025 16:00

### Proactive Holding Time Report

- \*AU Certificate of Analysis - NATA (COA)

Sample(s) have been received within the recommended holding times for the requested analysis.

### Requested Deliverables

### **ALL INVOICES**

, ,		
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	administrator@rca.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	administrator@rca.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	administrator@rca.com.au
- A4 - AU Tax Invoice (INV)	Email	administrator@rca.com.au
- Chain of Custody (CoC) (COC)	Email	administrator@rca.com.au
- EDI Format - ENMRG (ENMRG)	Email	administrator@rca.com.au
- EDI Format - ESDAT (ESDAT)	Email	administrator@rca.com.au
- EDI Format - XTab (XTAB)	Email	administrator@rca.com.au
ENVIRO		
- *AU Certificate of Analysis - NATA (COA)	Email	enviro@rca.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	enviro@rca.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	enviro@rca.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	enviro@rca.com.au
- A4 - AU Tax Invoice (INV)	Email	enviro@rca.com.au
- Chain of Custody (CoC) (COC)	Email	enviro@rca.com.au
- EDI Format - ENMRG (ENMRG)	Email	enviro@rca.com.au
- EDI Format - ESDAT (ESDAT)	Email	enviro@rca.com.au
- EDI Format - XTab (XTAB)	Email	enviro@rca.com.au
Gastonjeane Forget		
- *AU Certificate of Analysis - NATA (COA)	Email	Gastonjeane.Forget@tollgroup.com
<ul> <li>- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)</li> </ul>	Email	Gastonjeane.Forget@tollgroup.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Gastonjeane.Forget@tollgroup.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Gastonjeane.Forget@tollgroup.com
- A4 - AU Tax Invoice (INV)	Email	Gastonjeane.Forget@tollgroup.com
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Email

administrator@rca.com.au

: 29-Oct-2025 Issue Date

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3 of 3 EN2518354 Amendment 0 Work Order

Client : ROBERT CARR & ASSOCIATES P/L



### Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry / Biology).

(WATER) EP020: Oil and Grease (O&G)

(WATER) EK058G: Nitrate as N by Discrete Analyser (WATER) EK057G: Nitrite as N by Discrete Analyser

(WATER) EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser

(WATER) EK055G: Ammonia as N by Discrete Analyser (WATER) EA025: Total Suspended Solids dried at 104  $\pm$  2°C