

CERTIFICATE OF ANALYSIS

Work Order : **EW1902097**
Client : **MERRY BEACH CARAVAN PARK**
Contact : Mr Adrian Paine
Address : Merry Beach Rd
 Kioloa NSW 2539

Telephone : ----
Project : Merry Beach Monitoring
Order number : P0501061
C-O-C number : ----
Sampler : ----
Site : Merry Beach
Quote number : WO/010/16
No. of samples received : 2
No. of samples analysed : 2

Page : 1 of 4
Laboratory : Environmental Division NSW South Coast
Contact : Glenn Davies
Address : 1/19 Ralph Black Dr, North Wollongong 2500
 4/13 Geary Pl, North Nowra 2541
 Australia NSW Australia

Telephone : +61 2 4225 3125
Date Samples Received : 14-May-2019 16:15
Date Analysis Commenced : 15-May-2019
Issue Date : 21-May-2019 16:33



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. 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.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Tony DeSouza	Senior Microbiologist	Sydney Microbiology, Smithfield, NSW



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by 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 Contact 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.

- MF = membrane filtration
- CFU = colony forming unit
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.
- MW006 is ALS's internal code and is equivalent to AS4276.7.
- MW007 is ALS's internal code and is equivalent to AS4276.5.



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID			Front Bore	Back Bore	----	----	----
Client sampling date / time				14-May-2019 00:00	14-May-2019 00:00	----	----	----	----	----	
Compound	CAS Number	LOR	Unit	EW1902097-001	EW1902097-002	-----	-----	-----	-----	-----	
				Result	Result	----	----	----	----	----	
EA005P: pH by PC Titrator											
pH Value	----	0.01	pH Unit	8.45	8.48	----	----	----	----	----	
EA010P: Conductivity by PC Titrator											
Electrical Conductivity @ 25°C	----	1	µS/cm	3260	2970	----	----	----	----	----	
EA015: Total Dissolved Solids dried at 180 ± 5 °C											
Total Dissolved Solids @180°C	----	10	mg/L	1620	1550	----	----	----	----	----	
EA045: Turbidity											
Turbidity	----	0.1	NTU	0.3	1.7	----	----	----	----	----	
ED037P: Alkalinity by PC Titrator											
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	----	----	----	----	----	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	18	24	----	----	----	----	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	304	332	----	----	----	----	----	
Total Alkalinity as CaCO3	----	1	mg/L	322	356	----	----	----	----	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA											
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	25	18	----	----	----	----	----	
ED045G: Chloride by Discrete Analyser											
Chloride	16887-00-6	1	mg/L	680	596	----	----	----	----	----	
EG020T: Total Metals by ICP-MS											
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	----	----	----	----	----	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	----	----	----	----	----	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	----	----	----	----	----	
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	----	----	----	----	----	
Copper	7440-50-8	0.001	mg/L	<0.001	0.002	----	----	----	----	----	
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	----	----	----	----	----	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	----	----	----	----	----	
Zinc	7440-66-6	0.005	mg/L	0.014	<0.005	----	----	----	----	----	
Iron	7439-89-6	0.05	mg/L	0.07	0.70	----	----	----	----	----	
EG035T: Total Recoverable Mercury by FIMS											
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	----	----	----	----	----	
EK057G: Nitrite as N by Discrete Analyser											
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	----	----	----	----	----	
EK058G: Nitrate as N by Discrete Analyser											
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	----	----	----	----	----	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser											



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Front Bore	Back Bore	----	----	----
Client sampling date / time				14-May-2019 00:00	14-May-2019 00:00	----	----	----	
Compound	CAS Number	LOR	Unit	EW1902097-001	EW1902097-002	-----	-----	-----	
				Result	Result	----	----	----	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser - Continued									
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	<0.01	----	----	----	
MW006: Faecal Coliforms & E.coli by MF									
Escherichia coli	----	1	CFU/100mL	<1	<1	----	----	----	
MW007: Coliforms by MF									
Coliforms	----	1	CFU/100mL	<1	<1	----	----	----	