ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EW2002281**	Page	: 1 of 3
Client	: **MERRY BEACH CARAVAN PARK**	Laboratory	: Environmental Division NSW South Coast
Contact	: Andrew Norris	Contact	: Glenn Davies
Address	: Merry Beach Rd Kioloa NSW 2539	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 4/13 Geary Pl, North Nowra 2541 Australia NSW Australia
Telephone	: ----	Telephone	: +61 2 4225 3125
Project	: Merry Beach Monitoring	Date Samples Received	: 16-Jun-2020 16:04
Order number	: P1806838	Date Analysis Commenced	: 17-Jun-2020
C-O-C number	: ----	Issue Date	: 23-Jun-2020 16:13
Sampler	: Peter Young		
Site	: Merry Beach		
Quote number	: WO/010/16		
No. of samples received	: 5		
No. of samples analysed	: 5		

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.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Clare Kennedy	Analyst	Inorganics, Fyshwick, ACT
Somlok Chai	Microbiologist	Sydney Microbiology, Smithfield, NSW

General Comments

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

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

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

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

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

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

- **Analytical work for this work order will be conducted at ALS Sydney.**
- 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.
- MW023 is ALS's internal code and is equivalent to AS4276.9.
- MW006 is ALS's internal code and is equivalent to AS4276.7.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	884/Eff1	884/Eff2	884/SW2	884/SW3	Influent
				Client sampling date / time	11-May-2020 00:00	11-May-2020 00:00	11-May-2020 00:00	11-May-2020 00:00	11-May-2020 00:00
Compound	CAS Number	LOR	Unit		EW2002281-001	EW2002281-002	EW2002281-003	EW2002281-004	EW2002281-005
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		7.78	7.97	7.25	7.74	8.00
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		----	----	6570	7080	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		8	7	----	----	2770
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		0.17	----	0.64	0.11	7.44
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		17.0	----	0.03	0.34	0.69
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		3.5	----	1.1	0.6	132
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		20.5	----	1.1	0.9	133
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		4.89	----	0.12	0.07	92.6
EP030: Biochemical Oxygen Demand (BOD)									
Biochemical Oxygen Demand	----	2	mg/L		<2	----	2	<2	178
MW006: Faecal Coliforms & E.coli by MF									
Faecal Coliforms	----	1	CFU/100mL		580	----	450	120	1000000
Escherichia coli	----	1	CFU/100mL		----	730	----	----	1000000
MW023: Enterococci by Membrane Filtration									
Enterococci	----	1	CFU/100mL		----	----	120	20	----
EP020CA: Oil and Grease									
Oil and Grease	----	1	mg/L		<1	----	----	----	1