ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EW1602571**	Page	: 1 of 3
Client	: **WINGECARRIBEE SHIRE COUNCIL**	Laboratory	: Environmental Division NSW South Coast
Contact	: MR Scott McAllan	Contact	: Glenn Davies
Address	: PO BOX 141 MOSSVALE NSW AUSTRALIA	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 4/13 Geary Pl, North Nowra 2541 Australia
Telephone	: ----	Telephone	: 02 42253125
Project	: Annual Waters and Methane	Date Samples Received	: 14-Jul-2016 14:09
Order number	: ----	Date Analysis Commenced	: 12-Jul-2016
C-O-C number	: ----	Issue Date	: 19-Jul-2016 13:53
Sampler	: ----		
Site	: ----		
Quote number	: ----		
No. of samples received	: 4		
No. of samples analysed	: 4		

NATA Accredited Laboratory 825
Accredited for compliance with
ISO/IEC 17025.

NATA
WORLD RECOGNISED ACCREDITATION

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

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
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, 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.

- EG035: Positive Hg results have been confirmed by reanalysis

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Point 1	Point 2	Point 5	Point 9	----
				Client sampling date / time	12-Jul-2016 12:30	12-Jul-2016 12:50	12-Jul-2016 13:15	12-Jul-2016 13:40	----
Compound	CAS Number	LOR	Unit		EW1602571-001	EW1602571-002	EW1602571-003	EW1602571-004	--------
					Result	Result	Result	Result	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**40**	**229**	<1	**1450**	----
Total Alkalinity as CaCO3	----	1	mg/L		**40**	**229**	<1	**1450**	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**20**	**290**	**50**	**849**	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**6**	**199**	**246**	**350**	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**23**	**108**	**8**	**570**	----
Magnesium	7439-95-4	1	mg/L		**2**	**33**	**12**	**155**	----
Sodium	7440-23-5	1	mg/L		**4**	**141**	**125**	**261**	----
Potassium	7440-09-7	1	mg/L		<1	**42**	**11**	**273**	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	**0.005**	**0.005**	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	**0.0001**	**0.0002**	**0.0004**	----
Chromium	7440-47-3	0.001	mg/L		**0.007**	**0.001**	**0.011**	**0.007**	----
Nickel	7440-02-0	0.001	mg/L		**0.011**	**0.005**	**0.021**	**0.036**	----
Lead	7439-92-1	0.001	mg/L		**0.007**	**0.016**	**0.066**	**0.015**	----
Zinc	7440-66-6	0.005	mg/L		**0.202**	**0.231**	**0.130**	**0.126**	----
Iron	7439-89-6	0.05	mg/L		**2.98**	**4.83**	**7.73**	**14.5**	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0004**	<0.0001	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		----	----	----	**86.8**	----