

# **CERTIFICATE OF ANALYSIS**

Work Order	: CA1804141	Page	: 1 of 4		
Client	Southern Meats	Laboratory	: ALS Water Resources Group		
Contact	: Mr Scott Newton	Contact	: Client Services		
Address	: Mazamet Road	Address	: 16B Lithgow Street Fyshwick ACT Australia 2609		
	Goulburn NSW 2580				
Telephone	: 02 4824 0000	Telephone	: +61 2 6202 5404		
Project	: Monthly Wastewater	Date Samples Received	: 05-Jul-2018 16:00		
Order number	:	Date Analysis Commenced	: 06-Jul-2018		
C-O-C number	:	Issue Date	: 18-Jul-2018 17:28		
Sampler	:		Hac-MRA NAIA		
Site	:				
Quote number	:		Approximation No. 002		
No. of samples received	: 8		Accredited for compliance with		
No. of samples analysed	: 8		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
Amanda Gonzalez	Laboratory Technician	Inorganics, Fyshwick, ACT
Geetha Ramasundara	Chemistry Teamleader	Inorganics, Fyshwick, ACT
Kai Squires	Laboratory Manager	Inorganics, Fyshwick, ACT
Kathika Atapattu	QC Technician	Inorganics, Fyshwick, ACT
Titus Vimalasiri	Metals Teamleader	Inorganics, Fyshwick, ACT



#### **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.

- For samples collected by ALS WRG, sampling was carried out in accordance with Procedure EN67
- Result for pH in water tested in the laboratory may be indicative only as holding time is generally not achievable.



## Analytical Results

Sub-Matrix: WATER		Clie	ent sample ID	STHMEATS1	STHMEATS2	STHMEATS3	STHMEATS4	STHMEATS5	
(Matrix: WATER)				Ex Daf	Ex Anaerobic	Aerobic	Settling Pond 2	Storage Dam 1	
	Client sampling date / time			04-Jul-2018 00:00					
Compound	CAS Number	LOR	Unit	CA1804141-001	CA1804141-002	CA1804141-003	CA1804141-004	CA1804141-005	
				Result	Result	Result	Result	Result	
EA005: pH									
рН		0.01	pH Unit	6.74	7.27	7.44	7.67	8.24	
EA006: Sodium Adsorption Ratio (SAR)									
Sodium Adsorption Ratio		0.01	-	9.14	4.92	4.45	4.52	5.39	
EA010: Conductivity									
Electrical Conductivity @ 25°C		2	µS/cm	1650	2160	2350	2360	2420	
EA015: Total Dissolved Solids	EA015: Total Dissolved Solids								
Total Dissolved Solids		10	mg/L	1340	826	864	883	953	
EA025: Suspended Solids									
Suspended Solids (SS)		2	mg/L	2200	243	127	96	101	
ED009: Anions									
Chloride	16887-00-6	0.1	mg/L	183	195	198	202	222	
EG005T: Total Metals by ICP-OES									
Calcium	7440-70-2	0.05	mg/L	47.3	39.0	49.5	51.1	48.8	
Magnesium	7439-95-4	0.05	mg/L	26.4	28.6	31.2	31.0	34.5	
Sodium	7440-23-5	0.1	mg/L	194	166	171	175	212	
EK059: Nitrite plus Nitrate as N (NOx)									
Nitrite + Nitrate as N		0.05	mg/L	0.10	<0.05	<0.05	<0.05	1.09	
EK061: Total Kjeldahl Nitrogen as N (TN - I	NOx)								
Total Kjeldahl Nitrogen as N		0.05	mg/L	225	142	146	140	143	
EK062: Total Nitrogen as N (TKN + NOx)									
Total Nitrogen as N		0.05	mg/L	225	142	146	140	144	
EK067: Total Phosphorus as P									
Total Phosphorus as P		0.01	mg/L	43.8	27.5	28.3	28.7	33.1	
EP026: Chemical Oxygen Demand (COD)									
Chemical Oxygen Demand		5	mg/L	6410	660	335	301	274	
EP030: Biochemical Oxygen Demand (BOI	D)								
Biochemical Oxygen Demand		2	mg/L	3440	132	44	43	26	



## Analytical Results

Sub-Matrix: WATER		Clie	ent sample ID	STHMEATS6	STHMEATS7	STHMEATS8		
(Matrix: WATER)			Storage Dam 2	Run Off Dam 1	Run Off Dam 2			
	Client sampling date / time			04-Jul-2018 00:00	04-Jul-2018 00:00	04-Jul-2018 00:00		
Compound	CAS Number	LOR	Unit	CA1804141-006	CA1804141-007	CA1804141-008		
				Result	Result	Result		
EA005: pH								
рН		0.01	pH Unit	7.94	9.05	9.05		
EA006: Sodium Adsorption Ratio (SAR)								
Sodium Adsorption Ratio		0.01	-	5.92	9.76	11.0		
EA010: Conductivity								
Electrical Conductivity @ 25°C		2	µS/cm	2430	1970	2060		
EA015: Total Dissolved Solids								
Total Dissolved Solids		10	mg/L	1050	1180	1240		
EA025: Suspended Solids								
Suspended Solids (SS)		2	mg/L	78	22	58		
ED009: Anions								
Chloride	16887-00-6	0.1	mg/L	233	322	363		
EG005T: Total Metals by ICP-OES								
Calcium	7440-70-2	0.05	mg/L	45.0	20.3	21.8		
Magnesium	7439-95-4	0.05	mg/L	35.3	31.9	29.7		
Sodium	7440-23-5	0.1	mg/L	231	317	351		
EK059: Nitrite plus Nitrate as N (NOx)								
Nitrite + Nitrate as N		0.05	mg/L	1.67	3.88	0.50		
EK061: Total Kjeldahl Nitrogen as N (TN -	NOx)							
Total Kjeldahl Nitrogen as N		0.05	mg/L	125	10.8	12.2		
EK062: Total Nitrogen as N (TKN + NOx)								
Total Nitrogen as N		0.05	mg/L	127	14.7	12.7		
EK067: Total Phosphorus as P								
Total Phosphorus as P		0.01	mg/L	36.2	12.8	10.6		
EP026: Chemical Oxygen Demand (COD)								
Chemical Oxygen Demand		5	mg/L	260	164	242		
EP030: Biochemical Oxygen Demand (BOD)								
Biochemical Oxygen Demand		2	mg/L	12	4	10		