

CERTIFICATE OF ANALYSIS

<p>Work Order : CA1904690</p> <p>Client : Southern Meats</p> <p>Contact : Andy Grealy</p> <p>Address : Mazamet Road Goulburn NSW 2580</p> <p>Telephone : 02 4824 0000</p> <p>Project : Monthly Wastewater</p> <p>Order number : ----</p> <p>C-O-C number : ----</p> <p>Sampler : Andy Grealy</p> <p>Site : ----</p> <p>Quote number : ----</p> <p>No. of samples received : 8</p> <p>No. of samples analysed : 8</p>	<p>Page : 1 of 4</p> <p>Laboratory : ALS Water Resources Group</p> <p>Contact : Client Services</p> <p>Address : 16B Lithgow Street Fyshwick ACT Australia 2609</p> <p>Telephone : +61 2 6202 5404</p> <p>Date Samples Received : 18-Jul-2019 13:00</p> <p>Date Analysis Commenced : 19-Jul-2019</p> <p>Issue Date : 31-Jul-2019 11:45</p>
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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>
Amanda Gonzalez	Laboratory Technician	Inorganics, Fyshwick, ACT
Clare Kennedy	Analyst	Inorganics, Fyshwick, ACT
Geetha Ramasundara	Chemistry Teamleader	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
 (Matrix: WATER)

Client sample ID

				STHMEATS1 Ex Daf	STHMEATS2 Circular Anaerobic Lagoon	STHMEATS3 Aerated Lagoon	STHMEATS4 Settling Pond 2	STHMEATS5 Storage Dam 1
Client sampling date / time				17-Jul-2019 00:00	17-Jul-2019 00:00	17-Jul-2019 00:00	17-Jul-2019 00:00	17-Jul-2019 00:00
Compound	CAS Number	LOR	Unit	CA1904690-001	CA1904690-002	CA1904690-003	CA1904690-004	CA1904690-005
				Result	Result	Result	Result	Result
EA005CA: pH								
pH	----	0.01	pH Unit	7.00	7.45	7.84	7.87	8.01
EA010CA: Conductivity								
Electrical Conductivity @ 25°C	----	2	µS/cm	2130	2910	2980	2980	2520
ED009CA: Anions								
Chloride	16887-00-6	0.1	mg/L	194	203	211	199	267
EA015CA: Total Dissolved Solids								
Total Dissolved Solids	----	10	mg/L	1560	1070	1110	1180	1160
EA025CA: Suspended Solids								
Suspended Solids (SS)	----	2	mg/L	2130	1250	950	505	96
EP030CA: Biochemical Oxygen Demand								
Biochemical Oxygen Demand	----	2	mg/L	3930	444	327	261	27
EP026CA: Chemical Oxygen Demand								
Chemical Oxygen Demand	----	5	mg/L	7460	2380	1490	1140	294
EK059CA: Nitrite plus Nitrate as N								
Nitrite + Nitrate as N	----	0.05	mg/L N	<0.05	<0.05	<0.05	<0.05	15.0
EK061CA: Total Kjeldahl Nitrogen as N								
Total Kjeldahl Nitrogen as N	----	0.05	mg/L N	343	294	280	290	123
EK062CA: Total Nitrogen as N								
Total Nitrogen as N	----	0.05	mg/L N	343	294	280	290	138
EK067CA: Total Phosphorus as P								
Total Phosphorus as P	----	0.01	mg/L P	61.6	37.7	37.8	39.4	29.7
EG005CA: Total Metals by ICP-OES								
Calcium	7440-70-2	0.05	mg/L	48.3	36.7	32.3	28.3	38.6
Magnesium	7439-95-4	0.05	mg/L	27.7	19.8	20.0	20.5	24.4
Sodium	7440-23-5	0.1	mg/L	217	263	269	274	296
EA006CA: Sodium Adsorption Ratio								
∅ Sodium Adsorption Ratio	----	0.01	-	10.0	10.0	9.62	9.46	8.79



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Client sample ID			STHMEATS6 Storage Dam 2	STHMEATS7 Run Off Dam 1	STHMEATS8 Run Off Dam 2	----	----	
Client sampling date / time		17-Jul-2019 00:00			17-Jul-2019 00:00		17-Jul-2019 00:00		----	----
Compound	CAS Number	LOR	Unit	CA1904690-006	CA1904690-007	CA1904690-008	-----	-----		
				Result	Result	Result	----	----		
EA005CA: pH										
pH	----	0.01	pH Unit	7.59	8.94	9.55	----	----		
EA010CA: Conductivity										
Electrical Conductivity @ 25°C	----	2	µS/cm	2220	2450	2440	----	----		
ED009CA: Anions										
Chloride	16887-00-6	0.1	mg/L	289	402	442	----	----		
EA015CA: Total Dissolved Solids										
Total Dissolved Solids	----	10	mg/L	1280	1390	1390	----	----		
EA025CA: Suspended Solids										
Suspended Solids (SS)	----	2	mg/L	119	13	71	----	----		
EP030CA: Biochemical Oxygen Demand										
Biochemical Oxygen Demand	----	2	mg/L	29	3	22	----	----		
EP026CA: Chemical Oxygen Demand										
Chemical Oxygen Demand	----	5	mg/L	312	140	303	----	----		
EK059CA: Nitrite plus Nitrate as N										
Nitrite + Nitrate as N	----	0.05	mg/L N	29.3	0.12	0.22	----	----		
EK061CA: Total Kjeldahl Nitrogen as N										
Total Kjeldahl Nitrogen as N	----	0.05	mg/L N	69.0	6.04	14.1	----	----		
EK062CA: Total Nitrogen as N										
Total Nitrogen as N	----	0.05	mg/L N	98.3	6.16	14.3	----	----		
EK067CA: Total Phosphorus as P										
Total Phosphorus as P	----	0.01	mg/L P	30.7	12.2	12.1	----	----		
EG005CA: Total Metals by ICP-OES										
Calcium	7440-70-2	0.05	mg/L	41.1	20.9	19.5	----	----		
Magnesium	7439-95-4	0.05	mg/L	26.1	35.2	25.4	----	----		
Sodium	7440-23-5	0.1	mg/L	299	396	417	----	----		
EA006CA: Sodium Adsorption Ratio										
∅ Sodium Adsorption Ratio	----	0.01	-	8.73	11.6	14.6	----	----		