

CERTIFICATE OF ANALYSIS

Work Order : **CA1906400**
Client : **Southern Meats**
Contact : Andy Grealy
Address : Mazamet Road
 Goulburn NSW 2580
Telephone : 02 4824 0000
Project : Monthly Wastewater
Order number : ----
C-O-C number : ----
Sampler : ----
Site : Monthly Wastewater
Quote number : ----
No. of samples received : 8
No. of samples analysed : 8

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Laboratory : ALS Water Resources Group
Contact : Client Services
Address : 16B Lithgow Street Fyshwick ACT Australia 2609

Telephone : +61 2 6202 5404
Date Samples Received : 03-Oct-2019 12:00
Date Analysis Commenced : 04-Oct-2019
Issue Date : 16-Oct-2019 09:29



Accreditation No. 992
 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>
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				02-Oct-2019 12:00	02-Oct-2019 12:00	02-Oct-2019 12:00	02-Oct-2019 12:00	02-Oct-2019 12:00
Compound	CAS Number	LOR	Unit	CA1906400-001	CA1906400-002	CA1906400-003	CA1906400-004	CA1906400-005
				Result	Result	Result	Result	Result
EA005CA: pH								
pH	----	0.01	pH Unit	6.08	7.19	7.87	7.83	7.69
EA010CA: Conductivity								
Electrical Conductivity @ 25°C	----	2	µS/cm	1500	3270	3470	3480	2350
ED009CA: Anions								
Chloride	16887-00-6	0.1	mg/L	179	197	220	227	268
EA015CA: Total Dissolved Solids								
Total Dissolved Solids	----	10	mg/L	1020	1240	1220	1340	1260
EA025CA: Suspended Solids								
Suspended Solids (SS)	----	2	mg/L	5280	195	214	222	203
EP030CA: Biochemical Oxygen Demand								
Biochemical Oxygen Demand	----	2	mg/L	6800	83	133	142	67
EP026CA: Chemical Oxygen Demand								
Chemical Oxygen Demand	----	5	mg/L	11700	810	750	820	430
EK059CA: Nitrite plus Nitrate as N								
Nitrite + Nitrate as N	----	0.05	mg/L N	<0.05	<0.05	<0.05	<0.05	34.3
EK061CA: Total Kjeldahl Nitrogen as N								
Total Kjeldahl Nitrogen as N	----	0.05	mg/L N	3.15	260	278	275	85.7
EK062CA: Total Nitrogen as N								
Total Nitrogen as N	----	0.05	mg/L N	3.15	260	278	275	120
EK067CA: Total Phosphorus as P								
Total Phosphorus as P	----	0.01	mg/L P	43.8	31.1	35.4	36.6	31.0
EG005CA: Total Metals by ICP-OES								
Calcium	7440-70-2	0.05	mg/L	65.5	39.2	50.6	53.9	43.1
Magnesium	7439-95-4	0.05	mg/L	31.7	21.7	23.1	24.8	26.9
Sodium	7440-23-5	0.1	mg/L	168	258	284	298	297
EA006CA: Sodium Adsorption Ratio								
∅ Sodium Adsorption Ratio	----	0.01	-	6.67	7.97	8.22	8.24	8.64



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		02-Oct-2019 12:00			02-Oct-2019 12:00		02-Oct-2019 12:00		----	----
Compound	CAS Number	LOR	Unit	CA1906400-006	CA1906400-007	CA1906400-008	-----	-----		
				Result	Result	Result	----	----		
EA005CA: pH										
pH	----	0.01	pH Unit	8.04	8.67	9.69	----	----		
EA010CA: Conductivity										
Electrical Conductivity @ 25°C	----	2	µS/cm	3100	2450	2340	----	----		
ED009CA: Anions										
Chloride	16887-00-6	0.1	mg/L	1660	410	438	----	----		
EA015CA: Total Dissolved Solids										
Total Dissolved Solids	----	10	mg/L	1320	1480	1400	----	----		
EA025CA: Suspended Solids										
Suspended Solids (SS)	----	2	mg/L	124	12	216	----	----		
EP030CA: Biochemical Oxygen Demand										
Biochemical Oxygen Demand	----	2	mg/L	64	17	67	----	----		
EP026CA: Chemical Oxygen Demand										
Chemical Oxygen Demand	----	5	mg/L	370	148	554	----	----		
EK059CA: Nitrite plus Nitrate as N										
Nitrite + Nitrate as N	----	0.05	mg/L N	3.55	0.21	<0.05	----	----		
EK061CA: Total Kjeldahl Nitrogen as N										
Total Kjeldahl Nitrogen as N	----	0.05	mg/L N	172	6.76	24.6	----	----		
EK062CA: Total Nitrogen as N										
Total Nitrogen as N	----	0.05	mg/L N	176	6.97	24.6	----	----		
EK067CA: Total Phosphorus as P										
Total Phosphorus as P	----	0.01	mg/L P	31.4	14.4	12.3	----	----		
EG005CA: Total Metals by ICP-OES										
Calcium	7440-70-2	0.05	mg/L	45.2	27.6	18.6	----	----		
Magnesium	7439-95-4	0.05	mg/L	27.2	40.1	24.0	----	----		
Sodium	7440-23-5	0.1	mg/L	340	398	417	----	----		
EA006CA: Sodium Adsorption Ratio										
∅ Sodium Adsorption Ratio	----	0.01	-	9.26	11.0	15.7	----	----		