

CERTIFICATE OF ANALYSIS

Work Order : CA2005825 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 : ---- Quote number : ---- No. of samples received : 8 No. of samples analysed : 8	Page : 1 of 4 Laboratory : ALS Water Resources Group Contact : Client Services Address : 16B Lithgow Street Fyshwick ACT Australia 2609 Telephone : +61 2 6202 5404 Date Samples Received : 02-Sep-2020 07:30 Date Analysis Commenced : 02-Sep-2020 Issue Date : 10-Sep-2020 08:52
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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 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.

- **Samples received outside of 24hr recommended holding time. Samples were tested as received, results for microbiological and nutrients (total nitrogen, total phosphorous) analysis may be indicative only.**
- **Samples received outside of 48hr recommended holding time. Samples were tested as received, results for microbiological, nutrients (total nitrogen, total phosphorous, nitrate, oxidised nitrogen, reactive phosphorous), semivolatile compounds (Alkyl phenol Ethoxylates), biological oxygen demand, chlorophyll-a, colour, formaldehyde, surfactants (NIS, MBAS), sulphite and turbidity analysis may be indicative only.**
- **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				28-Aug-2020 10:00	28-Aug-2020 10:00	28-Aug-2020 10:00	28-Aug-2020 10:00	28-Aug-2020 10:00
Compound	CAS Number	LOR	Unit	CA2005825-001	CA2005825-002	CA2005825-003	CA2005825-004	CA2005825-005
				Result	Result	Result	Result	Result
EA005CA: pH								
pH	----	0.01	pH Unit	7.48	7.60	8.08	8.06	7.99
EA010CA: Conductivity								
Electrical Conductivity @ 25°C	----	2	µS/cm	2220	3440	3390	3450	2540
ED009CA: Anions								
Chloride	16887-00-6	0.1	mg/L	137	174	188	180	176
EA015CA: Total Dissolved Solids								
Total Dissolved Solids	----	10	mg/L	1320	1140	1220	1040	1020
EA025CA: Suspended Solids								
Suspended Solids (SS)	----	2	mg/L	2790	4290	505	300	103
EP030CA: Biochemical Oxygen Demand								
Biochemical Oxygen Demand	----	2	mg/L	4980	1620	168	162	44
EP026CA: Chemical Oxygen Demand								
Chemical Oxygen Demand	----	5	mg/L	9520	5340	1100	920	370
EK059CA: Nitrite plus Nitrate as N								
Nitrite + Nitrate as N	----	0.05	mg/L N	1.26	<0.05	0.06	0.09	0.59
EK061CA: Total Kjeldahl Nitrogen as N								
Total Kjeldahl Nitrogen as N	----	0.05	mg/L N	301	465	299	289	168
EK062CA: Total Nitrogen as N								
Total Nitrogen as N	----	0.05	mg/L N	302	465	299	289	169
EK067CA: Total Phosphorus as P								
Total Phosphorus as P	----	0.01	mg/L P	40.1	59.4	37.8	35.3	22.2
EG005CA: Total Metals by ICP-OES								
Calcium	7440-70-2	0.05	mg/L	30.5	79.0	34.2	31.3	31.3
Magnesium	7439-95-4	0.05	mg/L	13.1	24.2	21.5	21.7	21.9
Sodium	7440-23-5	0.1	mg/L	296	264	280	283	227
EA006CA: Sodium Adsorption Ratio								
∅ Sodium Adsorption Ratio	----	0.01	-	30.0	10.0	9.71	9.38	7.72



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		28-Aug-2020 10:00			28-Aug-2020 10:00			28-Aug-2020 10:00	
Compound	CAS Number	LOR	Unit	CA2005825-006	CA2005825-007	CA2005825-008	-----	-----	
				Result	Result	Result	----	----	
EA005CA: pH									
pH	----	0.01	pH Unit	8.13	8.36	8.12	----	----	
EA010CA: Conductivity									
Electrical Conductivity @ 25°C	----	2	µS/cm	2590	1430	1050	----	----	
ED009CA: Anions									
Chloride	16887-00-6	0.1	mg/L	225	190	133	----	----	
EA015CA: Total Dissolved Solids									
Total Dissolved Solids	----	10	mg/L	1150	845	590	----	----	
EA025CA: Suspended Solids									
Suspended Solids (SS)	----	2	mg/L	77	28	8	----	----	
EP030CA: Biochemical Oxygen Demand									
Biochemical Oxygen Demand	----	2	mg/L	19	16	7	----	----	
EP026CA: Chemical Oxygen Demand									
Chemical Oxygen Demand	----	5	mg/L	312	154	174	----	----	
EK059CA: Nitrite plus Nitrate as N									
Nitrite + Nitrate as N	----	0.05	mg/L N	1.81	0.20	0.32	----	----	
EK061CA: Total Kjeldahl Nitrogen as N									
Total Kjeldahl Nitrogen as N	----	0.05	mg/L N	136	6.44	7.89	----	----	
EK062CA: Total Nitrogen as N									
Total Nitrogen as N	----	0.05	mg/L N	138	6.64	8.21	----	----	
EK067CA: Total Phosphorus as P									
Total Phosphorus as P	----	0.01	mg/L P	29.9	10.9	10.2	----	----	
EG005CA: Total Metals by ICP-OES									
Calcium	7440-70-2	0.05	mg/L	37.3	19.4	16.6	----	----	
Magnesium	7439-95-4	0.05	mg/L	24.3	21.7	15.3	----	----	
Sodium	7440-23-5	0.1	mg/L	285	216	163	----	----	
EA006CA: Sodium Adsorption Ratio									
∅ Sodium Adsorption Ratio	----	0.01	-	8.59	7.94	6.76	----	----	