

CERTIFICATE OF ANALYSIS

Work Order : CA2000790 Page : 1 of 4

Client Laboratory : Southern Meats : ALS Water Resources Group

Contact : Andy Grealy Contact : Client Services

Address Address : 16B Lithgow Street Fyshwick ACT Australia 2609 : Mazamet Road

Goulburn NSW 2580

Telephone : 02 4824 0000 Telephone : +61 2 6202 5404 Project : Monthly Wastewater Date Samples Received

Order number C-O-C number Sampler Site Quote number No. of samples received : 8

: 04-Feb-2020 13:28 Date Analysis Commenced : 04-Feb-2020

Issue Date : 19-Feb-2020 17:04



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:

: 8

- 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

No. of samples analysed

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		
Clare Kennedy	Analyst	Inorganics, Fyshwick, ACT		
Geetha Ramasundara	Chemistry Teamleader	Inorganics, Fyshwick, ACT		
Titus Vimalasiri	Metals Teamleader	Inorganics, Fyshwick, ACT		

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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.

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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			31-Jan-2020 08:30	31-Jan-2020 08:30	31-Jan-2020 08:30	31-Jan-2020 08:30	31-Jan-2020 08:30
Compound	CAS Number	LOR	Unit	CA2000790-001	CA2000790-002	CA2000790-003	CA2000790-004	CA2000790-005
				Result	Result	Result	Result	Result
EA005CA: pH								
pH		0.01	pH Unit	6.72	7.68	7.85	7.98	7.96
EA010CA: Conductivity								
Electrical Conductivity @ 25°C		2	μS/cm	1980	3790	3850	3880	3360
ED009CA: Anions								
Chloride	16887-00-6	0.1	mg/L	142	174	176	188	223
EA015CA: Total Dissolved Solids								
Total Dissolved Solids		10	mg/L	1580	1300	1500	1480	1650
EA025CA: Suspended Solids								
Suspended Solids (SS)		2	mg/L	2450	2340	232	215	282
EP030CA: Biochemical Oxygen Demand								
Biochemical Oxygen Demand		2	mg/L	3620	348	101	113	96
EP026CA: Chemical Oxygen Demand								
Chemical Oxygen Demand		5	mg/L	6170	2350	768	756	637
EK059CA: Nitrite plus Nitrate as N								
Nitrite + Nitrate as N		0.05	mg/L N	<0.05	0.07	0.06	<0.05	1.75
EK061CA: Total Kjeldahl Nitrogen as N								
Total Kjeldahl Nitrogen as N		0.05	mg/L N	215	356	288	291	180
EK062CA: Total Nitrogen as N								
Total Nitrogen as N		0.05	mg/L N	215	356	288	291	182
EK067CA: Total Phosphorus as P								
Total Phosphorus as P		0.01	mg/L P	54.0	51.4	40.0	42.0	43.8
EG005CA: Total Metals by ICP-OES								•
Calcium	7440-70-2	0.05	mg/L	42.9	65.9	43.0	44.2	53.5
Magnesium	7439-95-4	0.05	mg/L	24.2	24.1	22.8	24.3	32.5
Sodium	7440-23-5	0.1	mg/L	252	322	329	352	400
EA006CA: Sodium Adsorption Ratio								
Ø Sodium Adsorption Ratio		0.01	-	13.2	9.40	9.62	9.85	10.3

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Analytical Results

Sub-Matrix: WATER (Matrix: WATER)	Client sample ID		STHMEATS6	STHMEATS7 Run Off Dam 1	STHMEATS8 Run Off Dam 2	 	
	Client sampling date / time		Storage Dam 2 31-Jan-2020 08:30	31-Jan-2020 08:30	31-Jan-2020 08:30	 	
Compound	CAS Number	LOR	Unit	CA2000790-006	CA2000790-007	CA2000790-008	
Compound	CAS Number	LON	O'III	Result	Result	Result	
EA005CA: pH				result	resuit	result	
pH		0.01	pH Unit	7.81	9.12	9.75	
EA010CA: Conductivity							
Electrical Conductivity @ 25°C		2	μS/cm	2980	3260	3780	
ED009CA: Anions					1201		
Chloride	16887-00-6	0.1	mg/L	247	516	670	
EA015CA: Total Dissolved Solids	.555. 50 0		J				
Total Dissolved Solids		10	mg/L	1710	1910	2460	
EA025CA: Suspended Solids			3				
Suspended Solids (SS)		2	mg/L	214	30	202	
EP030CA: Biochemical Oxygen Demand			3				
Biochemical Oxygen Demand		2	mg/L	81	4	51	
EP026CA: Chemical Oxygen Demand			g				
Chemical Oxygen Demand		5	mg/L	539	180	602	
EK059CA: Nitrite plus Nitrate as N			3				
Nitrite + Nitrate as N		0.05	mg/L N	1.01	<0.05	<0.05	
EK061CA: Total Kjeldahl Nitrogen as N		0.00	g/		0.00	0.00	
Total Kjeldahl Nitrogen as N		0.05	mg/L N	105	5.76	26.0	
EK062CA: Total Nitrogen as N		0.00	g/				
Total Nitrogen as N		0.05	mg/L N	106	5.76	26.0	
EK067CA: Total Phosphorus as P		0.00	g/	100	0.70	20.0	
Total Phosphorus as P		0.01	mg/L P	41.0	9.62	11.8	
EG005CA: Total Metals by ICP-OES		J.J.		7110	0.02	1110	
Calcium	7440-70-2	0.05	mg/L	48.6	29.1	19.2	
Magnesium	7439-95-4	0.05	mg/L	31.8	49.7	30.0	
Sodium	7440-23-5	0.1	mg/L	390	552	699	
EA006CA: Sodium Adsorption Ratio	20 0						I .
Ø Sodium Adsorption Ratio		0.01	-	10.5	13.8	23.4	
- Coulding Page 1		0.0.		10.0	10.0	20.7	