CERTIFICATE OF ANALYSIS

Work Order	: **CA2404906**	Page	: 1 of 6
Client	: **Southern Meats**	Laboratory	: ALS Water Resources Group
Contact	: Mick Sperring	Contact	: Client Services
Address	: Mazamet Road Goulburn NSW 2580	Address	: 2/33 Couranga Cr Hume ACT Australia 2620
Telephone	: ----	Telephone	: +61 2 6202 5404
Project	: Water Sampling Quarterly	Date Samples Received	: 01-Aug-2024 13:15
Order number	: ----	Date Analysis Commenced	: 02-Aug-2024
C-O-C number	: ----	Issue Date	: 14-Aug-2024 15:12
Sampler	: Mick Sperring		
Site	: STHMEATS_Water_Sampling		
Quote number	: ----		
No. of samples received	: 8		
No. of samples analysed	: 8		

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, unless the sampling was conducted by ALS. 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, Hume, ACT
Geetha Ramasundara	Chemistry Teamleader	Inorganics, Hume, ACT
Titus Vimalasiri	Metals Teamleader	Inorganics, Hume, 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 Contract 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)

Compound	CAS Number	LOR	Unit	Sample ID	STHMEATS1 Ex Daff	STHMEATS2 Circular Anaerobic Lagoon	STHMEATS3 Aerated Lagoon	STHMEATS4 Settling Pond	STHMEATS5 Storage Dam 1
				Sampling date / time	01-Aug-2024 00:00	01-Aug-2024 00:00	01-Aug-2024 00:00	01-Aug-2024 00:00	01-Aug-2024 00:00
					CA2404906-001	CA2404906-002	CA2404906-003	CA2404906-004	CA2404906-005
					Result	Result	Result	Result	Result
EA005CA: pH									
pH	----	0.01	pH Unit		7.82	7.48	8.03	8.05	7.99
EA010CA: Conductivity									
Electrical Conductivity @ 25°C	----	2	µS/cm		2530	3900	3810	3780	2970
ED009CA: Anions									
Chloride	16887-00-6	0.1	mg/L		234	136	128	131	185
EA015CA: Total Dissolved Solids									
Total Dissolved Solids	----	10	mg/L		1760	1190	1720	1120	2140
EA025CA: Suspended Solids									
Suspended Solids (SS)	----	2	mg/L		2410	1760	1330	1590	96
EP030CA: Biochemical Oxygen Demand									
Biochemical Oxygen Demand	----	2	mg/L		3660	923	307	334	44
EP026CA: Chemical Oxygen Demand									
Chemical Oxygen Demand	----	5	mg/L		8800	2100	2210	2260	293
EK055CA: Ammonia as N									
Ammonia as N	7664-41-7	0.1	mg/L N		154	306	288	286	177
EK057CA: Nitrite as N									
Nitrite as N	14797-65-0	0.01	mg/L N		0.20	0.13	<0.10	<0.10	0.07
EK058CA: Nitrate as N									
ø Nitrate as N	14797-55-8	0.01	mg/L N		<0.50	<0.50	<0.50	<0.50	<0.05
EK059CA: Nitrite plus Nitrate as N									
Nitrite + Nitrate as N	----	0.05	mg/L N		<0.50	<0.50	<0.50	<0.50	0.08
EK061CA: Total Kjeldahl Nitrogen as N									
Total Kjeldahl Nitrogen as N	----	0.05	mg/L N		493	446	459	415	232
EK062CA: Total Nitrogen as N									
Total Nitrogen as N	----	0.05	mg/L N		493	446	459	415	232
EK067CA: Total Phosphorus as P									
Total Phosphorus as P	----	0.01	mg/L P		56.4	48.3	47.7	50.6	17.8

Analytical Results

Sub-Matrix: **WATER**
(Matrix: **WATER**)

Compound	CAS Number	LOR	Unit	Sample ID	STHMEATS1 Ex Daff	STHMEATS2 Circular Anaerobic Lagoon	STHMEATS3 Aerated Lagoon	STHMEATS4 Settling Pond	STHMEATS5 Storage Dam 1
				Sampling date / time	01-Aug-2024 00:00	01-Aug-2024 00:00	01-Aug-2024 00:00	01-Aug-2024 00:00	01-Aug-2024 00:00
					CA2404906-001	CA2404906-002	CA2404906-003	CA2404906-004	CA2404906-005
					Result	Result	Result	Result	Result
EG005CA: Total Metals by ICP-OES									
Calcium	7440-70-2	0.10	mg/L		**40.4**	**43.8**	**41.3**	**45.4**	**24.2**
Magnesium	7439-95-4	0.10	mg/L		**18.6**	**20.6**	**20.8**	**21.3**	**24.1**
Sodium	7440-23-5	0.1	mg/L		**331**	**365**	**355**	**354**	**291**
EA006CA: Sodium Adsorption Ratio									
ø Sodium Adsorption Ratio	----	0.01	-		**24.5**	**13.7**	**12.7**	**12.5**	**9.50**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	STHMEATS6 Storage Dam 2	STHMEATS7 Run Off Dam 1	STHMEATS8 Run Off Dam 2	----	----
				Sampling date / time	01-Aug-2024 00:00	01-Aug-2024 00:00	01-Aug-2024 00:00	----	----
Compound	CAS Number	LOR	Unit		CA2404906-006	CA2404906-007	CA2404906-008	--------	--------
					Result	Result	Result	----	----
EA005CA: pH									
pH	----	0.01	pH Unit		8.04	8.13	8.04	----	----
EA010CA: Conductivity									
Electrical Conductivity @ 25°C	----	2	µS/cm		3090	1200	3090	----	----
ED009CA: Anions									
Chloride	16887-00-6	0.1	mg/L		187	98.7	187	----	----
EA015CA: Total Dissolved Solids									
Total Dissolved Solids	----	10	mg/L		1410	760	1290	----	----
EA025CA: Suspended Solids									
Suspended Solids (SS)	----	2	mg/L		124	64	60	----	----
EP030CA: Biochemical Oxygen Demand									
Biochemical Oxygen Demand	----	2	mg/L		55	31	61	----	----
EP026CA: Chemical Oxygen Demand									
Chemical Oxygen Demand	----	5	mg/L		370	254	373	----	----
EK055CA: Ammonia as N									
Ammonia as N	7664-41-7	0.1	mg/L N		185	12.6	185	----	----
EK057CA: Nitrite as N									
Nitrite as N	14797-65-0	0.01	mg/L N		0.04	0.34	0.04	----	----
EK058CA: Nitrate as N									
ø Nitrate as N	14797-55-8	0.01	mg/L N		<0.05	7.65	<0.05	----	----
EK059CA: Nitrite plus Nitrate as N									
Nitrite + Nitrate as N	----	0.05	mg/L N		0.07	7.99	0.06	----	----
EK061CA: Total Kjeldahl Nitrogen as N									
Total Kjeldahl Nitrogen as N	----	0.05	mg/L N		242	28.6	194	----	----
EK062CA: Total Nitrogen as N									
Total Nitrogen as N	----	0.05	mg/L N		242	36.6	194	----	----
EK067CA: Total Phosphorus as P									
Total Phosphorus as P	----	0.01	mg/L P		23.0	13.1	22.4	----	----
EG005CA: Total Metals by ICP-OES									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	STHMEATS6 Storage Dam 2	STHMEATS7 Run Off Dam 1	STHMEATS8 Run Off Dam 2	----	----
			Sampling date / time	01-Aug-2024 00:00	01-Aug-2024 00:00	01-Aug-2024 00:00	----	----
Compound	CAS Number	LOR	Unit	CA2404906-006	CA2404906-007	CA2404906-008	--------	--------
				Result	Result	Result	----	----
EG005CA: Total Metals by ICP-OES - Continued								
Calcium	7440-70-2	0.10	mg/L	**25.6**	**17.6**	**25.8**	**----**	**----**
Magnesium	7439-95-4	0.10	mg/L	**23.6**	**13.9**	**23.7**	**----**	**----**
Sodium	7440-23-5	0.1	mg/L	**305**	**185**	**306**	**----**	**----**
EA006CA: Sodium Adsorption Ratio								
ø Sodium Adsorption Ratio	----	0.01	-	**10.8**	**8.11**	**10.6**	**----**	**----**