CERTIFICATE OF ANALYSIS

Work Order	: **ES2512422**	Page	: 1 of 6
Client	: **SOUTHERN MEATS PTY. LTD**	Laboratory	: Environmental Division Sydney
Contact	: Mick Sperring	Contact	: Customer Services ES
Address	: PO BOX 244 GOULBURN 2580	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: STHMEATS_Water_Sampling	Date Samples Received	: 01-May-2025 13:15
Order number	: ----	Date Analysis Commenced	: 01-May-2025
C-O-C number	: ----	Issue Date	: 12-May-2025 10:00
Sampler	: Mick Sperring		
Site	: ----		
Quote number	: ES25SOUMEA0001		
No. of samples received	: 9		
No. of samples analysed	: 9		

Accreditation No. 825
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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

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.

- EK057G: LOR raised for Nitrite on sample 1 due to sample matrix.
- EP030: The residue DO for samples 1-4 are less than 1 mg/L. This indicates that the sample has not been diluted enough and the BOD is greater than 960 mg/L, 9865 mg/L, 926 mg/L and 929 mg/L respectively. The results reported are estimated from the greatest dilutions.
- EP030: The DO depletion for sample #7 is less than 2 mg/L. This inidcates that the sample has been over-diluted and the BOD is less than 15 mg/L. The result reported is estimated from the lowest dilution.
- EK059G: LOR raised for NOx due to sample matrix.
- EK057G: LOR raised for Nitrite due to sample matrix.
- TDS by method EA-015 sample 1 may bias high due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Ex Daff	Circular Anaerobic Lagoon	Aerated Lagoon	Setting Pond	Storage Dam 1
				Sampling date / time	01-May-2025 06:00	01-May-2025 06:00	01-May-2025 06:00	01-May-2025 06:00	01-May-2025 06:30
Compound	CAS Number	LOR	Unit		ES2512422-001	ES2512422-002	ES2512422-003	ES2512422-004	ES2512422-005
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.04**	**6.97**	**7.82**	**7.63**	**7.94**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**2830**	**3760**	**3480**	**3560**	**3370**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**2880**	**2010**	**1940**	**2140**	**1810**
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		**2300**	**965**	**1310**	**1250**	**264**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**199**	**232**	**240**	**238**	**280**
ED093F: SAR and Hardness Calculations									
^ Sodium Adsorption Ratio	----	0.01	-		**18.1**	**16.0**	**26.8**	**23.5**	**15.5**
ED093T: Total Major Cations									
Calcium	7440-70-2	1	mg/L		**37**	**14**	**19**	**22**	**23**
Magnesium	7439-95-4	1	mg/L		**21**	**25**	**15**	**16**	**23**
Sodium	7440-23-5	1	mg/L		**317**	**310**	**314**	**322**	**352**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.10	<0.10	**0.03**	<0.10	<0.10
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.28**	<0.10	**0.25**	<0.10	<0.10
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.28**	<0.10	**0.28**	<0.10	<0.10
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**492**	**398**	**399**	**366**	**237**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**492**	**398**	**399**	**366**	**237**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**59.3**	**50.3**	**55.9**	**54.1**	**30.6**
EP026SP: Chemical Oxygen Demand (Spectrophotometric)									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Ex Daff	Circular Anaerobic Lagoon	Aerated Lagoon	Setting Pond	Storage Dam 1
				Sampling date / time	01-May-2025 06:00	01-May-2025 06:00	01-May-2025 06:00	01-May-2025 06:00	01-May-2025 06:30
Compound	CAS Number	LOR	Unit		ES2512422-001	ES2512422-002	ES2512422-003	ES2512422-004	ES2512422-005
					Result	Result	Result	Result	Result
EP026SP: Chemical Oxygen Demand (Spectrophotometric) - Continued									
Chemical Oxygen Demand	----	10	mg/L		**10200**	**3870**	**3980**	**3880**	**1020**
EP030: Biochemical Oxygen Demand (BOD)									
Biochemical Oxygen Demand	----	2	mg/L		**960**	**985**	**926**	**929**	**324**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Storage Dam 2	Run Off Dam 1	Run Off Dam 2	Runowaters creek	----
				Sampling date / time	01-May-2025 06:30	01-May-2025 06:30	01-May-2025 06:45	01-May-2025 06:45	----
Compound	CAS Number	LOR	Unit		ES2512422-006	ES2512422-007	ES2512422-008	ES2512422-009	--------
					Result	Result	Result	Result	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		8.01	8.00	8.63	7.52	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		3290	2680	1810	358	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		1720	1620	1240	244	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		240	80	46	36	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		288	314	249	42	----
ED093F: SAR and Hardness Calculations									
^ Sodium Adsorption Ratio	----	0.01	-		15.3	16.3	13.7	1.15	----
ED093T: Total Major Cations									
Calcium	7440-70-2	1	mg/L		29	32	27	26	----
Magnesium	7439-95-4	1	mg/L		26	29	24	15	----
Sodium	7440-23-5	1	mg/L		367	424	323	30	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.10	<0.10	0.10	<0.01	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.10	<0.10	0.25	0.19	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.10	<0.10	0.35	0.19	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		207	68.5	20.2	2.7	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		207	68.5	20.6	2.9	----
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		29.4	23.9	19.2	0.32	----
EP020: Oil and Grease (O&G)									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Storage Dam 2	Run Off Dam 1	Run Off Dam 2	Runowaters creek	----
				Sampling date / time	01-May-2025 06:30	01-May-2025 06:30	01-May-2025 06:45	01-May-2025 06:45	----
Compound	CAS Number	LOR	Unit		ES2512422-006	ES2512422-007	ES2512422-008	ES2512422-009	--------
					Result	Result	Result	Result	----
EP020: Oil and Grease (O&G) - Continued									
Oil & Grease	----	5	mg/L		**----**	**----**	**----**	<5	**----**
EP026SP: Chemical Oxygen Demand (Spectrophotometric)									
Chemical Oxygen Demand	----	10	mg/L		**967**	**377**	**243**	**58**	**----**
EP030: Biochemical Oxygen Demand (BOD)									
Biochemical Oxygen Demand	----	2	mg/L		**133**	**15**	**9**	**3**	**----**