CERTIFICATE OF ANALYSIS

Work Order	: **ES2314135**	Page	: 1 of 4
Client	: **NSW OFFICE OF ENVIRONMENT AND HERITAGE**	Laboratory	: Environmental Division Sydney
Contact	: Oeh Forensics	Contact	: Customer Services ES
Address	: 59 - 61 Goulburn Street P.O. Box A290 Sydney South NSW 1232 Sydney 2000	Address	: [redacted]
Telephone	: +61 02 9995 5000	Telephone	: +61-2-8784 8555
Project	: 20230136	Date Samples Received	: 01-May-2023 13:00
Order number	: 4500806025	Date Analysis Commenced	: 01-May-2023
C-O-C number	: ----	Issue Date	: 03-May-2023 17:47
Sampler	: ----		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 3		
No. of samples analysed	: 3		

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
- Surrogate Control Limits

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*
[redacted]	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
[redacted]	LCMS Coordinator	Sydney Organics, 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.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	232701	232705	232709	----	----
			Sampling date / time	28-Apr-2023 00:00	28-Apr-2023 00:00	28-Apr-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2314135-001	ES2314135-002	ES2314135-003	--------	--------
				Result	Result	Result	---	---
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.04	0.06	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.04	0.08	0.08	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	1.4	1.6	1.7	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	1.4	1.7	1.8	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	0.27	0.21	0.26	----	----
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.12	0.12	0.09	----	----
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	10	µg/L	<10	<10	<10	----	----
2.4-DB	94-82-6	10	µg/L	<10	<10	<10	----	----
Dicamba	1918-00-9	10	µg/L	<10	<10	<10	----	----
Mecoprop	93-65-2	10	µg/L	<10	<10	<10	----	----
MCPA	94-74-6	10	µg/L	<10	<10	<10	----	----
2.4-DP	120-36-5	10	µg/L	<10	<10	<10	----	----
2.4-D	94-75-7	10	µg/L	<10	<10	<10	----	----
Triclopyr	55335-06-3	10	µg/L	<10	<10	<10	----	----
Silvex (2.4.5-TP/Fenoprop)	93-72-1	10	µg/L	<10	<10	<10	----	----
2.4.5-T	93-76-5	10	µg/L	<10	<10	<10	----	----
MCPB	94-81-5	10	µg/L	<10	<10	<10	----	----
Picloram	1918-02-1	10	µg/L	<10	<10	<10	----	----
Clopyralid	1702-17-6	10	µg/L	<10	<10	<10	----	----
Fluroxypyr	69377-81-7	10	µg/L	<10	<10	<10	----	----
2.6-D	575-90-6	10	µg/L	<10	<10	<10	----	----
2.4.6-T	575-89-3	10	µg/L	<10	<10	<10	----	----
EP204: Glyphosate and AMPA								
Glyphosate	1071-83-6	10	µg/L	<10	<10	<10	----	----
AMPA	1066-51-9	10	µg/L	<10	<10	<10	----	----
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	10	%	113	111	109	----	----

Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	64	140