

CERTIFICATE OF ANALYSIS

Work Order : CA2201471 Client : NSW Department of Planning, Industry and Environment - DPIE Water Contact : Joe Fuller Address : 10 Johnston Crescent Blayney NSW 2799 Telephone : ---- Project : Oberon STP Order number : 4500002422 C-O-C number : ---- Sampler : ---- Site : Oberon STP Quote number : ---- No. of samples received : 4 No. of samples analysed : 4	Page : 1 of 3 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-Mar-2022 07:30 Date Analysis Commenced : 03-Mar-2022 Issue Date : 10-Mar-2022 22:55
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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.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Clare Kennedy	Analyst	Inorganics, Fyshwick, ACT
Jing Zeng	Analyst	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 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)				Sample ID	Oberon STP A Trickle Filter East	Oberon STP B Trickle Filter West	Oberon STP C Clarifier Effluent	Oberon STP D Pond 2 Effluent	----
Sampling date / time				28-Feb-2022 00:00	28-Feb-2022 00:00	28-Feb-2022 00:00	28-Feb-2022 00:00	----	
Compound	CAS Number	LOR	Unit	CA2201471-001	CA2201471-002	CA2201471-003	CA2201471-004	-----	
				Result	Result	Result	Result	----	
EA005CA: pH									
pH	----	0.01	pH Unit	7.12	7.26	6.91	7.46	----	
EA010CA: Conductivity									
Electrical Conductivity @ 25°C	----	2	µS/cm	----	----	----	415	----	
ED037CA: Alkalinity									
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	----	
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	43.4	48.3	45.8	56.7	----	
Total Alkalinity as CaCO3	----	1	mg/L	43	48	46	57	----	
EA015CA: Total Dissolved Solids									
Total Dissolved Solids	----	10	mg/L	----	----	----	233	----	
EA025CA: Suspended Solids									
Suspended Solids (SS)	----	2	mg/L	11	28	27	22	----	
EP030CA: Biochemical Oxygen Demand									
Biochemical Oxygen Demand	----	2	mg/L	22	18	6	5	----	
EK055CA: Ammonia as N									
Ammonia as N	7664-41-7	0.1	mg/L N	6.8	6.9	6.0	5.5	----	
EK059CA: Nitrite plus Nitrate as N									
Nitrite + Nitrate as N	----	0.05	mg/L N	16.3	16.1	13.9	12.9	----	
EK060CA: Organic Nitrogen as N									
Organic Nitrogen as N	----	0.05	mg/L N	6.10	5.10	1.90	2.90	----	
EK062CA: Total Nitrogen as N									
Total Nitrogen as N	----	0.05	mg/L N	29.2	28.1	21.8	21.3	----	
EK067CA: Total Phosphorus as P									
Total Phosphorus as P	----	0.01	mg/L P	2.30	2.15	0.52	0.59	----	
EG005CA: Dissolved Metals by ICP-OES									
Calcium	7440-70-2	0.10	mg/L	----	----	----	11.1	----	
Magnesium	7439-95-4	0.10	mg/L	----	----	----	6.98	----	
Sodium	7440-23-5	0.1	mg/L	----	----	----	42.2	----	
EA006CA: Sodium Adsorption Ratio									
∅ Sodium Adsorption Ratio	----	0.01	-	----	----	----	2.44	----	