CERTIFICATE OF ANALYSIS

Work Order	: **CA2205531**	Page	: 1 of 3
Client	: **NSW Department of Planning, Industry and Environment - DPIE Water**	Laboratory	: ALS Water Resources Group
Contact	: Joe Fuller	Contact	: Client Services
Address	: 10 Johnston Crescent Blayney NSW 2799	Address	: 16B Lithgow Street Fyshwick ACT Australia 2609
Telephone	: ----	Telephone	: +61 2 6202 5404
Project	: Oberon STP	Date Samples Received	: 16-Aug-2022 08:30
Order number	:	Date Analysis Commenced	: 16-Aug-2022
C-O-C number	: ----	Issue Date	: 24-Aug-2022 16:28
Sampler	: Joe Fuller		
Site	: ----		
Quote number	: ----		
No. of samples received	: 4		
No. of samples analysed	: 4		

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, Fyshwick, ACT
Clare Kennedy	Analyst	Inorganics, Fyshwick, ACT
Geetha Ramasundara	Chemistry Teamleader	Inorganics, Fyshwick, ACT
Jing Zeng	Analyst	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 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	Oberon STP - 1 Primary Sed Tank Effluent	Oberon STP - 2 Trickle Filter Effluent East	Oberon STP - 3 Trickle Filter Effluent West	Oberon STP - 4 Clarifier Effluent	----
				Sampling date / time	09-Aug-2022 00:00	09-Aug-2022 00:00	09-Aug-2022 00:00	09-Aug-2022 00:00	----
					CA2205531-001	CA2205531-002	CA2205531-003	CA2205531-004	--------
					Result	Result	Result	Result	----
EA005CA: pH									
pH	----	0.01	pH Unit		**8.15**	**8.08**	**7.94**	**8.18**	**----**
EA010CA: Conductivity									
Electrical Conductivity @ 25°C	----	2	µS/cm		**342**	**295**	**236**	**328**	**----**
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		**116**	**82.4**	**53.7**	**61.2**	**----**
Total Alkalinity as CaCO3	----	1	mg/L		**116**	**82**	**54**	**61**	**----**
EA015CA: Total Dissolved Solids									
Total Dissolved Solids	----	10	mg/L		**155**	**177**	**138**	**165**	**----**
EA025CA: Suspended Solids									
Suspended Solids (SS)	----	2	mg/L		**60**	**35**	**39**	**42**	**----**
EP030CA: Biochemical Oxygen Demand									
Biochemical Oxygen Demand	----	2	mg/L		**52**	**10**	**4**	**11**	**----**
EK055CA: Ammonia as N									
Ammonia as N	7664-41-7	0.1	mg/L N		**11.8**	**5.8**	**1.8**	**5.4**	**----**
EK059CA: Nitrite plus Nitrate as N									
Nitrite + Nitrate as N	----	0.05	mg/L N		**3.14**	**10.5**	**7.85**	**11.0**	**----**
EK060CA: Organic Nitrogen as N									
Organic Nitrogen as N	----	0.05	mg/L N		**7.56**	**2.60**	**2.45**	**2.70**	**----**
EK062CA: Total Nitrogen as N									
Total Nitrogen as N	----	0.05	mg/L N		**22.5**	**18.9**	**12.1**	**19.1**	**----**
EK067CA: Total Phosphorus as P									
Total Phosphorus as P	----	0.01	mg/L P		**2.01**	**1.11**	**0.51**	**1.25**	**----**