

CERTIFICATE OF ANALYSIS

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| Work Order : WN2003297 Client : OBERON COUNCIL Contact : Andrew Krol Address : 137-139 OBERON STREET OBERON NSW,AUSTRALIA 2787 Telephone : ---- Project : OBERON WASTE WATER / Horace St Order number : 5230 C-O-C number : ---- Sampler : Andrew Krol Site : ---- Quote number : WN Blanket Quote No. of samples received : 6 No. of samples analysed : 6 | Page : 1 of 4 Laboratory : ALS Water - Newcastle Contact : Andrea Swan Address : 5/585 Maitland Road Newcastle West NSW Australia 2304 Telephone : +61 2 4014 2500 Date Samples Received : 15-Apr-2020 08:30 Date Analysis Commenced : 15-Apr-2020 Issue Date : 21-Apr-2020 15:07 |
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. 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> |
|--------------------|-------------------------|--------------------------------|
| Gregory Towers | Technical Officer | Chemistry, Newcastle West, NSW |
| Neil Martin | Team Leader - Chemistry | Chemistry, Newcastle West, 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 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.

- EK055A: Ammonia result is higher than TN results for sample 006 but taking into account the concentrations present and the dilutions required this is within acceptable criteria.



Analytical Results

| Sub-Matrix: WATER (Matrix: WATER) | | | | Client sample ID | Horace St 3a | Horace St 3b | Horace St 3c | Horace St 4a | Horace St 4b |
|---------------------------------------------------------|------------|------|---------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------|
| Client sampling date / time | | | | 10-Apr-2020 07:00 | 10-Apr-2020 12:00 | 10-Apr-2020 16:00 | 12-Apr-2020 07:00 | 12-Apr-2020 12:00 | |
| Compound | CAS Number | LOR | Unit | WN2003297-001 | WN2003297-002 | WN2003297-003 | WN2003297-004 | WN2003297-005 | |
| | | | | Result | Result | Result | Result | Result | |
| EA005: pH | | | | | | | | | |
| pH Value | ---- | 0.01 | pH Unit | 7.26 | 7.42 | 7.13 | 7.22 | 7.09 | |
| EA025: Total Suspended Solids dried at 104 ± 2°C | | | | | | | | | |
| Suspended Solids (SS) | ---- | 5 | mg/L | 108 | 108 | 188 | 76 | 144 | |
| EA036.WN: Volatile Suspended Solids | | | | | | | | | |
| Volatile Suspended Solids @ 550°C | ---- | 1 | mg/L | 70 | 66 | 74 | 46 | 90 | |
| ED037: Alkalinity | | | | | | | | | |
| Total Alkalinity as CaCO3 | ---- | 1 | mg/L | 330 | 380 | 290 | 280 | 260 | |
| EK055A: Ammonia as N | | | | | | | | | |
| Ammonia as N | 7664-41-7 | 0.05 | mg/L | 47.7 | 66.0 | 17.8 | 34.7 | 20.5 | |
| EK062A: Total Nitrogen as N | | | | | | | | | |
| Total Nitrogen as N | ---- | 0.1 | mg/L | 52.8 | 67.3 | 19.1 | 36.5 | 23.2 | |
| EK067A: Total Phosphorus as P | | | | | | | | | |
| Total Phosphorus as P | ---- | 0.05 | mg/L | 7.21 | 7.93 | 2.19 | 5.48 | 3.78 | |
| EP026SP.WN: Chemical Oxygen Demand (COD) | | | | | | | | | |
| Chemical Oxygen Demand | ---- | 10 | mg/L | 384 | 290 | 126 | 136 | 192 | |
| EP030.WN: Biochemical Oxygen Demand (BOD) | | | | | | | | | |
| Biochemical Oxygen Demand | ---- | 2 | mg/L | 155 | 183 | 53 | 84 | 99 | |



Analytical Results

| Sub-Matrix: WATER (Matrix: WATER) | | Client sample ID | | | Horace St 4c | ---- | ---- | ---- | ---- |
|---------------------------------------------------------|------------|-------------------|---------|---------------|--------------|-------|-------|-------|------|
| Client sampling date / time | | 12-Apr-2020 16:00 | | | ---- | ---- | ---- | ---- | |
| Compound | CAS Number | LOR | Unit | WN2003297-006 | ----- | ----- | ----- | ----- | |
| | | | | Result | ---- | ---- | ---- | ---- | |
| EA005: pH | | | | | | | | | |
| pH Value | ---- | 0.01 | pH Unit | 7.02 | ---- | ---- | ---- | ---- | |
| EA025: Total Suspended Solids dried at 104 ± 2°C | | | | | | | | | |
| Suspended Solids (SS) | ---- | 5 | mg/L | 86 | ---- | ---- | ---- | ---- | |
| EA036.WN: Volatile Suspended Solids | | | | | | | | | |
| Volatile Suspended Solids @ 550°C | ---- | 1 | mg/L | 54 | ---- | ---- | ---- | ---- | |
| ED037: Alkalinity | | | | | | | | | |
| Total Alkalinity as CaCO3 | ---- | 1 | mg/L | 260 | ---- | ---- | ---- | ---- | |
| EK055A: Ammonia as N | | | | | | | | | |
| Ammonia as N | 7664-41-7 | 0.05 | mg/L | 24.5 | ---- | ---- | ---- | ---- | |
| EK062A: Total Nitrogen as N | | | | | | | | | |
| Total Nitrogen as N | ---- | 0.1 | mg/L | 23.4 | ---- | ---- | ---- | ---- | |
| EK067A: Total Phosphorus as P | | | | | | | | | |
| Total Phosphorus as P | ---- | 0.05 | mg/L | 4.46 | ---- | ---- | ---- | ---- | |
| EP026SP.WN: Chemical Oxygen Demand (COD) | | | | | | | | | |
| Chemical Oxygen Demand | ---- | 10 | mg/L | 169 | ---- | ---- | ---- | ---- | |
| EP030.WN: Biochemical Oxygen Demand (BOD) | | | | | | | | | |
| Biochemical Oxygen Demand | ---- | 2 | mg/L | 101 | ---- | ---- | ---- | ---- | |