

## CERTIFICATE OF ANALYSIS

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|---|---|
| <b>Work Order</b> : <b>CA1903127</b><br><b>Client</b> : <b>Southern Meats</b><br><b>Contact</b> : <b>Andy Grealy</b><br><b>Address</b> : <b>Mazamet Road</b><br><b>Goulburn NSW 2580</b><br><b>Telephone</b> : <b>02 4824 0000</b><br><b>Project</b> : <b>Monthly Wastewater</b><br><b>Order number</b> : ----<br><b>C-O-C number</b> : ----<br><b>Sampler</b> : ----<br><b>Site</b> : ----<br><b>Quote number</b> : ----<br><b>No. of samples received</b> : <b>8</b><br><b>No. of samples analysed</b> : <b>8</b> | <b>Page</b> : 1 of 4<br><b>Laboratory</b> : ALS Water Resources Group<br><b>Contact</b> : Client Services<br><b>Address</b> : 16B Lithgow Street Fyshwick ACT Australia 2609<br><br><b>Telephone</b> : +61 2 6202 5404<br><b>Date Samples Received</b> : 08-May-2019 12:15<br><b>Date Analysis Commenced</b> : 09-May-2019<br><b>Issue Date</b> : 20-May-2019 16:35 |
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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> |
|--------------------|-----------------------|-------------------------------|
| Amanda Gonzalez    | Laboratory Technician | Inorganics, Fyshwick, ACT     |
| Clare Kennedy      | Analyst               | Inorganics, Fyshwick, ACT     |
| Geetha Ramasundara | Chemistry Teamleader  | Inorganics, Fyshwick, ACT     |
| Titus Vimalasiri   | Metals Teamleader     | Inorganics, Fyshwick, ACT     |



## General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by 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.

- 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)

Client sample ID

|  |            |      |         | STHMEATS1<br>Ex Daf | STHMEATS2<br>Circular Anaerobic<br>Lagoon | STHMEATS3<br>Aerated Lagoon | STHMEATS4<br>Settling Pond 2 | STHMEATS5<br>Storage Dam 1 |
|--|------------|------|---------|---------------------|---|-----------------------------|------------------------------|----------------------------|
| Client sampling date / time                  |            |      |         | 07-May-2019 00:00   | 07-May-2019 00:00                         | 07-May-2019 00:00           | 07-May-2019 00:00            | 07-May-2019 00:00          |
| Compound                                     | CAS Number | LOR  | Unit    | CA1903127-001       | CA1903127-002                             | CA1903127-003               | CA1903127-004                | CA1903127-005              |
|  |            |      |         | Result              | Result                                    | Result                      | Result                       | Result                     |
| <b>EA005CA: pH</b>                           |            |      |         |                     |   |                             |                              |                            |
| pH   | ----       | 0.01 | pH Unit | 6.77                | 7.35                                      | 7.80                        | 7.95                         | 7.71                       |
| <b>EA010CA: Conductivity</b>                 |            |      |         |                     |   |                             |                              |                            |
| Electrical Conductivity @ 25°C               | ----       | 2    | µS/cm   | 1600                | 2980                                      | 3030                        | 3020                         | 2460                       |
| <b>ED009CA: Anions</b>                       |            |      |         |                     |   |                             |                              |                            |
| Chloride                                     | 16887-00-6 | 0.1  | mg/L    | 203                 | 196                                       | 205                         | 208                          | 294                        |
| <b>EA015CA: Total Dissolved Solids</b>       |            |      |         |                     |   |                             |                              |                            |
| Total Dissolved Solids                       | ----       | 10   | mg/L    | 1480                | 1110                                      | 1050                        | 1110                         | 1200                       |
| <b>EA025CA: Suspended Solids</b>             |            |      |         |                     |   |                             |                              |                            |
| Suspended Solids (SS)                        | ----       | 2    | mg/L    | 2190                | 602                                       | 257                         | 243                          | 206                        |
| <b>EP030CA: Biochemical Oxygen Demand</b>    |            |      |         |                     |   |                             |                              |                            |
| Biochemical Oxygen Demand                    | ----       | 2    | mg/L    | 2800                | 200                                       | 121                         | 119                          | 36                         |
| <b>EP026CA: Chemical Oxygen Demand</b>       |            |      |         |                     |   |                             |                              |                            |
| Chemical Oxygen Demand                       | ----       | 5    | mg/L    | 5470                | 1060                                      | 577                         | 513                          | 367                        |
| <b>EK059CA: Nitrite plus Nitrate as N</b>    |            |      |         |                     |   |                             |                              |                            |
| Nitrite + Nitrate as N                       | ----       | 0.05 | mg/L N  | <0.05               | <0.05                                     | <0.05                       | <0.05                        | 22.1                       |
| <b>EK061CA: Total Kjeldahl Nitrogen as N</b> |            |      |         |                     |   |                             |                              |                            |
| Total Kjeldahl Nitrogen as N                 | ----       | 0.05 | mg/L N  | 296                 | 271                                       | 251                         | 252                          | 98.9                       |
| <b>EK062CA: Total Nitrogen as N</b>          |            |      |         |                     |   |                             |                              |                            |
| Total Nitrogen as N                          | ----       | 0.05 | mg/L N  | 296                 | 271                                       | 251                         | 252                          | 121                        |
| <b>EK067CA: Total Phosphorus as P</b>        |            |      |         |                     |   |                             |                              |                            |
| Total Phosphorus as P                        | ----       | 0.01 | mg/L P  | 45.8                | 36.8                                      | 35.6                        | 36.9                         | 32.3                       |
| <b>EG005CA: Total Metals by ICP-OES</b>      |            |      |         |                     |   |                             |                              |                            |
| Calcium                                      | 7440-70-2  | 0.05 | mg/L    | 33.2                | 44.6                                      | 39.0                        | 39.5                         | 44.1                       |
| Magnesium                                    | 7439-95-4  | 0.05 | mg/L    | 18.3                | 20.5                                      | 21.2                        | 21.6                         | 27.1                       |
| Sodium                                       | 7440-23-5  | 0.1  | mg/L    | 222                 | 270                                       | 274                         | 273                          | 311                        |
| <b>EA006CA: Sodium Adsorption Ratio</b>      |            |      |         |                     |   |                             |                              |                            |
| ∅ Sodium Adsorption Ratio                    | ----       | 0.01 | -       | 11.2                | 8.14                                      | 8.46                        | 8.73                         | 8.73                       |



## Analytical Results

| Sub-Matrix: WATER<br>(Matrix: WATER)         |            | Client sample ID  |         |               | STHMEATS6<br>Storage Dam 2 | STHMEATS7<br>Run Off Dam 1 | STHMEATS8<br>Run Off Dam 2 | ----  | ---- |      |
|--|------------|-------------------|---------|---------------|----------------------------|----------------------------|----------------------------|-------|------|------|
| Client sampling date / time                  |            | 07-May-2019 00:00 |         |               | 07-May-2019 00:00          |                            | 07-May-2019 00:00          |       | ---- | ---- |
| Compound                                     | CAS Number | LOR               | Unit    | CA1903127-006 | CA1903127-007              | CA1903127-008              | -----                      | ----- |      |      |
|  |            |                   |         | Result        | Result                     | Result                     | ----                       | ----  |      |      |
| <b>EA005CA: pH</b>                           |            |                   |         |               |                            |                            |                            |       |      |      |
| pH   | ----       | 0.01              | pH Unit | 7.89          | 9.34                       | 9.37                       | ----                       | ----  |      |      |
| <b>EA010CA: Conductivity</b>                 |            |                   |         |               |                            |                            |                            |       |      |      |
| Electrical Conductivity @ 25°C               | ----       | 2                 | µS/cm   | 2440          | 2330                       | 2380                       | ----                       | ----  |      |      |
| <b>ED009CA: Anions</b>                       |            |                   |         |               |                            |                            |                            |       |      |      |
| Chloride                                     | 16887-00-6 | 0.1               | mg/L    | 319           | 403                        | 457                        | ----                       | ----  |      |      |
| <b>EA015CA: Total Dissolved Solids</b>       |            |                   |         |               |                            |                            |                            |       |      |      |
| Total Dissolved Solids                       | ----       | 10                | mg/L    | 1110          | 1370                       | 1630                       | ----                       | ----  |      |      |
| <b>EA025CA: Suspended Solids</b>             |            |                   |         |               |                            |                            |                            |       |      |      |
| Suspended Solids (SS)                        | ----       | 2                 | mg/L    | 240           | 22                         | 40                         | ----                       | ----  |      |      |
| <b>EP030CA: Biochemical Oxygen Demand</b>    |            |                   |         |               |                            |                            |                            |       |      |      |
| Biochemical Oxygen Demand                    | ----       | 2                 | mg/L    | 32            | 4                          | 22                         | ----                       | ----  |      |      |
| <b>EP026CA: Chemical Oxygen Demand</b>       |            |                   |         |               |                            |                            |                            |       |      |      |
| Chemical Oxygen Demand                       | ----       | 5                 | mg/L    | 364           | 131                        | 291                        | ----                       | ----  |      |      |
| <b>EK059CA: Nitrite plus Nitrate as N</b>    |            |                   |         |               |                            |                            |                            |       |      |      |
| Nitrite + Nitrate as N                       | ----       | 0.05              | mg/L N  | 7.72          | <0.05                      | 0.10                       | ----                       | ----  |      |      |
| <b>EK061CA: Total Kjeldahl Nitrogen as N</b> |            |                   |         |               |                            |                            |                            |       |      |      |
| Total Kjeldahl Nitrogen as N                 | ----       | 0.05              | mg/L N  | 92.3          | 6.74                       | 17.3                       | ----                       | ----  |      |      |
| <b>EK062CA: Total Nitrogen as N</b>          |            |                   |         |               |                            |                            |                            |       |      |      |
| Total Nitrogen as N                          | ----       | 0.05              | mg/L N  | 100           | 6.74                       | 17.4                       | ----                       | ----  |      |      |
| <b>EK067CA: Total Phosphorus as P</b>        |            |                   |         |               |                            |                            |                            |       |      |      |
| Total Phosphorus as P                        | ----       | 0.01              | mg/L P  | 34.2          | 10.0                       | 12.6                       | ----                       | ----  |      |      |
| <b>EG005CA: Total Metals by ICP-OES</b>      |            |                   |         |               |                            |                            |                            |       |      |      |
| Calcium                                      | 7440-70-2  | 0.05              | mg/L    | 47.8          | 16.0                       | 20.6                       | ----                       | ----  |      |      |
| Magnesium                                    | 7439-95-4  | 0.05              | mg/L    | 28.8          | 34.0                       | 25.7                       | ----                       | ----  |      |      |
| Sodium                                       | 7440-23-5  | 0.1               | mg/L    | 329           | 407                        | 453                        | ----                       | ----  |      |      |
| <b>EA006CA: Sodium Adsorption Ratio</b>      |            |                   |         |               |                            |                            |                            |       |      |      |
| ∅ Sodium Adsorption Ratio                    | ----       | 0.01              | -       | 9.23          | 12.7                       | 15.7                       | ----                       | ----  |      |      |