

Analytical Report 216875



Issue Date: 25/01/2020
Issued By : Sydney Water Laboratory Services

Delivery Address: Sydney Water Corporation
51 Hermitage Rd
West Ryde NSW 2114

Analysis contact: Tel : (02) 9800 6935
Email: analyticalservices@sydneywater.com.au

Attention: Victor Papierniak-Wojtowicz
Customer: Cobar Shire Council
Customer ID: ZCSC

Address: PO Box 223
Cobar NSW 2835
Telephone: 6835 5800
Email: victor.papierniak@cobar.nsw.gov.au

CONTENTS

1. Sydney Water Approved Signatory
2. Sample Summary
3. Analytical results
4. Comments
5. Laboratory QC results

Sydney Water Approved Signatory

Rong Feng, Clean & Waste Water Analyst
Jouliet Ashak, Microbiology Analyst

Jeya Gajendran, Clean & Waste Water Analyst
Cyrell Cascabel, Nutrients Analyst



Where a result is required to meet a compliance limit or specification the associated uncertainty must be considered. Uncertainty estimates are available for all accredited test results.

Corporate Accreditation No 63

Accredited for compliance with ISO/IEC 17025 - Testing

SAMPLE SUMMARY

| <u>Client Sample ID</u> | <u>Sample Number</u> | <u>Sampling Procedure</u> | <u>Date Sampled</u> | <u>Date Received</u> | <u>Date Authorised</u> | <u>Description</u> |
|-----------------------------|--------------------------|-------------------------------|-------------------------|--------------------------|----------------------------|--------------------|
| Point 1 Polisher | L20006037 | 1 | 15/01/2020 | 16/01/2020 | 24/01/2020 | |
| Point 2 Turkeys | L20006038 | 1 | 15/01/2020 | 16/01/2020 | 24/01/2020 | |
| CSC Inlet | L20006721 | 1 | 15/01/2020 | 17/01/2020 | 23/01/2020 | |
| Splitter Box 1 | L20006722 | 1 | 15/01/2020 | 17/01/2020 | 23/01/2020 | |
| Splitter Box 2 | L20006723 | 1 | 15/01/2020 | 17/01/2020 | 23/01/2020 | |

Sampling procedures

- 1 Samples analysed as received.
- 2 Samples collected as per FS procedures SAWI 070, Excluding Oil & Grease which is collected as per clients instructions.
- 3 Samples collected as per FS procedures SAWI 070.
- 4 Results reported as received from WNSW.

ANALYTICAL RESULTS

| | | | | | | | | | |
|--|----------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--|--|--|
| Client Sample ID | | Point 1 Polisher | Point 2 Turkeys | CSC Inlet | Splitter Box 1 | Splitter Box 2 | | | |
| Sampled Date | | 15/01/2020 07:10:00 AM | 15/01/2020 07:10:00 AM | 15/01/2020 07:31:00 AM | 15/01/2020 07:20:00 AM | 15/01/2020 07:15:00 AM | | | |
| Sample Number | | L20006037 | L20006038 | L20006721 | L20006722 | L20006723 | | | |
| CHEMISTRY | | | | | | | | | |
| WC12MET : Conductivity | | | | | | | | | |
| Conductivity (mS/m) | mS/m | 166.7 | 164.0 | - | - | - | | | |
| Date of Performance | DD/MM/YY | 17/01/20 | 17/01/20 | | | | | | |
| WC17NS : Biological oxygen demand | | | | | | | | | |
| BOD5 | mg/L | 5 | 6 | 170 | 100 | 78 | | | |
| Date of Performance | DD/MM/YY | 17/01/20 | 17/01/20 | 18/01/20 | 18/01/20 | 18/01/20 | | | |
| WC26NS500 : Grease | | | | | | | | | |
| Oil & Grease | mg/L | <5 | <5 | - | - | - | | | |
| Date of Performance | DD/MM/YY | 20/01/20 | 20/01/20 | | | | | | |
| WC44NS : Determination of Total, Fixed & Volatile Suspended Solids | | | | | | | | | |
| Total Suspended Solids | mg/L | 38 | 54 | - | - | - | | | |
| Date of Performance | DD/MM/YY | 21/01/20 | 23/01/20 | | | | | | |
| MICRO | | | | | | | | | |

"-" = Not required or refer to Laboratory comment

| | | | | | | | | | |
|--|-----------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--|--|--|
| Client Sample ID | | Point 1 Polisher | Point 2 Turkeys | CSC Inlet | Splitter Box 1 | Splitter Box 2 | | | |
| Sampled Date | | 15/01/2020 07:10:00 AM | 15/01/2020 07:10:00 AM | 15/01/2020 07:31:00 AM | 15/01/2020 07:20:00 AM | 15/01/2020 07:15:00 AM | | | |
| Sample Number | | L20006037 | L20006038 | L20006721 | L20006722 | L20006723 | | | |
| MICRO | | | | | | | | | |
| MI01MUG : Faecal Coliform and/or E. coli | | | | | | | | | |
| E.coli | CFU/100mL | - | <1 | - | - | - | | | |
| Faecal Coliform | CFU/100mL | - | <1 | - | - | - | | | |
| Date of Performance | D/M/Y H:M | | 16/01/20 16:32 | | | | | | |
| NUTRIENTS | | | | | | | | | |
| NU102 : Nitrogen & Phosphorus | | | | | | | | | |
| Total Nitrogen | mg/L | 3.74 | 4.37 | - | - | - | | | |
| Total Phosphorus | mg/L | 0.850 | 1.19 | - | - | - | | | |
| Date of Performance | DD/MM/YY | 20/01/20 | 20/01/20 | | | | | | |

COMMENTS

| <u>Sample ID</u> | <u>Comment Level</u> | <u>Method</u> | <u>Test</u> | <u>Comment</u> |
|------------------|----------------------|---------------|-------------|-------------------------------|
| L20006038 | Method | MI01MUG | - | Result confirmed. |
| L20006722 | Method | WC17NS | - | Analysed outside holding time |
| L20006723 | Method | WC17NS | - | Analysed outside holding time |

Analysis**Analysis Requirements**

"-" = Not required or refer to Laboratory comment

MI01MUG Faecal Coliforms and/or E.Coli: all results are presumptive unless indicated otherwise.

LABORATORY QC RESULTS

N/A - Not Applicable

PQL - Practical Quantitation Limit

LOQ - Limit of Quantification

RPD - Relative Percent Difference

SPIKE/Positive Control - Addition of a known amount and concentration

Duplicate Precision = Accepted - Result 2 within 95% confidence limits of result 1

Duplicate Precision = Outlier - Result 2 outside 95% confidence limits of result 1

Duplicate Precision = Not calculated - Result is outside test range

| LOQ | Blank | Positive Control <i>Acceptance Criteria</i> | Negative Control <i>Acceptance Criteria</i> | Duplicate1 | Duplicate2 | Precision <i>Acceptance Criteria</i> |
|---|-------|--|--|------------|------------|---|
| MI01MUG [Membrane Filtration]E.coli | | | | | | |
| <1 CFU/100mL | <1 | Accepted | Accepted | <1 | <1 | Accepted |
| MI01MUG [Membrane Filtration]Faecal Coliform | | | | | | |
| <1 CFU/100mL | <1 | Accepted | Accepted | <1 | <1 | Accepted |

| LOQ | Blank | Control <i>Acceptance Criteria</i> | Spike <i>Acceptance Criteria</i> | Duplicate1 | Duplicate2 | RPD <i>Acceptance Criteria</i> |
|------------------------------------|--------|---------------------------------------|--|------------|------------|-----------------------------------|
| NU102 Total Nitrogen | | | | | | |
| <0.05 mg/L | <0.05 | 0.93 <i>0.88 - 1.12 mg/L</i> | 106 % Recovery <i>80 - 120 % Recovery</i> | 1.01 | 1.01 | 0.00 % <i>0 - 20 %</i> |
| NU102 Total Phosphorus | | | | | | |
| <0.002 mg/L | <0.002 | 0.050 <i>0.045 - 0.055 mg/L</i> | 94 % Recovery <i>80 - 120 % Recovery</i> | 0.002 | 0.003 | B <i>0 - 0 %</i> |
| WC12MET Conductivity (mS/m) | | | | | | |
| <0.1 mS/m | F | 142.0 <i>139.3 - 143.3 mS/m</i> | E | 166.7 | 166.2 | 0.30 % <i>0 - 20 %</i> |
| WC17NS BOD5 | | | | | | |
| <2 mg/L | <2 | 180 <i>139 - 257 mg/L</i> | E | 170 | 150 | 12.50 % <i>0 - 20 %</i> |

| LOQ | Blank | Control <i>Acceptance Criteria</i> | Spike <i>Acceptance Criteria</i> | Duplicate1 | Duplicate2 | RPD <i>Acceptance Criteria</i> |
|--------------------------------------|-------|---------------------------------------|-------------------------------------|------------|------------|-----------------------------------|
| WC26NS500 Oil & Grease | | | | | | |
| <5 mg/L | <5 | 92 85.1 - 101.5 mg/L | E | 45 | 49 | B 0 - 0 % |
| WC44NS Total Suspended Solids | | | | | | |
| <2 mg/L | F | | E | | | |

Extra Note:

F: Blank is not applicable for this analyte

E: Spike is not applicable for this analyte

DUPLICATE Total Phosphorus B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ

DUPLICATE Oil & Grease B: Duplicate RPD reject criteria is not applicable, results are <10 times LOQ