

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE

AR-25-NC-019328-01

REPORT DATE

07/07/2025

Attention Otago Regional Council

Private Bag 1954

9054 DUNEDIN

NEW ZEALAND

Phone

Email

Copy to: regulatory

Contact for your orders:

Contract:

Submission Reference:

Shotover WWTP

Emergency Discharge to Shotover River

Order code:

EUNZCH-00222166

Purchase Order Number:

SAMPLE CODE

817-2025-00064846

Sample Name

GT7800RC

Sample Reference

U/S WWTP and SH6 Bridge GT7800RC

Reception Date & Time:

30/06/2025 13:05

Reception temperature:

4.3 °C

Analysis Started on:

01/07/2025

Analysis Ending Date:

07/07/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date & Time

30/06/2025 11:10

RESULTS

LOQ

| | | | | |
|--------|--|-------|------------|------|
| *NCOAK | Ammoniacal Nitrogen by Discrete Analyser | | | |
| | Ammonia nitrogen | <0.01 | mg/l | 0.01 |
| *ZMJU7 | Enumeration of Escherichia coli by Membrane Filtration | | | |
| | Escherichia coli | 3 | cfu/100 ml | 1 |
| *NCOAF | pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time) | | | |
| | pH | 7.7 | | 0.1 |
| *NC05B | Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode | | | |
| | Biochemical oxygen demand (BOD) | <2 | mg/l | 2 |
| *NC03M | Total Nitrogen in Water by Discrete Analyser (Trace) | | | |
| | Total Nitrogen (N) | 0.10 | mg/l | 0.01 |
| *NC04C | Total Oxidised Nitrogen in Water by Discrete Analyser | | | |
| | Total Oxidised Nitrogen | 0.05 | mg/l | 0.01 |
| *NC76G | Total Phosphorus in Water by Discrete Analyser (Trace) | | | |
| | Total phosphorus | 0.03 | mg/l | 0.01 |
| *NCOAE | Total Suspended Solids in Water by Gravimetry | | | |
| | Suspended Solids | 39.0 | mg/l | 2.5 |

SAMPLE CODE

817-2025-00064847

Sample Name

GT7790RC

Sample Reference

Final Discharge Post UV GT7790RC

Reception Date & Time:

30/06/2025 13:05

Reception temperature:

4.3 °C

Analysis Started on:

01/07/2025

Analysis Ending Date:

07/07/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date & Time

30/06/2025 12:25

RESULTS

LOQ

| | | | | |
|--------|---|------|------|------|
| *NCOAK | Ammoniacal Nitrogen by Discrete Analyser | | | |
| | Ammonia nitrogen | 12.1 | mg/l | 0.01 |

Food & Water Testing

| RESULTS | | | LOQ |
|---------|--|------|------------|
| *ZMJU7 | Enumeration of Escherichia coli by Membrane Filtration | | |
| | Escherichia coli | 1 | cfu/100 ml |
| | | | 1 |
| *NCOAF | pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time) | | |
| | pH | 7.3 | 0.1 |
| *NC05B | Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode | | |
| | Biochemical oxygen demand (BOD) | 22 | mg/l |
| | | | 2 |
| *NC03M | Total Nitrogen in Water by Discrete Analyser (Trace) | | |
| | Total Nitrogen (N) | 21.2 | mg/l |
| | | | 0.01 |
| *NC04C | Total Oxidised Nitrogen in Water by Discrete Analyser | | |
| | Total Oxidised Nitrogen | 1.4 | mg/l |
| | | | 0.01 |
| *NC76G | Total Phosphorus in Water by Discrete Analyser (Trace) | | |
| | Total phosphorus | 2.89 | mg/l |
| | | | 0.01 |
| *NCOAE | Total Suspended Solids in Water by Gravimetry | | |
| | Suspended Solids | 52.0 | mg/l |
| | | | 2.5 |

| | | | |
|------------------------|--|------------------------|------------|
| SAMPLE CODE | | 817-2025-00064848 | |
| Sample Name | GT7810RC | | |
| Sample Reference | Shotover WWTP discharge to Shotover River GT7810RC | | |
| Reception Date & Time: | 30/06/2025 13:05 | Reception temperature: | 4.3 °C |
| Analysis Started on: | 01/07/2025 | Analysis Ending Date: | 07/07/2025 |
| Product Type | Surface water, raw water | Sampler(s) | |
| Sampled Date & Time | 30/06/2025 11:30 | | |

| RESULTS | | | LOQ |
|---------|--|------|------------|
| ⑨*NCOAK | Ammoniacal Nitrogen by Discrete Analyser | | |
| | Ammonia nitrogen | 10.0 | mg/l |
| | | | 0.01 |
| *ZMJU7 | Enumeration of Escherichia coli by Membrane Filtration | | |
| | Escherichia coli | 30 | cfu/100 ml |
| | | | 1 |
| *NCOAF | pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time) | | |
| | pH | 7.4 | 0.1 |
| *NC05B | Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode | | |
| | Biochemical oxygen demand (BOD) | 16 | mg/l |
| | | | 2 |
| *NC03M | Total Nitrogen in Water by Discrete Analyser (Trace) | | |
| | Total Nitrogen (N) | 19.8 | mg/l |
| | | | 0.01 |
| *NC04C | Total Oxidised Nitrogen in Water by Discrete Analyser | | |
| | Total Oxidised Nitrogen | 3.2 | mg/l |
| | | | 0.01 |
| *NC76G | Total Phosphorus in Water by Discrete Analyser (Trace) | | |
| | Total phosphorus | 2.87 | mg/l |
| | | | 0.01 |
| *NCOAE | Total Suspended Solids in Water by Gravimetry | | |
| | Suspended Solids | 96.0 | mg/l |
| | | | 2.5 |

| | | | |
|------------------------|---|------------------------|------------|
| SAMPLE CODE | | 817-2025-00064849 | |
| Sample Name | GT7820RC | | |
| Sample Reference | Approx 200m D/S of discharge to Shotover River GT7820RC | | |
| Reception Date & Time: | 30/06/2025 13:05 | Reception temperature: | 4.3 °C |
| Analysis Started on: | 01/07/2025 | Analysis Ending Date: | 07/07/2025 |
| Product Type | Surface water, raw water | Sampler(s) | |
| Sampled Date & Time | 30/06/2025 11:45 | | |

Food & Water Testing

| RESULTS | | | LOQ |
|---------|--|--------------|------|
| *NC0AK | Ammoniacal Nitrogen by Discrete Analyser | | |
| | Ammonia nitrogen | 0.73 mg/l | 0.01 |
| *ZMJU7 | Enumeration of Escherichia coli by Membrane Filtration | | |
| | Escherichia coli | 6 cfu/100 ml | 1 |
| *NC0AF | pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time) | | |
| | pH | 7.7 | 0.1 |
| *NC05B | Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode | | |
| | Biochemical oxygen demand (BOD) | <2 mg/l | 2 |
| *NC03M | Total Nitrogen in Water by Discrete Analyser (Trace) | | |
| | Total Nitrogen (N) | 1.41 mg/l | 0.01 |
| *NC04C | Total Oxidised Nitrogen in Water by Discrete Analyser | | |
| | Total Oxidised Nitrogen | 0.29 mg/l | 0.01 |
| *NC76G | Total Phosphorus in Water by Discrete Analyser (Trace) | | |
| | Total phosphorus | 0.21 mg/l | 0.01 |
| *NC0AE | Total Suspended Solids in Water by Gravimetry | | |
| | Suspended Solids | 71.3 mg/l | 2.5 |

| | | | |
|-----------------------------------|--------------------------------|-------------------------------|------------|
| SAMPLE CODE | 817-2025-00064850 | | |
| Sample Name | GT784ORC | | |
| Sample Reference | U/S of Kawareau River GT784ORC | | |
| Reception Date & Time: | 30/06/2025 13:05 | Reception temperature: | 4.3 °C |
| Analysis Started on: | 01/07/2025 | Analysis Ending Date: | 07/07/2025 |
| Product Type | Surface water, raw water | Sampler(s) | |
| Sampled Date & Time | 30/06/2025 12:00 | | |

| RESULTS | | | LOQ |
|---------|--|---------------|------|
| *NC0AK | Ammoniacal Nitrogen by Discrete Analyser | | |
| | Ammonia nitrogen | <0.01 mg/l | 0.01 |
| *ZMJU7 | Enumeration of Escherichia coli by Membrane Filtration | | |
| | Escherichia coli | 12 cfu/100 ml | 1 |
| *NC0AF | pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time) | | |
| | pH | 7.5 | 0.1 |
| *NC05B | Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode | | |
| | Biochemical oxygen demand (BOD) | <2 mg/l | 2 |
| *NC03M | Total Nitrogen in Water by Discrete Analyser (Trace) | | |
| | Total Nitrogen (N) | 0.10 mg/l | 0.01 |
| *NC04C | Total Oxidised Nitrogen in Water by Discrete Analyser | | |
| | Total Oxidised Nitrogen | 0.03 mg/l | 0.01 |
| *NC76G | Total Phosphorus in Water by Discrete Analyser (Trace) | | |
| | Total phosphorus | <0.01 mg/l | 0.01 |
| *NC0AE | Total Suspended Solids in Water by Gravimetry | | |
| | Suspended Solids | 11.5 mg/l | 2.5 |

Food & Water Testing

SAMPLE CODE 817-2025-00064851

Sample Name GT785ORC

Sample Reference D/S of Kawarau River GT785ORC

Reception Date & Time: 30/06/2025 13:05

Reception temperature:

4.3 °C

Analysis Started on: 01/07/2025

Analysis Ending Date:

07/07/2025

Product Type Surface water, raw water

Sampler(s)

Sampled Date & Time 30/06/2025 10:42

RESULTS

LOQ

| | | | | |
|--------|--|-------|------------|------|
| *NC0AK | Ammoniacal Nitrogen by Discrete Analyser | | | |
| | Ammonia nitrogen | <0.01 | mg/l | 0.01 |
| *ZMJU7 | Enumeration of Escherichia coli by Membrane Filtration | | | |
| | Escherichia coli | 9 | cfu/100 ml | 1 |
| *NC0AF | pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time) | | | |
| | pH | 7.7 | | 0.1 |
| *NC05B | Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode | | | |
| | Biochemical oxygen demand (BOD) | <2 | mg/l | 2 |
| *NC03M | Total Nitrogen in Water by Discrete Analyser (Trace) | | | |
| | Total Nitrogen (N) | 0.15 | mg/l | 0.01 |
| *NC04C | Total Oxidised Nitrogen in Water by Discrete Analyser | | | |
| | Total Oxidised Nitrogen | 0.05 | mg/l | 0.01 |
| *NC76G | Total Phosphorus in Water by Discrete Analyser (Trace) | | | |
| | Total phosphorus | 0.20 | mg/l | 0.01 |
| *NC0AE | Total Suspended Solids in Water by Gravimetry | | | |
| | Suspended Solids | 235 | mg/l | 2.5 |

LIST OF METHODS

NC03M **Total Nitrogen in Water by Discrete Analyser (Trace):**
 APHA Online Edition 4500-P J/4500-NH

NC05B **Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode:** APHA Online Edition 5210 B

NC0AF **pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time):** APHA 24th Edition 4500-H B

NC76G **Total Phosphorus in Water by Discrete Analyser (Trace):** APHA Online Edition 4500-P B/J mod.

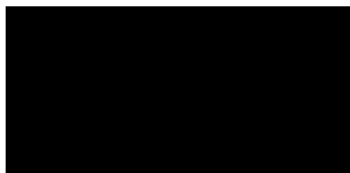
NC04C **Total Oxidised Nitrogen in Water by Discrete Analyser:**
 APHA Online Edition 4500-NO3 H

NC0AE **Total Suspended Solids in Water by Gravimetry:** APHA Online Edition 2540 D

NC0AK **Ammoniacal Nitrogen by Discrete Analyser:** ISBN 0117516139 mod.

ZMJU7 **Escherichia coli E [IVC] <1 >8 000 cfu/100 ml (0) mTEC Agar-F:** US-EPA 1603:2014

Signature



EXPLANATORY NOTE

Food & Water Testing

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited
- *Test was performed at Eurofins ELS Limited, 142 Esk Street, Invercargill

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

MAV means Maximum Allowable Value

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