

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE

AR-25-NC-031367-01

REPORT DATE

23/10/2025

Attention Otago Regional Council

Private Bag 1954
9054 DUNEDIN
NEW ZEALAND

Phone

Email

Copy to:

Contact for your orders:

Contract:

Submission Reference:

Shotover WWTP

Emergency Discharge to Shotover River

Order code:

EUNZCH-00233127

Purchase Order Number:

SAMPLE CODE

817-2025-00101624

Sample Name

GT7800RC

Sample Reference

U/S WWTP and SH6 Bridge

Sampling Point code:

GT7800RC

Sampling Point name:

1. Upstream WWTP (before the SH6 bridge) - ORC Sam

Reception Date & Time:

13/10/2025 14:54

Reception temperature:

14.6 °C

Analysis Started on:

14/10/2025

Analysis Ending Date:

23/10/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date & Time

13/10/2025 13:25

RESULTS

LOQ

NC03M Total Nitrogen in Water by Discrete Analyser (Trace)

Total Nitrogen (N) 0.09 mg/l 0.01

NC04C Total Oxidised Nitrogen in Water by Discrete Analyser

Total Oxidised Nitrogen 0.06 mg/l 0.01

NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode

Biochemical oxygen demand (BOD) <2 mg/l 2

NC0AE Total Suspended Solids in Water by Gravimetry

Suspended Solids 274 mg/l 2.5

NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)

pH 7.9 0.1

© NC0AK Ammoniacal Nitrogen by Discrete Analyser

Ammonia nitrogen 0.07 mg/l 0.01

NC76G Total Phosphorus in Water by Discrete Analyser (Trace)

Total phosphorus 0.15 mg/l 0.01

ZMJU7 Enumeration of Escherichia coli by Membrane Filtration

Escherichia coli 16 cfu/100 ml 1

SAMPLE CODE

817-2025-00101625

Sample Name

GT7790RC

Sample Reference

Final Discharge Post UV

Sampling Point code:

GT7790RC

Sampling Point name:

2. Final Discharge post UV - ORC Sampling

Reception Date & Time:

13/10/2025 14:54

Reception temperature:

14.6 °C

Analysis Started on:

14/10/2025

Analysis Ending Date:

23/10/2025

Product Type

Treated Effluent

Sampler(s)

Sampled Date & Time

13/10/2025 14:35

Food & Water Testing

	RESULTS		LOQ
NC03M Total Nitrogen in Water by Discrete Analyser (Trace)			
Total Nitrogen (N)	9.93	mg/l	0.01
NC04C Total Oxidised Nitrogen in Water by Discrete Analyser			
Total Oxidised Nitrogen	2.1	mg/l	0.01
NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode			
Biochemical oxygen demand (BOD)	9	mg/l	2
NC0AE Total Suspended Solids in Water by Gravimetry			
Suspended Solids	19.8	mg/l	2.5
NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)			
pH	7.2		0.1
© NC0AK Ammoniacal Nitrogen by Discrete Analyser			
Ammonia nitrogen	5.01	mg/l	0.01
NC76G Total Phosphorus in Water by Discrete Analyser (Trace)			
Total phosphorus	2.93	mg/l	0.01
ZMJU7 Enumeration of Escherichia coli by Membrane Filtration			
Escherichia coli	3	cfu/100 ml	1

SAMPLE CODE	817-2025-00101626		
Sample Name	GT7910RC		
Sample Reference	Shotover WWTP Discharge to Shotover River		
Sampling Point code:	GT7810RC	Sampling Point name:	3. Discharge to the river - ORC Sampling
Reception Date & Time:	13/10/2025 14:54	Reception temperature:	14.6 °C
Analysis Started on:	14/10/2025	Analysis Ending Date:	23/10/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	13/10/2025 14:12		

	RESULTS		LOQ
NC03M Total Nitrogen in Water by Discrete Analyser (Trace)			
Total Nitrogen (N)	8.88	mg/l	0.01
NC04C Total Oxidised Nitrogen in Water by Discrete Analyser			
Total Oxidised Nitrogen	2.2	mg/l	0.01
NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode			
Biochemical oxygen demand (BOD)	8	mg/l	2
NC0AE Total Suspended Solids in Water by Gravimetry			
Suspended Solids	18.2	mg/l	2.5
NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)			
pH	7.3		0.1
© NC0AK Ammoniacal Nitrogen by Discrete Analyser			
Ammonia nitrogen	4.23	mg/l	0.01
NC76G Total Phosphorus in Water by Discrete Analyser (Trace)			
Total phosphorus	2.84	mg/l	0.01
ZMJU7 Enumeration of Escherichia coli by Membrane Filtration			
Escherichia coli	47	cfu/100 ml	1

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SAMPLE CODE	817-2025-00101627		
Sample Name	GT782ORC		
Sample Reference	Appox. 200m D/S of discharge to Shotover River		
Sampling Point code:	GT782ORC	Sampling Point name:	4. 200 meters downstream - ORC Sampling
Reception Date & Time:	13/10/2025 14:54	Reception temperature:	14.6 °C
Analysis Started on:	14/10/2025	Analysis Ending Date:	23/10/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	13/10/2025 13:25		

RESULTS

LOQ

NC03M Total Nitrogen in Water by Discrete Analyser (Trace)			
Total Nitrogen (N)	0.30	mg/l	0.01
NC04C Total Oxidised Nitrogen in Water by Discrete Analyser			
Total Oxidised Nitrogen	0.06	mg/l	0.01
NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode			
Biochemical oxygen demand (BOD)	<2	mg/l	2
NC0AE Total Suspended Solids in Water by Gravimetry			
Suspended Solids	310	mg/l	2.5
NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)			
pH	7.8		0.1
©NC0AK Ammoniacal Nitrogen by Discrete Analyser			
Ammonia nitrogen	0.08	mg/l	0.01
NC76G Total Phosphorus in Water by Discrete Analyser (Trace)			
Total phosphorus	0.23	mg/l	0.01
ZMJU7 Enumeration of Escherichia coli by Membrane Filtration			
Escherichia coli	27	cfu/100 ml	1

SAMPLE CODE	817-2025-00101628		
Sample Name	GT784ORC		
Sample Reference	U/S of Kawarau River		
Sampling Point code:	GT784ORC	Sampling Point name:	5. Upstream of Kawarau River - ORC Sampling
Reception Date & Time:	13/10/2025 14:54	Reception temperature:	14.6 °C
Analysis Started on:	14/10/2025	Analysis Ending Date:	23/10/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	13/10/2025 13:45		

RESULTS

LOQ

NC03M Total Nitrogen in Water by Discrete Analyser (Trace)			
Total Nitrogen (N)	0.03	mg/l	0.01
NC04C Total Oxidised Nitrogen in Water by Discrete Analyser			
Total Oxidised Nitrogen	0.03	mg/l	0.01
NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode			
Biochemical oxygen demand (BOD)	<2	mg/l	2
NC0AE Total Suspended Solids in Water by Gravimetry			
Suspended Solids	<2.5	mg/l	2.5
NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)			
pH	7.6		0.1
©NC0AK Ammoniacal Nitrogen by Discrete Analyser			

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RESULTS			LOQ
© NC0AK Ammoniacal Nitrogen by Discrete Analyser			
Ammonia nitrogen	0.01	mg/l	0.01
NC76G Total Phosphorus in Water by Discrete Analyser (Trace)			
Total phosphorus	<0.01	mg/l	0.01
ZMJU7 Enumeration of Escherichia coli by Membrane Filtration			
Escherichia coli	14	cfu/100 ml	1

SAMPLE CODE	817-2025-00101629		
Sample Name	GT783ORC		
Sample Reference	D/S of Kawarau River		
Sampling Point code:	GT785ORC	Sampling Point name:	6. Downstream of Kawarau River - ORC Sampling
Reception Date & Time:	13/10/2025 14:54	Reception temperature:	14.6 °C
Analysis Started on:	14/10/2025	Analysis Ending Date:	23/10/2025
Product Type	Surface water, raw water		
Sampled Date & Time	13/10/2025 13:02	Sampler(s)	

RESULTS			LOQ
NC03M Total Nitrogen in Water by Discrete Analyser (Trace)			
Total Nitrogen (N)	0.11	mg/l	0.01
NC04C Total Oxidised Nitrogen in Water by Discrete Analyser			
Total Oxidised Nitrogen	0.02	mg/l	0.01
NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode			
Biochemical oxygen demand (BOD)	<2	mg/l	2
NC0AE Total Suspended Solids in Water by Gravimetry			
Suspended Solids	167	mg/l	2.5
NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)			
pH	7.8		0.1
© NC0AK Ammoniacal Nitrogen by Discrete Analyser			
Ammonia nitrogen	0.01	mg/l	0.01
NC76G Total Phosphorus in Water by Discrete Analyser (Trace)			
Total phosphorus	0.10	mg/l	0.01
ZMJU7 Enumeration of Escherichia coli by Membrane Filtration			
Escherichia coli	45	cfu/100 ml	1

LIST OF METHODS			
NC03M	Total Nitrogen in Water by Discrete Analyser (Trace): APHA 24th Edition 4500-P J/4500-NH * Test was performed at Eurofins ELS Limited, 142 Esk Street, Invercargill	NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser: APHA 24th Edition 4500-NO3 H * Test was performed at Eurofins ELS Limited, 142 Esk Street, Invercargill
NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode: APHA 24th Edition 5210 B * Test was performed at Eurofins ELS Limited, 142 Esk Street, Invercargill	NC0AE	Total Suspended Solids in Water by Gravimetry: APHA 24th Edition 2540 D * Test was performed at Eurofins ELS Limited, 142 Esk Street, Invercargill
NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B * Test was performed at Eurofins ELS Limited, 142 Esk Street, Invercargill	NC0AK	Ammoniacal Nitrogen by Discrete Analyser: ISBN 0117516139 mod. * Test was performed at Eurofins ELS Limited, 142 Esk Street, Invercargill * Test was performed at Eurofins ELS Limited, 142 Esk Street, Invercargill
NC76G	Total Phosphorus in Water by Discrete Analyser (Trace): APHA 24th Edition 4500-P B/J mod.		

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ZMJU7 **Escherichia coli E [IVC] <1 >8 000 cfu/100 ml (0) mTEC**

Agar-F: US-EPA 1603:2014

* Test was performed at Eurofins ELS Limited, 142 Esk Street,
Invercargill

EXPLANATORY NOTE

- 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

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

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

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