

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE

AR-25-NC-012132-01

REPORT DATE

30/04/2025

Attention Otago Regional Council
compliance
Private Bag 1954
9054 DUNEDIN
NEW ZEALAND

Phone (0800) 474 082

Email

Copy to: regulatory

Contact for your orders:

Contract: Shotover WWTP

Submission Reference: Emergency Discharge to Shotover River

Order code:

EUNZCH-00215116

Purchase Order Number:

SAMPLE CODE

817-2025-00041209

Sample Name

GT7800RC

Sample Reference

U/S WWTP and SH6 Bridge

Reception Date & Time:

22/04/2025 13:20

Reception temperature:

12.8 °C

Analysis Started on:

22/04/2025

Analysis Ending Date:

30/04/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date & Time

22/04/2025 11:02

RESULTS

LOQ

⑩*NC0AK	Ammoniacal Nitrogen by Discrete Analyser		
	Ammonia nitrogen	<0.01 mg/l	0.01
②NW340	Chlorophyll a		
	Chlorophyll A	<1.9 µg/l	1.9
*ZMJU7	Enumeration of Escherichia coli by Membrane Filtration		
	Escherichia coli	11 cfu/100 ml	1
*NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
	pH	7.9	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)	0.07 mg/l	0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	0.01 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	8.3 mg/l	2.5
⑩*NC03Q	Turbidity in Water by Nephelometry		
	Turbidity	5.6 NTU	0.1

Food & Water Testing

SAMPLE CODE		817-2025-00041210			
Sample Name		GT7790RC			
Sample Reference		Final Discharge Post UV			
Reception Date & Time:		22/04/2025 13:20		Reception temperature:	12.8 °C
Analysis Started on:		22/04/2025		Analysis Ending Date:	29/04/2025
Product Type		Treated Effluent		Sampler(s)	
Sampled Date & Time		22/04/2025 13:00			
RESULTS			LOQ		
☉NCOAK	Ammoniacal Nitrogen by Discrete Analyser				
	Ammonia nitrogen	8.81	mg/l	0.01	
☉NW340	Chlorophyll a				
	Chlorophyll A	128	µg/l	1.9	
*ZMJU7	Enumeration of Escherichia coli by Membrane Filtration				
	Escherichia coli	13	cfu/100 ml	1	
*NCOAF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)				
	pH	7.2		0.1	
*NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode				
	Biochemical oxygen demand (BOD)	10	mg/l	2	
*NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)				
	Total Nitrogen (N)	17.0	mg/l	0.01	
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser				
	Total Oxidised Nitrogen	3.8	mg/l	0.01	
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)				
	Total phosphorus	1.84	mg/l	0.01	
*NCOAE	Total Suspended Solids in Water by Gravimetry				
	Suspended Solids	13.5	mg/l	2.5	
☉NC03Q	Turbidity in Water by Nephelometry				
	Turbidity	7.2	NTU	0.1	

SAMPLE CODE		817-2025-00041211			
Sample Name		GT7810RC			
Sample Reference		Shotover WWTP Discharge to Shotover River			
Reception Date & Time:		22/04/2025 13:20		Reception temperature: 12.8 °C	
Analysis Started on:		22/04/2025		Analysis Ending Date: 29/04/2025	
Product Type		Surface water, raw water		Sampler(s)	
Sampled Date & Time		22/04/2025 12:31			
RESULTS			LOQ		
①	*NCOAK Ammoniactal Nitrogen by Discrete Analyser				
	Ammonia nitrogen	8.40	mg/l	0.01	
②	*NW340 Chlorophyll a				
	Chlorophyll A	164	µg/l	1.9	
	*ZMJU7 Enumeration of Escherichia coli by Membrane Filtration				
	Escherichia coli	11	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)	15	mg/l	2	

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RESULTS			LOQ
*NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)		
	Total Nitrogen (N)	17.2	mg/l
			0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	4.1	mg/l
			0.01
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	1.82	mg/l
			0.01
*NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	23.5	mg/l
			2.5
②*NC03Q	Turbidity in Water by Nephelometry		
	Turbidity	10	NTU
			0.1

SAMPLE CODE		817-2025-00041212	
Sample Name		GT7820RC	
Sample Reference		Approx 200m D/S of discharge Shotover River	
Reception Date & Time:		22/04/2025 13:20	Reception temperature: 12.8 °C
Analysis Started on:		22/04/2025	Analysis Ending Date: 29/04/2025
Product Type		Surface water, raw water	Sampler(s)
Sampled Date & Time		22/04/2025 12:20	

RESULTS			LOQ
②*NC0AK	Ammoniacal Nitrogen by Discrete Analyser		
	Ammonia nitrogen	0.64	mg/l
			0.01
②NW340	Chlorophyll a		
	Chlorophyll A	15.1	µg/l
			1.9
*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)	1.23	mg/l
			0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	0.34	mg/l
			0.01
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	0.15	mg/l
			0.01
*NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	9.2	mg/l
			2.5
②*NC03Q	Turbidity in Water by Nephelometry		
	Turbidity	5	NTU
			0.1

SAMPLE CODE		817-2025-00041213	
Sample Name		GT7840RC	
Sample Reference		U/S of Kawarau River	
Reception Date & Time:		22/04/2025 13:20	Reception temperature: 12.8 °C
Analysis Started on:		22/04/2025	Analysis Ending Date: 30/04/2025
Product Type		Surface water, raw water	Sampler(s)
Sampled Date & Time		22/04/2025 11:55	

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	RESULTS	LOQ
*NC0AK Ammoniacal Nitrogen by Discrete Analyser		
Ammonia nitrogen	<0.01 mg/l	0.01
*NW340 Chlorophyll a		
Chlorophyll A	<1.9 µg/l	1.9
*ZMJU7 Enumeration of Escherichia coli by Membrane Filtration		
Escherichia coli	28 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)	0.04 mg/l	0.01
*NC04C Total Oxidised Nitrogen in Water by Discrete Analyser		
Total Oxidised Nitrogen	0.02 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	<2.5 mg/l	2.5
*NC03Q Turbidity in Water by Nephelometry		
Turbidity	0.5 NTU	0.1

SAMPLE CODE	817-2025-00041214		
Sample Name	GT7830RC		
Sample Reference	D/S of Kawarau River		
Reception Date & Time:	22/04/2025 13:20	Reception temperature:	12.8 °C
Analysis Started on:	22/04/2025	Analysis Ending Date:	30/04/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	22/04/2025 11:22		

	RESULTS	LOQ
*NC0AK Ammoniacal Nitrogen by Discrete Analyser		
Ammonia nitrogen	0.03 mg/l	0.01
*NW340 Chlorophyll a		
Chlorophyll A	<1.9 µg/l	1.9
*ZMJU7 Enumeration of Escherichia coli by Membrane Filtration		
Escherichia coli	11 cfu/100 ml	1
*NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
pH	7.9	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)	0.12 mg/l	0.01
*NC04C Total Oxidised Nitrogen in Water by Discrete Analyser		
Total Oxidised Nitrogen	0.04 mg/l	0.01
*NC76G Total Phosphorus in Water by Discrete Analyser (Trace)		
Total phosphorus	0.05 mg/l	0.01
*NC0AE Total Suspended Solids in Water by Gravimetry		

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RESULTS			LOQ
*NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	29.2	mg/l
			2.5
⑨NC03Q	Turbidity in Water by Nephelometry		
	Turbidity	4.8	NTU
			0.1

LIST OF METHODS

NC03M	Total Nitrogen in Water by Discrete Analyser (Trace): APHA Online Edition 4500-P J/4500-NH	NC03Q	Turbidity in Water by Nephelometry: APHA 24th Edition 2130 B mod.
NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser: APHA Online Edition 4500-NO3 H	NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode: APHA Online Edition 5210 B
NC0AE	Total Suspended Solids in Water by Gravimetry: APHA Online Edition 2540 D	NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B
NC0AK	Ammoniacal Nitrogen by Discrete Analyser: ISBN 0117516139 mod.	NC76G	Total Phosphorus in Water by Discrete Analyser (Trace): APHA Online Edition 4500-P B/J mod.
NW340	Chlorophyll a: APHA Online Edition 10200 H	ZMJU7	Escherichia coli E (Water) [NZ Water] <1 >8 000 /100 ml (0) mTEC Agar-F: US-EPA 1603:2014

Signature

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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
- *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

Food & Water Testing

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

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Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

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