

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE

AR-25-NC-013704-01

REPORT DATE

14/05/2025

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-00216384

Purchase Order Number:

SAMPLE CODE

817-2025-00045765

Sample Name

GT7800RC

Sample Reference

U/S WWTP and SH6 Bridge

Reception Date & Time:

05/05/2025 14:43

Reception temperature:

10.8 °C

Analysis Started on:

05/05/2025

Analysis Ending Date:

14/05/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date & Time

05/05/2025 12:41

RESULTS

LOQ

①*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	1 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)	0.02 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	0.03 mg/l	0.01
*NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	20.9 mg/l	2.5
③*NC03Q	Turbidity in Water by Nephelometry		
	Turbidity	1.6 NTU	0.1

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SAMPLE CODE		817-2025-00045766		
Sample Name	GT7790RC			
Sample Reference	Final discharge post UV			
Reception Date & Time:	05/05/2025 14:43	Reception temperature:	10.8 °C	
Analysis Started on:	05/05/2025	Analysis Ending Date:	14/05/2025	
Product Type	Surface water, raw water	Sampler(s)	██████████	
Sampled Date & Time	05/05/2025 14:10			
RESULTS			LOQ	
①*NC0AK	Ammoniacal Nitrogen by Discrete Analyser			
	Ammonia nitrogen	0.07	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	2	cfu/100 ml	1
*NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)			
	pH	7.0		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)	4.69	mg/l	0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser			
	Total Oxidised Nitrogen	3.9	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	5.0	mg/l	2.5
③*NC03Q	Turbidity in Water by Nephelometry			
	Turbidity	0.85	NTU	0.1

SAMPLE CODE		817-2025-00045767		
Sample Name		GT7810RC		
Sample Reference		Shotover WWTP discharge to Shotover River		
Reception Date & Time:		05/05/2025 14:43	Reception temperature:	10.8 °C
Analysis Started on:		05/05/2025	Analysis Ending Date:	14/05/2025
Product Type		Surface water, raw water	Sampler(s)	
Sampled Date & Time		05/05/2025 13:36		
		RESULTS	LOQ	
①*NC0AK	Ammoniacal Nitrogen by Discrete Analyser			
	Ammonia nitrogen	0.09	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	19	cfu/100 ml	1
*NC0AF	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)	<2	mg/l	2

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RESULTS			LOQ
*NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)		
	Total Nitrogen (N)	4.44	mg/l
			0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	3.7	mg/l
			0.01
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	0.17	mg/l
			0.01
*NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	3.4	mg/l
			2.5
Ⓢ*NC03Q	Turbidity in Water by Nephelometry		
	Turbidity	1.1	NTU
			0.1

SAMPLE CODE		817-2025-00045768	
Sample Name	GT7820RC		
Sample Reference	Approx 200m d/s of discharge to Shotover River		
Reception Date & Time:	05/05/2025 14:43	Reception temperature:	10.8 °C
Analysis Started on:	05/05/2025	Analysis Ending Date:	14/05/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	05/05/2025 13:24		

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	1	cfu/100 ml
			1
*NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
	pH	7.8	
			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)	0.32	mg/l
			0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	0.26	mg/l
			0.01
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	0.03	mg/l
			0.01
*NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	3.2	mg/l
			2.5
Ⓢ*NC03Q	Turbidity in Water by Nephelometry		
	Turbidity	1	NTU
			0.1

SAMPLE CODE		817-2025-00045769	
Sample Name	GT7840RC		
Sample Reference	U/S of Kawarau River		
Reception Date & Time:	05/05/2025 14:43	Reception temperature:	10.8 °C
Analysis Started on:	05/05/2025	Analysis Ending Date:	14/05/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	05/05/2025 12:57		

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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	23 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)	0.03 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	3.5 mg/l	2.5
*NC03Q Turbidity in Water by Nephelometry		
Turbidity	0.4 NTU	0.1

SAMPLE CODE	817-2025-00045770
Sample Name	GT7850RC
Sample Reference	D/S of Kawarau River
Reception Date & Time:	05/05/2025 14:43
Analysis Started on:	05/05/2025
Product Type	Surface water, raw water
Sampled Date & Time	05/05/2025 12:25
Reception temperature:	10.8 °C
Analysis Ending Date:	14/05/2025
Sampler(s)	

	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	3 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)	0.03 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		

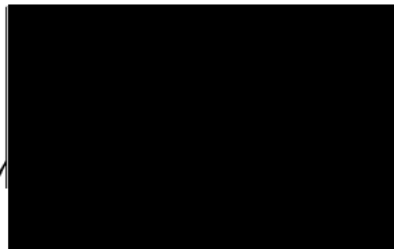
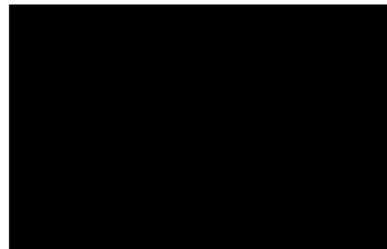
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	RESULTS	LOQ
*NC0AE Total Suspended Solids in Water by Gravimetry		
Suspended Solids	6.2 mg/l	2.5
⑨NC03Q Turbidity in Water by Nephelometry		
Turbidity	0.6 NTU	0.1

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



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

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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.

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