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## Certificate of Analysis MFI0117

### Client Details

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**Client** Natural Aqua Solutions Pty Ltd  
**Contact** Olaf Lyche  
**Address** 33 Allenby Avenue, MALVERN EAST, VIC, 3145

### Sample Details

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**Your Reference** Three Bays - B#Y05212ST  
**Number of Samples** 1 Water  
**Date Samples Received** 06/09/2024  
**Date Instructions Received** 06/09/2024

### Analysis Details

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Please refer to the following pages for results, methodology summary and quality control data.  
Samples were analysed as received from the client. Results relate specifically to the samples as received.  
Results are reported on a dry weight basis for soils and on an as received basis for other matrices.

### Report Details

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**Date Results Requested by** 16/09/2024  
**Date of Reissue** 17/09/2024 - This report supercedes previous report, see amendment history for details

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**Accredited for compliance with ISO/IEC 17025. Tests not covered by NATA are denoted with \*.**

### Authorisation Details

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**Results Approved By** Andrew Townsend, Microbiological Analyst  
Chris De Luca, Assistant Lab Manager  
Pamela Adams, Laboratory Manager, Melbourne  
Sally Rogers, Senior Microbiological Analyst  
Sean McAlary, Chemist  
Tara White, Metals Supervisor  
Tianna Milburn, Senior Chemist  
**Laboratory Manager** Pamela Adams

# Certificate of Analysis MFI0117

## Report Amendment History

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Revision	Reason for Amendment
R-01	This report supercedes MFI0117_R00 due to reference ID update.

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# Certificate of Analysis MFI0117

## Samples in this Report

Envirolab ID	Sample ID	Matrix	Date Sampled	Date Received
MFI0117-01	Y052125T	Water	06/09/2024	06/09/2024

## Sample Comments

General Comment      No attempt to cool was made. Envirolab strongly recommends cooling to <6° C (or an attempt to cool) when samples are transported to the laboratory.

# Certificate of Analysis MFI0117

## Organochlorine Pesticides (Water)

Envirolab ID Your Reference Date Sampled	Units	PQL	MFI0117-01 Y052125T 06/09/2024
alpha-BHC	µg/L	0.20	<0.20
Hexachlorobenzene	µg/L	0.20	<0.20
beta-BHC	µg/L	0.20	<0.20
gamma-BHC	µg/L	0.20	<0.20
delta-BHC	µg/L	0.20	<0.20
Heptachlor	µg/L	0.20	<0.20
Aldrin	µg/L	0.20	<0.20
Heptachlor epoxide	µg/L	0.20	<0.20
trans-Chlordane	µg/L	0.20	<0.20
cis-Chlordane	µg/L	0.20	<0.20
Endosulfan I	µg/L	0.20	<0.20
4,4'-DDE	µg/L	0.20	<0.20
Dieldrin	µg/L	0.20	<0.20
Endrin	µg/L	0.20	<0.20
4,4'-DDD	µg/L	0.20	<0.20
Endosulfan II	µg/L	0.20	<0.20
Endrin aldehyde	µg/L	0.20	<0.20
4,4'-DDT	µg/L	0.20	<0.20
Endosulfan sulfate	µg/L	0.20	<0.20
Endrin ketone	µg/L	0.20	<0.20
Methoxychlor	µg/L	0.20	<0.20
Mirex	µg/L	0.20	<0.20
Total +ve OCP	µg/L	0.20	<0.20
<i>Surrogate 4-chloro-3-nitrobenzotrifluoride</i>	%		82.5

# Certificate of Analysis MFI0117

## Acid Extractable Low Level Metals (Water)

EnviroLab ID	Units	PQL	MFI0117-01
Your Reference			Y052125T
Date Sampled			06/09/2024
Aluminium	µg/L	10	<10
Arsenic	µg/L	1.0	<1.0
Boron	µg/L	20	20
Barium	µg/L	1.0	47
Cadmium	µg/L	0.10	<0.10
Chromium	µg/L	1.0	<1.0
Copper	µg/L	1.0	5.1
Iron	µg/L	10	<10
Mercury	µg/L	0.050	<0.050
Manganese	µg/L	1.0	27
Molybdenum	µg/L	1.0	<1.0
Nickel	µg/L	1.0	20
Lead	µg/L	1.0	<1.0
Antimony	µg/L	1.0	<1.0
Selenium	µg/L	1.0	<1.0
Strontium	µg/L	1.0	350
Uranium	µg/L	1.0	<1.0
Vanadium	µg/L	1.0	10
Zinc	µg/L	1.0	5.4

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## Inorganics - Physical Parameters (Water)

Envirolab ID	Units	PQL	MFI0117-01
Your Reference			Y052125T
Date Sampled			06/09/2024
Total Dissolved Solids	mg/L	5.0	1100

# Certificate of Analysis MFI0117

## Inorganics - Ionic Balance and Indexes (Water)

Envirolab ID	Units	PQL	MFI0117-01
Your Reference			Y052125T
Date Sampled			06/09/2024
Bicarbonate Alkalinity as CaCO3	mg/L as CaCO3	5.0	300
Carbonate Alkalinity as CaCO3	mg/L as CaCO3	5.0	<5.0
Hydroxide OH- as CaCO3	mg/L as CaCO3	5.0	<5.0
Total Alkalinity as CaCO3	mg/L as CaCO3	5.0	300
Chloride	mg/L	1.0	350
Sulfate	mg/L	1.0	56
Calcium	mg/L	0.50	56
Magnesium	mg/L	0.50	88
Potassium	mg/L	0.50	2.7
Sodium	mg/L	0.50	160
Hardness (calc) equivalent CaCO3	mg/L	3.0	500
Ionic Balance	%		0.36
Total Anions	mg/L	7.0	710
Anions as meq	meq/L	0.59	16
Total Cations	mg/L	2.0	310
Cations as meq	meq/L	0.10	17

# Certificate of Analysis MFI0117

## PFAS Short List (Trace Level) (Water) - Analysed By Envirolab Services Sydney

Envirolab ID	Units	PQL	MFI0117-01
Your Reference			Y052125T
Date Sampled			06/09/2024
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.00020	<0.00020
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.00020	<0.00020
Perfluorooctanoic acid (PFOA)	µg/L	0.00020	<0.00020
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.00040	<0.00040
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.00040	<0.00040
<i>Surrogate 13C8 PFOS</i>	%		<i>99.8</i>
<i>Surrogate 13C2 PFOA</i>	%		<i>99.8</i>
Total +ve PFHxS+PFOS	µg/L	0.00020	<0.00020
Total +ve PFOA+PFOS	µg/L	0.00020	<0.00020
Total +ve PFAS	µg/L	0.00020	<0.00020
<i>Extraction Internal Standard 18O2 PFHxS</i>	%		<i>103</i>
<i>Extraction Internal Standard 13C4 PFOS</i>	%		<i>102</i>
<i>Extraction Internal Standard 13C4 PFOA</i>	%		<i>92.0</i>
<i>Extraction Internal Standard 13C2 6:2FTS</i>	%		<i>103</i>
<i>Extraction Internal Standard 13C2 8:2FTS</i>	%		<i>104</i>

# Certificate of Analysis MFI0117

## Heterotrophic Plate Count (Water) - Analysed By MPL Laboratories

<b>Envirolab ID</b>	<b>Units</b>	<b>PQL</b>	MFI0117-01
<b>Your Reference</b>			Y052125T
<b>Date Sampled</b>			06/09/2024
Heterotrophic Plate Count 36C	cfu/mL	10	4700 [1]

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## Microbiological Suite (Water) - Analysed By MPL Laboratories

<b>Envirolab ID</b>	<b>Units</b>	<b>PQL</b>	MFI0117-01
<b>Your Reference</b>			Y052125T
<b>Date Sampled</b>			06/09/2024
Total Yeast and Mould*	cfu/mL	1.0	<1.0

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## Result Comments

Identifier	Description
[1]	Heterotrophic plate count is an estimate.

# Certificate of Analysis MFI0117

## Method Summary

Method ID	Methodology Summary
Calc - ION	Calculation
INORG-006	Alkalinity - determined titrimetrically based on APHA latest edition 2320-B. Solids reported from a 1:5 water extract unless otherwise specified. Total Carbon Dioxide - determined by calculation in accordance with APHA latest edition,4500-CO2 D.
INORG-018	Total Dissolved Solids - determined gravimetrically. The solids are dried at 180±10°C. NOTE: Where the EC of the sample is <100µS/cm, the TDS will typically be below 70mg/L (as the sample is very likely to be at least drinking water quality). Therefore to ensure data quality for TDS, the TDS is typically calculated as per the equation: TDS = EC*0.6
INORG-040	The concentrations of the major ions (mg/L) are converted to milliequivalents and summed. The ionic balance should be within +/- 15% i.e. total anions = total cations +/-15%.
INORG-081	Anions determined by Ion Chromatography. Waters samples are filtered on receipt prior to analysis. Solids are analysed from a water extract. Alternatively determined by colourimetry/turbidity using Discrete Analyser.
METALS-020	Determination of various metals by ICP-OES.
METALS-021	Determination of Mercury by Cold Vapour AAS.
METALS-022	Determination of various metals by ICP-MS.Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements.Salt forms and/or anion/cation forms (e.g. FeO, PbO, ZnO, BO3) are determined stoichiometrically from the base metal concentration.
MICRO-001E	Heterotrophic Plate Count: Microbial Water Analysis - in accordance with MICRO-001 (AS4276.3-latest edition).
MICRO-008C	Surface Microbial Testing: Based on APHA (latest edition) Compendium for Food Microbiology, 4th Edition, Section 3.5.1 Surface Contact Method.
ORG-022_OC	Determination of semi-volatile organic compounds (SVOCs) by GC-MS. Water samples are extracted by LLE and soils using DCM/Acetone/Methanol.
ORG-029	Soil/solid and sorbent samples are extracted with basified Methanol. Waters and soil/sorbent extracts are directly injected and/or concentrated/extracted using SPE. TCLP/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MSMS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

# Certificate of Analysis MFI0117

## Result Definitions

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Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

## Quality Control Definitions

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### Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

### Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

### LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

### Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

### Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

# Certificate of Analysis MFI0117

## Laboratory Acceptance Criteria

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Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

## Miscellaneous Information

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When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10\*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volume measurements are not covered by Envirolab's NATA accreditation.

# Data Quality Assessment Summary MFI0117

## Client Details

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**Client** Natural Aqua Solutions Pty Ltd  
**Your Reference** Three Bays - B#Y05212ST  
**Date Issued** 17/09/2024

## Recommended Holding Time Compliance

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Recommended holding time exceedances exist - See detailed list below

## Quality Control and QC Frequency

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QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	No	Matrix Spike Outliers Exist - See detailed list below
Surrogates / Extracted Internal Standards	Yes	No Outliers
QC Frequency	No	QC Frequency Outliers Exist - See detailed list below

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

# Data Quality Assessment Summary MFI0117

## Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
OCP   Water	1	06/09/2024	11/09/2024	11/09/2024	Yes
Total Metals (LL)   Water	1	06/09/2024	09/09/2024	10/09/2024	Yes
Total Metals (LL)-Hg   Water	1	06/09/2024	10/09/2024	10/09/2024	Yes
TDS   Water	1	06/09/2024	10/09/2024	11/09/2024	Yes
Alkalinity Suite   Water	1	06/09/2024	09/09/2024	09/09/2024	Yes
Chloride   Water	1	06/09/2024	10/09/2024	10/09/2024	Yes
Dissolved Cations   Water	1	06/09/2024	11/09/2024	12/09/2024	Yes
Ion Balance   Water	1	06/09/2024	10/09/2024	16/09/2024	Yes
	1	06/09/2024	11/09/2024	12/09/2024	Yes
Sulfate   Water	1	06/09/2024	10/09/2024	10/09/2024	Yes
PFAS - TR ISTD (Short)   Water	1	06/09/2024	11/09/2024	11/09/2024	Yes
PFAS-Short TR   Water	1	06/09/2024	11/09/2024	11/09/2024	Yes
HPC-36C   Water	1	06/09/2024	09/09/2024	09/09/2024	No
Total Yeast & Mould   Water	1	06/09/2024	09/09/2024	09/09/2024	No

## Outliers: Matrix Spike

### METALS-020 | Inorganics - Ionic Balance and Indexes (Water) | Batch BFI1840

Sample ID	Analyte	% Limits	% Recovery
BFI1840-MS1#	Sodium	70 - 130	##[2]

### METALS-022 | Acid Extractable Low Level Metals (Water) | Batch BFI1303

Sample ID	Analyte	% Limits	% Recovery
BFI1303-MS1#	Aluminium	70 - 130	##[2]
BFI1303-MS1#	Copper	70 - 130	##[2]

# Data Quality Assessment Summary MFI0117

## Outliers: QC Frequency

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### ORG-022\_OC | Organochlorine Pesticides (Water) | Batch BFI1293

Analysis	QC Type	Expected	Reported
OCP	Duplicate	1	0
	Matrix Spike	1	0

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### ORG-029 | PFAS Short List (Trace Level) (Water) | Batch BFI2029

Analysis	QC Type	Expected	Reported
PFAS - TR ISTD (Short)	Duplicate	1	0
	Matrix Spike	1	0
PFAS-Short TR	Duplicate	1	0
	Matrix Spike	1	0

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# Quality Control MFI0117

## ORG-022\_OC | Organochlorine Pesticides (Water) | Batch BFI1293

Analyte	Units	PQL	Blank	LCS %
alpha-BHC	µg/L	0.20	<0.20	88.1
Hexachlorobenzene	µg/L	0.20	<0.20	[NA]
beta-BHC	µg/L	0.20	<0.20	92.3
gamma-BHC	µg/L	0.20	<0.20	[NA]
delta-BHC	µg/L	0.20	<0.20	[NA]
Heptachlor	µg/L	0.20	<0.20	90.4
Aldrin	µg/L	0.20	<0.20	94.0
Heptachlor epoxide	µg/L	0.20	<0.20	86.9
trans-Chlordane	µg/L	0.20	<0.20	[NA]
cis-Chlordane	µg/L	0.20	<0.20	[NA]
Endosulfan I	µg/L	0.20	<0.20	[NA]
4,4'-DDE	µg/L	0.20	<0.20	95.6
Dieldrin	µg/L	0.20	<0.20	85.7
Endrin	µg/L	0.20	<0.20	72.5
4,4'-DDD	µg/L	0.20	<0.20	130
Endosulfan II	µg/L	0.20	<0.20	[NA]
Endrin aldehyde	µg/L	0.20	<0.20	[NA]
4,4'-DDT	µg/L	0.20	<0.20	[NA]
Endosulfan sulfate	µg/L	0.20	<0.20	91.3
Endrin ketone	µg/L	0.20	<0.20	[NA]
Methoxychlor	µg/L	0.20	<0.20	[NA]
Mirex	µg/L	0.20	<0.20	[NA]
Surrogate 4-chloro-3-nitrobenzotrifluoride	%		61.9	74.2

Batch QC Comments: [3]

## METALS-022 | Acid Extractable Low Level Metals (Water) | Batch BFI1303

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %	Spike % BFI1303-MS1#
				BFI1303-DUP1# Samp   QC   RPD %	BFI1303-DUP2# Samp   QC   RPD %		
Aluminium	µg/L	10	<10	34.0   17.8   [NA]	<10   <10   [NA]	97.0	##[2]
Antimony	µg/L	1.0	<1.0	<1.0   <1.0   [NA]	<1.0   <1.0   [NA]	110	113
Arsenic	µg/L	1.0	<1.0	<1.0   <1.0   [NA]	<1.0   <1.0   [NA]	96.6	106
Barium	µg/L	1.0	<1.0	11.0   11.6   5.75	<1.0   <1.0   [NA]	99.4	103
Boron	µg/L	20	<20	132   139   5.39	<20   <20   [NA]	103	99.5
Cadmium	µg/L	0.10	<0.10	<0.10   <0.10   [NA]	<0.10   <0.10   [NA]	97.6	115
Chromium	µg/L	1.0	<1.0	<1.0   <1.0   [NA]	<1.0   <1.0   [NA]	97.4	113
Copper	µg/L	1.0	<1.0	576   544   5.59	85.0   87.4   2.76	94.4	##[2]
Iron	µg/L	10	<10	17.6   13.5   [NA]	<10   <10   [NA]	97.8	77.6
Lead	µg/L	1.0	<1.0	3.67   3.65   [NA]	<1.0   <1.0   [NA]	86.4	102
Manganese	µg/L	1.0	<1.0	2.05   2.26   [NA]	<1.0   <1.0   [NA]	95.8	96.9
Molybdenum	µg/L	1.0	<1.0	<1.0   <1.0   [NA]	<1.0   <1.0   [NA]	94.2	96.1
Nickel	µg/L	1.0	<1.0	<1.0   <1.0   [NA]	<1.0   <1.0   [NA]	94.6	97.4
Selenium	µg/L	1.0	<1.0	<1.0   <1.0   [NA]	<1.0   <1.0   [NA]	98.7	106
Strontium	µg/L	1.0	<1.0	20.6   18.1   12.9	<1.0   <1.0   [NA]	95.4	98.2
Uranium	µg/L	1.0	<1.0	<1.0   <1.0   [NA]	<1.0   <1.0   [NA]	91.2	104
Vanadium	µg/L	1.0	<1.0	<1.0   <1.0   [NA]	<1.0   <1.0   [NA]	98.2	113
Zinc	µg/L	1.0	<1.0	69.4   76.2   9.46	23.6   25.3   6.94	97.9	80.1

Analyte	Units	PQL	Blank	LCS %
Aluminium	µg/L	10	<10	[NA]
Antimony	µg/L	1.0	<1.0	[NA]
Arsenic	µg/L	1.0	<1.0	[NA]
Barium	µg/L	1.0	<1.0	[NA]
Boron	µg/L	20	<20	[NA]
Cadmium	µg/L	0.10	<0.10	[NA]

# Quality Control MFI0117

## METALS-022 | Acid Extractable Low Level Metals (Water) | Batch BFI1303

Analyte	Units	PQL	Blank	LCS %
Chromium	µg/L	1.0	<1.0	[NA]
Copper	µg/L	1.0	<1.0	[NA]
Iron	µg/L	10	<10	[NA]
Lead	µg/L	1.0	<1.0	[NA]
Manganese	µg/L	1.0	<1.0	[NA]
Molybdenum	µg/L	1.0	<1.0	[NA]
Nickel	µg/L	1.0	<1.0	[NA]
Selenium	µg/L	1.0	<1.0	[NA]
Strontium	µg/L	1.0	<1.0	[NA]
Uranium	µg/L	1.0	<1.0	[NA]
Vanadium	µg/L	1.0	<1.0	[NA]
Zinc	µg/L	1.0	<1.0	[NA]

## METALS-021 | Acid Extractable Low Level Metals (Water) | Batch BFI1626

Analyte	Units	PQL	Blank	DUP1 MFI0117-01 Samp   QC   RPD %	LCS %	Spike % BFI1626-MS1#
Mercury	µg/L	0.050	<0.050	<0.050   <0.050   [NA]	102	97.6

## INORG-018 | Inorganics - Physical Parameters (Water) | Batch BFI1585

Analyte	Units	PQL	Blank	DUP1 BFI1585-DUP1# Samp   QC   RPD %	LCS %
Total Dissolved Solids	mg/L	5.0	<5.0	420   390   7.41	109

# The QC reported was not specifically part of this workorder but formed part of the QC process batch.

## INORG-006 | Inorganics - Ionic Balance and Indexes (Water) | Batch BFI1299

Analyte	Units	PQL	Blank	DUP1 MFI0117-01 Samp   QC   RPD %	DUP2 BFI1299-DUP2# Samp   QC   RPD %	LCS %
Bicarbonate Alkalinity as CaCO3	mg/L as CaCO3	5.0	<5.0	303   296   2.54	1280   1300   1.23	[NA]
Carbonate Alkalinity as CaCO3	mg/L as CaCO3	5.0	<5.0	<5.0   <5.0   [NA]	<5.0   <5.0   [NA]	[NA]
Hydroxide OH- as CaCO3	mg/L as CaCO3	5.0	<5.0	<5.0   <5.0   [NA]	<5.0   <5.0   [NA]	[NA]
Total Alkalinity as CaCO3	mg/L as CaCO3	5.0	<5.0	303   296   2.54	1280   1300   1.23	93.8

# The QC reported was not specifically part of this workorder but formed part of the QC process batch.

## INORG-081 | Inorganics - Ionic Balance and Indexes (Water) | Batch BFI1582

Analyte	Units	PQL	Blank	DUP1 BFI1582-DUP1# Samp   QC   RPD %	DUP2 BFI1582-DUP2# Samp   QC   RPD %	LCS %	Spike % MFI0117-01
Chloride	mg/L	1.0	<1.0	183   165   10.1	<1.0   <1.0   [NA]	93.3	120
Sulfate	mg/L	1.0	<1.0	13.4   12.2   [NA]	<1.0   <1.0   [NA]	100	111

# The QC reported was not specifically part of this workorder but formed part of the QC process batch.

## METALS-020 | Inorganics - Ionic Balance and Indexes (Water) | Batch BFI1840

Analyte	Units	PQL	Blank	DUP1 BFI1840-DUP1# Samp   QC   RPD %	LCS %	Spike % BFI1840-MS1#
Calcium	mg/L	0.50	<0.50	83.8   79.3   5.52	106	102
Magnesium	mg/L	0.50	<0.50	10.4   10.7   3.14	115	105
Potassium	mg/L	0.50	<0.50	3.28   3.39   3.42	92.7	87.9
Sodium	mg/L	0.50	<0.50	95.6   90.4   5.55	93.6	##[2]
Hardness (calc) equivalent CaCO3	mg/L	3.0	<3.0	252   242   4.00	[NA]	[NA]

# The QC reported was not specifically part of this workorder but formed part of the QC process batch.

# Quality Control MFI0117

## ORG-029 | PFAS Short List (Trace Level) (Water) | Batch BFI2029

Analyte	Units	PQL	Blank	LCS %
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.00020	<0.00020	90.5
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.00020	<0.00020	96.0
Perfluorooctanoic acid (PFOA)	µg/L	0.00020	<0.00020	95.7
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.00040	<0.00040	97.7
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.00040	<0.00040	97.9
Surrogate 13C8 PFOS	%		102	104
Surrogate 13C2 PFOA	%		104	104
Extraction Internal Standard 18O2 PFHxS	%		109	[NA]
Extraction Internal Standard 13C4 PFOS	%		110	[NA]
Extraction Internal Standard 13C4 PFOA	%		94.0	[NA]
Extraction Internal Standard 13C2 6:2FTS	%		139	[NA]
Extraction Internal Standard 13C2 8:2FTS	%		143	[NA]

## MICRO-001E | Heterotrophic Plate Count (Water) | Batch BFI1622

Analyte	Units	PQL	Blank	DUP1 MFI0117-01 Samp   QC   RPD %	DUP2 BFI1622-DUP2# Samp   QC   RPD %	LCS %
Heterotrophic Plate Count 36C	cfu/mL	10	<10	4700   5000   6.19 [1]	10   10   [NA]	[NA]
Analyte	Units	PQL	Blank	DUP3 BFI1622-DUP3# Samp   QC   RPD %	DUP4 BFI1622-DUP4# Samp   QC   RPD %	LCS %
Heterotrophic Plate Count 36C	cfu/mL	10	<10	<10   <10   [NA]	<10   <10   [NA]	[NA]
Analyte	Units	PQL	Blank	DUP5 BFI1622-DUP5# Samp   QC   RPD %	DUP6 BFI1622-DUP6# Samp   QC   RPD %	LCS %
Heterotrophic Plate Count 36C	cfu/mL	10	<10	<10   <10   [NA]	<10   <10   [NA]	[NA]
Analyte	Units	PQL	Blank	DUP7 BFI1622-DUP7# Samp   QC   RPD %	LCS %	
Heterotrophic Plate Count 36C	cfu/mL	10	<10	10   <10   [NA]	[NA]	

# The QC reported was not specifically part of this workorder but formed part of the QC process batch.

## MICRO-008C | Microbiological Suite (Water) | Batch BFI1623

Analyte	Units	PQL	Blank	DUP1 MFI0117-01 Samp   QC   RPD %	LCS %
Total Yeast and Mould	cfu/mL	1.0	<1.0	<1.0   <1.0   [NA]	[NA]

## QC Comments

Identifier	Description
[1]	Heterotrophic plate count is an estimate.
[2]	Spike recovery is not applicable due to the relatively high analyte background in the sample (>3* spike level). However, the LCS recovery is within acceptance criteria.
[3]	Unable to perform all QC according to our internal guidelines due to the limited amount of sample(s) available for testing.