



CERTIFICATE OF ANALYSIS 26148

Client Details

Client	Natural Aqua Solutions Pty Ltd-Three Bays
Attention	Olaf Lyche
Address	116 Nelson Road, South Melbourne, VIC, 3205

Sample Details

Your Reference	<u>Three Bays Still water</u>
Number of Samples	1 Water
Date samples received	01/06/2021
Date completed instructions received	01/06/2021

Analysis Details

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 solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	16/06/2021
Date of Issue	30/07/2021
Reissue Details	This report supersedes 26148_R01 due to the reporting of EC at 37 degrees. This report supersedes 26148_R02 due to addition of iodine and phosphorus.
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Results Approved By

Chris De Luca, Operations Manager

Authorised By

Pamela Adams, Laboratory Manager



Client Reference: Three Bays Still water

VOCs in water		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date extracted	-	03/06/2021
Date analysed	-	03/06/2021
Dichlorodifluoromethane	µg/L	<10
Chloromethane	µg/L	<10
Vinyl Chloride	µg/L	<10
Bromomethane	µg/L	<10
Chloroethane	µg/L	<10
Trichlorofluoromethane	µg/L	<10
1,1-Dichloroethene	µg/L	<1
Trans-1,2-dichloroethene	µg/L	<1
1,1-dichloroethane	µg/L	<1
Cis-1,2-dichloroethene	µg/L	<1
Bromochloromethane	µg/L	<1
Chloroform	µg/L	5
2,2-dichloropropane	µg/L	<1
1,2-dichloroethane	µg/L	<1
1,1,1-trichloroethane	µg/L	<1
1,1-dichloropropene	µg/L	<1
Cyclohexane	µg/L	<1
Carbon tetrachloride	µg/L	<1
Benzene	µg/L	<1
Dibromomethane	µg/L	<1
1,2-dichloropropane	µg/L	<1
Trichloroethene	µg/L	<1
Bromodichloromethane	µg/L	1
trans-1,3-dichloropropene	µg/L	<1
cis-1,3-dichloropropene	µg/L	<1
1,1,2-trichloroethane	µg/L	<1
Toluene	µg/L	<1
1,3-dichloropropane	µg/L	<1
Dibromochloromethane	µg/L	<1
1,2-dibromoethane	µg/L	<1
Tetrachloroethene	µg/L	<1
1,1,1,2-tetrachloroethane	µg/L	<1
Chlorobenzene	µg/L	<1
Ethylbenzene	µg/L	<1

Client Reference: Three Bays Still water

VOCs in water		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Bromoform	µg/L	1
m+p-xylene	µg/L	<2
Styrene	µg/L	<1
1,1,2,2-tetrachloroethane	µg/L	<1
o-xylene	µg/L	<1
1,2,3-trichloropropane	µg/L	<1
Isopropylbenzene	µg/L	<1
Bromobenzene	µg/L	<1
n-propyl benzene	µg/L	<1
2-chlorotoluene	µg/L	<1
4-chlorotoluene	µg/L	<1
1,3,5-trimethyl benzene	µg/L	<1
Tert-butyl benzene	µg/L	<1
1,2,4-trimethyl benzene	µg/L	<1
1,3-dichlorobenzene	µg/L	<1
Sec-butyl benzene	µg/L	<1
1,4-dichlorobenzene	µg/L	<1
4-isopropyl toluene	µg/L	<1
1,2-dichlorobenzene	µg/L	<1
n-butyl benzene	µg/L	<1
1,2-dibromo-3-chloropropane	µg/L	<1
1,2,4-trichlorobenzene	µg/L	<1
Hexachlorobutadiene	µg/L	<1
1,2,3-trichlorobenzene	µg/L	<1
Surrogate Dibromofluoromethane	%	106
Surrogate toluene-d8	%	100
Surrogate 4-BFB	%	100

Client Reference: Three Bays Still water

vTRH(C6-C10)/BTEXN in Water		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date extracted	-	03/06/2021
Date analysed	-	03/06/2021
TRH C ₆ - C ₉	µg/L	<10
TRH C ₆ - C ₁₀	µg/L	<10
TRH C ₆ -C ₁₀ less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Total +ve Xylenes	µg/L	<1
Total BTEX in water	µg/L	<1
Surrogate Dibromofluoromethane	%	108
Surrogate toluene-d8	%	100
Surrogate 4-BFB	%	101

Client Reference: Three Bays Still water

TRH Water(C10-C40) NEPM		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date extracted	-	04/06/2021
Date analysed	-	04/06/2021
TRH C ₁₀ - C ₁₄	µg/L	<50
TRH C ₁₅ - C ₂₈	µg/L	<100
TRH C ₂₉ - C ₃₆	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C ₁₀ - C ₁₆	µg/L	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	µg/L	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	87

Client Reference: Three Bays Still water

PAHs in Water		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date extracted	-	04/06/2021
Date analysed	-	07/06/2021
Naphthalene	µg/L	<1
Acenaphthylene	µg/L	<1
Acenaphthene	µg/L	<1
Fluorene	µg/L	<1
Phenanthrene	µg/L	<1
Anthracene	µg/L	<1
Fluoranthene	µg/L	<1
Pyrene	µg/L	<1
Benzo(a)anthracene	µg/L	<1
Chrysene	µg/L	<1
Benzo(b,j&k)fluoranthene	µg/L	<2
Benzo(a)pyrene	µg/L	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1
Dibenzo(a,h)anthracene	µg/L	<1
Benzo(g,h,i)perylene	µg/L	<1
Total +ve PAH's	µg/L	<1
Benzo(a)pyrene TEQ	µg/L	<5
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	120

Client Reference: Three Bays Still water

OCP in water		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date extracted	-	04/06/2021
Date analysed	-	07/06/2021
alpha-BHC	µg/L	<0.2
HCB	µg/L	<0.2
beta-BHC	µg/L	<0.2
gamma-BHC	µg/L	<0.2
Heptachlor	µg/L	<0.2
delta-BHC	µg/L	<0.2
Aldrin	µg/L	<0.2
Heptachlor Epoxide	µg/L	<0.2
gamma-Chlordane	µg/L	<0.2
alpha-Chlordane	µg/L	<0.2
Endosulfan I	µg/L	<0.2
pp-DDE	µg/L	<0.2
Dieldrin	µg/L	<0.2
Endrin	µg/L	<0.2
Endosulfan II	µg/L	<0.2
pp-DDD	µg/L	<0.2
Endrin Aldehyde	µg/L	<0.2
pp-DDT	µg/L	<0.2
Endosulfan Sulphate	µg/L	<0.2
Methoxychlor	µg/L	<0.2
Surrogate 2-chlorophenol-d4	%	66

Client Reference: Three Bays Still water

Organophosphorus Pesticides		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date extracted	-	04/06/2021
Date analysed	-	07/06/2021
Azinphos-methyl	µg/L	<0.2
Bromophos-ethyl	µg/L	<0.2
Chlorpyrifos	µg/L	<0.2
Chlorpyriphos-methyl	µg/L	<0.2
Diazinon	µg/L	<0.2
Dichlorovos	µg/L	<0.2
Dimethoate	µg/L	<0.2
Ethion	µg/L	<0.2
Fenitrothion	µg/L	<0.2
Malathion	µg/L	<0.2
Parathion	µg/L	<0.2
Ronnel	µg/L	<0.2
Surrogate 2-chlorophenol-d4	%	66

Client Reference: Three Bays Still water

PCBs in Water		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date extracted	-	04/06/2021
Date analysed	-	07/06/2021
Aroclor 1016	µg/L	<2
Aroclor 1221	µg/L	<2
Aroclor 1232	µg/L	<2
Aroclor 1242	µg/L	<2
Aroclor 1248	µg/L	<2
Aroclor 1254	µg/L	<2
Aroclor 1260	µg/L	<2
Surrogate 2-fluorobiphenyl	%	82

Client Reference: Three Bays Still water

All metals in water - total		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date prepared	-	02/06/2021
Date analysed	-	02/06/2021
Aluminium-Total	µg/L	<10
Antimony-Total	µg/L	<1
Arsenic-Total	µg/L	<1
Barium-Total	µg/L	29
Boron-Total	µg/L	<20
Cadmium-Total	µg/L	<0.1
Chromium-Total	µg/L	<1
Copper-Total	µg/L	11
Iron-Total	µg/L	<10
Iodine-Total	µg/L	57
Lead-Total	µg/L	<1
Manganese-Total	µg/L	11
Mercury-Total	µg/L	<0.05
Molybdenum-Total	µg/L	<1
Nickel-Total	µg/L	7
Selenium-Total	µg/L	<1
Strontium-Total	µg/L	360
Uranium-Total	µg/L	<0.5
Vanadium-Total	µg/L	7
Zinc-Total	µg/L	13

Client Reference: Three Bays Still water

Metals in Waters - Acid extractable		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date prepared	-	27/07/2021
Date analysed	-	27/07/2021
Phosphorus - Total	mg/L	0.1

Client Reference: Three Bays Still water

Miscellaneous Inorganics		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date prepared	-	01/06/2021
Date analysed	-	01/06/2021
pH	pH Units	7.2
Total Dissolved Solids (by calc)	mg/L	1,100
Fluoride, F	mg/L	0.1
Free Cyanide in Water	mg/L	<0.004
Weak Acid Dissociable Cyanide	mg/L	<0.004
Total Cyanide	mg/L	<0.004
Electrical Conductivity	µS/cm	1,800
Electrical Conductivity @37° C *	µS/cm	2,000
Nitrate as N in water	mg/L	0.88
Nitrite as N in water	mg/L	<0.005
Turbidity	NTU	0.7
Colour (True)*	Pt/Co	<5
Colour (Apparent)*	Pt/Co	<5
Oil & Grease (LLE)	mg/L	<5
Threshold Odour Number*	TON	no odours observed
M.B.A.S Methylene Blue Active Substances	mg/L	0.1

Client Reference: Three Bays Still water

Ion Balance		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Date prepared	-	04/06/2021
Date analysed	-	04/06/2021
Calcium - Dissolved	mg/L	55
Potassium - Dissolved	mg/L	2.2
Sodium - Dissolved	mg/L	180
Magnesium - Dissolved	mg/L	78
Hydroxide Alkalinity (OH ⁻) as CaCO ₃	mg/L	<5
Bicarbonate Alkalinity as CaCO ₃	mg/L	280
Carbonate Alkalinity as CaCO ₃	mg/L	<5
Total Alkalinity as CaCO ₃	mg/L	280
Sulphate, SO ₄	mg/L	59
Chloride, Cl	mg/L	390
Hardness	mgCaCO ₃ /L	460
Ionic Balance	%	-2.8

Client Reference: Three Bays Still water

Micro Testing		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Total Coliforms	CFU/100mL	<1
E. Coli	CFU/100mL	<1
Thermotolerant Coliforms	CFU/100mL	<1
36° C Plate Count	CFU/mL	1,100
22° C Plate Count	CFU/mL	930

Client Reference: Three Bays Still water

External Analysis		
Our Reference		26148-1
Your Reference	UNITS	Three Bays Still
Type of sample		Water
Gross Alpha	Bq/L	<0.031
Gross Beta	Bq/L	0.036 ±0.035

Client Reference: Three Bays Still water

Method ID	Methodology Summary
Ext_063	Analysed by SGS Radiation Services, accreditation number 14174.
Ext-066	Analysis subcontracted to Mérieux NutriSciences. NATA Accreditation No: 2020 Please note that results for micro tests derived from counts outside of the range 10-100 are considered approximate as per AS4276.1
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25oC in accordance with APHA latest edition 2510 and Rayment & Lyons.
Inorg-003	Oil & Grease - determine gravimetrically following extraction with Hexane, in accordance with APHA latest edition, 5220-B.
Inorg-006	Alkalinity - determined titrimetrically in accordance with APHA latest edition, 2320-B.
Inorg-014	Cyanide - free, total, weak acid dissociable by segmented flow analyser (in line dialysis with colourimetric finish). Solids/Filters and sorbents are extracted in a caustic media prior to analysis. Impingers are pH adjusted as required prior to analysis. Cyanides amenable to Chlorination - samples are analysed untreated and treated with hyperchlorite to assess the potential for chlorination of cyanide forms. Based on APHA latest edition, 4500-CN_G,H.
Inorg-021	Methylene Blue Active Substances - determined colorimetrically after extracting with Chloroform, in accordance with APHA latest edition, 5540-C.
Inorg-022	Turbidity - measured nephelometrically using a turbidimeter, in accordance with APHA latest edition, 2130 B.
Inorg-026	Fluoride determined by ion selective electrode (ISE) in accordance with APHA latest edition, 4500-F-C.
Inorg-028	Colour - measured by visual comparison and/or spectrophotometrically.
Inorg-040	The concentrations of the major ions (mg/L) are converted to milliequivalents and summed. The ionic balance should be within +/- 10% ie total anions = total cations +/-10%.
Inorg-055	Nitrate - determined colourimetrically. Soils are analysed following a water extraction. Water samples are filtered on receipt prior to analysis.
Inorg-055	Nitrite - determined colourimetrically based on APHA latest edition NO2- B. Soils are analysed following a water extraction. Water samples are filtered on receipt prior to analysis.
Inorg-087	Chloride by colourimetry using Discrete Analyser
Inorg-115	Sulphate by turbidity using Discrete Analyser
Inorg-133	Threshold Odour Number (TON) is determined by the consensus of an odour panel.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.

Client Reference: Three Bays Still water

Method ID	Methodology Summary
Metals-022 ICP-MS	Determination of various metals by ICP-MS.
Org-020	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.</p> <p>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.</p> <p>Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).</p>
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater 2013.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p> <p>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.</p>

Client Reference: Three Bays Still water

QUALITY CONTROL: VOCs in water				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			03/06/2021	[NT]	[NT]	[NT]	[NT]	03/06/2021	[NT]
Date analysed	-			03/06/2021	[NT]	[NT]	[NT]	[NT]	03/06/2021	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromomethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromoform	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Styrene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: VOCs in water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate toluene-d8	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate 4-BFB	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	105	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			03/06/2021	[NT]	[NT]	[NT]	[NT]	03/06/2021	[NT]
Date analysed	-			03/06/2021	[NT]	[NT]	[NT]	[NT]	03/06/2021	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	108	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	108	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	113	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Surrogate Dibromofluoromethane	%		Org-023	103	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate toluene-d8	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-BFB	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	103	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: TRH Water(C10-C40) NEPM					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			04/06/2021	[NT]	[NT]	[NT]	[NT]	04/06/2021	[NT]
Date analysed	-			04/06/2021	[NT]	[NT]	[NT]	[NT]	04/06/2021	[NT]
TRH C ₁₀ - C ₁₄	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	74	[NT]
TRH C ₁₅ - C ₂₈	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH C ₂₉ - C ₃₆	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	74	[NT]
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate o-Terphenyl	%		Org-020	78	[NT]	[NT]	[NT]	[NT]	91	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: PAHs in Water				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			04/06/2021	[NT]	[NT]	[NT]	[NT]	04/06/2021	[NT]
Date analysed	-			07/06/2021	[NT]	[NT]	[NT]	[NT]	07/06/2021	[NT]
Naphthalene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Acenaphthylene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Acenaphthene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Phenanthrene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Anthracene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Pyrene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Benzo(a)anthracene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Benzo(b,j&k)fluoranthene	µg/L	2	Org-022	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-022	112	[NT]	[NT]	[NT]	[NT]	112	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: OCP in water				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			04/06/2021	[NT]	[NT]	[NT]	[NT]	04/06/2021	[NT]
Date analysed	-			07/06/2021	[NT]	[NT]	[NT]	[NT]	07/06/2021	[NT]
alpha-BHC	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	92	[NT]
HCB	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	92	[NT]
gamma-BHC	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	80	[NT]
delta-BHC	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	104	[NT]
Heptachlor Epoxide	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	98	[NT]
gamma-Chlordane	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	106	[NT]
alpha-Chlordane	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	106	[NT]
Dieldrin	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	106	[NT]
Endrin	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan II	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	138	[NT]
Endrin Aldehyde	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	86	[NT]
Methoxychlor	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	68	[NT]	[NT]	[NT]	[NT]	64	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-		Org-022	04/06/2021	[NT]	[NT]	[NT]	[NT]	04/06/2021	[NT]
Date analysed	-		Org-022	07/06/2021	[NT]	[NT]	[NT]	[NT]	07/06/2021	[NT]
Azinphos-methyl	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	104	[NT]
Chlorpyrifos-methyl	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dichlorovos	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	138	[NT]
Fenitrothion	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	132	[NT]
Malathion	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	µg/L	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	68	[NT]	[NT]	[NT]	[NT]	64	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: PCBs in Water				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			04/06/2021	[NT]	[NT]	[NT]	[NT]	04/06/2021	[NT]
Date analysed	-			07/06/2021	[NT]	[NT]	[NT]	[NT]	07/06/2021	[NT]
Aroclor 1016	µg/L	2	Org-022	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	µg/L	2	Org-021	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	µg/L	2	Org-022	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	µg/L	2	Org-022	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	µg/L	2	Org-022	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	µg/L	2	Org-022	<2	[NT]	[NT]	[NT]	[NT]	100	[NT]
Aroclor 1260	µg/L	2	Org-022	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-fluorobiphenyl	%		Org-022	80	[NT]	[NT]	[NT]	[NT]	82	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: All metals in water - total				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			02/06/2021	1	02/06/2021	02/06/2021		02/06/2021	[NT]
Date analysed	-			02/06/2021	1	02/06/2021	02/06/2021		02/06/2021	[NT]
Aluminium-Total	µg/L	10	Metals-022 ICP-MS	<10	1	<10	<10	0	98	[NT]
Antimony-Total	µg/L	1	Metals-022 ICP-MS	<1	1	<1	<1	0	108	[NT]
Arsenic-Total	µg/L	1	Metals-022 ICP-MS	<1	1	<1	<1	0	104	[NT]
Barium-Total	µg/L	1	Metals-022 ICP-MS	<1	1	29	29	0	101	[NT]
Boron-Total	µg/L	20	Metals-022 ICP-MS	<20	1	<20	<20	0	103	[NT]
Cadmium-Total	µg/L	0.1	Metals-022 ICP-MS	<0.1	1	<0.1	<0.1	0	104	[NT]
Chromium-Total	µg/L	1	Metals-022 ICP-MS	<1	1	<1	<1	0	103	[NT]
Copper-Total	µg/L	1	Metals-022 ICP-MS	<1	1	11	11	0	106	[NT]
Iron-Total	µg/L	10	Metals-022 ICP-MS	<10	1	<10	<10	0	104	[NT]
Iodine-Total	µg/L	10	Metals-022 ICP-MS	<10	1	57	[NT]		94	[NT]
Lead-Total	µg/L	1	Metals-022 ICP-MS	<1	1	<1	<1	0	103	[NT]
Manganese-Total	µg/L	5	Metals-022 ICP-MS	<5	1	11	11	0	102	[NT]
Mercury-Total	µg/L	0.05	Metals-021 CV-AAS	<0.05	1	<0.05	<0.05	0	109	[NT]
Molybdenum-Total	µg/L	1	Metals-022 ICP-MS	<1	1	<1	<1	0	101	[NT]
Nickel-Total	µg/L	1	Metals-022 ICP-MS	<1	1	7	7	0	103	[NT]
Selenium-Total	µg/L	1	Metals-022 ICP-MS	<1	1	<1	<1	0	102	[NT]
Strontium-Total	µg/L	1	Metals-022 ICP-MS	<1	1	360	360	0	100	[NT]
Uranium-Total	µg/L	0.5	Metals-022 ICP-MS	<0.5	1	<0.5	<0.5	0	101	[NT]
Vanadium-Total	µg/L	1	Metals-022 ICP-MS	<1	1	7	7	0	103	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: All metals in water - total						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Zinc-Total	µg/L	1	Metals-022 ICP-MS	<1	1	13	12	8	104	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: Metals in Waters - Acid extractable				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			27/07/2021	[NT]	[NT]	[NT]	[NT]	27/07/2021	[NT]
Date analysed	-			27/07/2021	[NT]	[NT]	[NT]	[NT]	27/07/2021	[NT]
Phosphorus - Total	mg/L	0.05	Metals-020 ICP-AES	<0.05	[NT]	[NT]	[NT]	[NT]	91	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: Miscellaneous Inorganics				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			01/06/2021	1	01/06/2021	01/06/2021		01/06/2021	[NT]
Date analysed	-			01/06/2021	1	01/06/2021	01/06/2021		01/06/2021	[NT]
pH	pH Units		Inorg-001	[NT]	1	7.2	[NT]		98	[NT]
Total Dissolved Solids (by calc)	mg/L	5	Inorg-002	[NT]	1	1100	[NT]		[NT]	[NT]
Fluoride, F	mg/L	0.1	Inorg-026	<0.1	1	0.1	[NT]		107	[NT]
Free Cyanide in Water	mg/L	0.004	Inorg-014	<0.004	1	<0.004	<0.004	0	83	[NT]
Weak Acid Dissociable Cyanide	mg/L	0.004	Inorg-014	<0.004	1	<0.004	<0.004	0	92	[NT]
Total Cyanide	mg/L	0.004	Inorg-014	<0.004	1	<0.004	<0.004	0	91	[NT]
Electrical Conductivity	µS/cm	1	Inorg-002	[NT]	1	1800	[NT]		108	[NT]
Electrical Conductivity @37° C *	µS/cm	1	Inorg-002	[NT]	1	2000	[NT]		[NT]	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	[NT]	1	0.88	[NT]		[NT]	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	<0.005	1	<0.005	[NT]		105	[NT]
Turbidity	NTU	0.1	Inorg-022	<0.1	1	0.7	0.7	0	97	[NT]
Colour (True)*	Pt/Co	5	Inorg-028	<5	1	<5	[NT]		115	[NT]
Colour (Apparent)*	Pt/Co	5	Inorg-028	<5	1	<5	[NT]		115	[NT]
Oil & Grease (LLE)	mg/L	5	Inorg-003	<5	1	<5	[NT]		86	[NT]
M.B.A.S Methylene Blue Active Substances	mg/L	0.1	Inorg-021	<0.1	1	0.1	0.1	0	108	[NT]

Client Reference: Three Bays Still water

QUALITY CONTROL: Ion Balance				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			04/06/2021	[NT]	[NT]	[NT]	[NT]	04/06/2021	[NT]
Date analysed	-			04/06/2021	[NT]	[NT]	[NT]	[NT]	04/06/2021	[NT]
Calcium - Dissolved	mg/L	0.5	Metals-020 ICP-AES	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
Potassium - Dissolved	mg/L	0.5	Metals-020 ICP-AES	<0.5	[NT]	[NT]	[NT]	[NT]	97	[NT]
Sodium - Dissolved	mg/L	0.5	Metals-020 ICP-AES	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
Magnesium - Dissolved	mg/L	0.5	Metals-020 ICP-AES	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Hydroxide Alkalinity (OH ⁻) as CaCO ₃	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bicarbonate Alkalinity as CaCO ₃	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	105	[NT]
Carbonate Alkalinity as CaCO ₃	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Total Alkalinity as CaCO ₃	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	105	[NT]
Sulphate, SO ₄	mg/L	1	Inorg-115	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Chloride, Cl	mg/L	1	Inorg-087	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Hardness	mgCaCO ₃ /L	3		<3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
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.
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.
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.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

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.

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 QA/QC tables for details; <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 (not SPOCAS); 60-140% for organics/SPOCAS (+/-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 insufficient in order to satisfy laboratory QA/QC protocols.

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.

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 and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Microbiological testing analysed by Merieux NutriSciences, report number MEL-51586345-0

Total Iodine and Phosphorus analysed by Envirolab Sydney, report number 274797.

MBAS analysed by MPL, report number 262955

Gross alpha & beta activity analysed by SGS, report number ME320850

Oil & grease and odour analysed by Envirolab Sydney, report number 270576

METALS: The PQL has been raised for Mercury.