

# Appendix D Laboratory Analysis Reports



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Attention: **Julian Brown**

Report **988289-W**  
Project name **SBWMF Water Monitoring**  
Project ID **304700296**  
Received Date **May 10, 2023**

Client Sample ID			GW1-3	GW1-12	GW2-3	GW2-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025082	M23-My0025083	M23-My0025084	M23-My0025085
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	0.03	0.09	3.1	0.22
Chemical Oxygen Demand (COD)	25	mg/L	< 25	< 25	130	230
Chloride	1	mg/L	330	830	1000	8200
Nitrate & Nitrite (as N)	0.05	mg/L	0.25	0.13	0.07	0.45
Nitrate (as N)	0.02	mg/L	0.25	0.10	0.06	0.44
Nitrite (as N)	0.02	mg/L	< 0.02	0.02	< 0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	< 0.2	0.51	1.4	< 0.2
Phosphate total (as P)	0.01	mg/L	0.03	0.03	0.14	0.23
Phosphorus reactive (as P)	0.01	mg/L	< 0.01	< 0.01	0.02	0.24
Sulphate (as SO4)	5	mg/L	35	32	160	1100
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	610	3600	1700	13000
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	< 0.2	0.6	4.5	0.3
Total Nitrogen (as N)*	0.2	mg/L	0.25	0.73	4.57	0.75
Total Organic Carbon	5	mg/L	< 5	< 5	38	< 5
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	< 5	11	43	< 5
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	47	40
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	250	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	880	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	< 20	1100	47	40
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	0.007	0.018	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	0.42	< 0.05	0.26	< 0.05
Aluminium (filtered)	0.05	mg/L	0.40	< 0.05	< 0.05	< 0.05
Arsenic	0.001	mg/L	< 0.001	< 0.001	0.059	0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	0.001	mg/L	0.002	< 0.001	< 0.001	< 0.001
Beryllium (filtered)	0.001	mg/L	0.002	< 0.001	< 0.001	0.001
Boron	0.05	mg/L	< 0.05	< 0.05	0.12	0.35

Client Sample ID			GW1-3	GW1-12	GW2-3	GW2-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025082	M23-My0025083	M23-My0025084	M23-My0025085
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Boron (filtered)	0.05	mg/L	< 0.05	< 0.05	0.12	0.31
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	0.0019
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	0.0019
Cobalt	0.001	mg/L	0.007	< 0.001	0.021	< 0.001
Cobalt (filtered)	0.001	mg/L	0.007	< 0.001	0.014	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iron	0.05	mg/L	< 0.05	< 0.05	92	0.63
Iron (filtered)	0.05	mg/L	< 0.05	< 0.05	0.82	< 0.05
Lead	0.001	mg/L	0.002	0.002	0.013	< 0.001
Lead (filtered)	0.001	mg/L	0.002	0.002	< 0.001	< 0.001
Lithium	0.005	mg/L	0.019	0.041	< 0.005	0.067
Lithium (filtered)	0.005	mg/L	0.013	0.036	< 0.005	0.052
Manganese	0.005	mg/L	0.14	< 0.005	0.54	0.017
Manganese (filtered)	0.005	mg/L	0.15	< 0.005	0.57	0.015
Nickel	0.001	mg/L	0.012	0.001	0.019	0.060
Nickel (filtered)	0.001	mg/L	0.013	< 0.001	0.007	0.054
Selenium	0.001	mg/L	< 0.001	< 0.001	0.003	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	0.005	mg/L	< 0.005	< 0.005	0.053	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Zinc	0.005	mg/L	0.047	< 0.005	0.032	0.38
Zinc (filtered)	0.005	mg/L	0.042	< 0.005	0.006	0.36
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	18	830	52	400
Magnesium	0.5	mg/L	18	< 0.5	50	470
Potassium	0.5	mg/L	1.1	4.5	11	36
Sodium	0.5	mg/L	160	210	550	4300
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	0.10	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	0.10	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	0.17	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	<sup>N09</sup> 0.03	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	<sup>N09</sup> 0.05	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	118	135	81	78
13C5-PFPeA (surr.)	1	%	110	14	86	128
13C5-PFHxA (surr.)	1	%	114	84	83	117
13C4-PFHpA (surr.)	1	%	102	112	94	110
13C8-PFOA (surr.)	1	%	90	104	89	91
13C5-PFNA (surr.)	1	%	90	99	86	97
13C6-PFDA (surr.)	1	%	83	99	80	95
13C2-PFUnDA (surr.)	1	%	87	93	65	88
13C2-PFDoDA (surr.)	1	%	81	82	55	76
13C2-PFTeDA (surr.)	1	%	101	104	60	91

Client Sample ID			GW1-3 Water M23- My0025082 May 10, 2023	GW1-12 Water M23- My0025083 May 10, 2023	GW2-3 Water M23- My0025084 May 10, 2023	GW2-12 Water M23- My0025085 May 10, 2023
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	86	99	77	93
D3-N-MeFOSA (surr.)	1	%	96	57	54	91
D5-N-EtFOSA (surr.)	1	%	103	53	54	90
D7-N-MeFOSE (surr.)	1	%	82	75	52	83
D9-N-EtFOSE (surr.)	1	%	87	80	56	85
D5-N-EtFOSAA (surr.)	1	%	90	81	60	86
D3-N-MeFOSAA (surr.)	1	%	95	87	71	96
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	0.46	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	0.02	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	<sup>NO9</sup> 0.05	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	120	95	94	115
18O2-PFHxS (surr.)	1	%	98	93	91	90
13C8-PFOS (surr.)	1	%	87	94	80	88
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	77	49	106	75
13C2-6:2 FTSA (surr.)	1	%	78	102	105	86
13C2-8:2 FTSA (surr.)	1	%	92	102	71	101
13C2-10:2 FTSA (surr.)	1	%	101	106	62	130
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	0.05	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	0.05	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	0.1	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	0.96	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	0.98	< 0.1

Client Sample ID			GW3-3	GW3-12	GW4-3	GW4-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025086	M23-My0025087	M23-My0025088	M23-My0025089
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	0.24	0.22	< 0.01	0.03
Chemical Oxygen Demand (COD)	25	mg/L	< 25	< 25	< 25	< 25
Chloride	1	mg/L	110	110	750	1500
Nitrate & Nitrite (as N)	0.05	mg/L	9.5	0.53	0.11	0.14
Nitrate (as N)	0.02	mg/L	9.5	0.53	0.11	0.13
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	1.56	< 0.2	0.6	0.27
Phosphate total (as P)	0.01	mg/L	0.01	0.02	0.01	0.01
Phosphorus reactive (as P)	0.01	mg/L	0.02	0.02	0.02	0.01
Sulphate (as SO4)	5	mg/L	10	18	45	30
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	270	230	1300	4800
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	1.8	0.4	0.6	0.3
Total Nitrogen (as N)*	0.2	mg/L	11.3	0.93	0.71	0.44
Total Organic Carbon	5	mg/L	< 5	< 5	< 5	< 5
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	5.1	< 5	< 5	17
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	94
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	510
Total Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	610
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	0.97	< 0.05	1.5	0.13
Aluminium (filtered)	0.05	mg/L	0.81	< 0.05	1.4	0.11
Arsenic	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Boron	0.05	mg/L	< 0.05	< 0.05	0.11	< 0.05
Boron (filtered)	0.05	mg/L	< 0.05	< 0.05	0.11	< 0.05
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	0.0002	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	0.0002	< 0.0002
Cobalt	0.001	mg/L	0.002	< 0.001	0.007	< 0.001
Cobalt (filtered)	0.001	mg/L	0.002	< 0.001	0.005	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iron	0.05	mg/L	0.10	< 0.05	2.5	< 0.05
Iron (filtered)	0.05	mg/L	< 0.05	< 0.05	0.37	< 0.05
Lead	0.001	mg/L	< 0.001	< 0.001	0.002	0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001	0.001
Lithium	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.028
Lithium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.024
Manganese	0.005	mg/L	0.031	0.023	0.063	< 0.005

Client Sample ID			GW3-3	GW3-12	GW4-3	GW4-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025086	M23-My0025087	M23-My0025088	M23-My0025089
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Manganese (filtered)	0.005	mg/L	0.030	0.022	0.061	< 0.005
Nickel	0.001	mg/L	0.005	0.005	0.028	< 0.001
Nickel (filtered)	0.001	mg/L	0.004	0.004	0.028	< 0.001
Selenium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	0.005	mg/L	< 0.005	< 0.005	0.005	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Zinc	0.005	mg/L	0.014	0.056	0.074	< 0.005
Zinc (filtered)	0.005	mg/L	0.013	0.055	0.073	< 0.005
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	3.6	7.1	10	810
Magnesium	0.5	mg/L	5.1	4.5	30	< 0.5
Potassium	0.5	mg/L	1.3	2.8	6.2	11
Sodium	0.5	mg/L	65	57	420	370
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	0.08	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	0.09	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	0.11	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	<sup>NO9</sup> 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	<sup>NO9</sup> 0.02	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	119	111	117	127
13C5-PFPeA (surr.)	1	%	101	128	102	16
13C5-PFHxA (surr.)	1	%	92	123	101	92
13C4-PFHpA (surr.)	1	%	96	107	92	111
13C8-PFOA (surr.)	1	%	87	97	87	102
13C5-PFNA (surr.)	1	%	88	105	85	107
13C6-PFDA (surr.)	1	%	85	106	86	104
13C2-PFUnDA (surr.)	1	%	72	94	77	92
13C2-PFDoDA (surr.)	1	%	63	79	70	83
13C2-PFTeDA (surr.)	1	%	70	83	82	97
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	84	102	87	111

Client Sample ID			GW3-3	GW3-12	GW4-3	GW4-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025086	M23-My0025087	M23-My0025088	M23-My0025089
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
D3-N-MeFOSA (surr.)	1	%	93	102	90	140
D5-N-EtFOSA (surr.)	1	%	95	107	91	156
D7-N-MeFOSE (surr.)	1	%	71	87	68	85
D9-N-EtFOSE (surr.)	1	%	74	89	72	90
D5-N-EtFOSAA (surr.)	1	%	65	90	66	77
D3-N-MeFOSAA (surr.)	1	%	74	104	72	85
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	0.36	< 0.01	0.02	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	0.01	< 0.01	0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	<sup>N09</sup> 0.04	< 0.01	<sup>N09</sup> 0.02	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	100	121	111	103
18O2-PFHxS (surr.)	1	%	96	97	96	101
13C8-PFOS (surr.)	1	%	88	93	80	93
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	87	102	71	59
13C2-6:2 FTSA (surr.)	1	%	71	92	73	97
13C2-8:2 FTSA (surr.)	1	%	68	112	73	101
13C2-10:2 FTSA (surr.)	1	%	78	129	88	114
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.04	< 0.01	0.02	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.02	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.06	< 0.01	0.02	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.71	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	0.72	< 0.1	< 0.1	< 0.1

Client Sample ID			GW4-30	GW5-3	GW5-12	GW7-3
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025090	M23-My0025091	M23-My0025092	M23-My0025093
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	0.04	0.27	0.07	0.03
Chemical Oxygen Demand (COD)	25	mg/L	< 25	420	< 25	120
Chloride	1	mg/L	540	720	1300	4100
Nitrate & Nitrite (as N)	0.05	mg/L	0.10	0.34	0.07	24
Nitrate (as N)	0.02	mg/L	0.10	0.34	0.07	24
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	< 0.2	< 0.2	< 0.2	1.27
Phosphate total (as P)	0.01	mg/L	0.05	0.01	0.07	0.03
Phosphorus reactive (as P)	0.01	mg/L	0.04	0.02	0.08	0.02
Sulphate (as SO4)	5	mg/L	70	120	190	530
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	1000	1600	2000	5900
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	< 0.2	0.27	0.2	1.3
Total Nitrogen (as N)*	0.2	mg/L	< 0.2	0.61	0.27	25.3
Total Organic Carbon	5	mg/L	< 5	< 5	< 5	9.2
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	< 5	< 5	< 5	57
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	20	84	95	100
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	20	84	95	100
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	< 0.005	0.006	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	< 0.05	0.56	< 0.05	< 0.05
Aluminium (filtered)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Arsenic	0.001	mg/L	0.001	0.001	< 0.001	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Boron	0.05	mg/L	0.11	0.62	0.94	0.68
Boron (filtered)	0.05	mg/L	0.11	0.62	0.87	0.56
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	0.0010
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	0.0009
Cobalt	0.001	mg/L	< 0.001	0.002	< 0.001	< 0.001
Cobalt (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iron	0.05	mg/L	< 0.05	0.94	< 0.05	< 0.05
Iron (filtered)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Lead	0.001	mg/L	< 0.001	0.003	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lithium	0.005	mg/L	0.025	0.006	0.011	0.014
Lithium (filtered)	0.005	mg/L	0.025	0.006	0.010	0.012
Manganese	0.005	mg/L	0.017	0.035	< 0.005	< 0.005

Client Sample ID			GW4-30	GW5-3	GW5-12	GW7-3
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025090	M23-My0025091	M23-My0025092	M23-My0025093
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Manganese (filtered)	0.005	mg/L	0.015	< 0.005	< 0.005	< 0.005
Nickel	0.001	mg/L	0.007	0.005	0.002	0.006
Nickel (filtered)	0.001	mg/L	0.007	0.003	0.002	0.006
Selenium	0.001	mg/L	0.002	< 0.001	< 0.001	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Zinc	0.005	mg/L	0.026	0.029	0.013	0.022
Zinc (filtered)	0.005	mg/L	0.024	0.016	0.011	0.021
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	21	10	22	130
Magnesium	0.5	mg/L	21	17	45	250
Potassium	0.5	mg/L	9.2	17	28	79
Sodium	0.5	mg/L	310	480	820	2100
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	0.11
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.04
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.05
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.02
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.09
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.02
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	140	118	118	56
13C5-PFPeA (surr.)	1	%	136	129	136	90
13C5-PFHxA (surr.)	1	%	130	125	130	98
13C4-PFHpA (surr.)	1	%	113	108	114	98
13C8-PFOA (surr.)	1	%	97	96	95	92
13C5-PFNA (surr.)	1	%	100	97	101	100
13C6-PFDA (surr.)	1	%	105	100	104	102
13C2-PFUnDA (surr.)	1	%	96	90	92	83
13C2-PFDoDA (surr.)	1	%	84	79	81	70
13C2-PFTeDA (surr.)	1	%	94	86	84	80
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	103	104	102	108

Client Sample ID			GW4-30	GW5-3	GW5-12	GW7-3
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025090	M23-My0025091	M23-My0025092	M23-My0025093
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
D3-N-MeFOSA (surr.)	1	%	72	133	78	115
D5-N-EtFOSA (surr.)	1	%	71	140	72	118
D7-N-MeFOSE (surr.)	1	%	84	90	84	73
D9-N-EtFOSE (surr.)	1	%	86	93	85	75
D5-N-EtFOSAA (surr.)	1	%	97	89	92	68
D3-N-MeFOSAA (surr.)	1	%	107	102	102	78
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.07
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.02
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.02
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.17
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.21
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	120	124	126	112
18O2-PFHxS (surr.)	1	%	94	98	99	102
13C8-PFOS (surr.)	1	%	92	85	89	93
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	102	90	101	111
13C2-6:2 FTSA (surr.)	1	%	88	82	96	104
13C2-8:2 FTSA (surr.)	1	%	101	92	124	86
13C2-10:2 FTSA (surr.)	1	%	110	104	139	89
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.38
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.3
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.47
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	0.76
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	0.82

Client Sample ID			GW7-12	GW8-3	GW8-12	GW9-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025094	M23-My0025095	M23-My0025096	M23-My0025097
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	0.20	40	2.7	2.4
Chemical Oxygen Demand (COD)	25	mg/L	< 25	49	1900	< 25
Chloride	1	mg/L	2300	470	32000	42
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	0.47	0.53	2.8
Nitrate (as N)	0.02	mg/L	0.02	0.47	0.49	2.7
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	0.04	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	< 0.2	4	1.1	4.6
Phosphate total (as P)	0.01	mg/L	0.05	0.03	0.36	0.38
Phosphorus reactive (as P)	0.01	mg/L	0.05	0.03	0.03	0.15
Sulphate (as SO4)	5	mg/L	360	57	4000	61
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	3700	1100	61000	390
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.2	44	3.8	7.0
Total Nitrogen (as N)*	0.2	mg/L	0.2	44.47	4.33	9.8
Total Organic Carbon	5	mg/L	< 5	24	< 5	< 5
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	13	14	150	11
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	130	340	230	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	130	340	230	< 20
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	< 0.05	< 0.05	< 0.05	0.44
Aluminium (filtered)	0.05	mg/L	< 0.05	< 0.05	< 0.05	0.10
Arsenic	0.001	mg/L	< 0.001	0.002	< 0.001	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	0.001	< 0.001	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Boron	0.05	mg/L	1.4	0.92	2.4	0.10
Boron (filtered)	0.05	mg/L	1.3	0.81	2.4	0.08
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	0.0025	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	0.0025	< 0.0002
Cobalt	0.001	mg/L	0.003	0.003	0.029	< 0.001
Cobalt (filtered)	0.001	mg/L	0.003	0.002	0.029	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001	0.002	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001	< 0.001
Iron	0.05	mg/L	< 0.05	6.4	< 0.05	0.13
Iron (filtered)	0.05	mg/L	< 0.05	0.15	< 0.05	< 0.05
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lithium	0.005	mg/L	0.021	< 0.005	0.030	0.023
Lithium (filtered)	0.005	mg/L	0.020	< 0.005	0.025	0.022
Manganese	0.005	mg/L	0.16	0.089	0.32	0.008

Client Sample ID			GW7-12	GW8-3	GW8-12	GW9-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025094	M23-My0025095	M23-My0025096	M23-My0025097
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Manganese (filtered)	0.005	mg/L	0.15	0.081	0.31	0.012
Nickel	0.001	mg/L	0.006	0.008	0.073	0.002
Nickel (filtered)	0.001	mg/L	0.006	0.008	0.070	0.001
Selenium	0.001	mg/L	< 0.001	0.001	< 0.001	0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.001
Vanadium	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Zinc	0.005	mg/L	0.035	0.030	0.062	0.020
Zinc (filtered)	0.005	mg/L	0.035	0.025	0.060	0.012
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	33	48	1000	16
Magnesium	0.5	mg/L	72	32	2100	9.7
Potassium	0.5	mg/L	42	47	370	10
Sodium	0.5	mg/L	1500	310	18000	89
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	0.10	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	0.04	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	0.05	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	<sup>N09</sup> 0.03	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	<sup>N09</sup> 0.01	<sup>N09</sup> 0.15	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	<sup>N09</sup> 0.03	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	122	123	119	155
13C5-PFPeA (surr.)	1	%	121	95	111	128
13C5-PFHxA (surr.)	1	%	118	120	101	121
13C4-PFHpA (surr.)	1	%	108	129	93	106
13C8-PFOA (surr.)	1	%	93	146	86	94
13C5-PFNA (surr.)	1	%	97	146	96	99
13C6-PFDA (surr.)	1	%	105	146	103	102
13C2-PFUnDA (surr.)	1	%	87	115	84	77
13C2-PFDoDA (surr.)	1	%	75	94	73	67
13C2-PFTeDA (surr.)	1	%	73	87	93	71
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	102	142	99	91

Client Sample ID			GW7-12	GW8-3	GW8-12	GW9-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025094	M23-My0025095	M23-My0025096	M23-My0025097
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
D3-N-MeFOSA (surr.)	1	%	69	87	96	78
D5-N-EtFOSA (surr.)	1	%	62	84	92	83
D7-N-MeFOSE (surr.)	1	%	81	75	72	72
D9-N-EtFOSE (surr.)	1	%	82	75	77	73
D5-N-EtFOSAA (surr.)	1	%	85	110	76	70
D3-N-MeFOSAA (surr.)	1	%	93	111	81	77
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	0.04	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	<sup>NO9</sup> 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	<sup>NO9</sup> 0.02	<sup>NO9</sup> 0.12	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	<sup>NO9</sup> 0.03	<sup>NO9</sup> 0.42	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	121	132	110	122
18O2-PFHxS (surr.)	1	%	99	144	96	102
13C8-PFOS (surr.)	1	%	94	123	90	84
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	69	190	43	101
13C2-6:2 FTSA (surr.)	1	%	102	176	55	85
13C2-8:2 FTSA (surr.)	1	%	83	195	74	87
13C2-10:2 FTSA (surr.)	1	%	97	129	86	77
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.05	0.54	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.04	0.57	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.06	0.69	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.06	0.95	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	0.99	< 0.1	< 0.1

Client Sample ID			GW10-12	GW11-12	GW12-3	GW12-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025099	M23-My0025101	M23-My0025102	M23-My0025103
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	0.08	0.11	0.09	0.43
Chemical Oxygen Demand (COD)	25	mg/L	< 25	< 25	52	< 25
Chloride	1	mg/L	12	13	300	14
Nitrate & Nitrite (as N)	0.05	mg/L	2.0	0.62	0.15	2.4
Nitrate (as N)	0.02	mg/L	2.0	0.62	0.15	2.3
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	0.22	0.69	1.41	0.67
Phosphate total (as P)	0.01	mg/L	0.02	0.04	0.18	0.38
Phosphorus reactive (as P)	0.01	mg/L	< 0.01	< 0.01	< 0.01	0.39
Sulphate (as SO4)	5	mg/L	< 5	9.8	42	15
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	68	140	960	90
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.3	0.8	1.5	1.1
Total Nitrogen (as N)*	0.2	mg/L	2.3	1.42	1.65	3.5
Total Organic Carbon	5	mg/L	< 5	< 5	30	< 5
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	< 5	< 5	81	< 5
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	67	92	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	< 20	67	92	< 20
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	0.30	0.33	0.24	0.15
Aluminium (filtered)	0.05	mg/L	0.30	< 0.05	< 0.05	0.10
Arsenic	0.001	mg/L	< 0.001	0.001	0.017	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Boron	0.05	mg/L	0.08	0.09	0.15	0.06
Boron (filtered)	0.05	mg/L	0.07	0.09	0.15	0.05
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Cobalt	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cobalt (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iron	0.05	mg/L	< 0.05	0.55	99	0.08
Iron (filtered)	0.05	mg/L	< 0.05	< 0.05	0.19	< 0.05
Lead	0.001	mg/L	< 0.001	< 0.001	0.004	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lithium	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Lithium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	0.005	mg/L	0.005	0.034	0.048	0.016

Client Sample ID			GW10-12	GW11-12	GW12-3	GW12-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025099	M23-My0025101	M23-My0025102	M23-My0025103
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Manganese (filtered)	0.005	mg/L	0.005	< 0.005	0.029	0.015
Nickel	0.001	mg/L	< 0.001	0.001	0.003	0.001
Nickel (filtered)	0.001	mg/L	< 0.001	0.001	0.002	0.001
Selenium	0.001	mg/L	< 0.001	< 0.001	0.005	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001	< 0.001
Vanadium	0.005	mg/L	< 0.005	< 0.005	0.064	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Zinc	0.005	mg/L	0.016	0.017	0.030	0.033
Zinc (filtered)	0.005	mg/L	0.011	0.006	0.011	0.031
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	1.4	22	49	3.0
Magnesium	0.5	mg/L	1.0	1.1	29	< 0.5
Potassium	0.5	mg/L	< 0.5	5.3	120	2.5
Sodium	0.5	mg/L	7.6	9.0	77	6.5
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	0.03	0.07	0.10	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	0.02	0.06	0.13	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	<sup>N09</sup> 0.02	0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	<sup>N09</sup> 0.01	<sup>N09</sup> 0.02	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTeDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	146	124	55	139
13C5-PFPeA (surr.)	1	%	121	123	55	117
13C5-PFHxA (surr.)	1	%	116	117	78	111
13C4-PFHpA (surr.)	1	%	102	110	91	97
13C8-PFOA (surr.)	1	%	97	106	105	91
13C5-PFNA (surr.)	1	%	104	115	96	95
13C6-PFDA (surr.)	1	%	119	123	98	98
13C2-PFUnDA (surr.)	1	%	110	101	72	72
13C2-PFDoDA (surr.)	1	%	100	87	59	62
13C2-PFTeDA (surr.)	1	%	120	103	64	72
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	108	115	98	88

Client Sample ID			GW10-12	GW11-12	GW12-3	GW12-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025099	M23-My0025101	M23-My0025102	M23-My0025103
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
D3-N-MeFOSA (surr.)	1	%	114	97	82	96
D5-N-EtFOSA (surr.)	1	%	112	91	82	99
D7-N-MeFOSE (surr.)	1	%	86	86	64	61
D9-N-EtFOSE (surr.)	1	%	89	87	64	63
D5-N-EtFOSAA (surr.)	1	%	90	96	61	61
D3-N-MeFOSAA (surr.)	1	%	98	103	69	71
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	0.02	0.02	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	<sup>N09</sup> 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	<sup>N09</sup> 0.03	<sup>N09</sup> 0.07	<sup>N09</sup> 0.03	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	<sup>N09</sup> 0.04	<sup>N09</sup> 0.08	<sup>N09</sup> 0.07	<sup>N09</sup> 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	119	127	93	127
18O2-PFHxS (surr.)	1	%	103	109	113	104
13C8-PFOS (surr.)	1	%	102	103	87	88
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	82	92	110	95
13C2-6:2 FTSA (surr.)	1	%	93	107	138	94
13C2-8:2 FTSA (surr.)	1	%	94	109	95	78
13C2-10:2 FTSA (surr.)	1	%	115	111	67	76
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.07	0.15	0.1	0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.04	0.09	0.09	0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.07	0.16	0.12	0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.12	0.33	0.43	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	0.12	0.34	0.43	< 0.1

Client Sample ID			GW12-30	GW13-12	GW14-3	GW14-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025104	M23-My0025106	M23-My0025107	M23-My0025108
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	0.15	2.3	0.14	0.13
Chemical Oxygen Demand (COD)	25	mg/L	< 25	< 25	< 25	47
Chloride	1	mg/L	4.3	76	1700	4200
Nitrate & Nitrite (as N)	0.05	mg/L	1.0	< 0.05	5.8	1.4
Nitrate (as N)	0.02	mg/L	1.0	< 0.02	5.3	1.4
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	< 0.2	< 0.2	0.36	1.17
Phosphate total (as P)	0.01	mg/L	0.06	0.04	0.02	0.13
Phosphorus reactive (as P)	0.01	mg/L	< 0.01	0.02	< 0.01	0.14
Sulphate (as SO4)	5	mg/L	16	10	320	600
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	170	230	3000	6000
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.3	2.3	0.5	1.3
Total Nitrogen (as N)*	0.2	mg/L	1.3	2.3	6.3	2.7
Total Organic Carbon	5	mg/L	< 5	6.2	< 5	< 5
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	< 5	12	< 5	7.0
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	30	< 20	67
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	< 20	30	< 20	67
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.081
Chromium (trivalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.081
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	0.13	< 0.05	0.29	0.17
Aluminium (filtered)	0.05	mg/L	< 0.05	< 0.05	0.08	0.09
Arsenic	0.001	mg/L	< 0.001	0.003	< 0.001	0.003
Arsenic (filtered)	0.001	mg/L	< 0.001	0.002	< 0.001	0.003
Beryllium	0.001	mg/L	< 0.001	< 0.001	0.003	0.004
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	0.003	0.004
Boron	0.05	mg/L	< 0.05	0.13	0.30	0.56
Boron (filtered)	0.05	mg/L	< 0.05	0.11	0.22	0.47
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	0.0007	0.0008
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	0.0007	0.0008
Cobalt	0.001	mg/L	0.001	0.002	0.030	0.071
Cobalt (filtered)	0.001	mg/L	0.001	0.002	0.027	0.071
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.002
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.002
Iron	0.05	mg/L	0.12	13	2.3	0.06
Iron (filtered)	0.05	mg/L	< 0.05	12	< 0.05	< 0.05
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lithium	0.005	mg/L	0.016	< 0.005	0.037	0.36
Lithium (filtered)	0.005	mg/L	0.015	< 0.005	0.025	0.35
Manganese	0.005	mg/L	0.012	0.13	1.3	2.4

Client Sample ID			GW12-30	GW13-12	GW14-3	GW14-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025104	M23-My0025106	M23-My0025107	M23-My0025108
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Manganese (filtered)	0.005	mg/L	0.012	0.12	1.1	2.3
Nickel	0.001	mg/L	0.002	0.004	0.033	0.041
Nickel (filtered)	0.001	mg/L	0.001	0.004	0.032	0.040
Selenium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.018
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.010
Zinc	0.005	mg/L	0.025	0.009	0.084	0.083
Zinc (filtered)	0.005	mg/L	0.018	0.007	0.083	0.082
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	1.0	3.6	79	140
Magnesium	0.5	mg/L	0.7	1.3	100	190
Potassium	0.5	mg/L	5.4	9.6	26	89
Sodium	0.5	mg/L	3.7	41	940	2400
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	0.37	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	0.06	0.81	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	0.08	0.82	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	<sup>N09</sup> 0.02	<sup>N09</sup> 0.21	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	<sup>N09</sup> 0.05	<sup>N09</sup> 0.20	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTeDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	180	134	60	105
13C5-PFPeA (surr.)	1	%	144	109	83	129
13C5-PFHxA (surr.)	1	%	138	112	84	121
13C4-PFHpA (surr.)	1	%	120	112	90	109
13C8-PFOA (surr.)	1	%	107	116	96	101
13C5-PFNA (surr.)	1	%	112	120	107	104
13C6-PFDA (surr.)	1	%	124	113	118	123
13C2-PFUnDA (surr.)	1	%	95	102	106	111
13C2-PFDoDA (surr.)	1	%	80	76	79	89
13C2-PFTeDA (surr.)	1	%	93	73	81	96
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	114	101	105	117

Client Sample ID			GW12-30	GW13-12	GW14-3	GW14-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025104	M23-My0025106	M23-My0025107	M23-My0025108
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
D3-N-MeFOSA (surr.)	1	%	112	75	102	128
D5-N-EtFOSA (surr.)	1	%	116	69	110	139
D7-N-MeFOSE (surr.)	1	%	85	64	78	84
D9-N-EtFOSE (surr.)	1	%	87	67	80	90
D5-N-EtFOSAA (surr.)	1	%	87	73	81	81
D3-N-MeFOSAA (surr.)	1	%	98	82	88	89
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	0.16	0.23	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	<sup>N09</sup> 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	<sup>N09</sup> 0.05	<sup>N09</sup> 0.09	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	<sup>N09</sup> 0.07	<sup>N09</sup> 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	136	120	103	124
18O2-PFHxS (surr.)	1	%	111	114	114	105
13C8-PFOS (surr.)	1	%	99	97	98	97
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	125	157	77	85
13C2-6:2 FTSA (surr.)	1	%	99	166	100	81
13C2-8:2 FTSA (surr.)	1	%	102	120	93	91
13C2-10:2 FTSA (surr.)	1	%	110	103	101	111
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	0.12	0.1	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	0.12	0.21	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	0.17	0.3	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	0.49	2.74	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	0.49	2.76	< 0.1

Client Sample ID			GW15-3	GW15-12	GW16-3	GW16-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025109	M23-My0025110	M23-My0025111	M23-My0025112
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	0.80	0.03	0.20	0.02
Chemical Oxygen Demand (COD)	25	mg/L	< 25	< 25	350	< 25
Chloride	1	mg/L	120	800	790	98
Nitrate & Nitrite (as N)	0.05	mg/L	8.2	0.28	0.13	1.9
Nitrate (as N)	0.02	mg/L	8.2	0.27	0.13	1.9
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	4.6	0.27	7.9	0.78
Phosphate total (as P)	0.01	mg/L	0.01	0.01	1.3	0.01
Phosphorus reactive (as P)	0.01	mg/L	0.02	0.02	0.51	0.03
Sulphate (as SO4)	5	mg/L	36	120	29	5.5
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	380	1500	3400	200
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	5.4	0.3	8.1	0.8
Total Nitrogen (as N)*	0.2	mg/L	13.6	0.58	8.23	2.7
Total Organic Carbon	5	mg/L	7.2	< 5	180	< 5
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	< 5	5.4	20	< 5
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	21	< 20	57	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	21	< 20	57	< 20
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	< 0.005	0.067	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	0.16	0.34	< 0.5	0.88
Aluminium (filtered)	0.05	mg/L	0.07	0.30	< 0.5	0.79
Arsenic	0.001	mg/L	< 0.001	< 0.001	0.004	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	0.003	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001	< 0.01	< 0.001
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.01	< 0.001
Boron	0.05	mg/L	0.19	0.07	0.96	< 0.05
Boron (filtered)	0.05	mg/L	0.18	0.05	0.80	< 0.05
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.002	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	0.0002	< 0.002	< 0.0002
Cobalt	0.001	mg/L	< 0.001	0.009	0.028	0.002
Cobalt (filtered)	0.001	mg/L	< 0.001	0.010	0.019	0.002
Copper	0.001	mg/L	< 0.001	0.015	0.15	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	0.015	0.12	< 0.001
Iron	0.05	mg/L	0.10	< 0.05	1.8	< 0.05
Iron (filtered)	0.05	mg/L	< 0.05	< 0.05	1.2	< 0.05
Lead	0.001	mg/L	< 0.001	0.002	< 0.01	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	0.002	< 0.01	< 0.001
Lithium	0.005	mg/L	< 0.005	0.016	< 0.05	< 0.005
Lithium (filtered)	0.005	mg/L	< 0.005	0.015	< 0.05	< 0.005
Manganese	0.005	mg/L	0.026	0.29	0.10	0.023

Client Sample ID			GW15-3	GW15-12	GW16-3	GW16-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025109	M23-My0025110	M23-My0025111	M23-My0025112
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Manganese (filtered)	0.005	mg/L	0.026	0.21	0.10	0.022
Nickel	0.001	mg/L	0.002	0.016	0.053	0.002
Nickel (filtered)	0.001	mg/L	0.002	0.014	0.053	0.001
Selenium	0.001	mg/L	< 0.001	< 0.001	0.004	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	0.003	< 0.001
Vanadium	0.005	mg/L	< 0.005	< 0.005	< 0.05	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.05	< 0.005
Zinc	0.005	mg/L	0.007	0.051	< 0.05	0.009
Zinc (filtered)	0.005	mg/L	0.006	0.044	< 0.05	0.007
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	15	34	24	2.8
Magnesium	0.5	mg/L	7.3	44	12	1.1
Potassium	0.5	mg/L	12	10.0	190	0.6
Sodium	0.5	mg/L	110	400	530	55
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	0.16	< 0.05	0.30	0.07
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	0.38	< 0.01	0.74	0.10
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	0.27	< 0.01	1.2	0.08
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	<sup>NO9</sup> 0.15	< 0.01	<sup>NO9</sup> 0.10	<sup>NO9</sup> 0.05
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	<sup>NO9</sup> 0.22	< 0.01	<sup>NO9</sup> 0.06	<sup>NO9</sup> 0.08
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	<sup>NO9</sup> 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTeDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	95	111	97	129
13C5-PFPeA (surr.)	1	%	78	145	109	100
13C5-PFHxA (surr.)	1	%	96	129	107	98
13C4-PFHpA (surr.)	1	%	100	120	70	100
13C8-PFOA (surr.)	1	%	109	109	98	99
13C5-PFNA (surr.)	1	%	115	110	91	94
13C6-PFDA (surr.)	1	%	110	111	93	95
13C2-PFUnDA (surr.)	1	%	77	82	69	70
13C2-PFDoDA (surr.)	1	%	62	69	52	57
13C2-PFTeDA (surr.)	1	%	69	73	54	64
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	102	102	99	100

Client Sample ID			GW15-3	GW15-12	GW16-3	GW16-12
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025109	M23-My0025110	M23-My0025111	M23-My0025112
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
D3-N-MeFOSA (surr.)	1	%	100	88	100	103
D5-N-EtFOSA (surr.)	1	%	104	87	94	105
D7-N-MeFOSE (surr.)	1	%	71	73	50	74
D9-N-EtFOSE (surr.)	1	%	73	74	49	76
D5-N-EtFOSAA (surr.)	1	%	57	70	57	58
D3-N-MeFOSAA (surr.)	1	%	68	77	64	58
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	0.14	0.01	3.1	0.06
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	<sup>N09</sup> 0.02	< 0.01	<sup>N09</sup> 0.02	<sup>N09</sup> 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	<sup>N09</sup> 0.13	< 0.01	<sup>N09</sup> 0.06	<sup>N09</sup> 0.09
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	<sup>N09</sup> 0.11	< 0.01	< 0.01	<sup>G01</sup> 0.04
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	110	133	102	115
18O2-PFHxS (surr.)	1	%	114	113	101	111
13C8-PFOS (surr.)	1	%	101	94	86	86
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	115	102	83	87
13C2-6:2 FTSA (surr.)	1	%	194	97	134	115
13C2-8:2 FTSA (surr.)	1	%	106	87	96	75
13C2-10:2 FTSA (surr.)	1	%	73	91	61	80
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.24	< 0.01	0.06	0.13
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.33	< 0.01	0.06	0.12
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.46	< 0.01	0.12	0.21
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	1.56	< 0.05	5.56	0.57
Sum of PFASs (n=30)*	0.1	ug/L	1.59	< 0.1	5.58	0.59

Client Sample ID			GW16-30	GW17-3	GW17-12	GW17-30
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025113	M23-My0025114	M23-My0025115	M23-My0025116
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	< 0.01	0.02	< 0.01	0.04
Chemical Oxygen Demand (COD)	25	mg/L	< 25	280	110	< 25
Chloride	1	mg/L	32	5600	3300	370
Nitrate & Nitrite (as N)	0.05	mg/L	0.11	0.80	0.24	2.7
Nitrate (as N)	0.02	mg/L	0.11	0.80	0.24	2.7
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02	0.04
Organic Nitrogen (as N)*	0.2	mg/L	< 0.2	< 0.2	2.4	0.36
Phosphate total (as P)	0.01	mg/L	0.01	0.09	0.04	0.02
Phosphorus reactive (as P)	0.01	mg/L	0.02	0.02	0.02	0.02
Sulphate (as SO4)	5	mg/L	33	480	330	180
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	91	9300	5300	1200
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	< 0.2	< 0.2	2.4	0.4
Total Nitrogen (as N)*	0.2	mg/L	< 0.2	0.8	2.64	3.1
Total Organic Carbon	5	mg/L	< 5	< 5	< 5	< 5
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	< 5	25	13	< 5
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	36
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	48
Total Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	84
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	0.11	0.15	0.06	0.35
Aluminium (filtered)	0.05	mg/L	0.05	0.05	< 0.05	0.33
Arsenic	0.001	mg/L	0.002	< 0.001	< 0.001	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001	0.001	< 0.001
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001	< 0.001
Boron	0.05	mg/L	< 0.05	0.07	0.06	0.07
Boron (filtered)	0.05	mg/L	< 0.05	0.06	0.05	0.07
Cadmium	0.0002	mg/L	< 0.0002	0.0014	0.0009	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	0.0014	0.0008	< 0.0002
Cobalt	0.001	mg/L	0.002	0.010	0.005	< 0.001
Cobalt (filtered)	0.001	mg/L	0.001	0.010	0.004	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iron	0.05	mg/L	0.10	0.10	0.11	< 0.05
Iron (filtered)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Lead	0.001	mg/L	< 0.001	0.002	0.002	0.004
Lead (filtered)	0.001	mg/L	< 0.001	0.002	< 0.001	0.004
Lithium	0.005	mg/L	0.006	0.11	0.13	0.020
Lithium (filtered)	0.005	mg/L	0.006	0.10	0.11	0.012
Manganese	0.005	mg/L	0.015	0.27	0.14	< 0.005

Client Sample ID			GW16-30	GW17-3	GW17-12	GW17-30
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025113	M23-My0025114	M23-My0025115	M23-My0025116
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Manganese (filtered)	0.005	mg/L	0.014	0.27	0.13	< 0.005
Nickel	0.001	mg/L	0.004	0.071	0.092	< 0.001
Nickel (filtered)	0.001	mg/L	0.004	0.064	0.089	< 0.001
Selenium	0.001	mg/L	0.003	< 0.001	< 0.001	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Zinc	0.005	mg/L	0.019	0.29	0.45	< 0.005
Zinc (filtered)	0.005	mg/L	0.017	0.21	0.43	< 0.005
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	2.1	400	240	140
Magnesium	0.5	mg/L	1.4	330	200	< 0.5
Potassium	0.5	mg/L	4.3	17	16	5.0
Sodium	0.5	mg/L	29	2500	1900	200
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTeDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	163	73	62	122
13C5-PFPeA (surr.)	1	%	132	109	126	13
13C5-PFHxA (surr.)	1	%	126	108	116	78
13C4-PFHpA (surr.)	1	%	108	101	107	114
13C8-PFOA (surr.)	1	%	94	95	97	106
13C5-PFNA (surr.)	1	%	101	102	110	114
13C6-PFDA (surr.)	1	%	110	115	115	124
13C2-PFUnDA (surr.)	1	%	88	91	97	99
13C2-PFDoDA (surr.)	1	%	75	73	80	86
13C2-PFTeDA (surr.)	1	%	78	78	83	99
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	103	104	113	121

Client Sample ID			GW16-30	GW17-3	GW17-12	GW17-30
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025113	M23-My0025114	M23-My0025115	M23-My0025116
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
D3-N-MeFOSA (surr.)	1	%	107	85	101	151
D5-N-EtFOSA (surr.)	1	%	112	91	100	157
D7-N-MeFOSE (surr.)	1	%	86	78	87	86
D9-N-EtFOSE (surr.)	1	%	87	82	89	88
D5-N-EtFOSAA (surr.)	1	%	83	76	87	86
D3-N-MeFOSAA (surr.)	1	%	89	86	91	93
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	124	119	124	105
18O2-PFHxS (surr.)	1	%	97	102	104	107
13C8-PFOS (surr.)	1	%	93	90	98	96
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	112	75	86	59
13C2-6:2 FTSA (surr.)	1	%	90	86	87	103
13C2-8:2 FTSA (surr.)	1	%	89	92	93	104
13C2-10:2 FTSA (surr.)	1	%	100	104	106	104
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			GW18-3	GW18-12	GW20	WW1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025117	M23-My0025118	M23-My0025119	M23-My0025120
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	< 0.01	< 0.01	0.29	0.07
Chemical Oxygen Demand (COD)	25	mg/L	< 25	< 25	< 25	< 25
Chloride	1	mg/L	430	29	49	210
Nitrate & Nitrite (as N)	0.05	mg/L	1.8	2.5	< 0.05	37
Nitrate (as N)	0.02	mg/L	1.8	2.5	< 0.02	37
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	0.5	0.6	0.31	5.53
Phosphate total (as P)	0.01	mg/L	0.03	0.09	0.02	0.05
Phosphorus reactive (as P)	0.01	mg/L	0.01	0.09	< 0.01	0.02
Sulphate (as SO4)	5	mg/L	86	31	13	10
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	980	180	200	600
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.5	0.6	0.6	5.6
Total Nitrogen (as N)*	0.2	mg/L	2.3	3.1	0.6	42.6
Total Organic Carbon	5	mg/L	< 5	< 5	< 5	< 5
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	7.1	< 5	< 5	< 5
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	110	40	20	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	110	40	20	< 20
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	1.7	0.34	< 0.05	2.2
Aluminium (filtered)	0.05	mg/L	< 0.05	< 0.05	< 0.05	2.0
Arsenic	0.001	mg/L	0.001	0.002	0.002	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Boron	0.05	mg/L	< 0.05	< 0.05	0.06	0.09
Boron (filtered)	0.05	mg/L	< 0.05	< 0.05	0.05	0.08
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Cobalt	0.001	mg/L	0.002	< 0.001	< 0.001	0.003
Cobalt (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.003
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.003
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iron	0.05	mg/L	1.2	0.63	2.5	0.06
Iron (filtered)	0.05	mg/L	< 0.05	< 0.05	2.5	< 0.05
Lead	0.001	mg/L	0.004	0.002	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lithium	0.005	mg/L	0.032	0.016	< 0.005	< 0.005
Lithium (filtered)	0.005	mg/L	0.027	< 0.005	< 0.005	< 0.005
Manganese	0.005	mg/L	0.024	0.026	0.050	0.045

Client Sample ID			GW18-3	GW18-12	GW20	WW1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025117	M23-My0025118	M23-My0025119	M23-My0025120
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Manganese (filtered)	0.005	mg/L	< 0.005	< 0.005	0.042	0.046
Nickel	0.001	mg/L	0.006	0.003	0.003	0.005
Nickel (filtered)	0.001	mg/L	0.002	< 0.001	< 0.001	0.003
Selenium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	0.005	mg/L	0.010	0.016	< 0.005	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Zinc	0.005	mg/L	0.015	0.013	< 0.005	0.047
Zinc (filtered)	0.005	mg/L	0.007	< 0.005	< 0.005	0.035
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	17	11	6.4	5.6
Magnesium	0.5	mg/L	12	2.1	2.9	7.5
Potassium	0.5	mg/L	1.3	4.4	15	2.8
Sodium	0.5	mg/L	220	15	18	150
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	0.17
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	0.05	0.21
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	0.06	0.22
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	<sup>N09</sup> 0.01	<sup>N09</sup> 0.07
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	<sup>N09</sup> 0.02	<sup>N09</sup> 0.11
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	120	117	145	110
13C5-PFPeA (surr.)	1	%	127	126	122	97
13C5-PFHxA (surr.)	1	%	127	123	113	91
13C4-PFHpA (surr.)	1	%	118	110	112	101
13C8-PFOA (surr.)	1	%	122	106	109	96
13C5-PFNA (surr.)	1	%	127	113	115	109
13C6-PFDA (surr.)	1	%	136	128	128	120
13C2-PFUnDA (surr.)	1	%	105	99	97	79
13C2-PFDoDA (surr.)	1	%	86	76	68	66
13C2-PFTeDA (surr.)	1	%	91	77	59	72
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	125	114	107	100

Client Sample ID			GW18-3	GW18-12	GW20	WW1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025117	M23-My0025118	M23-My0025119	M23-My0025120
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
D3-N-MeFOSA (surr.)	1	%	95	72	72	76
D5-N-EtFOSA (surr.)	1	%	93	69	71	76
D7-N-MeFOSE (surr.)	1	%	82	81	72	72
D9-N-EtFOSE (surr.)	1	%	84	83	73	76
D5-N-EtFOSAA (surr.)	1	%	94	84	76	63
D3-N-MeFOSAA (surr.)	1	%	107	92	85	67
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	0.03	0.41
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.03
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	<sup>N09</sup> 0.12	<sup>N09</sup> 0.04	<sup>N09</sup> 0.01	<sup>N09</sup> 0.03
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	<sup>N09</sup> 0.14	<sup>N09</sup> 0.02	<sup>N09</sup> 0.02	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	130	119	128	109
18O2-PFHxS (surr.)	1	%	114	110	114	110
13C8-PFOS (surr.)	1	%	108	101	99	103
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	114	108	115	77
13C2-6:2 FTSA (surr.)	1	%	141	111	121	80
13C2-8:2 FTSA (surr.)	1	%	123	106	107	71
13C2-10:2 FTSA (surr.)	1	%	119	103	90	71
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.26	0.06	0.03	0.03
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.14	0.02	0.04	0.11
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.26	0.06	0.05	0.14
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.26	0.06	0.2	1.22
Sum of PFASs (n=30)*	0.1	ug/L	0.26	< 0.1	0.2	1.26

Client Sample ID			WW6	WW9	WW13	GWILP
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025121	M23-My0025122	M23-My0025123	M23-My0025124
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	1.4	0.03	0.30	1.4
Chemical Oxygen Demand (COD)	25	mg/L	370	< 25	< 25	< 25
Chloride	1	mg/L	10000	380	410	120
Nitrate & Nitrite (as N)	0.05	mg/L	0.89	0.10	1.9	< 0.05
Nitrate (as N)	0.02	mg/L	0.89	0.10	1.9	< 0.02
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	< 0.2	< 0.2	1.7	1
Phosphate total (as P)	0.01	mg/L	0.35	0.05	0.28	0.02
Phosphorus reactive (as P)	0.01	mg/L	0.26	< 0.01	0.35	0.02
Sulphate (as SO4)	5	mg/L	1100	56	32	65
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	10000	1000	760	330
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	1.4	< 0.2	2.0	2.4
Total Nitrogen (as N)*	0.2	mg/L	2.29	< 0.2	3.9	2.4
Total Organic Carbon	5	mg/L	< 5	< 5	< 5	5.5
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	12	280	78	< 5
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	0.007	0.009	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	< 0.05	1.6	5.0	0.07
Aluminium (filtered)	0.05	mg/L	< 0.05	0.13	0.43	0.07
Arsenic	0.001	mg/L	0.002	0.009	0.015	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	0.001	mg/L	0.011	< 0.001	0.002	< 0.001
Beryllium (filtered)	0.001	mg/L	0.002	< 0.001	0.002	< 0.001
Boron	0.05	mg/L	0.65	< 0.05	< 0.05	0.05
Boron (filtered)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Cadmium	0.0002	mg/L	0.0050	< 0.0002	0.0002	< 0.0002
Cadmium (filtered)	0.0002	mg/L	0.0004	< 0.0002	< 0.0002	< 0.0002
Cobalt	0.001	mg/L	1.2	0.013	0.009	0.004
Cobalt (filtered)	0.001	mg/L	0.020	0.012	0.006	0.004
Copper	0.001	mg/L	< 0.001	0.003	0.004	0.003
Copper (filtered)	0.001	mg/L	0.008	< 0.001	< 0.001	0.002
Iron	0.05	mg/L	0.62	19	7.3	3.6
Iron (filtered)	0.05	mg/L	< 0.05	< 0.05	< 0.05	3.6
Lead	0.001	mg/L	0.004	0.003	0.046	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	0.005	< 0.001
Lithium	0.005	mg/L	0.68	0.011	0.054	< 0.005
Lithium (filtered)	0.005	mg/L	0.015	0.010	0.049	< 0.005
Manganese	0.005	mg/L	48	0.36	0.12	0.13

Client Sample ID			WW6	WW9	WW13	GWILP
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025121	M23-My0025122	M23-My0025123	M23-My0025124
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Manganese (filtered)	0.005	mg/L	0.53	0.33	0.066	0.12
Nickel	0.001	mg/L	0.77	0.011	0.051	0.007
Nickel (filtered)	0.001	mg/L	0.016	0.010	0.038	0.007
Selenium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	0.005	mg/L	< 0.005	0.013	0.012	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Zinc	0.005	mg/L	1.3	0.028	0.16	0.019
Zinc (filtered)	0.005	mg/L	0.55	0.027	0.12	0.017
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	14	16	16	7.7
Magnesium	0.5	mg/L	14	26	15	6.7
Potassium	0.5	mg/L	11	3.6	1.5	3.1
Sodium	0.5	mg/L	300	190	160	96
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.07
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.07
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.03
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.05
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	101	119	145	72
13C5-PFPeA (surr.)	1	%	129	111	122	71
13C5-PFHxA (surr.)	1	%	122	107	113	70
13C4-PFHpA (surr.)	1	%	115	101	101	74
13C8-PFOA (surr.)	1	%	112	101	98	61
13C5-PFNA (surr.)	1	%	112	111	109	57
13C6-PFDA (surr.)	1	%	108	118	118	38
13C2-PFUnDA (surr.)	1	%	80	104	86	22
13C2-PFDoDA (surr.)	1	%	68	76	72	18
13C2-PFTeDA (surr.)	1	%	77	64	79	10
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	88	101	99	38

Client Sample ID			WW6	WW9	WW13	GWILP
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025121	M23-My0025122	M23-My0025123	M23-My0025124
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
D3-N-MeFOSA (surr.)	1	%	40	39	65	15
D5-N-EtFOSA (surr.)	1	%	35	34	63	10
D7-N-MeFOSE (surr.)	1	%	56	65	73	15
D9-N-EtFOSE (surr.)	1	%	54	69	77	12
D5-N-EtFOSAA (surr.)	1	%	58	71	70	22
D3-N-MeFOSAA (surr.)	1	%	72	83	80	26
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.14
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.08
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	<sup>N09</sup> 0.03
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	126	121	119	82
18O2-PFHxS (surr.)	1	%	102	100	111	71
13C8-PFOS (surr.)	1	%	91	95	98	58
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	110	87	66	64
13C2-6:2 FTSA (surr.)	1	%	126	91	78	58
13C2-8:2 FTSA (surr.)	1	%	128	101	86	40
13C2-10:2 FTSA (surr.)	1	%	119	125	91	21
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.11
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.08
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.16
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	0.47
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	0.48
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	0.02	mg/L	-	-	-	< 0.02
TRH C10-C14	0.05	mg/L	-	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	-	< 0.1
TRH C6-C10	0.02	mg/L	-	-	-	< 0.02
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	0.02	mg/L	-	-	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	0.05	mg/L	-	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	-	< 0.1

Client Sample ID			WW6	WW9	WW13	GWILP
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025121	M23-My0025122	M23-My0025123	M23-My0025124
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>BTEX</b>						
Benzene	0.001	mg/L	-	-	-	< 0.001
Toluene	0.001	mg/L	-	-	-	< 0.001
Ethylbenzene	0.001	mg/L	-	-	-	< 0.001
m&p-Xylenes	0.002	mg/L	-	-	-	< 0.002
o-Xylene	0.001	mg/L	-	-	-	< 0.001
Xylenes - Total*	0.003	mg/L	-	-	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	-	-	-	107
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
Naphthalene <sup>N02</sup>	0.01	mg/L	-	-	-	< 0.01
<b>Polycyclic Aromatic Hydrocarbons</b>						
Acenaphthene	0.001	mg/L	-	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	-	< 0.001
Benzo(b&j)fluoranthene <sup>N07</sup>	0.001	mg/L	-	-	-	< 0.001
Benzo(g,h,i)perylene	0.001	mg/L	-	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	-	< 0.001
Dibenz(a,h)anthracene	0.001	mg/L	-	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	-	< 0.001
Indeno(1,2,3-cd)pyrene	0.001	mg/L	-	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	-	57
p-Terphenyl-d14 (surr.)	1	%	-	-	-	53
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	0.003	mg/L	-	-	-	< 0.003
2,4-Dichlorophenol	0.003	mg/L	-	-	-	< 0.003
2,4,5-Trichlorophenol	0.01	mg/L	-	-	-	< 0.01
2,4,6-Trichlorophenol	0.01	mg/L	-	-	-	< 0.01
2,6-Dichlorophenol	0.003	mg/L	-	-	-	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	-	-	< 0.01
Pentachlorophenol	0.01	mg/L	-	-	-	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	-	-	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	-	-	< 0.01
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	0.1	mg/L	-	-	-	< 0.1
2-Methyl-4,6-dinitrophenol	0.03	mg/L	-	-	-	< 0.03
2-Nitrophenol	0.01	mg/L	-	-	-	< 0.01
2,4-Dimethylphenol	0.003	mg/L	-	-	-	< 0.003
2,4-Dinitrophenol	0.03	mg/L	-	-	-	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	-	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	-	< 0.006
Total cresols*	0.01	mg/L	-	-	-	< 0.01

Client Sample ID			WW6	WW9	WW13	GWILP
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025121	M23-My0025122	M23-My0025123	M23-My0025124
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Phenols (non-Halogenated)</b>						
4-Nitrophenol	0.03	mg/L	-	-	-	< 0.03
Dinoseb	0.1	mg/L	-	-	-	< 0.1
Phenol	0.003	mg/L	-	-	-	< 0.003
Phenol-d6 (surr.)	1	%	-	-	-	67
Total Non-Halogenated Phenol*	0.1	mg/L	-	-	-	< 0.1

Client Sample ID			GW Sump	SW12	SW13	DUP1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025125	M23-My0025126	M23-My0025127	M23-My0025129
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	0.84	0.81	0.03	0.80
Chemical Oxygen Demand (COD)	25	mg/L	550	< 25	79	-
Chloride	1	mg/L	190	530	1500	540
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	0.17	0.09	0.17
Nitrate (as N)	0.02	mg/L	0.02	0.13	0.09	0.12
Nitrite (as N)	0.02	mg/L	< 0.02	0.04	< 0.02	0.04
Organic Nitrogen (as N)*	0.2	mg/L	14.16	1.49	3.57	1.4
Phosphate total (as P)	0.01	mg/L	2.0	0.03	0.03	0.01
Phosphorus reactive (as P)	0.01	mg/L	0.08	0.02	0.02	< 0.01
Sulphate (as SO4)	5	mg/L	8.1	78	170	79
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	1200	1100	2900	1100
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	15	2.3	3.6	2.2
Total Nitrogen (as N)*	0.2	mg/L	15	2.47	3.69	2.37
Total Organic Carbon	5	mg/L	120	14	38	-
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	270	< 5	11	< 5
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	280	66	54	79
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	280	66	54	79
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (trivalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	0.005	mg/L	-	< 0.005	< 0.005	< 0.005
Chromium (trivalent filtered)	0.005	mg/L	-	< 0.005	< 0.005	< 0.005
<b>Heavy Metals</b>						
Aluminium	0.05	mg/L	4.0	0.07	0.28	0.14
Aluminium (filtered)	0.05	mg/L	-	< 0.05	0.10	< 0.05
Arsenic	0.001	mg/L	0.027	0.001	0.002	< 0.001
Arsenic (filtered)	0.001	mg/L	-	< 0.001	0.002	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium (filtered)	0.001	mg/L	-	< 0.001	< 0.001	< 0.001
Boron	0.05	mg/L	0.22	0.08	0.14	0.08
Boron (filtered)	0.05	mg/L	-	0.08	0.13	0.07

Client Sample ID			GW Sump	SW12	SW13	DUP1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M23-My0025125	M23-My0025126	M23-My0025127	M23-My0025129
Date Sampled			May 10, 2023	May 10, 2023	May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Cadmium	0.0002	mg/L	0.0006	< 0.0002	< 0.0002	< 0.0002
Cadmium (filtered)	0.0002	mg/L	-	< 0.0002	< 0.0002	< 0.0002
Cobalt	0.001	mg/L	0.006	< 0.001	0.002	< 0.001
Cobalt (filtered)	0.001	mg/L	-	< 0.001	0.002	< 0.001
Copper	0.001	mg/L	0.007	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	-	< 0.001	< 0.001	< 0.001
Iron	0.05	mg/L	26	0.09	0.27	0.20
Iron (filtered)	0.05	mg/L	-	0.05	0.06	< 0.05
Lead	0.001	mg/L	0.010	< 0.001	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	-	< 0.001	< 0.001	< 0.001
Lithium	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Lithium (filtered)	0.005	mg/L	-	< 0.005	< 0.005	< 0.005
Manganese	0.005	mg/L	0.69	0.043	0.20	0.043
Manganese (filtered)	0.005	mg/L	-	0.029	0.077	0.029
Nickel	0.001	mg/L	0.009	0.002	0.005	0.002
Nickel (filtered)	0.001	mg/L	-	0.002	0.004	0.002
Selenium	0.001	mg/L	0.002	< 0.001	< 0.001	< 0.001
Selenium (filtered)	0.001	mg/L	-	< 0.001	< 0.001	< 0.001
Vanadium	0.005	mg/L	0.086	< 0.005	< 0.005	< 0.005
Vanadium (filtered)	0.005	mg/L	-	< 0.005	< 0.005	< 0.005
Zinc	0.005	mg/L	0.31	0.013	0.007	0.013
Zinc (filtered)	0.005	mg/L	-	0.010	0.007	0.010
<b>Alkali Metals</b>						
Calcium	0.5	mg/L	7.8	59	110	54
Magnesium	0.5	mg/L	6.4	35	97	34
Potassium	0.5	mg/L	3.8	14	29	14
Sodium	0.5	mg/L	93	300	880	290

Client Sample ID			DUP2	LP02
Sample Matrix			Water	Water
Eurofins Sample No.			M23-My0025130	M23-My0027306
Date Sampled			May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit		
Ammonia (as N)	0.01	mg/L	0.28	840
Chemical Oxygen Demand (COD)	25	mg/L	-	3500
Chloride	1	mg/L	48	2000
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	0.60
Nitrate (as N)	0.02	mg/L	< 0.02	< 0.2
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.2
Organic Nitrogen (as N)*	0.2	mg/L	< 0.2	360
Phosphate total (as P)	0.01	mg/L	0.01	11
Phosphorus reactive (as P)	0.01	mg/L	0.32	8.5
Sulphate (as SO4)	5	mg/L	9.4	< 50
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	130	5700
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.4	1200
Total Nitrogen (as N)*	0.2	mg/L	0.4	1200.6

Client Sample ID			DUP2	LP02
Sample Matrix			Water	Water
Eurofins Sample No.			M23-My0025130	M23-My0027306
Date Sampled			May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit		
Total Organic Carbon	5	mg/L	-	150
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	6.4	150
<b>Alkalinity (speciated)</b>				
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )	20	mg/L	< 20	5100
Carbonate Alkalinity (as CaCO <sub>3</sub> )	10	mg/L	< 10	< 10
Hydroxide Alkalinity (as CaCO <sub>3</sub> )	20	mg/L	< 20	< 20
Total Alkalinity (as CaCO <sub>3</sub> )	20	mg/L	< 20	5100
<b>Hexavalent Chromium Set</b>				
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.05
Chromium (trivalent)	0.005	mg/L	< 0.005	0.38
<b>Hexavalent Chromium Set (filtered)</b>				
Chromium (hexavalent filtered)	0.005	mg/L	< 0.005	-
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	-
<b>Heavy Metals</b>				
Aluminium	0.05	mg/L	0.10	0.88
Aluminium (filtered)	0.05	mg/L	< 0.05	-
Arsenic	0.001	mg/L	0.002	0.11
Arsenic (filtered)	0.001	mg/L	0.002	-
Beryllium	0.001	mg/L	< 0.001	< 0.01
Beryllium (filtered)	0.001	mg/L	< 0.001	-
Boron	0.05	mg/L	0.06	4.5
Boron (filtered)	0.05	mg/L	0.05	-
Cadmium	0.0002	mg/L	< 0.0002	< 0.002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	-
Cobalt	0.001	mg/L	< 0.001	0.051
Cobalt (filtered)	0.001	mg/L	< 0.001	-
Copper	0.001	mg/L	< 0.001	0.031
Copper (filtered)	0.001	mg/L	< 0.001	-
Iron	0.05	mg/L	2.7	8.1
Iron (filtered)	0.05	mg/L	2.6	-
Lead	0.001	mg/L	< 0.001	< 0.01
Lead (filtered)	0.001	mg/L	< 0.001	-
Lithium	0.005	mg/L	< 0.005	0.11
Lithium (filtered)	0.005	mg/L	< 0.005	-
Manganese	0.005	mg/L	0.053	0.20
Manganese (filtered)	0.005	mg/L	0.050	-
Nickel	0.001	mg/L	< 0.001	0.20
Nickel (filtered)	0.001	mg/L	< 0.001	-
Selenium	0.001	mg/L	< 0.001	< 0.01
Selenium (filtered)	0.001	mg/L	< 0.001	-
Vanadium	0.005	mg/L	< 0.005	0.19
Vanadium (filtered)	0.005	mg/L	< 0.005	-
Zinc	0.005	mg/L	< 0.005	0.26
Zinc (filtered)	0.005	mg/L	< 0.005	-
<b>Alkali Metals</b>				
Calcium	0.5	mg/L	7.0	54
Magnesium	0.5	mg/L	3.1	38
Potassium	0.5	mg/L	17	750
Sodium	0.5	mg/L	21	1800

Client Sample ID			DUP2	LP02
Sample Matrix			Water	Water
Eurofins Sample No.			M23-My0025130	M23-My0027306
Date Sampled			May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	-	1.1
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	-	2.7
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	-	4.8
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	-	0.68
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	-	<sup>N09</sup> 2.0
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	-	0.08
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	-	0.08
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	-	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	-	< 0.01
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	0.01	ug/L	-	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	-	< 0.01
13C4-PFBA (surr.)	1	%	-	125
13C5-PFPeA (surr.)	1	%	-	56
13C5-PFHxA (surr.)	1	%	-	72
13C4-PFHpA (surr.)	1	%	-	98
13C8-PFOA (surr.)	1	%	-	104
13C5-PFNA (surr.)	1	%	-	79
13C6-PFDA (surr.)	1	%	-	75
13C2-PFUnDA (surr.)	1	%	-	60
13C2-PFDoDA (surr.)	1	%	-	62
13C2-PFTeDA (surr.)	1	%	-	57
<b>Perfluoroalkyl sulfonamido substances</b>				
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	-	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	-	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	-	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	-	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	-	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	-	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	-	<sup>N09</sup> 0.07
13C8-FOSA (surr.)	1	%	-	66
D3-N-MeFOSA (surr.)	1	%	-	144
D5-N-EtFOSA (surr.)	1	%	-	160
D7-N-MeFOSE (surr.)	1	%	-	80
D9-N-EtFOSE (surr.)	1	%	-	81
D5-N-EtFOSAA (surr.)	1	%	-	52
D3-N-MeFOSAA (surr.)	1	%	-	55
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	-	11
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	-	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	-	0.12
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	-	<sup>N09</sup> 0.20
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	-	<sup>N09</sup> 0.66
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	-	<sup>N09</sup> 0.03
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	-	<sup>N09</sup> 0.66
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	-	< 0.01

Client Sample ID			DUP2	LP02
Sample Matrix			Water	Water
Eurofins Sample No.			M23-My0025130	M23-My0027306
Date Sampled			May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>				
13C3-PFBS (surr.)	1	%	-	88
18O2-PFHxS (surr.)	1	%	-	90
13C8-PFOS (surr.)	1	%	-	96
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	-	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	-	0.65
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	-	0.04
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	-	< 0.01
13C2-4:2 FTSA (surr.)	1	%	-	84
13C2-6:2 FTSA (surr.)	1	%	-	150
13C2-8:2 FTSA (surr.)	1	%	-	142
13C2-10:2 FTSA (surr.)	1	%	-	136
<b>PFASs Summations</b>				
Sum (PFHxS + PFOS)*	0.01	ug/L	-	1.32
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	-	2.66
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	-	3.32
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	-	24.29
Sum of PFASs (n=30)*	0.1	ug/L	-	24.87
<b>Total Recoverable Hydrocarbons</b>				
TRH C6-C9	0.02	mg/L	-	0.11
TRH C10-C14	0.05	mg/L	-	3.6
TRH C15-C28	0.1	mg/L	-	8.5
TRH C29-C36	0.1	mg/L	-	0.5
TRH C10-C36 (Total)	0.1	mg/L	-	12.6
TRH C6-C10	0.02	mg/L	-	0.09
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	0.02	mg/L	-	0.09
TRH >C10-C16	0.05	mg/L	-	4.8
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	0.05	mg/L	-	4.8
TRH >C16-C34	0.1	mg/L	-	7.2
TRH >C34-C40	0.1	mg/L	-	0.2
TRH >C10-C40 (total)*	0.1	mg/L	-	12.2
<b>BTEX</b>				
Benzene	0.001	mg/L	-	< 0.004
Toluene	0.001	mg/L	-	< 0.004
Ethylbenzene	0.001	mg/L	-	< 0.004
m&p-Xylenes	0.002	mg/L	-	< 0.008
o-Xylene	0.001	mg/L	-	< 0.004
Xylenes - Total*	0.003	mg/L	-	< 0.012
4-Bromofluorobenzene (surr.)	1	%	-	76
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				
Naphthalene <sup>N02</sup>	0.01	mg/L	-	< 0.04
<b>Polycyclic Aromatic Hydrocarbons</b>				
Acenaphthene	0.001	mg/L	-	< 0.001
Acenaphthylene	0.001	mg/L	-	< 0.001
Anthracene	0.001	mg/L	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	< 0.001

Client Sample ID			DUP2	LP02
Sample Matrix			Water	Water
Eurofins Sample No.			M23-My0025130	M23-My0027306
Date Sampled			May 10, 2023	May 10, 2023
Test/Reference	LOR	Unit		
<b>Polycyclic Aromatic Hydrocarbons</b>				
Benzo(a)pyrene	0.001	mg/L	-	< 0.001
Benzo(b&j)fluoranthene <sup>N07</sup>	0.001	mg/L	-	< 0.001
Benzo(g,h,i)perylene	0.001	mg/L	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	< 0.001
Chrysene	0.001	mg/L	-	< 0.001
Dibenz(a,h)anthracene	0.001	mg/L	-	< 0.001
Fluoranthene	0.001	mg/L	-	< 0.001
Fluorene	0.001	mg/L	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	< 0.001
Naphthalene	0.001	mg/L	-	0.002
Phenanthrene	0.001	mg/L	-	< 0.001
Pyrene	0.001	mg/L	-	< 0.001
Total PAH*	0.001	mg/L	-	0.002
2-Fluorobiphenyl (surr.)	1	%	-	52
p-Terphenyl-d14 (surr.)	1	%	-	88
<b>Phenols (Halogenated)</b>				
2-Chlorophenol	0.003	mg/L	-	< 0.003
2,4-Dichlorophenol	0.003	mg/L	-	< 0.003
2,4,5-Trichlorophenol	0.01	mg/L	-	< 0.01
2,4,6-Trichlorophenol	0.01	mg/L	-	< 0.01
2,6-Dichlorophenol	0.003	mg/L	-	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	< 0.01
Pentachlorophenol	0.01	mg/L	-	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	< 0.01
<b>Phenols (non-Halogenated)</b>				
2-Cyclohexyl-4,6-dinitrophenol	0.1	mg/L	-	< 0.1
2-Methyl-4,6-dinitrophenol	0.03	mg/L	-	< 0.03
2-Nitrophenol	0.01	mg/L	-	< 0.01
2,4-Dimethylphenol	0.003	mg/L	-	0.007
2,4-Dinitrophenol	0.03	mg/L	-	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	< 0.006
Total cresols*	0.01	mg/L	-	< 0.01
4-Nitrophenol	0.03	mg/L	-	< 0.03
Dinoseb	0.1	mg/L	-	< 0.1
Phenol	0.003	mg/L	-	< 0.003
Phenol-d6 (surr.)	1	%	-	93
Total Non-Halogenated Phenol*	0.1	mg/L	-	< 0.1

**Sample History**

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
<b>Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P</b>			
Ammonia (as N) - Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser	Melbourne	May 16, 2023	28 Days
Nitrate & Nitrite (as N) - Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser	Melbourne	May 16, 2023	28 Days
Nitrate (as N) - Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser	Melbourne	May 16, 2023	28 Days
Nitrite (as N) - Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser	Melbourne	May 16, 2023	2 Days
Organic Nitrogen (as N)* - Method: APHA 4500 Organic Nitrogen (N)	Melbourne	May 12, 2023	7 Days
Phosphate total (as P) - Method: LTM-INO-4040 Phosphate by CFA	Melbourne	May 16, 2023	28 Days
Phosphorus reactive (as P) - Method: APHA 4500-P	Melbourne	May 16, 2023	2 Days
Total Kjeldahl Nitrogen (as N) - Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA	Melbourne	May 16, 2023	28 Days
Chemical Oxygen Demand (COD) - Method: LTM-INO-4220 Determination of COD in Water	Melbourne	May 16, 2023	28 Days
Total Organic Carbon - Method: LTM-INO-4060 Total Organic Carbon in water and soil	Melbourne	May 16, 2023	28 Days
Total Suspended Solids Dried at 103 °C to 105 °C - Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry	Melbourne	May 16, 2023	7 Days
Hexavalent Chromium Set - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	May 12, 2023	28 Days
Hexavalent Chromium Set (filtered) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	May 12, 2023	28 Days
Heavy Metals - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	May 16, 2023	28 Days
Heavy Metals (filtered) - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	May 12, 2023	180 Days
Eurofins Suite B11C: Na/K/Ca/Mg - Method: LTM-MET-3010 Alkali Metals by ICP-AES	Melbourne	May 16, 2023	180 Days
<b>Eurofins Suite B11E: Cl/SO4/Alkalinity</b>			
Chloride - Method: LTM-INO-4090 Chloride by Discrete Analyser	Melbourne	May 16, 2023	28 Days
Sulphate (as SO4) - Method: LTM-INO-4110 Sulfate by Discrete Analyser	Melbourne	May 16, 2023	28 Days
Alkalinity (speciated) - Method: LTM-INO-4250 Alkalinity by Electrometric Titration	Melbourne	May 16, 2023	14 Days
Total Dissolved Solids Dried at 180 °C ± 2 °C - Method: LTM-INO-4170 Total Dissolved Solids in Water	Melbourne	May 16, 2023	28 Days
<b>Per- and Polyfluoroalkyl Substances (PFASs)</b>			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 16, 2023	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 16, 2023	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 16, 2023	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 16, 2023	28 Days

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
<b>PFASs Summations</b> - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 12, 2023	
<b>Eurofins Suite B4A</b>			
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b> - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 16, 2023	7 Days
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b> - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 16, 2023	7 Days
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b> - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 16, 2023	7 Days
<b>BTEX</b> - Method: LTM-ORG-2010 BTEX and Volatile TRH	Melbourne	May 16, 2023	14 Days
<b>Polycyclic Aromatic Hydrocarbons</b> - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 16, 2023	7 Days
<b>Phenols (Halogenated)</b> - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 16, 2023	7 Days
<b>Phenols (non-Halogenated)</b> - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 16, 2023	7 Days



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NATA# 1261 Site# 1254

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43 Detroit Drive
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IANZ# 1290

Company Name: Stantec Australia Pty Ltd (NT)
Address: Level 22, 570 Bourke Street Melbourne VIC 3000
Project Name: SBWMF Water Monitoring
Project ID: 304700296

Order No.: 988289
Report #: 988289
Phone: 988289
Fax:

Received: May 10, 2023 1:15 PM
Due: May 17, 2023
Priority: 5 Day
Contact Name: Julian Brown

Eurofins Analytical Services Manager : Michael Morrison

Table with 13 columns: No, Sample ID, Sample Date, Sampling Time, Matrix, LAB ID, and 13 analyte columns (Total Dissolved Solids, Eurofins Suite B11C, Per- and Polyfluoroalkyl Substances, Eurofins Suite B11E, Eurofins Suite B19E, Eurofins Suite B4A, Eurofins Suite B4, Eurofins Suite B1, Hexavalent Chromium Set, Zinc, Vanadium, Total Suspended Solids, Total Organic Carbon, Selenium, Nickel, Manganese, Lithium, Lead, Iron, HOLD, Copper, Cobalt, Chemical Oxygen Demand, CANCELLED, Cadmium, Boron, Beryllium, Arsenic, Aluminium).

Melbourne Laboratory - NATA # 1261 Site # 1254
External Laboratory



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Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

ABN: 91 05 0159 898
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NATA# 2377 Site# 2370

NZBN: 9429046024954
Christchurch
43 Detroit Drive
Rolleston
Christchurch 7675
Tel: 0800 886 450
IANZ# 1290

Company Name: Stantec Australia Pty Ltd (NT)
Address: Level 22, 570 Bourke Street Melbourne VIC 3000
Project Name: SBWMF Water Monitoring
Project ID: 304700296

Order No.: 988289
Report #:
Phone:
Fax:

Received: May 10, 2023 1:15 PM
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Priority: 5 Day
Contact Name: Julian Brown

Eurofins Analytical Services Manager : Michael Morrison

Table with columns: Sample Detail, Melbourne Laboratory - NATA # 1261 Site # 1254, and various chemical parameters like Total Dissolved Solids, Eurofins Suite B11C, etc.



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NATA# 2377 Site# 2370

NZBN: 9429046024954
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Christchurch 7675
Tel: 0800 856 450
IANZ# 1290

Company Name: Stantec Australia Pty Ltd (NT)
Address: Level 22, 570 Bourke Street Melbourne VIC 3000
Project Name: SBWMF Water Monitoring
Project ID: 304700296

Order No.: 988289
Report #:
Phone:
Fax:

Received: May 10, 2023 1:15 PM
Due: May 17, 2023
Priority: 5 Day
Contact Name: Julian Brown

Eurofins Analytical Services Manager : Michael Morrison

Table with columns: Sample ID, Date, Matrix, and various chemical parameters (Aluminium, Arsenic, Boron, Cadmium, Cobalt, Copper, Iron, Lead, Lithium, Manganese, Nickel, Selenium, Vanadium, Zinc, etc.) with 'X' or 'M23-My0025111' values.

Sample Detail



ABN: 50 005 085 521
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NATA# 1261 Site# 1254

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Company Name: Stantec Australia Pty Ltd (NT)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000
Project Name: SBWMF Water Monitoring
Project ID: 304700296

Order No.: 988289
Report #:
Phone:
Fax:

Received: May 10, 2023 1:15 PM
Due: May 17, 2023
Priority: 5 Day
Contact Name: Julian Brown

Eurofins Analytical Services Manager : Michael Morrison

Table with columns: Sample Detail, Melbourne Laboratory - NATA # 1261 Site # 1254, and Test Counts. Rows include various chemical tests like Total Dissolved Solids, Eurofins Suite B11C, Hexavalent Chromium, etc.

**Internal Quality Control Review and Glossary**
**General**

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- This report replaces any interim results previously issued.

**Holding Times**

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

**Units**

**mg/kg:** milligrams per kilogram

**mg/L:** milligrams per litre

**µg/L:** micrograms per litre

**ppm:** parts per million

**ppb:** parts per billion

**%:** Percentage

**org/100 mL:** Organisms per 100 millilitres

**NTU:** Nephelometric Turbidity Units

**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres

**CFU:** Colony forming unit

**Terms**

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

**QC - Acceptance Criteria**

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

**QC Data General Comments**

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

**Quality Control Results**

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Chemical Oxygen Demand (COD)	mg/L	< 25			25	Pass	
Chloride	mg/L	< 1			1	Pass	
Nitrate & Nitrite (as N)	mg/L	< 0.05			0.05	Pass	
Nitrate (as N)	mg/L	< 0.02			0.02	Pass	
Nitrite (as N)	mg/L	< 0.02			0.02	Pass	
Phosphate total (as P)	mg/L	< 0.01			0.01	Pass	
Phosphorus reactive (as P)	mg/L	0.01			0.01	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	mg/L	< 10			10	Pass	
Total Kjeldahl Nitrogen (as N)	mg/L	< 0.2			0.2	Pass	
Total Organic Carbon	mg/L	< 5			5	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	mg/L	< 5			5	Pass	
<b>Method Blank</b>							
<b>Alkalinity (speciated)</b>							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
<b>Method Blank</b>							
<b>Hexavalent Chromium Set</b>							
Chromium (hexavalent)	mg/L	< 0.005			0.005	Pass	
<b>Method Blank</b>							
<b>Hexavalent Chromium Set (filtered)</b>							
Chromium (hexavalent filtered)	mg/L	< 0.005			0.005	Pass	
<b>Method Blank</b>							
<b>Heavy Metals</b>							
Aluminium	mg/L	< 0.05			0.05	Pass	
Aluminium (filtered)	mg/L	< 0.05			0.05	Pass	
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Beryllium	mg/L	< 0.001			0.001	Pass	
Beryllium (filtered)	mg/L	< 0.001			0.001	Pass	
Boron	mg/L	< 0.05			0.05	Pass	
Boron (filtered)	mg/L	< 0.05			0.05	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Cobalt	mg/L	< 0.001			0.001	Pass	
Cobalt (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Iron	mg/L	< 0.05			0.05	Pass	
Iron (filtered)	mg/L	< 0.05			0.05	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Lithium	mg/L	< 0.005			0.005	Pass	
Lithium (filtered)	mg/L	< 0.005			0.005	Pass	
Manganese	mg/L	< 0.005			0.005	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Selenium	mg/L	< 0.001			0.001	Pass	
Selenium (filtered)	mg/L	< 0.001			0.001	Pass	
Vanadium	mg/L	< 0.005			0.005	Pass	
Vanadium (filtered)	mg/L	< 0.005			0.005	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
<b>Method Blank</b>							
<b>Alkali Metals</b>							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
<b>Method Blank</b>							
<b>Perfluoroalkyl sulfonamido substances</b>							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
<b>Method Blank</b>							
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
<b>Method Blank</b>							
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
<b>Method Blank</b>							
<b>BTEX</b>							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>							
Naphthalene	mg/L	< 0.01			0.01	Pass	
<b>Method Blank</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
<b>Method Blank</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2,4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2,4,5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2,4,6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2,6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
<b>Method Blank</b>							
<b>Phenols (non-Halogenated)</b>							
2-Cyclohexyl-4,6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4,6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2,4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2,4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4-Nitrophenol	mg/L	< 0.03		0.03	Pass	
Dinoseb	mg/L	< 0.1		0.1	Pass	
Phenol	mg/L	< 0.003		0.003	Pass	
<b>LCS - % Recovery</b>						
Ammonia (as N)	%	111		70-130	Pass	
Chemical Oxygen Demand (COD)	%	88		70-130	Pass	
Chloride	%	117		70-130	Pass	
Nitrate & Nitrite (as N)	%	114		70-130	Pass	
Nitrite (as N)	%	104		70-130	Pass	
Phosphate total (as P)	%	128		70-130	Pass	
Phosphorus reactive (as P)	%	82		70-130	Pass	
Sulphate (as SO <sub>4</sub> )	%	125		70-130	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	%	102		70-130	Pass	
Total Kjeldahl Nitrogen (as N)	%	84		70-130	Pass	
Total Organic Carbon	%	110		70-130	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	%	100		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Alkalinity (speciated)</b>						
Carbonate Alkalinity (as CaCO <sub>3</sub> )	%	89		70-130	Pass	
Total Alkalinity (as CaCO <sub>3</sub> )	%	82		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Hexavalent Chromium Set</b>						
Chromium (hexavalent)	%	117		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Hexavalent Chromium Set (filtered)</b>						
Chromium (hexavalent filtered)	%	117		80-120	Pass	
<b>LCS - % Recovery</b>						
<b>Heavy Metals</b>						
Aluminium	%	119		80-120	Pass	
Aluminium (filtered)	%	114		80-120	Pass	
Arsenic	%	110		80-120	Pass	
Arsenic (filtered)	%	108		80-120	Pass	
Beryllium	%	120		80-120	Pass	
Boron	%	115		80-120	Pass	
Boron (filtered)	%	83		80-120	Pass	
Cadmium	%	101		80-120	Pass	
Cadmium (filtered)	%	101		80-120	Pass	
Cobalt	%	109		80-120	Pass	
Cobalt (filtered)	%	107		80-120	Pass	
Copper	%	101		80-120	Pass	
Copper (filtered)	%	101		80-120	Pass	
Iron	%	104		80-120	Pass	
Iron (filtered)	%	101		80-120	Pass	
Lead	%	89		80-120	Pass	
Lead (filtered)	%	92		80-120	Pass	
Lithium	%	115		80-120	Pass	
Lithium (filtered)	%	105		80-120	Pass	
Manganese	%	112		80-120	Pass	
Manganese (filtered)	%	109		80-120	Pass	
Nickel	%	105		80-120	Pass	
Nickel (filtered)	%	105		80-120	Pass	
Selenium	%	100		80-120	Pass	
Selenium (filtered)	%	104		80-120	Pass	
Vanadium	%	109		80-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	%	109			80-120	Pass	
Zinc (filtered)	%	105			80-120	Pass	
<b>LCS - % Recovery</b>							
<b>Alkali Metals</b>							
Calcium	%	97			80-120	Pass	
Magnesium	%	100			80-120	Pass	
Potassium	%	98			80-120	Pass	
Sodium	%	100			80-120	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>							
Perfluorobutanoic acid (PFBA)	%	70			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	67			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	67			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	64			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	64			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	91			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	73			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	73			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	72			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	104			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	69			50-150	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl sulfonamido substances</b>							
Perfluorooctane sulfonamide (FOSA)	%	69			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	66			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	64			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	77			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	73			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	75			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	67			50-150	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>							
Perfluorobutanesulfonic acid (PFBS)	%	64			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	80			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	71			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	70			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	73			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	76			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	69			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	76			50-150	Pass	
<b>LCS - % Recovery</b>							
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	62			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	74			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	75			50-150	Pass	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C6-C9	%	95			70-130	Pass	
TRH C10-C14	%	84			70-130	Pass	
TRH C6-C10	%	88			70-130	Pass	
TRH >C10-C16	%	80			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>BTEX</b>							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Benzene	%	86			70-130	Pass		
Toluene	%	87			70-130	Pass		
Ethylbenzene	%	85			70-130	Pass		
m&p-Xylenes	%	82			70-130	Pass		
Xylenes - Total*	%	84			70-130	Pass		
<b>LCS - % Recovery</b>								
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>								
Naphthalene	%	83			70-130	Pass		
<b>LCS - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>								
Acenaphthene	%	90			70-130	Pass		
Acenaphthylene	%	80			70-130	Pass		
Anthracene	%	73			70-130	Pass		
Benz(a)anthracene	%	74			70-130	Pass		
Benzo(a)pyrene	%	74			70-130	Pass		
Benzo(b&j)fluoranthene	%	71			70-130	Pass		
Benzo(g,h,i)perylene	%	84			70-130	Pass		
Benzo(k)fluoranthene	%	87			70-130	Pass		
Chrysene	%	80			70-130	Pass		
Dibenz(a,h)anthracene	%	73			70-130	Pass		
Fluoranthene	%	84			70-130	Pass		
Fluorene	%	79			70-130	Pass		
Indeno(1,2,3-cd)pyrene	%	73			70-130	Pass		
Naphthalene	%	71			70-130	Pass		
Phenanthrene	%	75			70-130	Pass		
Pyrene	%	87			70-130	Pass		
<b>LCS - % Recovery</b>								
<b>Phenols (Halogenated)</b>								
2-Chlorophenol	%	58			25-140	Pass		
2,4-Dichlorophenol	%	63			25-140	Pass		
2,4,5-Trichlorophenol	%	62			25-140	Pass		
2,4,6-Trichlorophenol	%	63			25-140	Pass		
2,6-Dichlorophenol	%	58			25-140	Pass		
4-Chloro-3-methylphenol	%	62			25-140	Pass		
Pentachlorophenol	%	45			25-140	Pass		
Tetrachlorophenols - Total	%	40			25-140	Pass		
<b>LCS - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>								
2-Cyclohexyl-4,6-dinitrophenol	%	69			25-140	Pass		
2-Methyl-4,6-dinitrophenol	%	69			25-140	Pass		
2-Nitrophenol	%	67			25-140	Pass		
2,4-Dimethylphenol	%	36			25-140	Pass		
2,4-Dinitrophenol	%	43			25-140	Pass		
2-Methylphenol (o-Cresol)	%	41			25-140	Pass		
3&4-Methylphenol (m&p-Cresol)	%	39			25-140	Pass		
4-Nitrophenol	%	43			25-140	Pass		
Dinoseb	%	78			25-140	Pass		
Phenol	%	35			25-140	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
				Result 1				
Chemical Oxygen Demand (COD)	M23-My0018622	NCP	%	105		70-130	Pass	
Phosphate total (as P)	B23-My0007982	NCP	%	87		70-130	Pass	
Total Kjeldahl Nitrogen (as N)	R23-My0041094	NCP	%	82		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Aluminium	M23-My0025082	CP	%	91		75-125	Pass	
Arsenic	M23-My0025082	CP	%	98		75-125	Pass	
Beryllium	M23-My0025082	CP	%	87		75-125	Pass	
Boron	M23-My0025082	CP	%	90		75-125	Pass	
Cadmium	M23-My0025082	CP	%	89		75-125	Pass	
Cobalt	M23-My0025082	CP	%	94		75-125	Pass	
Copper	M23-My0025082	CP	%	89		75-125	Pass	
Iron	M23-My0025082	CP	%	92		75-125	Pass	
Lead	M23-My0025082	CP	%	83		75-125	Pass	
Lithium	M23-My0025082	CP	%	82		75-125	Pass	
Manganese	M23-My0025082	CP	%	75		75-125	Pass	
Nickel	M23-My0025082	CP	%	91		75-125	Pass	
Selenium	M23-My0025082	CP	%	91		75-125	Pass	
Vanadium	M23-My0025082	CP	%	99		75-125	Pass	
Zinc	M23-My0025082	CP	%	88		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1				
Perfluoropentanoic acid (PFPeA)	M23-My0025083	CP	%	70		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M23-My0025083	CP	%	68		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M23-My0025083	CP	%	68		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M23-My0025083	CP	%	63		50-150	Pass	
Perfluorononanoic acid (PFNA)	M23-My0025083	CP	%	94		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M23-My0025083	CP	%	72		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M23-My0025083	CP	%	72		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M23-My0025083	CP	%	74		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M23-My0025083	CP	%	76		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1				
Perfluorooctane sulfonamide (FOSA)	M23-My0025083	CP	%	73		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M23-My0025083	CP	%	75		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M23-My0025083	CP	%	73		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M23-My0025083	CP	%	76		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M23-My0025083	CP	%	75		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M23-My0025083	CP	%	80		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M23-My0025083	CP	%	67		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M23-My0025083	CP	%	65		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M23-My0025083	CP	%	64		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M23-My0025083	CP	%	70		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M23-My0025083	CP	%	72		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanesulfonic acid (PFHpS)	M23-My0025083	CP	%	76		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M23-My0025083	CP	%	70		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M23-My0025083	CP	%	61		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				Result 1				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M23-My0025083	CP	%	67		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M23-My0025083	CP	%	77		50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M23-My0025083	CP	%	72		50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M23-My0025083	CP	%	85		50-150	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Chloride	B23-My0032818	NCP	%	118		70-130	Pass	
Sulphate (as SO4)	B23-My0032818	NCP	%	100		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Aluminium (filtered)	M23-My0025090	CP	%	116		75-125	Pass	
Arsenic (filtered)	M23-My0025090	CP	%	112		75-125	Pass	
Beryllium (filtered)	M23-My0025090	CP	%	110		75-125	Pass	
Boron (filtered)	M23-My0025090	CP	%	105		75-125	Pass	
Cadmium (filtered)	M23-My0025090	CP	%	101		75-125	Pass	
Cobalt (filtered)	M23-My0025090	CP	%	110		75-125	Pass	
Copper (filtered)	M23-My0025090	CP	%	103		75-125	Pass	
Iron (filtered)	M23-My0025090	CP	%	105		75-125	Pass	
Lead (filtered)	M23-My0025090	CP	%	92		75-125	Pass	
Lithium (filtered)	M23-My0025090	CP	%	106		75-125	Pass	
Manganese (filtered)	M23-My0025090	CP	%	110		75-125	Pass	
Nickel (filtered)	M23-My0025090	CP	%	106		75-125	Pass	
Selenium (filtered)	M23-My0025090	CP	%	108		75-125	Pass	
Vanadium (filtered)	M23-My0025090	CP	%	115		75-125	Pass	
Zinc (filtered)	M23-My0025090	CP	%	106		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Alkali Metals</b>				Result 1				
Calcium	M23-My0025091	CP	%	102		75-125	Pass	
Magnesium	M23-My0025091	CP	%	106		75-125	Pass	
Potassium	M23-My0025091	CP	%	101		75-125	Pass	
Sodium	M23-My0025091	CP	%	121		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Aluminium	M23-My0025092	CP	%	105		75-125	Pass	
Arsenic	M23-My0025092	CP	%	105		75-125	Pass	
Beryllium	M23-My0025092	CP	%	99		75-125	Pass	
Boron	M23-My0025092	CP	%	20		75-125	Fail	Q08
Cadmium	M23-My0025092	CP	%	95		75-125	Pass	
Cobalt	M23-My0025092	CP	%	102		75-125	Pass	
Copper	M23-My0025092	CP	%	92		75-125	Pass	
Iron	M23-My0025092	CP	%	96		75-125	Pass	
Lead	M23-My0025092	CP	%	87		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Lithium	M23-My0025092	CP	%	95		75-125	Pass	
Manganese	M23-My0025092	CP	%	104		75-125	Pass	
Nickel	M23-My0025092	CP	%	96		75-125	Pass	
Selenium	M23-My0025092	CP	%	97		75-125	Pass	
Vanadium	M23-My0025092	CP	%	104		75-125	Pass	
Zinc	M23-My0025092	CP	%	97		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Aluminium (filtered)	M23-My0025102	CP	%	121		75-125	Pass	
Arsenic (filtered)	M23-My0025102	CP	%	113		75-125	Pass	
Beryllium (filtered)	M23-My0025102	CP	%	121		75-125	Pass	
Boron (filtered)	M23-My0025102	CP	%	102		75-125	Pass	
Cadmium (filtered)	M23-My0025102	CP	%	102		75-125	Pass	
Cobalt (filtered)	M23-My0025102	CP	%	109		75-125	Pass	
Copper (filtered)	M23-My0025102	CP	%	101		75-125	Pass	
Iron (filtered)	M23-My0025102	CP	%	101		75-125	Pass	
Lead (filtered)	M23-My0025102	CP	%	89		75-125	Pass	
Lithium (filtered)	M23-My0025102	CP	%	123		75-125	Pass	
Manganese (filtered)	M23-My0025102	CP	%	111		75-125	Pass	
Nickel (filtered)	M23-My0025102	CP	%	104		75-125	Pass	
Selenium (filtered)	M23-My0025102	CP	%	108		75-125	Pass	
Vanadium (filtered)	M23-My0025102	CP	%	113		75-125	Pass	
Zinc (filtered)	M23-My0025102	CP	%	108		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Alkali Metals</b>				Result 1				
Calcium	M23-My0025103	CP	%	96		75-125	Pass	
Potassium	M23-My0025103	CP	%	96		75-125	Pass	
Sodium	M23-My0025103	CP	%	99		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Aluminium	M23-My0025104	CP	%	108		75-125	Pass	
Arsenic	M23-My0025104	CP	%	110		75-125	Pass	
Beryllium	M23-My0025104	CP	%	111		75-125	Pass	
Boron	M23-My0025104	CP	%	107		75-125	Pass	
Cadmium	M23-My0025104	CP	%	101		75-125	Pass	
Cobalt	M23-My0025104	CP	%	109		75-125	Pass	
Copper	M23-My0025104	CP	%	102		75-125	Pass	
Iron	M23-My0025104	CP	%	99		75-125	Pass	
Lead	M23-My0025104	CP	%	93		75-125	Pass	
Lithium	M23-My0025104	CP	%	112		75-125	Pass	
Manganese	M23-My0025104	CP	%	110		75-125	Pass	
Nickel	M23-My0025104	CP	%	104		75-125	Pass	
Selenium	M23-My0025104	CP	%	99		75-125	Pass	
Vanadium	M23-My0025104	CP	%	106		75-125	Pass	
Zinc	M23-My0025104	CP	%	104		75-125	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Nitrite (as N)	M23-My0025111	CP	%	123		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Aluminium (filtered)	M23-My0025113	CP	%	124		75-125	Pass	
Arsenic (filtered)	M23-My0025113	CP	%	115		75-125	Pass	
Beryllium (filtered)	M23-My0025113	CP	%	127		75-125	Fail	Q08
Boron (filtered)	M23-My0025113	CP	%	116		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Cadmium (filtered)	M23-My0025113	CP	%	110		75-125	Pass	
Cobalt (filtered)	M23-My0025113	CP	%	114		75-125	Pass	
Copper (filtered)	M23-My0025113	CP	%	108		75-125	Pass	
Iron (filtered)	M23-My0025113	CP	%	108		75-125	Pass	
Lead (filtered)	M23-My0025113	CP	%	94		75-125	Pass	
Lithium (filtered)	M23-My0025113	CP	%	127		75-125	Fail	Q08
Manganese (filtered)	M23-My0025113	CP	%	114		75-125	Pass	
Nickel (filtered)	M23-My0025113	CP	%	110		75-125	Pass	
Selenium (filtered)	M23-My0025113	CP	%	108		75-125	Pass	
Vanadium (filtered)	M23-My0025113	CP	%	117		75-125	Pass	
Zinc (filtered)	M23-My0025113	CP	%	114		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1				
Perfluorobutanoic acid (PFBA)	M23-My0025113	CP	%	77		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M23-My0025113	CP	%	78		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M23-My0025113	CP	%	75		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M23-My0025113	CP	%	70		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M23-My0025113	CP	%	72		50-150	Pass	
Perfluorononanoic acid (PFNA)	M23-My0025113	CP	%	101		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M23-My0025113	CP	%	75		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M23-My0025113	CP	%	76		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M23-My0025113	CP	%	79		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	M23-My0025113	CP	%	124		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M23-My0025113	CP	%	79		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1				
Perfluorooctane sulfonamide (FOSA)	M23-My0025113	CP	%	78		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M23-My0025113	CP	%	73		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M23-My0025113	CP	%	69		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M23-My0025113	CP	%	81		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M23-My0025113	CP	%	78		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M23-My0025113	CP	%	78		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M23-My0025113	CP	%	75		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M23-My0025113	CP	%	74		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M23-My0025113	CP	%	77		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M23-My0025113	CP	%	84		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M23-My0025113	CP	%	77		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M23-My0025113	CP	%	77		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M23-My0025113	CP	%	81		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctanesulfonic acid (PFOS)	M23-My0025113	CP	%	75		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M23-My0025113	CP	%	63		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				Result 1				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M23-My0025113	CP	%	74		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M23-My0025113	CP	%	87		50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M23-My0025113	CP	%	80		50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M23-My0025113	CP	%	76		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Alkali Metals</b>				Result 1				
Calcium	M23-My0025114	CP	%	100		75-125	Pass	
Magnesium	M23-My0025114	CP	%	97		75-125	Pass	
Potassium	M23-My0025114	CP	%	96		75-125	Pass	
Sodium	M23-My0025114	CP	%	75		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Aluminium	M23-My0025115	CP	%	113		75-125	Pass	
Arsenic	M23-My0025115	CP	%	113		75-125	Pass	
Beryllium	M23-My0025115	CP	%	115		75-125	Pass	
Boron	M23-My0025115	CP	%	119		75-125	Pass	
Cadmium	M23-My0025115	CP	%	95		75-125	Pass	
Cobalt	M23-My0025115	CP	%	105		75-125	Pass	
Copper	M23-My0025115	CP	%	96		75-125	Pass	
Iron	M23-My0025115	CP	%	97		75-125	Pass	
Lead	M23-My0025115	CP	%	87		75-125	Pass	
Lithium	M23-My0025115	CP	%	108		75-125	Pass	
Manganese	M23-My0025115	CP	%	99		75-125	Pass	
Nickel	M23-My0025115	CP	%	95		75-125	Pass	
Selenium	M23-My0025115	CP	%	96		75-125	Pass	
Vanadium	M23-My0025115	CP	%	109		75-125	Pass	
Zinc	M23-My0025115	CP	%	65		75-125	Fail	Q08
<b>Spike - % Recovery</b>								
<b>Hexavalent Chromium Set</b>				Result 1				
Chromium (hexavalent)	M23-My0025121	CP	%	101		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Aluminium	M23-My0025124	CP	%	96		75-125	Pass	
Arsenic	M23-My0025124	CP	%	98		75-125	Pass	
Beryllium	M23-My0025124	CP	%	101		75-125	Pass	
Boron	M23-My0025124	CP	%	102		75-125	Pass	
Cadmium	M23-My0025124	CP	%	99		75-125	Pass	
Cobalt	M23-My0025124	CP	%	98		75-125	Pass	
Copper	M23-My0025124	CP	%	98		75-125	Pass	
Iron	M23-My0025124	CP	%	58		75-125	Fail	Q08
Lead	M23-My0025124	CP	%	99		75-125	Pass	
Lithium	M23-My0025124	CP	%	99		75-125	Pass	
Manganese	M23-My0025124	CP	%	84		75-125	Pass	
Nickel	M23-My0025124	CP	%	97		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Selenium	M23-My0025124	CP	%	102		75-125	Pass	
Vanadium	M23-My0025124	CP	%	98		75-125	Pass	
Zinc	M23-My0025124	CP	%	97		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Alkali Metals</b>				Result 1				
Calcium	M23-My0025124	CP	%	113		75-125	Pass	
Magnesium	M23-My0025124	CP	%	116		75-125	Pass	
Potassium	M23-My0025124	CP	%	114		75-125	Pass	
Sodium	M23-My0025124	CP	%	122		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1				
TRH C10-C14	M23-My0025643	NCP	%	61		70-130	Fail	Q08
TRH >C10-C16	M23-My0025643	NCP	%	63		70-130	Fail	Q08
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	B23-Ap0052954	NCP	%	90		70-130	Pass	
Acenaphthylene	B23-Ap0052954	NCP	%	78		70-130	Pass	
Anthracene	B23-Ap0052954	NCP	%	90		70-130	Pass	
Benz(a)anthracene	B23-Ap0052954	NCP	%	92		70-130	Pass	
Benzo(a)pyrene	B23-Ap0052954	NCP	%	82		70-130	Pass	
Benzo(b&j)fluoranthene	B23-Ap0052954	NCP	%	87		70-130	Pass	
Benzo(g,h,i)perylene	B23-Ap0052954	NCP	%	90		70-130	Pass	
Benzo(k)fluoranthene	B23-Ap0052954	NCP	%	75		70-130	Pass	
Chrysene	B23-Ap0052954	NCP	%	92		70-130	Pass	
Dibenz(a,h)anthracene	B23-Ap0052954	NCP	%	88		70-130	Pass	
Fluoranthene	B23-Ap0052954	NCP	%	94		70-130	Pass	
Fluorene	B23-Ap0052954	NCP	%	77		70-130	Pass	
Indeno(1,2,3-cd)pyrene	B23-Ap0052954	NCP	%	79		70-130	Pass	
Naphthalene	B23-Ap0052954	NCP	%	89		70-130	Pass	
Phenanthrene	B23-Ap0052954	NCP	%	82		70-130	Pass	
Pyrene	B23-Ap0052954	NCP	%	98		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	B23-Ap0052954	NCP	%	123		30-130	Pass	
2,4-Dichlorophenol	B23-Ap0052954	NCP	%	108		30-130	Pass	
2,4,5-Trichlorophenol	B23-Ap0052954	NCP	%	96		30-130	Pass	
2,4,6-Trichlorophenol	B23-Ap0052954	NCP	%	113		30-130	Pass	
2,6-Dichlorophenol	B23-Ap0052954	NCP	%	107		30-130	Pass	
4-Chloro-3-methylphenol	B23-Ap0052954	NCP	%	100		30-130	Pass	
Pentachlorophenol	B23-Ap0052954	NCP	%	87		30-130	Pass	
Tetrachlorophenols - Total	B23-Ap0052954	NCP	%	105		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	B23-Ap0052954	NCP	%	115		30-130	Pass	
2-Methyl-4,6-dinitrophenol	B23-Ap0052954	NCP	%	115		30-130	Pass	
2-Nitrophenol	B23-Ap0052954	NCP	%	112		30-130	Pass	
2,4-Dimethylphenol	B23-Ap0052954	NCP	%	26		30-130	Fail	Q08
2,4-Dinitrophenol	B23-Ap0052954	NCP	%	115		30-130	Pass	
2-Methylphenol (o-Cresol)	B23-Ap0052954	NCP	%	115		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	B23-Ap0052954	NCP	%	118		30-130	Pass	
4-Nitrophenol	B23-Ap0052954	NCP	%	119		30-130	Pass	
Dinoseb	B23-Ap0052954	NCP	%	103		30-130	Pass	
Phenol	B23-Ap0052954	NCP	%	95		30-130	Pass	
<b>Spike - % Recovery</b>								

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
				Result 1					
Nitrite (as N)	M23-My0025127	CP	%	119			70-130	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
Hexavalent Chromium Set									
Chromium (hexavalent)	M23-My0025127	CP	%	122			70-130	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
<b>Total Recoverable Hydrocarbons</b>									
TRH C6-C9	M23-My0032488	NCP	%	107			70-130	Pass	
TRH C6-C10	M23-My0032488	NCP	%	98			70-130	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
<b>BTEX</b>									
Benzene	M23-My0032488	NCP	%	98			70-130	Pass	
Toluene	M23-My0032488	NCP	%	101			70-130	Pass	
Ethylbenzene	M23-My0032488	NCP	%	89			70-130	Pass	
m&p-Xylenes	M23-My0032488	NCP	%	99			70-130	Pass	
o-Xylene	M23-My0032488	NCP	%	89			70-130	Pass	
Xylenes - Total*	M23-My0032488	NCP	%	96			70-130	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>									
Naphthalene	M23-My0032488	NCP	%	88			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
				Result 1	Result 2	RPD			
Chemical Oxygen Demand (COD)	M23-My0023864	NCP	mg/L	160	190	19	30%	Pass	
Total Kjeldahl Nitrogen (as N)	M23-My0047372	NCP	mg/L	610	580	5.0	30%	Pass	
<b>Duplicate</b>									
				Result 1	Result 2	RPD			
<b>Heavy Metals</b>									
Aluminium	M23-My0025082	CP	mg/L	0.42	0.41	4.5	30%	Pass	
Arsenic	M23-My0025082	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Beryllium	M23-My0025082	CP	mg/L	0.002	0.002	2.1	30%	Pass	
Boron	M23-My0025082	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Cadmium	M23-My0025082	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Cobalt	M23-My0025082	CP	mg/L	0.007	0.006	4.4	30%	Pass	
Copper	M23-My0025082	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iron	M23-My0025082	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Lead	M23-My0025082	CP	mg/L	0.002	0.002	3.6	30%	Pass	
Lithium	M23-My0025082	CP	mg/L	0.019	0.018	6.2	30%	Pass	
Manganese	M23-My0025082	CP	mg/L	0.14	0.14	3.6	30%	Pass	
Nickel	M23-My0025082	CP	mg/L	0.012	0.011	3.2	30%	Pass	
Selenium	M23-My0025082	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vanadium	M23-My0025082	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Zinc	M23-My0025082	CP	mg/L	0.047	0.045	3.7	30%	Pass	
<b>Duplicate</b>									
				Result 1	Result 2	RPD			
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>									
Perfluorobutanoic acid (PFBA)	M23-My0025082	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorododecanoic acid (PFDoDA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M23-My0025082	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M23-My0025082	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M23-My0025082	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M23-My0025082	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M23-My0025082	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M23-My0025082	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M23-My0025082	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA's)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M23-My0025082	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M23-My0025082	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chloride	M23-My0025084	CP	mg/L	1000	1000	<1	30%	Pass
Sulphate (as SO4)	M23-My0025084	CP	mg/L	160	160	2.5	30%	Pass

Duplicate								
				Result 1	Result 2	RPD		
Chloride	M23-My0025087	CP	mg/L	110	110	<1	30%	Pass
Nitrate & Nitrite (as N)	M23-My0025087	CP	mg/L	0.53	0.54	3.0	30%	Pass
Nitrite (as N)	M23-My0025087	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Sulphate (as SO4)	M23-My0025087	CP	mg/L	18	18	<1	30%	Pass
Total Organic Carbon	M23-My0025087	CP	mg/L	< 5	< 5	<1	30%	Pass
Duplicate								
Alkalinity (speciated)				Result 1	Result 2	RPD		
Bicarbonate Alkalinity (as CaCO3)	M23-My0025088	CP	mg/L	< 20	< 20	<1	30%	Pass
Carbonate Alkalinity (as CaCO3)	M23-My0025088	CP	mg/L	< 10	< 10	<1	30%	Pass
Hydroxide Alkalinity (as CaCO3)	M23-My0025088	CP	mg/L	< 20	< 20	<1	30%	Pass
Total Alkalinity (as CaCO3)	M23-My0025088	CP	mg/L	< 20	< 20	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Ammonia (as N)	M23-My0025089	CP	mg/L	0.03	0.04	2.1	30%	Pass
Nitrate & Nitrite (as N)	M23-My0025089	CP	mg/L	0.14	0.15	4.0	30%	Pass
Nitrite (as N)	M23-My0025089	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Total Dissolved Solids Dried at 180 °C ± 2 °C	M23-My0025090	CP	mg/L	1000	1000	4.3	30%	Pass
Total Suspended Solids Dried at 103 °C to 105 °C	M23-My0025090	CP	mg/L	< 5	< 5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Aluminium (filtered)	M23-My0025090	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Arsenic (filtered)	M23-My0025090	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Beryllium (filtered)	M23-My0025090	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Boron (filtered)	M23-My0025090	CP	mg/L	0.11	0.11	2.6	30%	Pass
Cadmium (filtered)	M23-My0025090	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Cobalt (filtered)	M23-My0025090	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	M23-My0025090	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iron (filtered)	M23-My0025090	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Lead (filtered)	M23-My0025090	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lithium (filtered)	M23-My0025090	CP	mg/L	0.025	0.024	1.0	30%	Pass
Manganese (filtered)	M23-My0025090	CP	mg/L	0.015	0.016	2.6	30%	Pass
Nickel (filtered)	M23-My0025090	CP	mg/L	0.007	0.007	4.2	30%	Pass
Selenium (filtered)	M23-My0025090	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vanadium (filtered)	M23-My0025090	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Zinc (filtered)	M23-My0025090	CP	mg/L	0.024	0.023	3.8	30%	Pass
Duplicate								
Alkali Metals				Result 1	Result 2	RPD		
Calcium	M23-My0025091	CP	mg/L	10	10	<1	30%	Pass
Magnesium	M23-My0025091	CP	mg/L	17	18	1.1	30%	Pass
Potassium	M23-My0025091	CP	mg/L	17	17	<1	30%	Pass
Sodium	M23-My0025091	CP	mg/L	480	490	1.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Aluminium	M23-My0025092	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Arsenic	M23-My0025092	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Beryllium	M23-My0025092	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Boron	M23-My0025092	CP	mg/L	0.94	0.99	5.1	30%	Pass
Cadmium	M23-My0025092	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Cobalt	M23-My0025092	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper	M23-My0025092	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iron	M23-My0025092	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Lead	M23-My0025092	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lithium	M23-My0025092	CP	mg/L	0.011	0.012	6.9	30%	Pass
Manganese	M23-My0025092	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Nickel	M23-My0025092	CP	mg/L	0.002	0.002	9.9	30%	Pass
Selenium	M23-My0025092	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vanadium	M23-My0025092	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Zinc	M23-My0025092	CP	mg/L	0.013	0.014	5.5	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluoropentanoic acid (PFPeA)	M23-My0025093	CP	ug/L	0.04	0.04	3.7	30%	Pass
Perfluorohexanoic acid (PFHxA)	M23-My0025093	CP	ug/L	0.05	0.05	4.3	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M23-My0025093	CP	ug/L	0.02	0.02	1.3	30%	Pass
Perfluorooctanoic acid (PFOA)	M23-My0025093	CP	ug/L	0.09	0.09	2.2	30%	Pass
Perfluorononanoic acid (PFNA)	M23-My0025093	CP	ug/L	0.02	0.02	11	30%	Pass
Perfluorodecanoic acid (PFDA)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M23-My0025093	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M23-My0025093	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M23-My0025093	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M23-My0025093	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M23-My0025093	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M23-My0025093	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M23-My0025093	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M23-My0025093	CP	ug/L	0.07	0.07	4.6	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M23-My0025093	CP	ug/L	0.02	0.03	6.2	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M23-My0025093	CP	ug/L	0.02	0.02	4.9	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M23-My0025093	CP	ug/L	0.17	0.16	5.6	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M23-My0025093	CP	ug/L	0.21	0.22	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M23-My0025093	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M23-My0025093	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Hexavalent Chromium Set				Result 1	Result 2	RPD		
Chromium (hexavalent)	M23-My0025096	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Duplicate								
Hexavalent Chromium Set				Result 1	Result 2	RPD		
Chromium (hexavalent)	M23-My0025097	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Aluminium (filtered)	M23-My0025102	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Arsenic (filtered)	M23-My0025102	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Beryllium (filtered)	M23-My0025102	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Boron (filtered)	M23-My0025102	CP	mg/L	0.15	0.15	1.6	30%	Pass
Cadmium (filtered)	M23-My0025102	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Cobalt (filtered)	M23-My0025102	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	M23-My0025102	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iron (filtered)	M23-My0025102	CP	mg/L	0.19	0.15	21	30%	Pass
Lead (filtered)	M23-My0025102	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lithium (filtered)	M23-My0025102	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Manganese (filtered)	M23-My0025102	CP	mg/L	0.029	0.025	17	30%	Pass
Nickel (filtered)	M23-My0025102	CP	mg/L	0.002	0.001	20	30%	Pass
Selenium (filtered)	M23-My0025102	CP	mg/L	0.001	0.001	5.6	30%	Pass
Vanadium (filtered)	M23-My0025102	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Zinc (filtered)	M23-My0025102	CP	mg/L	0.011	0.010	9.4	30%	Pass
Duplicate								
Alkali Metals				Result 1	Result 2	RPD		
Calcium	M23-My0025103	CP	mg/L	3.0	3.1	4.3	30%	Pass
Potassium	M23-My0025103	CP	mg/L	2.5	2.7	7.4	30%	Pass
Sodium	M23-My0025103	CP	mg/L	6.5	6.9	5.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Aluminium	M23-My0025104	CP	mg/L	0.13	0.14	8.7	30%	Pass
Arsenic	M23-My0025104	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Beryllium	M23-My0025104	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Boron	M23-My0025104	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Cadmium	M23-My0025104	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Cobalt	M23-My0025104	CP	mg/L	0.001	0.001	7.2	30%	Pass
Copper	M23-My0025104	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iron	M23-My0025104	CP	mg/L	0.12	0.12	8.0	30%	Pass
Lead	M23-My0025104	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lithium	M23-My0025104	CP	mg/L	0.016	0.017	9.1	30%	Pass
Manganese	M23-My0025104	CP	mg/L	0.012	0.014	11	30%	Pass
Nickel	M23-My0025104	CP	mg/L	0.002	0.002	7.0	30%	Pass
Selenium	M23-My0025104	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vanadium	M23-My0025104	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Zinc	M23-My0025104	CP	mg/L	0.025	0.027	6.9	30%	Pass

Duplicate				Result 1	Result 2	RPD		
Nitrate & Nitrite (as N)	M23-My0025107	CP	mg/L	5.8	5.8	<1	30%	Pass
Nitrite (as N)	M23-My0025107	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Total Organic Carbon	M23-My0025107	CP	mg/L	< 5	< 5	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Alkalinity (speciated)				Result 1	Result 2	RPD		
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )	M23-My0025107	CP	mg/L	< 20	< 20	<1	30%	Pass
Carbonate Alkalinity (as CaCO <sub>3</sub> )	M23-My0025107	CP	mg/L	< 10	< 10	<1	30%	Pass
Hydroxide Alkalinity (as CaCO <sub>3</sub> )	M23-My0025107	CP	mg/L	< 20	< 20	<1	30%	Pass
Total Alkalinity (as CaCO <sub>3</sub> )	M23-My0025107	CP	mg/L	< 20	< 20	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Ammonia (as N)	M23-My0025108	CP	mg/L	0.13	0.10	28	30%	Pass
Nitrate & Nitrite (as N)	M23-My0025108	CP	mg/L	1.4	1.4	<1	30%	Pass
Nitrite (as N)	M23-My0025108	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Total Dissolved Solids Dried at 180 °C ± 2 °C	M23-My0025110	CP	mg/L	1500	1600	4.9	30%	Pass
Total Suspended Solids Dried at 103 °C to 105 °C	M23-My0025110	CP	mg/L	5.4	< 5	16	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Chloride	M23-My0025111	CP	mg/L	790	790	<1	30%	Pass
Sulphate (as SO <sub>4</sub> )	M23-My0025111	CP	mg/L	29	28	4.0	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M23-My0025112	CP	ug/L	0.07	0.07	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M23-My0025112	CP	ug/L	0.10	0.09	4.5	30%	Pass
Perfluorohexanoic acid (PFHxA)	M23-My0025112	CP	ug/L	0.08	0.08	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M23-My0025112	CP	ug/L	0.05	0.05	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M23-My0025112	CP	ug/L	0.08	0.08	5.0	30%	Pass
Perfluorononanoic acid (PFNA)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M23-My0025112	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M23-My0025112	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M23-My0025112	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M23-My0025112	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M23-My0025112	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M23-My0025112	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M23-My0025112	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M23-My0025112	CP	ug/L	0.06	0.06	1.2	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M23-My0025112	CP	ug/L	0.01	0.01	3.5	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M23-My0025112	CP	ug/L	0.01	0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M23-My0025112	CP	ug/L	0.09	0.10	2.2	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M23-My0025112	CP	ug/L	0.04	0.05	4.2	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)</b>				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M23-My0025112	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M23-My0025112	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
<b>Heavy Metals</b>				Result 1	Result 2	RPD		
Aluminium (filtered)	M23-My0025113	CP	mg/L	0.05	< 0.05	11	30%	Pass
Arsenic (filtered)	M23-My0025113	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Beryllium (filtered)	M23-My0025113	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Boron (filtered)	M23-My0025113	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Cadmium (filtered)	M23-My0025113	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Cobalt (filtered)	M23-My0025113	CP	mg/L	0.001	0.001	2.4	30%	Pass
Copper (filtered)	M23-My0025113	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iron (filtered)	M23-My0025113	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Lead (filtered)	M23-My0025113	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lithium (filtered)	M23-My0025113	CP	mg/L	0.006	0.005	7.3	30%	Pass
Manganese (filtered)	M23-My0025113	CP	mg/L	0.014	0.013	6.3	30%	Pass
Nickel (filtered)	M23-My0025113	CP	mg/L	0.004	0.004	1.0	30%	Pass
Selenium (filtered)	M23-My0025113	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vanadium (filtered)	M23-My0025113	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Zinc (filtered)	M23-My0025113	CP	mg/L	0.017	0.017	5.2	30%	Pass
Duplicate								
<b>Alkali Metals</b>				Result 1	Result 2	RPD		
Calcium	M23-My0025114	CP	mg/L	400	380	3.2	30%	Pass
Magnesium	M23-My0025114	CP	mg/L	330	330	<1	30%	Pass
Potassium	M23-My0025114	CP	mg/L	17	18	2.1	30%	Pass
Sodium	M23-My0025114	CP	mg/L	2500	2500	<1	30%	Pass
Duplicate								
<b>Hexavalent Chromium Set</b>				Result 1	Result 2	RPD		
Chromium (hexavalent)	M23-My0025115	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Aluminium	M23-My0025115	CP	mg/L	0.06	0.06	<1	30%	Pass
Arsenic	M23-My0025115	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Beryllium	M23-My0025115	CP	mg/L	0.001	0.001	4.9	30%	Pass
Boron	M23-My0025115	CP	mg/L	0.06	0.06	5.4	30%	Pass
Cadmium	M23-My0025115	CP	mg/L	0.0009	0.0008	11	30%	Pass
Cobalt	M23-My0025115	CP	mg/L	0.005	0.004	8.2	30%	Pass
Copper	M23-My0025115	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iron	M23-My0025115	CP	mg/L	0.11	0.11	1.3	30%	Pass
Lead	M23-My0025115	CP	mg/L	0.002	0.002	10.0	30%	Pass
Lithium	M23-My0025115	CP	mg/L	0.13	0.12	5.2	30%	Pass
Manganese	M23-My0025115	CP	mg/L	0.14	0.13	6.1	30%	Pass
Nickel	M23-My0025115	CP	mg/L	0.092	0.092	<1	30%	Pass
Selenium	M23-My0025115	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vanadium	M23-My0025115	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Zinc	M23-My0025115	CP	mg/L	0.45	0.43	3.9	30%	Pass
Duplicate								
Hexavalent Chromium Set				Result 1	Result 2	RPD		
Chromium (hexavalent)	M23-My0025116	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Ammonia (as N)	M23-My0025121	CP	mg/L	1.4	1.7	16	30%	Pass
Nitrate & Nitrite (as N)	M23-My0025121	CP	mg/L	0.89	0.88	<1	30%	Pass
Nitrite (as N)	M23-My0025121	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Ammonia (as N)	M23-My0025123	CP	mg/L	0.30	0.31	2.6	30%	Pass
Nitrate & Nitrite (as N)	M23-My0025123	CP	mg/L	1.9	2.0	1.6	30%	Pass
Nitrate (as N)	M23-My0025123	CP	mg/L	1.9	2.0	1.6	30%	Pass
Nitrite (as N)	M23-My0025123	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chloride	M23-My0025124	CP	mg/L	120	120	3.7	30%	Pass
Sulphate (as SO4)	M23-My0025124	CP	mg/L	65	66	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Aluminium	M23-My0025124	CP	mg/L	0.07	0.07	<1	30%	Pass
Arsenic	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Beryllium	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Boron	M23-My0025124	CP	mg/L	0.05	0.05	2.9	30%	Pass
Cadmium	M23-My0025124	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Cobalt	M23-My0025124	CP	mg/L	0.004	0.004	5.3	30%	Pass
Copper	M23-My0025124	CP	mg/L	0.003	0.002	6.1	30%	Pass
Iron	M23-My0025124	CP	mg/L	3.6	3.3	7.7	30%	Pass
Lead	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lithium	M23-My0025124	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Manganese	M23-My0025124	CP	mg/L	0.13	0.12	5.3	30%	Pass
Nickel	M23-My0025124	CP	mg/L	0.007	0.007	5.4	30%	Pass
Selenium	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vanadium	M23-My0025124	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Zinc	M23-My0025124	CP	mg/L	0.019	0.016	17	30%	Pass

Duplicate								
Alkali Metals				Result 1	Result 2	RPD		
Calcium	M23-My0025124	CP	mg/L	7.7	7.4	4.3	30%	Pass
Magnesium	M23-My0025124	CP	mg/L	6.7	6.4	4.3	30%	Pass
Potassium	M23-My0025124	CP	mg/L	3.1	2.9	7.1	30%	Pass
Sodium	M23-My0025124	CP	mg/L	96	93	3.3	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M23-My0025124	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH C15-C28	M23-My0025124	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH C29-C36	M23-My0025124	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH >C10-C16	M23-My0025124	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C16-C34	M23-My0025124	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH >C34-C40	M23-My0025124	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Acenaphthylene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Anthracene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benz(a)anthracene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(a)pyrene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(b&j)fluoranthene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(g,h,i)perylene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(k)fluoranthene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chrysene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibenz(a,h)anthracene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluoranthene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluorene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Naphthalene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Phenanthrene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Pyrene	M23-My0025124	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M23-My0025124	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass
2,4-Dichlorophenol	M23-My0025124	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass
2,4,5-Trichlorophenol	M23-My0025124	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass
2,4,6-Trichlorophenol	M23-My0025124	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass
2,6-Dichlorophenol	M23-My0025124	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass
4-Chloro-3-methylphenol	M23-My0025124	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass
Pentachlorophenol	M23-My0025124	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass
Tetrachlorophenols - Total	M23-My0025124	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M23-My0025124	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M23-My0025124	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass
2-Nitrophenol	M23-My0025124	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass
2,4-Dimethylphenol	M23-My0025124	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass
2,4-Dinitrophenol	M23-My0025124	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass
2-Methylphenol (o-Cresol)	M23-My0025124	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M23-My0025124	CP	mg/L	< 0.006	< 0.006	<1	30%	Pass
4-Nitrophenol	M23-My0025124	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass
Dinoseb	M23-My0025124	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass
Phenol	M23-My0025124	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Phosphate total (as P)	M23-My0025127	CP	mg/L	0.03	0.03	15	30%	Pass

<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Ammonia (as N)	M23-My0025129	CP	mg/L	0.80	0.81	<1	30%	Pass
Nitrate & Nitrite (as N)	M23-My0025129	CP	mg/L	0.17	0.17	<1	30%	Pass
Nitrite (as N)	M23-My0025129	CP	mg/L	0.04	0.04	<1	30%	Pass
Total Dissolved Solids Dried at 180 °C ± 2 °C	M23-My0025129	CP	mg/L	1100	1000	1.7	30%	Pass
Total Suspended Solids Dried at 103 °C to 105 °C	M23-My0025129	CP	mg/L	< 5	< 5	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Ammonia (as N)	M23-My0025130	CP	mg/L	0.28	0.28	<1	30%	Pass
Nitrate & Nitrite (as N)	M23-My0025130	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Nitrite (as N)	M23-My0025130	CP	mg/L	< 0.02	-0.00047	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD		
TRH C6-C9	M23-My0033232	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C6-C10	M23-My0033232	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
<b>Duplicate</b>								
<b>BTEX</b>				Result 1	Result 2	RPD		
Benzene	M23-My0033232	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Toluene	M23-My0033232	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Ethylbenzene	M23-My0033232	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
m&p-Xylenes	M23-My0033232	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
o-Xylene	M23-My0033232	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Xylenes - Total*	M23-My0033232	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1	Result 2	RPD		
Naphthalene	M23-My0033232	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass

**Comments**
**Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

**Qualifier Codes/Comments**

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

**Authorised by:**

Michael Morrison	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Carroll Lee	Senior Analyst-PFAS
Carroll Lee	Senior Analyst-Volatile
Edward Lee	Senior Analyst-Organic
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Mary Makarios	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Metal



**Glenn Jackson**  
**Managing Director**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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# Appendix E Emergency Leachate Management Plan

# Emergency Leachate Management Procedure Shoal Bay Waste Management Facility



## 1 Purpose

The purpose of this document is to ensure that City of Darwin (CoD) effectively manage leachate in an emergency where there is insufficient leachate storage, for example during extreme weather conditions or leachate treatment equipment failure, to ensure minimal impact to the environment.

## 2 Scope

This procedure covers all leachate (raw and treated) within the Shoal Bay Waste Management Facility (SBWMF). CoD will lead the implementation of this procedure in consultation with other stakeholders who manage leachate onsite, including Veolia and Water & Carbon Group (WCG).

## 3 Procedure Statement

The CoD leachate dashboard is updated several times a week to provide data on actual leachate generation, storage and treatment (leachate treatment plant and irrigation and Benevap system).

The leachate dashboard also provides a forecast of leachate generation, based on predicted rainfall events and leachate treatment rates.

In an event where leachate storage capacity is likely to be exceeded, environmental harm will be minimised through adopting the following principles, reflected in the leachate emergency procedure:

- 1) prioritise the effective storage and management of raw leachate over treated leachate
- 2) contain surplus leachate to the operational site

The emergency leachate management procedure will be enacted in 2 phases once all listed trigger criteria have been met:

### Phase 1: Maintaining raw leachate storage

Phase 1 trigger criteria:

- Leachate storage volumes are above 90% storage capacity;
- An overtopping event of treated leachate is imminent without prioritising the effective storage and management of raw leachate over treated leachate.

Phase 1 actions
1. Notify the EPA of phase 1 emergency procedure to minimise harm to the environment
2. Pump out treated leachate from tank 1 into the lined wetland, making tank 1 available for raw leachate
3. Overflow of treated and diluted leachate may occur from the open wetland into Northern Borrow Pit unlined pond where it will receive further dilution and remain contained onsite.
4. If overflow occurs, take water samples immediately at wetland overflow and within the Northern Borrow Pit/unlined pond at the existing routine surface water sampling site SW14. All water sampling will follow the requirements for surface water sample collection as prescribed in the Water Quality Monitoring Plan (Appendix B of the SBWMF EMP). Sample analysis will be undertaken by a NATA-accredited lab for the routine surface water parameters as per Attachment 3 of EPL188-03.

Emergency Leachate Management Procedure		Responsible Officer: Shane Coleman	
Version	Adoption Date	History	Next Review Date
1	28 <sup>th</sup> December 2022	Emergency Leachate Management Procedure	28 <sup>th</sup> December 2023



# Emergency Leachate Management Procedure

## Shoal Bay Waste Management Facility



5. Continue taking weekly water samples at the Northern Borrow Pit/unlined pond (SW14) until discharge of treated leachate into the pond ceases.
6. Maximise the processing of raw leachate through the leachate treatment plant for overflow into the Northern Borrow Pit/unlined pond to maximise capacity for raw leachate storage
7. Provide weekly email updates to the NT EPA that include status of leachate storages and onsite management actions undertaken, and water sampling results with brief assessment of environmental risks. Weekly updates will continue until discharge from the wetland to the Northern Borrow Pit ceases.

Emergency Leachate Management Procedure		Responsible Officer: Shane Coleman	
Version	Adoption Date	History	Next Review Date
1	28 <sup>th</sup> December 2022	Emergency Leachate Management Procedure	28 <sup>th</sup> December 2023



# Emergency Leachate Management Procedure Shoal Bay Waste Management Facility



## Phase 2: Containing raw leachate within the operational site.

Phase 2 trigger criteria:

- Raw leachate storage volumes are reaching an overtopping event
- The forecast generation of raw leachate cannot be stored for more than 96 hours

<b>Phase 2 actions:</b>	
1.	Notify the EPA of phase 2 emergency procedure to minimise harm to the environment
2.	Commence reinjection of raw leachate into stage 5 and 6 where possible
3.	Pump out all the diluted treated leachate from the Northern Borrow Pit/unlined pond into the stormwater (S/W) basin
4.	Pump a maximum daily leachate generation amount of 150kL of raw leachate into the Northern Borrow Pit/unlined pond for surface containment and rainfall dilution
5.	Take an immediate water sample at the Northern Borrow Pit/unlined pond
6.	Maintain full capacity of the leachate treatment plant to maximise raw leachate storage
7.	Continue to daily monitor leachate storage and generation
8.	If additional pumping of raw leachate into the Northern Borrow Pit/unlined pond is required, notify the EPA and maintain a buffer of the maximum daily leachate generation amount of 150kL within the leachate storage system.
9.	Take weekly water samples at the Northern Borrow Pit/unlined pond sampling site SW14 until discharge of treated leachate into the pond ceases.
10.	Provide weekly email updates to the NT EPA that include status of leachate storages, onsite management actions undertaken, and water sampling results with brief assessment of environmental risks. Weekly updates will continue until discharge of any raw or treated leachate to the Northern Borrow Pit/ unlined pond ceases.

Emergency Leachate Management Procedure		Responsible Officer: Shane Coleman	
Version	Adoption Date	History	Next Review Date
1	28 <sup>th</sup> December 2022	Emergency Leachate Management Procedure	28 <sup>th</sup> December 2023



# Emergency Leachate Management Procedure Shoal Bay Waste Management Facility

Figure 1: Map of leachate storage and emergency containment areas



Emergency Leachate Management Procedure		Responsible Officer: Shane Coleman	
Version	Adoption Date	History	Next Review Date
1	28 <sup>th</sup> December 2022	Emergency Leachate Management Procedure	28 <sup>th</sup> December 2023

