Monthly water quality monitoring results
Cabbage Tree Road sand quarry
June 2021 Water Monitoring Event

NCA21R127475

16 July 2021

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Attention: Darren Williams

Subject: Monthly water quality monitoring results
Cabbage Tree Road sand quarry
June 2021 Water Monitoring Event

Please find enclosed the monthly water monitoring results at Cabbage Tree Road Sand Quarry for the June 2021 water monitoring event.

1 SCOPE OF SERVICE

The scope of work includes the quarterly surface and groundwater monitoring as part of the monthly monitoring requirements. **Figure 1** (**Attachment 1**) presents the surface water and groundwater sampling locations.

The scheduled June monitoring was a monthly monitoring event to include gauging of all available monitoring wells (a total of 13 wells) and sampling from 11 monitoring wells and four surface water locations.

2 SITE WORK

The monthly monitoring round was conducted on 18 June 2021.

Each well location was gauged using a water level meter to determine groundwater depth (relative to the top of the well casing) and the total depth of the well in order to determine potential sand/silt inundation and potential maintenance requirements. Following gauging, a HydraSleeve was placed into the well, ensuring the top of the sleeve was located below the water column to be sampled and suspended in place while all remaining wells were gauged. Each HydraSleeve was then removed and samples were taken.

A bailer was used to purge BH10 since a HydraSleeve requires larger water volumes than what was present. The bailer was lowered into the well and 3 times the bore volume was removed to ensure a representative sample was taken. This was able to be achieved given the rapid recharge of groundwater into the monitoring well.

The June 2021 monitoring round included:

- Gauging of 13 monitoring wells (BH1, BH2, BH4, BH5, BH6, BH7, BH8, BH9A, BH10, BH11, BH12, MW239S & MW239D);
- Groundwater sampling from 11 monitoring wells as summarised in **Table 5** and detailed in **Attachment 2**; and
- Surface water sampling from four locations as summarised in **Table 5** and detailed in **Attachment 2.**

Water samples were collected into laboratory supplied containers and placed into an ice chilled esky. The samples were then submitted to a NATA accredited laboratory under a chain of custody (COC) for the analytical schedule as per **Table 1**.

Table 1: Summary of Monthly Water Quality Analysis

Analysis	Number of Samples				
	Primary	Intra-lab (Duplicate)	Inter-lab (Triplicate)	Transport Blank	Rinsate Blank
Hydrocarbons*	15	1	1	1	1
Metals**	14	1	1	1	1
Iron (dissolved)	14	1	1	1	1

Analysis	Number of Samples				
	Primary	Intra-lab (Duplicate)	Inter-lab (Triplicate)	Transport Blank	Rinsate Blank
General Water Quality Suite***	14	0	0	0	0
Total Dissolved Solids (TDS)	14	0	0	0	0
Total Suspended Solids (TSS)	14	0	0	0	0
PFAS (28 analytes, standard level)	14	2	2	1	1

* TRH (C6 – C40) (Silica Gel), BTEXN
** NEPM Metals Suite (dissolved) - Arsenic (As), Barium (Ba), Beryllium (Be), Boron (B), Cadmium (Cd), Chromium (Cr), Cobalt (Co), Copper (Cu), Iron (Fe), Lead (Pb), Manganese (Mn), Mercury (Hg), Nickel (Ni), Selenium (Se), Vanadium (V), Zinc (Zn).
*** General Water Quality Suite - Ca, Mg, Na, K, pH, EC, Cl, F, SO_4, Alkalinity, Fluoride, Hardness & TDS (Calc').

3 SAMPLING RESULTS

Table 2 provides a summary of the gauging data. The full set of gauging data and field parameters for each monitoring location are provided in **Attachment 2**. Additionally, Watershed HydroGeo (2019) outlined a Trigger Action and Response Plan (TARP) to mitigate groundwater elevations that may potentially impact quarry operations at Williamtown Sand (primarily sand excavation depths). Based on these recommendations, groundwater elevation has been shaded to correspond to triggers and actions outlined in **Table 3.**

Table 2: Summary of gauging data

Borehole	Top of Casing (mAHD)	Depth to Water (mBTOC)	Groundwater Elevation (mAHD)	Well Total Depth Current (mBTOC)	Well Total Depth 2014 (mBTOC)	Inferred Max GW Level (mAHD)[1]	Comment
BH1	8.64	5.021	3.619	8.25	9.45	4.5	Clear, no odour / sheen
BH2	7.79	4.728	3.062	8.97	9.45	3.8	Slight cloudy brown, no odour / sheen, well in good condition
BH3	-	-	-	-	-	3.4	Well decommissioned
BH4	3.06	1.029	2.031	6.01	6.45	3.0	Slight brown tannin, no odour / sheen, well in good condition
BH5	7.36	5.248	2.112	8.8	9.28	4.0	No sample taken, well in good condition
BH6	3.62	0.926	2.694	4.52	4.95	4.4	Clear, strong sulphur odour, no sheen, well in good condition
BH7	2.98	1.124	1.856	4.53	4.95	3.7	Clear, strong sulphur odour, no sheen, well in good condition
BH8	3.88	1.338	2.542	6.10	6.28	4.0	Clear, strong sulphur odour, no sheen, well in good condition

Borehole	Top of Casing (mAHD)	Depth to Water (mBTOC)	Groundwater Elevation (mAHD)	Well Total Depth Current (mBTOC)	Well Total Depth 2014 (mBTOC)	Inferred Max GW Level (mAHD)[1]	Comment
BH9	-	-	-	-	-	3.0	Well decommissioned
BH9A	10.25	8.613	1.637	12.44	16.16	3.0[2]	Moderate brown, sulphur odour, no sheen, well in good condition
BH10	6.69	2.734	3.956	3.44	5.45	4.9	Clear, slight sulphur odour, no sheen, well in good condition
BH11	6.63	1.993	4.637	5.29	5.95	5.5	Light yellow / brown, slight sulphur odour, no sheen, well in good condition
BH12	8.67	6.019	2.651	8.22	8.39	4.0	Clear, no odour / sheen, broken hinge on well casing
MW239S	3.04	0.812	2.228	3.84	4.0	3.9	Slight cloudy yellow, moderate sulphur odour, no sheen, well in good condition
MW239D	3.04	0.794	2.246	20.57	20.49	3.9[3]-	No sample taken, well in good condition
SW01*	N/A	1.4	N/A	N/A	N/A	N/A	Natural tannin brown, no odour / sheen
SW02*	N/A	0.25	N/A	N/A	N/A	N/A	Clear, no odour / sheen
SW03*	N/A	1.4	N/A	N/A	N/A	N/A	Clear, strong sulphur odour, no sheen
SW04*	N/A	1.2	N/A	N/A	N/A	N/A	Natural tannin brown, no odour / sheen

* Surface water levels measured from measuring tape installed (When dry number is ground elevation AHD).
[1] – Sourced from Watershed HydroGeo ,2019, *Maximum Extraction Depth Management Plan, Cabbage Tree Road Sand Quarry*, May 2019.
[2] – Inferred Max Groundwater level based on adjacent wells (BH4 & BH9).
[3] – Inferred Max Groundwater level based on adjacent well (MW239S).
N/A – Not applicable

Table 3: Groundwater level monitoring TARP rules (Watershed HydroGeo, 2019)

Level	Trigger	Action and Response	Report to
0	Groundwater levels more than 0.5 m below *inferred* maximum historical level at BH1 and BH10. (**Table 2**).	Standard operations – monthly dipping of operational on-site monitoring bores.	n/a

1	Groundwater levels within 0.5 m below *inferred* maximum historical level (**Table 2**) at any on-site bore.	Weekly (or more frequent) monitoring (dipping) of groundwater levels until water level declines to below high frequency level bores listed in **Table 2**.	Internal and environmental consultant. Include note in Annual Report.
2	Groundwater levels within 0.25 m of *inferred* maximum historical level (**Table 2**) at any on-site bore.	Weekly (or more frequent) monitoring (dipping) of groundwater levels. Re-analysis and review of MEL.	WSS to issue letter to DPIE, documenting groundwater level and rainfall trends, and review and recommendations regarding of Minimum Extraction Level (MEL) outlined in Watershed HydroGeo, 2019.
3	Groundwater levels within resource area rise above previously *inferred* maximum groundwater level (**Table 2**).	Analysis of recent data by hydrogeologist, including site data and data from local HWC wells and local Defence wells (if available). Revision of MEL. Remediation of earlier excavations to revised MEL if required by DPIE.	WSS to issue letter to DPIE, DoI Water and HWC, documenting groundwater level trends, and revision (if necessary) of MEL. Letter to outline remedial options, considering access, vegetation condition in previously rehabilitated areas. Re-grading of previously rehabilitated areas if required by DPIE.

Table 4 provides a summary of the field parameters taken during the June monitoring event. All gauging data and field parameters for each monitoring location are provided in **Attachment 2.**

Table 4: Summary of Field Measurements

Borehole	Turbidity (NTU)	Temp (^{0}C)	DO (mg/L)	EC (µc/cm)	TDS (mg/L)	PH	Redox (mV)
BH1	5.9	19.2	1.47	132	85	5.42	35.2
BH2	38.4	19.1	4.36	64.7	42.2	4.78	209
BH4	11.6	16.2	3.18	133	86	4.61	284
BH5	ND	ND	ND	ND	ND	ND	ND
BH6	83.0	15.2	1.22	298	194	4.69	-71
BH7	169	15.6	1.60	250	163	4.74	-40
BH8	102	16.6	2.36	391	254	4.72	-53.9
BH9A	117	18.3	1.34	173	112	4.70	-17.5
BH10	12.1	17.1	2.07	229	149	4.55	24.2
BH11	6.2	16.8	2.08	225	146	4.62	132
BH12	ND	18.1	4.41	94.6	61	5.20	288
MW239S	216	16.1	1.01	246	160	4.59	38
MW239D	ND	ND	ND	ND	ND	ND	ND
SW01	7.8	10.1	2.4	219	144	5.77	202
SW02	1.4	12.8	1.19	105	68	4.69	64.2
SW03	7.7	10.2	1.68	220	143	4.84	-2.9
SW04	11.7	10.4	1.98	277	180	4.79	260

ND: No Data – no sample taken

Table 5 and **Table 6** presents a summary of the water monitoring results for key analytes found to be elevated above the LOR for groundwater and surface water. Groundwater and surface water criteria outlined in the baseline water quality summary (BWQS) report, developed by Kleinfelder (KLF 2020), has been applied to the monthly report including a comment comparing results with previous data. It should be noted that since undertaking the BWQS report, increased rainfall has occurred throughout 2020/21 (compared to 2019) which may influence baseline concentrations across the site, most notably in metals, inorganics and general water quality parameters.

Non detect for analytes BTEXN, TRH, TPH and PFAS were reported at the majority of locations and are therefore not included in the below summary tables(**Table 6**). Full results tables are provided in the **Attachment 2**. Full Laboratory results, including copies of the COC, are provided in **Attachment 3**.

Table 5: Groundwater screening levels

Analyte	Metals								Relative to previous monitoring (details on specific data trends provided in Section 5 below)
	Barium	Chromium**[1]	Copper**	Cobalt	Iron	Manganese**	Nickel	Zinc**	
LOR	0.001	0.001	0.001	0.001	0.05	0.001	0.001	0.005	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Baseline Trigger Values (KLF 2020)	0.035	0.004	0.013 (0.051 for BH4)	-	4.1[2]/ 1.0[3]	1.9	0.022 (0.037 for BH11)	0.085	
NHMRC ADWG (2018)	-	0.05	2	-	-	0.5	0.02	-	
Sample ID	Groundwater								
BH1	0.003	<0.001	<0.001	<0.001	0.52[4]	0.017	<0.001	0.290	Concentrations of metals were generally consistent with historical variations and mostly below the adopted criteria. Concentrations of zinc (0.290 mg/L) are within historical concentrations recorded at BH1 since February 2019. Quarry operations are presently being undertaken directly adjacent (south) of BH1.
BH2	0.001	<0.001	0.002	<0.001	<0.05	0.011	<0.001	<0.005	Metal concentrations were generally consistent with historical results and remain below adopted criteria. BH2 is located marginally down hydraulic gradient from the current quarry operations footprint.
BH4	0.010	<0.001	0.157	<0.001	<0.05	0.023	0.002	<0.005	Metal concentrations were generally consistent with historical variations and remain below adopted criteria, except for copper (0.157 mg/L) which reported concentrations above Baseline Trigger Values (0.051 mb/L). Concentrations of copper at BH4 are significantly higher than previously reported and will be closely monitored during subsequent monitoring events. BH4 is down hydraulic gradient from current quarry operations and on the southernmost boundary of the site.
BH6	0.033	<0.001	<0.001	<0.001	1.08	0.004	0.001	<0.005	Generally metal concentrations were consistent with historical results. Barium concentrations (0.033 mg/L) have reduced since the previous May monitoring round to be below the Baseline Trigger Values (0.035mg/L). BH6 is generally up hydraulic gradient from current quarry operations and at the north eastern most point of the Site.

Analyte	Metals								
	Barium	Chromium**[1]	Copper**	Cobalt	Iron	Manganese**	Nickel	Zinc**	
LOR	0.001	0.001	0.001	0.001	0.05	0.001	0.001	0.005	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Relative to previous monitoring (details on specific data trends provided in Section 5 below)
Baseline Trigger Values (KLF 2020)	0.035	0.004	0.013 (0.051 for BH4)	-	4.1[2]/ 1.0[3]	1.9	0.022 (0.037 for BH11)	0.085	
NHMRC ADWG (2018)	-	0.05	2	-	-	0.5	0.02	-	
Sample ID	Groundwater								
BH7	0.004	0.002	<0.001	0.001	1.35	0.011	0.003	<0.005	Metal concentrations were generally consistent with historical results and below adopted criteria. BH7 is located east of the current quarry operations.
BH8	0.012	0.002	<0.001	<0.001	3.38	0.005	0.002	0.005	Metal concentrations were consistent with historical results and below adopted criteria. BH8 is located north east of the current quarry operations on the eastern most boundary of the Site.
BH9A	0.004	0.001	<0.001	<0.001	0.25	0.020	0.002	<0.005	Metal concentrations were generally consistent with historical results and below adopted criteria. Copper concentrations (<0.001 mg/L) have decreased since the May monitoring round (0.027 mg/L) to levels below the Baseline Trigger Values. Close monitoring will continue to confirm trends. BH9A is down gradient for current quarry operations and is on the southernmost boundary of the Site.
BH10	0.025	0.001	<0.001	<0.001	<0.05	0.006	0.002	0.013	Metal concentrations were all below adopted criteria and consistent with the previous month's monitoring event. While BH10 has been dry in all monitoring events prior to April 2021, trends appear to be stable.
MW239S	0.003	0.002	<0.001	<0.001	0.68	0.005	0.002	<0.005	Metal concentrations were generally consistent with historical results and below adopted criteria. Copper concentrations (<0.001 mg/L) have reduced since the previous monitoring event (0.033 mg/L) and are now below Baseline Trigger Values. MW239S is located east and upgradient of the current quarry operations.
BH11	0.004	0.001	0.001	<0.001	0.25	0.002	0.002	0.031	Metal concentrations were generally consistent with historical results and below adopted criteria. Nickel concentrations were

Analyte	Metals								
	Barium	Chromium**[1]	Copper**	Cobalt	Iron	Manganese**	Nickel	Zinc**	
LOR	0.001	0.001	0.001	0.001	0.05	0.001	0.001	0.005	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Relative to previous monitoring (details on specific data trends provided in Section 5 below)
Baseline Trigger Values (KLF 2020)	0.035	0.004	0.013 (0.051 for BH4)	-	4.1[2]/ 1.0[3]	1.9	0.022 (0.037 for BH11)	0.085	
NHMRC ADWG (2018)	-	0.05	2	-	-	0.5	0.02	-	
Sample ID	Groundwater								
									within the baseline trigger values and have decreased since the previous May GME. Monitoring will continue in subsequent events to confirm a new decreasing trend.
BH12	NS	NS	NS	NS	NS	NS	NS	NS	Metals for BH12 were not analysed.

Notes:
< - Less than laboratory limit of reporting
** 95% Level of protection in freshwater
[1] value for CR VI
[2] Northern half of site – BH6, BH7, BH8, BH11 & MW239S
[3] Southern half of site - BH2, BH4 & BH9
[4] BH1, BH5 & BH12 – Baseline Trigger Values do not apply. Data assessed against historical variations (since monitoring began in February 2019).
NS – No Sample

Table 6: Surface water screening levels

Analyte	Metals									
	Arsenic	Barium	Chromium**[1]	Copper**	Cobalt	Iron	Manganese**	Nickel	Zinc**	
LOR	0.001	0.001	0.001	0.001	0.001	0.05	0.001	0.001	0.005	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Baseline Trigger Values (KLF 2020)	0.001	0.08	0.002	0.013	0.017	9.26	0.841 (SW1)/0.048 (SW3 & SW4)	0.022	0.535 (SW1) / 0.085 (SW3 & SW4)	Relative to previous monitoring (details on specific data trends provided in Section 5 below)
NHMRC ADWG 6	0.01	-	0.05	2	-	-	0.5	0.02	-	
Sample Name	Surface Water									
SW1	<0.001	0.009	0.002	0.002	<0.001	1.51	0.052	<0.001	0.068	Metal concentrations were generally consistent with historical variations. Iron concentrations (1.51 mg/L) have decreased since the previous month (3.59 mg/L) and remain below the Baseline Trigger Values. Chromium concentrations were analysed to be equivalent to the Baseline Trigger Values and will be closely monitored to confirm trends in subsequent months. SW1 is located on the southernmost boundary of the Site adjacent to Cabbage Tree Road.
SW2	<0.001	0.004	<0.001	<0.001	<0.001	1.58	0.017	0.001	0.058	SW2 was previously dry during all sampling periods from 2019 – February 2021. Metal concentrations detected at SW2 during the June monitoring event were all below the Baseline Trigger Values, with copper decreasing since the previous month to levels below the adopted criteria. Close monitoring will continue to confirm trends in subsequent months. Arsenic also decreased to concentrations below the Baseline Trigger Values since the previous monitoring round. SW2 is the most western located surface water monitoring point situated adjacent to current quarry operations.

Analyte	Metals									
	Arsenic	Barium	Chromium**[1]	Copper**	Cobalt	Iron	Manganese**	Nickel	Zinc**	
LOR	0.001	0.001	0.001	0.001	0.001	0.05	0.001	0.001	0.005	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Baseline Trigger Values (KLF 2020)	0.001	0.08	0.002	0.013	0.017	9.26	0.841 (SW1)/0.048 (SW3 & SW4)	0.022	0.535 (SW1) / 0.085 (SW3 & SW4)	Relative to previous monitoring (details on specific data trends provided in Section 5 below)
NHMRC ADWG 6	0.01	-	0.05	2	-	-	0.5	0.02	-	
Sample Name	Surface Water									
SW3	0.001	0.003	<0.001	<0.001	<0.001	10.5	0.024	0.001	<0.005	Metal concentrations were generally consistent with historical variations. Concentrations of arsenic (0.001 mg/L) were equivalent to the Baseline Trigger Values but have slightly decreased since the previous May GME (0.005 mg/L). Concentrations of iron (10.5 mg/L) were above the Baseline Trigger Value (9.26mg/L) but have reduced from 25.4 mg/L since the last monitoring round. Concentrations will continue to be closely monitored during subsequent monthly monitoring rounds to confirm trends. SW3 is located within a drainage channel that travels from west to east along the south eastern perimeter of the Site. SW3 is east of the current quarry operations.
SW4	<0.001	0.025	<0.001	<0.001	<0.001	1.58	0.045	<0.001	0.009	Metal concentrations at SW4 appear to be stable across most analytes. Iron concentrations (1.58 mg/L) have significantly decreased since the previous month (10.1 mg/L), indicating that levels are stabilising following reduced rainfall. A reduction in arsenic concentrations was also reported at this location, confirming the new decreasing trend. Both arsenic and iron concentrations have dropped below Baseline Trigger Values. It should be noted that SW4 is downstream of SW3, hence why similar reductions were seen at both locations. PFOS

Analyte	Metals									
	Arsenic	Barium	Chromium**[1]	Copper**	Cobalt	Iron	Manganese**	Nickel	Zinc**	
LOR	0.001	0.001	0.001	0.001	0.001	0.05	0.001	0.001	0.005	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Baseline Trigger Values (KLF 2020)	0.001	0.08	0.002	0.013	0.017	9.26	0.841 (SW1)/0.048 (SW3 & SW4)	0.022	0.535 (SW1) / 0.085 (SW3 & SW4)	Relative to previous monitoring (details on specific data trends provided in Section 5 below)
NHMRC ADWG 6	0.01	-	0.05	2	-	-	0.5	0.02	-	
Sample Name	Surface Water									
										concentrations were below the laboratory limit of reporting during the June monitoring round. SW4 is located on the eastern most perimeter of the site and is the only location to consistently record concentrations of PFOS.

Notes:
< - Less than laboratory limit of reporting
** 95% Level of protection in freshwater
[1] value for CR VI
[2] HEPA NEMP 2018 – Recreational Water

4 RAINWATER DATA

Table 7 presents the rainfall data from Williamtown RAAF base (Station Number: 061078, Latitude: 32.79°S; Longitude: 151.84°E; Elevation: 8 m) for the period 2020/21. The mean monthly rainfall for the May/June period indicates that there was below average rainfall leading up to the June 2021 sampling event. Based on current rainfall data (mean and monthly totals) for June 2021, it is expected that surface and groundwater elevations will steadily decrease which is consistent with groundwater trend data.

Table 7: 2020-2021 Rainfall data (12-month period)

2020	July	Aug	Sep	Oct	Nov	Dec	Jan (21)	Feb (21)	Mar (21)	Apr (21)	May (21)	Jun (21)
1st	0	0	0	0.4	0.2	0	7.0	0.2	0	7.8	0	0.2
2nd	0.2	0	0	0	3.2	12	21.2	17.2	0	0.8	0	0.2
3rd	0	0	0	0	0	0	2.2	4.2	0	0	0	0
4th	1.6	0	0	0	0	0	0.2	0.2	1.6	0.2	0	12.8
5th	0	0	3	0	0	0	41.6	0	0	0	6.0	0.8
6th	0	0	0	0	30.2	12	0	0	3.8	0	26.4	0
7th	0	0	0	0	0	0	5.8	10.6	0.8	6.2	31.4	0
8th	4	3	0	0	0.4	0	4.0	0.2	0	40.2	0.4	0
9th	0	2.8	0	0	0	0	12.0	0.4	6.4	0.2	0	7.6
10th	0	8.4	12.6	0	0	0	0.2	4.4	0.8	0.2	0.4	0
11th	0.6	18.4	0	0	0	1	0	0.6	0	0	0	2.0
12th	1.8	0	0	0	0	0	0	0	0	0	7.2	0
13th	17	1.2	0	0	4.4	0	0	3.4	7.6	0	0	0
14th	24.6	0	0	0	13.6	0	0	11	1.8	0	0	0
15th	4	5	0	0	0	5.4	0.2	0.2	39.2	0	0	0
16th	0	0	0	0	0	14.8	0	11	1.0	0	0	ND
17th	0	0	0	0	5.8	0	0	3.6	6.0	5.0	0	0.4
18th	7.8	0	0.4	0.2	0	13.6	0	0.2	43.6	8.6	0	0
19th	0	0	0	18.0	0	8.0	0	29.2	96.4	0.2	0	0.2
20th	0	0	2.2	1.0	0	5.0	0	0.4	79.2	0.2	0	26.0
21st	0	0	8.8	0	0	3.0	0	7.4	46.6	0	0	19.2
22nd	0	0	0.4	0	0	48.6	0	20.6	65.2	0	13.0	0.6
23rd	0	0	0	0	0	0.2	0	19.8	16.8	0	0	0.2
24th	0	0	0	9.4	0	0	0	9.2	4.4	0	3.0	0.8
25th	0	0	0	14.0	0.4	0	0	3.6	0.2	0	0.6	1.8
26th	23.4	0	0.6	128.8	0	0	0	0	0	0	0.2	0
27th	133	0	0	76.2	0	1.8	0	0	0	0.2	0	0
28th	16.2	0	0	0	0	0.2	50.6	0.2	0	0	0	0.4
29th	8.4	0	0	4.0	0	24.0	31.4		31.4	0.2	0	30.8
30th	0	0	0	0	0	0.2	6		2.4	0	1.8	0.6

2020	July	Aug	Sep	Oct	Nov	Dec	Jan (21)	Feb (21)	Mar (21)	Apr (21)	May (21)	Jun (21)
31st	0	0	-	-	-	6.4	4.4		4.0	-	0.4	-
Total	242.6	38.8	28	252.0	58.2	156.2	186.8	157.8	459.2	70.0	90.8	104.6
Mean	72.6	72.8	60.6	75.9	81.9	77.5	98.3	118.3	125.2	109.8	108.6	124.6

Notes:
ND – no data retrieved.

5 DATA TRENDS

Data trends, taken from analyses undertaken throughout the duration of the sampling program (January 2019 – current), are provided as **Attachment 4.** Generally, the trends indicate a slight decrease in groundwater elevations consistent with the previous May 2021 round. This is likely due to a continuation of decreased rainfall following the March 2021 monitoring event, allowing groundwater to stabilise or slightly decrease in elevation. Trends for the current month show a slight drop in groundwater levels, which is considered to be in line with the below-average rainfall observed in **Section 4**.

Notable changes in data trends were observed for the following analytes:

- Arsenic – Arsenic concentrations have reduced or remained stable across the site, falling below the Baseline Trigger value at SW2 and SW4 following the May monitoring round. June results show a downward trend in arsenic concentrations at both locations when compared to previous months. Arsenic was detected at SW3 with a reported concentration equivalent to the Baseline Trigger Value, but has decreased since the previous monitoring event. This is the first GME of 2021 where concentrations have not exceeded the adopted criteria. Monitoring will continue to confirm whether concentrations continue to decrease or stabilise.
- Iron – generally remained stable across the site, with reduced concentrations reported at SW3 and SW4 in comparison to the May 2021 monitoring round. Despite this, levels remain above the Baseline Trigger Values at SW3.
- Barium – concentrations of barium were generally consistent across the site, with concentration levels at BH6 reported to have fallen below the Baseline Trigger Values since the previous May monitoring round.
- Nickel – concentrations of nickel are generally within historical variations for all locations. Nickel concentrations at BH11 continue to decrease following a large spike in April and are below the Base Trigger Value.
- Copper – concentrations of copper have decreased at BH9A, MW239S and SW2, which all previously exceeded historical results during the May 2021 monitoring round. However, copper concentrations have risen further above Baseline Trigger Values at BH4 to levels higher than previously recorded. Historical variations beginning in 2019 show a seasonal trend where concentrations begin to rise in May, peak during August/September and fall back to stable levels by October. Such concentrated levels may be attributed to the decrease in rainfall associated with the winter months. Overall trends also show a long-term temporal increase, where the peak concentrations are increasing with each seasonal event.
- Zinc – concentrations of zinc have generally stabilised across the site, with a reduction reported at BH1. Despite this, levels remain above the Baseline Trigger Value at this location and will be monitored in future monitoring events to determine whether the decreasing trend continues.
- PFAS – Concentrations of PFAS (PFOS and PFHxS compounds) were detected at SW4 in recent previous monitoring events, however, concentrations were below the LOR during the June 2021 monitoring round.

6 CLOSING

Overall, the results suggest that since quarry operations began in August 2019, there has been an insignificant change in analytical results.

It is recommended that further investigation be undertaken in the southern and central areas of the site to determine if there is a potential issue with copper concentrations at BH4, BH9A, MW239S and SW2. The following should be undertaken:

- A review of rainfall data in comparison to other months to understand if a decrease in rainfall may be a reason for higher copper concentrations.

- A review of current groundwater elevation data relative to previous months to determine whether increased concentrations are associated with reduced groundwater levels.
- A description of current operations in relation to the identified locations, along with surface water movements across the site.
- Discussion with current operation staff to understand the work that has been undertaken in the last 4 months to account for the potential introduction of copper sources and/or the potential mobilisation of naturally occurring copper due to quarry operations (a comparison of sand analysis including leachability from the area would help to prove or disprove this).
- The continuation of close monitoring to confirm the new decreasing trends during subsequent monitoring rounds.

We trust that the information presented is acceptable. If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

Kleinfelder Australia Pty Ltd

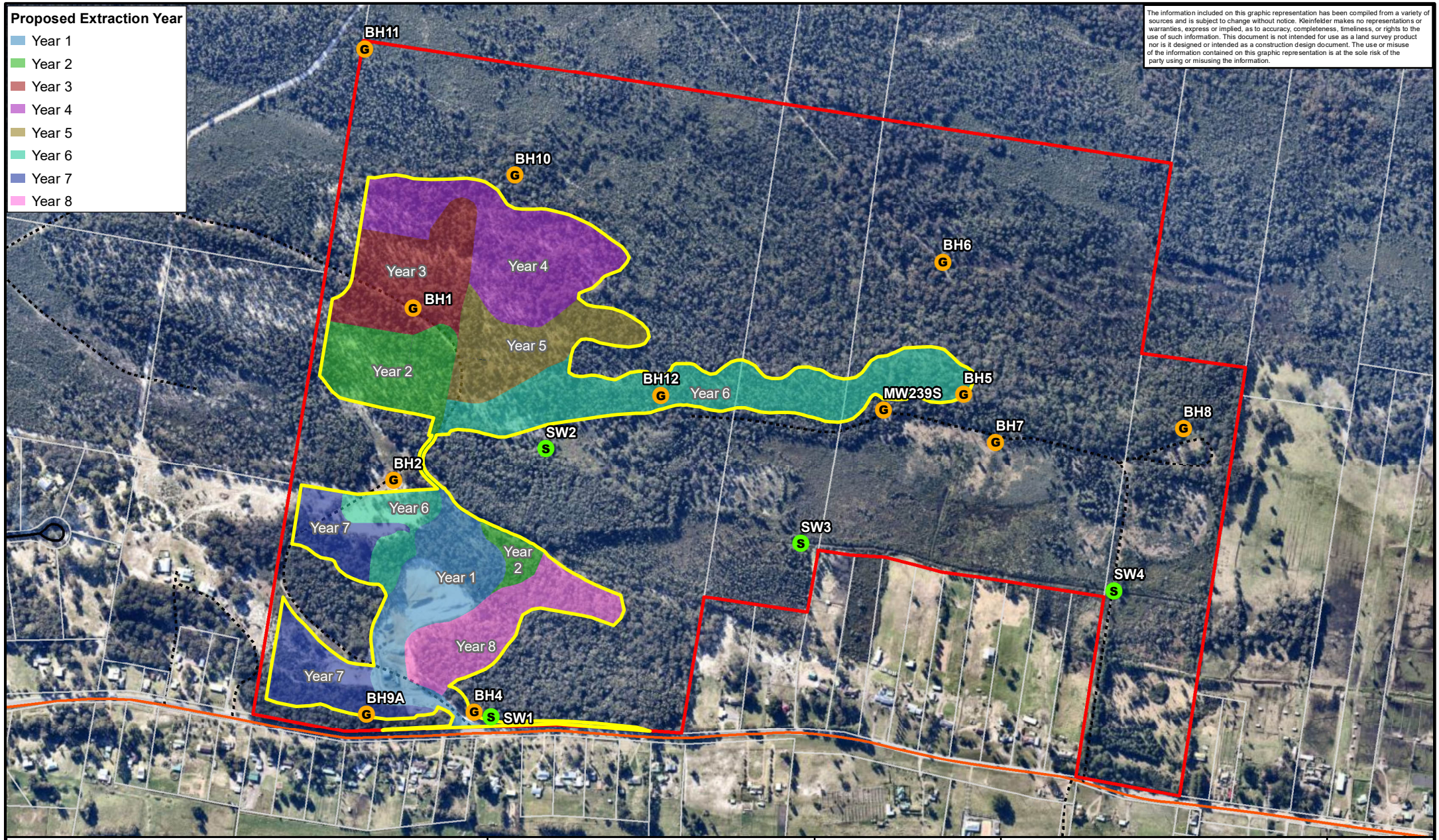
Megan Ferguson

Environmental Consultant
Contaminated Land Management
MFerguson@kleinfelder.com
Mobile: 0455 981 953

Attachments

Attachment: 1 Figures
Attachment 2: Results tables and field records
Attachment 3: Lab results
Attachment 4: Data Trends

ATTACHMENT 1: FIGURES



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G Groundwater Sample Site
S Surface Water Sample Site
Quarry Project Area
Subject Land Boundary
Arterial Road
Local Road
Track

Metres
0 50 100 200 300 400 500
N

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PROJECT REFERENCE: 20170448
DATE DRAWN: 2021/03/02 22:40 Version 1
DRAWN BY: GJoyce
DATA SOURCE:
NSW DFSI - 2017
Nearmap - 2020

Monthly Monitoring Locations

Williamtown Sand Syndicate
Proposed Sand Quarry
Cabbage Tree Road, Williamtown

FIGURE:
1

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ATTACHMENT 2: RESULTS TABLES AND FIELD RECORDS

KLEINFELDER

HYDRASLEEVE™ SAMPLING LOG

Project Number:	Date:	Site Address:
20193820	18/6	Cabbage Tree Rd.

Site Name:	Field Manager:	Weather Observations:
Williamtown Sands Syndicate	DIL	Clear – Windy

Field Measurements

Well ID	Sample Time	DTW (mbTOC)	Total Depth (mbTOC)	Sample Depth (mbTOC)	Temp (°C)	DO (mg/L)	EC (µc/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Description (Odour, Colour, Sheen)
BH4.	1202	4.029			16.2	3.18	133	86	4.61	284.	See	Slight Brown Tint – No/NS
BH9A	1230	8.613			18.3.	1.34	173	112	4.70	-17.5	Lab	Mod brown colour / Sulfur odour – NS
BH2	1245	4.728			19.1	4.36	64.7	42.2	4.78	209.	Report.	Slight Cloudy Brown – No/NS
BH12	1337	6.019			18.1	4.41	94.6	61	5.20	288		Clear – No/NS
MW2390	—	0.794	—									No Sample Taken
MW2395	1357	0.812			16.1	1.01	246	160	4.59	38		Slight cloudy Yellow – Sulfur odour – NS.
~~BH4~~ BH3	—	5.248	—									No Sample Taken
BH6	1407	0.926			15.2	1.22	298	194	4.69	-71		Clear – Strong Sulfur odour / NS
BH7	1441	1.124			15.6	1.60	250	163	4.74	-40		Clear – Strong Sulfur odour – / NS
BH8	1420	1.338			16.6	2.36	391	254	4.72	-53.9		Clear – Strong Sulfur odour – NS
SW4	1000	1.2			10.4	1.98	277	180	4.79	260		Nat Tain Brown – No/NS.
SW3	1024	1.4			10.2	1.68	220	143	4.84	-2.9		Clear – Strong Sulfur odour / NS
SW2	1040	0.25			12.8	1.19	105	68	4.69	64.2		Clear – No / NS.
BH10	1105.	2.734	3.44		17.1	2.07	229	149	4.55	24.2		Clear – slight Sulfur odour / NS.
BH1	1300	5.021			19.2	1.47	132	85	5.42	95.2		Clear – No/NS.
BH11	1320	1.993			16.8	2.08	225	146	4.62	132		Slight Yellow/Brown – Slight Sulfur odour
SW1	11:49	1.4.			10.1	2.4	219	144	5.77	202		Nat Tain – Brown – No/NS

Damaged wells (identify how damaged): _____

*Sample Depth is reported as bottom of hydrasleeve depth

BH10 – Bailed 9x Well Volume due to insufficient Volume for Hydrasleeve.

~~SW52 + SW53 = SW3~~
QW52 + QW53 = SW3
QW54 + QW55 = BH2 (PFAS only)

KENNARDS HIRE

EQUIPMENT CERTIFICATION REPORT

PGN9003871 WATER QUALITY METER – MULTIFUNCTION (YSI)

Plant Number: 1077464

SENSOR	CONCENTRATION	SPAN 1	SPAN 2	TRACEABILITY	PASS
pH	pH 7	pH 7		# 363536	☑
pH	pH 4	pH 4		# 366070	☑
Conductivity	12·88 mS/cm	12·88 mS/cm		# 364215	☑
Dissolvent Oxygen	Sodium Sulphite / Air	0.0ppm in Sodium Sulphite	ppm Saturation in Air	# 10640	☑
ORP	240mV	240mV		# 5931	☑

Battery Status ✓ (%)	Temperature 16·2 °C
Electrical Test & Tag (AS/NZS 3760)	Electrodes Cleaned and Checked

Note: Calibration solution traceability information is available upon request.

Please clean/decontaminate instrument and accessories before returning. A minimum 'Cleaning Fee' $55.00 (Inc GST) may apply if instrument is returned contaminated.

Checked By: Jacob Arnott Date: 11 / 06 / 21 Signed: [signature]

Accessories List:

User's Manual	pH and ORP Storage Solution	Transit Case

Table GW1
Groundwater Analytical Data - BTEXN
Williamtown Sand Syndicate

Analyte		BTEXN								Total Petroleum Hydrocarbons	Total Petroleum Hydrocarbons - Silcia Clean up				Total Recoverable Hydrocarbons		Total Recoverable Hydrocarbons - Silcia Clean up				
		Benzene**	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene**	Total Xylenes	Naphthalene **	Sum of BTEX	C_6 - C_9	C_{10}-C_{14} - Silica Cleanup	C_{15}-C_{28} - Silica Cleanup	C_{29}-C_{36} - Silica Cleanup	C_{10}-C_{36} Sum - Silica Cleanup	C_6 - C_{10}	C_6 - C_{10} minus BTEX (F1)	>C_{10}-C_{16} - Silica Cleanup	F2 - Silica Cleanup	>C_{16}-C_{34} - Silica Cleanup	>C_{34}-C_{40} - Silica Cleanup	>C_{10}-C_{40} - Silica Cleanup
LOR		1	2	2	2	2	2	5	1	20	50	100	50	50	20	20	100	100	100	100	100
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Baseline Trigger Values (KLF, 2020)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
	21-Feb-19											Blocked									
	15-Mar-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	**1,710**	< 50	< 100	< 50	< 50	**1,690**	**1,690**	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	**40**	< 50	< 100	< 50	< 50	**30**	**30**	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Dec-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jan-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH1	27-Apr-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-May-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	19-Jun-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Jul-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	14-Aug-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Mar-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Dec-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jan-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	<50	**160**	<50	**160**	< 20	<100	<100	< 100	**160**	< 100	**160**
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH4	27-Apr-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	**70**[3]	**600**[2]	< 50	**600**[2]	< 20	< 20	**80**[3]	< 100	**700**[2]	< 100	**700**[2]
	15-May-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	19-Jun-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Jul-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	14-Aug-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100

Analyte		BTEXN								Total Petroleum Hydrocarbons	Total Petroleum Hydrocarbons - Silcia Clean up				Total Recoverable Hydrocarbons		Total Recoverable Hydrocarbons - Silcia Clean up				
		Benzene**	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene**	Total Xylenes	Naphthalene **	Sum of BTEX	C_6 - C_9	C_{10}-C_{14} - Silica Cleanup	C_{15}-C_{28} - Silica Cleanup	C_{29}-C_{36} - Silica Cleanup	C_{10}-C_{36} Sum - Silica Cleanup	C_6 - C_{10}	C_6 - C_{10} minus BTEX (F1)	>C_{10}-C_{16} - Silica Cleanup	F2 - Silica Cleanup	>C_{16}-C_{34} - Silica Cleanup	>C_{34}-C_{40} - Silica Cleanup	>C_{10}-C_{40} - Silica Cleanup
LOR		1	2	2	2	2	2	5	1	20	50	100	50	50	20	20	100	100	100	100	100
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Baseline Trigger Values (KLF, 2020)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH5	22-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Dec-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jan-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH6	27-Apr-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-May-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	19-Jun-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Jul-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	14-Aug-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Dec-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jan-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH7	27-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15-May-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	19-Jun-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Jul-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	14-Aug-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	21-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Dec-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jan-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100

Table GW1
Groundwater Analytical Data - BTEXN
Williamtown Sand Syndicate

Analyte		BTEXN								Total Petroleum Hydrocarbons	Total Petroleum Hydrocarbons - Silcia Clean up				Total Recoverable Hydrocarbons		Total Recoverable Hydrocarbons - Silcia Clean up				
		Benzene**	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene**	Total Xylenes	Naphthalene **	Sum of BTEX	C_6 - C_9	C_{10}-C_{14} - Silica Cleanup	C_{15}-C_{28} - Silica Cleanup	C_{29}-C_{36} - Silica Cleanup	C_{10}-C_{36} Sum - Silica Cleanup	C_6 - C_{10}	C_6 - C_{10} minus BTEX (F1)	>C_{10}-C_{16} - Silica Cleanup	F2 - Silica Cleanup	>C_{16}-C_{34} - Silica Cleanup	>C_{34}-C_{40} - Silica Cleanup	>C_{10}-C_{40} - Silica Cleanup
LOR		1	2	2	2	2	2	5	1	20	50	100	50	50	20	20	100	100	100	100	100
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Baseline Trigger Values (KLF, 2020)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
BH8	27-Apr-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-May-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	19-Jun-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Aug-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH9	14-Aug-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH9A	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH10	21-Feb-19	Dry																			
	15-Mar-19																				
	23-Apr-19																				
	16-May-19																				
	14-Jun-19																				
	16-Jul-19																				
	15-Aug-19																				
	16-Sep-19																				
	15-Oct-19																				
	18-Nov-19																				
	17-Dec-19																				
	16-Jan-20																				
	27-Feb-20																				
	26-Mar-20																				
	27-Apr-20																				
	15-May-20																				
	19-Jun-20																				
	16-Jul-20																				
	14-Aug-20																				
	16-Sep-20																				
	16-Oct-20																				
	16-Nov-20																				
	16-Dec-20																				
	14-Jan-21																				
	16-Feb-21																				
	17-Mar-21																				
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH11	21-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Mar-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Dec-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jan-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Apr-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	**250**	**100**	**350**	< 20	< 20	< 100	< 100	**310**	< 100	**310**
	15-May-20	< 1.0	**2.0**	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	**2.0**	< 20	< 50	**460**	**220**	**680**	< 20	< 20	< 100	< 100	**580**	< 100	**580**
	19-Jun-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Jul-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	14-Aug-20	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<1.0	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100

Table GW1
Groundwater Analytical Data - BTEXN
Williamtown Sand Syndicate

Analyte		BTEXN								Total Petroleum Hydrocarbons	Total Petroleum Hydrocarbons - Silcia Clean up				Total Recoverable Hydrocarbons		Total Recoverable Hydrocarbons - Silcia Clean up				
		Benzene**	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene**	Total Xylenes	Naphthalene**	Sum of BTEX	C_6 - C_9	C_{10}-C_{14} - Silica Cleanup	C_{15}-C_{28} - Silica Cleanup	C_{29}-C_{36} - Silica Cleanup	C_{10}-C_{36} Sum - Silica Cleanup	C_6 - C_{10}	C_6 - C_{10} minus BTEX (F1)	>C_{10}-C_{16} - Silica Cleanup	F2 - Silica Cleanup	>C_{16}-C_{34} - Silica Cleanup	>C_{34}-C_{40} - Silica Cleanup	>C_{10}-C_{40} - Silica Cleanup
LOR		1	2	2	2	2	2	5	1	20	50	100	50	50	20	20	100	100	100	100	100
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Baseline Trigger Values (KLF, 2020)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH12	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Dec-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jan-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
MW239S	27-Apr-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-May-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	19-Jun-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Aug-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100

Notes:
- - Not analysed
< - Less than laboratory limit of reporting
µg/L - Micrograms per litre
BTEXN - Benzene, toluene, ethylbenzene, xylenes, naphthalene
1- Baseline Water Quality Summary Report, September 2020 (KLF 2020)
2- Denotes duplicate value used.
3- Denotes triplicate vbalue used.
** 95% Level of protection in freshwater

Table GW2
Groundwater Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium** [1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury** [2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.003	0.035	-	-	-	0.004	-	0.013 (0.051 for BH4)	4.1 [4]/ 1.0 [5]	-	0.136	-	0.022 (0.037 for BH11)	-	-	0.085
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
BH1	21-Feb-19	Blocked															
	15-Mar-19	< 0.001	**0.003**	< 0.001	< 0.05	< 0.0001	**0.004**	< 0.001	< 0.001	**13**	< 0.001	**0.014**	< 0.0001	< 0.001	< 0.01	< 0.01	**1.27**
	23-Apr-19	< 0.001	**0.003**	< 0.001	< 0.05	< 0.0001	**0.004**	< 0.001	**0.002**	**10**	**0.001**	**0.015**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.363**
	16-May-19	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	**0.003**	< 0.001	< 0.001	**8.33**	< 0.001	**0.009**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.132**
	14-Jun-19	< 0.001	**0.001**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.001**	**6.31**	< 0.001	**0.009**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.074**
	16-Jul-19	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	**0.003**	< 0.001	**0.002**	**7.35**	< 0.001	**0.01**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.116**
	15-Aug-19	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	**0.003**	< 0.001	**0.002**	**7.96**	< 0.001	**0.008**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.023**
	16-Sep-19	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	**0.004**	< 0.001	**0.001**	**8.84**	< 0.001	**0.009**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.034**
	15-Oct-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.003**	< 0.001	**0.006**	**4.32**	< 0.001	**0.007**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.037**
	18-Nov-19	< 0.001	**0.001**	< 0.001	< 0.05	< 0.0001	**0.004**	< 0.001	< 0.001	**11**	< 0.001	**0.008**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.012**
	17-Dec-19	<0.001	**0.002**	<0.001	<0.05	<0.0001	**0.003**	<0.001	0.001	**8.48**	<0.001	**0.009**	<0.0001	<0.001	<0.01	<0.01	**0.028**
	16-Jan-20	<0.001	**0.003**	<0.001	<0.05	<0.0001	**0.002**	<0.001	**0.002**	**4.43**	<0.001	**0.011**	<0.0001	**0.002**	<0.01	<0.01	**0.044**
	27-Feb-20	<0.001	**0.005**	<0.001	<0.05	<0.0001	**0.002**	<0.001	**0.022**	**4.1**	<0.001	**0.008**	<0.0001	**0.004**	<0.01	<0.01	**0.075**
	26-Mar-20	<0.001	**0.006**	<0.001	<0.05	<0.0001	**0.003**	<0.001	**0.021**	**7.37**	<0.001	**0.009**	<0.0001	**0.006**	<0.01	<0.01	**0.08**
	27-Apr-20	<0.001	**-**	-	-	<0.0001	<0.001	-	**0.002**	**0.22**	<0.001	**0.01**	<0.0001	**-**	-	-	**0.035**
	15-May-20	<0.001	**0.006**	<0.001	<0.05	<0.0001	**0.003**	**0.002**	**0.013**	**8.1**	<0.001	**0.012**	<0.0001	**0.006**	<0.01	<0.01	**0.065**
	19-Jun-20	<0.001	**-**	**-**	**-**	<0.0001	**0.002**	**-**	**0.006**	**5.74**	<0.001	**0.01**	<0.0001	**-**	**-**	**-**	**0.06**
	16-Jul-20	<0.001	**-**	**-**	**-**	<0.0001	**0.003**	**-**	**0.014**	**6.22**	<0.001	**0.01**	<0.0001	**-**	**-**	**-**	**0.08**
	14-Aug-20	<0.001	**0.005**	<0.001	<0.05	<0.0001	**0.002**	<0.001	**0.005**	**4.08**	<0.001	**0.01**	<0.0001	<0.001	< 0.01	< 0.01	**0.025**
	16-Sep-20	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.005**	**5.48**	< 0.001	**0.01**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.016**
	16-Oct-20	< 0.001	**0.006**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.001**	**5.55**	< 0.001	**0.009**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.017**
	16-Nov-20	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	**0.003**	< 0.001	**0.001**	**7.05**	< 0.001	**0.012**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.045**
	16-Dec-20	< 0.001	**0.006**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.008**	**3.21**	< 0.001	**0.011**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.077**
	14-Jan-21	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.001**	**5.21**	< 0.001	**0.013**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.032**
	16-Feb-21	< 0.001	**0.003**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.001**	**3.24**	< 0.001	**0.015**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.652**
	17-Mar-21	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**4.0**	< 0.001	**0.027**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.596**
	22-Apr-21	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**0.86**	< 0.001	**0.022**	< 0.0001	< 0.001	< 0.01	< 0.01	**1.5**
	20-May-21	<0.001	<0.001	<0.001	<0.05	**0.0001**	**0.002**	<0.001	<0.001	**5.71**	<0.001	**0.017**	<0.0001	<0.001	<0.01	<0.01	**0.384**
	18-Jun-21	<0.001	**0.003**	<0.001	**0.11**	<0.0001	<0.001	<0.001	<0.001	**0.52**	<0.001	**0.017**	<0.0001	<0.001	<0.01	<0.01	**0.29**
BH2	22-Feb-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.002**	**0.14**	< 0.001	**0.021**	< 0.0001	**0.015**	< 0.01	< 0.01	**0.006**
	15-Mar-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.003**	< 0.05	< 0.001	**0.02**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	23-Apr-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.004**	**0.19**	< 0.001	**0.018**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.008**
	16-May-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.001**	**0.06**	< 0.001	**0.014**	< 0.0001	**0.001**	< 0.01	< 0.01	< 0.005
	14-Jun-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.004**	**0.08**	< 0.001	**0.009**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	16-Jul-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.008**	**0.05**	< 0.001	**0.013**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.006**
	15-Aug-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.012**	**0.08**	< 0.001	**0.011**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	16-Sep-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.008**	**0.26**	< 0.001	**0.014**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.007**
	15-Oct-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.006**	**0.46**	< 0.001	**0.011**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.007**
	18-Nov-19	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.013**	**0.08**	< 0.001	**0.011**	< 0.0001	**0.007**	< 0.01	< 0.01	**0.028**
	17-Dec-19	<0.001	**0.004**	<0.001	<0.05	<0.0001	**0.002**	<0.001	**0.006**	**0.1**	<0.001	**0.012**	<0.0001	**0.001**	<0.01	<0.01	**0.006**
	16-Jan-20	<0.001	**0.004**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.005**	**0.73**	<0.001	**0.014**	<0.0001	<0.001	<0.01	<0.01	**0.01**
	27-Feb-20	<0.001	**0.005**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.008**	**0.07**	<0.001	**0.012**	<0.0001	**0.003**	<0.01	<0.01	**0.021**
	26-Mar-20	<0.001	**0.005**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.01**	**0.06**	<0.001	**0.012**	<0.0001	**0.003**	<0.01	<0.01	**0.034**
	27-Apr-20	<0.001	**-**	**-**	**-**	<0.0001	<0.001	**-**	**0.011**	<0.05	**0.001**	**0.015**	<0.0001	**-**	**-**	**-**	**0.024**
	15-May-20	<0.001	**0.005**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.012**	<0.05	<0.001	**0.014**	<0.0001	**0.003**	<0.01	<0.01	**0.031**
	19-Jun-20	<0.001	**-**	**-**	**-**	<0.0001	<0.001	**-**	**0.024**	**0.08**	<0.001	**0.014**	<0.0001	**-**	**-**	**-**	**0.043**
	16-Jul-20	<0.001	**-**	**-**	**-**	<0.0001	<0.001	**-**	**0.029**	<0.5	<0.001	**0.012**	<0.0001	**-**	**-**	**-**	**0.033**
	14-Aug-20	< 0.001	**0.008**	< 0.001	< 0.05	<0.0001	<0.001	<0.001	**0.062**	**0.22**	< 0.001	**0.015**	<0.0001	<0.001	<0.01	<0.01	**0.006**
	16-Sep-20	< 0.001	**0.012**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.026**	**0.07**	< 0.001	**0.016**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.006**
	16-Oct-20	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.013**	< 0.05	< 0.001	**0.015**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005

Table GW2
Groundwater Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium** [1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury** [2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.003	0.035	-	-	-	0.004	-	0.013 (0.051 for BH4)	4.1 [4] / 1.0 [5]	-	0.136	-	0.022 (0.037 for BH11)	-	-	0.085
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
	16-Nov-20	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.02**	**0.36**	< 0.001	**0.015**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.018**
	16-Dec-20	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.011**	< 0.05	< 0.001	**0.014**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	14-Jan-21	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.006**	< 0.05	< 0.001	**0.016**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	16-Feb-21	< 0.001	**0.003**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.021**	< 0.05	< 0.001	**0.009**	< 0.0001	**0.007**	< 0.01	< 0.01	**0.017**
	17-Mar-21	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.003**	< 0.05	< 0.001	**0.016**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.006**
	22-Apr-21	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	**0.008**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.007**
	20-May-21	<0.001	**0.002**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.001**	<0.05	<0.001	**0.004**	<0.0001	<0.001	<0.01	<0.01	<0.005
	18-Jun-21	<0.001	**0.001**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.002**	<0.05	<0.001	**0.011**	<0.0001	<0.001	<0.01	<0.01	<0.005
BH3	21-Feb-19	< 0.001	**0.003**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**0.06**	< 0.001	**0.005**	< 0.0001	**0.053**	< 0.01	< 0.01	< 0.005
	21-Feb-19	< 0.001	**0.014**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.002**	**0.16**	< 0.001	**0.039**	< 0.0001	**0.018**	< 0.01	< 0.01	**0.014**
	15-Mar-19	< 0.001	**0.014**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.001**	< 0.05	< 0.001	**0.014**	< 0.0001	**0.022**	< 0.01	< 0.01	**0.043**
	23-Apr-19	< 0.001	**0.013**	< 0.001	**0.05**	< 0.0001	< 0.001	< 0.001	**0.002**	**0.99**	< 0.001	**0.045**	< 0.0001	**0.007**	< 0.01	< 0.01	**0.008**
	16-May-19	< 0.001	**0.013**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**0.27**	< 0.001	**0.022**	< 0.0001	**0.022**	< 0.01	< 0.01	**0.011**
	14-Jun-19	< 0.001	**0.012**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.038**	< 0.05	< 0.001	**0.014**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.005**
	16-Jul-19	< 0.001	**0.013**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.046**	< 0.05	< 0.001	**0.019**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.007**
	15-Aug-19	< 0.001	**0.013**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.026**	< 0.05	< 0.001	**0.018**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.007**
	16-Sep-19	< 0.001	**0.012**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.051**	**0.19**	< 0.001	**0.026**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.005**
	15-Oct-19	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.011**	**0.31**	< 0.001	**0.136**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.014**
	18-Nov-19	< 0.001	**0.011**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.005**	< 0.05	< 0.001	**0.013**	< 0.0001	**0.001**	< 0.01	< 0.01	< 0.005
	17-Dec-19	<0.001	**0.012**	<0.001	**0.06**	<0.0001	**0.001**	<0.001	**0.008**	<0.05	<0.001	**0.014**	<0.0001	<0.001	<0.01	<0.01	**0.005**
	16-Jan-20	<0.001	**0.014**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.006**	<0.05	<0.001	**0.014**	<0.0001	<0.001	<0.01	<0.01	**0.009**
	27-Feb-20	<0.001	**0.009**	<0.001	<0.05	<0.0001	**0.001**	<0.001	**0.006**	**0.09**	<0.001	**0.013**	<0.0001	**0.001**	<0.01	<0.01	**0.009**
	26-Mar-20	<0.001	**0.01**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.002**	**0.2**	<0.001	**0.014**	<0.0001	**0.002**	<0.01	<0.01	**0.024**
BH4	27-Apr-20	<0.001	-	-	-	<0.0001	<0.001	-	**0.006**	**0.22**	<0.001	**0.028**	<0.0001	-	-	-	**0.018**
	15-May-20	<0.001	**0.012**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.052**	**0.13**	<0.001	**0.019**	<0.0001	**0.004**	<0.01	<0.01	**0.037**
	19-Jun-20	<0.001	-	-	-	<0.0001	<0.001	-	**0.079**	**0.14**	<0.001	**0.016**	<0.001	-	-	-	**0.033**
	16-Jul-20	<0.001	-	-	-	<0.0001	<0.001	-	**0.069**	**0.06**	<0.001	**0.01**	<0.001	-	-	-	<0.005
	14-Aug-20	< 0.001	**0.008**	< 0.001	< 0.05	<0.0001	<0.001	<0.001	**0.083**	**0.09**	< 0.001	**0.011**	<0.0001	<0.001	<0.01	<0.01	**0.012**
	16-Sep-20	< 0.001	**0.013**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.078**	**0.06**	< 0.001	**0.012**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.006**
	16-Oct-20	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.003**	**0.25**	< 0.001	**0.021**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.018**
	16-Nov-20	< 0.001	**0.008**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.005**	**0.18**	< 0.001	**0.008**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.005**
	16-Dec-20	< 0.001	**0.011**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.002**	**0.46**	< 0.001	**0.027**	< 0.0001	**0.003**	< 0.01	< 0.01	< 0.005
	14-Jan-21	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.012**	**0.27**	< 0.001	**0.012**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.006**
	16-Feb-21	< 0.001	**0.02**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.002**	**0.94**	< 0.001	**0.023**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.008**
	17-Mar-21	< 0.001	**0.027**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.006**	**1.39**	< 0.001	**0.029**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.019**
	22-Apr-21	< 0.001	**0.013**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.032**	**0.09**	< 0.001	**0.029**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.007**
	20-May-21	<0.001	**0.012**	<0.001	<0.05	<0.0001	<0.001	**0.001**	**0.105**	<0.05	<0.001	**0.03**	<0.0001	**0.002**	<0.01	<0.01	<0.005
	18-Jun-21	<0.001	**0.01**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.157**	<0.05	<0.001	**0.023**	<0.0001	**0.002**	<0.01	<0.01	<0.005
BH5	22-Feb-19	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**1.4**	< 0.001	**0.005**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.008**
	14-Aug-20	< 0.001	**0.015**	< 0.001	< 0.05	<0.0001	<0.001	<0.001	**0.006**	**0.33**	< 0.001	**0.003**	<0.0001	**0.002**	<0.01	<0.01	**0.01**
	22-Feb-19	< 0.001	**0.03**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**1.03**	< 0.001	**0.014**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.019**
	14-Mar-19	< 0.001	**0.027**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**1.9**	< 0.001	**0.01**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.012**
	23-Apr-19	< 0.001	**0.03**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.001**	**0.96**	< 0.001	**0.01**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.022**
	16-May-19	< 0.001	**0.029**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**2.57**	< 0.001	**0.009**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	14-Jun-19	< 0.001	**0.027**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.001**	**2.86**	< 0.001	**0.008**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.008**
	16-Jul-19	< 0.001	**0.026**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.002**	**2.41**	< 0.001	**0.008**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.005**
	15-Aug-19	< 0.001	**0.026**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.001**	**2.19**	< 0.001	**0.008**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.007**
	16-Sep-19	< 0.001	**0.034**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.008**	**2.08**	< 0.001	**0.012**	< 0.0001	**0.007**	< 0.01	< 0.01	**0.035**
	15-Oct-19	< 0.001	**0.026**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**1.95**	< 0.001	**0.009**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.006**
	18-Nov-19	< 0.001	**0.03**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**1.58**	< 0.001	**0.009**	< 0.0001	**0.008**	< 0.01	< 0.01	**0.073**

Table GW2
Groundwater Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium** [1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury** [2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.003	0.035	-	-	-	0.004	-	0.013 (0.051 for BH4)	4.1 [4]/ 1.0 [5]	-	0.136	-	0.022 (0.037 for BH11)	-	-	0.085
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
BH6	17-Dec-19	<0.001	**0.026**	<0.001	**0.05**	<0.0001	**0.001**	<0.001	**0.003**	**1.78**	<0.001	**0.007**	<0.0001	**0.001**	<0.01	<0.01	**0.006**
	16-Jan-20	<0.001	**0.032**	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	**2.15**	<0.001	**0.01**	<0.0001	<0.001	<0.01	<0.01	<0.005
	27-Feb-20	<0.001	**0.03**	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	**1.69**	<0.001	**0.01**	<0.0001	**0.004**	<0.01	<0.01	**0.019**
	26-Mar-20	<0.001	**0.028**	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	**1.51**	<0.001	**0.01**	<0.0001	<0.001	<0.01	<0.01	**0.03**
	27-Apr-20	<0.001	**-**	**-**	**-**	<0.0001	<0.001	**-**	**0.002**	**1.14**	<0.001	**0.014**	<0.0001	**-**	**-**	**-**	**0.041**
	15-May-20	<0.001	**0.045**	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	**1.89**	<0.001	**0.01**	<0.0001	<0.001	<0.01	<0.01	**0.007**
	19-Jun-20	<0.001	**-**	**-**	**-**	<0.0001	<0.001	**-**	**0.007**	**2.49**	<0.001	**0.018**	<0.0001	**-**	**-**	**-**	**0.053**
	16-Jul-20	<0.001	**-**	**-**	**-**	<0.0001	<0.001	**-**	**0.002**	**1.98**	<0.001	**0.016**	<0.0001	**-**	**-**	**-**	**0.036**
	14-Aug-20	< 0.001	**0.05**	< 0.001	< 0.05	<0.0001	<0.001	<0.001	<0.001	**2**	< 0.001	**0.014**	<0.0001	<0.001	<0.01	<0.01	<0.005
	16-Sep-20	< 0.001	**0.047**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.002**	**1.78**	< 0.001	**0.01**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.006**
	16-Oct-20	< 0.001	**0.04**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**1.84**	< 0.001	**0.011**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.007**
	16-Nov-20	< 0.001	**0.061**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**1.72**	< 0.001	**0.014**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.01**
	16-Dec-20	< 0.001	**0.07**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**1.64**	< 0.001	**0.014**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.007**
	14-Jan-21	< 0.001	**0.054**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.011**	**1.06**	< 0.001	**0.014**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.025**
	16-Feb-21	< 0.001	**0.048**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.013**	**1.18**	< 0.001	**0.012**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.012**
	17-Mar-21	< 0.001	**0.068**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**1.39**	< 0.001	**0.012**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.006**
	22-Apr-21	< 0.001	**0.039**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	0.022	**1.17**	< 0.001	**0.008**	< 0.0001	0.002	< 0.01	< 0.01	**0.011**
	20-May-21	<0.001	**0.039**	<0.001	<0.05	**0.0001**	<0.001	<0.001	**0.008**	**1.05**	<0.001	**0.003**	<0.0001	**0.002**	<0.01	<0.01	**0.009**
	18-Jun-21	<0.001	**0.033**	<0.001	<0.05	**0.0001**	<0.001	<0.001	<0.001	**1.08**	<0.001	**0.004**	<0.0001	**0.001**	<0.01	<0.01	<0.005

Table GW2
Groundwater Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium** [1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury** [2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.003	0.035	-	-	-	0.004	-	0.013 (0.051 for BH4)	4.1 [4]/ 1.0 [5]	-	0.136	-	0.022 (0.037 for BH11)	-	-	0.085
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
BH7	22-Feb-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.003**	< 0.001	**1.8**	< 0.001	**0.026**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.019**
	14-Mar-19	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.001**	**0.003**	< 0.001	**1.8**	< 0.001	**0.02**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.009**
	23-Apr-19	< 0.001	**0.012**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.003**	< 0.001	**2.0**	< 0.001	**0.026**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.01**
	16-May-19	< 0.001	**0.008**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.003**	< 0.001	**2.32**	< 0.001	**0.035**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.013**
	14-Jun-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	< 0.001	**2.06**	< 0.001	**0.03**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.006**
	16-Jul-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	< 0.001	**1.66**	< 0.001	**0.025**	< 0.0001	**0.003**	< 0.01	< 0.01	< 0.005
	15-Aug-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	< 0.001	**1.54**	< 0.001	**0.023**	< 0.0001	**0.003**	< 0.01	< 0.01	< 0.005
	16-Sep-19	< 0.001	**0.016**	< 0.001	**0.06**	< 0.0001	**0.002**	**0.002**	**0.007**	**1.42**	**0.001**	**0.024**	< 0.0001	**0.02**	< 0.01	< 0.01	**0.085**
	15-Oct-19	< 0.001	**0.009**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	**0.003**	**1.32**	< 0.001	**0.018**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.011**
	18-Nov-19	< 0.001	**0.016**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	< 0.001	**1.1**	< 0.001	**0.015**	< 0.0001	**0.013**	< 0.01	< 0.01	**0.053**
	17-Dec-19	<0.001	**0.009**	<0.001	**0.06**	<0.0001	**0.002**	**0.001**	<0.001	**0.98**	<0.001	**0.011**	<0.0001	**0.003**	<0.01	<0.01	**0.007**
	16-Jan-20	<0.001	**0.01**	<0.001	<0.05	<0.0001	**0.002**	<0.001	<0.001	**0.93**	<0.001	**0.006**	<0.0001	**0.003**	<0.01	<0.01	**0.007**
	27-Feb-20	<0.001	**0.01**	<0.001	<0.05	<0.0001	**0.003**	<0.001	<0.001	**1.18**	<0.001	**0.008**	<0.0001	**0.004**	<0.01	<0.01	**0.027**
	26-Mar-20	<0.001	**0.01**	<0.001	<0.05	<0.0001	**0.001**	<0.001	<0.001	**0.9**	<0.001	**0.009**	<0.0001	**0.005**	<0.01	<0.01	**0.084**
	27-Apr-20	<0.001	-	-	-	<0.0001	**0.003**	-	**0.012**	**0.92**	<0.001	**0.011**	<0.0001	-	-	-	**0.033**
	15-May-20	<0.001	**0.01**	<0.001	<0.05	<0.0001	**0.003**	**0.002**	**0.005**	**1.26**	<0.001	**0.016**	<0.0001	**0.007**	<0.01	<0.01	**0.045**
	19-Jun-20	<0.001	-	-	-	<0.0001	**0.003**	-	**0.002**	**1.36**	<0.001	**0.019**	<0.0001	-	-	-	**0.043**
	16-Jul-20	<0.001	-	-	-	<0.0001	**0.003**	-	**0.004**	**1.14**	<0.001	**0.02**	<0.0001	-	-	-	**0.041**
	14-Aug-20	< 0.001	**0.013**	< 0.001	< 0.05	<0.0001	**0.002**	**0.002**	<0.001	**1.5**	< 0.001	**0.024**	<0.0001	**0.002**	<0.01	<0.01	<0.005
	16-Sep-20	< 0.001	**0.013**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	< 0.001	**1.67**	< 0.001	**0.021**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.006**
	16-Oct-20	< 0.001	**0.009**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	< 0.001	**1.49**	< 0.001	**0.015**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.015**
	16-Nov-20	< 0.001	**0.006**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.003**	< 0.001	**1.72**	< 0.001	**0.023**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.006**
	16-Dec-20	< 0.001	**0.003**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	< 0.001	**1.79**	< 0.001	**0.024**	< 0.0001	**0.003**	< 0.01	< 0.01	< 0.005
	14-Jan-21	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	**0.004**	**1.65**	< 0.001	**0.025**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.017**
	16-Feb-21	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.002**	**0.002**	**1.74**	< 0.001	**0.025**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.013**
	17-Mar-21	< 0.001	**0.009**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.003**	< 0.001	**2.28**	< 0.001	**0.028**	< 0.0001	**0.005**	< 0.01	< 0.01	< 0.005
	22-Apr-21	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.003**	< 0.001	**1.72**	< 0.001	**0.023**	< 0.0001	**0.004**	< 0.01	< 0.01	0.008
	20-May-21	<0.001	**0.008**	<0.001	<0.05	**0.0001**	**0.001**	**0.002**	<0.001	**1.65**	<0.001	**0.018**	<0.0001	**0.005**	<0.01	<0.01	<0.005
	18-Jun-21	<0.001	**0.004**	<0.001	<0.05	<0.0001	**0.002**	**0.001**	<0.001	**1.35**	<0.001	**0.011**	<0.0001	**0.003**	<0.01	<0.01	<0.005
BH8	21-Feb-19	**0.001 ***	**0.011**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**4.1**	< 0.001	**0.012**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.006**
	14-Mar-19	< 0.001	**0.006**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**3.25**	< 0.001	**0.008**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	23-Apr-19	**0.001**	**0.008**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**3.2**	< 0.001	**0.009**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.008**
	16-May-19	**0.003**	**0.01**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**3.0**	< 0.001	**0.01**	< 0.0001	**0.003**	< 0.01	< 0.01	< 0.005
	14-Jun-19	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**2.5**	< 0.001	**0.005**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.006**
	16-Jul-19	**0.001**	**0.012**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**2.6**	< 0.001	**0.004**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	15-Aug-19	**0.001**	**0.008**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**1.72**	< 0.001	**0.004**	< 0.0001	**0.001**	< 0.01	< 0.01	< 0.005
	16-Sep-19	**0.001**	**0.01**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**2.06**	< 0.001	**0.005**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	15-Oct-19	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.002**	**2.08**	< 0.001	**0.009**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.011**
	18-Nov-19	< 0.001	**0.012**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.002**	**2.49**	< 0.001	**0.01**	< 0.0001	**0.013**	< 0.01	< 0.01	**0.053**
	17-Dec-19	<0.001	**0.007**	<0.001	**0.05**	<0.0001	**0.002**	<0.001	**0.003**	**3.02**	<0.001	**0.011**	<0.0001	**0.002**	<0.01	<0.01	**0.007**
	16-Jan-20	<0.001	**0.007**	<0.001	<0.05	<0.0001	**0.002**	<0.001	<0.001	**2.94**	<0.001	**0.011**	<0.0001	**0.002**	<0.01	<0.01	**0.011**
	27-Feb-20	<0.001	**0.007**	<0.001	<0.05	<0.0001	**0.002**	<0.001	<0.001	**2.56**	<0.001	**0.01**	<0.0001	**0.005**	<0.01	<0.01	**0.032**
	26-Mar-20	<0.001	**0.005**	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	**3.17**	<0.001	**0.012**	<0.0001	<0.001	<0.01	<0.01	<0.005
	27-Apr-20	<0.001	-	-	-	<0.0001	**0.002**	-	**0.002**	**3.32**	<0.001	**0.016**	<0.0001	-	-	-	**0.046**
	15-May-20	**0.001**	**0.009**	<0.001	<0.05	<0.0001	**0.001**	<0.001	**0.001**	**3.49**	<0.001	**0.015**	<0.0001	**0.006**	<0.01	<0.01	**0.04**
	19-Jun-20	**0.001**	-	-	-	**0.0002**	**0.001**	-	**0.012**	**3.3**	<0.001	**0.031**	<0.0001	-	-	-	**0.057**
	16-Jul-20	<0.001	-	-	-	<0.0001	**0.001**	-	**0.002**	**2.87**	<0.001	**0.006**	<0.0001	-	-	-	<0.005
	14-Aug-20	< 0.001	**0.02**	< 0.001	< 0.05	<0.0001	**0.001**	<0.001	<0.001	**3.14**	< 0.001	**0.008**	<0.0001	**0.002**	<0.01	<0.01	**0.007**
	16-Sep-20	< 0.001	**0.014**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.035**	**3.35**	**0.001**	**0.009**	< 0.0001	**0.009**	< 0.01	< 0.01	**0.039**
	16-Oct-20	**0.001**	**0.009**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**3.03**	< 0.001	**0.007**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.012**

Table GW2
Groundwater Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium** [1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury** [2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.003	0.035	-	-	-	0.004	-	0.013 (0.051 for BH4)	4.1 [4] / 1.0 [5]	-	0.136	-	0.022 (0.037 for BH11)	-	-	0.085
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
	16-Nov-20	< 0.001	**0.013**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**3.48**	< 0.001	**0.008**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	16-Dec-20	< 0.001	**0.006**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.001**	**2.98**	< 0.001	**0.01**	< 0.0001	**0.001**	< 0.01	< 0.01	< 0.005
	14-Jan-21	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.002**	**2.71**	< 0.001	**0.01**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.009**
	16-Feb-21	**0.001**	**0.009**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.004**	**2.99**	< 0.001	**0.01**	< 0.0001	**0.006**	< 0.01	< 0.01	**0.013**
	17-Mar-21	< 0.001	**0.012**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**3.86**	< 0.001	**0.01**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	22-Apr-21	**0.001**	**0.009**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.008**	**2.97**	< 0.001	**0.01**	< 0.0001	**0.008**	< 0.01	< 0.01	0.008
	20-May-21	**0.002**	**0.008**	<0.001	<0.05	<0.0001	**0.001**	<0.001	<0.001	**2.36**	<0.001	**0.004**	<0.0001	**0.002**	<0.01	<0.01	<0.005
	18-Jun-21	<0.001	**0.012**	<0.001	<0.05	<0.0001	**0.002**	<0.001	<0.001	**3.38**	<0.001	**0.005**	<0.0001	**0.002**	<0.01	<0.01	**0.005**
BH9	14-Aug-20	<0.001	**0.002**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.003**	<0.05	< 0.001	**0.007**	<0.0001	**0.002**	<0.01	<0.01	**0.032**

Table GW2
Groundwater Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium** [1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury** [2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.003	0.035	-	-	-	0.004	-	0.013 (0.051 for BH4)	4.1 [4] / 1.0 [5]	-	0.136	-	0.022 (0.037 for BH11)	-	-	0.085
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
BH9A	16-Sep-20	< 0.001	**0.028**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.002**	**0.004**	**0.14**	< 0.001	**0.076**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.02**
	16-Oct-20	< 0.001	**0.001**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.001**	**0.001**	**0.06**	< 0.001	**0.042**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.016**
	16-Nov-20	< 0.001	**0.001**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.001**	**0.001**	**0.11**	< 0.001	**0.03**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.011**
	16-Dec-20	< 0.001	**0.001**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.001**	**0.31**	< 0.001	**0.024**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.006**
	14-Jan-21	< 0.001	**0.002**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.017**	**0.14**	< 0.001	**0.025**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.011**
	16-Feb-21	< 0.001	**0.001**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.001**	< 0.001	**0.35**	< 0.001	**0.024**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.006**
	17-Mar-21	< 0.001	**0.006**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**0.27**	< 0.001	**0.024**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.01**
	22-Apr-21	< 0.001	**0.003**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	**0.012**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.007**
	20-May-21	<0.001	**0.002**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.027**	<0.05	<0.001	**0.015**	<0.0001	**0.013**	<0.01	<0.01	**0.022**
	18-Jun-21	<0.001	**0.004**	<0.001	<0.05	<0.0001	**0.001**	<0.001	<0.001	**0.25**	<0.001	**0.02**	<0.0001	**0.002**	<0.01	<0.01	<0.005
BH10	21-Feb-19	Dry															
	15-Mar-19																
	23-Apr-19																
	16-May-19																
	14-Jun-19																
	16-Jul-19																
	15-Aug-19																
	16-Sep-19																
	15-Oct-19																
	18-Nov-19																
	17-Dec-19																
	16-Jan-20																
	27-Feb-20																
	26-Mar-20																
	27-Apr-20																
	15-May-20																
	19-Jun-20																
	16-Jul-20																
	14-Aug-20																
	16-Sep-20																
	16-Oct-20																
	16-Nov-20																
	16-Dec-20																
	14-Jan-21																
	16-Feb-21																
	17-Mar-21																
	22-Apr-21	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**0.06**	< 0.001	**0.008**	< 0.0001	**0.001**	< 0.01	< 0.01	< 0.005
	20-May-21	<0.001	**0.011**	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.001	**0.007**	<0.0001	**0.004**	<0.01	<0.01	<0.005
	18-Jun-21	<0.001	**0.025**	<0.001	<0.05	<0.0001	**0.001**	<0.001	<0.001	<0.05	<0.001	**0.006**	<0.0001	**0.002**	<0.01	<0.01	**0.013**
	21-Feb-19	< 0.001	**0.008**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.001**	< 0.001	**0.26**	< 0.001	**0.003**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.031**
	15-Mar-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**1.49**	< 0.001	**0.007**	< 0.0001	**0.037**	< 0.01	< 0.01	**0.016**
	23-Apr-19	< 0.001	**0.006**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**0.98**	< 0.001	**0.007**	< 0.0001	**0.07**	< 0.01	< 0.01	**0.04**
	16-May-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**0.97**	< 0.001	**0.006**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.024**
	14-Jun-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**0.98**	< 0.001	**0.005**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.005**
	16-Jul-19	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**0.47**	< 0.001	**0.003**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.007**
	15-Aug-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.001**	**0.87**	< 0.001	**0.007**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.005**
	16-Sep-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**0.79**	< 0.001	**0.008**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.012**
	15-Oct-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.004**	**0.74**	< 0.001	**0.006**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.016**
	18-Nov-19	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**0.95**	< 0.001	**0.008**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	17-Dec-19	<0.001	**0.004**	<0.001	**0.06**	<0.0001	**0.002**	<0.001	**0.002**	**1**	<0.001	**0.008**	<0.0001	**0.001**	<0.01	<0.01	**0.006**

Table GW2
Groundwater Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium** [1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury** [2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.003	0.035	-	-	-	0.004	-	0.013 (0.051 for BH4)	4.1 [4] / 1.0 [5]	-	0.136	-	0.022 (0.037 for BH11)	-	-	0.085
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
BH11	16-Jan-20	<0.001	**0.005**	<0.001	<0.05	<0.0001	**0.002**	<0.001	<0.001	**1.08**	<0.001	**0.007**	<0.0001	**0.003**	<0.01	<0.01	**0.005**
	27-Feb-20	<0.001	**0.004**	<0.001	<0.05	<0.0001	**0.002**	<0.001	<0.001	**0.6**	<0.001	**0.003**	<0.0001	**0.002**	<0.01	<0.01	**0.027**
	26-Mar-20	<0.001	**0.007**	<0.001	<0.05	<0.0001	**0.001**	<0.001	<0.001	**0.36**	<0.001	**0.004**	<0.0001	**0.006**	<0.01	<0.01	**0.038**
	27-Apr-20	<0.001	**-**	**-**	**-**	<0.0001	<0.001	**-**	**0.002**	**0.22**	<0.001	**0.005**	<0.0001	**-**	**-**	**-**	**0.035**
	15-May-20	<0.001	**0.008**	<0.001	<0.05	<0.0001	**0.002**	<0.001	**0.009**	**0.78**	<0.001	**0.01**	<0.0001	**0.007**	<0.01	<0.01	**0.025**
	19-Jun-20	<0.001	**-**	**-**	**-**	<0.0001	**0.001**	**-**	**0.003**	**0.72**	<0.001	**0.007**	<0.0001	**-**	**-**	**-**	**0.051**
	16-Jul-20	<0.001	**-**	**-**	**-**	<0.0001	**0.001**	**-**	**0.001**	**1**	<0.001	**0.007**	<0.0001	**-**	**-**	**-**	**0.005**
	14-Aug-20	<0.001	**0.012**	< 0.001	< 0.05	<0.0001	**0.001**	< 0.001	**0.004**	**0.75**	< 0.001	**0.004**	<0.0001	< 0.001	< 0.01	< 0.01	**0.017**
	16-Sep-20	< 0.001	**0.014**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.005**	**0.9**	< 0.001	**0.008**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.009**
	16-Oct-20	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**1.06**	< 0.001	**0.009**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.01**

Table GW2
Groundwater Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium** [1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury** [2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.003	0.035	-	-	-	0.004	-	0.013 (0.051 for BH4)	4.1 [4]/ 1.0 [5]	-	0.136	-	0.022 (0.037 for BH11)	-	-	0.085
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
	16-Nov-20	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**0.84**	< 0.001	**0.011**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.016**
	16-Dec-20	< 0.001	**0.008**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**1.0**	< 0.001	**0.009**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.008**
	14-Jan-21	< 0.001	**0.008**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.025**	**0.56**	< 0.001	**0.006**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.018**
	16-Feb-21	< 0.001	**0.008**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.018**	**0.59**	< 0.001	**0.008**	< 0.0001	**0.007**	< 0.01	< 0.01	**0.03**
	17-Mar-21	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**0.2**	< 0.001	**0.002**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.014**
	22-Apr-21	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	0.003	**0.28**	< 0.001	**0.002**	< 0.0001	**0.068**	< 0.01	< 0.01	**0.066**
	20-May-21	<0.001	**0.003**	<0.001	<0.05	**0.0002**	**0.001**	<0.001	**0.004**	**0.25**	<0.001	<0.001	<0.0001	**0.003**	<0.01	<0.01	**0.033**
	18-Jun-21	<0.001	**0.004**	<0.001	<0.05	<0.0001	**0.001**	<0.001	**0.001**	**0.25**	<0.001	**0.002**	<0.0001	**0.002**	<0.01	<0.01	**0.031**
BH12	14-Aug-20	< 0.001	**0.012**	< 0.001	< 0.05	<0.0001	**0.002**	<0.001	**0.001**	**0.08**	< 0.001	**0.008**	<0.0001	<0.001	<0.01	<0.01	**0.022**
	16-Sep-20	Hydrasleeves too large for 40mm diameter well casing- no samples taken															
	16-Oct-20	Hydrasleeves too large for 40mm diameter well casing- no samples taken															
	16-Nov-20	< 0.001	-	-	-	< 0.0001	**0.002**	-	**0.002**	-	< 0.001	-	< 0.0001	**0.002**	-	-	**0.017**
MW239S	22-Feb-19	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**1.11**	< 0.001	**0.003**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.006**
	14-Mar-19	< 0.001	**0.008**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**1.25**	< 0.001	**0.005**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.008**
	23-Apr-19	< 0.001	**0.008**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**1.01**	< 0.001	**0.004**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.007**
	16-May-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**0.87**	< 0.001	**0.003**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	14-Jun-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.002**	**0.8**	< 0.001	**0.003**	< 0.0001	**0.001**	< 0.01	< 0.01	< 0.005
	16-Jul-19	< 0.001	**0.006**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**0.87**	< 0.001	**0.003**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	15-Aug-19	< 0.001	**0.006**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**1.0**	< 0.001	**0.004**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	16-Sep-19	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.002**	**0.94**	< 0.001	**0.006**	< 0.0001	**0.006**	< 0.01	< 0.01	**0.032**
	15-Oct-19	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.003**	**0.68**	< 0.001	**0.004**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.011**
	18-Nov-19	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**1.1**	< 0.001	**0.004**	< 0.0001	**0.008**	< 0.01	< 0.01	**0.03**
	17-Dec-19	<0.001	**0.008**	<0.001	<0.05	<0.0001	**0.003**	<0.001	**0.001**	**1.33**	<0.001	**0.003**	<0.0001	**0.002**	<0.01	<0.01	<0.005
	16-Jan-20	<0.001	**0.008**	<0.001	<0.05	<0.0001	**0.002**	<0.001	<0.001	**1.31**	<0.001	**0.004**	<0.0001	**0.002**	<0.01	<0.01	**0.007**
	27-Feb-20	<0.001	**0.008**	<0.001	<0.05	<0.0001	**0.002**	<0.001	<0.001	**1.03**	<0.001	**0.002**	<0.0001	**0.002**	<0.01	<0.01	**0.019**
	26-Mar-20	<0.001	**0.008**	<0.001	<0.05	<0.0001	**0.002**	<0.001	**0.001**	**0.97**	<0.001	**0.004**	<0.0001	**0.003**	<0.01	<0.01	**0.032**
	27-Apr-20	<0.001	-	-	-	<0.0001	**0.002**	-	**0.002**	**1.14**	<0.001	**0.005**	<0.0001	-	-	-	**0.041**
	15-May-20	<0.001	**0.011**	<0.001	<0.05	<0.0001	**0.002**	<0.001	**0.006**	**1.17**	<0.001	**0.004**	<0.0001	**0.006**	<0.01	<0.01	**0.028**
	19-Jun-20	<0.001	-	-	-	<0.0001	**0.002**	-	**0.002**	**0.9**	<0.001	**0.004**	<0.0001	-	-	-	**0.057**
	16-Jul-20	<0.001	-	-	-	<0.0001	**0.002**	-	**0.01**	**0.55**	**0.001**	**0.006**	<0.0001	-	-	-	**0.053**
	14-Aug-20	< 0.001	**0.017**	< 0.001	< 0.05	<0.0001	**0.001**	<0.001	**0.002**	**0.38**	< 0.001	**0.006**	<0.0001	**0.001**	<0.01	<0.01	**0.006**
	16-Sep-20	< 0.001	**0.016**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.002**	**0.51**	< 0.001	**0.008**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.006**
	16-Oct-20	< 0.001	**0.009**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**1.17**	< 0.001	**0.009**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.005**
	16-Nov-20	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	**0.001**	**0.3**	< 0.001	**0.011**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.021**
	16-Dec-20	< 0.001	**0.01**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**1.06**	< 0.001	**0.011**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	14-Jan-21	< 0.001	**0.011**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.005**	**0.77**	< 0.001	**0.012**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.011**
	16-Feb-21	< 0.001	**0.011**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.001**	**0.01**	**0.92**	< 0.001	**0.012**	< 0.0001	**0.009**	< 0.01	< 0.01	**0.014**
	17-Mar-21	< 0.001	**0.011**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**0.95**	< 0.001	**0.01**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.009**
	22-Apr-21	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.001**	< 0.001	**0.62**	< 0.001	**0.006**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.012**
	20-May-21	**0.001**	**0.005**	<0.001	<0.05	<0.0001	**0.002**	<0.001	**0.033**	**0.66**	<0.001	**0.003**	<0.0001	**0.005**	<0.01	<0.01	**0.022**
	18-Jun-21	<0.001	**0.003**	<0.001	<0.05	<0.0001	**0.002**	<0.001	<0.001	**0.68**	<0.001	**0.005**	<0.0001	**0.002**	<0.01	<0.01	<0.005

Notes:
- - Not analysed
< - Less than laboratory limit of reporting
mg/L - Milligrams per litre
Bold indicates a detection above the laboratory limit of reporting
"*" denotes duplicate/triplicate sample result adopted for analytical use due to RPD >50%

Table GW2
Groundwater Analytical Data - Metals
Williamtown Sand Syndicate

Analyte	Metals															
	Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium** [1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury** [2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR	0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]	0.003	0.035	-	-	-	0.004	-	0.013 (0.051 for BH4)	4.1 [4]/ 1.0 [5]	-	0.136	-	0.022 (0.037 for BH11)	-	-	0.085
NHMRC ADWG 2018	0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name / Sample Date																

** denotes 95% Level of protection in freshwater
RPD - Relative Percentage Difference
[1] value for CR VI
[2] as inorganioc
[3] Baseline Water Quality Summary Report, September 2020 (KLF 2020)
[4] Northern half of site - BH6, BH7, BH8, BH11 & MW239S
[5] Southern half of site - BH2, BH4 & BH9

Table GW3
Groundwater Analytical Data - PFAS
Williamtown Sand Syndicate

Analyte		Perfluoroalkyl Sulfonic Acids						Perfluoroalkyl Carboxylic Acids							
		Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonate (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)
LOR		0.02	0.02	0.02	0.02	0.01	0.02	0.1	0.02	0.02	0.02	0.01	0.02	0.02	0.02
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NHMRC ADWG 6												0.56			
HEPA NEMP 2018***						0.00023						19			
HEPA NEMP 2018^4												5.6			
Sample Name	Sample Date														
BH1	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	22-Apr-21	<0.02	<0.02	<0.02	<0.02	< 0.01	<0.02	< 0.1	<0.02	<0.02	<0.02	< 0.01	<0.02	<0.02	<0.02
	20-May-21	<0.02	<0.02	<0.02	<0.02	< 0.01	<0.02	< 0.1	<0.02	<0.02	<0.02	< 0.01	<0.02	<0.02	<0.02
	18-Jun-21	<0.02	<0.02	<0.02	<0.02	< 0.01	<0.02	< 0.1	<0.02	<0.02	<0.02	< 0.01	<0.02	<0.02	<0.02
BH2	22-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Aug-20	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH3	21-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH4	21-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-Mar-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	23-Apr-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-May-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jun-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jul-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-Aug-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Sep-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	**0.02**	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	25-Sep-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	<0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-Oct-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Nov-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Dec-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jan-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	27-Feb-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	26-Mar-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	27-Apr-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-May-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	19-Jun-20	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02
	16-Jul-20	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02
	14-Aug-20	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH5	22-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH6	22-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Mar-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	23-Apr-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-May-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jun-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jul-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-Aug-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Sep-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-Oct-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Nov-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Dec-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jan-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	27-Feb-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	26-Mar-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	27-Apr-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-May-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	19-Jun-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jul-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH7	22-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Mar-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	23-Apr-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-May-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jun-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jul-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-Aug-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Sep-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-Oct-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Nov-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Dec-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jan-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	27-Feb-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	26-Mar-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	27-Apr-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-May-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	19-Jun-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jul-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH8	21-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Mar-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	23-Apr-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-May-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jun-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jul-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-Aug-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Sep-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-Oct-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Nov-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Dec-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jan-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	27-Feb-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	26-Mar-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	27-Apr-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	15-May-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	19-Jun-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Jul-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH9	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH9A	16-Sep-20 *	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH10	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH11	21-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
BH12	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
MW239S	22-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02

Notes:
- - Not analysed
< - Less than laboratory limit of reporting
µg/L - Micrograms per litre
*** 99% Level of protection in freshwater
[1] Baseline Summary Report Criteria (KLF 2020) - Standard LOR
2- Denotes duplicate value used.
3- Denotes triplicate vbalue used.
[4] Recreation water
* BH9A 16/09/2020 Sample required dilution prior to extraction due to matrix interferences. LOR values have been adjusted accordingly

Table GW3
Groundwater Analytical Data - PFAS
Williamtown Sand Syndicate

Analyte					Perfluoroalkyl Sulfonamides							(n:2) Fluorotelomer Sulfonic Acids				Sum of PFAS		
		Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl-perfluorooctane sulfonamide (MeFOSA)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS
LOR		0.02	0.02	0.05	0.02	0.05	0.05	0.05	0.05	0.02	0.02	0.05	0.05	0.05	0.05	0.01	0.01	0.01
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NHMRC ADWG 6																0.07		
HEPA NEMP 2018***																		
HEPA NEMP 2018^4																0.7		
Sample Name	Sample Date																	
BH1	17-Mar-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	<0.02	<0.02	< 0.05	<0.02	< 0.05	< 0.05	< 0.05	< 0.05	<0.02	<0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	<0.02	<0.02	< 0.05	<0.02	< 0.05	< 0.05	< 0.05	< 0.05	<0.02	<0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	<0.02	<0.02	< 0.05	<0.02	< 0.05	< 0.05	< 0.05	< 0.05	<0.02	<0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH2	22-Feb-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01
	16-Sep-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH3	21-Feb-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	21-Feb-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Mar-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	23-Apr-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jun-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Aug-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	**0.02**
	25-Sep-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Oct-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Dec-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jan-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Feb-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	26-Mar-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Apr-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-May-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Jun-20	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01
	16-Jul-20	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01
	14-Aug-20	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01
	16-Sep-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH5	22-Feb-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH6	22-Feb-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Mar-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	23-Apr-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jun-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Aug-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Oct-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Dec-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	**0.19**	< 0.05	< 0.05	< 0.01	< 0.01	**0.19**
	16-Jan-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Feb-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	26-Mar-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Apr-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-May-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Jun-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH7	22-Feb-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Mar-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	23-Apr-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jun-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Aug-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Oct-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Dec-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jan-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Feb-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	26-Mar-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Apr-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-May-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Jun-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH8	21-Feb-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Mar-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	23-Apr-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jun-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Aug-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Oct-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Dec-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jan-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Feb-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	26-Mar-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Apr-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-May-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Jun-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH9	14-Aug-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	**0.14**	< 0.05	< 0.05	<0.01	< 0.01	**0.14**
BH9A	16-Sep-20 *	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.12	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16-Oct-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH10	22-Apr-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH11	21-Feb-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH12	14-Aug-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
MW239S	22-Feb-19	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

Notes:
- \- Not analysed
< - Less than laboratory limit of report
µg/L - Micrograms per litre
*** 99% Level of protection in freshwa
[1] Baseline Summary Report Criteria (Kl
2- Denotes duplicate value used.
3- Denotes triplicate vbalue used.
[4] Recreation water
* BH9A 16/09/2020 Sample required d

Analyte		Anions and Cations														
		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Reactive phosphorus as P	Total Phosphorus	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Ammonia as N	Total Nitrogen as N	Total Kjeldahl Nitrogen as N
LOR		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[4]		-	-	-	-	-	-	-	-	2	-	-	-	0.5	3	-
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-
Sample Name	Sample Date															
	21-Feb-19															Blocked
	15-Mar-19	11	2.0	1.0	< 1.0	< 1.0	25	< 0.1	-	-	-	-	-	-	-	-
	23-Apr-19	14	1.0	2.0	< 1.0	4.0	25	< 0.1	-	-	-	-	-	-	-	-
	16-May-19	12	< 1.0	2.0	< 1.0	5.0	25	< 0.1	0.03	< 0.01	< 0.01	< 0.01	< 0.01	0.11	0.3	0.3
	14-Jun-19	10	< 1.0	2.0	< 1.0	3.0	24	< 0.1	-	-	-	-	-	-	-	-
	16-Jul-19	15	< 1.0	2.0	< 1.0	4.0	23	< 0.1	-	-	-	-	-	-	-	-
	15-Aug-19	14	< 1.0	2.0	< 1.0	2.0	21	< 0.1	-	-	-	-	-	-	-	-
	16-Sep-19	13	< 1.0	2.0	< 1.0	2.0	20	< 0.1	< 0.01	0.06	< 0.01	< 0.01	< 0.01	0.12	0.3	0.3
	15-Oct-19	13	< 1.0	2.0	< 1.0	2.0	21	< 0.1	-	-	-	-	-	-	-	-
	18-Nov-19	16	< 1.0	2.0	< 1.0	3.0	23	0.1	< 0.01	< 0.01	< 0.01	0.01	0.01	0.13	0.3	0.3
	17-Dec-19	14	<1	2	<1	5	23	<0.1	-	-	-	-	-	-	-	-
	16-Jan-20	16	<1	3	<1	3	25	<0.1	-	-	-	-	-	-	-	-
	27-Feb-20	14	<1	2	<1	4	24	<0.1	<0.01	0.02	<0.01	0.02	0.02	0.22	0.4	0.4
	26-Mar-20	12	<1	2	<1	<1	24	<0.1	-	-	-	-	-	-	-	-
BH1	27-Apr-20	15	<1	2	1	<1	24	<0.1	-	-	-	-	-	-	-	-
	15-May-20	16	<1	2	<1	3	27	<0.1	<0.01	0.06	<0.01	0.04	0.04	0.1	1	1
	19-Jun-20	15	<1	2	<1	2	27	0.2	-	-	-	-	-	-	-	-
	16-Jul-20	17	<1	2	2	3	24	<0.1	-	-	-	-	-	-	-	-
	14-Aug-20	15	<1	2	<1	2	26	<0.1	<0.01	0.03	<0.1	0.06	0.06	0.09	0.6	0.5
	16-Sep-20	13	< 1.0	2.0	< 1.0	2.0	21	< 0.1	-	-	-	-	-	-	-	-
	16-Oct-20	14	< 1.0	2.0	< 1.0	4.0	21	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	11	< 1.0	2.0	< 1.0	5.0	18	< 0.1	< 0.01	0.02	< 0.01	< 0.01	< 0.01	0.07	0.2	0.2
	16-Dec-20	13	< 1.0	2.0	1.0	6.0	22	< 0.1	-	-	-	-	-	-	-	-
	14-Jan-21	12	< 1.0	2.0	< 1.0	5.0	23	< 0.1	-	-	-	-	-	-	-	-
	16-Feb-21	14	< 1.0	2.0	1.0	5.0	25	< 0.1	< 0.01	< 0.01	< 0.01	0.02	0.02	0.05	< 0.1	< 0.1
	17-Mar-21	14	1.0	2.0	< 1.0	4.0	23	< 0.1	-	-	-	-	-	-	-	-
	22-Apr-21	13	1.0	2.0	< 1.0	5.0	24	0.1	-	-	-	-	-	-	-	-
	20-May-21	14	< 1.0	3	1	5	24	< 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.2	0.2
	18-Jun-21	15	< 1.0	3	< 1.0	5	25	< 0.1	-	-	-	-	-	-	-	-
	22-Feb-19	12	2.0	2.0	< 1.0	6.0	22	0.1	< 0.01	0.28	< 0.01	2.76	2.76	0.05	4.0	1.2
	15-Mar-19	10	3.0	2.0	< 1.0	7.0	23	< 0.1	-	-	-	-	-	-	-	-
	23-Apr-19	14	2.0	2.0	< 1.0	6.0	23	< 0.1	-	-	-	-	-	-	-	-
	16-May-19	12	2.0	2.0	< 1.0	21	22	< 0.1	< 0.01	0.26	< 0.01	0.38	0.38	0.01	1.3	0.9
	14-Jun-19	11	1.0	2.0	< 1.0	5.0	23	< 0.1	-	-	-	-	-	-	-	-
	16-Jul-19	13	2.0	2.0	< 1.0	9.0	20	< 0.1	-	-	-	-	-	-	-	-
	15-Aug-19	12	1.0	2.0	< 1.0	8.0	20	< 0.1	-	-	-	-	-	-	-	-
	16-Sep-19	11	2.0	2.0	< 1.0	8.0	18	< 0.1	< 0.01	0.28	< 0.01	1.07	1.07	0.04	2.7	1.6
	15-Oct-19	12	2.0	2.0	< 1.0	5.0	20	< 0.1	-	-	-	-	-	-	-	-
	18-Nov-19	14	2.0	1.0	< 1.0	7.0	19	< 0.1	< 0.01	0.21	< 0.01	1.01	1.01	0.05	2.1	1.1
	17-Dec-19	13	2	2	<1	8	17	<0.1	-	-	-	-	-	-	-	-
	16-Jan-20	13	2	2	<1	6	17	<0.1	-	-	-	-	-	-	-	-
	27-Feb-20	11	2	2	<1	6	16	0.1	<0.01	0.09	<0.01	2.18	2.18	0.04	2.8	0.6
	26-Mar-20	12	2	1	<1	7	23	<0.1								
BH2	27-Apr-20	12	2	1	<1	7	19	<0.1	-	-	-	-	-	-	-	-
	15-May-20	13	2	1	<1	3	27	<0.1	<0.01	0.13	<0.01	2.1	2.1	0.01	3.2	1.1
	19-Jun-20	12	2	2	<1	6	18	<0.1	-	-	-	-	-	-	-	-
	16-Jul-20	11	2	1	<1	6	16	<0.1	-	-	-	-	-	-	-	-
	14-Aug-20	10	2	1	<1	7	15	<0.1	<0.01	0.21	<0.01	2.31	2.31	0.02	3.9	1.6
	16-Sep-20	11	2.0	2.0	< 1.0	7.0	17	< 0.1	-	-	-	-	-	-	-	-
	16-Oct-20	11	2.0	2.0	< 1.0	6.0	16	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	11	2.0	2.0	< 1.0	9.0	16	< 0.1	< 0.01	0.48	< 0.01	2.88	2.88	< 0.01	4.8	1.9
	16-Dec-20	11	2.0	2.0	< 1.0	7.0	15	< 0.1	-	-	-	-	-	-	-	-
	14-Jan-21	9.0	2.0	2.0	< 1.0	7.0	13	< 0.1	-	-	-	-	-	-	-	-
	16-Feb-21	12	1.0	1.0	< 1.0	8.0	12	< 0.1	< 0.01	0.15	< 0.01	2.58	2.58	< 0.01	0.9	3.5
	17-Mar-21	10	2.0	2.0	< 1.0	7.0	13	< 0.1	-	-	-	-	-	-	-	-
	22-Apr-21	6.0	1.0	2.0	< 1.0	6.0	7.0	< 1.0	-	-	-	-	-	-	-	-
	20-May-21	6	2	1	<1.0	7	6	<0.1	<0.01	0.13	<0.01	0.96	0.96	<0.01	1.8	0.8
	18-Jun-21	9	2	2	< 1.0	7	11	<0.1	-	-	-	-	-	-	-	-
BH3	21-Feb-19	4.0	4.0	1.0	< 1.0	4.0	10	< 0.1	< 0.01	2.76	< 0.01	0.78	0.78	0.3	5.9	5.1
	21-Feb-19	8.0	2.0	1.0	1.0	5.0	17	< 0.1	< 0.01	0.19	< 0.01	0.35	0.35	0.04	0.6	0.3
	15-Mar-19	9.0	2.0	< 1.0	< 1.0	5.0	18	< 0.1	-	-	-	-	-	-	-	-
	23-Apr-19	10	2.0	1.0	1.0	3.0	19	< 0.1	-	-	-	-	-	-	-	-
	16-May-19	9.0	2.0	1.0	1.0	22	19	< 0.1	< 0.01	0.97	< 0.01	0.29	0.29	< 0.01	1.0	0.7
	14-Jun-19	6.0	1.0	1.0	< 1.0	4.0	18	< 0.1	-	-	-	-	-	-	-	-
	16-Jul-19	10	2.0	2.0	1.0	6.0	18	< 0.1	-	-	-	-	-	-	-	-
	15-Aug-19	8.0	2.0	1.0	1.0	5.0	16	< 0.1	-	-	-	-	-	-	-	-
	16-Sep-19	11	2.0	2.0	< 1.0	8.0	19	< 0.1	< 0.01	0.4	< 0.01	0.24	0.24	0.02	0.6	0.4
	15-Oct-19	10	1.0	1.0	< 1.0	4.0	18	< 0.1	-	-	-	-	-	-	-	-
	18-Nov-19	11	1.0	1.0	< 1.0	6.0	18	< 0.1	< 0.01	0.08	< 0.01	0.29	0.29	< 0.01	0.3	< 0.1
	17-Dec-19	9	1	1	1	6	16	<0.1	-	-	-	-	-	-	-	-
	16-Jan-20	13	2	2	2	6	18	<0.1	-	-	-	-	-	-	-	-
	27-Feb-20	14	2	2	<1	9	26	<0.1	<0.01	0.18	<0.01	0.41	0.41	0.01	0.7	0.3
	26-Mar-20	12	2	2	<1	10	27	<0.1	-	-	-	-	-	-	-	-

Table GW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

Analyte						Alkalinity						Inorganics		
		Total Cations	Total Anions	Ionic Balance	Sodium Adsorption Ratio	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3	Total Hardness as CaCO3	Electrical Conductivity @ 25°C*	Total Dissolved Solids	Total Dissolved Solids	pH
LOR		0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
Units		meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Baseline Trigger Values (KLF 2020)[4]		-	-	-	-	-	-	-	-	-	125-2200	-	-	4-7
NHMRC ADWG 2018		-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date													
	21-Feb-19													
	15-Mar-19	0.66	0.88	-	-	9.0	< 1.0	< 1.0	9.0	9.0	104	68	129	5.67
	23-Apr-19	0.82	0.99	-	-	10	< 1.0	< 1.0	10	11	84	55	97	5.83
	16-May-19	0.69	1.01	-	1.7	10	< 1.0	< 1.0	10	8.0	105	68	164	5.82
	14-Jun-19	0.6	0.94	-	-	10	< 1.0	< 1.0	10	8.0	99	64	72	5.52
	16-Jul-19	0.82	0.95	-	-	11	< 1.0	< 1.0	11	8.0	102	66	84	5.62
	15-Aug-19	0.77	0.91	-	-	14	< 1.0	< 1.0	14	8.0	128	83	82	6.22
	16-Sep-19	0.73	0.76	-	1.84	8.0	< 1.0	< 1.0	8.0	8.0	102	66	88	5.44
	15-Oct-19	0.73	0.71	-	-	4.0	< 1.0	< 1.0	4.0	8.0	98	64	-	5.5
	18-Nov-19	0.86	1.19	-	2.26	24	< 1.0	< 1.0	24	8.0	126	82	-	6.29
	17-Dec-19	0.77	1.05	-	-	15	<1	<1	15	8	118	77	-	6.05
	16-Jan-20	0.94	1.21	-	-	22	<1	<1	22	12	112	73	-	6.23
	27-Feb-20	0.77	0.94	-	1.98	9	<1	<1	9	8	103	67	-	6.2
	26-Mar-20	0.69	0.88	-	-	10	<1	<1	10	8	118	77	-	5.61
BH1	27-Apr-20	0.84	0.92	-	-	12	<1	<1	12	8	131	85	-	5.7
	15-May-20	0.86	1.06	-	2.26	12	<1	<1	12	8	137	89	-	6.12
	19-Jun-20	1.04	1.14	-	-	17	<1.0	<1.0	17	8	140	91		5.91
	16-Jul-20	0.96	1.26	-	-	26	<1.0	<1.0	26	8	135	88		5.91
	14-Aug-20	0.82	0.95	-	2.12	9	<1	<1	9	8	113	73	100	5.76
	16-Sep-20	0.73	0.81	-	-	9.0	< 1.0	< 1.0	9.0	8.0	95	62	81	5.87
	16-Oct-20	0.77	0.84	-	-	8.0	< 1.0	< 1.0	8.0	8.0	88	57	-	5.7
	16-Nov-20	1.02	1.05	-	1.55	22	< 1.0	< 1.0	22	8.0	120	78	76	5.98
	16-Dec-20	0.93	1.16	-	-	21	< 1.0	< 1.0	21	8.0	134	87	-	5.76
	14-Jan-21	0.96	1.07	-	-	16	< 1.0	< 1.0	16	8.0	124	81	-	5.63
	16-Feb-21	0.8	1.05	-	1.98	12	< 1.0	< 1.0	12	8.0	116	75	89	5.57
	17-Mar-21	0.82	0.95	-	-	11	< 1.0	< 1.0	11	11	111	72	-	6.02
	22-Apr-21	0.78	1.34	-	-	28	< 1.0	< 1.0	28	11	120	78	-	5.09
	20-May-21	0.88	0.98	-	1.65	10	<1.0	<1.0	10	12	131	85	72	5.60
	18-Jun-21	0.90	0.87	-	-	3	< 1.0	< 1.0	3	12	99	64	59	5.27
	22-Feb-19	0.79	0.74	-	1.44	< 1.0	< 1.0	< 1.0	< 1.0	13	91	128	-	4.87
	15-Mar-19	0.75	0.79	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	101	66	90	4.71
	23-Apr-19	0.87	0.77	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	70	46	84	4.82
	16-May-19	0.79	1.06	-	1.44	< 1.0	< 1.0	< 1.0	< 1.0	13	94	61	144	4.85
	14-Jun-19	0.69	0.75	-	-	< 1.0	< 1.0	< 1.0	< 1.0	11	91	59	51	4.76
	16-Jul-19	0.83	0.75	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	90	58	63	4.84
	15-Aug-19	0.74	0.73	-	-	< 1.0	< 1.0	< 1.0	< 1.0	11	110	72	61	5.2
	16-Sep-19	0.74	0.67	-	1.32	< 1.0	< 1.0	< 1.0	< 1.0	13	96	62	60	4.72
	15-Oct-19	0.79	0.67	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	102	66	-	5.06
	18-Nov-19	0.79	0.68	-	2.02	< 1.0	< 1.0	< 1.0	< 1.0	9.0	102	66	-	5.47
	17-Dec-19	0.83	0.69	-	-	2	<1	<1	2	13	106	69	-	5.43
	16-Jan-20	0.83	0.72	-	-	6	<1	<1	6	13	102	66	-	5.61
	27-Feb-20	0.74	0.6	-	1.32	1	<1	<1	1	13	98	64	-	5.23
	26-Mar-20	0.7	0.79	-		10	<1	<1	10	9	113	73	-	5.18
BH2	27-Apr-20	0.7	0.72	-	-	2	<1	<1	2	9	109	71	-	5.25
	15-May-20	0.75	0.72	-	1.87	3	<1	<1	3	9	108	70	-	5.31
	19-Jun-20	0.79	0.64	-	-	2	<1	<1	2	13	107	70	-	5.13
	16-Jul-20	0.66	0.78	-	-	10	<1	<1	10	9	101	66	-	5.34
	14-Aug-20	0.62	0.63		1.44	3	<1	<1	3	9	92	60	120	5.22
	16-Sep-20	0.74	0.62	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	99	64	76	4.85
	16-Oct-20	0.74	0.58	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	90	58	-	5.07
	16-Nov-20	0.74	0.7	-	1.32	3.0	< 1.0	< 1.0	3.0	13	119	77	91	5.09
	16-Dec-20	0.74	0.57	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	105	68	-	4.66
	14-Jan-21	0.66	0.57	-	-	3.0	< 1.0	< 1.0	3.0	13	93	60	-	5.04
	16-Feb-21	0.65	0.5	-	2.03	< 1.0	< 1.0	< 1.0	< 1.0	7.0	89	58	67	4.84
	17-Mar-21	0.7	0.53	-	-	1.0	< 1.0	< 1.0	1.0	13	88	57	-	5.28
	22-Apr-21	0.48	0.32	-	-	< 1.0	< 1.0	< 1.0	< 1.0	11	60	39	-	4.37
	20-May-21	0.44	0.33	-	0.86	1	<1.0	<1.0	1	9	57	37	32	5.00
	18-Jun-21	0.66	0.50	-	-	2	< 1.0	< 1.0	2	13	61	40	43	4.85
BH3	21-Feb-19	0.46	0.54	-	0.46	9.0	< 1.0	< 1.0	9.0	14	60	438	-	5.55
	21-Feb-19	0.56	0.7	-	1.15	6.0	< 1.0	< 1.0	6.0	9.0	73	96	-	5.4
	15-Mar-19	0.49	0.61	-	-	< 1.0	< 1.0	< 1.0	< 1.0	5.0	77	50	70	5.12
	23-Apr-19	0.64	0.6	-	-	< 1.0	< 1.0	< 1.0	< 1.0	9.0	54	35	61	5.05
	16-May-19	0.6	0.99	-	1.3	< 1.0	< 1.0	< 1.0	< 1.0	9.0	73	47	100	4.99
	14-Jun-19	0.39	0.59	-	-	< 1.0	< 1.0	< 1.0	< 1.0	7.0	69	45	36	4.84
	16-Jul-19	0.72	0.63	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	75	49	42	4.96
	15-Aug-19	0.56	0.56	-	-	< 1.0	< 1.0	< 1.0	< 1.0	9.0	85	55	49	5.01
	16-Sep-19	0.74	0.7	-	1.32	< 1.0	< 1.0	< 1.0	< 1.0	13	95	62	58	4.83
	15-Oct-19	0.57	0.59	-	-	< 1.0	< 1.0	< 1.0	< 1.0	7.0	85	55	-	4.93
	18-Nov-19	0.61	0.63	-	1.86	< 1.0	< 1.0	< 1.0	< 1.0	7.0	86	56	-	5.34
	17-Dec-19	0.55	0.64	-	-	3	<1	<1	3	7	85	55	-	5.44
	16-Jan-20	0.88	0.71	-	-	4	<1	<1	4	13	85	55	-	5.5
	27-Feb-20	0.87	0.96	-	1.67	2	<1	<1	2	13	123	80	-	5.57
	26-Mar-20	0.79	1.01	-	-	2	<1	<1	2	13	126	82		5.36

Analyte		Anions and Cations														
		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Reactive phosphorus as P	Total Phosphorus	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Ammonia as N	Total Nitrogen as N	Total Kjeldahl Nitrogen as N
LOR		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[4]		-	-	-	-	-	-	-	-	2	-	-	-	0.5	3	-
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-
Sample Name	Sample Date															
BH4	27-Apr-20	16	1	2	1	10	25	<0.1	-	-	-	-	-	-	-	-
	15-May-20	21	1	3	<1	12	37	<0.1	<0.01	0.09	<0.01	0.12	0.12	<0.01	0.6	0.5
	19-Jun-20	23	1	2	1	13	36	<0.1	-	-	-	-	-	-	-	-
	16-Jul-20	35	<1	6	<1	21	50	<0.1	-	-	-	-	-	-	-	-
	14-Aug-20	18	<1	2	<1	10	34	<0.1	<0.01	0.24	<0.01	0.16	0.16	0.02	0.8	0.6
	16-Sep-20	20	< 1.0	2.0	< 1.0	11	31	< 0.1	-	-	-	-	-	-	-	-
	16-Oct-20	19	1.0	3.0	< 1.0	10	34	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	18	< 1.0	2.0	< 1.0	12	27	< 0.1	< 0.01	0.06	< 0.01	0.1	0.1	< 0.01	0.1	< 0.1
	16-Dec-20	25	1.0	4.0	< 1.0	15	43	< 0.1	-	-	-	-	-	-	-	-
	14-Jan-21	36	1.0	4.0	< 1.0	23	54	< 0.1	-	-	-	-	-	-	-	-
	16-Feb-21	69	2.0	9.0	1.0	32	111	< 0.1	< 0.01	0.11	< 0.01	< 0.01	< 0.01	0.03	< 0.1	< 0.1
	17-Mar-21	77	2.0	11	1.0	26	128	< 0.1	-	-	-	-	-	-	-	-
	22-Apr-21	14	2.0	2.0	1.0	9.0	24	< 0.1	-	-	-	-	-	-	-	-
	20-May-21	13	1	3	1	10	20	<0.1	<0.01	0.08	<0.01	0.20	0.20	<0.01	0.4	0.2
	18-Jun-21	14	1	3	1	14	24	<0.1	-	-	-	-	-	-	-	-
BH5	22-Feb-19	42	< 1.0	6.0	1.0	19	69	0.2	< 0.01	0.34	< 0.01	< 0.01	< 0.01	0.09	3.0	3.0
	14-Aug-20	18	1.0	3.0	<1	30	32	<0.1	<0.01	0.09	<0.01	<0.01	<0.01	0.05	0.8	0.8
BH6	22-Feb-19	28	3.0	4.0	1.0	28	42	< 0.1	< 0.01	0.05	< 0.01	0.09	0.09	0.14	0.5	0.4
	14-Mar-19	23	2.0	4.0	1.0	17	37	< 0.1	-	-	-	-	-	-	-	-
	23-Apr-19	25	3.0	4.0	1.0	18	42	< 0.1	-	-	-	-	-	-	-	-
	16-May-19	23	3.0	4.0	1.0	18	45	< 0.1	< 0.01	0.13	< 0.01	< 0.01	< 0.01	0.14	0.6	0.6
	14-Jun-19	20	2.0	4.0	1.0	16	42	< 0.1	-	-	-	-	-	-	-	-
	16-Jul-19	23	2.0	4.0	1.0	20	35	< 0.1	-	-	-	-	-	-	-	-
	15-Aug-19	23	2.0	3.0	1.0	21	38	< 0.1	-	-	-	-	-	-	-	-
	16-Sep-19	25	3.0	3.0	1.0	21	38	< 0.1	< 0.01	0.15	< 0.01	0.07	0.07	0.19	0.8	0.7
	15-Oct-19	25	2.0	4.0	1.0	13	41	< 0.1	-	-	-	-	-	-	-	-
	18-Nov-19	27	3.0	3.0	1.0	18	45	< 0.1	< 0.01	0.06	< 0.01	< 0.01	< 0.01	0.23	0.4	0.4
	17-Dec-19	26	2	4	1	16	42	<0.1	-	-	-	-	-	-	-	-
	16-Jan-20	30	3	4	2	15	50	0.2	-	-	-	-	-	-	-	-
	27-Feb-20	27	2	4	1	16	46	<0.1	< 0.01	0.3	< 0.01	0.03	0.03	0.27	1	1
	26-Mar-20	26	2	4	1	18	48	<0.1	-	-	-	-	-	-	-	-
	27-Apr-20	31	2	4	2	7	119	<0.1	-	-	-	-	-	-	-	-
	15-May-20	42	2	5	2	15	73	<0.1	< 0.01	0.42	<0.01	<0.01	0.02	0.22	1.8	1.8
	19-Jun-20	67	4	7	2	13	127	<0.1	-	-	-	-	-	-	-	-
	16-Jul-20	54	4	6	2	16	102	<0.1	-	-	-	-	-	-	-	-
	14-Aug-20	50	4	5	2	17	92	<0.1	<0.01	0.22	<0.01	0.1	0.1	0.29	1.3	1.2
	16-Sep-20	36	2.0	4.0	1.0	16	55	< 0.1	-	-	-	-	-	-	-	-
	16-Oct-20	36	2.0	5.0	1.0	12	64	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	37	3.0	5.0	2.0	23	61	< 0.1	0.01	0.08	< 0.01	0.01	0.01	0.22	0.3	0.3
	16-Dec-20	46	3.0	6.0	2.0	15	75	< 0.1	-	-	-	-	-	-	-	-
	14-Jan-21	39	3.0	5.0	2.0	21	73	< 0.1	-	-	-	-	-	-	-	-
	16-Feb-21	43	3.0	6.0	2.0	18	72	< 0.1	< 0.01	0.1	< 0.01	< 0.01	< 0.01	0.25	< 0.1	< 0.1
	17-Mar-21	51	4.0	9.0	1.0	25	80	< 0.1	-	-	-	-	-	-	-	-
	22-Apr-21	36	3.0	5.0	1.0	30	51	< 0.1	-	-	-	-	-	-	-	-
	20-May-21	54	2	5	1	42	72	<0.1	<0.01	0.14	<0.01	<0.01	<0.01	0.10	0.6	0.6
	18-Jun-21	40	3	7	< 1.0	42	58	<0.1	-	-	-	-	-	-	-	-
BH7	22-Feb-19	34	< 1.0	5.0	2.0	12	64	0.2	< 0.01	0.13	< 0.01	0.02	0.02	0.34	2.2	2.2
	14-Mar-19	36	< 1.0	6.0	2.0	16	61	< 0.1	-	-	-	-	-	-	-	-
	23-Apr-19	38	< 1.0	6.0	2.0	17	62	< 0.1	-	-	-	-	-	-	-	-
	16-May-19	35	< 1.0	5.0	2.0	15	68	0.2	< 0.01	0.06	< 0.01	< 0.01	< 0.01	0.27	0.9	0.9
	14-Jun-19	31	< 1.0	4.0	2.0	11	56	0.1	-	-	-	-	-	-	-	-
	16-Jul-19	36	< 1.0	5.0	2.0	12	46	< 0.1	-	-	-	-	-	-	-	-
	15-Aug-19	32	< 1.0	4.0	2.0	15	49	0.1	-	-	-	-	-	-	-	-
	16-Sep-19	27	< 1.0	4.0	1.0	13	53	< 0.1	< 0.01	0.09	< 0.01	0.06	0.06	0.2	1.2	1.1
	15-Oct-19	34	< 1.0	5.0	2.0	12	53	< 0.1	-	-	-	-	-	-	-	-
	18-Nov-19	31	< 1.0	5.0	1.0	15	56	0.1	< 0.01	0.02	< 0.01	< 0.01	< 0.01	0.17	0.5	0.5
	17-Dec-19	26	<1	5	1	15	44	<0.1	-	-	-	-	-	-	-	-
	16-Jan-20	27	<1	4	1	13	46	0.2	-	-	-	-	-	-	-	-
	27-Feb-20	23	<1	4	1	11	42	<0.1	< 0.01	0.06	< 0.01	< 0.01	< 0.01	0.22	0.8	0.8
	26-Mar-20	25	<1	4	1	18	44	<0.1	-	-	-	-	-	-	-	-
	27-Apr-20	28	<1	2	2	<1	42	<0.1	-	-	-	-	-	-	-	-
	15-May-20	27	<1	3	2	5	47	<0.1	<0.01	0.03	0.01	<0.01	0.01	0.26	1.1	1.1
	19-Jun-20	27	<1	3	2	1	44	<0.1	-	-	-	-	-	-	-	-
	16-Jul-20	26	<1	3	2	20	44	<0.1	-	-	-	-	-	-	-	-
	14-Aug-20	30	<1	4	2	4	60	0.1	<0.01	0.09	<0.01	0.01	0.01	0.3	1.2	1.2
	16-Sep-20	33	< 1.0	5.0	2.0	12	62	0.1	-	-	-	-	-	-	-	-
	16-Oct-20	34	< 1.0	5.0	2.0	9.0	64	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	30	< 1.0	5.0	2.0	9.0	54	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.3	0.6	0.6

Analyte						Alkalinity						Inorganics		
		Total Cations	Total Anions	Ionic Balance	Sodium Adsorption Ratio	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3	Total Hardness as CaCO3	Electrical Conductivity @ 25°C*	Total Dissolved Solids	Total Dissolved Solids	pH
LOR		0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
Units		meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Baseline Trigger Values (KLF 2020)[4]		-	-	-	-	-	-	-	-	-	125-2200	-	-	4-7
NHMRC ADWG 2018		-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date													
BH4	27-Apr-20	0.94	0.99	-	-	4	<1	<1	4	11	130	84	-	5.68
	15-May-20	1.21	1.33	-	2.97	3	<1	<1	3	8	438	101	-	5.04
	19-Jun-20	1.24	1.33	-	-	2	<1	<1	2	11	172	112	-	5.07
	16-Jul-20	2.02	2.01	-	-	8	<1	<1	8	25	257	167	-	5.22
	14-Aug-20	0.95	1.21		2.54	2	<1	<1	2	8	148	96	96	5.02
	16-Sep-20	1.03	1.1	-	-	< 1.0	< 1.0	< 1.0	< 1.0	8.0	148	96	74	4.66
	16-Oct-20	1.12	1.21	-	-	2.0	< 1.0	< 1.0	2.0	15	133	86	-	5.21
	16-Nov-20	0.95	1.03	-	2.54	1.0	< 1.0	< 1.0	1.0	8.0	146	95	90	4.98
	16-Dec-20	1.47	1.58	-	-	3.0	< 1.0	< 1.0	3.0	19	193	125	-	4.81
	14-Jan-21	1.94	2.02	-	-	1.0	< 1.0	< 1.0	1.0	19	258	168	-	5.23
	16-Feb-21	3.87	3.82	0.65	4.63	1.0	< 1.0	< 1.0	1.0	42	445	289	251	4.86
	17-Mar-21	4.38	4.21	1.96	-	3.0	< 1.0	< 1.0	3.0	50	501	326	-	5.07
	22-Apr-21	0.9	0.86	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	118	77	-	4.56
	20-May-21	0.89	0.77	-	1.47	<1.0	<1.0	<1.0	<1.0	15	119	77	78	4.64
	18-Jun-21	0.93	0.97	-	-	< 1.0	< 1.0	< 1.0	< 1.0	15	111	72	85	4.60
BH5	22-Feb-19	2.35	2.34	-	3.59	< 1.0	< 1.0	< 1.0	< 1.0	25	250	211	-	4.87
	14-Aug-20	1.08	1.53		2.03	<1	<1	<1	<1	15	180	117	100	4.49
BH6	22-Feb-19	1.72	1.77	-	2.49	< 1.0	< 1.0	< 1.0	< 1.0	24	177	144	-	4.37
	14-Mar-19	1.46	1.44	-	-	2.0	< 1.0	< 1.0	2.0	21	179	116	146	4.95
	23-Apr-19	1.59	1.56	-	-	< 1.0	< 1.0	< 1.0	< 1.0	24	136	88	115	4.64
	16-May-19	1.5	1.64	-	2.04	< 1.0	< 1.0	< 1.0	< 1.0	24	175	114	214	4.88
	14-Jun-19	1.32	1.52	-	-	< 1.0	< 1.0	< 1.0	< 1.0	21	174	113	90	4.82
	16-Jul-19	1.46	1.4	-	-	< 1.0	< 1.0	< 1.0	< 1.0	21	161	105	82	4.73
	15-Aug-19	1.37	1.51	-	-	< 1.0	< 1.0	< 1.0	< 1.0	17	201	131	104	4.87
	16-Sep-19	1.51	1.55	-	2.44	2.0	< 1.0	< 1.0	2.0	20	197	128	124	4.68
	15-Oct-19	1.54	1.43	-	-	< 1.0	< 1.0	< 1.0	< 1.0	21	202	131	-	5.17
	18-Nov-19	1.6	1.64	-	2.64	< 1.0	< 1.0	< 1.0	< 1.0	20	204	133	-	5.32
	17-Dec-19	1.58	1.62	-	-	5	<1	<1	5	21	207	134	-	5.58
	16-Jan-20	1.83	1.86	-	-	7	<1	<1	7	24	218	142	-	5.51
	27-Feb-20	1.63	1.63	-	2.54	< 1.0	< 1.0	< 1.0	< 1.0	21	220	143	-	4.72
	26-Mar-20	1.58	1.73	-	-	< 1.0	< 1.0	< 1.0	< 1.0	21	222	144		5.13
	27-Apr-20	1.83	1.94	-	-	5	<1	<1	5	44	264	172	-	5.72
	15-May-20	2.39	2.43	-	3.61	3	<1	<1	3	26	310	202	-	5.11
	19-Jun-20	3.53	3.89	4.6	-	2	<1	<1	2	39	462	300	-	5.16
	16-Jul-20	3.09	3.37	4.28	-	8	<1	<1	8	35	407	264	-	5.12
	14-Aug-20	2.84	3.03	3.27	3.93	4	<1	<1	4	30	353	229	205	5.26
	16-Sep-20	2.02	1.9	-	-	1.0	< 1.0	< 1.0	1.0	21	273	177	121	4.98
	16-Oct-20	2.1	2.14	-	-	4.0	< 1.0	< 1.0	4.0	26	249	162	-	5.3
	16-Nov-20	2.22	2.2	-	3.04	< 1.0	< 1.0	< 1.0	< 1.0	28	321	209	205	4.45
	16-Dec-20	2.7	2.43	-	-	< 1.0	< 1.0	< 1.0	< 1.0	32	321	209	-	4.63
	14-Jan-21	2.31	2.5	-	-	< 1.0	< 1.0	< 1.0	< 1.0	28	332	216	-	4.33
	16-Feb-21	2.56	2.46	-	3.3	3.0	< 1.0	< 1.0	3.0	32	316	205	182	4.89
	17-Mar-21	3.18	2.82	-	-	2.0	< 1.0	< 1.0	2.0	47	358	233	-	5.07
	22-Apr-21	2.15	2.06	-	-	< 1.0	< 1.0	< 1.0	< 1.0	28	278	181	-	4.4
	20-May-21	2.88	2.90	-	4.64	<1.0	<1.0	<1.0	<1.0	26	370	240	204	4.88
	18-Jun-21	2.46	2.55	-	-	2	< 1.0	< 1.0	2	36	286	186	167	4.82
BH7	22-Feb-19	1.94	2.06	-	3.16	< 1.0	< 1.0	< 1.0	< 1.0	20	213	196	-	4.76
	14-Mar-19	2.11	2.05	1.37	-	< 1.0	< 1.0	< 1.0	< 1.0	25	271	176	212	4.73
	23-Apr-19	2.2	2.1	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	205	133	185	4.51
	16-May-19	1.98	2.23	-	3.26	< 1.0	< 1.0	< 1.0	< 1.0	20	235	153	310	4.87
	14-Jun-19	1.73	1.81	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	213	138	145	4.91
	16-Jul-19	2.03	1.55	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	202	131	164	5.0
	15-Aug-19	1.77	1.85	-	-	8.0	< 1.0	< 1.0	8.0	16	232	151	168	5.53
	16-Sep-19	1.53	1.86	-	2.79	5.0	< 1.0	< 1.0	5.0	16	222	144	181	5.07
	15-Oct-19	1.94	1.74	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	252	164	-	4.95
	18-Nov-19	1.78	1.89	-	2.89	< 1.0	< 1.0	< 1.0	< 1.0	20	239	155	-	4.97
	17-Dec-19	1.57	1.59	-	-	2.0	<1	<1	2.0	20	210	136	-	5.14
	16-Jan-20	1.53	1.63	-	-	3.0	<1	<1	3.0	16	202	131	-	5.27
	27-Feb-20	1.36	1.41	-	2.38	<1	<1	<1	<1	16	194	126	-	4.77
	26-Mar-20	1.44	1.24	-	-	<1	<1	<1	<1	16	199	129		4.92
	27-Apr-20	1.43	1.26	-	-	4	<1	<1	4	8	207	134	-	5.16
	15-May-20	1.47	1.51	-	3.18	4	<1	<1	4	12	244	159	-	5.17
	19-Jun-20	1.47	1.34	-	-	4	<1	<1	4	12	192	125	-	5.16
	16-Jul-20	1.43	1.35	-	-	7	<1	<1	7	12	196	127	-	5.21
	14-Aug-20	1.68	1.84		3.1	3	<1	<1	3	16	233	151	169	5.18
	16-Sep-20	1.9	2.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	248	161	140	4.81
	16-Oct-20	1.94	1.99	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	243	158	-	4.87
	16-Nov-20	1.77	1.71	-	2.79	< 1.0	< 1.0	< 1.0	< 1.0	20	245	159	168	4.57

Analyte		Anions and Cations														
		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Reactive phosphorus as P	Total Phosphorus	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Ammonia as N	Total Nitrogen as N	Total Kjeldahl Nitrogen as N
LOR		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[4]		-	-	-	-	-	-	-	-	2	-	-	-	0.5	3	-
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-
Sample Name	Sample Date															
	16-Dec-20	30	< 1.0	6.0	2.0	9.0	58	0.1	-	-	-	-	-	-	-	-
	14-Jan-21	31	< 1.0	5.0	2.0	10	63	0.1	-	-	-	-	-	-	-	-
	16-Feb-21	34	< 1.0	6.0	2.0	12	64	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.3	0.6	0.6
	17-Mar-21	36	< 1.0	7.0	2.0	11	68	< 0.1	-	-	-	-	-	-	-	-
	22-Apr-21	39	< 1.0	8.0	2.0	11	78	0.2	-	-	-	-	-	-	-	-
	20-May-21	42	<1.0	8	2	17	77	0.2	<0.01	0.04	<0.01	0.01	0.01	0.21	0.5	0.5
	18-Jun-21	33	< 1.0	6	2	15	59	0.1	-	-	-	-	-	-	-	-
BH8	21-Feb-19	52	< 1.0	6.0	< 1.0	11	90	< 0.1	< 0.01	1.97	< 0.01	< 0.01	< 0.01	0.5	2.4	2.4
	14-Mar-19	45	< 1.0	6.0	< 1.0	6.0	76	< 0.1	-	-	-	-	-	-	-	-
	23-Apr-19	53	< 1.0	7.0	< 1.0	8.0	89	< 0.1	-	-	-	-	-	-	-	-
	16-May-19	47	< 1.0	4.0	< 1.0	6.0	81	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.12	0.4	0.4
	14-Jun-19	47	< 1.0	5.0	< 1.0	4.0	89	< 0.1	-	-	-	-	-	-	-	-
	16-Jul-19	57	< 1.0	5.0	< 1.0	70	121	0.1	-	-	-	-	-	-	-	-
	15-Aug-19	42	< 1.0	3.0	< 1.0	4.0	63	< 0.1	-	-	-	-	-	-	-	-
	16-Sep-19	46	< 1.0	3.0	< 1.0	4.0	70	< 0.1	< 0.01	0.43	< 0.01	< 0.01	< 0.01	0.13	1.1	1.1
	15-Oct-19	45	< 1.0	4.0	< 1.0	4.0	70	< 0.1	-	-	-	-	-	-	-	-
	18-Nov-19	49	< 1.0	4.0	< 1.0	8.0	80	< 0.1	< 0.01	0.58	< 0.01	0.01	0.01	0.17	1.3	1.3
	17-Dec-19	50	<1	4	<1	10	75	<0.1	-	-	-	-	-	-	-	-
	16-Jan-20	49	<1	4	<1	13	78	<0.1	-	-	-	-	-	-	-	-
	27-Feb-20	34	<1	3	<1	14	54	<0.1	< 0.01	0.14	< 0.01	< 0.01	< 0.01	0.05	0.6	0.6
	26-Mar-20	30	<1	3	<1	16	50	<0.1	-	-	-	-	-	-	-	-
	27-Apr-20	28	<1	4	<1	13	50	<0.1	-	-	-	-	-	-	-	-
	15-May-20	32	<1	4	<1	14	59	<0.1	<0.01	0.18	<0.01	0.02	0.02	0.05	0.8	0.8
	19-Jun-20	48	<1	5	<1	9	74	<0.1	-	-	-	-	-	-	-	-
	16-Jul-20	50	<1	5	<1	10	76	<0.1	-	-	-	-	-	-	-	-
	14-Aug-20	55	<1	4	<1	9	102	<0.1	<0.01	0.1	<0.01	0.01	0.01	0.14	0.7	0.7
	16-Sep-20	58	< 1.0	4.0	< 1.0	9.0	109	< 0.1	-	-	-	-	-	-	-	-
	16-Oct-20	43	< 1.0	4.0	< 1.0	12	70	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	48	< 1.0	6.0	< 1.0	10	76	< 0.1	< 0.01	0.14	< 0.01	< 0.01	< 0.01	0.13	0.6	0.6
	16-Dec-20	35	< 1.0	4.0	< 1.0	14	56	< 0.1	-	-	-	-	-	-	-	-
	14-Jan-21	44	< 1.0	5.0	< 1.0	13	77	< 0.1	-	-	-	-	-	-	-	-
	16-Feb-21	50	< 1.0	6.0	< 1.0	17	79	< 0.1	< 0.01	0.14	< 0.01	< 0.01	< 0.01	0.12	< 0.1	< 0.1
	17-Mar-21	50	< 1.0	6.0	< 1.0	19	75	< 0.1	-	-	-	-	-	-	-	-
	22-Apr-21	45	< 1.0	5.0	< 1.0	44	52	< 0.1	-	-	-	-	-	-	-	-
	20-May-21	39	<1.0	4	<1.0	37	42	<0.1	<0.01	0.08	<0.01	<0.01	<0.01	0.11	0.8	0.8
	18-Jun-21	62	2	6	< 1.0	40	89	0.2	-	-	-	-	-	-	-	-
BH9	14-Aug-20	10	< 1.0	1	< 1.0	7	17	<0.1	<0.01	0.07	<0.01	0.21	0.21	<0.01	1	0.8
BH9A	16-Sep-20	35	5.0	5.0	1.0	41	38	< 0.1	-	-	-	-	-	-	-	-
	16-Oct-20	32	3.0	6.0	1.0	33	48	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	23	2.0	4.0	1.0	23	35	< 0.1	< 0.01	0.11	< 0.01	2.35	2.35	< 0.01	2.8	0.5
	16-Dec-20	23	1.0	3.0	1.0	9.0	37	< 0.1	-	-	-	-	-	-	-	-
	14-Jan-21	24	1.0	3.0	1.0	15	43	< 0.1	-	-	-	-	-	-	-	-
	16-Feb-21	25	1.0	3.0	1.0	12	40	< 0.1	< 0.01	1.74	< 0.01	< 0.01	< 0.01	0.15	5.1	5.1
	17-Mar-21	25	1.0	3.0	< 1.0	12	35	< 0.1	-	-	-	-	-	-	-	-
	22-Apr-21	22	1.0	4.0	< 1.0	21	35	< 0.1	-	-	-	-	-	-	-	-
	20-May-21	27	1	3	2	18	35	<0.1	<0.01	0.08	<0.01	<0.01	<0.01	0.07	0.8	0.8
	18-Jun-21	26	< 1.0	3	1	15	39	<0.1	-	-	-	-	-	-	-	-
BH10	22-Apr-21	33	2.0	5.0	3.0	26	40	< 0.1	-	-	-	-	-	-	-	-
	20-May-21	27	<1.0	5	4	26	41	<0.1	<0.01	<0.01	<0.01	12.0	12.0	<0.01	13.2	1.2
	18-Jun-21	26	< 1.0	4	9	23	41	<0.1	-	-	-	-	-	-	-	-
BH11	21-Feb-19	48	< 1.0	10	< 1.0	24	80	0.1	< 0.01	0.03	< 0.01	0.04	0.04	0.06	1.8	1.8
	15-Mar-19	26	< 1.0	2.0	< 1.0	2.0	52	< 0.1	-	-	-	-	-	-	-	-
	23-Apr-19	32	< 1.0	5.0	< 1.0	2.0	57	< 0.1	-	-	-	-	-	-	-	-
	16-May-19	29	< 1.0	4.0	< 1.0	2.0	55	< 0.1	< 0.01	0.01	< 0.01	< 0.01	< 0.01	0.12	0.4	0.4
	14-Jun-19	26	< 1.0	3.0	< 1.0	< 1.0	53	< 0.1	-	-	-	-	-	-	-	-
	16-Jul-19	49	< 1.0	8.0	< 1.0	8.0	73	0.2	-	-	-	-	-	-	-	-
	15-Aug-19	28	< 1.0	3.0	< 1.0	4.0	47	< 0.1	-	-	-	-	-	-	-	-
	16-Sep-19	27	< 1.0	3.0	< 1.0	5.0	46	< 0.1	< 0.01	0.12	< 0.01	< 0.01	< 0.01	0.15	0.7	0.7
	15-Oct-19	28	< 1.0	3.0	< 1.0	3.0	44	< 0.1	-	-	-	-	-	-	-	-
	18-Nov-19	28	< 1.0	3.0	< 1.0	< 1.0	53	< 0.1	< 0.01	2.11	< 0.01	0.06	0.06	0.18	5.9	5.8
	17-Dec-19	26	<1	4	<1	<1	48	<0.1	-	-	-	-	-	-	-	-
	16-Jan-20	25	<1	3	<1	<1	46	<0.1	-	-	-	-	-	-	-	-
	27-Feb-20	20	<1	3	<1	<1	41	<0.1	<0.01	1.09	<0.01	0.02	0.02	0.16	3.3	3.3
	26-Mar-20	20	1	2	<1	<1	40	<0.1	-	-	-	-	-	-	-	-
	27-Apr-20	22	<1	2	<1	1	36	<0.1	-	-	-	-	-	-	-	-
	15-May-20	21	<1	2	<1	2	39	<0.1	<0.01	31.8	<0.01	0.21	0.21	0.72	85.5	85.3
	19-Jun-20	22	<1	2	<1	1	42	<0.1	-	-	-	-	-	-	-	-
	16-Jul-20	24	<1	3	<1	2	41	<0.1	-	-	-	-	-	-	-	-
	14-Aug-20	22	<1	4	<1	6	43	<0.1	<0.01	0.05	<0.01	0.06	0.06	0.07	0.6	0.5
	16-Sep-20	29	< 1.0	5.0	< 1.0	6.0	48	< 0.1	-	-	-	-	-	-	-	-
	16-Oct-20	29	< 1.0	6.0	< 1.0	4.0	61	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	27	< 1.0	5.0	< 1.0	5.0	50	< 0.1	< 0.01	0.06	< 0.01	< 0.01	< 0.01	0.08	0.5	0.5
	16-Dec-20	31	< 1.0	6.0	< 1.0	7.0	60	< 0.1	-	-	-	-	-	-	-	-

Analyte						Alkalinity						Inorganics		
		Total Cations	Total Anions	Ionic Balance	Sodium Adsorption Ratio	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3	Total Hardness as CaCO3	Electrical Conductivity @ 25°C*	Total Dissolved Solids	Total Dissolved Solids	pH
LOR		0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
Units		meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Baseline Trigger Values (KLF 2020)[4]		-	-	-	-	-	-	-	-	-	125-2200	-	-	4-7
NHMRC ADWG 2018		-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date													
	16-Dec-20	1.85	1.82	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	265	172	-	4.34
	14-Jan-21	1.81	1.98	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	267	174	-	4.62
	16-Feb-21	2.02	2.06	-	2.9	< 1.0	< 1.0	< 1.0	< 1.0	25	270	176	161	4.54
	17-Mar-21	2.19	2.15	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	279	181	-	4.9
	22-Apr-21	2.4	2.43	-	-	< 1.0	< 1.0	< 1.0	< 1.0	33	318	207	-	4.43
	20-May-21	2.54	2.53	-	3.12	<1.0	<1.0	<1.0	<1.0	33	341	222	189	4.89
	18-Jun-21	1.98	1.98	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	232	151	185	4.84
	21-Feb-19	2.76	2.77	-	4.44	< 1.0	< 1.0	< 1.0	< 1.0	25	352	258	-	4.46
	14-Mar-19	2.45	2.27	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	319	207	253	4.77
	23-Apr-19	2.88	2.68	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	264	172	223	4.76
	16-May-19	2.37	2.43	-	4.86	1.0	< 1.0	< 1.0	1.0	16	302	196	354	4.9
	14-Jun-19	2.46	2.59	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	315	205	194	4.82
	16-Jul-19	2.89	4.87	26	-	< 1.0	< 1.0	< 1.0	< 1.0	20	353	229	226	4.78
	15-Aug-19	2.07	1.86	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	260	169	140	5.0
	16-Sep-19	2.25	2.06	-	5.43	< 1.0	< 1.0	< 1.0	< 1.0	12	293	190	206	4.85
	15-Oct-19	2.29	2.06	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	303	197	-	5.02
	18-Nov-19	2.46	2.42	-	5.06	< 1.0	< 1.0	< 1.0	< 1.0	16	316	205	-	5.12
	17-Dec-19	2.5	2.36	-	-	2	<1	<1	2	16	328	213	-	5.02
	16-Jan-20	2.46	6.61	-	-	7	<1	<1	7	16	318	207	-	5.55
	27-Feb-20	1.72	1.81	-	4.01	< 1.0	< 1.0	< 1.0	< 1.0	12	250	162	-	4.57
	26-Mar-20	1.55	1.74	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	221	144		4.76
BH8	27-Apr-20	1.55	1.68	-	-	<1	<1	<1	<1	16	242	157	-	4.84
	15-May-20	1.72	2	-	3.31	2	<1	<1	2	16	250	162	-	4.93
	19-Jun-20	2.5	2.29	-	-	1	<1	<1	1	20	318	207	-	4.99
	16-Jul-20	2.59	2.49	-	-	7	<1	<1	7	20	342	222	-	5.03
	14-Aug-20	2.89	3.1	3.58	5.68	2	<1	<1	2	16	367	238	236	5.16
	16-Sep-20	3.1	3.26	2.57	-	< 1.0	< 1.0	< 1.0	< 1.0	16	391	254	216	4.79
	16-Oct-20	2.2	2.22	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	268	174	-	5.01
	16-Nov-20	2.58	2.35	-	4.1	< 1.0	< 1.0	< 1.0	< 1.0	25	341	222	212	4.75
	16-Dec-20	1.85	1.87	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	256	166	-	4.82
	14-Jan-21	2.32	2.44	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	317	206	-	4.76
	16-Feb-21	2.67	2.58	-	4.27	< 1.0	< 1.0	< 1.0	< 1.0	25	335	218	184	4.68
	17-Mar-21	2.67	2.51	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	329	214	-	4.57
	22-Apr-21	2.37	2.38	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	331	215	-	4.2
	20-May-21	2.02	1.96	-	4.03	<1.0	<1.0	<1.0	<1.0	16	275	179	153	4.71
	18-Jun-21	3.29	3.42	1.98	-	4	< 1.0	< 1.0	4	30	390	254	276	4.83
BH9	14-Aug-20	0.57	0.66		1.69	2	<1.0	<1.0	2	7	80	52	63	5.17
	16-Sep-20	2.21	2.06	-	-	7.0	< 1.0	< 1.0	7.0	33	276	179	310	5.78
	16-Oct-20	2.06	2.06	-	-	1.0	< 1.0	< 1.0	1.0	32	237	154	-	5.15
	16-Nov-20	1.46	1.51	-	2.16	2.0	< 1.0	< 1.0	2.0	21	195	127	142	4.93
	16-Dec-20	1.32	1.23	-	-	< 1.0	< 1.0	< 1.0	< 1.0	15	175	114	-	4.83
BH9A	14-Jan-21	1.37	1.52	-	-	< 1.0	< 1.0	< 1.0	< 1.0	15	196	127	-	4.96
	16-Feb-21	1.41	1.42	-	2.82	2.0	< 1.0	< 1.0	2.0	15	181	118	135	4.72
	17-Mar-21	1.38	1.32	-	-	4.0	< 1.0	< 1.0	4.0	15	164	107	-	5.23
	22-Apr-21	1.34	1.42	-	-	< 1.0	< 1.0	< 1.0	< 1.0	19	192	125	-	4.53
	20-May-21	1.52	1.36	-	3.05	<1.0	<1.0	<1.0	<1.0	15	196	127	108	4.94
	18-Jun-21	1.40	1.57	-	-	8	< 1.0	< 1.0	8	12	165	107	103	4.81
	22-Apr-21	2.02	1.75	-	-	4.0	< 1.0	< 1.0	4.0	26	225	146	-	5.3
BH10	20-May-21	1.69	1.70	-	2.51	<1.0	<1.0	<1.0	<1.0	20	259	168	147	4.24
	18-Jun-21	1.69	1.64	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	199	129	111	4.66
	21-Feb-19	2.91	2.76	-	3.21	< 1.0	< 1.0	< 1.0	< 1.0	41	346	278	-	4.67
	15-Mar-19	1.3	1.51	-	-	< 1.0	< 1.0	< 1.0	< 1.0	8.0	186	121	144	4.82
	23-Apr-19	1.8	1.65	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	150	98	135	4.99
	16-May-19	1.59	1.59	-	3.0	< 1.0	< 1.0	< 1.0	< 1.0	16	188	122	216	4.91
	14-Jun-19	1.38	1.5	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	175	114	107	4.84
	16-Jul-19	2.79	2.22	-	-	< 1.0	< 1.0	< 1.0	< 1.0	33	318	207	192	4.68
	15-Aug-19	1.46	1.41	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	197	128	135	4.88
	16-Sep-19	1.42	1.4	-	3.18	< 1.0	< 1.0	< 1.0	< 1.0	12	195	127	140	4.66
	15-Oct-19	1.46	1.3	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	194	126	-	4.92
	18-Nov-19	1.46	1.5	-	3.3	< 1.0	< 1.0	< 1.0	< 1.0	12	193	125	-	5.12
	17-Dec-19	1.46	1.39	-	-	2	<1	<1	2	16	196	127	-	5.03
	16-Jan-20	1.33	1.34	-	-	2	<1	<1	2	12	168	109	-	5.09
	27-Feb-20	1.12	1.16	-	2.36	<1	<1	<1	<1	12	165	107	-	4.35
	26-Mar-20	1.08	1.13	-	-	<1	<1	<1	<1	11	156	101	-	5.14
BH11	27-Apr-20	1.12	1.24	-	-	10	<1	<1	10	16	151	98	-	6.14
	15-May-20	1.08	1.2	-	-	10	<1	<1	10	16	151	98	-	6.14
	19-Jun-20	1.12	1.2	-	-	<1	<1	<1	<1	8	168	109	-	4.9
	16-Jul-20	1.29	1.32	-	-	6	<1	<1	6	12	184	120	-	4.91
	14-Aug-20	1.29	1.38		2.27	2	<1	<1	2	16	172	112	119	4.89
	16-Sep-20	1.67	1.48	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	223	145	111	4.61
	16-Oct-20	1.76	1.8	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	218	142	-	4.8
	16-Nov-20	1.58	1.51	-	2.51	< 1.0	< 1.0	< 1.0	< 1.0	20	217	141	146	4.81
	16-Dec-20	1.84	1.84	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	249	162	-	4.74

Table GW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

Analyte		Anions and Cations														
		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Reactive phosphorus as P	Total Phosphorus	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Ammonia as N	Total Nitrogen as N	Total Kjeldahl Nitrogen as N
LOR		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[4]		-	-	-	-	-	-	-	-	2	-	-	-	0.5	3	-
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-
Sample Name	Sample Date															
	14-Jan-21	**32**	< 1.0	**6.0**	< 1.0	**12**	**63**	< 0.1	-	-	-	-	-	-	-	-
	16-Feb-21	**32**	< 1.0	**5.0**	**1.0**	**12**	**55**	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**0.08**	< 0.1	< 0.1
	17-Mar-21	**29**	< 1.0	**6.0**	< 1.0	**17**	**48**	< 0.1	-	-	-	-	-	-	-	-
	22-Apr-21	**20**	< 1.0	**3.0**	< 1.0	**14**	**29**	< 0.1	-	-	-	-	-	-	-	-
	20-May-21	**24**	<1.0	**4**	<1.0	**16**	**34**	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.5**	**0.5**
	18-Jun-21	**31**	< 1.0	**5**	< 1.0	**20**	**46**	<0.1	-	-	-	-	-	-	-	-
BH12	14-Aug-20	**20**	**4**	**4**	<1	**14**	**36**	<0.1	<0.01	**0.75**	**0.01**	**0.01**	**0.02**	<0.01	**3.9**	**3.9**
	16-Sep-20	**24**	< 1.0	**7.0**	**1.0**	**22**	**38**	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	**22**	< 1.0	**4.0**	**1.0**	**11**	**41**	< 0.1	< 0.01	< 0.01	< 0.01	**0.02**	**0.02**	< 0.01	**0.2**	**0.2**
MW239S	22-Feb-19	**61**	< 1.0	**6.0**	< 1.0	**6.0**	**104**	< 0.1	< 0.01	**0.56**	< 0.01	< 0.01	< 0.01	**0.18**	**3.9**	**3.9**
	14-Mar-19	**64**	< 1.0	**6.0**	< 1.0	**2.0**	**126**	< 0.1	-	-	-	-	-	-	-	-
	23-Apr-19	**64**	< 1.0	**7.0**	**1.0**	**9.0**	**97**	< 0.1	-	-	-	-	-	-	-	-
	16-May-19	**52**	< 1.0	**6.0**	< 1.0	**13**	**88**	< 0.1	< 0.01	**0.43**	< 0.01	< 0.01	< 0.01	**0.09**	**1.7**	**1.7**
	14-Jun-19	**50**	< 1.0	**6.0**	< 1.0	**13**	**87**	< 0.1	-	-	-	-	-	-	-	-
	16-Jul-19	**52**	< 1.0	**7.0**	**1.0**	**16**	**73**	< 0.1	-	-	-	-	-	-	-	-
	15-Aug-19	**54**	< 1.0	**7.0**	< 1.0	**11**	**88**	< 0.1	-	-	-	-	-	-	-	-
	16-Sep-19	**55**	< 1.0	**6.0**	**1.0**	**14**	**85**	< 0.1	< 0.01	**0.32**	< 0.01	< 0.01	< 0.01	**0.1**	**1.4**	**1.4**
	15-Oct-19	**58**	< 1.0	**6.0**	< 1.0	**8.0**	**108**	< 0.1	-	-	-	-	-	-	-	-
	18-Nov-19	**63**	< 1.0	**6.0**	**1.0**	**8.0**	**118**	< 0.1	< 0.01	**0.23**	< 0.01	< 0.01	< 0.01	**0.17**	**1.2**	**1.2**
	17-Dec-19	**65**	<1	**8**	<1	**6**	**127**	<0.1	-	-	-	-	-	-	-	-
	16-Jan-20	**67**	<1	**8**	<1	**7**	**120**	<0.1	-	-	-	-	-	-	-	-
	27-Feb-20	**64**	<1	**7**	<1	**11**	**126**	<0.1	< 0.01	**1.05**	< 0.01	**0.02**	**0.02**	**0.14**	**4.5**	**4.5**
	26-Mar-20	**66**	<1	**6**	<1	**5**	**133**	<0.1	-	-	-	-	-	-	-	-
	27-Apr-20	**64**	<1	**6**	<1	**7**	**119**	<0.1	-	**-**	-	**-**	**-**	**-**	**-**	**-**
	15-May-20	**67**	<1	**6**	<1	**2**	**39**	<0.1	<0.01	**0.57**	<0.01	<0.01	<0.01	**0.15**	**3**	**3**
	19-Jun-20	**70**	<1	**8**	**1**	**22**	**125**	<0.1	-	-	-	-	-	-	-	-
	16-Jul-20	**65**	<1	**9**	**1**	**27**	**110**	<0.1	-	-	-	-	-	-	-	-
	14-Aug-20	**62**	<1	**9**	**1**	**33**	**102**	<0.1	<0.01	**0.38**	**0.01**	<0.01	**0.01**	0.04	**0.6**	**2.2**
	16-Sep-20	**53**	< 1.0	**8.0**	**1.0**	**36**	**86**	**0.1**	-	-	-	-	-	-	-	-
	16-Oct-20	**76**	< 1.0	**9.0**	**1.0**	**17**	**148**	< 0.1	-	-	-	-	-	-	-	-
	16-Nov-20	**68**	< 1.0	**9.0**	**2.0**	**37**	**125**	< 0.1	< 0.01	**0.59**	< 0.01	< 0.01	< 0.01	**0.01**	**2.6**	**2.6**
	16-Dec-20	**68**	< 1.0	**10**	**1.0**	**24**	**126**	< 0.1	-	-	-	-	-	-	-	-
	14-Jan-21	**58**	< 1.0	**9.0**	**2.0**	**37**	**102**	< 0.1	-	-	-	-	-	-	-	-
	16-Feb-21	**66**	< 1.0	**11**	**2.0**	**38**	**124**	< 0.1	< 0.01	**0.58**	< 0.01	< 0.01	< 0.01	**0.06**	**2.5**	**2.5**
	17-Mar-21	**49**	< 1.0	**7.0**	**1.0**	**38**	**70**	< 0.1	-	-	-	-	-	-	-	-
	22-Apr-21	**33**	< 1.0	**5.0**	**1.0**	**23**	**51**	< 0.1	-	-	-	-	-	-	-	-
	20-May-21	**44**	<1.0	**7**	**1**	**30**	**68**	<0.1	<0.01	**0.35**	<0.01	<0.01	<0.01	**0.02**	**1.8**	**1.8**
	18-Jun-21	**33**	< 1.0	**5**	< 1.0	**31**	**46**	<0.1	-	-	-	-	-	-	-	-

Notes:
- - Not analysed
< - Less than laboratory limit of reporting
LOR - Laboratory limit of reporting
mg/L - Milligrams per litre
µS/cm - Microsiemens per centimeter
Bold indicates a detection above the laboratory limit of reporting
[4] Baseline Water Quality Summary Report, September 2020 (KLF 2020)

Table GW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

Analyte						Alkalinity						Inorganics		
		Total Cations	Total Anions	Ionic Balance	Sodium Adsorption Ratio	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3	Total Hardness as CaCO3	Electrical Conductivity @ 25°C*	Total Dissolved Solids	Total Dissolved Solids	pH
LOR		0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
Units		meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Baseline Trigger Values (KLF 2020)[4]		-	-	-	-	-	-	-	-	-	125-2200	-	-	4-7
NHMRC ADWG 2018		-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date													
	14-Jan-21	1.88	2.03	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	264	172	-	4.41
	16-Feb-21	1.83	1.8	-	2.98	< 1.0	< 1.0	< 1.0	< 1.0	20	235	153	149	4.73
	17-Mar-21	1.76	1.71	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	223	145	-	4.66
	22-Apr-21	1.12	1.11	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	151	98	-	4.23
	20-May-21	1.37	1.29	-	2.48	<1.0	<1.0	<1.0	<1.0	16	190	124	111	4.51
	18-Jun-21	1.76	1.71	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	202	131	158	4.48
BH12	14-Aug-20	1.4	1.35	-	1.69	2	<1	<1	2	26	170	110	139	5.26
	16-Sep-20	1.64	1.57	-	-	2.0	< 1.0	< 1.0	2.0	29	206	134	118	5.37
	16-Nov-20	1.31	1.52	-	2.27	7.0	< 1.0	< 1.0	7.0	16	190	124	134	5.92
MW239S	22-Feb-19	3.15	3.06	1.43	5.21	< 1.0	< 1.0	< 1.0	< 1.0	25	329	234	-	4.89
	14-Mar-19	3.28	3.64	5.18	-	2.0	< 1.0	< 1.0	2.0	25	410	266	232	5.02
	23-Apr-19	3.38	2.92	7.32	-	< 1.0	< 1.0	< 1.0	< 1.0	29	294	191	208	4.92
	16-May-19	2.76	2.75	-	4.44	< 1.0	< 1.0	< 1.0	< 1.0	25	327	212	320	4.87
	14-Jun-19	2.67	2.86	-	-	7.0	< 1.0	< 1.0	7.0	25	334	217	220	5.39
	16-Jul-19	2.86	2.39	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	353	229	188	4.85
	15-Aug-19	2.92	2.71	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	359	233	195	4.83
	16-Sep-19	2.91	2.69	-	4.7	< 1.0	< 1.0	< 1.0	< 1.0	25	373	242	224	4.66
	15-Oct-19	3.02	3.21	3.15	-	< 1.0	< 1.0	< 1.0	< 1.0	25	404	263	-	4.86
	18-Nov-19	3.26	3.5	3.48	5.38	< 1.0	< 1.0	< 1.0	< 1.0	25	419	272	-	4.76
	17-Dec-19	3.48	3.75	3.62	-	2	<1	<1	2	33	439	285	-	5.01
	16-Jan-20	3.57	3.57	0.03	-	2	<1	<1	2	33	423	275	-	5.02
	27-Feb-20	3.36	3.78	5.93	5.08	< 1.0	< 1.0	< 1.0	< 1.0	29	475	309	-	4.45
	26-Mar-20	3.36	3.86	6.8	-	< 1.0	< 1.0	< 1.0	< 1.0	30	420	273	-	4.98
	27-Apr-20	3.28	3.56	4.16	-	3	<1	<1	3	25	453	294	-	5.13
	15-May-20	3.41	3.89	6.58	5.64	2	<1	<1	2	25	438	285	-	4.92
	19-Jun-20	3.73	3.98	3.31	-	<1.0	<1	<1	<1.0	33	456	296	-	4.76
	16-Jul-20	3.59	3.8	2.86	-	7	<1	<1	7	37	451	293	-	5.32
	14-Aug-20	3.46	3.56	1.44	4.36	<1	<1	<1	<1	37	455	296	276	4.71
	16-Sep-20	2.99	3.24	3.95	-	3.0	< 1.0	< 1.0	3.0	33	390	254	244	5.2
	16-Oct-20	4.14	4.57	4.99	-	2.0	< 1.0	< 1.0	2.0	37	458	298	-	4.73
	16-Nov-20	4.21	4.3	1.0	4.78	< 1.0	< 1.0	< 1.0	< 1.0	37	489	318	294	4.55
	16-Dec-20	3.81	4.05	3.15	-	< 1.0	< 1.0	< 1.0	< 1.0	41	484	315	-	4.68
	14-Jan-21	3.31	3.65	4.78	-	< 1.0	< 1.0	< 1.0	< 1.0	37	430	280	-	4.44
	16-Feb-21	4.03	4.29	3.1	4.21	< 1.0	< 1.0	< 1.0	< 1.0	45	488	317	375	4.61
	17-Mar-21	2.73	2.76	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	343	223	-	4.73
	22-Apr-21	1.87	1.92	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	257	167	-	4.44
	20-May-21	2.52	2.54	-	3.49	<1.0	<1.0	<1.0	<1.0	29	334	217	190	4.41
	18-Jun-21	1.85	1.94	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	231	150	167	4.66

Notes:
- - Not analysed
< - Less than laboratory limit of reporti
LOR - Laboratory limit of reporting
mg/L - Milligrams per litre
µS/cm - Microsiemens per centimeter
Bold indicates a detection above the la
[1] Baseline Water Quality Summary Repc

Table SW1
Surface Water Analytical Data - BTEXN
Williamtown Sand Syndicate

Analyte		BTEXN								Total Petroleum Hydrocarbons	Total Petroleum Hydrocarbons - Silcia Clean up				Total Recoverable Hydrocarbons		Total Recoverable Hydrocarbons - Silcia Clean up				
		Benzene **	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene**	Total Xylenes	Naphthalene**	Sum of BTEX	C_6 - C_9	C_{10}-C_{14} - Silica Cleanup	C_{15}-C_{28} - Silica Cleanup	C_{29}-C_{36} - Silica Cleanup	C_{10}-C_{36} Sum - Silica Cleanup	C_6 - C_{10}	C_6 - C_{10} minus BTEX (F1)	>C_{10}-C_{16} - Silica Cleanup	F2 - Silica Cleanup	>C_{16}-C_{34} - Silica Cleanup	>C_{34}-C_{40} - Silica Cleanup	>C_{10}-C_{40} - Silica Cleanup
LOR		1	2	2	2	2	2	5	1	20	50	100	50	50	20	20	100	100	100	100	100
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Baseline Trigger Values (KLF, 2020)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
SW1	22-Feb-19	Dry																			
	14-Mar-19																				
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Dec-19	Dry																			
	16-Jan-20																				
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Apr-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-May-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	19-Jun-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Aug-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW2	22-Feb-19	Dry																			
	14-Mar-19																				
	23-Apr-19																				
	16-May-19																				
	14-Jun-19																				
	16-Jul-19																				
	15-Aug-19																				
	16-Sep-19																				
	15-Oct-19																				
	18-Nov-19																				
	17-Dec-19																				
	16-Jan-20																				
	27-Feb-20																				
	26-Mar-20																				
	27-Apr-20																				
	15-May-20																				
	19-Jun-20																				
	16-Jul-20																				
	14-Aug-20																				
	16-Sep-20																				
	16-Oct-20																				
	16-Nov-20																				
	16-Dec-20																				
	14-Jan-21																				
	16-Feb-21																				
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100

Table SW1
Surface Water Analytical Data - BTEXN
Williamtown Sand Syndicate

Analyte		BTEXN								Total Petroleum Hydrocarbons	Total Petroleum Hydrocarbons - Silcia Clean up				Total Recoverable Hydrocarbons		Total Recoverable Hydrocarbons - Silcia Clean up				
		Benzene **	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene**	Total Xylenes	Naphthalene**	Sum of BTEX	C_6 - C_9	C_{10}-C_{14} - Silica Cleanup	C_{15}-C_{28} - Silica Cleanup	C_{29}-C_{36} - Silica Cleanup	C_{10}-C_{36} Sum - Silica Cleanup	C_6 - C_{10}	C_6 - C_{10} minus BTEX (F1)	>C_{10}-C_{16} - Silica Cleanup	F2 - Silica Cleanup	>C_{16}-C_{34} - Silica Cleanup	>C_{34}-C_{40} - Silica Cleanup	>C_{10}-C_{40} - Silica Cleanup
LOR		1	2	2	2	2	2	5	1	20	50	100	50	50	20	20	100	100	100	100	100
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Baseline Trigger Values (KLF, 2020)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
SW3	17-Dec-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jan-20	Dry																			
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Apr-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-May-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	19-Jun-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Aug-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4	22-Feb-19	Dry																			
	14-Mar-19																				
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Dec-19	Dry																			
	16-Jan-20																				
	27-Feb-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	26-Mar-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	27-Apr-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	15-May-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	19-Jun-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Jul-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Aug-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	22-Apr-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	20-May-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	18-Jun-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100

Notes:
- - Not analysed
< - Less than laboratory limit of reporting
µg/L - Micrograms per litre
BTEXN - Benzene, toluene, ethylbenzene, xylenes, naphthalene
1- Baseline Water Quality Summary Report, September 2020 (KLF 2020)
** 95% Level of protection in freshwater

Table SW2
Surface Water Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium**[1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury**[2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.001	0.08	-	0.14 (SW1)/ 0.05 (SW3 & SW4)	-	0.002	0.017	0.013	9.26	-	0.841 (SW1)/0.048 (SW3 & SW4)	-	0.022	-	-	0.535 (SW1) / 0.085 (SW3 & SW4)
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
SW1	22-Feb-19	Dry															
	14-Mar-19	Dry															
	23-Apr-19	< 0.001	0.043	< 0.001	0.14	< 0.0001	< 0.001	0.017	0.002	4.16	< 0.001	0.841	< 0.0001	0.02	< 0.01	< 0.01	0.356
	16-May-19	< 0.001	0.029	< 0.001	0.1	< 0.0001	< 0.001	0.01	0.003	7.25	< 0.001	0.666	< 0.0001	0.012	< 0.01	< 0.01	0.077
	14-Jun-19	< 0.001	0.029	< 0.001	0.09	0.0002	< 0.001	0.009	0.006	2.75	< 0.001	0.595	< 0.0001	0.011	< 0.01	< 0.01	0.535
	16-Jul-19	< 0.001	0.032	< 0.001	0.08	0.0001	< 0.001	0.007	0.003	1.86	< 0.001	0.59	< 0.0001	0.008	< 0.01	< 0.01	0.239
	15-Aug-19	< 0.001	0.027	< 0.001	0.09	< 0.0001	< 0.001	0.005	0.003	2.15	< 0.001	0.482	< 0.0001	0.005	< 0.01	< 0.01	0.075
	16-Sep-19	< 0.001	0.056	< 0.001	0.09	0.0002	0.001	0.008	0.012	2.45	0.001	0.587	< 0.0001	0.014	< 0.01	< 0.01	0.282
	15-Oct-19	< 0.001	0.036	< 0.001	0.07	< 0.0001	< 0.001	0.005	0.003	1.61	< 0.001	0.383	< 0.0001	0.005	< 0.01	< 0.01	0.055
	18-Nov-19	< 0.001	0.042	< 0.001	0.11	< 0.0001	0.001	0.003	< 0.001	1.14	< 0.001	0.366	< 0.0001	0.003	< 0.01	< 0.01	0.026
	17-Dec-19	Dry															
	16-Jan-20	Dry															
	27-Feb-20	0.002	0.029	<0.001	0.06	<0.0001	0.006	0.002	0.026	1.67	0.002	0.211	<0.0001	0.009	<0.01	<0.01	0.061
	26-Mar-20	0.002	0.013	<0.001	<0.05	<0.0001	0.002	<0.001	0.011	0.1	0.001	0.018	<0.0001	0.005	<0.01	<0.01	0.028
	27-Apr-20	< 0.001	-	-	-	<0.0001	0.004	-	0.016	0.2	0.003	0.012	<0.0001	-	-	-	0.041
	15-May-20	< 0.001	0.008	<0.001	<0.05	<0.0001	0.002	<0.001	0.018	0.15	0.001	0.014	<0.0001	0.005	<0.01	<0.01	0.031
	19-Jun-20	<0.001	-	-	-	<0.0001	<0.001	-	0.01	0.17	0.001	0.011	<0.0001	-	-	-	0.042
	16-Jul-20	<0.001	-	-	-	<0.0001	<0.001	-	0.002	<0.5	<0.001	0.003	<0.0001	-	-	-	<0.005
	14-Aug-20	< 0.001	0.016	< 0.001	< 0.05	<0.0001	<0.001	<0.001	0.006	0.18	< 0.001	0.01	<0.0001	<0.001	<0.01	<0.01	0.063
	16-Sep-20	< 0.001	0.021	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	0.005	0.87	0.001	0.096	< 0.0001	0.002	< 0.01	< 0.01	0.061
	16-Oct-20	0.001	0.021	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	0.001	0.76	< 0.001	0.15	< 0.0001	0.001	< 0.01	< 0.01	0.005
	16-Nov-20	< 0.001	0.02	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	0.005	0.18	< 0.001	0.017	< 0.0001	< 0.001	< 0.01	< 0.01	0.03
	16-Dec-20	< 0.001	0.015	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	0.003	0.18	< 0.001	0.058	< 0.0001	< 0.001	< 0.01	< 0.01	0.013
	14-Jan-21	< 0.001	0.012	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	0.02	0.35	< 0.001	0.04	< 0.0001	0.006	< 0.01	< 0.01	0.037
	16-Feb-21	< 0.001	0.011	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	0.12	< 0.001	0.028	< 0.0001	< 0.001	< 0.01	< 0.01	0.024
	17-Mar-21	< 0.001	0.013	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	0.16	< 0.001	0.036	< 0.0001	< 0.001	< 0.01	< 0.01	0.04
	22-Apr-21	< 0.001	0.014	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	6.38	< 0.001	0.078	< 0.0001	0.003	< 0.01	< 0.01	0.017
	20-May-21	< 0.001	0.009	< 0.001	< 0.05	< 0.0001	0.001	0.001	< 0.001	3.59	< 0.001	0.070	< 0.0001	0.002	< 0.01	< 0.01	0.022
	18-Jun-21	< 0.001	0.009	< 0.001	< 0.05	< 0.0001	0.002	< 0.001	0.002	1.51	< 0.001	0.052	< 0.0001	< 0.001	< 0.01	< 0.01	0.068
SW2	22-Feb-19	Dry															
	14-Mar-19	Dry															
	23-Apr-19	Dry															
	16-May-19	Dry															
	14-Jun-19	Dry															
	16-Jul-19	Dry															
	15-Aug-19	Dry															
	16-Sep-19	Dry															
	15-Oct-19	Dry															
	18-Nov-19	Dry															
	17-Dec-19	Dry															
	16-Jan-20	Dry															
	27-Feb-20	Dry															
	26-Mar-20	Dry															
	27-Apr-20	Dry															
	15-May-20	Dry															
	19-Jun-20	Dry															
	16-Jul-20	Dry															
	14-Aug-20	Dry															
	16-Sep-20	Dry															
	16-Oct-20	Dry															
	16-Nov-20	Dry															
	16-Dec-20	Dry															
	14-Jan-21	Dry															
	16-Feb-21	Dry															
	17-Mar-21	< 0.001	0.005	< 0.001	< 0.05	< 0.0001	0.001	0.002	< 0.001	0.62	< 0.001	0.11	< 0.0001	0.004	< 0.01	< 0.01	0.097
	22-Apr-21	0.001	0.005	< 0.001	< 0.05	< 0.0001	0.002	0.001	< 0.001	4.45	< 0.001	0.061	< 0.0001	0.003	< 0.01	< 0.01	0.095
	20-May-21	0.001	0.002	< 0.001	< 0.05	< 0.0001	0.001	0.002	0.028	1.99	< 0.001	0.016	< 0.0001	0.003	< 0.01	< 0.01	0.038
	18-Jun-21	< 0.001	0.004	< 0.001	< 0.05	0.0001	< 0.001	< 0.001	< 0.001	1.58	< 0.001	0.017	< 0.0001	0.001	< 0.01	< 0.01	0.058
SW3	22-Feb-19	0.003	0.075	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	4.84	< 0.001	0.033	< 0.0001	0.002	< 0.01	< 0.01	0.016
	14-Mar-19	0.006	0.08	< 0.001	< 0.05	< 0.0001	< 0.001	0.003	< 0.001	9.26	< 0.001	0.048	< 0.0001	0.002	< 0.01	< 0.01	0.009
	23-Apr-19	< 0.001	0.043	< 0.001	< 0.05	< 0.0001	< 0.001	0.003	0.001	2.01	< 0.001	0.046	< 0.0001	0.004	< 0.01	< 0.01	0.016
	16-May-19	< 0.001	0.034	< 0.001	< 0.05	< 0.0001	< 0.001	0.002	< 0.001	1.78	< 0.001	0.038	< 0.0001	0.003	< 0.01	< 0.01	0.012
	14-Jun-19	< 0.001	0.035	< 0.001	< 0.05	< 0.0001	0.001 *	0.003	< 0.001	1.68	< 0.001	0.038	< 0.0001	0.003	< 0.01	< 0.01	0.016
	16-Jul-19	< 0.001	0.055	< 0.001	< 0.05	< 0.0001	< 0.001	0.007	0.002	1.25	< 0.001	0.043	< 0.0001	0.006	< 0.01	< 0.01	0.029
	15-Aug-19	< 0.001	0.035	< 0.001	< 0.05	< 0.0001	< 0.001	0.003	0.002	1.16	< 0.001	0.036	< 0.0001	0.003	< 0.01	< 0.01	0.013
	16-Sep-19	< 0.001	0.045	< 0.001	< 0.05	< 0.0001	< 0.001	0.004	0.02	0.69	0.001	0.036	< 0.0001	0.017	< 0.01	< 0.01	0.094
	15-Oct-19	< 0.001	0.034	< 0.001	< 0.05	< 0.0001	< 0.001	0.005	0.002	1.7	< 0.001	0.027	< 0.0001	0.005	< 0.01	< 0.01	0.022
	18-Nov-19	< 0.001	0.031	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	< 0.001	2.6	< 0.001	0.026	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	17-Dec-19	<0.001	0.041	<0.001	<0.05	<0.0001	0.002	<0.001	0.003	1.42	<0.001	0.026	<0.0001	0.001	<0.01	<0.01	<0.005
	16-Jan-20	Dry															
	27-Feb-20	0.002	0.051	<0.001	<0.05	<0.0001	<0.001	0.006	0.008	6	<0.001	0.054	<0.0001	0.01	<0.01	<0.01	0.049
	26-Mar-20	0.001	0.041	<0.001	<0.05	<0.0001	<0.001	0.001	0.013	4.01	<0.001	0.035	<0.0001	0.006	<0.01	<0.01	0.033
	27-Apr-20	0.001	-	-	-	<0.0001	<0.001	-	0.006	4.01	0.003	0.034	<0.0001	-	-	-	0.031
	15-May-20	< 0.001	0.038	<0.001	<0.05	<0.0001	<0.001	0.001	0.02	0.87	<0.001	0.036	<0.0001	0.007	<0.01	<0.01	0.037
	19-Jun-20	<0.001	-	-	-	0.0001	<0.001	-	0.015	2.9	0.001	0.04	<0.0001	-	-	-	0.092
	16-Jul-20	<0.001	-	-	-	0.0001	0.001	-	0.006	1.6	<0.001	0.036	<0.0001	-	-	-	0.043
	14-Aug-20	< 0.001	0.024	< 0.001	< 0.05	<0.0001	<0.001	0.004	0.001	4.28	< 0.001	0.034	<0.0001	0.005	<0.01	<0.01	0.025
	16-Sep-20	< 0.001	0.034	< 0.001	< 0.05	< 0.0001	< 0.001	0.007	0.007	3.49	< 0.001	0.029	< 0.0001	0.007	< 0.01	< 0.01	0.031
	16-Oct-20	< 0.001	0.028	< 0.001	< 0.05	< 0.0001	< 0.001	0.004	0.003	7.09	< 0.001	0.027	< 0.0001	0.004	< 0.01	< 0.01	0.019
	16-Nov-20	< 0.001	0.029	< 0.001	< 0.05	< 0.0001	< 0.001	0.009	0.002	4.79	< 0.001	0.032	< 0.0001	0.009	< 0.01	< 0.01	0.03
	16-Dec-20	0.002	0.015	< 0.001	< 0.05	< 0.0001	0.001	0.002	0.005	16	< 0.001	0.023	< 0.0001	0.004	< 0.01	< 0.01	0.054
	14-Jan-21	0.002	0.015	< 0.001	< 0.05	< 0.0001	< 0.001	0.004	0.02	8.28	< 0.001	0.026	< 0.0001	0.01	< 0.01	< 0.01	0.025
	16-Feb-21	0.004	0.014	< 0.001	< 0.05	< 0.0001	0.002	0.003	0.001	11	< 0.001	0.015	< 0.0001	0.004	< 0.01	< 0.01	0.011
	17-Mar-21	0.004	0.013	< 0.001	< 0.05	< 0.0001	0.001	0.002	< 0.001	12	< 0.001	0.016	< 0.0001	0.003	< 0.01	< 0.01	0.007

Table SW2
Surface Water Analytical Data - Metals
Williamtown Sand Syndicate

Analyte		Metals															
		Arsenic**	Barium	Beryllium	Boron**	Cadmium**	Chromium**[1]	Cobalt	Copper**	Iron	Lead**	Manganese**	Mercury**[2]	Nickel**	Selenium**	Vanadium	Zinc**
LOR		0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.01	0.01	0.005
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[3]		0.001	0.08	-	0.14 (SW1)/ 0.05 (SW3 & SW4)	-	0.002	0.017	0.013	9.26	-	0.841 (SW1)/0.048 (SW3 & SW4)	-	0.022	-	-	0.535 (SW1) / 0.085 (SW3 & SW4)
NHMRC ADWG 2018		0.01	-	0.06	4	0.002	0.05	-	2	-	0.01	0.5	0.001	0.02	0.01	-	-
Sample Name	Sample Date																
SW4	22-Apr-21	**0.006**	**0.008**	< 0.001	< 0.05	< 0.0001	**0.003**	**0.006**	< 0.001	**28**	< 0.001	**0.026**	< 0.0001	**0.006**	< 0.01	< 0.01	**0.01**
	20-May-21	**0.005**	**0.006**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**25.4**	< 0.001	**0.024**	< 0.0001	**0.001**	< 0.01	< 0.01	< 0.005
	18-Jun-21	**0.001**	**0.003**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**10.5**	< 0.001	**0.024**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	22-Feb-19	Dry															
	14-Mar-19																
	23-Apr-19	< 0.001	**0.059**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.003**	**0.003**	**2.09**	< 0.001	**0.037**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.03**
	16-May-19	< 0.001	**0.047**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.002**	< 0.001	**1.12**	< 0.001	**0.03**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.019**
	14-Jun-19	< 0.001	**0.041**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.002**	**0.003**	**0.79**	< 0.001	**0.034**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.014**
	16-Jul-19	< 0.001	**0.044**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.002**	**0.002**	**0.96**	< 0.001	**0.043**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.014**
	15-Aug-19	< 0.001	**0.04**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.001**	**0.001**	**0.57**	< 0.001	**0.032**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.009**
	16-Sep-19	< 0.001	**0.046**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.002**	**0.02**	**0.7**	**0.001**	**0.039**	< 0.0001	**0.017**	< 0.01	< 0.01	**0.085**
	15-Oct-19	< 0.001	**0.037**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.002**	**0.004**	**0.66**	< 0.001	**0.031**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.018**
	18-Nov-19	< 0.001	**0.035**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**6.32**	< 0.001	**0.032**	< 0.0001	**0.002**	< 0.01	< 0.01	<0.005
	17-Dec-19	Dry															
	16-Jan-20																
	27-Feb-20	<0.001	**0.054**	<0.001	<0.05	<0.0001	<0.001	**0.002**	**0.018**	**2.52**	<0.001	**0.05**	<0.0001	**0.009**	<0.01	<0.01	**0.06**
	26-Mar-20	<0.001	**0.046**	<0.001	<0.05	<0.0001	<0.001	**0.001**	**0.007**	**1.97**	<0.001	**0.039**	<0.0001	**0.003**	<0.01	<0.01	**0.034**
	27-Apr-20	<0.001	**-**	-	-	<0.0001	<0.001	**-**	**0.017**	**1.82**	<0.001	**0.04**	<0.0001	**-**	-	-	**1.82**
	15-May-20	<0.001	**0.039**	<0.001	<0.05	<0.0001	<0.001	<0.001	**0.033**	**0.62**	<0.001	**0.038**	<0.0001	**0.005**	<0.01	<0.01	**0.038**
	19-Jun-20	<0.001	**-**	**-**	**-**	<0.0001	<0.001	**-**	**0.015**	**1.03**	**0.001**	**0.06**	<0.0001	**-**	**-**	**-**	**0.063**
	16-Jul-20	<0.001	**-**	**-**	**-**	<0.0001	**0.001**	**-**	**0.008**	**0.8**	<0.001	**0.059**	<0.0001	**-**	**-**	**-**	**0.043**
	14-Aug-20	< 0.001	**0.043**	< 0.001	< 0.05	<0.0001	<0.001	**0.007**	<0.001	**0.95**	< 0.001	**0.087**	<0.0001	**0.007**	<0.01	<0.01	**0.04**
	16-Sep-20	< 0.001	**0.041**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.004**	**0.005**	**0.97**	< 0.001	**0.053**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.02**
	16-Oct-20	< 0.001	**0.03**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.002**	**0.001**	**2.26**	< 0.001	**0.042**	< 0.0001	**0.003**	< 0.01	< 0.01	**0.007**
	16-Nov-20	< 0.001	**0.031**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.004**	**0.001**	**1.93**	< 0.001	**0.074**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.016**
	16-Dec-20	< 0.001	**0.017**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.001**	**0.002**	**32**	< 0.001	**0.035**	< 0.0001	**0.002**	< 0.01	< 0.01	< 0.005
	14-Jan-21	**0.002**	**0.028**	< 0.001	< 0.05	< 0.0001	**0.002**	**0.003**	**0.026**	**20**	< 0.001	**0.171**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.013**
	16-Feb-21	**0.003**	**0.02**	< 0.001	< 0.05	< 0.0001	**0.003**	**0.001**	< 0.001	**27**	< 0.001	**0.054**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.01**
	17-Mar-21	**0.002**	**0.02**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**16**	< 0.001	**0.057**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	22-Apr-21	**0.006**	**0.02**	< 0.001	< 0.05	< 0.0001	**0.004**	**0.002**	< 0.001	**33.9**	< 0.001	**0.062**	< 0.0001	**0.003**	< 0.01	< 0.01	< 0.005
	20-May-21	**0.002**	**0.015**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**10.1**	< 0.001	**0.073**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	18-Jun-21	< 0.001	**0.025**	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	**1.58**	< 0.001	**0.045**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.009**

Notes:
- - Not analysed
< - Less than laboratory limit of reporting
mg/L - Milligrams per litre
Bold indicates a detection above the laboratory limit of reporting
"*" denotes duplicate/triplicate sample result adopted for analytical use due to RPD >50%
RPD - Relative Percentage Difference

** 95% Level of protection in freshwater
[1] value for CR VI
[2] as inorganioc

Analyte		Perfluoroalkyl Sulfonic Acids						Perfluoroalkyl Carboxylic Acids												
		Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonate (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl-perfluorooctane sulfonamide (MeFOSA)
LOR		0.02	0.02	0.02	0.02	0.01	0.02	0.1	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.05	0.02	0.05
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NHMRC ADWG 2018		-	-	-	-	-	-	-	-	-	-	0.56	-	-	-	-	-	-	-	-
HEPA NEMP 2018***		-	-	-	-	0.01 [1]	-	-	-	-	-	19	-	-	-	-	-	-	-	-
HEPA NEMP 2018[4]		-	-	-	-	-	-	-	-	-	-	5.6	-	-	-	-	-	-	-	-
Sample Name	Sample Date																			
SW1	22-Feb-19																DRY			
	16-May-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Sep-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	18-Nov-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	27-Jan-20	< 0.02	< 0.02	< 0.02	< 0.02	**0.02**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	15-May-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	19-Jun-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Jul-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Nov-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	**0.01**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
SW2	22-Feb-19																			
	16-May-19																			
	16-Sep-19																			
	18-Nov-19																			
	16-Jan-20																			
	27-Feb-20																			
	15-May-20																			
	19-Jun-20																DRY			
	16-Jul-20																			
	14-Aug-20																			
	16-Sep-20																			
	16-Oct-20																			
	16-Nov-20																			
	16-Dec-20																			
	14-Jan-21																			
	16-Feb-21																			
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	22-Feb-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-May-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Sep-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	18-Nov-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
SW3	16-Jan-20																DRY			
	27-Feb-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	15-May-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	19-Jun-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Jul-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Nov-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Dec-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-May-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Sep-19	< 0.02	< 0.02	< 0.02	< 0.02	**0.03 [*]**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	25-Sep-19	< 0.02	< 0.02	< 0.02	< 0.02	**0.05**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	18-Nov-19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
SW4	16-Jan-20																DRY			
	27-Feb-20	< 0.02	< 0.02	< 0.02	< 0.02	**0.01**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	15-May-20	< 0.02	< 0.02	< 0.02	< 0.02	**0.01**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	19-Jun-20	< 0.02	< 0.02	< 0.02	< 0.02	**0.01**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Jul-20	< 0.02	< 0.02	< 0.02	< 0.02	<0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	14-Aug-20	< 0.02	< 0.02	< 0.02	< 0.02	**0.01**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Sep-20	< 0.02	< 0.02	< 0.02	< 0.02	**0.02**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Oct-20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Nov-20	< 0.02	< 0.02	**0.01 [3]**	< 0.02	**0.02**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Dec-20	**0.03 [3]**	**0.02 [3]**	**0.16 [3]**	< 0.02	**0.02**	< 0.02	< 0.1	**0.09 [3]**	**0.08 [3]**	**0.03 [3]**	**0.02 [3]**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	14-Jan-21	< 0.02	< 0.02	**0.03**	< 0.02	**0.04**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	**0.03**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	17-Mar-21	< 0.02	< 0.02	**0.02**	< 0.02	**0.02**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	22-Apr-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	20-May-21	< 0.02	< 0.02	< 0.02	< 0.02	**0.01**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05
	18-Jun-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05

Notes:

- - Not analysed
< - Less than laboratory limit of reporting
µg/L - Micrograms per litre
*** 99% Level of protection in freshwater
[1] Criteria is LOR
2- Denotes duplicate value used.
3- Denotes triplicate vbalue used.
[4] Recreation water

Analyte		Perfluoroalkyl Sulfonamides					(n:2) Fluorotelomer Sulfonic Acids				Sum of PFAS		
		N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS
LOR		0.05	0.05	0.05	0.02	0.02	0.05	0.05	0.05	0.05	0.01	0.01	0.01
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NHMRC ADWG 2018		-	-	-	-	-	-	-	-	-	0.07	-	-
HEPA NEMP 2018***		-	-	-	-	-	-	-	-	-	-	-	-
HEPA NEMP 2018[4]		-	-	-	-	-	-	-	-	-	0.7	-	-
Sample Name	Sample Date												
SW1	22-Feb-19												
	16-May-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Jan-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.02**	**0.02**	**0.02**
	15-May-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Jun-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW2	22-Feb-19												
	16-May-19												
	16-Sep-19												
	18-Nov-19												
	16-Jan-20												
	27-Feb-20												
	15-May-20												
	19-Jun-20												
	16-Jul-20												
	14-Aug-20												
	16-Sep-20												
	16-Oct-20												
	16-Nov-20												
	16-Dec-20												
	14-Jan-21												
	16-Feb-21												
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW3	22-Feb-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jan-20												
	27-Feb-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-May-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Jun-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4	16-May-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.03 ***	**0.01**	**0.01**
	25-Sep-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.05**	**0.05**	**0.05**
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jan-20												
	27-Feb-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	15-May-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	19-Jun-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	16-Jul-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<0.01	<0.01	<0.01
	14-Aug-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<0.01	<0.01	<0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.02**	**0.02**	**0.02**
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.55 [3]**	**0.8 [3]**	**0.82 [3]**
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.07**	**0.07**	**0.07**
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.03**	**0.03**	**0.03**
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.04**	**0.04**	**0.04**
	22-Apr-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	18-Jun-21	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

Notes:
- - Not analysed
< - Less than laboratory limit
µg/L - Micrograms per litre
*** 99% Level of protection i
[1] Criteria is LOR
2- Denotes duplicate value us
3- Denotes triplicate vbalue us
[4] Recreation water

Table SW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

	Analyte	Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Reactive phosphorus as P	Total Phosphorus
		Anions and Cations								
	LOR	1	1	1	1	1	1	0.1	0.01	0.01
	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline Trigger Values (KLF 2020)[1]		-	-	-	-	-	-	-	-	0.13
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-
Sample Name	Sample Date									
SW1	22-Feb-19									
	14-Mar-19									
	23-Apr-19	**94**	**34**	**52**	**6.0**	**310**	**95**	**0.5**	-	-
	16-May-19	**86**	**24**	**42**	**6.0**	**324**	**112**	**0.3**	< 0.01	**0.13**
	14-Jun-19	**77**	**20**	**34**	**5.0**	**182**	**112**	**0.4**	-	-
	16-Jul-19	**90**	**20**	**35**	**4.0**	**240**	**130**	**0.4**	-	-
	15-Aug-19	**97**	**18**	**32**	**4.0**	**212**	**134**	**0.4**	-	-
	16-Sep-19	**117**	**21**	**39**	**4.0**	**244**	**193**	**0.7**	< 0.01	**0.05**
	15-Oct-19	**124**	**16**	**31**	**3.0**	**127**	**191**	**0.6**	-	-
	18-Nov-19	**142**	**14**	**30**	**4.0**	**165**	**234**	**0.5**	< 0.01	**0.02**
	17-Dec-19									
	16-Jan-20									
	27-Feb-20	**56**	**34**	**10**	**8.0**	**73**	**64**	**0.4**	< 0.01	**0.17**
	26-Mar-20	**12**	**27**	**2**	**4.0**	**6.0**	**11**	<0.1	-	-
	27-Apr-20	**12**	**13**	**1**	**5.0**	**18**	**12**	**0.3**	-	-
	15-May-20	**9.0**	**18**	**1.0**	**3.0**	**29**	**8.0**	<0.1	**0.05**	**0.17**
	19-Jun-20	**7.0**	**21**	**1.0**	**2.0**	**8.0**	**7.0**	<0.1	-	-
	16-Jul-20	**7.0**	**16**	**1.0**	**2.0**	**6.0**	**7.0**	<0.1	-	-
	14-Aug-20	**6.0**	**8.0**	**2.0**	**2.0**	<10	**8.0**	<0.1	<0.01	**0.04**
	16-Sep-20	**9.0**	**16**	**3.0**	**3.0**	< 1.0	< 1.0	**0.1**	-	-
	16-Oct-20	**12**	**40**	**4.0**	**4.0**	< 1.0	**16**	**0.2**	-	-
	16-Nov-20	**8.0**	**13**	**2.0**	**3.0**	< 1.0	**10**	< 0.1	< 0.01	**0.03**
	16-Dec-20	**10**	**19**	**2.0**	**3.0**	**5.0**	**12**	**0.1**	-	-
	14-Jan-21	**10**	**18**	**2.0**	**3.0**	< 1.0	**13**	**0.1**	-	-
	16-Feb-21	**10**	**15**	**2.0**	**3.0**	< 1.0	**12**	**0.1**	< 0.01	**0.02**
	17-Mar-21	**10**	**15**	**2.0**	**2.0**	< 1.0	**13**	**0.1**	-	-
	22-Apr-21	**37**	**7.0**	**4.0**	**2.0**	< 10	**65**	**0.1**	-	-
	20-May-21	**32**	**6**	**3**	**2**	<10	**66**	<0.1	<0.05	<0.05
	18-Jun-21	**31**	**7**	**3**	**2**	< 1.0	**56**	<0.1	-	-
SW2	23-Apr-19									
	16-May-19									
	14-Jun-19									
	16-Jul-19									
	15-Aug-19									
	16-Sep-19									
	15-Oct-19									
	18-Nov-19									
	27-Feb-20									
	26-Mar-20									
	27-Apr-20									
	15-May-20									
	19-Jun-20									
	16-Jul-20									
	14-Aug-20									
	16-Sep-20									
	16-Oct-20									
	16-Nov-20									
	16-Dec-20									
	14-Jan-21									
	16-Feb-21									
	17-Mar-21	**12**	**2.0**	**2.0**	< 1.0	**6.0**	**16**	**0.2**	-	-
	22-Apr-21	**9.0**	**2.0**	**1.0**	< 1.0	< 10	**17**	< 0.1	-	-
	20-May-21	**11**	<1.0	<1.0	<1.0	**3**	**16**	<0.1	<0.01	**0.03**
	18-Jun-21	**11**	< 1.0	**2**	< 1.0	**8**	**20**	<0.1	-	-
SW3	22-Feb-19	**40**	**4.0**	**4.0**	**1.0**	**16**	**82**	<0.1	< 0.01	**0.06**
	14-Mar-19	**45**	**6.0**	**6.0**	**2.0**	**44**	**64**	< 0.1	-	-
	23-Apr-19	**37**	**8.0**	**6.0**	**1.0**	**42**	**53**	< 0.1	-	-
	16-May-19	**35**	**7.0**	**5.0**	< 1.0	**34**	**54**	< 0.1	< 0.01	< 0.01
	14-Jun-19	**32**	**7.0**	**6.0**	< 1.0	**41**	**55**	< 0.1	-	-
	16-Jul-19	**46**	**8.0**	**12**	< 1.0	**104**	**57**	**0.2**	-	-
	15-Aug-19	**38**	**6.0**	**7.0**	< 1.0	**54**	**56**	**0.1**	-	-
	16-Sep-19	**42**	**7.0**	**8.0**	< 1.0	**48**	**57**	**0.1**	< 0.01	< 0.01
	15-Oct-19	**40**	**5.0**	**7.0**	< 1.0	**42**	**57**	**0.2**	-	-
	18-Nov-19	**36**	**5.0**	**5.0**	< 1.0	**29**	**56**	< 0.1	< 0.01	**0.04**
	17-Dec-19	**40**	**4**	**7**	**1**	**25**	**57**	<0.1	-	-
	16-Jan-20									
	27-Feb-20	**38**	**8**	**8**	< 1.0	**73**	**56**	<0.1	< 0.01	**0.01**
	26-Mar-20	**34**	**4**	**6**	< 1.0	**50**	**49**	<0.1	-	-
	27-Apr-20	**35**	**4**	**5**	**1**	**38**	**47**	0.2	-	-
	15-May-20	**33**	**6**	**5**	**1**	**35**	**54**	<0.1	<0.01	<0.01
	19-Jun-20	**64**	**9**	**18**	< 1.0	**132**	**76**	**0.3**	-	-
	16-Jul-20	**52**	**5**	**14**	< 1.0	**110**	**63**	**0.2**	-	-
	14-Aug-20	**50**	<1	**11**	<1	**67**	**76**	<0.1	<0.01	<0.01
	16-Sep-20	**39**	**3.0**	**8.0**	< 1.0	**65**	**55**	**0.1**	-	-
	16-Oct-20	**40**	**4.0**	**6.0**	< 1.0	**40**	**63**	< 0.1	-	-
	16-Nov-20	**34**	**2.0**	**5.0**	< 1.0	**67**	**53**	< 0.1	< 0.01	< 0.01
	16-Dec-20	**36**	**1.0**	**5.0**	**1.0**	**27**	**61**	< 0.1	-	-
	14-Jan-21	**27**	< 1.0	**2.0**	< 1.0	**26**	**54**	< 0.1	-	-
	16-Feb-21	**30**	**2.0**	**3.0**	< 1.0	**21**	**56**	< 0.1	< 0.01	< 0.01
	17-Mar-21	**29**	< 1.0	**2.0**	< 1.0	**15**	**51**	< 0.1	-	-
	22-Apr-21	**31**	< 1.0	**4.0**	**1.0**	**18**	**54**	< 0.1	-	-
	20-May-21	**28**	**2**	**2**	**1**	<10	**41**	<0.1	<0.05	<0.05
	18-Jun-21	**28**	< 1.0	**2**	< 1.0	**14**	**47**	<0.1	-	-
SW4	22-Feb-19									
	14-Mar-19									
	23-Apr-19	**39**	**5.0**	**5.0**	< 1.0	**60**	**64**	**0.1**	-	-
	16-May-19	**41**	**5.0**	**5.0**	< 1.0	**41**	**59**	< 0.1	**0.01**	< 0.01
	14-Jun-19	**40**	**5.0**	**5.0**	< 1.0	**39**	**60**	< 0.1	-	-
	16-Jul-19	**46**	**7.0**	**7.0**	< 1.0	**67**	**56**	**0.2**	-	-
	15-Aug-19	**40**	**5.0**	**5.0**	< 1.0	**43**	**55**	**0.1**	-	-
	16-Sep-19	**45**	**7.0**	**6.0**	< 1.0	**45**	**58**	**0.1**	< 0.01	**0.01**
	15-Oct-19	**44**	**6.0**	**6.0**	< 1.0	**38**	**57**	**0.1**	-	-
	18-Nov-19	**41**	**4.0**	**5.0**	< 1.0	**41**	**64**	**0.2**	< 0.01	< 0.01
	17-Dec-19									
	16-Jan-20									
	27-Feb-20	**44**	**9.0**	**6.0**	**1.0**	**68**	**59**	<0.1	< 0.01	< 0.01
	26-Mar-20	**40**	**5.0**	**4.0**	1.0	**46**	**57**	<0.1	-	-
	27-Apr-20	**38**	**5.0**	**4.0**	1.0	**38**	**51**	**0.1**	-	-
	15-May-20	**41**	**5.0**	**4.0**	**2.0**	**41**	**61**	<0.1	<0.01	<0.01
	19-Jun-20	**59**	**12**	**9.0**	**1.0**	**84**	**69**	**0.3**	-	-
	16-Jul-20	**53**	**11**	**8.0**	**2.0**	**82**	**59**	**0.3**	-	-
	14-Aug-20	**47**	**10**	**10**	**2.0**	**82**	**70**	**0.3**	<0.01	<0.01
	16-Sep-20	**45**	**6.0**	**7.0**	< 1.0	**58**	**59**	**0.1**	-	-
	16-Oct-20	**43**	**5.0**	**5.0**	< 1.0	**40**	**67**	**0.1**	-	-
	16-Nov-20	**37**	**8.0**	**6.0**	**2.0**	**42**	**54**	**0.2**	< 0.01	< 0.01
	16-Dec-20	**43**	**4.0**	**4.0**	**2.0**	**24**	**70**	**0.2**	-	-
	14-Jan-21	**36**	**16**	**4.0**	**2.0**	**15**	**58**	**0.8**	-	-
	16-Feb-21	**37**	**6.0**	**4.0**	**2.0**	**14**	**61**	**0.3**	< 0.01	**0.03**
	17-Mar-21	**36**	**10**	**4.0**	**2.0**	**10**	**54**	**0.4**	-	-
	22-Apr-21	**32**	**4.0**	**4.0**	**2.0**	< 10	**56**	**0.2**	-	-
	20-May-21	**35**	**9**	**4**	**2**	**18**	**53**	**0.5**	<0.01	<0.01
	18-Jun-21	**34**	**4**	**4**	**1**	**23**	**57**	**0.2**	-	-

Notes:
- - Not analysed
< - Less than laboratory limit of reporting
LOR - Laboratory limit of reporting
mg/L - Milligrams per litre
µS/cm - Microsiemens per centimeter
Bold indicates a detection above the laboratory limit of reporting
[1] Baseline Water Quality Summary Report, September 2020 (KLF 2020)

Table SW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Ammonia as N	Total Nitrogen as N	Total Kjeldahl Nitrogen as N	Total Cations	Total Anions	Ionic Balance	Sodium Adsorption Ratio
0.01	0.01	0.01	0.01	0.1	0.1	0.01	0.01		0.01
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	-
-	-	-	0.25	1.8	-	-	-	-	-
3	50	-	-	-	-	-	-	-	-
				Dry					
-	-	-	-	-	-	10	9.13	5.6	-
< 0.01	< 0.01	< 0.01	< 0.01	1.8	1.8	8.94	9.9	5.13	2.45
-	-	-	-	-	-	7.27	6.95	2.28	-
-	-	-	-	-	-	7.9	8.66	4.64	-
-	-	-	-	-	-	7.85	8.19	2.12	-
< 0.01	0.02	0.02	< 0.01	1.2	1.2	9.45	11	5.38	3.49
-	-	-	-	-	-	8.82	8.03	4.68	-
< 0.01	< 0.01	< 0.01	0.03	1.1	1.1	9.45	10	3.03	4.91
				Dry					
<0.05	<0.05	<0.05	0.16	2.4	2.4	5.16	4.58	5.91	2.17
-	-	-	-	-	-	2.14	1.45	-	-
-	-	-	-	-	-	1.38	1.51	-	-
0.02	0.33	0.35	0.07	1.4	1.0	1.45	1.63	-	0.56
-	-	-	-	-	-	1.48	1.52		-
-	-	-	-	-	-	1.34	1.34		-
0.01	0.01	0.02	<0.1	0.7	0.7	0.88	0.64		0.49
-	-	-	-	-	-	1.51	1.1	-	-
-	-	-	-	-	-	2.95	2.69	-	-
< 0.01	0.04	0.04	< 0.01	0.6	0.6	1.24	1.12	-	0.54
-	-	-	-	-	-	1.62	1.68	-	-
-	-	-	-	-	-	1.57	1.46	-	-
< 0.01	< 0.01	< 0.01	< 0.01	0.5	0.5	1.42	1.36	-	0.64
-	-	-	-	-	-	1.4	1.26	-	-
-	-	-	-	-	-	2.34	1.83	-	-
<0.10	<0.10	<0.10	<0.01	1.3	1.3	1.99	1.70	-	2.66
-	-	-	-	-	-	2.00	2.22	-	-

Dry

-	-	-	-	-	-	0.79	0.58	-	-
-	-	-	-	-	-	0.57	0.58	-	-
<0.01	<0.01	<0.01	<0.01	0.7	0.7	0.48	0.60	-	2.63
-	-	-	-	-	-	0.64	0.73	-	-
< 0.01	< 0.01	< 0.01	0.16	1.0	1.0	2.55	2.87	-	3.38
-	-	-	-	-	-	2.8	2.8	-	-
-	-	-	-	-	-	2.53	2.37	-	-
< 0.01	< 0.01	< 0.01	< 0.01	0.1	0.1	2.28	2.25	-	2.47
-	-	-	-	-	-	2.24	2.4	-	-
-	-	-	-	-	-	3.39	3.77	5.38	-
-	-	-	-	-	-	2.53	2.7	-	-
< 0.01	< 0.01	< 0.01	0.01	0.1	0.1	2.83	2.61	-	2.57
-	-	-	-	-	-	2.56	2.48	-	-
< 0.01	0.01	0.01	0.03	0.6	0.6	2.23	2.18	-	2.72
-	-	-	-	-	-	2.54	2.25	-	-
				Dry					
< 0.01	0.1	0.1	0.02	0.3	0.2	2.71	3.1	-	2.27
-	-	-	-	-	-	2.39	2.42	-	-
-	-	-	-	-	-	2.16	2.12	-	-
<0.01	<0.01	<0.01	0.01	0.2	0.2	2.17	2.31		2.41
-	-	-	-	-	-	4.71	4.89	1.85	-
-	-	-	-	-	-	3.75	4.07	4.15	-
<0.01	0.07	0.07	0.01	0.3	0.2	3.08	3.54	6.93	3.19
-	-	-	-	-	-	3.12	2.9	3.5	-
-	-	-	-	-	-	2.73	2.61	-	-
< 0.01	< 0.01	< 0.01	< 0.01	0.3	0.3	2.6	2.89	-	2.92
-	-	-	-	-	-	2.05	2.3	-	-
-	-	-	-	-	-	1.82	2.06	-	-
< 0.01	< 0.01	< 0.01	< 0.01	0.5	0.5	1.65	2.02	-	3.13
-	-	-	-	-	-	1.43	1.75	-	-
-	-	-	-	-	-	1.7	1.96	-	-
<0.10	<0.10	<0.10	0.02	1.3	1.3	1.51	1.30	-	3.36
-	-	-	-	-	-	1.38	1.70	-	-
				Dry					
-	-	-	-	-	-	2.36	3.05	13	-
< 0.01	0.05	0.05	< 0.01	0.2	0.2	2.44	2.52	-	3.1
-	-	-	-	-	-	2.4	2.5	-	-
-	-	-	-	-	-	2.93	2.97	-	-
-	-	-	-	-	-	2.4	2.45	-	-
< 0.01	< 0.01	< 0.01	< 0.01	0.1	0.1	2.8	2.57	-	3.01
-	-	-	-	-	-	2.71	2.4	-	-
< 0.01	0.02	0.02	< 0.01	0.2	0.2	2.76	2.66	-	3.22
				Dry					
< 0.01	0.01	0.01	< 0.01	0.2	0.2	2.88	3.08	-	2.79
-	-	-	-	-	-	2.34	2.56	-	-
-	-	-	-	-	-	2.26	2.29	-	-
<0.01	0.01	0.01	<0.01	0.2	0.2	2.41	2.57	-	3.31
-	-	-	-	-	-	3.93	3.7	3.1	-
-	-	-	-	-	-	3.56	3.37	2.77	-
<0.01	0.02	0.02	0.01	0.4	0.4	3.42	3.68	3.72	2.51
-	-	-	-	-	-	2.83	2.87	-	-
-	-	-	-	-	-	2.53	2.72	-	-
< 0.01	< 0.01	< 0.01	< 0.01	0.1	0.1	2.55	2.4	-	2.41
-	-	-	-	-	-	2.45	2.79	-	-
-	-	-	-	-	-	3.74	2.69	-	-
< 0.01	< 0.01	< 0.01	0.02	1.2	1.2	2.29	2.15	-	2.87
-	-	-	-	-	-	2.44	2.25	-	-
-	-	-	-	-	-	1.97	2.04	-	-
<0.01	<0.01	<0.01	<0.01	0.6	0.6	2.35	2.33	-	2.44
-	-	-	-	-	-	2.03	2.09	-	-

Table SW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

Alkalinity					Inorganics			
Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3	Total Hardness as CaCO3	Electrical Conductivity @ 25°C*	Total Dissolved Solids	Total Dissolved Solids	pH
1	1	1	1	1	1	1	10	0.01
mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
-	-	-	-	-	125-2200	-	-	4-7
-	-	-	-	-	-	-	-	-
< 1.0	< 1.0	< 1.0	< 1.0	299	893	580	707	4.01
< 1.0	< 1.0	< 1.0	< 1.0	233	947	616	715	4.6
< 1.0	< 1.0	< 1.0	< 1.0	190	847	550	512	4.5
< 1.0	< 1.0	< 1.0	< 1.0	194	876	569	568	4.42
< 1.0	< 1.0	< 1.0	< 1.0	177	813	528	548	4.53
< 1.0	< 1.0	< 1.0	< 1.0	213	1,080	702	689	4.32
< 1.0	< 1.0	< 1.0	< 1.0	168	1,050	682	-	5.32
< 1.0	< 1.0	< 1.0	< 1.0	158	1,090	708	-	5.06
63	< 1.0	< 1.0	63	126	550	358	-	6.83
51	< 1.0	< 1.0	51	76	234	152	-	7.09
40	< 1.0	< 1.0	40	36	163	106	-	6.94
40			40	49	178	116		7.06
58	< 1.0	< 1.0	58	56	159	103	-	6.68
51	< 1.0	< 1.0	51	44	133	86	-	6.89
21	<1	<1	21	28	82	53	98	6.21
55	< 1.0	< 1.0	55	52	137	89	152	6.5
112	< 1.0	< 1.0	112	116	268	174	-	7.29
42	< 1.0	< 1.0	42	41	127	82	127	6.5
62	< 1.0	< 1.0	62	56	171	111	-	7.01
55	< 1.0	< 1.0	55	53	154	100	-	6.71
51	< 1.0	< 1.0	51	46	141	92	115	6.93
45	< 1.0	< 1.0	45	46	139	90	-	6.63
< 1.0	< 1.0	< 1.0	< 1.0	34	280	182	-	4.72
6	<1.0	<1.0	6	27	254	165	232	5.16
32	< 1.0	< 1.0	32	30	213	138	236	5.76

< 1.0	< 1.0	< 1.0	< 1.0	13	83	54	-	5.08
5.0	< 1.0	< 1.0	5.0	9.0	86	56	-	4.95
1	<1.0	<1.0	1	<1.0	82	53	71	4.96
< 1.0	< 1.0	< 1.0	< 1.0	8	89	58	54	4.51
11	< 1.0	< 1.0	11	26	262	228		6.21
4.0	< 1.0	< 1.0	4.0	40	344	224	279	5.42
< 1.0	< 1.0	< 1.0	< 1.0	45	220	143	190	5.2
1.0	< 1.0	< 1.0	1.0	38	271	176	300	5.24
< 1.0	< 1.0	< 1.0	< 1.0	42	300	195	170	4.58
< 1.0	< 1.0	< 1.0	< 1.0	69	451	293	246	4.47
< 1.0	< 1.0	< 1.0	< 1.0	44	338	220	192	4.47
< 1.0	< 1.0	< 1.0	< 1.0	50	374	243	201	4.3
< 1.0	< 1.0	< 1.0	< 1.0	41	383	249	-	4.75
< 1.0	< 1.0	< 1.0	< 1.0	33	278	181	-	5.39
6	<1	<1	6	39	301	196	-	5.75
< 1.0	< 1.0	< 1.0	< 1.0	53	437	284	-	4.6
< 1.0	< 1.0	< 1.0	< 1.0	35	326	212	-	4.87
< 1.0	< 1.0	< 1.0	< 1.0	30	321	209	-	4.87
3	< 1.0	< 1.0	3	36	294	191	-	5.12
< 1.0	< 1.0	< 1.0	< 1.0	96	573	372	-	4.56
< 1.0	< 1.0	< 1.0	< 1.0	70	509	331	-	4.56
<1	<1	<1	<1	45	469	305	255	4.46
< 1.0	< 1.0	< 1.0	< 1.0	40	402	261	224	4.41
< 1.0	< 1.0	< 1.0	< 1.0	35	333	216	-	4.15
< 1.0	< 1.0	< 1.0	< 1.0	26	460	299	201	3.95
1.0	< 1.0	< 1.0	1.0	23	303	197	-	4.8
< 1.0	< 1.0	< 1.0	< 1.0	8.0	301	196	-	4.06
< 1.0	< 1.0	< 1.0	< 1.0	17	273	177	172	4.15
< 1.0	< 1.0	< 1.0	< 1.0	8.0	237	154	-	4.65
3.0	< 1.0	< 1.0	3.0	16	297	193	-	4.94
7	<1.0	<1.0	7	13	231	150	132	5.76
4	< 1.0	< 1.0	4	8	196	127	120	5.27
< 1.0	< 1.0	< 1.0	< 1.0	33	293	190	198	4.0
< 1.0	< 1.0	< 1.0	< 1.0	33	331	215	288	4.08
< 1.0	< 1.0	< 1.0	< 1.0	33	316	205	163	4.31
< 1.0	< 1.0	< 1.0	< 1.0	46	367	238	207	4.46
< 1.0	< 1.0	< 1.0	< 1.0	33	308	200	160	4.48
< 1.0	< 1.0	< 1.0	< 1.0	42	360	234	208	4.35
< 1.0	< 1.0	< 1.0	< 1.0	40	365	237	-	4.48
< 1.0	< 1.0	< 1.0	< 1.0	30	348	226	-	4.48
< 1.0	< 1.0	< 1.0	< 1.0	47	479	311	-	3.82
< 1.0	< 1.0	< 1.0	< 1.0	29	346	245	-	5.29
3.0	< 1.0	< 1.0	3.0	29	336	218	-	5.54
<1.0	<1.0	<1.0	<1.0	29	322	212	-	4.67
< 1.0	< 1.0	<1	< 1.0	67	464	302	-	4.5
< 1.0	< 1.0	< 1.0	< 1.0	60	439	285	-	4.58
<1	<1	<1	<1	66	450	292	266	4.24
< 1.0	< 1.0	< 1.0	< 1.0	44	421	274	228	4.16
< 1.0	< 1.0	< 1.0	< 1.0	33	355	231	-	3.94
< 1.0	< 1.0	< 1.0	< 1.0	45	338	220	196	4.21
16	< 1.0	< 1.0	16	26	323	210	-	6.15
37	< 1.0	< 1.0	37	56	316	205	-	6.38
7.0	< 1.0	< 1.0	7.0	31	267	174	240	5.91
26	< 1.0	< 1.0	26	41	271	176	-	6.23
23	< 1.0	< 1.0	23	26	276	179	-	5.54
23	<1.0	<1.0	23	39	276	179	176	6.26
< 1.0	< 1.0	< 1.0	< 1.0	26	250	162	145	4.84

Table QC1
Quality Control Sample Analysis - BTEXN
Williamtown Sand Syndicate

Analyte			BTEXN								Total Petroleum Hydrocarbons	Total Petroleum Hydrocarbons - Silcia Clean up				Total Recoverable Hydrocarbons		Total Recoverable Hydrocarbons - Silcia Clean up				
			Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Total Xylenes	Naphthalene	Sum of BTEX	C_6 - C_9	C_{10}-C_{14} - Silica Cleanup	C_{15}-C_{28} - Silica Cleanup	C_{29}-C_{36} - Silica Cleanup	C_{10}-C_{36} Sum - Silica Cleanup	C_6 - C_{10}	C_6 - C_{10} minus BTEX (F1)	>C_{10}-C_{16} - Silica Cleanup	F2 - Silica Cleanup	>C_{16}-C_{34} - Silica Cleanup	>C_{34}-C_{40} - Silica Cleanup	>C_{10}-C_{40} - Silica Cleanup
Units			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Sample Name	Sample Date	Sample Type																				
TRIP BLANK_13022019	13-Feb-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE01_21022019	21-Feb-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH8_21022019	21-Feb-19	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
DUP01_21022019	21-Feb-19	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH8_21022019	21-Feb-19	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIP01_21022019	21-Feb-19	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	< 50	< 100	< 100	< 400	< 20	< 20	< 50	-	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK_130319	13-Mar-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
RINSATE02_140319	14-Mar-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH7_140319	14-Mar-19	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
DUP02_140319	14-Mar-19	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK_03	23-Apr-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
RINSATE_03	23-Apr-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIP BLANK_04	16-May-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
RINSATE_04	16-May-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIP BLANK 05_14062019	14-Jun-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE 05_14062019	14-Jun-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW3_14062019	14-Jun-19	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
DUP05_14062019	14-Jun-19	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW3_14062019	14-Jun-19	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIP05_140619	14-Jun-19	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	< 50	< 100	< 100	< 100	< 20	< 20	< 50	< 50	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK 06_16072019	16-Jul-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE06_16072019	16-Jul-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE07	15-Aug-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
TRIP BLANK 08_16092019	16-Sep-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE 08_16092019	16-Sep-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_16092019	16-Sep-19	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
DUP08_16092019	16-Sep-19	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_16092019	16-Sep-19	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIP08_16092019	16-Sep-19	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	< 50	< 100	< 100	< 400	< 20	< 20	< 50	-	< 100	< 100	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK_15102019	15-Oct-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE_15102019	15-Oct-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIPBLANK09_181119	18-Nov-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE09_181119	18-Nov-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_181119	18-Nov-19	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
DUP09_181119	18-Nov-19	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_181119	18-Nov-19	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIP09_18112019	18-Nov-19	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	< 50	< 100	< 100	< 100	< 20	< 20	< 50	-	< 100	< 100	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIPBLANK10_171219	17-Dec-19	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE10_171219	17-Dec-19	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RIP BLANK 13_2001333300	16-Jan-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE 13_2001333009	16-Jan-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH6_2001333004	16-Jan-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW12_2001333012	16-Jan-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH6_2001333004	16-Jan-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW13_14392	16-Jan-20	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	< 50	< 100	< 100	< 400	< 20	< 20	< 50	-	< 100	< 100	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK ES2006858013	27-Feb-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH6_2001333004	27-Feb-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Dup13_2001333012	27-Feb-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH6_2001333004	27-Feb-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIP13_2001333012	27-Feb-20	Triplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIPBLANK(QW5)	26-Mar-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE (QW4)	26-Mar-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH4_ES2010734004	26-Mar-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW1_ES2010734005	26-Mar-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_ES2010734004	26-Mar-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW2_S20-Ma47338	26-Mar-20	Triplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIPBLANK(QW10)	27-Apr-20	Trip Blank	< 1.0	**4.0**	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE (QW11)	27-Apr-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH4_ES2014254004	27-Apr-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	430	< 50	430	< 20	< 20	< 100	< 100	440	< 100	440
QW6_ES2014254005	27-Apr-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	600	< 50	600	< 20	< 20	< 100	< 100	700	< 100	700
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	**33%**	NC	**33%**	< 20	< 20	NC	NC	**45.61%**	NC	**45.60%**
BH4_ES2014254004	27-Apr-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	430	< 50	430	< 20	< 20	< 100	< 100	440	< 100	440
QW7_S20-Ap44317	27-Apr-20	Triplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	<20	70	200	<100	270	< 20	< 20	80	-	200	< 100	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	**94.74%**	**73.02%**	NC	**45.71%**	NC	NC	**46.15%**	NC	**75.00%**	NC	NC
TRIPBLANK(QW16)	15-May-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE (QW17)	15-May-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
BH4_ES2014254004	15-May-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW12_ES2014254005	15-May-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_ES2016918003	15-May-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW13_S20-Ap44317	15-May-20	Triplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-

Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH6_ES2010734011	15-May-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW14_ES2016918014	15-May-20	Triplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIPBLANK(QW18)	19-Jun-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE (QW19)	19-Jun-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIPBLANK(QW20)	16-Jul-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE (QW21)	16-Jul-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
TRIPBLANK(QW26)	14-Aug-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE (QW27)	14-Aug-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_ES2028606-012	14-Aug-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW22_ES2028606-013	14-Aug-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_ES2028606-012	14-Aug-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW23_S20-Au26274	14-Aug-20	Triplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW33_160920	16-Sep-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW32_160920	16-Sep-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_160920	16-Sep-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW28_160920	16-Sep-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW39_161020	16-Oct-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW38_161020	16-Oct-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_161020	16-Oct-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW34_161020	16-Oct-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_161020	16-Oct-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW35_16102020	16-Oct-20	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	-	< 50	< 100	< 100	< 100	-	-	< 50	-	< 100	< 100	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW39_161120	16-Nov-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW38_161120	16-Nov-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_161120	16-Nov-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW34_161120	16-Nov-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_161120	16-Nov-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW35_16112020	16-Nov-20	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	-	< 50	< 100	< 100	< 100	-	-	< 50	-	< 100	< 100	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW39_161220	16-Dec-20	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW38_161220	16-Dec-20	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_161220	16-Dec-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW34_161220	16-Dec-20	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_161220	16-Dec-20	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW35_16122020	16-Dec-20	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	< 50	< 100	< 100	< 100	< 20	< 20	< 50	-	< 100	< 100	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW39_140121	14-Jan-21	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW38_140121	14-Jan-21	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_140121	14-Jan-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW34_140121	14-Jan-21	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_140121	14-Jan-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW35_140121	14-Jan-21	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW38_160221	16-Feb-21	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW39_160221	16-Feb-21	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_160221	16-Feb-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW34_160221	16-Feb-21	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_160221	16-Feb-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW35_16022021	16-Feb-21	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW40_170321	17-Mar-21	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW41_170321	17-Mar-21	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW46_220421	22-Apr-21	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW47_220421	22-Apr-21	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_220421	22-Apr-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW42_220421	22-Apr-21	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_220421	22-Apr-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW43_220421	22-Apr-21	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK MAY_200521	20-May-21	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
RINSATE MAY_200521	20-May-21	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW4_200521	20-May-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW51_200521	20-May-21	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_200521	20-May-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW48_200521	20-May-21	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Trip Blank June_180621	18-Jun-21	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Rinsate June_180621	18-Jun-21	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
SW3_180621	18-Jun-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW52_180621	18-Jun-21	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW3_180621	18-Jun-21	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
QW53_180621	18-Jun-21	Triplicate	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 3.0	< 10	-	< 20	-	-	-	-	< 20	< 20	-	-	-	-	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Table QC2
Quality Control Sample Analysis - Metals
Williamtown Sand Syndicate

Analyte			Metals															
			Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium	Zinc
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date	Sample Type																
TRIP BLANK_13022019	13-Feb-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE01_21022019	21-Feb-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
BH8_21022019	21-Feb-19	Primary	< 0.001	0.011	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	< 0.001	4.1	< 0.001	0.012	< 0.0001	0.002	< 0.01	< 0.01	0.005
DUP01_21022019	21-Feb-19	Duplicate	0.001	0.014	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	< 0.001	4.09	< 0.001	0.012	< 0.0001	0.003	< 0.01	< 0.01	0.015
Relative Percentage Difference			**67%**	24%	NC	NC	NC	0%	NC	NC	0%	NC	0%	NC	40%	NC	NC	**100%**
BH8_21022019	21-Feb-19	Primary	< 0.001	0.011	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	< 0.001	4.1	< 0.001	0.012	< 0.0001	0.002	< 0.01	< 0.01	0.005
TRIP01_21022019	21-Feb-19	Triplicate	0.001	< 0.02	< 0.001	< 0.05	< 0.0002	< 0.005	< 0.001	< 0.001	4.5	< 0.001	0.012	< 0.0001	0.003	-	< 0.005	0.006
Relative Percentage Difference			**67%**	10%	NC	NC	NC	**86%**	NC	NC	9%	NC	0%	NC	40%	NC	NC	18%
TRIP BLANK_130319	13-Mar-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
TRIP BLANK02_150319	15-Mar-19	Trip Blank	< 0.001	0.002	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE02_140319	14-Mar-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
BH7_140319	14-Mar-19	Primary	< 0.001	0.01	< 0.001	< 0.05	< 0.0001	0.001	0.003	< 0.001	1.8	< 0.001	0.02	< 0.0001	0.004	< 0.01	< 0.01	0.009
DUP02_140319	14-Mar-19	Duplicate	< 0.001	0.01	< 0.001	< 0.05	< 0.0001	0.001	0.002	< 0.001	2.51	< 0.001	0.021	< 0.0001	0.004	< 0.01	< 0.01	0.007
Relative Percentage Difference			NC	0%	NC	NC	NC	0%	**40%**	NC	33%	NC	5%	NC	0%	NC	NC	25%
BH7_140319	14-Mar-19	Primary	< 0.001	0.01	< 0.001	< 0.05	< 0.0001	0.001	0.003	< 0.001	1.8	< 0.001	0.02	< 0.0001	0.004	< 0.01	< 0.01	0.009
TRIP02_14032019	14-Mar-19	Triplicate	< 0.001	< 0.02	< 0.001	< 0.05	< 0.0002	0.001	0.002	< 0.001	1.7	< 0.001	0.019	< 0.0001	< 0.001	-	< 0.005	< 0.005
Relative Percentage Difference			NC	0%	NC	NC	NC	0%	**40%**	NC	6%	NC	5%	NC	**156%**	NC	NC	**113%**
TRIP BLANK_03	23-Apr-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE_03	23-Apr-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
TRIP BLANK_04	16-May-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE_04	16-May-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
TRIP BLANK 05_14062019	14-Jun-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE 05_14062019	14-Jun-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW3_14062019	14-Jun-19	Primary	< 0.001	0.035	< 0.001	< 0.05	< 0.0001	< 0.001	0.003	< 0.001	1.68	< 0.001	0.038	< 0.0001	0.003	< 0.01	< 0.01	0.016
DUP05_14062019	14-Jun-19	Duplicate	< 0.001	0.036	< 0.001	< 0.05	< 0.0001	< 0.001	0.003	< 0.001	1.63	< 0.001	0.039	< 0.0001	0.003	< 0.01	< 0.01	0.013
Relative Percentage Difference			NC	3%	NC	NC	NC	NC	0%	NC	3%	NC	3%	NC	0%	NC	NC	21%
SW3_14062019	14-Jun-19	Primary	< 0.001	0.035	< 0.001	< 0.05	< 0.0001	< 0.001	0.003	< 0.001	1.68	< 0.001	0.038	< 0.0001	0.003	< 0.01	< 0.01	0.016
TRIP05_140619	14-Jun-19	Triplicate	< 0.001	-	-	-	< 0.0002	0.001	-	< 0.001	1.6	< 0.001	-	< 0.0001	0.003	-	-	0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	**67%**	NC	NC	5%	NC	NC	NC	0%	NC	NC	46%
TRIP BLANK 06_16072019	16-Jul-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE06_16072019	16-Jul-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE07	15-Aug-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
TRIP BLANK 08_16092019	16-Sep-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE 08_16092019	16-Sep-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_16092019	16-Sep-19	Primary	< 0.001	0.046	< 0.001	< 0.05	< 0.0001	< 0.001	0.002	0.02	0.7	0.001	0.039	< 0.0001	0.017	< 0.01	< 0.01	0.085
DUP08_16092019	16-Sep-19	Duplicate	< 0.001	0.041	< 0.001	< 0.05	< 0.0001	< 0.001	0.002	< 0.001	0.76	< 0.001	0.036	< 0.0001	0.003	< 0.01	< 0.01	0.012
Relative Percentage Difference			NC	11%	NC	NC	NC	NC	0%	**190%**	8%	**67%**	8%	NC	**140%**	NC	NC	**151%**
SW4_16092019	16-Sep-19	Primary	< 0.001	0.046	< 0.001	< 0.05	< 0.0001	< 0.001	0.002	0.02	0.7	0.001	0.039	< 0.0001	0.017	< 0.01	< 0.01	0.085
TRIP08_16092019	16-Sep-19	Triplicate	< 0.001	0.04	< 0.001	< 0.05	< 0.0002	< 0.001	0.002	< 0.001	0.69	< 0.001	0.037	< 0.0001	0.003	-	< 0.005	0.012
Relative Percentage Difference			NC	14%	NC	NC	NC	NC	0%	**190%**	1%	**67%**	5%	NC	**140%**	NC	NC	**151%**
TRIP BLANK_15102019	15-Oct-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE_15102019	15-Oct-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
TRIPBLANK09_181119	18-Nov-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE09_181119	18-Nov-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_181119	18-Nov-19	Primary	< 0.001	0.035	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	6.32	< 0.001	0.032	< 0.0001	0.002	< 0.01	< 0.01	< 0.005
DUP09_181119	18-Nov-19	Duplicate	< 0.001	0.034	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	5.9	< 0.001	0.036	< 0.0001	0.002	< 0.01	< 0.01	< 0.005
Relative Percentage Difference			NC	3%	NC	NC	NC	NC	NC	NC	7%	NC	12%	NC	0%	NC	NC	NC
SW4_181119	18-Nov-19	Primary	< 0.001	0.035	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	0.001	6.32	< 0.001	0.032	< 0.0001	0.002	< 0.01	< 0.01	< 0.005
TRIP09_18112019	18-Nov-19	Triplicate	< 0.001	0.04	< 0.001	< 0.05	< 0.0002	< 0.001	< 0.001	0.01	-	< 0.001	0.035	< 0.0001	0.007	-	< 0.005	0.033
Relative Percentage Difference			NC	13%	NC	NC	NC	NC	NC	2%	NC	NC	9%	NC	**111%**	NC	NC	**172%**
TRIPBLANK10_171219	17-Dec-19	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE10_171219	17-Dec-19	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RIP BLANK 13_200133300	16-Jan-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE 13_2001333009	16-Jan-20	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
BH6_2001333004	16-Jan-20	Primary	<0.001	0.032	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	2.15	<0.001	0.01	<0.0001	<0.001	<0.01	<0.01	<0.005
QW12_2001333012	16-Jan-20	Duplicate	<0.001	0.035	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	2.18	<0.001	0.009	<0.0001	0.001	<0.01	<0.01	<0.005
Relative Percentage Difference			NC	9%	NC	NC	NC	NC	NC	NC	1%	NC	11%	NC	**67%**	NC	NC	NC
BH6_2001333004	16-Jan-20	Primary	<0.001	0.032	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	2.15	<0.001	0.01	<0.0001	<0.001	<0.01	<0.01	<0.005
QW13_14392	16-Jan-20	Triplicate	< 0.001	0.03	< 0.001	< 0.05	< 0.0002	< 0.001	< 0.001	0.004	1.6	< 0.001	0.009	< 0.0001	< 0.001	-	< 0.005	0.012
Relative Percentage Difference			NC	6%	NC	NC	NC	NC	NC	**156%**	29%	NC	11%	NC	NC	NC	NC	**131%**
TRIPBLANK(QW5)	26-Mar-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE (QW4)	26-Mar-20	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
BH4_ES2010734004	26-Mar-20	Primary	<0.001	0.010	<0.001	<0.05	<0.0001	<0.001	<0.001	0.002	0.20	<0.001	0.014	<0.0001	0.002	<0.01	<0.01	0.024
QW1_ES2010734005	26-Mar-20	Duplicate	<0.001	0.009	<0.001	<0.05	<0.0001	<0.001	<0.001	< 0.001	0.28	<0.001	0.016	<0.0001	0.001	<0.01	<0.01	0.007
Relative Percentage Difference			NC	10.53%	NC	NC	NC	NC	NC	**66.70%**	**33.33%**	NC	13.33%	NC	**67.66%**	NC	NC	**109.68%**
BH4_ES2010734004	26-Mar-20	Primary	<0.001	0.010	<0.001	<0.05	<0.0001	<0.001	<0.001	0.002	0.20	<0.001	0.014	<0.0001	0.002	<0.01	<0.01	0.024
QW2_S20-Ma47338	26-Mar-20	Triplicate	<0.001	0.03	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	0.27	<0.001	0.016	<0.0001	<0.001	0.006	<0.01	0.029
Relative Percentage Difference			NC	**100%**	NC	NC	NC	NC	NC	**120%**	29.79%	NC	13.33%	NC	**120%**	18.18%	NC	18.87%
TRIPBLANK(QW10)	27-Apr-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE (QW11)	27-Apr-20	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.008**	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
BH4_ES2014254004	27-Apr-20	Primary	<0.001	-	-	-	<0.0001	<0.001	-	0.006	0.22	<0.001	0.026	<0.0001	-	-	-	0.018
QW6_ES2014254005	27-Apr-20	Duplicate	<0.001	-	-	-	<0.0001	<0.001	-	0.011	0.14	<0.001	0.018	<0.0001	-	-	-	0.029
Relative Percentage Difference			NC	-	-	-	NC	NC	-	**58.80%**	**67%**	NC	**36.36%**	NC	-	-	-	**47%**
BH4_ES2014254004	27-Apr-20	Primary	<0.001	-	-	-	<0.0001	<0.001	-	0.006	0.22	<0.001	-	<0.0001	-	-	-	0.018
QW7_S20-Ap44317	27-Apr-20	Triplicate	<0.001	-	-	-	0.0003	<0.001	-	<0.001	0.22	<0.001	-	<0.0001	-	-	-	<0.005
Relative Percentage Difference			NC	-	-	-	**143%**	NC	-	**169%**	NC	NC	-	NC	-	-	-	**198%**
TRIPBLANK(QW17)	15-May-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	**0.002**	-	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE (QW16)	15-May-20	Rinsate	< 0.001	**0.001**	< 0.001	< 0.05	< 0.0001	< 0.001	<0.001	**0.005**	< 0.05	< 0.001	**0.002**	< 0.0001	< 0.001	< 0.01	< 0.01	**0.012**
BH4_ES2014254004	15-May-20	Primary	<0.001	0.012	<0.001	<0.05	<0.0001	<0.001	<0.001	0.052	0.13	<0.001	0.019	<0.0001	0.004	<0.01	<0.01	0.037
QW12_ES2014254005	15-May-20	Duplicate	<0.001	0.011	<0.001	<0.05	<0.0001	<0.001	<0.001	0.054	0.16	<0.001	0.023	<0.0001	0.001	<0.01	<0.01	0.008
Relative Percentage Difference			NC	8.70%	NC	NC	NC	NC	NC	3.80%	20.70%	NC	**19.05%**	NC	**120%**	NC	NC	**129%**
BH4_ES2016918003	15-May-20	Primary	<0.001	0.012	<0.001	<0.05	<0.0001	<0.001	<0.001	0.052	0.13	<0.001	0.019	<0.0001	0.004	<0.01	<0.01	0.037
QW13_S20-Ap44317	15-May-20	Triplicate	<0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	0.048	-	0.002	0.021	<0.0001	0.001	<0.01	<0.01	0.009
Relative Percentage Difference			NC	**184%**	NC	NC	NC	NC	NC	8%	NC	**120%**	10%	NC	**120%**	NC	NC	**122%**
BH6_ES2010734011	15-May-20	Primary	<0.001	0.045	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	1.89	<0.001	0.01	<0.0001	<0.001	<0.01	<0.01	0.007
QW14_ES2016918014	15-May-20	Duplicate	<0.001	0.044	<0.001	<0.05	<0.0001	<0.001	<0.001	0.014	1.73	<0.001	0.012	<0.0001	0.002	<0.01	<0.01	0.044
Relative Percentage Difference			NC	**2.25%**	NC	NC	NC	NC	NC	**142.11%**	**8.84%**	NC	**18.18%**	NC	**120.00%**	NC	**NC**	**145.10%**
TRIPBLANK(QW18)	19-Jun-29	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE (QW19)	19-Jun-29	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
Rinsate (QW20)	16-Jul-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
Trip Blank (QW21)	16-Jul-20	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
TRIPBLANK(QW26)	14-Aug-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
RINSATE (QW27)	14-Aug-20	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_ES2028606-012	14-Aug-20	Primary	< 0.001	0.043	< 0.001	< 0.05	<0.0001	<0.001	0.007	<0.001	0.95	< 0.001	0.087	<0.0001	0.007	<0.01	<0.01	0.04
QW22_ES2028606-013	14-Aug-20	Duplicate	<0.001	0.044	<0.001	<0.05	<0.0001	<0.001	0.006	<0.001	0.98	<0.001	0.089	<0.0001	0.007	<0.01	<0.01	0.039
Relative Percentage Difference			NC	2.30%	NC	NC	NC	NC	15.38%	NC	3.11%	NC	2%	NC	0%	NC	NC	3%
SW4_ES2028606-012	14-Aug-20	Primary	< 0.001	0.043	< 0.001	< 0.05	<0.0001	<0.001	0.007	<0.001	0.95	< 0.001	0.087	<0.0001	0.007	<0.01	<0.01	0.04
QW23_S20-Au26274	14-Aug-20	Triplicate	0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	0.007	0.011	1.1	0.002	0.094	<0.0001	0.007	<0.01	<0.01	0.051
Relative Percentage Difference			**66%**	**195%**	NC	NC	NC	NC	NC	**167%**	15%	**120%**	8%	NC	NC	NC	NC	24%
QW33_160920	16-Sep-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
QW32_160920	16-Sep-20	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_160920	16-Sep-20	Primary	< 0.001	0.041	< 0.001	< 0.05	< 0.0001	< 0.001	0.004	0.005	0.97	< 0.001	0.053	< 0.0001	0.005	< 0.01	< 0.01	0.02
QW28_160920	16-Sep-20	Duplicate	< 0.001	0.042	< 0.001	< 0.05	< 0.0001	< 0.001	0.004	0.006	0.97	< 0.001	0.054	< 0.0001	0.005	< 0.01	< 0.01	0.024
Relative Percentage Difference			NC	2%	NC	NC	NC	NC	0%	18%	0%	NC	2%	NC	0%	NC	NC	18%
SW4_160920	16-Sep-20	Primary	< 0.001	0.041	< 0.001	< 0.05	< 0.0001	< 0.001	0.004	0.005	0.97	< 0.001	0.053	< 0.0001	0.005	< 0.01	< 0.01	0.02
QW29_16092020	16-Sep-20	Triplicate	< 0.001	0.04	< 0.001	0.09	< 0.0002	< 0.001	0.004	0.001	0.93	< 0.001	0.053	< 0.0001	0.003	< 0.001	< 0.005	0.017
Relative Percentage Difference			NC	2%	NC	**57%**	NC	NC	0%	**133%**	4%	NC	0%	NC	**50%**	NC	NC	16%
QW39_161020	16-Oct-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
QW38_161020	16-Oct-20	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_161020	16-Oct-20	Primary	< 0.001	0.03	< 0.001	< 0.05	< 0.0001	< 0.001	0.002	0.001	2.26	< 0.001	0.042	< 0.0001	0.003	< 0.01	< 0.01	0.007
QW34_161020	16-Oct-20	Duplicate	< 0.001	0.028	< 0.001	< 0.05	< 0.0001	< 0.001	0.002	< 0.001	2.32	< 0.001	0.039	< 0.0001	0.002	< 0.01	< 0.01	< 0.005
Relative Percentage Difference			NC	7%	NC	NC	NC	NC	0%	0%	3%	NC	7%	NC	40%	NC	NC	33%
SW4_161020	16-Oct-20	Primary	< 0.001	0.03	< 0.001	< 0.05	< 0.0001	< 0.001	0.002	0.001	2.26	< 0.001	0.042	< 0.0001	0.003	< 0.01	< 0.01	0.007
QW35_16102020	16-Oct-20	Triplicate	< 0.001	0.03	< 0.001	< 0.05	< 0.0002	< 0.001	0.003	< 0.001	2.2	< 0.001	0.045	< 0.0001	0.003	-	< 0.005	0.006
Relative Percentage Difference			NC	0%	NC	NC	NC	NC	40%	0%	3%	NC	7%	NC	0%	NC	NC	15%
QW39_161120	16-Nov-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
QW38_161120	16-Nov-20	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_161120	16-Nov-20	Primary	< 0.001	0.031	< 0.001	< 0.05	< 0.0001	< 0.001	0.004	0.001	1.93	< 0.001	0.074	< 0.0001	0.005	< 0.01	< 0.01	0.016
QW34_161120	16-Nov-20	Duplicate	< 0.001	0.031	< 0.001	< 0.05	< 0.0001	< 0.001	0.004	< 0.001	1.77	< 0.001	0.071	< 0.0001	0.005	< 0.01	< 0.01	0.016
Relative Percentage Difference			NC	0%	NC	NC	NC	NC	0%	0%	9%	NC	4%	NC	0%	NC	NC	0%
SW4_161120	16-Nov-20	Primary	< 0.001	0.031	< 0.001	< 0.05	< 0.0001	< 0.001	0.004	0.001	1.93	< 0.001	0.074	< 0.0001	0.005	< 0.01	< 0.01	0.016
QW35_16112020	16-Nov-20	Triplicate	< 0.001	0.03	< 0.001	< 0.05	< 0.0002	< 0.001	0.004	< 0.001	2.2	< 0.001	0.074	< 0.0001	0.005	-	< 0.005	0.015
Relative Percentage Difference			NC	3%	NC	NC	NC	NC	0%	0%	13%	NC	0%	NC	0%	NC	NC	6%
QW38_161220	16-Dec-20	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
QW39_161220	16-Dec-20	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_161220	16-Dec-20	Primary	< 0.001	0.017	< 0.001	< 0.05	< 0.0001	0.002	0.001	0.002	32	< 0.001	0.035	< 0.0001	0.002	< 0.01	< 0.01	< 0.005
QW34_161220	16-Dec-20	Duplicate	0.001	0.017	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	38	< 0.001	0.035	< 0.0001	0.001	< 0.01	< 0.01	< 0.005
Relative Percentage Difference			**66.67%**	0%	NC	NC	NC	0%	**67%**	**67%**	17%	NC	0%	NC	**67%**	NC	NC	NC
SW4_161220	16-Dec-20	Primary	< 0.001	0.017	< 0.001	< 0.05	< 0.0001	0.002	0.001	0.002	32	< 0.001	0.035	< 0.0001	0.002	< 0.01	< 0.01	< 0.005
QW35_16122020	16-Dec-20	Triplicate	0.001	< 0.02	0.001	< 0.05	< 0.0002	0.002	0.002	< 0.001	34	< 0.001	0.034	< 0.0001	0.002	< 0.001	< 0.005	< 0.005
Relative Percentage Difference			**66.67%**	16%	**66.67%**	NC	NC	0%	**67%**	**67%**	6%	NC	3%	NC	0%	NC	NC	NC
QW39_140121	14-Jan-21	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
QW38_140121	14-Jan-21	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_140121	14-Jan-21	Primary	0.002	0.028	< 0.001	< 0.05	< 0.0001	0.002	0.003	0.026	20	< 0.001	0.171	< 0.0001	0.005	< 0.01	< 0.01	0.013
QW34_140121	14-Jan-21	Duplicate	0.001	0.028	< 0.001	< 0.05	< 0.0001	< 0.001	0.003	< 0.001	22	< 0.001	0.176	< 0.0001	0.002	< 0.01	< 0.01	< 0.005
Relative Percentage Difference			**67%**	0%	NC	NC	NC	**67%**	0%	**185%**	11%	NC	3%	NC	**86%**	NC	NC	**89%**
SW4_140121	14-Jan-21	Primary	0.002	0.028	< 0.001	< 0.05	< 0.0001	0.002	0.003	0.026	20	< 0.001	0.171	< 0.0001	0.005	< 0.01	< 0.01	0.013
QW35_140121	14-Jan-21	Triplicate	0.002	0.03	< 0.001	< 0.05	< 0.0002	0.002	0.004	< 0.001	25	< 0.001	0.19	< 0.0001	0.004	-	< 0.005	< 0.005
Relative Percentage Difference			0%	7%	NC	NC	NC	0%	29%	**185%**	22%	NC	11%	NC	22%	NC	NC	**89%**
QW38_160221	16-Feb-21	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
QW39_160221	16-Feb-21	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_160221	16-Feb-21	Primary	0.003	0.02	< 0.001	< 0.05	< 0.0001	0.003	0.001	< 0.001	27	< 0.001	0.054	< 0.0001	0.002	< 0.01	< 0.01	0.01
QW34_160221	16-Feb-21	Duplicate	0.003	0.019	< 0.001	< 0.05	< 0.0001	0.004	0.001	< 0.001	27	< 0.001	0.054	< 0.0001	0.002	< 0.01	< 0.01	0.008
Relative Percentage Difference			0%	5%	NC	NC	NC	29%	0%	NC	0%	NC	0%	NC	0%	NC	NC	22%
SW4_160221	16-Feb-21	Primary	0.003	0.02	< 0.001	< 0.05	< 0.0001	0.003	0.001	< 0.001	27	< 0.001	0.054	< 0.0001	0.002	< 0.01	< 0.01	0.01
QW35_16022021	16-Feb-21	Triplicate	0.004	< 0.02	< 0.001	< 0.05	< 0.0002	0.003	0.002	0.002	32	< 0.001	0.065	< 0.0001	< 0.001	-	0.012	0.005
Relative Percentage Difference			29%	0%	NC	NC	NC	0%	**67%**	**67%**	17%	NC	18%	NC	**67%**	NC	18%	**67%**
QW40_170321	17-Mar-21	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
QW41_170321	17-Mar-21	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
QW46_220421	22-Apr-21	Trip Blank	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
QW47_220421	22-Apr-21	Rinsate	< 0.001	< 0.001	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
SW4_220421	22-Apr-21	Primary	0.006	0.02	< 0.001	< 0.05	< 0.0001	0.004	0.002	< 0.001	34	< 0.001	0.062	< 0.0001	0.003	< 0.01	< 0.01	< 0.005
QW42_220421	22-Apr-21	Duplicate	0.005	0.02	< 0.001	< 0.05	< 0.0001	0.003	0.002	< 0.001	34	< 0.001	0.064	< 0.0001	0.003	< 0.01	< 0.01	< 0.005
Relative Percentage Difference			18.18%	0%	NC	NC	NC	29%	0%	NC	0%	NC	3%	NC	0%	NC	NC	NC

Table QC2
Quality Control Sample Analysis - Metals
Williamtown Sand Syndicate

SW4_220421	22-Apr-21	Primary	0.006	0.02	< 0.001	< 0.05	< 0.0001	0.004	0.002	< 0.001	34	< 0.001	0.062	< 0.0001	0.003	< 0.01	< 0.01	< 0.005
QW43_220421	22-Apr-21	Triplicate	0.006	0.02	< 0.001	0.07	< 0.0002	0.004	0.003	< 0.001	44	< 0.001	0.074	< 0.0001	0.002	-	< 0.005	< 0.005
Relative Percentage Difference			0%	0%	NC	**95%**	NC	0%	**40%**	NC	26%	NC	18%	NC	**40%**	NC	NC	NC
TRIP BLANK MAY_200521	20-May-21	Trip Blank	<0.001	<0.001	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.01	<0.01	<0.005
RINSATE MAY_200521	20-May-21	Rinsate	<0.001	<0.001	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.01	<0.01	<0.005
SW4_200521	20-May-21	Primary	0.002	0.015	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	10.1	<0.001	0.073	<0.0001	<0.001	<0.01	<0.01	<0.005
QW51_200521	20-May-21	Duplicate	0.001	0.016	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	9.85	<0.001	0.083	<0.0001	<0.001	<0.01	<0.01	<0.005
Relative Percentage Difference			**67%**	6%	NC	NC	NC	NC	NC	NC	3%	NC	13%	NC	NC	NC	NC	NC
SW4_200521	20-May-21	Primary	0.002	0.015	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	10.1	<0.001	0.073	<0.0001	<0.001	<0.01	<0.01	<0.005
QW48_200521	20-May-21	Triplicate	0.001	<0.02	<0.001	0.11	<0.0002	<0.001	<0.001	<0.001	9.1	<0.001	0.068	<0.0001	<0.001	-	<0.005	<0.005
Relative Percentage Difference			**67%**	**40%**	NC	**126%**	NC	NC	NC	NC	10%	NC	7%	NC	NC	NC	NC	NC
Trip Blank June_180621	18-Jun-21	Trip Blank	<0.001	<0.001	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.01	<0.01	<0.005
Rinsate June_180621	18-Jun-21	Rinsate	<0.001	<0.001	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.01	<0.01	<0.005
SW3_180621	18-Jun-21	Primary	0.001	0.003	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	10.5	<0.001	0.024	<0.0001	<0.001	<0.01	<0.01	<0.005
QW52_180621	18-Jun-21	Duplicate	<0.001	0.004	<0.001	<0.05	<0.0001	0.001	<0.001	<0.001	10.6	<0.001	0.027	<0.0001	<0.001	<0.01	<0.01	<0.005
Relative Percentage Difference			**67%**	29%	NC	NC	NC	**67%**	NC	NC	1%	NC	12%	NC	NC	NC	NC	NC
SW3_180621	18-Jun-21	Primary	0.001	0.003	<0.001	<0.05	<0.0001	<0.001	<0.001	<0.001	10.5	<0.001	0.024	<0.0001	<0.001	<0.01	<0.01	<0.005
QW53_180621	18-Jun-21	Triplicate	0.002	<0.02	<0.001	<0.05	<0.0002	0.002	<0.001	0.002	10	0.001	0.024	<0.0001	<0.001	-	0.02	0.006
Relative Percentage Difference			**67%**	**108%**	NC	NC	NC	**120%**	NC	**120%**	10%	**67%**	0%	NC	NC	NC	**120%**	**82.35%**

Table QC3
Quality Control Sample Analysis - PFAS
Williamtown Sand Syndicate

Analyte			Perfluoroalkyl Sulfonic Acids						Perfluoroalkyl Carboxylic Acids											Perfluoroalkyl Sulfonamides							(n:2) Fluorotelomer Sulfonic Acids				Sum of PFAS		
			Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonate (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl-perfluorooctane sulfonamide (MeFOSA)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS
Units			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Sample Name	Sample Date	Sample Type																															
TRIP BLANK_13022019	13-Feb-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE01_21022019	21-Feb-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH8_21022019	21-Feb-19	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
DUP01_21022019	21-Feb-19	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH8_21022019	21-Feb-19	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP01_21022019	21-Feb-19	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK_130319	13-Mar-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP BLANK02_150319	15-Mar-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE02_140319	14-Mar-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH7_140319	14-Mar-19	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
DUP02_140319	14-Mar-19	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH7_140319	14-Mar-19	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP02_14032019	14-Mar-19	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK 03	23-Apr-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE 03	23-Apr-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP BLANK 04	16-May-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE 04	16-May-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP BLANK 05_14062019	14-Jun-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE 05_14062019	14-Jun-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP BLANK 06_16072019	16-Jul-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE06_16072019	16-Jul-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE07	15-Aug-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP BLANK 08_16092019	16-Sep-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE 08_16092019	16-Sep-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_16092019	16-Sep-19	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
DUP08_16092019	16-Sep-19	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
Relative Percentage Difference			NC	NC	NC	NC	0%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0%	0%	0%
SW4_16092019	16-Sep-19	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
TRIP08_16092019	16-Sep-19	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	0.03	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	**100%**	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	**100%**	**86%**	**133%**
TRIP BLANK 09_1931069	25-Sep-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE 09_1931069	25-Sep-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIPBLANK09_181119	18-Nov-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE09_181119	18-Nov-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_181119	18-Nov-19	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
DUP09_181119	18-Nov-19	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_181119	18-Nov-19	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP09_18112019	18-Nov-19	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIPBLANK10_171219	17-Dec-19	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE10_171219	17-Dec-19	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP BLANK 13_2001333008	16-Jan-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE 13_2001333009	16-Jan-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH6_2001333004	16-Jan-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW12_2001333012	16-Jan-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH6_2001333004	16-Jan-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW13_14392	16-Jan-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK ES2006858013	27-Feb-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH6_2001333004	27-Feb-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIP13_2001333012	27-Feb-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIPBLANK(QW5)	26-Mar-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE (QW4)	26-Mar-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4_ES2010734004	26-Mar-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW1_ES2010734005	26-Mar-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_ES2010734004	26-Mar-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW2_S20-Ma47338	26-Mar-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH6_ES2010734011	26-Mar-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW3_S20-Ma47339	26-Mar-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIPBLANK(QW10)	27-Apr-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE (QW11)	27-Apr-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	**0.01**	< 0.02	**0.4**	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.01**	**0.41**	**0.41**
BH4_ES2014254004	27-Apr-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW6_ES2014254005	27-Apr-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_ES2014254004	27-Apr-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW7_S20-Ap44317	27-Apr-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH6_ES2010734011	27-Apr-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW8_ES2014254012	27-Apr-20	Duplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH6_ES2010734011	27-Apr-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW9_S20-Ap44318	27-Apr-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIPBLANK(QW16)	15-May-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE (QW17)	15-May-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4_ES2014254004	15-May-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW12_ES2014254005	15-May-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_ES2016918003	15-May-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW13_S20-Ap44317	15-May-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH6_ES2010734011	15-May-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW14_ES2016918014	15-May-20	Duplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH6_ES2010734011	15-May-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW15_S20-My28879	15-May-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIPBLANK(QW18)	19-Jun-29	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE (QW19)	19-Jun-29	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIPBLANK(QW20)	16-Jul-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE (QW21)	16-Jul-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
TRIPBLANK(QW26)	14-Aug-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE (QW27)	14-Aug-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_ES2028606-012	14-Aug-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW22_ES2028606-013	14-Aug-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	**0.01**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
Relative Percentage Difference			NC	NC	NC	NC	**66.67%**	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	**66.67%**	**66.67%**	**66.67%**
SW4_ES2028606-012	14-Aug-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW23_S20-Au26274	14-Aug-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_ES2028606-003	14-Aug-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW24_ES2028606-014	14-Aug-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_ES2028606-003	14-Aug-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW25_S20-Au26275	14-Aug-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW33_160920	16-Sep-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW32_160920	16-Sep-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_160920	16-Sep-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW28_160920	16-Sep-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	**0.02**	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.02	0.02	0.02
Relative Percentage Difference			NC	NC	NC	NC	**67%**	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	**67%**	**67%**	**67%**
SW4_160920	16-Sep-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW29_16092020	16-Sep-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW39_161020	16-Oct-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW38_161020	16-Oct-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_161020	16-Oct-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW34_161020	16-Oct-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SW4_161020	16-Oct-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW35_16102020	16-Oct-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_161020	16-Oct-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW36_161020	16-Oct-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_161020	16-Oct-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW37_16102020	16-Oct-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW39_161120	16-Nov-20	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW38_161120	16-Nov-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_161120	16-Nov-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.02	0.02	0.02
QW34_161120	16-Nov-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.02	0.02	0.02
Relative Percentage Difference			NC	NC	NC	NC	0%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0%	0%	0%
SW4_161120	16-Nov-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.02	0.02	0.02
QW35_16112020	16-Nov-20	Triplicate	< 0.01	< 0.01	0.01	< 0.01	0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	0.02	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	**67%**	NC	**67%**	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0%	**86%**	**133%**
BH4_161120	16-Nov-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW36_161120	16-Nov-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_161120	16-Nov-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW37_16112020	16-Nov-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW38_161220	16-Dec-20	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW39_161220	16-Dec-20	Trip_balnk	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_161220	16-Dec-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.02	0.02	0.02
QW34_161220	16-Dec-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.02	0.02	0.02
Relative Percentage Difference			NC	NC	NC	NC	0%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0%	0%	0%
SW4_161220	16-Dec-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.02	0.02	0.02
QW35_16122020	16-Dec-20	Triplicate	0.03	0.02	0.16	< 0.01	0.39	< 0.01	< 0.05	0.09	0.08	0.03	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	0.55	0.8	0.82
Relative Percentage Difference			**100.00%**	**66.67%**	**176.47%**	NC	**180%**	NC	NC	**160.00%**	**155.56%**	**100.00%**	**120.00%**	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	**186%**	**190%**	**190%**
BH4_161220	16-Dec-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW36_161220	16-Dec-20	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_161220	16-Dec-20	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW37_16122020	16-Dec-20	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
QW39_140121	14-Jan-21	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW38_140121	14-Jan-21	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_140121	14-Jan-21	Primary	< 0.02	< 0.02	0.03	< 0.02	0.04	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.07	0.07	0.07
QW34_140121	14-Jan-21	Duplicate	< 0.02	< 0.02	0.02	< 0.02	0.04	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.06	0.06	0.06
Relative Percentage Difference			NC	NC	40%	NC	0%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	15%	15%	15%
SW4_140121	14-Jan-21	Primary	< 0.02	< 0.02	0.03	< 0.02	0.04	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.07	0.07	0.07
QW35_140121	14-Jan-21	Triplicate	< 0.01	< 0.01	0.02	< 0.01	0.03	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	0.05	0.05	< 0.1
Relative Percentage Difference			NC	NC	40%	NC	29%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	33%	33%	35%
QW38_160221	16-Feb-21	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW39_160221	16-Feb-21	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_160221	16-Feb-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.03	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.03	0.03	0.03
QW34_160221	16-Feb-21	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.02	0.02	0.02
Relative Percentage Difference			NC	NC	NC	NC	40%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	40%	40%	40%
SW4_160221	16-Feb-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.03	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.03	0.03	0.03
QW35_16022021	16-Feb-21	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	**100%**	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	**100%**	**50%**	**108%**
BH4_160221	16-Feb-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW36_160221	16-Feb-21	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH4_160221	16-Feb-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW37_16022021	16-Feb-21	Triplicate	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.01	0.01	< 0.05	< 0.1
Relative Percentage Difference			NC	NC	NC	NC	0%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0%	NC	NC
QW40_170321	17-Mar-21	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW41_170321	17-Mar-21	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW46_220421	22-Apr-21	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW47_220421	22-Apr-21	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH7_220421	22-Apr-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW44_220421	22-Apr-21	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH7_220421	22-Apr-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QW45_220421	22-Apr-21	Triplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TRIP BLANK MAY_200521	20-May-21	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RINSATE MAY_200521	20-May-21	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4_200521	20-May-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
QW51_200521	20-May-21	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
Relative Percentage Difference			NC	NC	NC	NC	0%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0%	0%	0%
SW4_200521	20-May-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
QW48_200521	20-May-21	Triplicate	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
Relative Percentage Difference			NC	NC	NC	NC	0%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0%	0%	0%
Trip Blank June_180621	18-Jun-21	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
Rinsate June_180621	18-Jun-21	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH2_180621	18-Jun-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
QW54_180621	18-Jun-21	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
Relative Percentage Difference			NC	NC	NC	NC	0%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0%	0%	0%
BH2_180621	18-Jun-21	Primary	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
QW55_180621	18-Jun-21	Triplicate	< 0.02	< 0.02	< 0.02	< 0.02	0.01	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	0.01	0.01	0.01
Relative Percentage Difference			NC	NC	NC	NC	0%	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0%	0%	0%

Notes:
< - Less than laboratory limit of reporting
NC - Not calculated
µg/L - Micrograms per litre

	Borehole	Top of Casing (mAHD)	Depth to Water (mBTOC)	Groundwater Elevation (mAHD)	Well Total Depth at point of sampling (mBTOC)	Time	Temp (°C)	EC (us/cm)	pH	Redox (mV)	Comment
Feb-19	BH1	8.64	5.776	2.864	8.89						No water sample taken due to top of well casing being melted.
Mar-19	BH1	8.64	6.145	2.495	8.12	830	18.93	111	5.49	81	Well recently reinstated. Strong acrylic odour when gauging. Light brown in colour.
Apr-19	BH1	8.64	6.277	2.495	8.12	1315	21.41	87	5.48	91.9	Well in good condition, will require well end cap. Slightly cloudy, no apparent odour
May-19	BH1	8.64	6.319	2.321	8.12	1220	20.57	150	5.42	25.6	Very light brown, no odour.
Jun-19	BH1	8.64	6.375	2.265	8.12	1230	19.97	111	6.43	33.6	Clear, no odour.
Jul-19	BH1	8.64	6.373	2.267	8.12	1145	18.4	122	5.42	51	Slightly cloudy, no apparent odour
Aug-19	BH1	8.64	6.453	2.187	8.12	1145	19.69	165	5.47	103	Slightly cloudy, slight sulfur odour
Sep-19	BH1	8.64	6.428	2.212	8.28	1130	21.02	125	5.43	101	Slightly cloudy brown, no odour
Oct-19	BH1	8.64	6.427	2.213	8.28	1140	21.12	18	5.5	78	Slightly cloudy brown, no odour
Nov-19	BH1	8.64	6.432	2.208	8.28	1350	21.56	182	5.43	67.3	Cloudy brown, sulfur odour
Dec-19	BH1	8.64	6.558	2.028	8.28	1225	20.53	163	6.12	15.2	Slight cloudy brown, no odour
Jan-20	BH1	8.64	6.701	1.939	8.28	1145	22.52	123	5.39	27.7	Slight cloudy brown, no odour
Feb-20	BH1	8.64	6.701	1.939	8.28	1145	22.52	123	5.39	27.7	Slight cloudy brown, no odour
Mar-20	BH1	8.64	6.701	1.939	8.28	1145	22.52	123	5.39	27.7	Slight cloudy brown, no odour
Apr-20	BH1		6.08		8.28		20	126.2	5.34	122.4	
May-20	BH1	8.64	6.842	1.798	8.28	1145	19.1	132.3	5.21	135.3	Slight cloudy brown, no odour
Jun-20	BH1	8.64	6.865	1.775	8.28	1145	19.3	121.2	5.29	118.5	Clear, no odour
Jul-20	BH1	8.64	6.958	1.682	8.28		17.6	108	5.4	135	Clear, no odour
Aug-20	BH1	8.64	6.165	2.475	8.22		18.61	273.4	4.89	278.4	Clear, no odour
Sep-20	BH1	8.64	6.216	2.424	8.22		20.44	103	5	220	Clear, no odour
Oct-20	BH1	8.64	6.329	2.311	9.45		19.1	119.7	4.84	198.5	Clear, no odour
Nov-20	BH1	8.64	6.075	2.565	9.45		24.23	348	5.43	131.1	Clear, no odour
Dec-20	BH1	8.64	6.181	2.459	9.45		22.6	233	5.62	70.1	Clear, no odour
Jan-21	BH1	8.64	6.107	2.533	9.45		21.6	308	6.1	-65.1	Clear, sulphur odour
Feb-21	BH1	8.64				1300	21.1	345	5.96	51.8	clear, sulfur odour
Mar-21	BH1	8.64	5.923	2.717		1300	21	152	5.84	-18	Clear, no odour
Apr-21	BH1	8.64	4.628	4.012	8.25	915	20.32	51	4.88	225	Very light brown, no odour
May-21	BH1	8.64	4.844	3.796		1330	19.6	141	5.36	144	Clear, no odour, well cap missing
Jun-21	BH1	8.64	5.021	3.619	8.25	1300	19.2	132	5.42	35.2	Clear, no odour / sheen
Feb-19	BH2*	7.79	5.674	2.116	8.93	1030	22.7	124.1	4.29	111	Slightly Cloudy, light brown, slight sulfur odour.
Mar-19	BH2	7.79	5.184	2.606	8.93	915	19.35	101	4.49	264	Dark brown – No Odour.
Apr-19	BH2	7.79	5.833	1.957	9.02	1245	22.9	87	4.59	308	Dark brown to black, no odour
May-19	BH2	7.79	5.86	1.93	9.02	1200	21.13	124	4.56	111	Dark brown, no odour
Jun-19	BH2	7.79	8.852	-1.062	9.02	1215	20.84	77	6.41	255	Very cloudy, dark brown, no odour
Jul-19	BH2	7.79	5.083	2.707	9.02	1130	18.3	124.5	4.76	88	Dark, cloudy, no odour
Aug-19	BH2	7.79	5.888	1.902	9.02	1120	19.66	136	4.7	275	Silty Base, dark brown, no odour
Sep-19	BH2	7.79	5.796	1.994	9.08	1100	21.61	111	4.7	263	Dark brown, slight sulfur odour
Oct-19	BH2	7.79	5.769	2.021	9.03	1115	20.76	48	4.83	223	Dark brown, slight sulfur odour
Nov-19	BH2	7.79	5.721	2.069	9.03	1330	21.76	133	4.61	230	Dark brown, slight sulfur odour
Dec-19	BH2	7.79	5.936	1.854	9.03	1200	20.13	131	5.38	178	Dark brown, slight sulfur odour
Jan-20	BH2	7.79	6.153	1.637	9.03	1130	24.49	94	4.84	186.5	Cloudy brown, slight sulfur odour
Feb-20	BH2	7.79	6.153	1.637	9.03	1130	24.49	94	4.84	186.5	Cloudy brown, slight sulfur odour
Mar-20	BH2	7.79	6.153	1.637	9.03	1130	24.49	94	4.84	186.5	Cloudy brown, slight sulfur odour
Apr-20	BH2		6.069		9.03		20.2	106.4	4.63	253.2	
May-20	BH2	7.79	5.102	2.688	9.03	1130	18.7	109.9	4.5	272.2	Cloudy brown, slight sulfur odour
Jun-20	BH2	7.79	5.978	1.812	9.03	1130	19.8	102.2	4.68	218.7	Brown, no odour
Jul-20	BH2	7.79	6.035	1.755	9.03		17.6	70	4.63	340	Light brown, no odour
Aug-20	BH2	7.79	5.03	2.76	8.46						Dark brown, no odour
Sep-20	BH2	7.79	5.462	2.328	8.46		20.23	103	4.53	280	Dark brown, no odour
Oct-20	BH2	7.79	5.643	2.147	9.45		20.8	118.6	4.38	274.7	Dark brown, no odour
Nov-20	BH2	7.79	5.328	2.462	9.45		29.5	346	4.91	297.2	Dark brown, sulphur odour
Dec-20	BH2	7.79	5.498	2.292	9.45		21.78	293	4.87	201.9	Light brown, sulphur odour
Jan-21	BH2	7.79	5.36	2.43	9.45		23.5	229	5.69	232.1	Dark brown, sulphur odour
Feb-21	BH2	7.79				1245	22.6	279	5.58	170.7	light brown, sulfur odour
Mar-21	BH2	7.79	5.244			1240	21.4	114	5.62	140	very cloudy brown
Apr-21	BH2	7.79	4.326	3.464	8.97	845	20.66	59.57	4.73	250	Light brown, no odour
May-21	BH2	7.79	4.535	3.255		1305	20	60.1	4.98	251.8	Very turbid brown, no odour, well in good condition
Jun-21	BH2	7.79	4.728	3.062	8.97	1245	19.1	64.7	4.78	209	Slight cloudy brown, no odour / sheen, well in good condition
Feb-19	BH3	7.57	6.026	1.544	8.94	1440	22.1	82.4	4.54	94	Light Brown - No Odour.
Mar-19	BH3	7.57	6.146	1.544	8.75						No odour – No sample taken.
Apr-19	BH3	7.57	6.059	1.511	9.03						Data logger attached, Silty material at base. No sample taken.
May-19	BH3	7.57	6.064	1.506	9.03						Data logger downloaded.
Jun-19	BH3	7.57	6.005	1.565	9.03						Data logger attached, Silty material at base. No sample taken.
Jul-19	BH3	7.57	5.938	1.632	9.03						Data logger attached, Silty material at base. No sample taken.
Aug-19	BH3	7.57	6.027	1.543	9.03						Data logger attached, Silty material at base. No sample taken.
Sep-19	BH3										Well Decommissioned
Feb-19	BH4	3.06	1.994	1.066	5.92	1420	20.4	129.2	3.85	135	light discolouration – Brown.
Mar-19	BH4	3.06	2.091	0.969	5.92	950	18.92	79	4.52	311	Light Brown – No Odour.
Apr-19	BH4	3.06	1.878	1.182	5.92	1210	21.43	43	4.88	269.9	Cloudy, no odour.
May-19	BH4	3.06	1.847	1.213	5.92	1145	20.14	110	4.65	98.5	Stained brown, no odour.
Jun-19	BH4	3.06	1.723	1.337	5.92	1145	19.01	55	6.41	321.9	Mildly cloudy, no odour.
Jul-19	BH4	3.06	1.617	1.443	5.92	1100	17.6	91.5	4.78	88	Cloudy, no odour.
Aug-19	BH4	3.06	1.736	1.324	5.92	1100	17.96	102	4.76	266	Slightly Cloudy brown
Sep-19	BH4	3.06	1.604	1.456	6.11	1245	20.53	96	4.27	251	Clear, no odour
Oct-19	BH4	3.06	1.531	1.529	6.11	1030	19.18	8	4.93	221	Clear, no odour
Nov-19	BH4	3.06	1.624	1.436	6.11	1010	21.07	95	4.53	290	Cloudy brown, slight sulfur odour
Dec-19	BH4	3.06	2.051	1.009	6.11	1145	20.93	109	6.49	174	Slight cloudy brown, no odour
Jan-20	BH4	3.06	2.252	0.808	6.11	1100	23.3	85	4.63	221	Slight cloudy brown, no odour
Feb-20	BH4	3.06	2.252	0.808	6.11	1100	23.3	85	4.63	221	Slight cloudy brown, no odour
Mar-20	BH4	3.06	2.252	0.808	6.11	1100	23.3	85	4.63	221	Slight cloudy brown, no odour
Apr-20	BH4		1.881		6.11		19	132.1	5.04	206.3	
May-20	BH4	3.06	1.85	1.21	6.11	1100	18.1	174.8	4.78	282.7	Slight cloudy brown, no odour
Jun-20	BH4	3.06	1.494	1.566	6.11	1100	18.5	165.3	4.76	217.2	Slightly brown, no odour
Jul-20	BH4	3.06	1.47	1.59	6.11		16.8	212	4.7	343	Clear, no odour
Aug-20	BH4	3.06	1.009	2.051	6		15.68	152.23	4.58	348.1	Clear, no odour
Sep-20	BH4	3.06	1.31	1.75	6		18.06	151	4.53	348.1	Clear, no odour
Oct-20	BH4	3.06	1.605	1.455	6.45		19.2	166.4	4.25	328.8	Clear, no odour
Nov-20	BH4	3.06	1.052	2.008	6.45		24.4	382	4.64	164.4	Clear, sulphur odour
Dec-20	BH4	3.06	1.406	1.654	6.45		21.23	2226	4.86	419	Clear, sulphur odour
Jan-21	BH4	3.06	1.202	1.858	6.45		23.3	683	5.88	230.5	Clear, no odour
Feb-21	BH4	3.06				1115	22.9	1693	5.96	-124.9	clear, sulfur odour
Mar-21	BH4	3.06	1.098	1.962		1150	20.7	586	5.9	-170	slight brown stain, sulfur odour
Apr-21	BH4	3.06	0.854	2.206	6.01	800	17.29	135	4.78	208	Light brown, no odour
May-21	BH4	3.06	0.94	2.12		1220	17.7	126	4.8	244.4	Slight brown stain, no odour, well in good condition
Jun-21	BH4	3.06	1.029	2.031	6.01	1202	16.2	133	4.61	284	Slight brown tannin, no odour / sheen, well in good condition
Feb-19	BH5	7.36	6.063	1.297	8.63	830	20.1	320	4.06	122	Roots evident. Brown slight sulfur odour.
Mar-19	BH5	7.36	6.146	1.214	8.63						Slight sulfur odour – No sample taken.
Apr-19	BH5	7.36	5.914	1.446	8.71						Slight sulfur odour – No sample taken.
May-19	BH5	7.36	5.894	1.466	8.71						No sample taken. Data logger downloaded.
Jun-19	BH5	7.36	5.823	1.537	8.71						No odour - No sample taken.
Jul-19	BH5	7.36	5.779	1.581	8.71						No odour - No sample taken.
Aug-19	BH5	7.36	5.894	1.466	8.71						No odour - No sample taken.
Sep-19	BH5	7.36	5.786	1.574	8.71						No odour - No sample taken.
Oct-19	BH5	7.36	5.767	1.593	8.8						No odour - No sample taken.
Nov-19	BH5	7.36	5.792	1.568	8.8						No odour - No sample taken.
Dec-19	BH5	7.36	6.143	1.217	8.8						No odour - No sample taken.
Jan-20	BH5	7.36	6.315	1.045	8.8						No odour - No sample taken.
Feb-20	BH5	7.36	6.315	1.045	8.8						No odour - No sample taken.
Mar-20	BH5	7.36	6.315	1.045	8.8						No odour - No sample taken.
Apr-20	BH5		6.061		8.8						
May-20	BH5	7.36	6.092	1.268	8.8						No odour - No sample taken.
Jun-20	BH5	7.36	5.732	1.628	8.8						No sample taken.
Jul-20	BH5	7.36	5.76	1.045	8.8						No sample taken.
Aug-20	BH5	7.36	5.339	2.021	8.75		16.93	171.91	4.35	299.4	Light brown, no odour
Sep-20	BH5	7.36	5.632	1.728	8.75		18.87	254.16	4.25	71	Light brown, no odour
Oct-20	BH5	7.36	5.824	1.536	9.28		18.4	329.4	4.14	15.8	Light brown, no odour
Nov-20	BH5	7.36	6.345	1.015	9.28		21.33	356	4.7	-29.8	Clear, sulphur odour
Dec-20	BH5	7.36	5.671	1.689	9.28		ND	ND	ND	ND	No sample taken
Jan-21	BH5	7.36	5.411	1.949	9.28		ND	ND	ND	ND	No sample taken
Feb-21	BH5	7.36									No sample taken
Mar-21	BH5	7.36	5.316	2.044							No sample taken
Apr-21	BH5	7.36	5.174	2.186	8.8	1010	ND	ND	ND	ND	No sample taken
May-21	BH5	7.36	5.226	2.134		915	ND	ND	ND	ND	No sample taken, well in good condition
Jun-21	BH5	7.36	5.248	2.112	8.8		ND	ND	ND	ND	No sample taken, well in good condition
Feb-19	BH6	3.62	1.823	1.797	4.43	850	23.1	228	4.28	111	Clear to slightly cloudy, sulfur odour.
Mar-19	BH6	3.62	1.913	1.707	4.44	1415	23.17	159	4.74	178	Brown – No Odour.
Apr-19	BH6	3.62	1.761	1.859	4.52	1510	22.03	144	4.52	140.1	Cloudy with slight sulfur odour.
May-19	BH6	3.62	1.766	1.854	4.52	1415	20.62	226	4.7	-5.2	Light brown, no odour.
Jun-19	BH6	3.62	1.713	1.907	4.52	1410	19.73	176	5.45	-104.7	Cloudy, slight sulfur odour

	Borehole	Top of Casing (mAHD)	Depth to Water (mBTOC)	Groundwater Elevation (mAHD)	Well Total Depth at point of sampling (mBTOC)	Time	Temp (°C)	EC (us/cm)	pH	Redox (mV)	Comment
Jul-19	BH6	3.62	1.591	2.029	4.52	1330	17.2	191	4.54	101	Slightly cloudy, no odour
Aug-19	BH6	3.62	1.723	1.897	4.52	1330	18.32	277	4.69	140	Slight brown colour, slight sulfur odour
Sep-19	BH6	3.62	1.647	1.973	4.62	1515	18.66	215	4.61	57	Clear, slight odour
Oct-19	BH6	3.62	1.628	1.992	4.62	1530	21.09	110	5.05	-144	Slight brown colour, slight sulfur odour
Nov-19	BH6	3.62	1.657	1.963	4.62	1230	23.12	335	4.8	6.4	Cloudy brown, slight sulfur odour
Dec-19	BH6	3.62	2.009	1.611	4.62	1345	21.96	256	5.52	-86.2	Mostly clear, slight sulfur odour
Jan-20	BH6	3.62	2.169	1.451	4.62	1320	24.62	190	4.39	92	Brown, no odour
Feb-20	BH6	3.62	2.169	1.451	4.62	1320	24.62	190	4.39	92	Brown, no odour
Mar-20	BH6	3.62	2.169	1.451	4.62	1320	24.62	190	4.39	92	Brown, no odour
Apr-20	BH6		2.033		4.62		20.7	232.2	4.68	138.4	
May-20	BH6	3.62	2.065	1.555	4.62	1320	19.2	305.8	4.5	138.7	Brown, no odour
Jun-20	BH6	3.62	1.798	1.822	4.62	1320	20.1	447.8	4.74	-33.3	Clear, no odour
Jul-20	BH6	3.62	1.728	1.451	4.62		15.7	204	4.68	-52.4	Light brown, no odour
Aug-20	BH6	3.62	1.225	2.395	4.5		15.17	350.62	4.66	-30.4	Clear, sulphur odour
Sep-20	BH6	3.62	1.544	2.076	4.5		20.02	269	4.48	62.5	Clear, sulphur odour
Oct-20	BH6	3.62	1.745	1.875	4.95		19.5	292.4	4.49	17.6	Clear, sulphur odour
Nov-20	BH6	3.62	0.259	3.361	4.95		24.95	226	4.07	5.5	Clear, sulphur odour
Dec-20	BH6	3.62	1.472	2.148	4.95		22.8	1036	4.76	-134	Clear, sulphur odour
Jan-21	BH6	3.62	1.29	2.33	4.95		24.2	859	4.96	-94.8	Clear, sulphur odour
Feb-21	BH6	3.62				1410	2	1160	5.23	-167.9	Ants nest in casing, clear, sulfur odour
Mar-21	BH6	3.62	0.977	2.643			22.9	495	5.23	-172	clear, slight sulfur odour
Apr-21	BH6	3.62	0.813	2.807	4.52	1015	18.56	307	4.35	-3.8	Clear, strong sulphur odour
May-21	BH6	3.62	0.857	2.763		1440	18	395	4.71	61.9	Light brown, strong sulphur odour, well in good condition
Jun-21	BH6	3.62	0.926	2.694	4.52	1407	15.2	298	4.69	-71	Clear, strong sulphur odour, no sheen, well in good condition
Feb-19	BH7	2.98	1.938	1.042	4.42	920	23.7	283	4.04	125	Slightly Cloudy, light brown, slight sulfur odour.
Mar-19	BH7	2.98	2.015	0.965	4.42	1330	25	251	4.34	179	Slightly Cloudy, light brown, slight sulfur odour.
Apr-19	BH7	2.98	1.744	1.236	4.51	1530	22.9	233	4.45	94.3	Slightly Cloudy, light brown, slight sulfur odour.
May-19	BH7	2.98	1.744	1.236	4.51	1445	20.62	226	4.7	-5.2	Slightly Cloudy, light brown, slight sulfur odour.
Jun-19	BH7	2.98	1.634	1.346	4.51	1430	19.56	217	5.47	-227.9	Slightly cloudy sulfur odour.
Jul-19	BH7	2.98	1.544	1.436	4.51	1400	17.2	228	4.58	100	Slightly cloudy sulfur odour.
Aug-19	BH7	2.98	1.649	1.331	4.51	1345	17.71	329	4.88	55	Cloudy brown, sulfur odour
Sep-19	BH7	2.98	1.542	1.438	4.61	1415	18.34	232	4.73	-22	Light brown, sulfur odour
Oct-19	BH7	2.98	1.514	1.466	4.61	1350	21.79	183	4.89	-139	Slightly Cloudy, light brown, slight sulfur odour.
Nov-19	BH7	2.98	1.588	1.392	4.61	1210	21.79	391	4.6	13.1	Cloudy brown, slight sulfur odour.
Dec-19	BH7	2.98	1.989	0.991	4.61	1400	21.87	292	5.93	-92.6	Cloudy brown, slight sulfur odour.
Jan-20	BH7	2.98	2.169	0.811	4.61	1410	22.39	164	4.45	23.1	Light brown, slight sulfur odour.
Feb-20	BH7	2.98	2.169	0.811	4.61	1410	22.39	164	4.45	23.1	Light brown, slight sulfur odour.
Mar-20	BH7	2.98	2.169	0.811	4.61	1410	22.39	164	4.45	23.1	Light brown, slight sulfur odour.
Apr-20	BH7		1.813		4.61		20.8	190	4.88	-71.2	
May-20	BH7	2.98	1.813	1.167	4.61	1410	19	196.3	4.63	-34.4	Light brown, slight sulfur odour.
Jun-20	BH7	2.98	1.471	1.509	4.61	1410	18.5	170	4.89	-70.3	Light brown, sulphur odour.
Jul-20	BH7	2.98	1.43	1.59	4.61		15.8	155	4.83	-102	Light brown, no odour.
Aug-20	BH7	2.98	1.217	1.763	4.49		15.24	237.95	4.72	-66	Light brown, sulphur odour.
Sep-20	BH7	2.98	1.437	1.543	4.49		21.64	253	4.57	21.9	Light brown, sulphur odour.
Oct-20	BH7	2.98	1.672	1.308	4.95		18.7	284.6	4.27	-29.1	Light brown, sulphur odour.
Nov-20	BH7	2.98	1.225	1.755	4.95		22.8	792	4.42	-104	clear, sulphur odour.
Dec-20	BH7	2.98	1.473	1.507	4.95		24.38	770	4.42	-75.5	Clear, sulphur odour.
Jan-21	BH7	2.98	1.234	1.746	4.95		24.3	810	4.76	-67.2	Light brown, sulphur odour.
Feb-21	BH7	2.98				1435	24.1	892	5.02	-146.3	light brown, sulfur odour
Mar-21	BH7	2.98	1.174	1.806			22.8	350	5.1	-137	clear, sulfur odour
Apr-21	BH7	2.98	1.095	1.885	4.53	1025	18.21	348	4.46	-35	Slight yellow, strong sulphur odour
May-21	BH7	2.98	1.114	1.866		1450	17.6	354	4.65	85	Light brown, strong sulphur odour, well in good condition
Jun-21	BH7	2.98	1.124	1.856	4.53	1441	15.6	250	4.74	-40	Clear, strong sulphur odour, no sheen, well in good condition
Feb-19	BH8	3.88	2.78	1.1	6.08	1330	21.8	411	4.09	121	Sulfur smell - Dark Brown.
Mar-19	BH8	3.88	2.864	1.016	6.09	1300	21.54	307	4.96	176	Sulfur smell - cloudy
Apr-19	BH8	3.88	2.511	1.369	6.18	1600	20.66	300	4.53	17.6	Sulfur smell - cloudy
May-19	BH8	3.88	2.511	1.369	6.18	1500	20.86	298	4.74	-75	Sulfur smell - cloudy
Jun-19	BH8	3.88	2.346	1.534	6.18	1440	18.78	289	7.43	-340.8	Dark brown cloudy, sulfur odour
Jul-19	BH8	3.88	2.266	1.614	6.18	1430	16.8	347	4.55	101	Cloudy brown, sulfur odour
Aug-19	BH8	3.88	2.406	1.474	6.18	1415	18.2	374	4.66	27	Cloudy brown, sulfur odour
Sep-19	BH8	3.88	2.282	1.598	6.27	1330	18.64	300	4.72	-10	Dark brown cloudy, sulfur odour
Oct-19	BH8	3.88	2.233	1.647	6.28	1415	20.44	224	4.89	-160	Dark brown cloudy, sulfur odour
Nov-19	BH8	3.88	2.312	1.568	6.28	1450	22.5	545	4.51	-28.8	Cloudy brown, sulfur odour
Dec-19	BH8	3.88	2.778	1.102	6.28	1430	22.05	995	6.16	-96.8	Cloudy brown, sulfur odour
Jan-20	BH8	3.88	2.969	0.911	6.28	1440	21.99	284	4.08	45.6	Cloudy brown, sulfur odour
Feb-20	BH8	3.88	2.969	0.911	6.28	1440	21.99	284	4.08	45.6	Cloudy brown, sulfur odour
Mar-20	BH8	3.88	2.969	0.911	6.28	1440	21.99	284	4.08	45.6	Cloudy brown, sulfur odour
Apr-20	BH8		2.549		6.28		19.8	218.7	4.65	-70.6	
May-20	BH8	3.88	2.489	1.391	6.28	1440	18.2	242.6	4.49	-42.2	Cloudy brown, sulfur odour
Jun-20	BH8	3.88	2.058	1.822	6.28	1440	17	282.9	4.8	-50.9	Light brown, no odour
Jul-20	BH8	3.88	2.02	1.86	6.28		16	268	4.69	-90	Light brown, no odour
Aug-20	BH8	3.88	1.804	2.076	6.14		15.4	367.95	4.62	-63.2	Light brown, sulphur odour
Sep-20	BH8	3.88	1.156	2.724	6.14		19.41	379	4.46	1.5	Light brown, sulphur odour
Oct-20	BH8	3.88	2.442	1.438	6.28		17.7	314.1	4.3	-57.5	Light brown, sulphur odour
Nov-20	BH8	3.88	1.472	2.408	6.28		22.7	1053	4.64	-116.1	clear, sulphur odour
Dec-20	BH8	3.88	2.198	1.682	6.28		23.5	701	4.71	-124.6	Clear, sulphur odour
Jan-21	BH8	3.88	1.209	2.671	6.28		22.7	846	4.97	-114	Light brown, sulphur odour
Feb-21	BH8	3.88				1500	20.7	1105	5.26	-167.6	
Mar-21	BH8	3.88	1.801	2.079			21.3	366	5.002	-159	slight cloudy brown, sulfur odour
Apr-21	BH8	3.88	1.765	2.115	6.1	1032	17.9	280	3.92	9.4	Slight yellow, strong sulphur odour
May-21	BH8	3.88	1.8	2.08		1500	17.5	311	4.73	78	Light brown, strong sulphur odour, well in good condition
Jun-21	BH8	3.88	1.338	2.542	6.1	1420	16.6	391	4.72	-53.9	Clear, strong sulphur odour, no sheen, well in good condition
Feb-19	BH9	17.75	Dry	-	15.82						Well was dry.
Mar-19	BH9	17.75	Dry	-	16.01					176	Well was dry.
Apr-19	BH9	17.75	Dry	-	16.01						Well was dry.
May-19	BH9	17.75	Dry	-	16.01						Well was dry.
Jun-19	BH9	17.75	Dry	-	16.01						Well was dry.
Jul-19	BH9	17.75	Dry	-	16.01						Well was dry.
Aug-19	BH9	17.75	Dry	-	16.01						Well was dry.
Sep-19	BH9	17.75	Dry	-	16.01						Well was dry.
Oct-19	BH9	17.75	Dry	-	16.01						Well was dry.
Nov-19	BH9	17.75	Dry	-	16.01						Well was dry.
Dec-19	BH9	17.75	Dry	-	16.01						Well was dry.
Jan-20	BH9	17.75	Dry	-	16.01						Well was dry.
Feb-20	BH9	17.75	Dry	-	16.01						Well was dry.
Mar-20	BH9	17.75	Dry	-	16.01						Well was dry.
Apr-20	BH9		Dry		16.01						
May-20	BH9	17.75	Dry	-	16.01						Well was dry.
Jun-20	BH9	17.75	Dry	-	16.01						Well was dry.
Jul-20	BH9	17.75	Dry	-	16.01						Well was dry.
Aug-20	BH9	17.75	15.723	2.027	16.2		18.43	84.33	4.79	317	Bailer used due to insufficient volume. clear, no odour
Sep-20	BH9	17.75	15.951	1.799	16.2						Insufficient volume to sample
Oct-20	BH9	17.75	Dry	-	18.8						Insufficient well volume for sampling
Sep-20	BH9A	10.25	8.903	1.347	16.16		19.85	266	4.97	317	Newly installed. Silty brown, no odour.
Oct-20	BH9A	10.25	9.163	1.087	16.16		20.2	279.8	4.77	274.7	Newly installed well
Nov-20	BH9A	10.25	8.76	1.49	16.16		24.6	686	5.73	304.3	Dark brown, no odour
Dec-20	BH9A	10.25	9.026	1.224	16.16		22.8	516	4.66	-120.6	Dark brown, no odour
Jan-21	BH9A	10.25	8.528	1.722	16.16		22	562	5.65	52.6	Dark brown, no odour
Feb-21	BH9A	10.25				1200	22.5	609	5.46	-141.8	dark brown, sulfur odour
Mar-21	BH9A	10.25	8.713	1.537		1215	20.4	214	5.72	-161	cloudy brown, sulfur odour
Apr-21	BH9A	10.25	8.389	1.861	12.44	824	18.45	182.2	4.79	234	Dark brown, sulphur odour
May-21	BH9A	10.25	8.523	1.727		1240	18.9	204	4.95	248	Slight brown stain, no odour, well in good condition
Jun-21	BH9A	10.25	8.613	1.637	12.44	1230	18.3	173	4.7	-17.5	Moderate brown, sulphur odour, no sheen, well in good condition
Feb-19	BH10	6.69	Dry	-	3.58						Well was dry.
Mar-19	BH10	6.69	Dry	-	3.58					179	Well was dry.
Apr-19	BH10	6.69	Dry	-	3.58						Well was dry.
May-19	BH10	6.69	Dry	-	3.58						Well was dry.
Jun-19	BH10	6.69	Dry	-	3.58						Well was dry.
Jul-19	BH10	6.69	Dry	-	3.58						Well was dry.
Aug-19	BH10	6.69	Dry	-	3.58						Well was dry.
Sep-19	BH10	6.69	Dry	-	3.58						Well was dry.
Oct-19	BH10	6.69	Dry	-	3.58						Well was dry.
Nov-19	BH10	6.69	Dry	-	3.58	1400	22.65	324	4.62	34	Well was dry.
Dec-19	BH10	6.69	Dry	-	3.58						Well was dry.
Jan-20	BH10	6.69	Dry	-	3.58						Well was dry.
Feb-20	BH10	6.69	Dry	-	3.58						Well was dry.
Mar-20	BH10	6.69	Dry	-	3.58						Well was dry.
Apr-20	BH10				3.58						
May-20	BH10	6.69	Dry	-	3.58						Well was dry.
Jun-20	BH10	6.69	Dry	-	3.58						Well was dry.
Jul-20	BH10	6.69	Dry	-	3.58						Well was dry.

	Borehole	Top of Casing (mAHD)	Depth to Water (mBTOC)	Groundwater Elevation (mAHD)	Well Total Depth at point of sampling (mBTOC)	Time	Temp (°C)	EC (us/cm)	pH	Redox (mV)	Comment
Aug-20	BH10	6.69	Dry	-	3.68						Well was dry. Approximately 1.8m of sediment deposited since 2014.
Sep-20	BH10	6.69	Dry	-	3.68						Well was dry. Approximately 1.8m of sediment deposited since 2014
Oct-20	BH10	6.69	Dry	-	5.45						Well was dry.
Nov-20	BH10	6.69	Dry	-	5.45						Well was dry.
Dec-20	BH10	6.69	Dry	-	5.45						Well was dry.
Jan-21	BH10	6.69	Dry	-	5.45						Well was dry.
Feb-21	BH10	6.69	DRY								Well was dry.
Mar-21	BH10	6.69	DRY								Well was dry.
Apr-21	BH10	6.69	2.464	4.226	3.46	900	19.75	245.7	5.05	35.2	Light brown, sulphur odour
May-21	BH10	6.69	2.591	4.099		1320	18.9	227	4.77	196	Clear, moderate sulphur odour, well in good condition
Jun-21	BH10	6.69	2.734	3.956	3.44	1105	17.1	229	4.55	24.2	Clear, slight sulphur odour, no sheen, well in good condition
Feb-19	BH11	6.63	3.02	3.61	5.21						Brown - No Odour.
Mar-19	BH11	6.63	3.181	3.02	5.21	745	18.87	168	4.95	10	Light Brown – Slight Odour.
Apr-19	BH11	6.63	3.254	3.376	5.29	1345	21.64	155	4.75	78.3	Cloudy, slight sulfur smell
May-19	BH11	6.63	3.311	3.319	5.29	1245	19.94	232	4.68	-71.5	Data logger downloaded. Light brown, no odour.
Jun-19	BH11	6.63	3.382	3.248	5.29	1250	18.93	185	6.41	-78.5	Cloudy with sulfur odour
Jul-19	BH11	6.63	3.348	3.282	5.29	1215	16.9	296	4.53	101	Cloudy no odour
Aug-19	BH11	6.63	3.503	3.127	5.29	1215	17.66	261	4.74	126	Cloudy light brown, sulfur odour
Sep-19	BH11	6.63	3.546	3.084	5.39	1200	20.26	195	4.64	31.2	Cloudy light brown, sulfur odour
Oct-19	BH11	6.63	3.586	3.044	5.39	1205	19.93	124	4.83	-117	Cloudy light brown, sulfur odour
Nov-19	BH11	6.63	3.621	3.009	5.39						Cloudy light brown, sulfur odour
Dec-19	BH11	6.63	3.859	2.771	5.39	1300	20.55	239	5.42	-60.7	Cloudy brown, sulfur odour
Jan-20	BH11	6.63	3.962	2.668	5.39	1215	22.37	129	4.61	42	Cloudy brown, sulfur odour
Feb-20	BH11	6.63	3.962	2.668	5.39	1215	22.37	129	4.61	42	Cloudy brown, sulfur odour
Mar-20	BH11	6.63	3.962	2.668	5.39	1215	22.37	129	4.61	42	Cloudy brown, sulfur odour
Apr-20	BH11		4.087		5.39		20	140.4	4.84	-39.7	
May-20	BH11	6.63	4.241	2.389	5.39	1215	18.2	147.4	4.69	-65.4	Cloudy brown, sulfur odour
Jun-20	BH11	6.63	4.343	2.87	5.39	1215	18.2	146.2	4.71	-24.7	Brown, dirt odour, well blockage
Jul-20	BH11	6.63	4.484	2.146	5.39		15.8	121	4.6	124	Light Brown, no odour – bore blocked
Aug-20	BH11	6.63	3.621	3.009	5.82		17.28	172.83	4.71	270.4	Light Brown, no odour
Sep-20	BH11	6.63	3.658	2.972	5.82		20.02	220.49	4.52	115.4	Light Brown, no odour
Oct-20	BH11	6.63	3.725	2.905	5.95		19	255.1	4.3	111	Light Brown, no odour
Nov-20	BH11	6.63	3.405	3.225	5.95		23.4	541	4.77	6.6	clear, no odour
Dec-20	BH11	6.63	3.505	3.125	5.95		23.6	459	4.81	-95.6	Clear, sulphur odour
Jan-21	BH11	6.63	3.384	3.246	5.95		22.6	668	5.23	-73.3	Clear, sulphur odour
Feb-21	BH11	6.63				1315	21.1	68	5.3	-107.4	light brown, slight odour
Mar-21	BH11	6.63	3.143	3.487		1325	20.8	291	5.43	-95	Clear, no odour
Apr-21	BH11	6.63	1.839	4.791	5.29	927	18.87	160	4.47	224	Light yellow, slight sulphur odour
May-21	BH11	6.63	1.86	4.77		1350	18.1	200	4.54	235	Light yellow, no odour, well in good condition
Jun-21	BH11	6.63	1.993	4.637	5.29	1320	16.8	225	4.62	132	Light yellow / brown, slight sulphur odour, no sheen, well in good condition
Feb-19	BH12	8.67	Dry	-	6.17						Well was dry.
Mar-19	BH12	8.67	6.924	1.746	8.03						40mm inner tube installed. No odour – No sample taken
Apr-19	BH12	8.67	6.846	1.824	8.12						40mm inner tube installed. No odour – No sample taken
May-19	BH12	8.67	6.863	1.807	8.12						Acrylic odour. No sample taken.
Jun-19	BH12	8.67	6.832	1.838	8.12						Slight acrylic odour. No sample taken.
Jul-19	BH12	8.67	6.799	1.871	8.12						Slight acrylic odour. No sample taken.
Aug-19	BH12	8.67	6.889	1.781	8.12						Slight acrylic odour. No sample taken.
Sep-19	BH12	8.67	6.827	1.843	8.2						No sample taken.
Oct-19	BH12	8.67	6.881	1.789	8.2						No sample taken.
Nov-19	BH12	8.67	6.89	1.78	8.2						No sample taken.
Dec-19	BH12	8.67	7.076	1.594	8.2						No sample taken.
Jan-20	BH12	8.67	7.252	1.418	8.2						No sample taken.
Feb-20	BH12	8.67	7.252	1.418	8.2						No sample taken.
Mar-20	BH12	8.67	7.252	1.418	8.2						No sample taken.
Apr-20	BH12		7.149		8.2						
May-20	BH12	8.67	7.156	1.514	8.2						No sample taken.
Jun-20	BH12	8.67	7.003	1.667	8.2						No sample taken.
Jul-20	BH12	8.67	7.057	1.613	8.2						No sample taken.
Aug-20	BH12	8.67	6.443	2.227	8.17		17.78	163.09	5.25	-48	Light Brown, no odour
Sep-20	BH12	8.67	6.629	2.041	8.17		21.85	206.44	4.66	134	Light Brown, no odour
Oct-20	BH12	8.67	6.799	1.871	8.39						No sample take, well too skinny
Nov-20	BH12	8.67	6.459	2.211	8.39		24.9	525	5.02	-34.6	Light brown, sulphur odour
Dec-20	BH12	8.67	6.632	2.038	8.39		22.43	532	5	203.3	Clear, no odour
Jan-21	BH12	8.67	6.502	2.168	8.39		21.9	282	5.53	43.7	Clear, no odour
Feb-21	BH12	8.67				1335	21.5	534	5.73	-172.9	Well damaged, clear, sulfur odour
Mar-21	BH12	8.67	6.364	2.306		1345	20.6	211	5.77	-186	Clear, no odour
Apr-21	BH12	8.67	5.82	2.85	8.22	945	20	201	5.65	196	Clear, no odour
May-21	BH12	8.67	5.938	2.732		1415	19.4	249	5.62	62.6	Cloudy brown, slight sulphur odour, broken hinge on well casing
Jun-21	BH12	8.67	6.019	2.651	8.22	1337	18.1	94.6	5.2	288	Clear, no odour / sheen, broken hinge on well casing
Feb-19	MW239S	3.04	1.529	1.511	3.89	730	21.7	526	4.09	121	Light Brown - Slight Sulfur odour.
Mar-19	MW239S	3.04	1.615	1.425	3.89	1445	23.1	323	4.43		Dark Brown - Slight Sulfur odour.
Apr-19	MW239S	3.04	1.421	1.619	3.89	1445	21.43	352	4.72	45.3	Light Brown - Slight Sulfur odour
May-19	MW239S	3.04	1.412	1.628	3.89	1345	19.49	392	4.64	-65.8	Data logger downloaded. Dark brown, sulfur odour.
Jun-19	MW239S	3.04	1.344	1.696	3.89	1350	19.3	305	5.7	-117.9	Cloudy, sulfur odour.
Jul-19	MW239S	3.04	1.262	1.778	3.89	1315	15.8	37	4.67	94	Cloudy, sulfur odour.
Aug-19	MW239S	3.04	1.352	1.688	3.89	1300	17.99	530	4.75	72.8	Dark Brown - Slight Sulfur odour.
Sep-19	MW239S	3.04	1.269	1.771	3.89	1430	17.56	397	4.61	-11	Cloudy Brown, Sulfur odour.
Oct-19	MW239S	3.04	1.248	1.792	4.06	1300	20.87	331	4.81	-132	Cloudy Brown, Sulfur odour.
Nov-19	MW239S	3.04	1.256	1.784	4.06	1300	21.18	718	4.58	-17.6	Cloudy brown, sulfur odour
Dec-19	MW239S	3.04	1.648	1.392	4.06	1315	20.33	523	5.64	-104.7	Cloudy brown, sulfur odour
Jan-20	MW239S	3.04	1.823	1.217	4.06	1250	24.71	396	4.59	16.1	Dark brown, sulfur odour
Feb-20	MW239S	3.04	1.823	1.217	4.06	1250	24.71	396	4.59	16.1	Dark brown, sulfur odour
Mar-20	MW239S	3.04	1.823	1.217	4.06	1250	24.71	396	4.59	16.1	Dark brown, sulfur odour
Apr-20	MW239S		1.576		4.06		20.3	293.7	4.74	-77.4	
May-20	MW239S	3.04	1.578	1.462	4.06	1250	18.4	409	4.32	-53.9	Dark brown, sulfur odour
Jun-20	MW239S	3.04	1.326	1.714	4.06	1250	15.4	474.9	4.73	-52.9	Dark brown, sulfur odour
Jul-20	MW239S	3.04	1.3	1.74	4.06		15.3	0.27	12.7	144	Brown, no odour
Aug-20	MW239S	3.04	0.981	2.059	3.9		15.74	431.08	4.72	2.3	Light Brown, sulphur odour
Sep-20	MW239S	3.04	1.116	1.924	3.9		18.87	337.89	4.42	79.8	Light Brown, sulphur odour
Oct-20	MW239S	3.04	1.364	1.676	4		19.6	522	4.27	28.7	Light Brown, sulphur odour
Nov-20	MW239S	3.04	0.998	2.042	4		22.4	1443	4.55	-83.8	Light Brown, sulphur odour
Dec-20	MW239S	3.04	1.2	1.84	4		23	1389	4.6	-126.1	Dark brown, sulphur odour
Jan-21	MW239S	3.04	0.998	2.042	4		23.6	1221	5.08	-127.7	Dark brown, sulphur odour
Feb-21	MWS	3.04				1350	22.8	1676	5.12	-155.7	dark brown, sulfur odour
Mar-21	MW239S	3.04	0.923	2.117			22.3	402	5.19	-158	slight cloudy brown, sulfur odour
Apr-21	MW239S	3.04	0.757	2.283	3.84	955	18.43	276	4.43	8.3	Dark brown/organic material, strong sulphur odour
May-21	MW239S	3.04	0.81	2.23		1430	17.5	348	4.61	117	Dark brown/organic material, strong sulphur odour, well in good condition
Jun-21	MW239S	3.04	0.812	2.228	3.84	1353	16.1	246	4.59	38	Slight cloudy yellow, moderate sulphur odour, no sheen, well in good condition
Feb-19	MW239D	3.04	1.312	1.728	20.21						-
Mar-19	MW239D	3.04	1.591	1.449	20.19						No odour – No sample taken
Apr-19	MW239D	3.04	1.392	1.648	20.2						No odour – No sample taken
May-19	MW239D	3.04	1.383	1.657	20.2						No odour – No sample taken
Jun-19	MW239D	3.04	1.32	1.72	20.2						No odour – No sample taken
Jul-19	MW239D	3.04	1.239	1.801	20.2						No odour – No sample taken
Aug-19	MW239D	3.04	1.327	1.713	20.2						Slight Sulfur odour, no sample taken
Sep-19	MW239D	3.04	1.248	1.792	20.2						Slight Sulfur odour, no sample taken
Oct-19	MW239D	3.04	1.226	1.814	20.32						Slight Sulfur odour, no sample taken
Nov-19	MW239D	3.04	1.238	1.802	20.32						Slight Sulfur odour, no sample taken
Dec-19	MW239D	3.04	1.626	1.414	20.32						Slight Sulfur odour, no sample taken
Jan-20	MW239D	3.04	1.799	1.241	20.32						Slight Sulfur odour, no sample taken
Feb-20	MW239D	3.04	1.799	1.241	20.32						Slight Sulfur odour, no sample taken
Mar-20	MW239D	3.04	1.799	1.241	20.32						Slight Sulfur odour, no sample taken
Apr-20	MW239D				20.32						
Jun-20	MW239D	3.04	1.328	1.712	20.32						No sample taken
Jul-20	MW239D	3.04	1.32	1.72	20.32						No sample taken
Aug-20	MW239D	3.04	0.955	2.085	20.49						No sample taken
Sep-20	MW239D	3.04	1.183	1.857	20.49						No sample taken
Oct-20	MW239D	3.04	1.331	1.709	20.49						No sample taken
Nov-20	MW239D	3.04	1.132	1.908	20.49						No sample taken
Dec-20	MW239D	3.04	1.172	1.868	20.49						No sample taken
Jan-21	MW239D	3.04	0.975	2.065	20.49						No sample taken
Feb-21	MWB	3.04									
Mar-21	MW239D	3.04	0.901	2.139							No sample
Apr-21	MW239D	3.04	0.739	2.301	20.57	1000	ND	ND	ND	ND	No sample taken
May-21	MW239D	3.04	0.783	2.257		910	ND	ND	ND	ND	No sample taken, well in good condition
Jun-21	MW239D	3.04	0.794	2.246	20.57		ND	ND	ND	ND	No sample taken, well in good condition
Feb-19	SW1*	2.5	Dry	-	N/A						Location was dry.
Mar-19	SW1*	2.5	Dry	-	N/A						Location was dry.
Apr-19	SW1*	2.5	2.49	0.01	N/A	1200	23.16	1003	3.95	405.9	Small pool of surface water with stained brown water.
May-19	SW1*	2.5	0.01	2.51	N/A	1115	14.9	966	4.42	106.7	Small pool of surface water with stained brown water.

	Borehole	Top of Casing (mAHD)	Depth to Water (mBTOC)	Groundwater Elevation (mAHD)	Well Total Depth at point of sampling (mBTOC)	Time	Temp (°C)	EC (us/cm)	pH	Redox (mV)	Comment
Jun-19	SW1*	N/A	0.14	2.51	N/A	1140	14.5	811	6.4	298.4	Small pool of surface water with stained brown water.
Jul-19	SW1*	N/A	0.2	2.7	N/A	1105	9.7	827	4.56	99	Dark brown, no odour, slight sheen
Aug-19	SW1*	N/A	0.15	2.65	N/A	1045	9.52	1205	4.6	263	Natural tannin stained brown, sulfur odour
Sep-19	SW1*	N/A	0.26	2.76	N/A	1300	16.59	1138	4.21	323	Natural tannin stained brown, sulfur odour
Oct-19	SW1*	N/A	0.29	2.79	N/A	1045	16.56	857	4.35	339	Natural tannin stained brown, sulfur odour
Nov-19	SW1*	N/A	0.02	2.52	N/A	1145	23.75	1964	4.53	230	Significant reduction in water level, tannins stained brown, sulfur odour
Dec-19	SW1*	N/A	Dry		N/A						Location was dry
Jan-20	SW1*	N/A	Dry		N/A						Location was dry
Feb-20	SW1*	N/A	Dry		N/A						Location was dry
Mar-20	SW1*	N/A	Dry		N/A						Location was dry
Apr-20	SW1*	N/A	1.9		N/A		18.3	144.6	8.23	126.5	
May-20	SW1*	N/A	3		N/A	1310	14	169.4	7.4	183.1	
Jun-20	SW1*	N/A	0.52	-	N/A	1310	11.9	120.5	6.9	139.8	Light brown, no odour
Jul-20	SW1*	N/A	0.54	-	N/A		12	98	7.4	226	Light brown, no odour
Aug-20	SW1*	N/A	>0.6	-	N/A		14.21	83.65	6.38	229.4	Light brown, no odour
Sep-20	SW1*	N/A	0.6	-	N/A		16.51	116	6.36	229.4	Light brown, no odour
Oct-20	SW1*	N/A	0.6	N/A	N/A		18.2	313.3	6.68	131	Light brown, no odour
Nov-20	SW1*	N/A	0.6	N/A	N/A		22.9	461	6.91	1140	Clear, no odour
Dec-20	SW1*	N/A	0.6	N/A	N/A		26.4	658	6.61	49.8	Clear, no odour
Jan-21	SW1*	N/A	0.6	N/A	N/A		25.1	594	6.77	67.2	Clear, no odour
Feb-21	SW1	N/A				1100	22.58	608	6.68	65.1	Clear, no odour, very full
Mar-21	SW1	N/A	> 0.6			1130	21.1	184	6.59	118	Slight brown/tan, no odour
Apr-21	SW1	N/A	> 0.6	N/A	N/A	1245	15.4	310.66	5.38	41.7	Slight brown stain, sulphur odour
May-21	SW1	N/A	1.5	N/A	N/A	1200	11	265.5	5.43	186.5	Dark brown stain, no odour
Jun-21	SW1	N/A	1.4	N/A	N/A	1149	10.1	219	5.77	202	Natural tannin brown, no odour / sheen
Feb-19	SW2*	3.3	Dry	-	N/A						Location was dry.
Mar-19	SW2*	3.3	Dry	-	N/A						Location was dry.
Apr-19	SW2*	3.3	Dry	-	N/A						Location was dry.
May-19	SW2*	3.3	Dry	-	N/A						Location was dry.
Jun-19	SW2*	N/A	Dry	-	N/A						Location was dry.
Jul-19	SW2*	N/A	Dry	-	N/A						Location was dry.
Aug-19	SW2*	N/A	Dry	-	N/A						Location was dry.
Sep-19	SW2*	N/A	Dry		N/A						Location was dry.
Oct-19	SW2*	N/A	Dry		N/A						Location was dry.
Nov-19	SW2*	N/A	Dry		N/A						Location was dry.
Dec-19	SW2*	N/A	Dry		N/A						Location was dry.
Jan-20	SW2*	N/A	Dry		N/A						Location was dry.
Feb-20	SW2*	N/A	Dry		N/A						Location was dry.
Mar-20	SW2*	N/A	Dry		N/A						Location was dry.
Apr-20	SW2*	N/A	Dry		N/A						
May-20	SW2*	N/A	Dry		N/A						Location was dry.
Jun-20	SW2*	N/A	Dry	-	N/A						Location was dry.
Jul-20	SW2*	N/A	Dry	-	N/A						Location was dry – ground damp
Aug-20	SW2*	N/A	Dry	-	N/A						Location was dry – ground damp
Sep-20	SW2*	N/A	Dry	-	N/A						Location was dry
Oct-20	SW2*	N/A	Dry	N/A	N/A						Location was dry
Nov-20	SW2*	N/A	Dry	N/A	N/A						Location was dry
Dec-20	SW2*	N/A	Dry	N/A	N/A						Location was dry
Jan-21	SW2*	N/A	Dry	N/A	N/A						Location was dry
Mar-21	SW2	N/A	0.1			1100	20.3	132	6.16	244	Slight brown/tan, sulfur odour
Apr-21	SW2	N/A	0.1	N/A	N/A	1210	14.67	91.5	5.07	19	Slight brown stain, sulphur odour
May-21	SW2	N/A	0.25	N/A	N/A	1110	11.1	89.1	4.99	166	Slight brown stain, no odour
Jun-21	SW2	N/A	0.25	N/A	N/A	1040	12.8	105	4.69	64.2	Clear, no odour / sheen
Feb-19	SW3*	2.1	1.1	1	N/A	1615	26	313	5.11	62	Water was at a low level and was not seen to be flowing.
Mar-19	SW3*	2.1	1.1	1	N/A	1515	25.87	342	6.08		Water was at a low level and was not seen to be flowing.
Apr-19	SW3*	2.1	1.1	0.1	N/A	1430	19.88	311	6.02	-12.8	Water clear, no odour.
May-19	SW3*	2.1	0.1	1.1	N/A	1315	14.54	344	5.54	71.6	Water clear, no odour.
Jun-19	SW3*	N/A	0.15	1.1	N/A	1330	16.36	290	6.41	52.4	Water clear, no odour.
Jul-19	SW3*	N/A	0.215	1.215	N/A	1245	14.6	431	4.27	116	Water clear, no odour.
Aug-19	SW3*	N/A	0.195	1.195	N/A	1245	11.96	464	4.67	152	Water clear, no odour.
Sep-19	SW3*	N/A	0.24	1.24	N/A	1445	17.05	449	5.02	86.7	Water clear, no odour.
Oct-19	SW3*	N/A	0.29	1.29	N/A	1230	18.77	313	4.36	315	Water clear, no odour.
Nov-19	SW3*	N/A	0.02	1.02	N/A	945	19.54	470	5.04	97.7	Mostly clear (red algae present), no odour
Dec-19	SW3*	N/A	Dry		N/A	1000	20	440	5.69	29.3	Small amount of standing water
Jan-20	SW3*	N/A	Dry		N/A						Location was dry.
Feb-20	SW3*	N/A	Dry		N/A						Location was dry.
Mar-20	SW3*	N/A	Dry		N/A						Location was dry.
Apr-20	SW3*	N/A	0.76		N/A		17.5	276.9	4.24	235.6	
May-20	SW3*	N/A	0.85		N/A	1330	14.3	286.6	4.72	304.7	
Jun-20	SW3*	N/A	0.24	-	N/A	1330	14.5	468.6	4.18	220.9	Clear, no odour
Jul-20	SW3*	N/A	0.3	-	N/A		14	395	4	381	Clear, no odour
Aug-20	SW3*	N/A	0.56	-	N/A		13.56	477.36	3.77	4.08	Clear, no odour
Sep-20	SW3*	N/A	0.39	-	N/A		16.99	399	3.79	4.08	Clear, no odour
Oct-20	SW3*	N/A	0.39	N/A	N/A		18.3	375.4	3.74	318	Clear, no odour
Nov-20	SW3*	N/A	0.39	N/A	N/A		20.1	1218	4.78	398.5	Clear, slight odour
Dec-20	SW3*	N/A	0.31	N/A	N/A		23.6	1097	5.45	171.1	Clear, no odour
Jan-21	SW3*	N/A	0.31	N/A	N/A		22.1	1056	5.31	147.2	Clear, no odour
Feb-21	SW3	N/A				1015	21.2	1101	5.95	36.9	Clear, no odour
Mar-21	SW3	N/A	> 0.6			1030	20.6	291	6.54	1076	Slight brown/tan, sulfur odour
Apr-21	SW3	N/A	> 0.6	N/A	N/A	1155	15.5	312.57	5.49	48.1	Slight brown stain, sulphur odour
May-21	SW3	N/A	1.5	N/A	N/A	1100	10.2	276	5.7	36.1	Natural sheen (brown algae), no odour
Jun-21	SW3	N/A	1.4	N/A	N/A	1024	10.2	220	4.84	-2.9	Clear, strong sulphur odour, no sheen
Feb-19	SW4*	2	Dry	-	N/A						Location was dry.
Mar-19	SW4*	2	Dry	-	N/A						Location was dry.
Apr-19	SW4*	2	1.9	1.9	N/A	1115	17.57	339	3.69	430.5	Water clear, no odour.
May-19	SW4*	2	0.135	2.135	N/A	1030	12.03	389	3.69	211.4	Water clear, no odour.
Jun-19	SW4*	N/A	0.175	2.135	N/A	1045	13.34	313	6.44	377.3	Water clear, no odour.
Jul-19	SW4*	N/A	0.281	2.281	N/A	930	9.9	371	4.23	116	Light brown, no odour.
Aug-19	SW4*	N/A	0.18	2.18	N/A	950	8.07	485	4.17	294	Clear, no odour.
Sep-19	SW4*	N/A	0.29	2.29	N/A	1030	14.8	371	4.19	360	Clear, no odour.
Oct-19	SW4*	N/A	0.35	2.35	N/A	945	16.45	325	4.36	370	Clear, no odour.
Nov-19	SW4*	N/A	0.15	2.15	N/A	1045	18.46	538	4.56	219	Clear, no odour.
Dec-19	SW4*	N/A	Dry		N/A						Location was dry
Jan-20	SW4*	N/A	Dry		N/A						Location was dry
Feb-20	SW4*	N/A	Dry		N/A						Location was dry
Mar-20	SW4*	N/A	Dry		N/A						Location was dry
Apr-20	SW4*	N/A	0.68		N/A		16.2	306.1	4.83	205.6	
May-20	SW4*	N/A	1.28		N/A	1400	12.1	337.5	4.69	230.1	
Jun-20	SW4*	N/A	0.38	-	N/A	1400	12.5	375	4.82	236.2	Clear, No odour
Jul-20	SW4*	N/A	0.47	-	N/A		13	324	4.7	311	Clear, no odour
Aug-20	SW4*	N/A	0.52	-	N/A		12.4	433.79	4.22	389	Clear, no odour
Sep-20	SW4*	N/A	0.5	-	N/A		17.02	383	3.88	389	Clear, no odour
Oct-20	SW4*	N/A	0.5	N/A	N/A		17.7	397.2	3.62	303	Clear, no odour
Nov-20	SW4*	N/A	0.5	N/A	N/A		20.3	1239	5.66	256	Clear, slight odour
Dec-20	SW4*	N/A	0.5	N/A	N/A		21	1397	6.72	-204.6	Natural sheen, no odour
Jan-21	SW4*	N/A	0.5	N/A	N/A		21.7	1311	7.24	-226.5	Natural sheen, sulphur odour
Feb-21	SW4	N/A				945	20.6	1468	6.98	-140.4	Natural sheen, no odour, very full
Mar-21	SW4	N/A	> 0.6			1000	19.5	529	7.34	-15.2	Brown/Tan, sulfur odour
Apr-21	SW4	N/A	> 0.6	N/A	N/A	1121	16.14	257.88	6.18	-65	Brown stain, sulphur odour
May-21	SW4	N/A	1.5	N/A	N/A	1015	10.4	322	6.26	-54	Natural sheen (brown algae), no odour, water flowing in E direction
Jun-21	SW4	N/A	1.2	N/A	N/A	1000	10.4	277	4.79	260	Natural tannin brown, no odour / sheen

ATTACHMENT 3: LAB RESULTS

CERTIFICATE OF ANALYSIS

Work Order	: **ES2122840**	Page	: 1 of 22
Client	: **KLEINFELDER AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: TOM OVERTON	Contact	: Shirley LeCornu
Address	: Suite 3, 240 - 244 Pacific Highway Charlestown NSW 2290	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +6138549 9630
Project	: 20193820	Date Samples Received	: 18-Jun-2021 15:47
Order number	: ----	Date Analysis Commenced	: 19-Jun-2021
C-O-C number	: ----	Issue Date	: 25-Jun-2021 17:49
Sampler	: Megan Ferguson		
Site	: WSS - Cabbage Tree Rd water mointoring June 2021		
Quote number	: ME/114/19 ALS Compass		
No. of samples received	: 19		
No. of samples analysed	: 19		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Neil Martin	Team Leader - Chemistry	Chemistry, Newcastle West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- TDS by method EA-015 may bias high for various samples due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- EA016: Calculated TDS is determined from Electrical conductivity using a conversion factor of 0.65.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH1	BH2	BH4	BH6	BH7
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-001	ES2122840-002	ES2122840-003	ES2122840-004	ES2122840-005
				Result	Result	Result	Result	Result
EA005: pH								
pH Value	----	0.01	pH Unit	5.27	4.85	4.60	4.82	4.84
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	99	61	111	286	232
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	59	43	85	167	185
EA016: Calculated TDS (from Electrical Conductivity)								
Total Dissolved Solids (Calc.)	----	1	mg/L	64	40	72	186	151
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	9	64	18	57	44
EA045: Turbidity								
Turbidity	----	0.1	NTU	5.9	38.4	11.6	83.0	169
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	12	13	15	36	25
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	3	2	<1	2	<1
Total Alkalinity as CaCO3	----	1	mg/L	3	2	<1	2	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	5	7	14	42	15
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	25	11	24	58	59
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	<1	2	1	3	<1
Magnesium	7439-95-4	1	mg/L	3	2	3	7	6
Sodium	7440-23-5	1	mg/L	15	9	14	40	33
Potassium	7440-09-7	1	mg/L	<1	<1	1	<1	2
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	7440-42-8	0.05	mg/L	0.11	<0.05	<0.05	<0.05	<0.05
Barium	7440-39-3	0.001	mg/L	0.003	0.001	0.010	0.033	0.004
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	0.0001	<0.0001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH1	BH2	BH4	BH6	BH7
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-001	ES2122840-002	ES2122840-003	ES2122840-004	ES2122840-005
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	**0.001**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	**0.002**
Copper	7440-50-8	0.001	mg/L	<0.001	**0.002**	**0.157**	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.017**	**0.011**	**0.023**	**0.004**	**0.011**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	**0.002**	**0.001**	**0.003**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.290**	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	**0.52**	<0.05	<0.05	**1.08**	**1.35**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	**0.1**
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**0.87**	**0.50**	**0.97**	**2.55**	**1.98**
ø Total Cations	----	0.01	meq/L	**0.90**	**0.66**	**0.93**	**2.46**	**1.98**
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	<50	<50	<50
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	<100	<100	<100
>C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	<100	<100	<100
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20	<20

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH1	BH2	BH4	BH6	BH7
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-001	ES2122840-002	ES2122840-003	ES2122840-004	ES2122840-005
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20	<20
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L	<2	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	<5
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH1	BH2	BH4	BH6	BH7
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-001	ES2122840-002	ES2122840-003	ES2122840-004	ES2122840-005
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH1	BH2	BH4	BH6	BH7
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-001	ES2122840-002	ES2122840-003	ES2122840-004	ES2122840-005
				Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued								
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	119	118	121	118	118
Toluene-D8	2037-26-5	2	%	123	119	127	125	124
4-Bromofluorobenzene	460-00-4	2	%	121	119	126	126	126
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	107	105	101	101	103
13C8-PFOA	----	0.02	%	98.1	96.7	96.4	98.6	96.3

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH8	BH9A	BH10	BH11	BH12
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-006	ES2122840-007	ES2122840-008	ES2122840-009	ES2122840-010
				Result	Result	Result	Result	Result
EA005: pH								
pH Value	----	0.01	pH Unit	4.83	4.81	4.66	4.48	7.90
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	390	165	199	202	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	276	103	111	158	----
EA016: Calculated TDS (from Electrical Conductivity)								
Total Dissolved Solids (Calc.)	----	1	mg/L	254	107	129	131	----
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	34	216	33	14	----
EA045: Turbidity								
Turbidity	----	0.1	NTU	102	117	12.1	6.2	----
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	30	12	16	20	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	4	8	<1	<1	----
Total Alkalinity as CaCO3	----	1	mg/L	4	8	<1	<1	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	40	15	23	20	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	89	39	41	46	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	2	<1	<1	<1	----
Magnesium	7439-95-4	1	mg/L	6	3	4	5	----
Sodium	7440-23-5	1	mg/L	62	26	26	31	----
Potassium	7440-09-7	1	mg/L	<1	1	9	<1	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	----
Barium	7440-39-3	0.001	mg/L	0.012	0.004	0.025	0.004	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH8	BH9A	BH10	BH11	BH12
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-006	ES2122840-007	ES2122840-008	ES2122840-009	ES2122840-010
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Chromium	7440-47-3	0.001	mg/L	**0.002**	**0.001**	**0.001**	**0.001**	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	**0.001**	----
Manganese	7439-96-5	0.001	mg/L	**0.005**	**0.020**	**0.006**	**0.002**	----
Nickel	7440-02-0	0.001	mg/L	**0.002**	**0.002**	**0.002**	**0.002**	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
Zinc	7440-66-6	0.005	mg/L	**0.005**	<0.005	**0.013**	**0.031**	----
Iron	7439-89-6	0.05	mg/L	**3.38**	**0.25**	<0.05	**0.25**	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	**0.2**	<0.1	<0.1	<0.1	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**3.42**	**1.57**	**1.64**	**1.71**	----
ø Total Cations	----	0.01	meq/L	**3.29**	**1.40**	**1.69**	**1.76**	----
ø Ionic Balance	----	0.01	%	**1.98**	----	----	----	----
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	<50	<50	<50
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	<100	<100	<100
>C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	<100	<100	<100
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20	<20

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH8	BH9A	BH10	BH11	BH12
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-006	ES2122840-007	ES2122840-008	ES2122840-009	ES2122840-010
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20	<20
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L	<2	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	<5
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH8	BH9A	BH10	BH11	BH12
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-006	ES2122840-007	ES2122840-008	ES2122840-009	ES2122840-010
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH8	BH9A	BH10	BH11	BH12
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-006	ES2122840-007	ES2122840-008	ES2122840-009	ES2122840-010
				Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued								
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	121	103	116	120	120
Toluene-D8	2037-26-5	2	%	126	107	122	125	124
4-Bromofluorobenzene	460-00-4	2	%	126	105	122	120	118
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	106	102	102	97.2	----
13C8-PFOA	----	0.02	%	96.5	99.1	93.8	97.3	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MW239S	SW1	SW2	SW3	SW4
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-011	ES2122840-012	ES2122840-013	ES2122840-014	ES2122840-015
				Result	Result	Result	Result	Result
EA005: pH								
pH Value	----	0.01	pH Unit	4.66	5.76	4.51	5.27	4.84
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	231	213	89	196	250
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	167	236	54	120	145
EA016: Calculated TDS (from Electrical Conductivity)								
Total Dissolved Solids (Calc.)	----	1	mg/L	150	138	58	127	162
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	265	6	<5	<5	26
EA045: Turbidity								
Turbidity	----	0.1	NTU	216	7.8	1.4	7.7	11.7
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	20	30	8	8	26
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	32	<1	4	<1
Total Alkalinity as CaCO3	----	1	mg/L	<1	32	<1	4	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	31	<1	8	14	23
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	46	56	20	47	57
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	<1	7	<1	<1	4
Magnesium	7439-95-4	1	mg/L	5	3	2	2	4
Sodium	7440-23-5	1	mg/L	33	31	11	28	34
Potassium	7440-09-7	1	mg/L	<1	2	<1	<1	1
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	0.001	<0.001
Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	7440-39-3	0.001	mg/L	0.003	0.009	0.004	0.003	0.025
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MW239S	SW1	SW2	SW3	SW4
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-011	ES2122840-012	ES2122840-013	ES2122840-014	ES2122840-015
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	7440-47-3	0.001	mg/L	**0.002**	**0.002**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	**0.002**	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.005**	**0.052**	**0.017**	**0.024**	**0.045**
Nickel	7440-02-0	0.001	mg/L	**0.002**	<0.001	**0.001**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	**0.068**	**0.058**	<0.005	**0.009**
Iron	7439-89-6	0.05	mg/L	**0.68**	**1.51**	**1.58**	**10.5**	**1.58**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	**0.2**
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**1.94**	**2.22**	**0.73**	**1.70**	**2.09**
ø Total Cations	----	0.01	meq/L	**1.85**	**2.00**	**0.64**	**1.38**	**2.03**
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	<50	<50	<50
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	<100	<100	<100
>C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	<100	<100	<100
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20	<20

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MW239S	SW1	SW2	SW3	SW4
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-011	ES2122840-012	ES2122840-013	ES2122840-014	ES2122840-015
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20	<20
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L	<2	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	<5
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MW239S	SW1	SW2	SW3	SW4
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-011	ES2122840-012	ES2122840-013	ES2122840-014	ES2122840-015
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MW239S	SW1	SW2	SW3	SW4
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00
Compound	CAS Number	LOR	Unit	ES2122840-011	ES2122840-012	ES2122840-013	ES2122840-014	ES2122840-015
				Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued								
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	120	120	113	95.9	100.0
Toluene-D8	2037-26-5	2	%	121	126	117	102	93.9
4-Bromofluorobenzene	460-00-4	2	%	122	122	116	96.9	98.9
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	99.8	100	98.8	104	97.0
13C8-PFOA	----	0.02	%	95.9	99.2	96.4	96.2	96.6

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	QW52	QW54	Rinsate June	Trip Blank June	----
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	----
Compound	CAS Number	LOR	Unit	ES2122840-016	ES2122840-017	ES2122840-018	ES2122840-019	--------
				Result	Result	Result	Result	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	<0.001	<0.001	----
Boron	7440-42-8	0.05	mg/L	<0.05	----	<0.05	<0.05	----
Barium	7440-39-3	0.001	mg/L	**0.004**	----	<0.001	<0.001	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	----	<0.001	<0.001	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	<0.0001	<0.0001	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	----	<0.001	<0.001	----
Chromium	7440-47-3	0.001	mg/L	**0.001**	----	<0.001	<0.001	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	<0.001	<0.001	----
Manganese	7439-96-5	0.001	mg/L	**0.027**	----	<0.001	<0.001	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	<0.001	<0.001	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	<0.001	<0.001	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	<0.01	<0.01	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	<0.01	<0.01	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	<0.005	<0.005	----
Iron	7439-89-6	0.05	mg/L	**10.6**	----	<0.05	<0.05	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	<0.0001	<0.0001	----
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
C10 - C14 Fraction	----	50	µg/L	<50	----	<50	<50	----
C15 - C28 Fraction	----	100	µg/L	<100	----	<100	<100	----
C29 - C36 Fraction	----	50	µg/L	<50	----	<50	<50	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	----	<50	<50	----
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
>C10 - C16 Fraction	----	100	µg/L	<100	----	<100	<100	----
>C16 - C34 Fraction	----	100	µg/L	<100	----	<100	<100	----
>C34 - C40 Fraction	----	100	µg/L	<100	----	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	----	<100	<100	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	----	<100	<100	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	----	<20	<20	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	<20	<20	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	QW52	QW54	Rinsate June	Trip Blank June	----
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	----
Compound	CAS Number	LOR	Unit	ES2122840-016	ES2122840-017	ES2122840-018	ES2122840-019	--------
				Result	Result	Result	Result	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	----	<20	<20	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	----	<1	<1	----
Toluene	108-88-3	2	µg/L	<2	----	<2	<2	----
Ethylbenzene	100-41-4	2	µg/L	<2	----	<2	<2	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	<2	<2	----
ortho-Xylene	95-47-6	2	µg/L	<2	----	<2	<2	----
^ Total Xylenes	----	2	µg/L	<2	----	<2	<2	----
^ Sum of BTEX	----	1	µg/L	<1	----	<1	<1	----
Naphthalene	91-20-3	5	µg/L	<5	----	<5	<5	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	QW52	QW54	Rinsate June	Trip Blank June	----
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	----
Compound	CAS Number	LOR	Unit	ES2122840-016	ES2122840-017	ES2122840-018	ES2122840-019	--------
				Result	Result	Result	Result	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	QW52	QW54	Rinsate June	Trip Blank June	----
			Sampling date / time	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	18-Jun-2021 00:00	----
Compound	CAS Number	LOR	Unit	ES2122840-016	ES2122840-017	ES2122840-018	ES2122840-019	--------
				Result	Result	Result	Result	----
EP231P: PFAS Sums - Continued								
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	114	----	113	108	----
Toluene-D8	2037-26-5	2	%	104	----	102	96.2	----
4-Bromofluorobenzene	460-00-4	2	%	97.2	----	97.5	90.9	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	99.1	93.9	99.8	95.1	----
13C8-PFOA	----	0.02	%	96.9	98.7	99.2	101	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle - Water, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(WATER) EA005: pH

QUALITY CONTROL REPORT

Work Order	: **ES2122840**	Page	: 1 of 10
Client	: **KLEINFELDER AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: TOM OVERTON	Contact	: Shirley LeCornu
Address	: Suite 3, 240 - 244 Pacific Highway Charlestown NSW 2290	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +6138549 9630
Project	: 20193820	Date Samples Received	: 18-Jun-2021
Order number	: ----	Date Analysis Commenced	: 19-Jun-2021
C-O-C number	: ----	Issue Date	: 25-Jun-2021
Sampler	: Megan Ferguson		
Site	: WSS - Cabbage Tree Rd water mointoring June 2021		
Quote number	: ME/114/19 ALS Compass		
No. of samples received	: 19		
No. of samples analysed	: 19		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Neil Martin	Team Leader - Chemistry	Chemistry, Newcastle West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EA005: pH (QC Lot: 3749383)									
ES2122805-015	Anonymous	EA005: pH Value	----	0.01	pH Unit	8.15	8.16	0.1	0% - 20%
ES2122808-004	Anonymous	EA005: pH Value	----	0.01	pH Unit	7.84	7.83	0.1	0% - 20%
EA005: pH (QC Lot: 3749384)									
ES2122840-011	MW239S	EA005: pH Value	----	0.01	pH Unit	4.66	4.68	0.4	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 3747669)									
WN2106928-006	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	284	285	0.4	0% - 20%
ES2122647-002	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	5650	5650	0.0	0% - 20%
ES2122630-008	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	20800	20800	0.0	0% - 20%
ES2122633-008	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	1030	1030	0.2	0% - 20%
ES2122379-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	420	421	0.2	0% - 20%
ES2122840-011	MW239S	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	231	236	2.2	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 3754324)									
ES2122809-002	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	3540	3540	0.3	0% - 20%
ES2122840-011	MW239S	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	167	168	0.0	0% - 50%
EA025: Total Suspended Solids dried at 104 ± 2°C (QC Lot: 3754323)									
ES2122809-002	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	19	17	12.6	No Limit
ES2122840-011	MW239S	EA025H: Suspended Solids (SS)	----	5	mg/L	265	264	0.6	0% - 20%
EA045: Turbidity (QC Lot: 3745512)									
ES2122805-015	Anonymous	EA045: Turbidity	----	0.1	NTU	6.7	6.7	0.0	0% - 20%
ES2122840-002	BH2	EA045: Turbidity	----	0.1	NTU	38.4	38.3	0.3	0% - 20%
EA045: Turbidity (QC Lot: 3745513)									
ES2122840-014	SW3	EA045: Turbidity	----	0.1	NTU	7.7	7.7	0.0	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 3747672)									

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
				Laboratory Duplicate (DUP) Report					
ED037P: Alkalinity by PC Titrator (QC Lot: 3747672) - continued									
ES2122786-004	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	88	88	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	88	88	0.0	0% - 20%
ES2122786-013	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	171	169	1.2	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	171	169	1.2	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 3747673)									
ES2122840-015	SW4	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	<1	0.0	No Limit
ES2122840-011	MW239S	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	<1	0.0	No Limit
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 3748248)									
ES2122775-002	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<10	<10	0.0	No Limit
ES2122858-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	<1	0.0	No Limit
ED045G: Chloride by Discrete Analyser (QC Lot: 3748249)									
ES2122775-002	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	844	847	0.3	0% - 20%
ES2122858-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	<1	<1	0.0	No Limit
ED093F: Dissolved Major Cations (QC Lot: 3748725)									
ES2122840-008	BH10	ED093F: Calcium	7440-70-2	1	mg/L	<1	1	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	4	4	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	26	26	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	9	8	0.0	No Limit
ES2122736-021	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	<1	<1	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	<1	<1	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	2	2	0.0	No Limit
		ED093F: Potassium	7440-09-7	1	mg/L	1	<1	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3748723)									
ES2122840-008	BH10	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.025	0.024	0.0	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
				Laboratory Duplicate (DUP) Report					
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3748723) - continued									
ES2122840-008	BH10	EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.006	0.010	42.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.013	0.010	29.4	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
ES2122736-021	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.055	0.059	5.8	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.012	0.010	17.7	0% - 50%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 3748726)									
ES2122840-001	BH1	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2122840-009	BH11	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK040P: Fluoride by PC Titrator (QC Lot: 3747666)									
ES2122630-008	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.3	0.3	0.0	No Limit
ES2122379-001	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.2	0.2	0.0	No Limit
EK040P: Fluoride by PC Titrator (QC Lot: 3747675)									
ES2122840-015	SW4	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.2	0.2	0.0	No Limit
ES2122840-011	MW239S	EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3748009)									
ES2122830-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	210	200	0.0	0% - 50%
ES2122840-009	BH11	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3748009)									
ES2122830-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	370	360	0.0	0% - 50%
ES2122840-009	BH11	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 3748009)									
ES2122830-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	21	20	0.0	0% - 50%
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	174	193	10.3	0% - 20%
ES2122840-009	BH11	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA005: pH (QCLot: 3749383)								
EA005: pH Value	----	----	pH Unit	----	7.6 pH Unit	100	98.5	102
EA005: pH (QCLot: 3749384)								
EA005: pH Value	----	----	pH Unit	----	7.6 pH Unit	100	98.5	102
EA010P: Conductivity by PC Titrator (QCLot: 3747669)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	220 µS/cm	96.5	91.1	107
				<1	2100 µS/cm	102	93.2	108
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 3754324)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2000 mg/L	97.8	87.0	109
				<10	293 mg/L	110	75.2	126
				<10	2835 mg/L	103	83.0	124
EA025: Total Suspended Solids dried at 104 ± 2°C (QCLot: 3754323)								
EA025H: Suspended Solids (SS)	----	5	mg/L	<5	150 mg/L	98.0	83.0	129
				<5	1000 mg/L	101	82.0	110
				<5	463 mg/L	106	83.0	118
EA045: Turbidity (QCLot: 3745512)								
EA045: Turbidity	----	0.1	NTU	<0.1	40 NTU	99.5	91.0	105
EA045: Turbidity (QCLot: 3745513)								
EA045: Turbidity	----	0.1	NTU	<0.1	40 NTU	99.5	91.0	105
ED037P: Alkalinity by PC Titrator (QCLot: 3747672)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	110	81.0	111
				----	22 mg/L	95.4	80.0	120
ED037P: Alkalinity by PC Titrator (QCLot: 3747673)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	109	81.0	111
				----	50 mg/L	100	80.0	120
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 3748248)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	103	82.0	122
				<1	500 mg/L	104	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 3748249)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	99.5	80.9	127
				<1	1000 mg/L	93.2	80.9	127
ED093F: Dissolved Major Cations (QCLot: 3748725)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	92.6	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	106	90.0	116

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED093F: Dissolved Major Cations (QCLot: 3748725) - continued								
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	104	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	104	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 3748723)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	86.7	85.0	114
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	89.6	85.0	115
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	84.5	82.0	110
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	91.3	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	90.1	85.0	111
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	85.1	82.0	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	93.6	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	87.0	83.0	111
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	92.7	82.0	110
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	88.6	82.0	112
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	89.5	85.0	115
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.1 mg/L	86.6	83.0	109
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	89.2	81.0	117
EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	0.5 mg/L	92.3	85.0	115
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	90.9	82.0	112
EG035F: Dissolved Mercury by FIMS (QCLot: 3748726)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	96.4	83.0	105
EK040P: Fluoride by PC Titrator (QCLot: 3747666)								
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	5 mg/L	102	82.0	116
EK040P: Fluoride by PC Titrator (QCLot: 3747675)								
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	5 mg/L	99.8	82.0	116
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup (QCLot: 3745918)								
EP071SG: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	79.1	55.8	112
EP071SG: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	89.1	71.6	113
EP071SG: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	80.9	56.0	121
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup (QCLot: 3745918)								
EP071SG: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	66.8	57.9	119
EP071SG: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	77.0	62.5	110
EP071SG: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	68.9	61.5	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3748009)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	86.1	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3748009)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	84.9	75.0	127
EP080: BTEXN (QCLot: 3748009)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low	High
EP080: BTEXN (QCLot: 3748009) - continued								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	95.2	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	92.1	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	94.1	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	94.7	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	96.6	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	98.9	70.0	120
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3755081)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	110	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	0.25 µg/L	98.2	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	105	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	108	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3755081)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	104	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	94.2	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	112	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	117	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	101	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	105	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	113	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	94.6	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	104	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3755081)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	95.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	121	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	80.0	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	103	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	99.5	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	122	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	114	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3755081)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3755081) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	108	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	101	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	104	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	87.2	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 3748248)							
ES2122775-002	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	130	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 3748249)							
ES2122775-002	Anonymous	ED045G: Chloride	16887-00-6	50 mg/L	# Not Determined	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 3748723)							
ES2122736-022	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	86.1	70.0	130
		EG020A-F: Beryllium	7440-41-7	1 mg/L	90.3	70.0	130
		EG020A-F: Barium	7440-39-3	1 mg/L	92.4	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	91.4	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	87.4	70.0	130
		EG020A-F: Cobalt	7440-48-4	1 mg/L	81.4	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	84.9	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	83.2	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	102	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	87.9	70.0	130
		EG020A-F: Vanadium	7440-62-2	1 mg/L	94.3	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	89.0	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3748726)							
ES2122775-002	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	89.6	70.0	130
EK040P: Fluoride by PC Titrator (QCLot: 3747666)							
ES2121491-001	Anonymous	EK040P: Fluoride	16984-48-8	5 mg/L	91.4	70.0	130
EK040P: Fluoride by PC Titrator (QCLot: 3747675)							
ES2122840-005	BH7	EK040P: Fluoride	16984-48-8	5 mg/L	78.0	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3748009)							

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3748009) - continued							
ES2122830-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	105	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3748009)							
ES2122830-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	100	70.0	130
EP080: BTEXN (QCLot: 3748009)							
ES2122830-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	95.3	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	111	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	117	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	114	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	116	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	# Not Determined	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2122840**	Page	: 1 of 13
Client	: **KLEINFELDER AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: TOM OVERTON	Telephone	: +6138549 9630
Project	: 20193820	Date Samples Received	: 18-Jun-2021
Site	: WSS - Cabbage Tree Rd water mointoring June 2021	Issue Date	: 25-Jun-2021
Sampler	: Megan Ferguson	No. of samples received	: 19
Order number	: ----	No. of samples analysed	: 19

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
ED045G: Chloride by Discrete Analyser	ES2122775--002	Anonymous	**Chloride**	16887-00-6	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP080: BTEXN	ES2122830--001	Anonymous	**Naphthalene**	91-20-3	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method / **Container** / Client Sample ID(s)	*Extraction / Preparation*			*Analysis*		
	Date extracted	*Due for extraction*	***Days overdue***	*Date analysed*	*Due for analysis*	***Days overdue***
EA005: pH						
Clear Plastic Bottle - Natural						
BH1, BH2, BH4, BH6, BH7, BH8, BH9A, BH10, BH11, BH12, MW239S, SW1, SW2, SW3, SW4	----	----	----	21-Jun-2021	18-Jun-2021	**3**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	0	18	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
pH	3	36	8.33	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	0	18	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	0	18	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	0	18	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA005: pH								
Clear Plastic Bottle - Natural (EA005)								
BH1,	BH2,	**18-Jun-2021**	**----**	----	----	**21-Jun-2021**	18-Jun-2021	×
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	BH12,							
MW239S,	SW1,							
SW2,	SW3,							
SW4								
EA010P: Conductivity by PC Titrator								
Clear Plastic Bottle - Natural (EA010-P)								
BH1,	BH2,	**18-Jun-2021**	**----**	----	----	**21-Jun-2021**	16-Jul-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4							
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Clear Plastic Bottle - Natural (EA015H)								
BH1,	BH2,	**18-Jun-2021**	**----**	----	----	**24-Jun-2021**	25-Jun-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA025: Total Suspended Solids dried at 104 ± 2°C							
Clear Plastic Bottle - Natural (EA025H)							
BH1, BH2, BH4, BH6, BH7, BH8, BH9A, BH10, BH11, MW239S, SW1, SW2, SW3, SW4	**18-Jun-2021**	**----**	----	----	**24-Jun-2021**	25-Jun-2021	✓
EA045: Turbidity							
Clear Plastic Bottle - Natural (EA045)							
BH1, BH2, BH4, BH6, BH7, BH8, BH9A, BH10, BH11, MW239S, SW1, SW2, SW3, SW4	**18-Jun-2021**	**----**	----	----	**19-Jun-2021**	20-Jun-2021	✓
EA065: Total Hardness as CaCO3							
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)							
BH1, BH2, BH4, BH6, BH7, BH8, BH9A, BH10, BH11, MW239S, SW1, SW2, SW3, SW4	**18-Jun-2021**	**----**	----	----	**22-Jun-2021**	16-Jul-2021	✓
ED037P: Alkalinity by PC Titrator							
Clear Plastic Bottle - Natural (ED037-P)							
BH1, BH2, BH4, BH6, BH7, BH8, BH9A, BH10, BH11, MW239S, SW1, SW2, SW3, SW4	**18-Jun-2021**	**----**	----	----	**21-Jun-2021**	02-Jul-2021	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural (ED041G)								
BH1,	BH2,	**18-Jun-2021**	**----**	----	----	**21-Jun-2021**	16-Jul-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4							
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G)								
BH1,	BH2,	**18-Jun-2021**	**----**	----	----	**21-Jun-2021**	16-Jul-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4							
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)								
BH1,	BH2,	**18-Jun-2021**	**----**	----	----	**22-Jun-2021**	16-Jul-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4							
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)								
BH1,	BH2,	**18-Jun-2021**	**----**	----	----	**22-Jun-2021**	15-Dec-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4,							
QW52,	Rinsate June,							
Trip Blank June								

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)								
BH1,	BH2,	**18-Jun-2021**	**----**	----	----	**22-Jun-2021**	16-Jul-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4,							
QW52,	Rinsate June,							
Trip Blank June								
EK040P: Fluoride by PC Titrator								
Clear Plastic Bottle - Natural (EK040P)								
BH1,	BH2,	**18-Jun-2021**	**----**	----	----	**21-Jun-2021**	16-Jul-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4							
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
Amber Glass Bottle - Unpreserved (EP071SG)								
BH1,	BH2,	**18-Jun-2021**	**22-Jun-2021**	25-Jun-2021	✓	**25-Jun-2021**	01-Aug-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	BH12,							
MW239S,	SW1,							
SW2,	SW3,							
SW4,	QW52,							
Rinsate June,	Trip Blank June							
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
Amber Glass Bottle - Unpreserved (EP071SG)								
BH1,	BH2,	**18-Jun-2021**	**22-Jun-2021**	25-Jun-2021	✓	**25-Jun-2021**	01-Aug-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	BH12,							
MW239S,	SW1,							
SW2,	SW3,							
SW4,	QW52,							
Rinsate June,	Trip Blank June							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons								
Amber VOC Vial - Sulfuric Acid (EP080)								
BH1,	BH2,	**18-Jun-2021**	**24-Jun-2021**	02-Jul-2021	✓	**24-Jun-2021**	02-Jul-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	BH12,							
MW239S,	SW1,							
SW2,	SW3,							
SW4,	QW52,							
Rinsate June,	Trip Blank June							
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Amber VOC Vial - Sulfuric Acid (EP080)								
BH1,	BH2,	**18-Jun-2021**	**24-Jun-2021**	02-Jul-2021	✓	**24-Jun-2021**	02-Jul-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	BH12,							
MW239S,	SW1,							
SW2,	SW3,							
SW4,	QW52,							
Rinsate June,	Trip Blank June							
EP080: BTEXN								
Amber VOC Vial - Sulfuric Acid (EP080)								
BH1,	BH2,	**18-Jun-2021**	**24-Jun-2021**	02-Jul-2021	✓	**24-Jun-2021**	02-Jul-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	BH12,							
MW239S,	SW1,							
SW2,	SW3,							
SW4,	QW52,							
Rinsate June,	Trip Blank June							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
BH1,	BH2,	**18-Jun-2021**	**24-Jun-2021**	15-Dec-2021	✓	**24-Jun-2021**	15-Dec-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4,							
QW52,	QW54,							
Rinsate June,	Trip Blank June							
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
BH1,	BH2,	**18-Jun-2021**	**24-Jun-2021**	15-Dec-2021	✓	**24-Jun-2021**	15-Dec-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4,							
QW52,	QW54,							
Rinsate June,	Trip Blank June							
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X)								
BH1,	BH2,	**18-Jun-2021**	**24-Jun-2021**	15-Dec-2021	✓	**24-Jun-2021**	15-Dec-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4,							
QW52,	QW54,							
Rinsate June,	Trip Blank June							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
BH1,	BH2,	**18-Jun-2021**	**24-Jun-2021**	15-Dec-2021	✓	**24-Jun-2021**	15-Dec-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4,							
QW52,	QW54,							
Rinsate June,	Trip Blank June							
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
BH1,	BH2,	**18-Jun-2021**	**24-Jun-2021**	15-Dec-2021	✓	**24-Jun-2021**	15-Dec-2021	✓
BH4,	BH6,							
BH7,	BH8,							
BH9A,	BH10,							
BH11,	MW239S,							
SW1,	SW2,							
SW3,	SW4,							
QW52,	QW54,							
Rinsate June,	Trip Blank June							

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Alkalinity by PC Titrator	ED037-P	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	6	43	13.95	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Fluoride by PC Titrator	EK040P	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	18	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
pH	EA005	3	36	8.33	10.00	×	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	0	18	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Turbidity	EA045	3	29	10.34	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by PC Titrator	ED037-P	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	4	43	9.30	8.33	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Fluoride by PC Titrator	EK040P	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH	EA005	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	3	20	15.00	15.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	3	20	15.00	15.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Turbidity	EA045	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Chloride by Discrete Analyser	ED045G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	1	43	2.33	1.67	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Method Blanks (MB) - Continued							
Dissolved Mercury by FIMS	EG035F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Fluoride by PC Titrator	EK040P	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Turbidity	EA045	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Chloride by Discrete Analyser	ED045G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Fluoride by PC Titrator	EK040P	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	18	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	0	18	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH	EA005	WATER	In house: Referenced to APHA 4500 H+ B. pH of water samples is determined by ISE either manually or by automated pH meter. This method is compliant with NEPM Schedule B(3)
Conductivity by PC Titrator	EA010-P	WATER	In house: Referenced to APHA 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM Schedule B(3)
Total Dissolved Solids (High Level)	EA015H	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of `filterable` residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM Schedule B(3)
Calculated TDS (from Electrical Conductivity)	EA016	WATER	In house: Calculation from Electrical Conductivity (APHA 2510 B) using a conversion factor specified in the analytical report. This method is compliant with NEPM Schedule B(3)
Suspended Solids (High Level)	EA025H	WATER	In house: Referenced to APHA 2540D. A gravimetric procedure employed to determine the amount of `non-filterable` residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water, oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um). The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM Schedule B(3)
Turbidity	EA045	WATER	In house: Referenced to APHA 2130 B. This method is compliant with NEPM Schedule B(3)
Alkalinity by PC Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm APHA seal method 2 017-1-L
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Fluoride by PC Titrator	EK040P	WATER	In house: Referenced to APHA 4500-F C: CDTA is added to the sample to provide a uniform ionic strength background, adjust pH, and break up complexes. Fluoride concentration is determined by either manual or automatic ISE measurement. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030F. This method is compliant with NEPM Schedule B(3)
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	WATER	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM Schedule B(3).
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2122840**

Client	: **KLEINFELDER AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: TOM OVERTON	Contact	: Shirley LeCornu
Address	: Suite 3, 240 - 244 Pacific Highway Charlestown NSW 2290	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: toverton@kleinfelder.com	E-mail	: shirley.lecornu@Alsglobal.com
Telephone	: ----	Telephone	: +6138549 9630
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 20193820	Page	: 1 of 3
Order number	: ----	Quote number	: EM2019ALLENVENG0010 (ME/114/19 ALS Compass)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: WSS - Cabbage Tree Rd water mointoring June 2021		
Sampler	: Megan Ferguson		

Dates

Date Samples Received	: 18-Jun-2021 15:47	Issue Date	: 18-Jun-2021
Client Requested Due Date	: 25-Jun-2021	Scheduled Reporting Date	: **25-Jun-2021**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 1.4'C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 19 / 19

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Sample ID QW53 & QW55 will be fowarded to Eurofins.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EA025H Suspended Solids - Standard Level	WATER - EA045 Turbidity	WATER - EP231X PFAS - Full Suite (28 analytes)	WATER - NT-12 General Water Suite	WATER - W-03 15 Metals (NEPM Suite)	WATER - W-04 SG TRH/BTEXN inc Silica Gel Clean Up
ES2122840-001	18-Jun-2021 00:00	BH1	✓	✓	✓	✓	✓	✓	✓
ES2122840-002	18-Jun-2021 00:00	BH2	✓	✓	✓	✓	✓	✓	✓
ES2122840-003	18-Jun-2021 00:00	BH4	✓	✓	✓	✓	✓	✓	✓
ES2122840-004	18-Jun-2021 00:00	BH6	✓	✓	✓	✓	✓	✓	✓
ES2122840-005	18-Jun-2021 00:00	BH7	✓	✓	✓	✓	✓	✓	✓
ES2122840-006	18-Jun-2021 00:00	BH8	✓	✓	✓	✓	✓	✓	✓
ES2122840-007	18-Jun-2021 00:00	BH9A	✓	✓	✓	✓	✓	✓	✓
ES2122840-008	18-Jun-2021 00:00	BH10	✓	✓	✓	✓	✓	✓	✓
ES2122840-009	18-Jun-2021 00:00	BH11	✓	✓	✓	✓	✓	✓	✓
ES2122840-010	18-Jun-2021 00:00	BH12							✓
ES2122840-011	18-Jun-2021 00:00	MW239S	✓	✓	✓	✓	✓	✓	✓
ES2122840-012	18-Jun-2021 00:00	SW1	✓	✓	✓	✓	✓	✓	✓
ES2122840-013	18-Jun-2021 00:00	SW2	✓	✓	✓	✓	✓	✓	✓
ES2122840-014	18-Jun-2021 00:00	SW3	✓	✓	✓	✓	✓	✓	✓
ES2122840-015	18-Jun-2021 00:00	SW4	✓	✓	✓	✓	✓	✓	✓
ES2122840-016	18-Jun-2021 00:00	QW52				✓		✓	✓
ES2122840-017	18-Jun-2021 00:00	QW54				✓			
ES2122840-018	18-Jun-2021 00:00	Rinsate June				✓		✓	✓
ES2122840-019	18-Jun-2021 00:00	Trip Blank June				✓		✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA005: pH pH	WATER - EG020F Dissolved Metals by ICP/MS
ES2122840-001	18-Jun-2021 00:00	BH1	✓	✓
ES2122840-002	18-Jun-2021 00:00	BH2	✓	✓
ES2122840-003	18-Jun-2021 00:00	BH4	✓	✓
ES2122840-004	18-Jun-2021 00:00	BH6	✓	✓
ES2122840-005	18-Jun-2021 00:00	BH7	✓	✓

			WATER - EA005: pH pH	WATER - EG020F Dissolved Metals by ICP/MS
ES2122840-006	18-Jun-2021 00:00	BH8	✓	✓
ES2122840-007	18-Jun-2021 00:00	BH9A	✓	✓
ES2122840-008	18-Jun-2021 00:00	BH10	✓	✓
ES2122840-009	18-Jun-2021 00:00	BH11	✓	✓
ES2122840-010	18-Jun-2021 00:00	BH12	✓	
ES2122840-011	18-Jun-2021 00:00	MW239S	✓	✓
ES2122840-012	18-Jun-2021 00:00	SW1	✓	✓
ES2122840-013	18-Jun-2021 00:00	SW2	✓	✓
ES2122840-014	18-Jun-2021 00:00	SW3	✓	✓
ES2122840-015	18-Jun-2021 00:00	SW4	✓	✓
ES2122840-016	18-Jun-2021 00:00	QW52		✓
ES2122840-018	18-Jun-2021 00:00	Rinsate June		✓
ES2122840-019	18-Jun-2021 00:00	Trip Blank June		✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

DANIEL KOUSBROEK

- *AU Certificate of Analysis - NATA (COA)	Email	dkousbroek@kleinfelder.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	dkousbroek@kleinfelder.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	dkousbroek@kleinfelder.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	dkousbroek@kleinfelder.com
- Chain of Custody (CoC) (COC)	Email	dkousbroek@kleinfelder.com
- EDI Format - ESDAT (ESDAT)	Email	dkousbroek@kleinfelder.com

INVOICES

- A4 - AU Tax Invoice (INV)	Email	Aus_Accounts@kleinfelder.com

M Ferguson

- *AU Certificate of Analysis - NATA (COA)	Email	mferguson@Kleinfelder.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	mferguson@Kleinfelder.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	mferguson@Kleinfelder.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	mferguson@Kleinfelder.com
- Chain of Custody (CoC) (COC)	Email	mferguson@Kleinfelder.com
- EDI Format - ESDAT (ESDAT)	Email	mferguson@Kleinfelder.com

TOM OVERTON

- *AU Certificate of Analysis - NATA (COA)	Email	toverton@kleinfelder.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	toverton@kleinfelder.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	toverton@kleinfelder.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	toverton@kleinfelder.com
- Chain of Custody (CoC) (COC)	Email	toverton@kleinfelder.com
- EDI Format - ESDAT (ESDAT)	Email	toverton@kleinfelder.com

KLEINFELDER AUSTRALIA PTY LTD

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COC number:

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1 of 2

pH @ WN

Client:	SITE, COC AND CONTACT DATA				Laboratory:
Kleinfelder Australia Pty Ltd	*Site Name:*	WSS - Cabbage Tree Rd water monitoring June 2021	*Sampler Name:*	Megan Ferguson	ALS
Suite 3, 240-244 Pacific Hwy	*QUOTE NUMBER*	ME/114/19	*Contact Number:*	0455 981 953	5/585 Maitland Rd
Charlestown,	*Job No.:*	20193820	*Contact e-mail:*	MFerguson@kleinfelder.com	Mayfield West,
NSW 2290	*Required TAT:*	24 hrs 48 hrs 3 days **5 days** 7 days	*PM name (if not sampler):*	Tom Overton	Newcastle NSW 2304
Phone: 02 4949 5200	*Data QA level:*	LAB minimum unless specified:	*PM e-mail:*	TOverton@kleinfelder.com	Phone: (02) 4014 2500

CHAIN OF CUSTODY								Send Results to:
Relinquished by (print):	Daniel Kousbroek	*Received by (print):*		*Relinquished:*	KS	*Received by:*		dkousbroek@kleinfelder.com, toverton@kleinfelder.com & mferguson@kleinfelder.com
(sign)		*(sign)*	3:47	*(sign)*		*(sign)*		Suite 3, 240-244 Pacific Hwy
Date / Time:	18/6/21	*Date / Time:*	18/6/21	*Date / Time:*	18.6.21 5pm	*Date / Time:*		Charlestown, NSW 2290
		Temp. (°C)	1.4°C			*Temp. (°C)*		newcastle@kleinfelder.com
Notes:		*Notes:*	ice present / no ice seals intact / no seal	*Notes:*		*Notes:*	ice present / no ice seals intact / no seal	Phone: 02 4949 5200

	Sample ID	Lab ID	Sample Point	Sample Type	Date	Start Depth	End Depth	Units	# Containers	Organic Analytes: W-04 SG TRH SG/BTEX								Metals: W-03 Metals_ NEPM 15	Iron (dissolved)	Turbidity	Other Analytes: NT 12 - General Water Suite	[redacted]	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	EP231X PFAS (28 analytes, standard level)	Comments
1	BH1			Water	18/6				7	X								X	X	X	X		X	X	X	
2	BH2								7	X								X	X	X	X		X	X	X	
3	BH4								7	X								X	X	X	X		X	X	X	
4	BH6								7	X								X	X	X	X		X	X	X	
5	BH7								7	X								X	X	X	X		X	X	X	
6	BH8								7	X								X	X	X	X		X	X	X	
7	BH9A								7	X								X	X	X	X		X	X	X	
8	BH10								7	X								X	X	X	X		X	X	X	
9	BH11								7	X								X	X	X	X		X	X	X	
10	BH12								3	X																
11	MW2395								7	X								X	X	X	X		X	X	X	
12	SW1								7	X								X	X	X	X		X	X	X	
13	SW2								7	X								X	X	X	X		X	X	X	
14	SW3								7	X								X	X	X	X		X	X	X	
15	SW4								7	X								X	X	X	X		X	X	X	
16	QW52								6	X								X	X						X	
17	QW53								6	X								X	X						X	Send to Eurofins

Subcon / Forward Lab / Split WO: QW53 EUROFINS

Lab / Analysis: # QW53

Organised By / Date:

Relinquished By / Date:

Connote / Courier:

WO No: ES 2122840

Attached By PO / Internal Sheet:

Environmental Division Sydney

Work Order Reference

ES2122840

Telephone : +61-2-8784 8555

W-05 SG - TRH/BTEXN/ 8 Metals Silica Gel Clean Up — Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Nickel (Ni), Zinc (Zn)

NT14 - Extended water suite B

Additional metals analysis to make up NEPM 15 — Boron (B), Barium (Ba), Beryllium (Be), Cobalt (Co), Manganese (Mn), Selenium (Se), Vanadium (V)

LAB OF ORIGIN: NEWCASTLE

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2 of 2

Client:	SITE, COC AND CONTACT DATA				Laboratory:
Kleinfelder Australia Pty Ltd Suite 3, 240-244 Pacific Hwy Charlestown, NSW 2290 Phone: 02 4949 5200	Site Name:	WSS - Cabbage Tree Rd water monitoring June 2021	Sampler Name:	Megan Ferguson	ALS 5/585 Maitland Rd Mayfield West, Newcastle NSW 2304 Phone: (02) 4014 2500
	QUOTE NUMBER	ME/114/19	Contact Number:	0455 981 953	
	Job No.:	20193820	Contact e-mail:	MFerguson@kleinfelder.com	
	Required TAT:	24 hrs 48 hrs 3 days **5 days** 7 days	PM name (if not sampler):	Tom Overton	
	Data QA level:	LAB minimum unless specified:	PM e-mail:	TOverton@kleinfelder.com	

CHAIN OF CUSTODY								Send Results to:
Relinquished by (print):	Daniel Kousbroek	Received by (print):	cl	Relinquished:	ICS	Received by:		dkousbroek@kleinfelder.com, toverton@kleinfelder.com & mferguson@kleinfelder.com
(sign)		(sign)		(sign)		(sign)		Suite 3, 240-244 Pacific Hwy Charlestown, NSW 2290 newcastle@kleinfelder.com Phone: 02 4949 5200
Date / Time:	18/6	Date / Time:	18/6/21	Date / Time:	18.6.21 5pm	Date / Time:		
Notes:		Temp. (°C)	3.4.7	Notes:		Temp. (°C)		
		Notes:	ice present / no ice seals intact / no seal			Notes:	ice present / no ice seals intact / no seal	

Sample ID	Lab ID	Sample Point	Sample Type	Date	Start Depth	End Depth	Units	# Containers	Organic Analytes: W-04 SG TRH SG/BTEX									Metals: W-03 Metals NEPM 15	Iron (dissolved)	Turbidity	Other Analytes: NT 12 - General Water Suite	~~Extended Water Suite~~	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	EP231X PFAS (28 analytes, standard level)	Comments
QW54			Water	18/6				2																	X	
QW55			↓	↓				2																	X	Send to Eurofins
Rinsate Sure								6	X									X	X						X	
Trip Blank Sure								6	X									X	X						X	
																										pH @ WN

W-05 SG - TRH/BTEXN/ 8 Metals Silica Gel Clean Up — Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Nickel (Ni), Zinc (Zn)
NT14 - Extended water suite B
Additional metals analysis to make up NEPM 15 — Boron (B), Barium (Ba), Beryllium (Be), Cobalt (Co), Manganese (Mn), Selenium (Se), Vanadium (V)

LAB OF ORIGIN:
NEWCASTLE

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ABN: 50 005 085 521 www.eurofins.com.au EnviroSales@eurofins.com

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NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

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43 Detroit Drive
Rolleston, Christchurch 7675
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IANZ # 1290

Sample Receipt Advice

Company name:	Kleinfelder Aust Pty Ltd (NEWCASTLE)
Contact name:	Tom Overton
Project name:	WSS - CABBAGE TREE RD WATER MONITORING JUNE 2021
Project ID:	20193820
Turnaround time:	5 Day
Date/Time received	Jun 21, 2021 2:29 PM
Eurofins reference	804512

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- **N/A** Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Tom Overton - toverton@kleinfelder.com.

Note: A copy of these results will also be delivered to the general Kleinfelder Aust Pty Ltd (NEWCASTLE) email address.

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ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

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IANZ # 1290

Company Name: Kleinfelder Aust Pty Ltd (NEWCASTLE)
Address: Suite 3, 240-244 Pacific Hwy
Charlestown
NSW 2290

Order No.:
Report #: 804512
Phone: 02 4949 5200
Fax:

Received: Jun 21, 2021 2:29 PM
Due: Jun 28, 2021
Priority: 5 Day
Contact Name: Tom Overton

Project Name: WSS - CABBAGE TREE RD WATER MONITORING JUNE 2021
Project ID: 20193820

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Iron (filtered)	NEPM 1999 Metals : Metals M15 (Filtered)	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	
Brisbane Laboratory - NATA Site # 20794								X
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory - NATA Site # 25079								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	QW53	Jun 18, 2021		Water	S21-Jn41118	X	X	X
2	QW55	Jun 18, 2021		Water	S21-Jn41119			X
Test Counts						1	1	2

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Certificate of Analysis

Kleinfelder Australia Pty Ltd (NEWC)
Suite 3, 240-244 Pacific Hwy
Charlestown
NSW 2290

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Tom Overton**

Report **804512-W**
Project name WSS - CABBAGE TREE RD WATER MONITORING JUNE 2021
Project ID 20193820
Received Date Jun 21, 2021

Client Sample ID			**QW53**	**QW55**
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**S21-Jn41118**	**S21-Jn41119**
Date Sampled			**Jun 18, 2021**	**Jun 18, 2021**
Test/Reference	LOR	Unit		
Chromium (hexavalent)	0.005	mg/L	< 0.005	-
Chromium (trivalent filtered)	0.005	mg/L	< 0.005	-
Heavy Metals				
Arsenic (filtered)	0.001	mg/L	0.002	-
Barium (filtered)	0.02	mg/L	< 0.02	-
Beryllium (filtered)	0.001	mg/L	< 0.001	-
Boron (filtered)	0.05	mg/L	< 0.05	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	-
Chromium (filtered)	0.001	mg/L	0.002	-
Cobalt (filtered)	0.001	mg/L	< 0.001	-
Copper (filtered)	0.001	mg/L	0.002	-
Iron (filtered)	0.05	mg/L	10	-
Lead (filtered)	0.001	mg/L	0.001	-
Manganese (filtered)	0.005	mg/L	0.024	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	-
Nickel (filtered)	0.001	mg/L	< 0.001	-
Vanadium (filtered)	0.005	mg/L	0.020	-
Zinc (filtered)	0.005	mg/L	0.006	-
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.1	< 0.1
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	64	56
13C5-PFPeA (surr.)	1	%	89	79
13C5-PFHxA (surr.)	1	%	112	81
13C4-PFHpA (surr.)	1	%	121	76
13C8-PFOA (surr.)	1	%	131	84

Client Sample ID			QW53	QW55
Sample Matrix			Water	Water
Eurofins Sample No.			S21-Jn41118	S21-Jn41119
Date Sampled			Jun 18, 2021	Jun 18, 2021
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
13C5-PFNA (surr.)	1	%	122	94
13C6-PFDA (surr.)	1	%	109	84
13C2-PFUnDA (surr.)	1	%	103	83
13C2-PFDoDA (surr.)	1	%	88	77
13C2-PFTeDA (surr.)	1	%	56	53
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	59	48
D3-N-MeFOSA (surr.)	1	%	40	31
D5-N-EtFOSA (surr.)	1	%	43	33
D7-N-MeFOSE (surr.)	1	%	33	26
D9-N-EtFOSE (surr.)	1	%	32	25
D5-N-EtFOSAA (surr.)	1	%	85	72
D3-N-MeFOSAA (surr.)	1	%	91	74
Perfluoroalkyl sulfonic acids (PFSAs)				
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	127	94
18O2-PFHxS (surr.)	1	%	140	94
13C8-PFOS (surr.)	1	%	120	89
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
13C2-4:2 FTS (surr.)	1	%	110	91
13C2-6:2 FTSA (surr.)	1	%	91	71
13C2-8:2 FTSA (surr.)	1	%	103	106
13C2-10:2 FTSA (surr.)	1	%	66	60

Client Sample ID			QW53	QW55
Sample Matrix			Water	Water
Eurofins Sample No.			S21-Jn41118	S21-Jn41119
Date Sampled			Jun 18, 2021	Jun 18, 2021
Test/Reference	LOR	Unit		
PFASs Summations				
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.1	< 0.1
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 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
NEPM 1999 Metals : Metals M15 (Filtered)			
Chromium (hexavalent)	Sydney	Jun 21, 2021	28 Days
- Method: In-house method E057.1			
Chromium (trivalent filtered)	Sydney	Jun 21, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Heavy Metals (filtered)	Sydney	Jun 22, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Mobil Metals : Metals M15	Sydney	Jun 21, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jun 23, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jun 23, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jun 23, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jun 23, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name:	Kleinfelder Aust Pty Ltd (NEWCASTLE)	**Order No.:**		**Received:**	Jun 21, 2021 2:29 PM
Address:	Suite 3, 240-244 Pacific Hwy Charlestown NSW 2290	**Report #:**	804512	**Due:**	Jun 28, 2021
		Phone:	02 4949 5200	**Priority:**	5 Day
		Fax:		**Contact Name:**	Tom Overton
Project Name:	WSS - CABBAGE TREE RD WATER MONITORING JUNE 2021				
Project ID:	20193820				

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Iron (filtered)	NEPM 1999 Metals : Metals M15 (Filtered)	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	
Brisbane Laboratory - NATA Site # 20794								X
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory - NATA Site # 25079								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	QW53	Jun 18, 2021		Water	S21-Jn41118	X	X	X
2	QW55	Jun 18, 2021		Water	S21-Jn41119			X
Test Counts						1	1	2

Internal Quality Control Review and Glossary

General

1. 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.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. 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.
2. 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.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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
Method Blank							
Chromium (hexavalent)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Barium (filtered)	mg/L	< 0.02			0.02	Pass	
Beryllium (filtered)	mg/L	0.001			0.001	Pass	
Boron (filtered)	mg/L	< 0.05			0.05	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Cobalt (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Iron (filtered)	mg/L	< 0.05			0.05	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Vanadium (filtered)	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
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	
Method Blank							
Perfluoroalkyl sulfonamido substances							
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	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
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	
LCS - % Recovery							
Chromium (hexavalent)	%	92			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	100			80-120	Pass	
Barium (filtered)	%	103			80-120	Pass	
Beryllium (filtered)	%	88			80-120	Pass	
Boron (filtered)	%	108			80-120	Pass	
Cadmium (filtered)	%	98			80-120	Pass	
Chromium (filtered)	%	100			80-120	Pass	
Cobalt (filtered)	%	100			80-120	Pass	
Copper (filtered)	%	98			80-120	Pass	
Iron (filtered)	%	96			80-120	Pass	
Lead (filtered)	%	100			80-120	Pass	
Manganese (filtered)	%	101			80-120	Pass	
Mercury (filtered)	%	105			80-120	Pass	
Nickel (filtered)	%	98			80-120	Pass	
Vanadium (filtered)	%	95			80-120	Pass	
Zinc (filtered)	%	102			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	99			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	102			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	128			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	105			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	111			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	117			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	120			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	107			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	113			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	92			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	137			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	105			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	117			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	112			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	107			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	111			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	100			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	96			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	92			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	104			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	84			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	101			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	103			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanesulfonic acid (PFHpS)			%	130			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)			%	103			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)			%	92			50-150	Pass	
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)			%	106			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)			%	107			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)			%	88			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)			%	97			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-Jn41118	CP	%	92			75-125	Pass	
Barium (filtered)	S21-Jn41118	CP	%	90			75-125	Pass	
Boron (filtered)	S21-Jn41118	CP	%	90			75-125	Pass	
Cadmium (filtered)	S21-Jn41118	CP	%	93			75-125	Pass	
Chromium (filtered)	S21-Jn41118	CP	%	89			75-125	Pass	
Cobalt (filtered)	S21-Jn41118	CP	%	89			75-125	Pass	
Copper (filtered)	S21-Jn41118	CP	%	88			75-125	Pass	
Lead (filtered)	S21-Jn41118	CP	%	92			75-125	Pass	
Manganese (filtered)	S21-Jn41118	CP	%	88			75-125	Pass	
Mercury (filtered)	S21-Jn41118	CP	%	81			75-125	Pass	
Nickel (filtered)	S21-Jn41118	CP	%	88			75-125	Pass	
Vanadium (filtered)	S21-Jn41118	CP	%	95			75-125	Pass	
Zinc (filtered)	S21-Jn41118	CP	%	92			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S21-Jn41133	NCP	%	105			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jn41133	NCP	%	99			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jn41133	NCP	%	125			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jn41133	NCP	%	103			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jn41133	NCP	%	102			50-150	Pass	
Perfluorononanoic acid (PFNA)	S21-Jn41133	NCP	%	105			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jn41133	NCP	%	100			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jn41133	NCP	%	104			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jn41133	NCP	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jn41133	NCP	%	90			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jn41133	NCP	%	102			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S21-Jn41133	NCP	%	97			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jn41133	NCP	%	89			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jn41133	NCP	%	91			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jn41133	NCP	%	94			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jn41133	NCP	%	104			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jn41133	NCP	%	98			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jn41133	NCP	%	96			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S21-Jn41133	NCP	%	93			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jn41133	NCP	%	89			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jn41133	NCP	%	56			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jn41133	NCP	%	95			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jn41133	NCP	%	99			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jn41133	NCP	%	110			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jn41133	NCP	%	95			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jn41133	NCP	%	91			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S21-Jn41133	NCP	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jn41133	NCP	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jn41133	NCP	%	85			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jn41133	NCP	%	91			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	M21-Jn45218	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Barium (filtered)	M21-Jn45218	NCP	mg/L	0.02	0.02	2.0	30%	Pass	
Beryllium (filtered)	M21-Jn45218	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Boron (filtered)	M21-Jn45218	NCP	mg/L	0.06	0.06	1.0	30%	Pass	
Cadmium (filtered)	M21-Jn45218	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	M21-Jn45218	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cobalt (filtered)	M21-Jn45218	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	M21-Jn45218	NCP	mg/L	0.002	0.002	2.0	30%	Pass	
Iron (filtered)	M21-Jn45218	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Lead (filtered)	M21-Jn45218	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	M21-Jn45218	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Mercury (filtered)	M21-Jn45218	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	M21-Jn45218	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vanadium (filtered)	M21-Jn45218	NCP	mg/L	0.017	0.020	16	30%	Pass	
Zinc (filtered)	M21-Jn45218	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B21-Jn46780	NCP	ug/L	< 0.1	0.09	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B21-Jn46780	NCP	ug/L	0.04	0.04	2.0	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B21-Jn46780	NCP	ug/L	0.07	0.07	1.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B21-Jn46780	NCP	ug/L	0.01	0.01	1.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorononanoic acid (PFNA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B21-Jn46780	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B21-Jn46780	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B21-Jn46780	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B21-Jn46780	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B21-Jn46780	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B21-Jn46780	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B21-Jn46780	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B21-Jn46780	NCP	ug/L	0.05	0.05	1.0	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B21-Jn46780	NCP	ug/L	0.02	0.02	18	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B21-Jn46780	NCP	ug/L	0.04	0.04	24	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B21-Jn46780	NCP	ug/L	0.21	0.18	18	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B21-Jn46780	NCP	ug/L	0.03	0.03	4.0	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	B21-Jn46780	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B21-Jn46780	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
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
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).

Authorised by:

Andrew Black	Analytical Services Manager
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson
General Manager

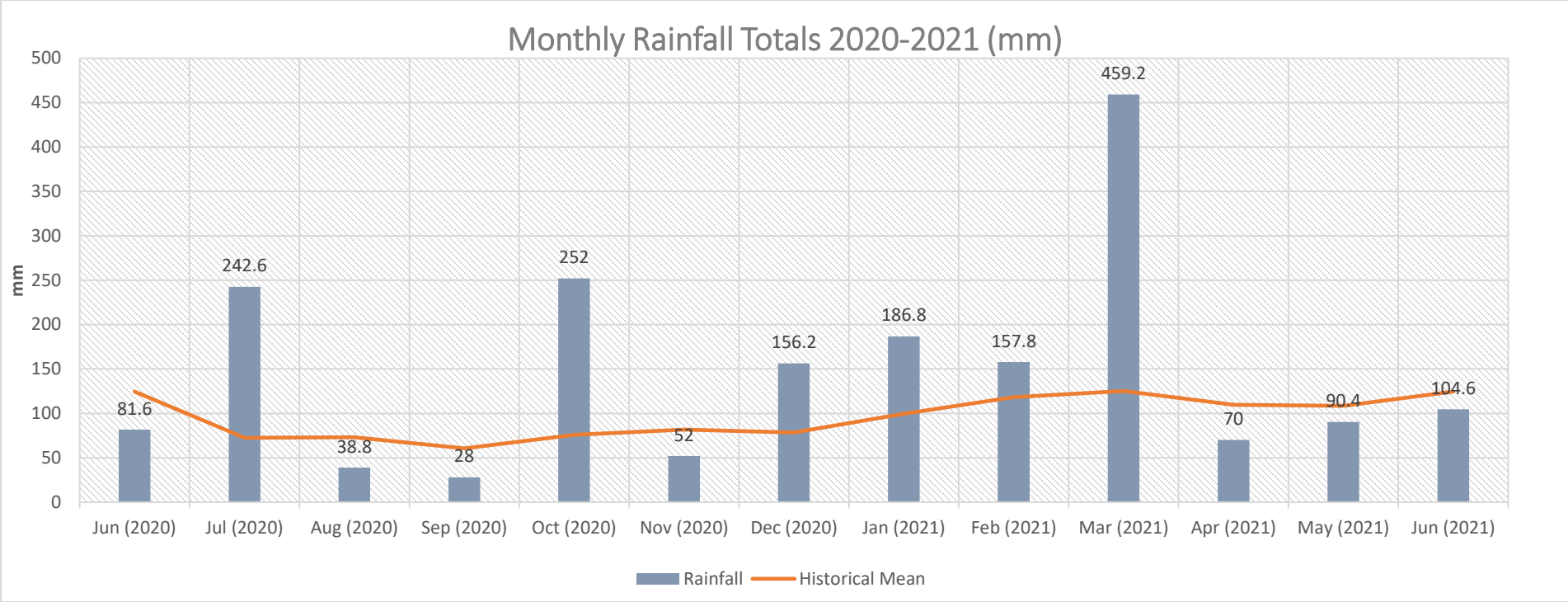
Final Report – this report replaces any previously issued Report

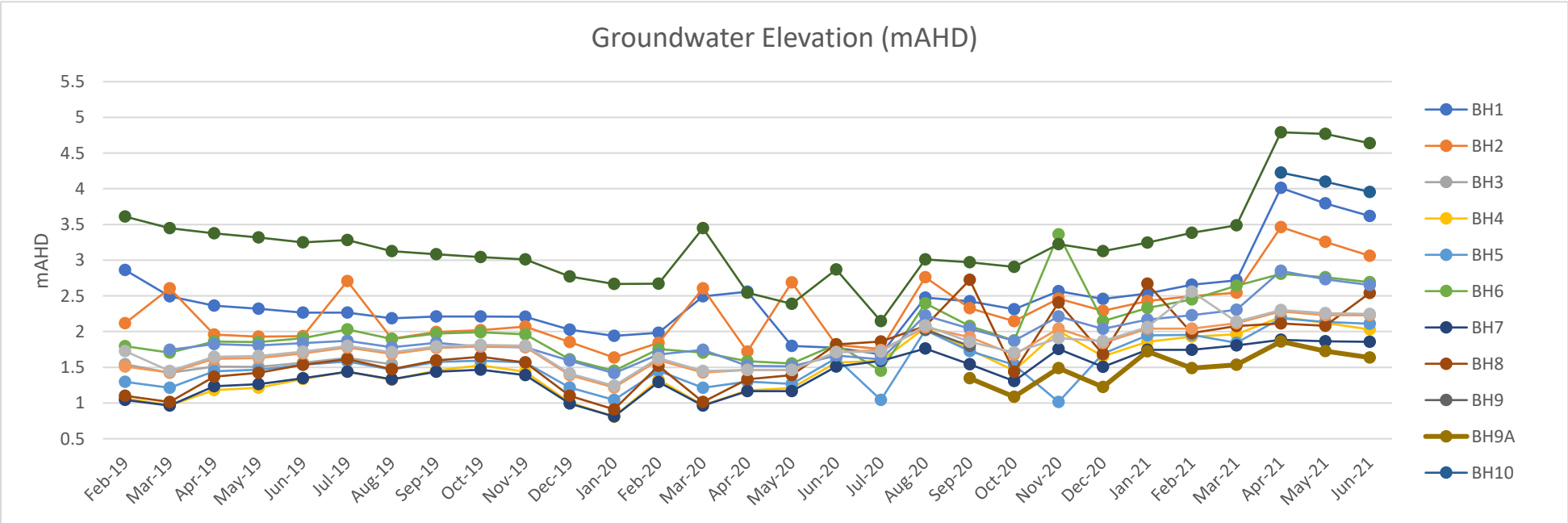
- Indicates Not Requested

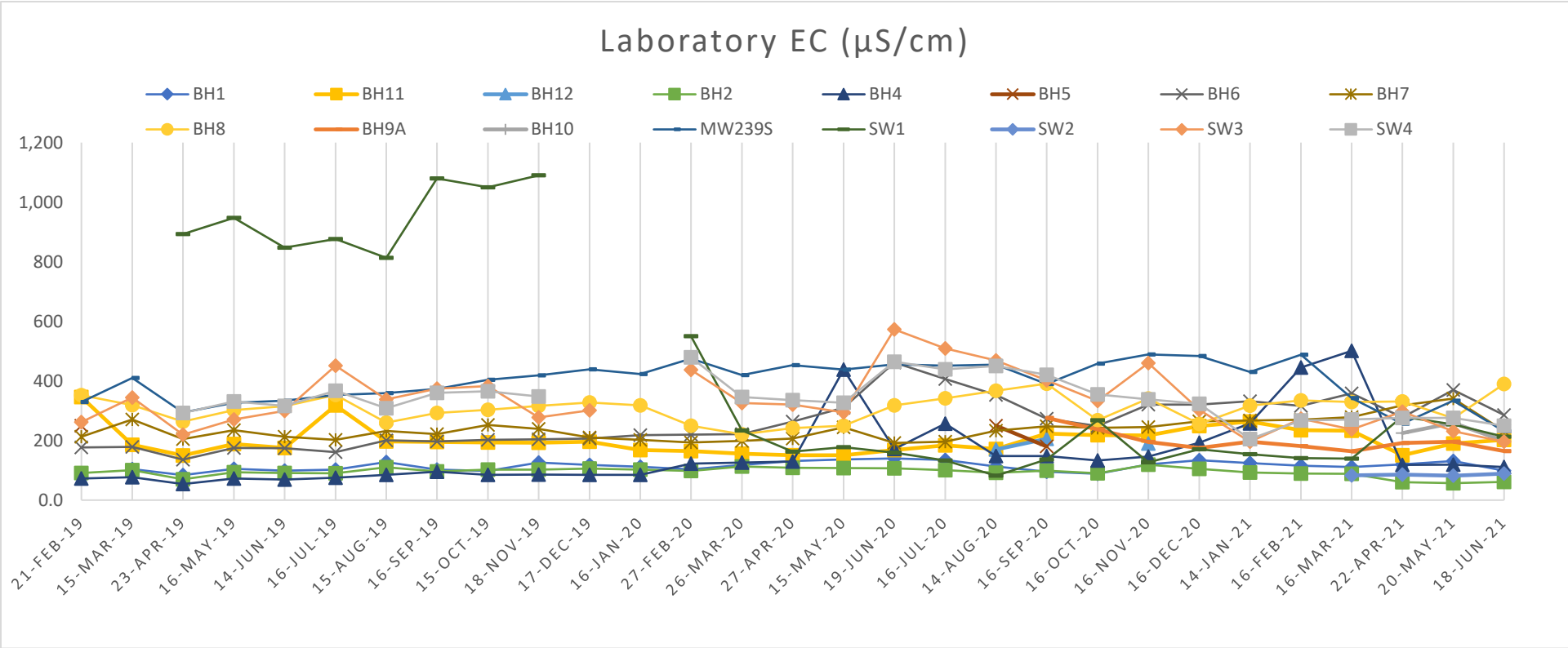
* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

ATTACHMENT 4: DATA TRENDS


Monthly Rainfall Totals 2020-2021 (mm)
mm
500
450
400
350
300
250
200
150
100
50
0
81.6
242.6
38.8
28
252
52
156.2
186.8
157.8
459.2
70
90.4
104.6
Jun (2020)
Jul (2020)
Aug (2020)
Sep (2020)
Oct (2020)
Nov (2020)
Dec (2020)
Jan (2021)
Feb (2021)
Mar (2021)
Apr (2021)
May (2021)
Jun (2021)
Rainfall
Historical Mean


Groundwater Elevation (mAHD)
mAHD
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
Feb-19
Mar-19
Apr-19
May-19
Jun-19
Jul-19
Aug-19
Sep-19
Oct-19
Nov-19
Dec-19
Jan-20
Feb-20
Mar-20
Apr-20
May-20
Jun-20
Jul-20
Aug-20
Sep-20
Oct-20
Nov-20
Dec-20
Jan-21
Feb-21
Mar-21
Apr-21
May-21
Jun-21
BH1
BH2
BH3
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10


Laboratory EC (µS/cm)
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
1,200
1,000
800
600
400
200
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
16-FEB-21
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22-APR-21
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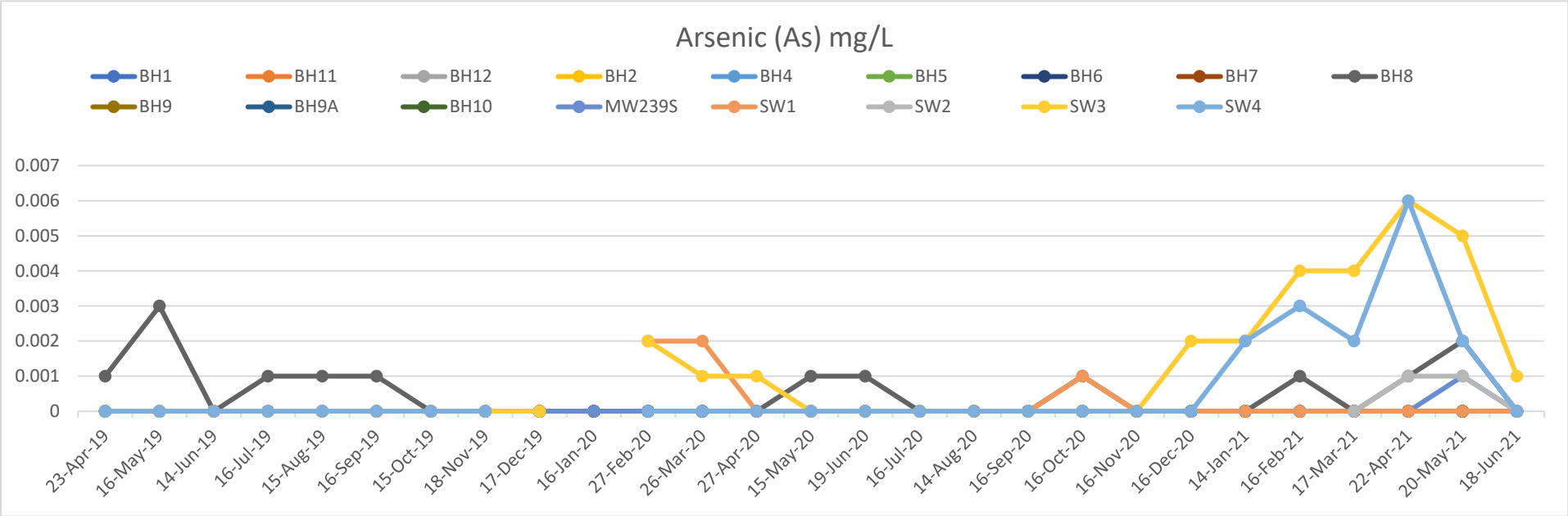
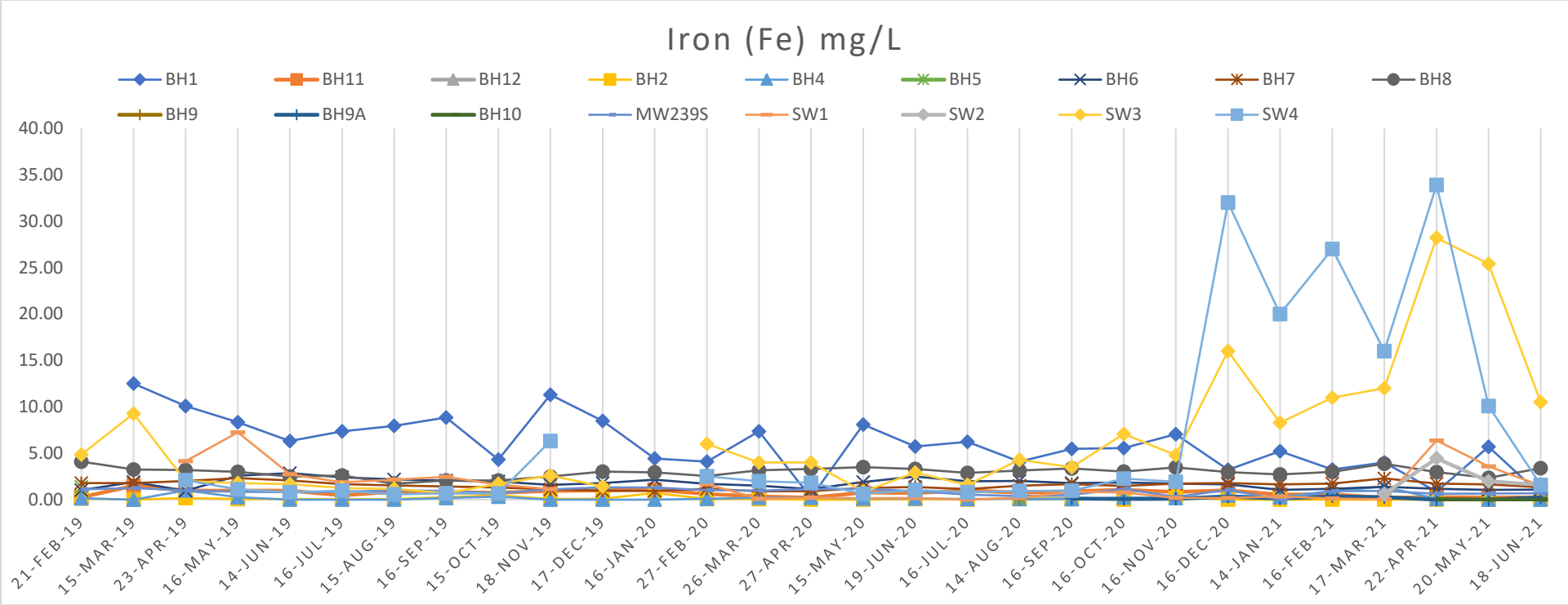
18-JUN-21


Arsenic (As) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
23-Apr-19
16-May-19
14-Jun-19
16-Jul-19
15-Aug-19
16-Sep-19
15-Oct-19
18-Nov-19
17-Dec-19
16-Jan-20
27-Feb-20
26-Mar-20
27-Apr-20
15-May-20
19-Jun-20
16-Jul-20
14-Aug-20
16-Sep-20
16-Oct-20
16-Nov-20
16-Dec-20
14-Jan-21
16-Feb-21
17-Mar-21
22-Apr-21
20-May-21
18-Jun-21


Iron (Fe) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
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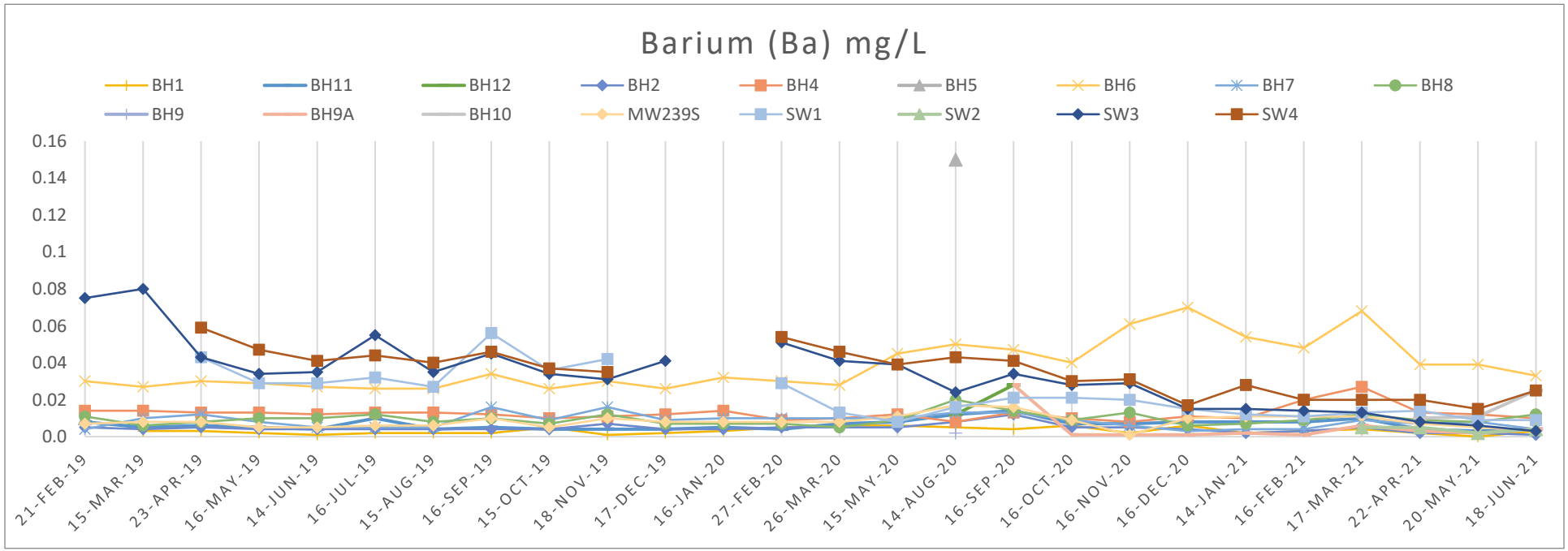
18-JUN-21


Barium (Ba) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
15-MAY-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
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22-APR-21
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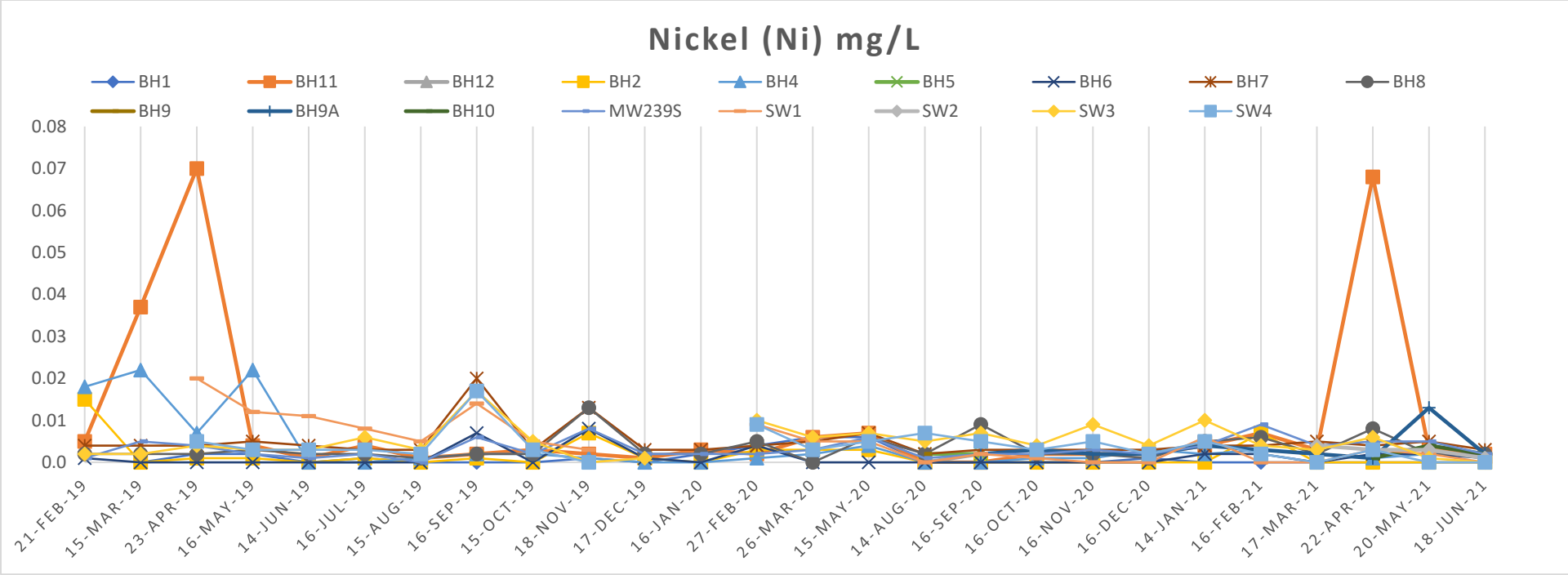
18-JUN-21


Nickel (Ni) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
15-MAY-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
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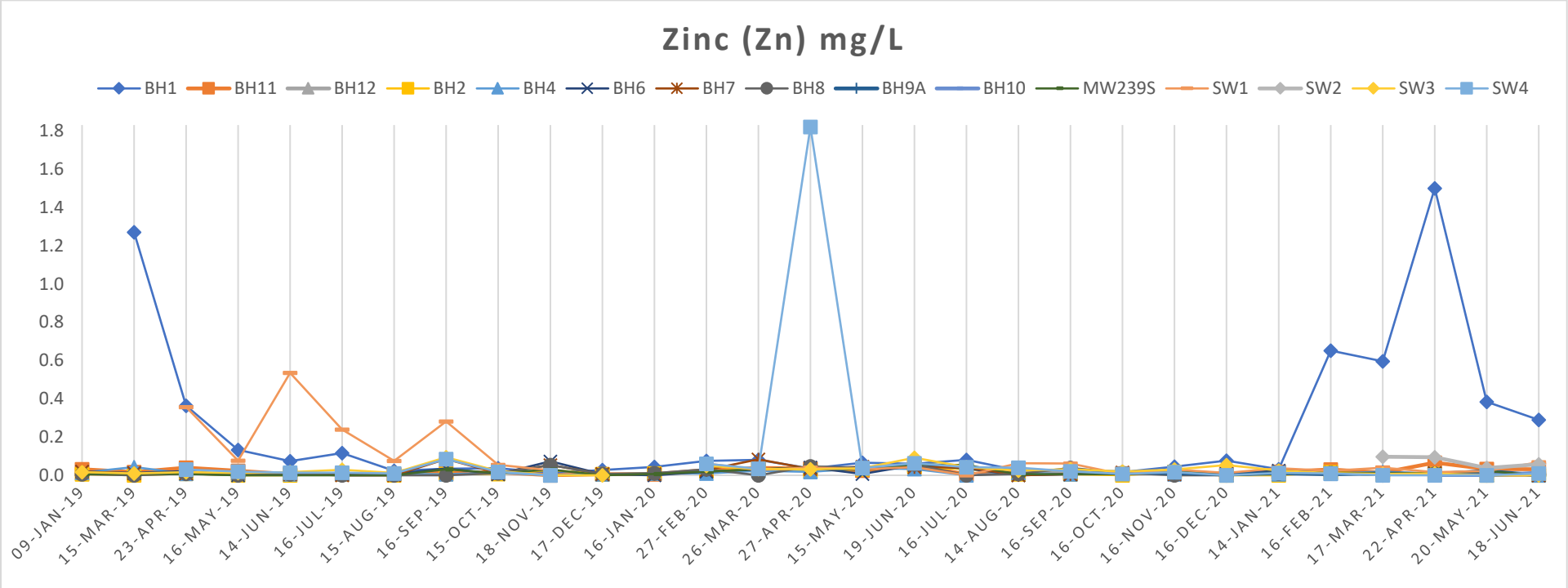
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Zinc (Zn) mg/L
BH1
BH11
BH12
BH2
BH4
BH6
BH7
BH8
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
09-JAN-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
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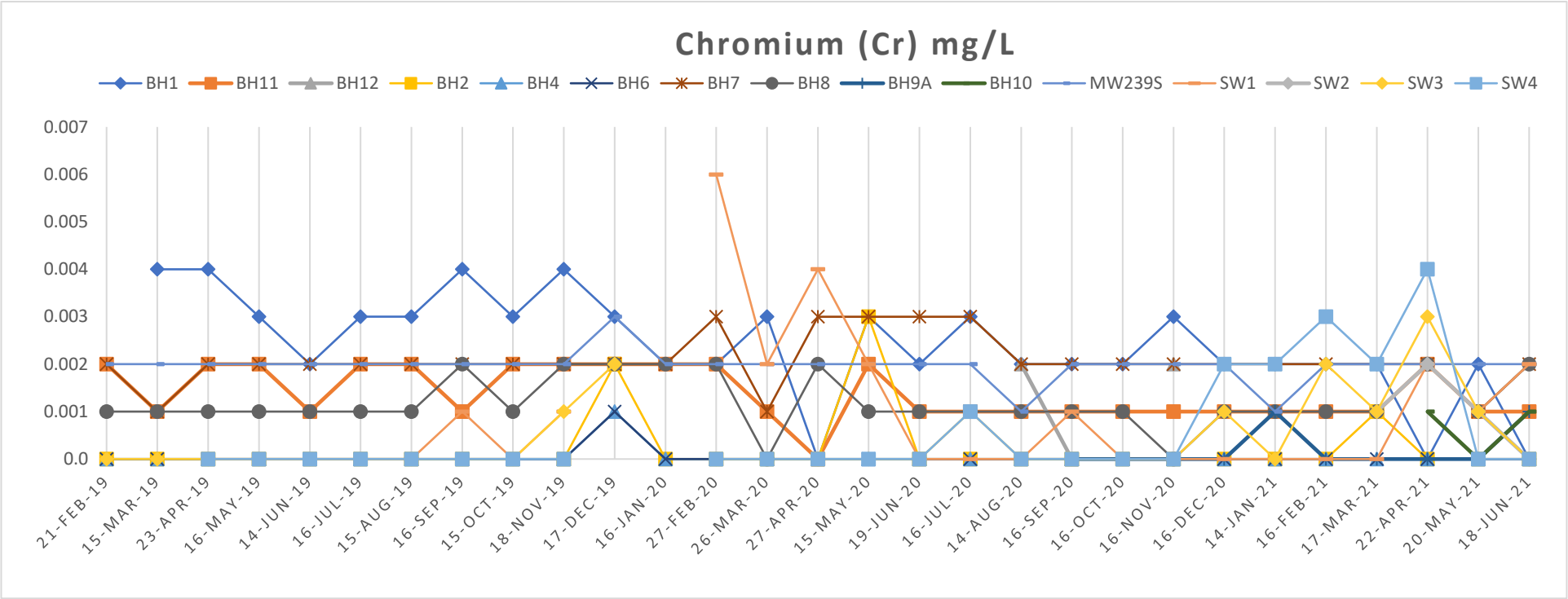
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Chromium (Cr) mg/L
BH1
BH11
BH12
BH2
BH4
BH6
BH7
BH8
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
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16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
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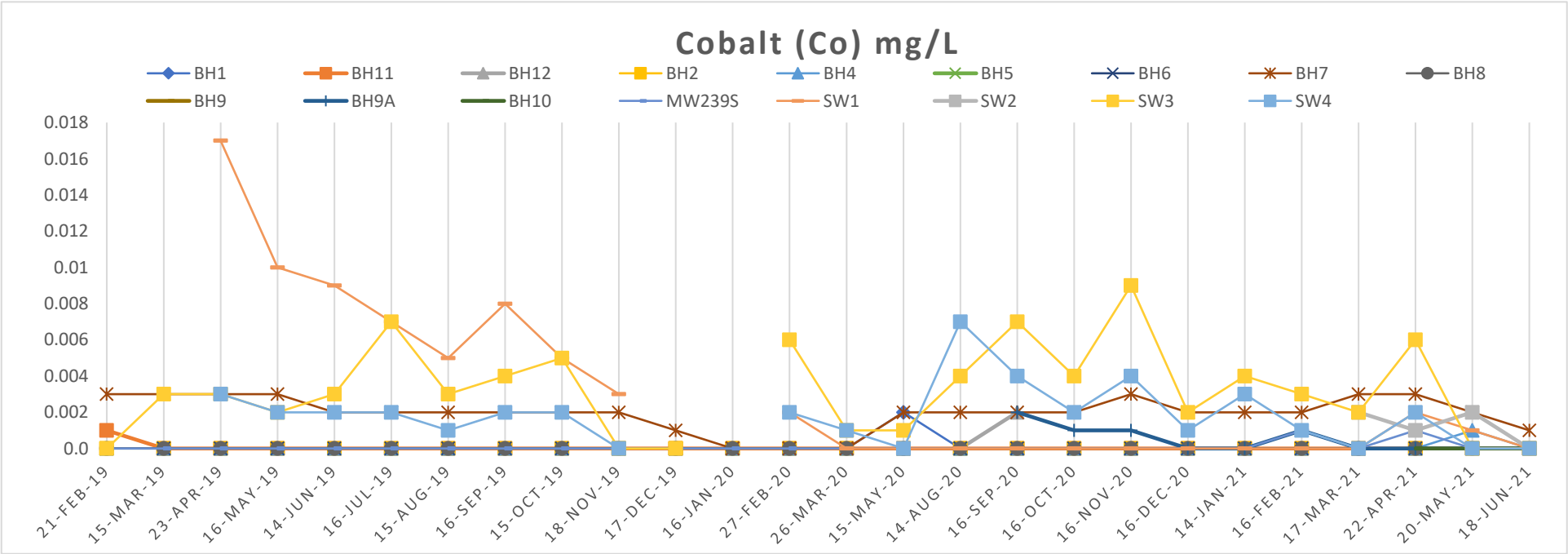
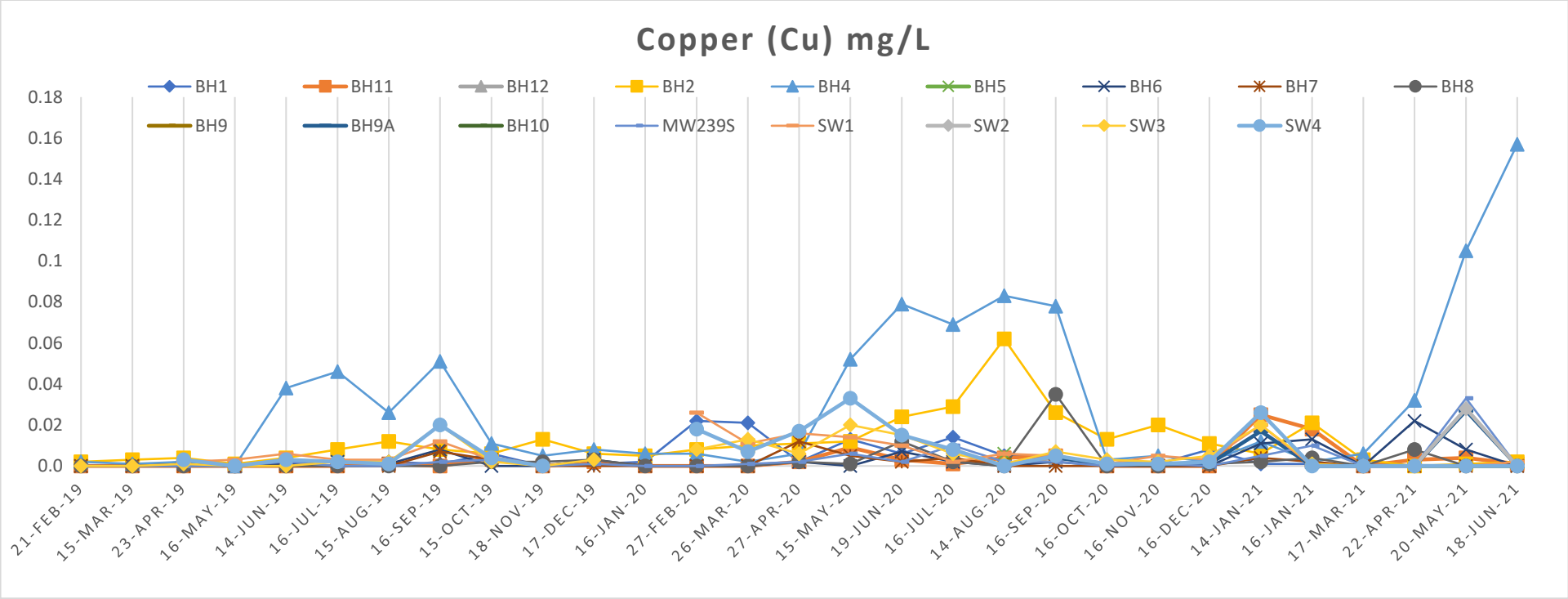
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Cobalt (Co) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
15-MAY-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
16-FEB-21
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Copper (Cu) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
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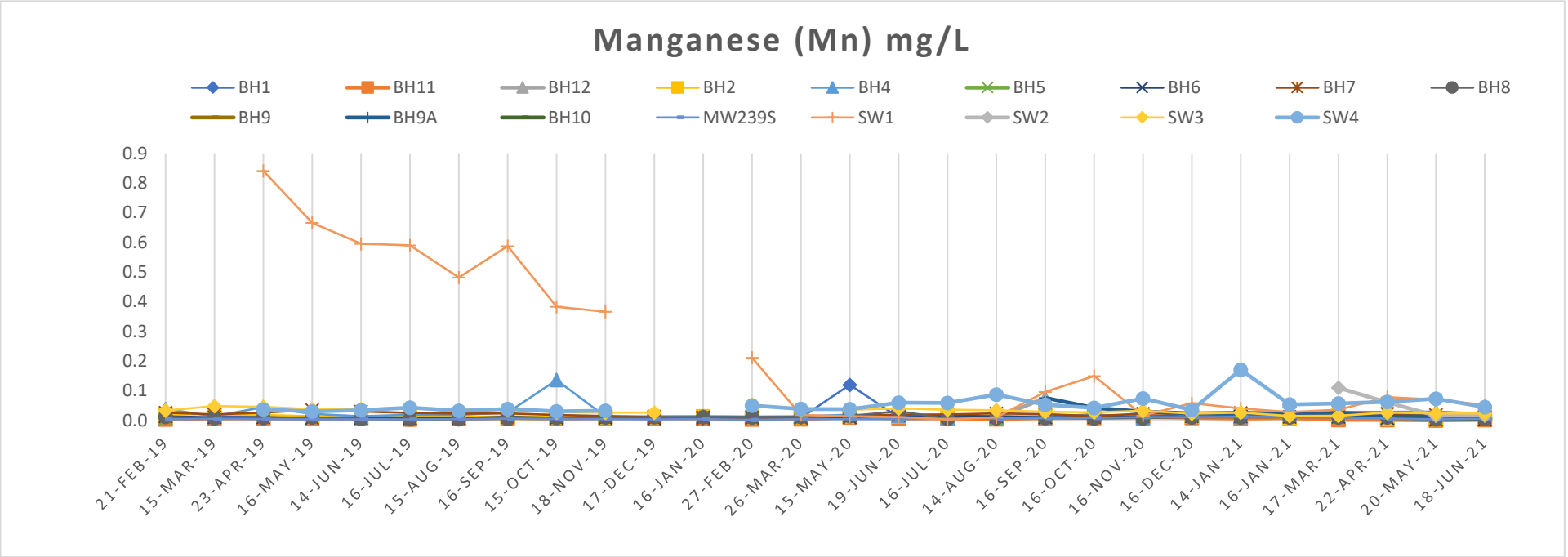
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Manganese (Mn) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
15-MAY-20
19-JUN-20
16-JUL-20
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16-SEP-20
16-OCT-20
16-NOV-20
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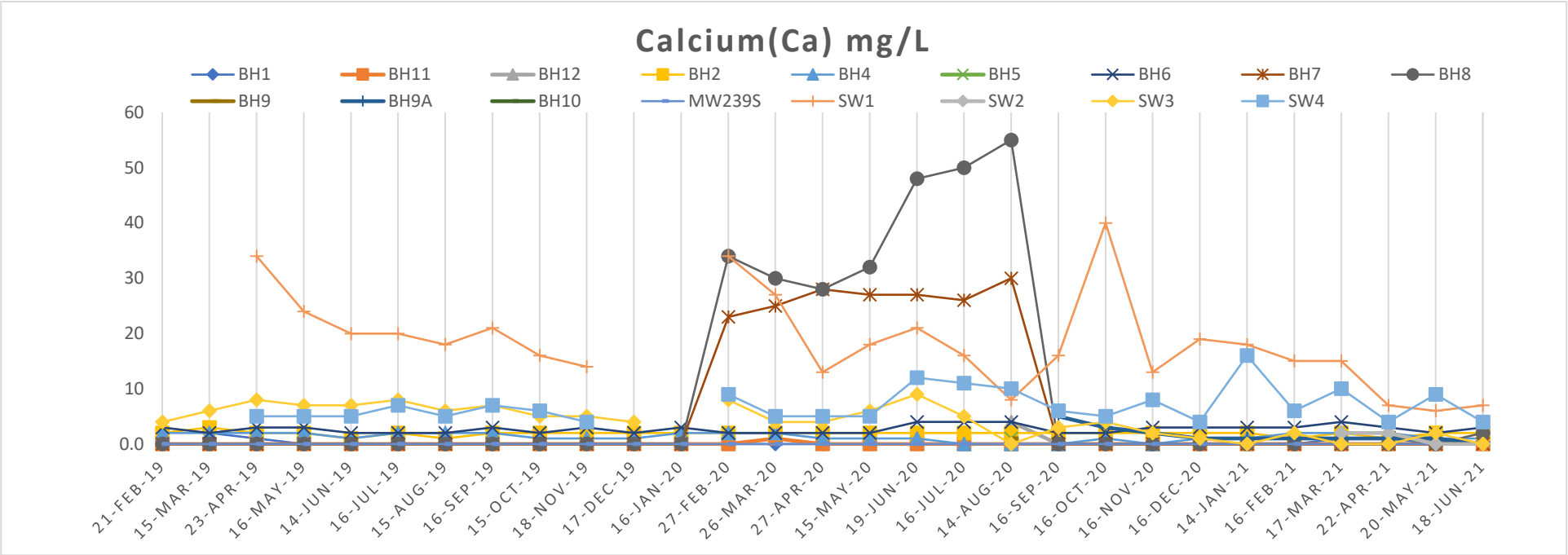
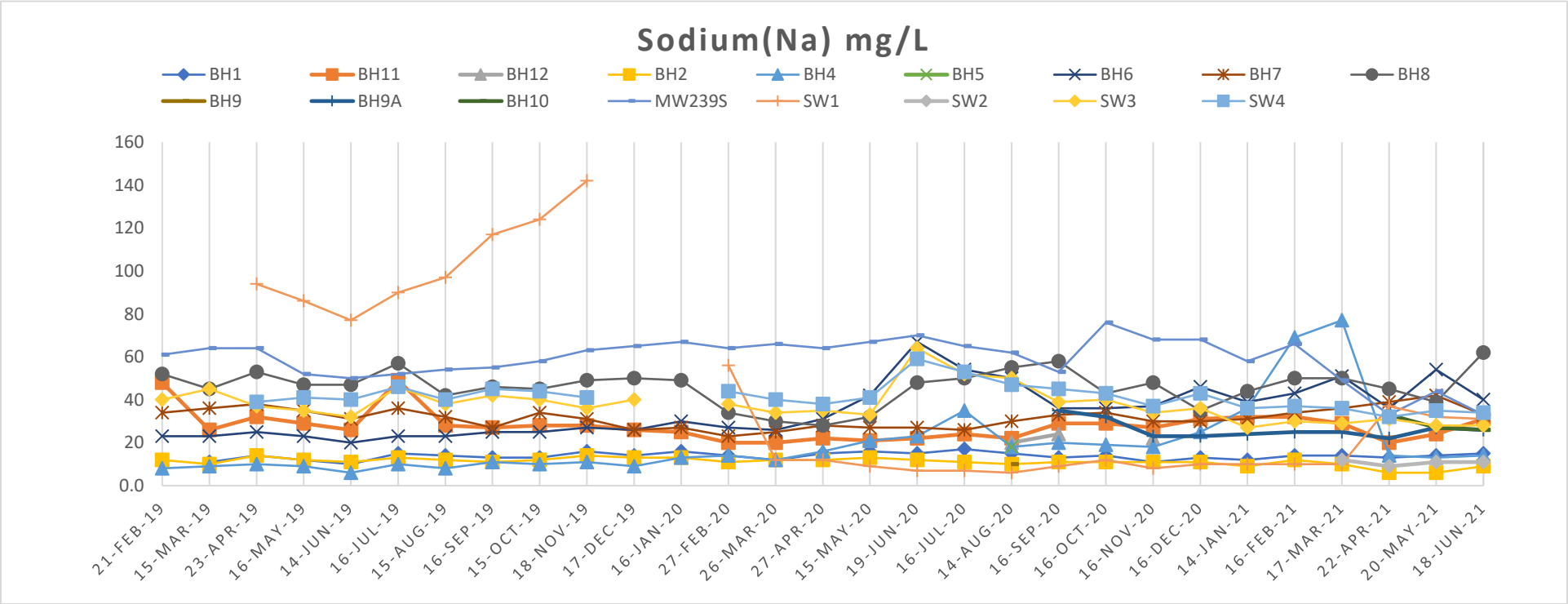
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Calcium(Ca) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
60
50
40
30
20
10
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
16-FEB-21
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Sodium(Na) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
160
140
120
100
80
60
40
20
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
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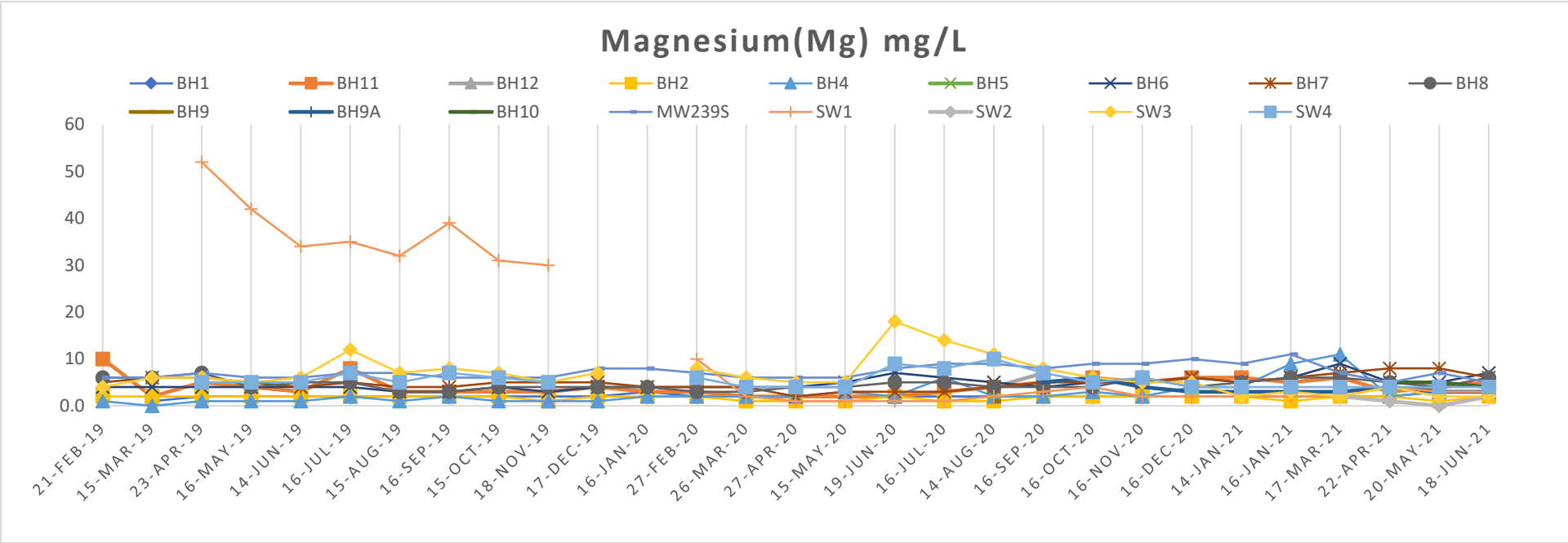
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Magnesium(Mg) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
60
50
40
30
20
10
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
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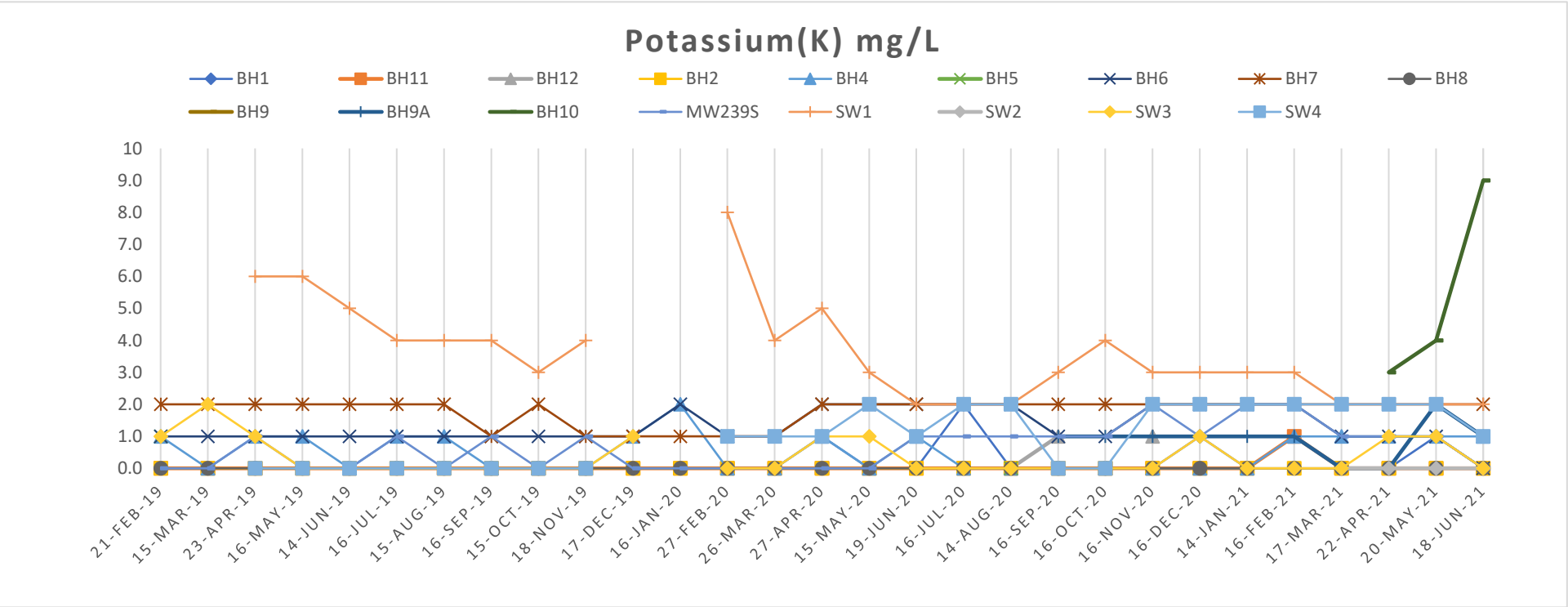
16-JAN-21
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Potassium(K) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
10
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
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22-APR-21
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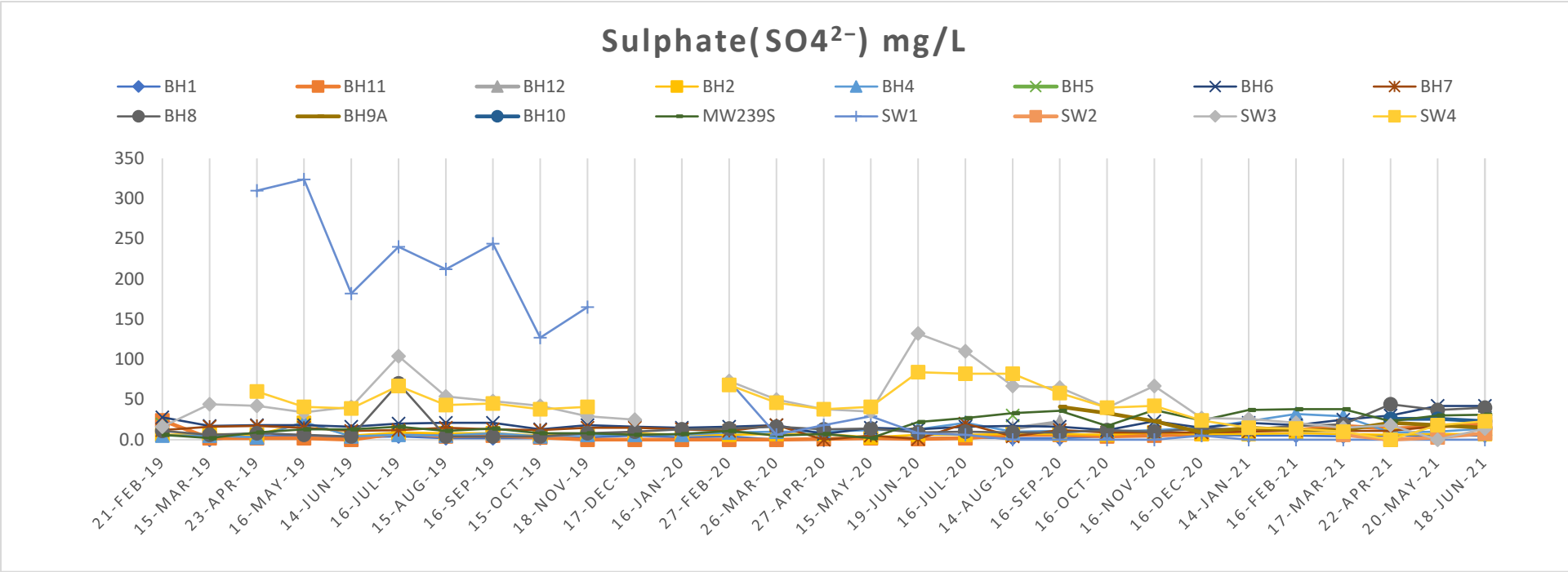
18-JUN-21


Sulphate($SO4^{2-}$) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
350
300
250
200
150
100
50
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
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16-SEP-20
16-OCT-20
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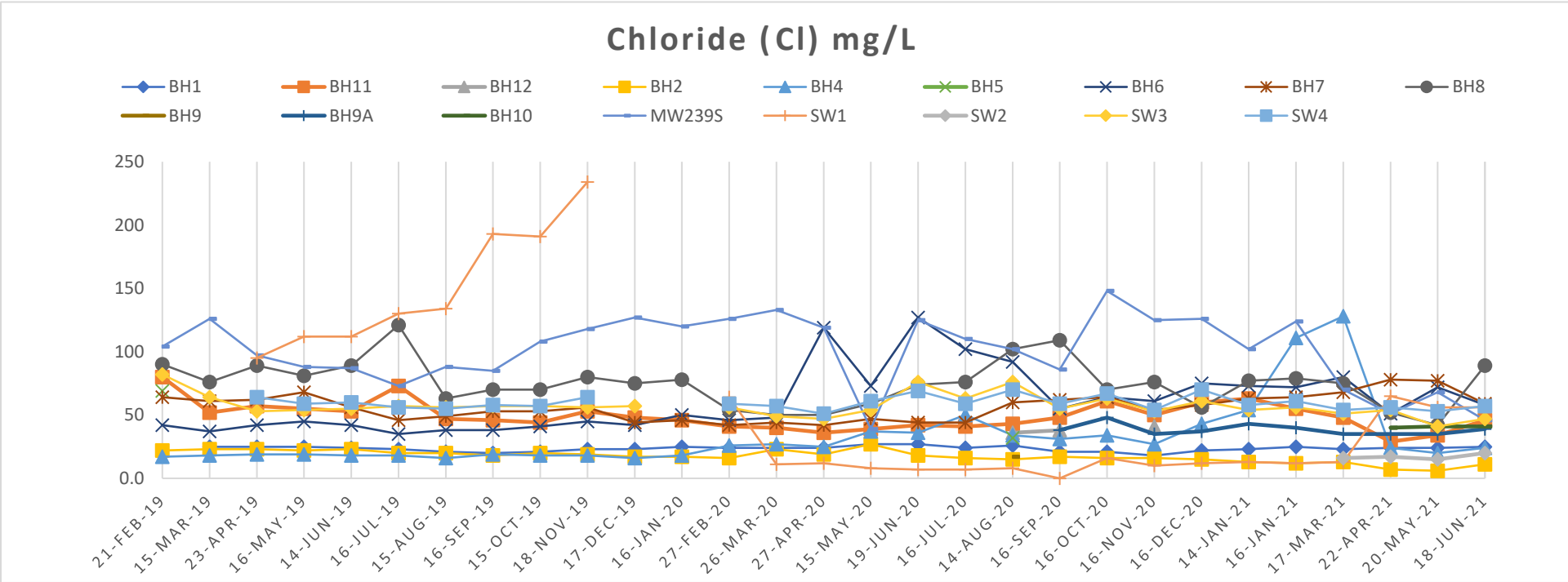
22-APR-21
20-MAY-21
18-JUN-21


Chloride (Cl) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
250
200
150
100
50
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
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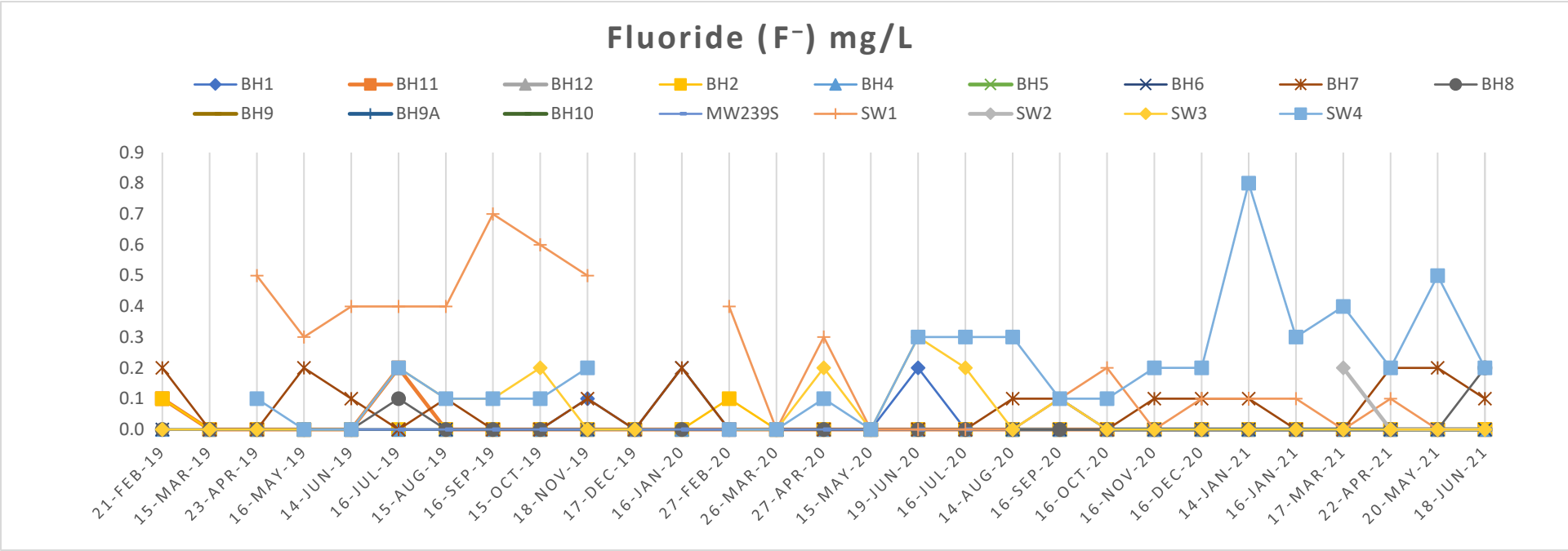
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Fluoride (F⁻) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
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17-MAR-21
22-APR-21
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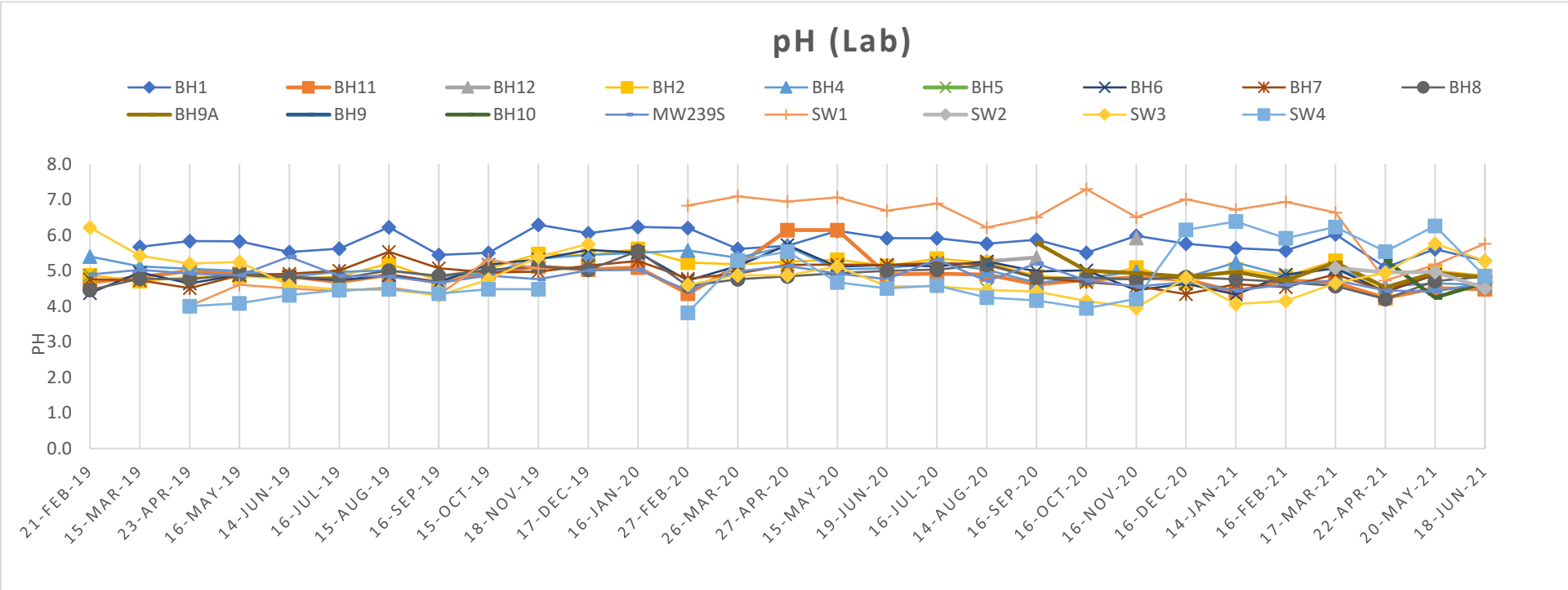
18-JUN-21


pH (Lab)
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9A
BH9
BH10
MW239S
SW1
SW2
SW3
SW4
PH
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
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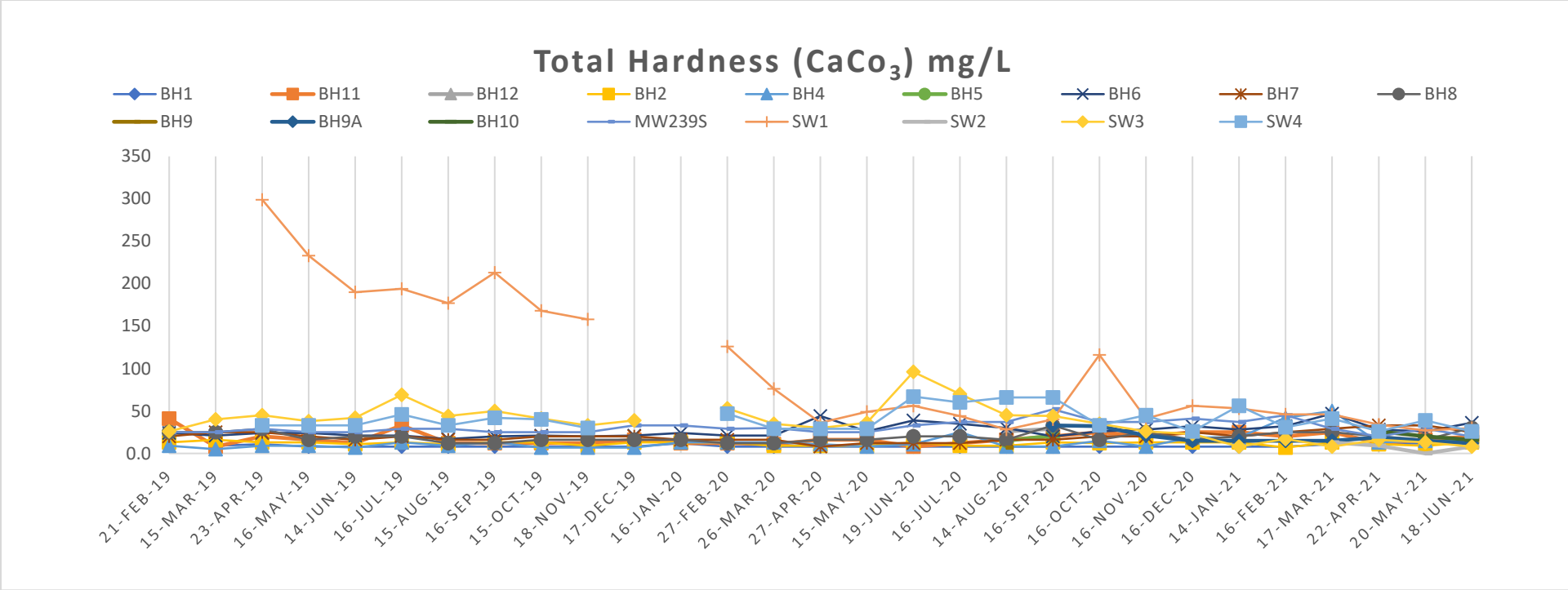
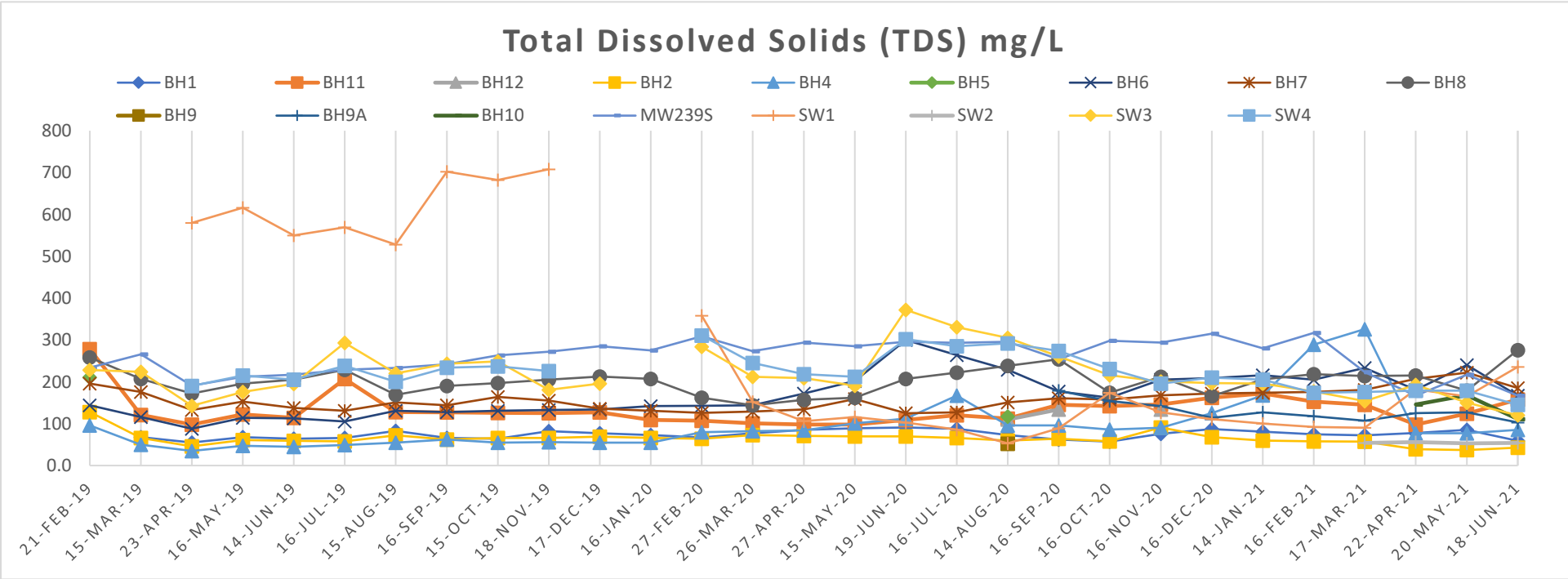
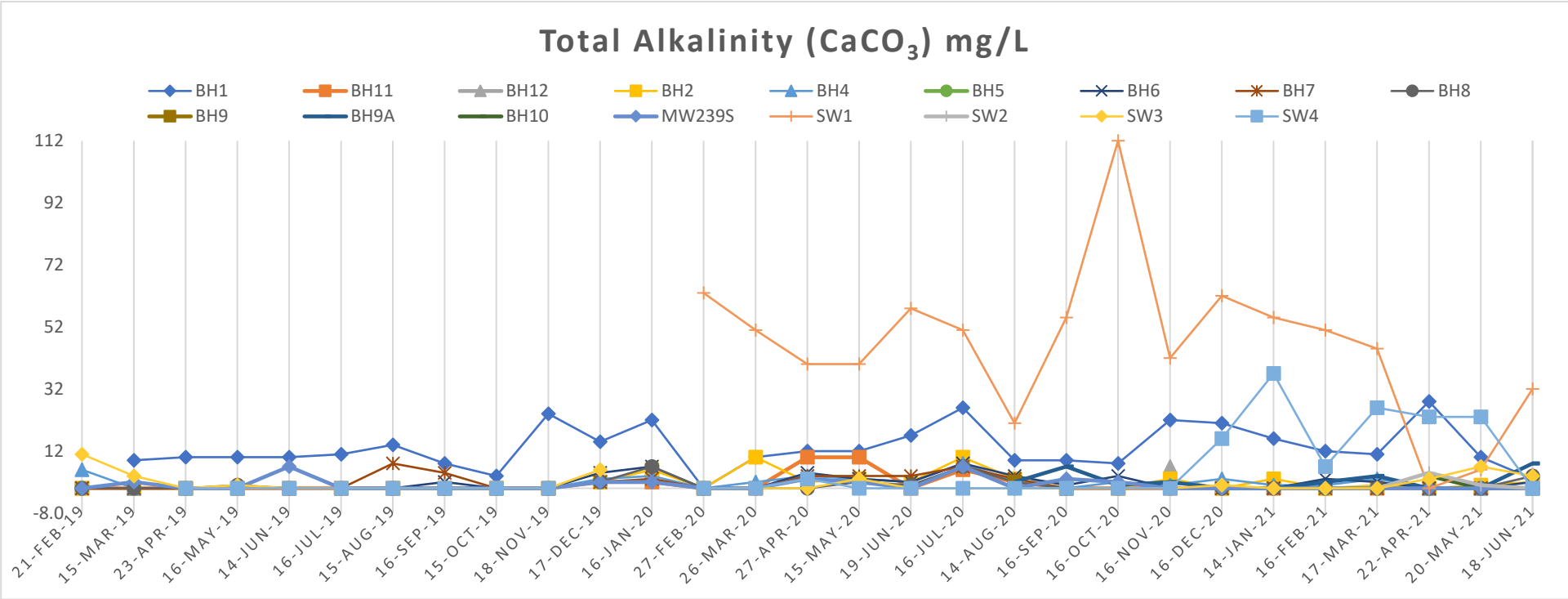
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
16-FEB-21
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Total Hardness ($CaCo_3$) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
350
300
250
200
150
100
50
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
16-FEB-21
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Total Dissolved Solids (TDS) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
800
700
600
500
400
300
200
100
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
16-FEB-21
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21


Total Alkalinity ($CaCO_3$) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
112
92
72
52
32
12
-8.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
16-FEB-21
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21