Monthly Water Quality Monitoring Results Cabbage Tree Road Sand Quarry, NSW

September 2021 Monitoring Event

NCA21R131770

14 October 2021

KLEINFELDER
Bright People. Right Solutions.

Suite 3, 240-244 Pacific Highway,
Charlestown, NSW, 2290
Phone: +61 2 49495200

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Williamtown Sand Syndicate (WSS)
PO Box 898
Newcastle, NSW 2300

Attention: Darren Williams

Subject: Monthly Water Quality Monitoring Results Cabbage Tree Road Sand Quarry, NSW
September 2021 Monitoring Event

Please find enclosed the monthly water quality monitoring results for the September 2021 monitoring event undertaken by Kleinfelder at the Cabbage Tree Road Sand Quarry, NSW.

1 SCOPE OF WORK

The scope of work presented in this report includes the results from the monthly surface and groundwater monitoring event undertaken in accordance with the NSW Environment Protection Authority (EPA) and Department of Planning, Industry and Environment (DPIE) requirements for monthly water quality monitoring at the quarry. **Figure 1** (**Attachment 1**) presents the surface water and groundwater sampling locations.

The scheduled September 2021 monitoring event included gauging of 10 monitoring wells, recording of field parameters for groundwater and surface water, and sampling from 10 monitoring wells and three surface water locations. Furthermore, a wash plant water sample was taken as part of the monthly water monitoring program outlined in the Soil and Water Management Plan (SWMP, 2021).

Due to the detection of PFAS in the previous August monitoring round, additional samples were requested to be taken at the wash plant in order to gain a better understanding of the source and extent of PFAS contamination. A wash plant fines, raw feed sand, washed sand and input water sample were collected as requested by Wedgetail on behalf of Newcastle Sand.

2 SITE WORK

The monthly monitoring round was conducted on 22 September 2021 and comprised:

- Gauging of nine monitoring wells (BH1, BH2, BH4, BH6, BH7, BH9A, BH11, BH12 & MW239S).
- Groundwater sampling from nine monitoring wells (BH1, BH2, BH4, BH6, BH7, BH8, BH9A, BH11, BH12 & MW239S) as summarised in **Table 5** and detailed in **Attachment 2**. It should be noted that BH9 was gauged as dry and therefore not sampled.
- Surface water sampling from three locations (SW1, SW2 & SW4) as summarised in **Table 6** and detailed in **Attachment 2.**
- One wash plant fines sample (WPF) as summarised in **Table 7** and detailed in **Attachment 2.**
- One raw feed sand sample (RFS) as summarised in **Table 7** and detailed in **Attachment 2**.
- One washed sand sample (WASHED) as summarised in **Table 7** and detailed in **Attachment 2**.
- One wash plant water sample (WPW) as summarised in **Table 8** and detailed in **Attachment 2.**
- One input water sample (INPUT) as summarised in **Table 8** and detailed in **Attachment 2**.

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 from the well and representative groundwater samples taken.

Surface water samples were taken directly into a laboratory supplied sample containers using a gloved hand. Where access was deemed problematic a telescopic sampling pole was applied.

Water, fines and sand 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 (September 2021)

Analysis	Number of Samples				
	Primary	Intra-lab (Duplicate)	Inter-lab (Triplicate)	Transport Blank	Rinsate Blank
Hydrocarbons*	5	1	1	1	1
Metals**	9	1	1	1	1
Iron (dissolved)	7	1	1	1	1
Extended Water Quality Suite***	3	0	0	0	0
PFAS (28 analytes, standard level)	11	1	1	1	1

* TRH (C6 – C40) (Silica Gel), TPH, 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).
*** Extended Water Quality Suite - pH, EC, TDS (Calc'), Cation (Ca, Mg, Na, K), Anion (Cl, SO_4, reactive P, F), Alkalinity as CaCO3, nutrients (NH3, NO3 and NO2).

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 Elevation (mAHD)[1]	Comment
BH1	8.64	5.359	3.281	8.2	9.45	4.5	Light brown, no odour / sheen, well cap hinge broken
BH2	7.79	4.990	2.8	8.85	9.45	3.8	Light brown, no odour / sheen, well in good condition
BH3	-	-	-	-	-	3.4	Well decommissioned
BH4	3.06	1.063	1.997	6.00	6.45	3.0	Light brown, no odour / sheen, well in good condition
BH5	7.36	-	-	-	9.28	4.0	No sample taken
BH6	3.62	0.880	2.74	4.5	4.95	4.4	Clear, strong sulphur odour, no sheen, well in good condition
BH7	2.98	1.072	1.908	4.52	4.95	3.7	Cloudy brown, strong sulphur odour, no sheen, well in good condition
BH8	3.88	-	-	-	6.28	4.0	No sample taken
BH9	17.75	-	-	-	18.8	3.0	No sample taken (insufficient volume of water)

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 Elevation (mAHD)[1]	Comment
BH9A	10.25	8.675	1.575	12.4	16.16	3.0[2]	Medium brown, slight sulphur odour, no sheen, well in good condition
BH10	6.69	-	-	-	5.45	4.9	No sample taken
BH11	6.63	2.141	4.489	5.29	5.95	5.5	Very light brown, slight sulphur odour, no sheen, well in good condition
BH12	8.67	6.079	2.591	8.21	8.39	4.0	Light grey / brown, no odour / sheen, well in good condition
MW239S	3.04	0.786	2.254	3.82	4.0	3.9	Cloudy brown, slight sulphur odour, no sheen, well in good condition
MW239D	3.04	-	-	-	20.49	3.9[3]-	No sample taken
SW01*	N/A	0.6	N/A	N/A	N/A	N/A	Slight yellow, no odour / sheen
SW02*	N/A	0.6	N/A	N/A	N/A	N/A	Natural tannin orange, no odour / sheen
SW03*	N/A	-	N/A	N/A	N/A	N/A	No sample taken
SW04*	N/A	0.6	N/A	N/A	N/A	N/A	Natural tannin orange / yellow, 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 / Response Actions
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.	WSS to issue letter to DPIE, documenting groundwater level and rainfall trends, review and make recommendations regarding MEL.

		Re-analysis and review of Minimum Extraction Level (MEL).	
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 September 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	40	18.4	3.39	104	68	5.07	234
BH2	134	18.9	4.27	96	63	4.75	224
BH4	112	17.9	2.96	143	93	4.50	316.7
BH5	ND	ND	ND	ND	ND	ND	ND
BH6	73	15.2	3.00	318	207	5.15	-155
BH7	183	14.7	1.99	152	99	4.91	-100
BH8	ND	ND	ND	ND	ND	ND	ND
BH9	ND	ND	ND	ND	ND	ND	ND
BH9A	305	18.8	2.02	166	108	4.80	40.7
BH10	ND	ND	ND	ND	ND	ND	ND
BH11	40	18.0	4.27	362	236	4.39	-4.8
BH12	30.5	17.5	5.02	210	136	4.98	86.7
MW239S	195	15.4	2.38	209	136	4.66	-142
MW239D	ND	ND	ND	ND	ND	ND	ND
SW01	1.98	10.8	3.52	145	94	6.04	139.4
SW02	6.30	13.4	0.92	103	67	4.57	346
SW03	ND	ND	ND	ND	ND	ND	ND
SW04	14.5	12.1	3.95	236	153	5.8	149
WPW	2907	16.6	10.07	284	184	4.94	318

ND: No Data – no sample taken

Table 5 and **Table 6** below present a summary of the water monitoring results for key analytes found to be elevated above the laboratory limit of reporting (LOR) for groundwater and surface water. **Table 7** and **Table 8** present a summary of the wash plant sampling results for PFAS analytes in both water and fines. Recently approved and updated groundwater and surface water criteria outlined in the SWMP has been applied to this monthly report including a comment on comparison of results with previous data.

Non-detects for analytes BTEXN, TRH, TPH and PFAS were reported at most locations and are therefore not included in the below summary tables. However, due to the reported concentrations of PFOS and PFOA during the previous August monitoring round, PFAS results have been included in the wash plant summary tables (**Table 7** and **Table 8**). Full results summary tables are provided in **Attachment 2**. Full Laboratory certificates of analysis (COA), including copies of chain of custody (COC), are provided in **Attachment 3**.

Table 5: Groundwater Results and Screening Criteria

Analyte	Metals									Discussion of results relative to previous monitoring (details on specific data trends provided in Section 4 below)
	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	
Adopted Site Specific Trigger Values (SWMP 2021)	0.003	0.07	0.004	0.083	0.006	4.1 (8.84 for BH1)	0.136	0.02	0.085 (0.1 for BH1)	
Sample ID		Groundwater								
BH1	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for BH1 were not analysed, no sample collected.
BH2	<0.001	NS	NS	NS	NS	<0.05	0.013	NS	NS	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	<0.001	0.009	<0.001	0.172	<0.001	0.10	0.020	<0.001	0.006	Metal concentrations were generally consistent with historical variations and remain below adopted criteria, except for copper (0.172 mg/L) which reported a concentration above the adopted criteria (0.083 mg/L). It is noted that the concentration detected is below the drinking water criteria. Concentrations of copper have continued to exceed the trigger value at BH4 since May 2021, though has decreased since the previous August monitoring round (0.198 mg/L). BH4 is down hydraulic gradient (approximately 140m) from current quarry operations and on the southernmost boundary of the site adjacent to Cabbage Tree Road.
BH6	0.002	0.020	<0.001	<0.001	<0.001	0.55	0.005	<0.001	<0.005	Generally metal concentrations were consistent with historical results and remain below the adopted criteria, including arsenic (0.002 mg/L) which had previously exceeded the Site Specific Trigger Value (0.003 mg/L) during the August GME (0.005 mg/L). Monitoring will continue in subsequent rounds to confirm a stabilising

Analyte	Metals									Discussion of results relative to previous monitoring (details on specific data trends provided in Section 4 below)
	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	
Adopted Site Specific Trigger Values (SWMP 2021)	0.003	0.07	0.004	0.083	0.006	4.1 (8.84 for BH1)	0.136	0.02	0.085 (0.1 for BH1)	
Sample ID		Groundwater								
										trend. BH6 is considered up hydraulic gradient (approximately 570m) from current quarry operations and at the north-eastern most point of the Site.
BH7	<0.001	0.004	0.003	<0.001	<0.001	0.62	0.005	0.002	<0.005	Metal concentrations were generally consistent with historical results and below adopted criteria. Arsenic concentrations (<0.001 mg/L) have decreased since the previous monitoring round (0.003 mg/L), returning to normal conditions. Close monitoring will continue in subsequent rounds to confirm trends. BH7 is located (approximately 630m) east of the current quarry operations.
BH8	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for BH8 were not analysed as no sample was collected.
BH9A	<0.001	0.003	<0.001	<0.001	<0.001	0.32	0.027	0.003	<0.005	Metal concentrations were generally consistent with historical results and below adopted criteria. BH9A is down gradient (approximately 50m) from current quarry operations and is on the southernmost boundary of the Site adjacent to Cabbage Tree Road.
BH10	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for BH10 were not analysed as no sample was collected.
MW239S	<0.001	0.005	0.001	<0.001	<0.001	0.65	0.004	0.001	0.005	Metal concentrations were generally consistent with historical results and below adopted criteria. MW239S is located approximately 426m

Analyte	Metals									Discussion of results relative to previous monitoring (details on specific data trends provided in Section 4 below)
	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	
Adopted Site Specific Trigger Values (SWMP 2021)	0.003	0.07	0.004	0.083	0.006	4.1 (8.84 for BH1)	0.136	0.02	0.085 (0.1 for BH1)	
Sample ID		Groundwater								
										east and upgradient of the current quarry operations.
BH11	<0.001	0.007	0.002	<0.001	<0.001	0.72	0.003	0.004	0.042	Metal concentrations were generally consistent with historical results and below adopted criteria. Nickel concentrations (0.004 mg/L) have remained equivalent to the previous August GME, indicating a stabilising trend. This follows three consecutive months of a slightly increasing trend since June 2021. Regardless, concentrations remain well below the Site Specific Trigger Values.
BH12	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for BH12 were not analysed as no sample was collected.

Notes:
< - Less than laboratory limit of reporting
NS – No Sample

Table 6: Surface Water Results and Screening Criteria

Analyte	Metals									Discussion of results relative to previous monitoring (details on specific data trends provided in Section 4 below)
	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	
Site Specific Trigger Values (SWMP 2021)	0.006	0.08	0.004	0.033	0.017	7.25 (32 for SW3 & SW4)	0.841	0.02	0.535	
Sample Name	**Surface Water**									
SW1	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for SW1 were not analysed, no sample collected.
SW2	<0.001	0.007	<0.001	<0.001	0.003	1.11	0.087	0.005	0.134	SW2 was previously dry during all sampling periods from 2019 – February 2021. Metal concentrations detected at SW2 during the September monitoring event were all below the Site Specific Trigger Values. SW2 is the most northern located surface water monitoring point directly adjacent or central to current quarry operations.
SW3	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for SW3 were not analysed as no sample was collected.
SW4	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for SW4 were not analysed, no sample collected.

Notes:
< - Less than laboratory limit of reporting
NS – No Sample

Table 7: Wash Plant Fines and Sand Sample Results and Screening Criteria

Analyte	PFAS		Discussion of results
	PFOA	Sum of PFOS + PFHxS	
LOR	0.0002	0.0002	
Units	mg/kg	mg/kg	
Site Specific Trigger Values (SWMP 2021)	0.1	0.01	
Sample Name	Sand Wash Plant		
WPF	<0.0002	<0.0002	PFOA (0.0043 mg/kg) and the Sum of PFOS + PFHxS (0.0005 mg/kg) were previously detected during the August GME, however, did not exceed the Site Specific Trigger Values. Concentrations were not detected during the current September monitoring round.
RFS	<0.0002	<0.0002	Sampling has not previously been carried out at this location, however, PFAS was not detected during the September GME.
WASHED	<0.0002	<0.0002	PFAS was not reported in the washed sand sample taken during the previous August GME, as well as the current September sampling round.

Notes:
< - Less than laboratory limit of reporting

Table 8: Wash Plant Water Sample Results and Screening Criteria

Analyte	PFAS		Discussion of results
	PFOA	Sum of PFOS + PFHxS	
LOR	0.01	0.01	
Units	µg/L	µg/L	
Site Specific Trigger Values (SWMP 2021)	0.56	0.07	
Sample Name	Sand Wash Plant		
WPW	<0.01	<0.01	PFAS was not detected at this location during the September GME, in line with the previous August monitoring results.
INPUT	<0.01	<0.01	Sampling has not previously occurred at this location, therefore, comparisons cannot be made with prior monitoring rounds. However, during the September monitoring event, PFAS was not detected at this location.

Notes:
< - Less than laboratory limit of reporting

3 RAINWATER DATA

Table 9 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 August/September period indicates that there was below average rainfall leading up to the September 2021 sampling event. Based on current rainfall data (mean and monthly totals) for September 2021, it is expected that surface and groundwater elevations will steadily decrease or remain generally stable which is consistent with groundwater trend data.

Table 9: 2020-2021 Rainfall data (12-month period)

Date	Oct (20)	Nov (20)	Dec (20)	Jan (21)	Feb (21)	Mar (21)	Apr (21)	May (21)	Jun (21)	July (21)	Aug (21)	Sep (21)
1st	0.4	0.2	0	7.0	0.2	0	7.8	0	0.2	2.6	0	0
2nd	0	3.2	12	21.2	17.2	0	0.8	0	0.2	1.6	0.8	0
3rd	0	0	0	2.2	4.2	0	0	0	0	0	1.6	0
4th	0	0	0	0.2	0.2	1.6	0.2	0	12.8	0.2	0	0
5th	0	0	0	41.6	0	0	0	6.0	0.8	0	0	3.0
6th	0	30.2	12	0	0	3.8	0	26.4	0	0	0	0
7th	0	0	0	5.8	10.6	0.8	6.2	31.4	0	0	0	0
8th	0	0.4	0	4.0	0.2	0	40.2	0.4	0	0.2	0	0
9th	0	0	0	12.0	0.4	6.4	0.2	0	7.6	1.4	2.4	0
10th	0	0	0	0.2	4.4	0.8	0.2	0.4	0	7.0	0	12.6
11th	0	0	1	0	0.6	0	0	0	2.0	24.8	0.2	0
12th	0	0	0	0	0	0	0	7.2	0	1.0	0	0
13th	0	4.4	0	0	3.4	7.6	0	0	0	0	0	0
14th	0	13.6	0	0	11	1.8	0	0	0	0.2	0	0
15th	0	0	5.4	0.2	0.2	39.2	0	0	0	0.4	0.2	0
16th	0	0	14.8	0	11	1.0	0	0	ND	1.2	0	0
17th	0	5.8	0	0	3.6	6.0	5.0	0	0.4	2.4	0	0
18th	0.2	0	13.6	0	0.2	43.6	8.6	0	0	0	0.6	0.4
19th	18.0	0	8.0	0	29.2	96.4	0.2	0	0.2	0	0	0
20th	1.0	0	5.0	0	0.4	79.2	0.2	0	26.0	0	0	2.2
21st	0	0	3.0	0	7.4	46.6	0	0	19.2	0	0.4	8.8
22nd	0	0	48.6	0	20.6	65.2	0	13.0	0.6	0	0	0.4
23rd	0	0	0.2	0	19.8	16.8	0	0	0.2	0.2	0.2	0
24th	9.4	0	0	0	9.2	4.4	0	3.0	0.8	0.2	22.2	0
25th	14.0	0.4	0	0	3.6	0.2	0	0.6	1.8	0	20.2	0
26th	128.8	0	0	0	0	0	0	0.2	0	0	0	0.6
27th	76.2	0	1.8	0	0	0	0.2	0	0	0	0	0
28th	0	0	0.2	50.6	0.2	0	0	0	0.4	0	0	0
29th	4.0	0	24.0	31.4		31.4	0.2	0	30.8		0	0
30th	0	0	0.2	6		2.4	0	1.8	0.6		0	0

Date	Oct (20)	Nov (20)	Dec (20)	Jan (21)	Feb (21)	Mar (21)	Apr (21)	May (21)	Jun (21)	July (21)	Aug (21)	Sep (21)
31st	-	-	6.4	4.4		4.0	-	0.4	-		0	-
Total	252.0	58.2	156.2	186.8	157.8	459.2	70.0	90.8	104.6	43.4	48.8	28.0
Mean	75.9	81.9	77.5	98.3	118.3	125.2	109.8	108.6	124.6	72.6	72.8	60.6

Notes:
ND – no data retrieved.

4 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 steady decrease in groundwater elevations since April 2021. This is likely due to a continuation of decreased rainfall following the March 2021 monitoring event. Groundwater levels for the current month appear to be generally stable with some locations slightly increasing, despite the below-average rainfall observed in **Section 3**. This may be due to a lag in groundwater response following moderate rainfall towards the end of August, as well as the days prior to the September sampling event. Based on these trends, groundwater elevations are likely to remain generally stable across the quarry.

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

- Arsenic – Arsenic concentrations have generally remained stable across the quarry, with slight decreases in concentration at BH6 and BH7 to levels below the Site Specific Trigger Value. Monitoring will continue to confirm whether trends of arsenic continue to decrease or stabilise at these locations.
- Barium – concentrations of barium were generally consistent across the quarry, with concentrations at BH6 reported to have slightly decreased since August 2021. This follows an increase in concentrations during the previous monitoring event, though levels did not exceed the Site Specific Trigger Value.
- Nickel – concentrations of nickel are generally within historical variations for all locations. Nickel concentrations at BH11 have remained equivalent to the previous August 2021 monitoring event and remain well below the Site Specific Trigger Value. This follows three consecutive months of a slightly increasing trend since June 2021. Monitoring will continue in subsequent events to confirm stabilisation of trends following the large spike in concentration that occurred in April 2021.
- Copper – concentrations of copper have remained stable or slightly decreased across the quarry, including at BH4 which had previously shown an increasing trend since January 2021. Despite this, concentrations remain above the Site Specific Trigger Value. 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 2021. These increased concentrations 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. Notwithstanding, copper concentrations remain below the drinking water criteria.
- PFAS – Concentrations of PFAS (PFOS and PFHxS compounds) have previously been detected at SW4 between November 2020 and March 2021, however, concentrations were below the LOR during the current September 2021 GME. PFOS and PFOA were both detected at the sand wash plant during the August 2021 monitoring round, yet were non-detect in all locations sampled this round. Close monitoring will continue in subsequent rounds, specifically in the fines located at the wash plant, to determine trends.

5 CLOSING

Overall, the results suggest that since quarry operations began in August 2019, there has been negligible change in analytical results across the sampled locations. However, concentrations of copper have shown an increasing trend at BH4 with recent concentrations exceeding the Site Specific Trigger Value. Following conversations with the Quarry Manager, quarry operations are not considered to have contributed to these increased copper concentrations.

Elevated concentrations of copper at BH4 appear to be a symptom of seasonal changes therefore it is expected that concentrations will significantly decrease as temperatures increase to below Site Specific Trigger Values. Additionally, the following activities should be also be undertaken to monitor triggers of the SWMP:

- A review of rainfall data in comparison to other months to understand if a decrease in rainfall may be attributed to increasing 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 above report meets with your requirements. If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

Kleinfelder Australia Pty Ltd

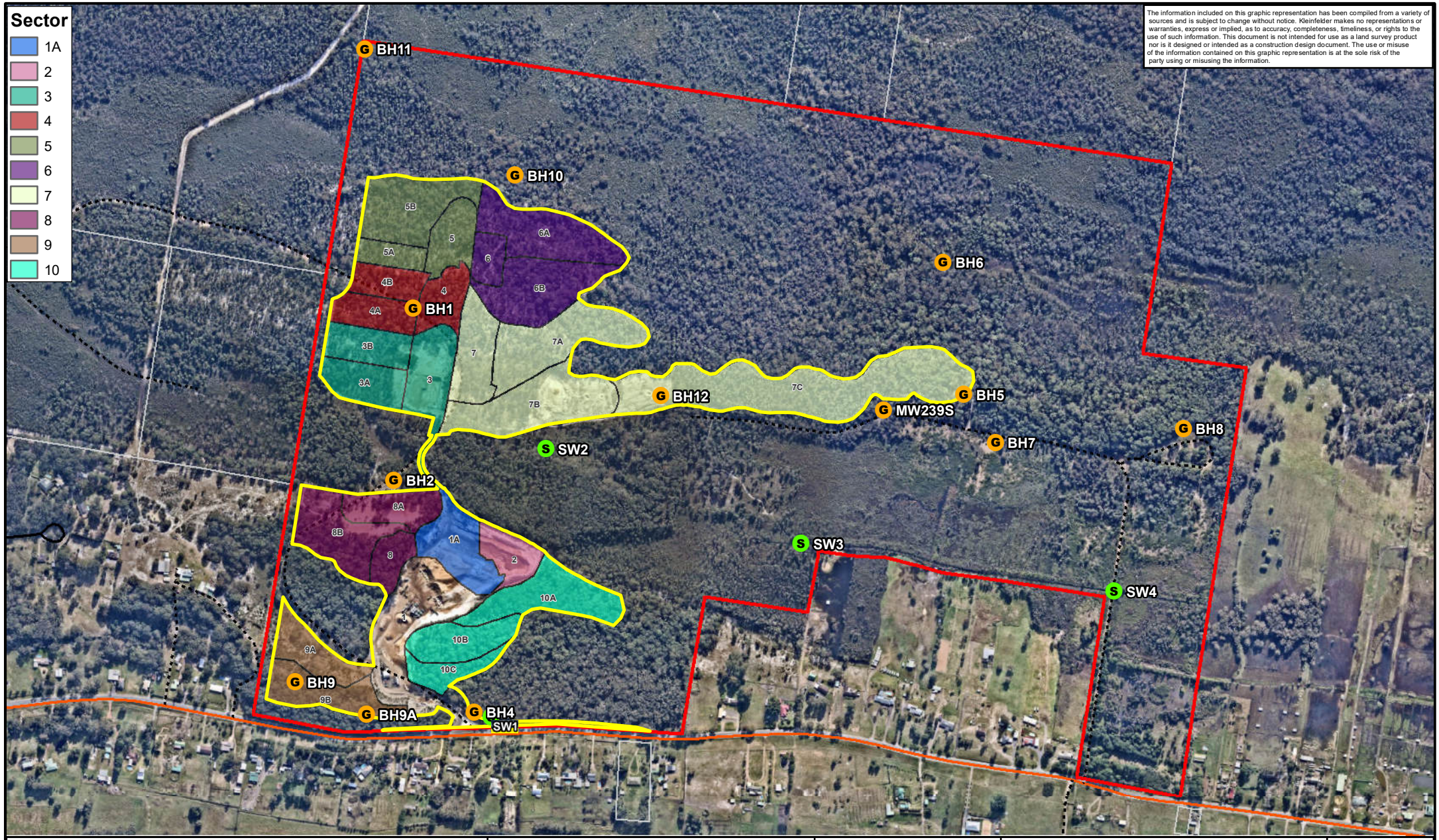
Megan Ferguson

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



Groundwater Sample Site
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: 20222347
DATE DRAWN: 2021/09/03 16:16 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

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
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
BH1	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
	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
	15-Jul-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
	19-Aug-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-Sep-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 100	< 100	< 50	< 50	< 20	< 20	-	< 100	< 100	< 100	< 100
BH2	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	< 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
	15-Jul-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
	19-Aug-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
BH3	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
BH4	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	**250**	< 50	**250**	< 20	< 20	< 100	< 100	**280**	< 100	**280**
	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	**130**	< 50	**130**	< 20	< 20	< 100	< 100	**140**	< 100	**140**
	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
	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

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
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
	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
	15-Jul-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
	19-Aug-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
	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
BH6	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
	15-Jul-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
	19-Aug-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
	27-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7	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
	15-Jul-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
	19-Aug-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

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
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
BH8	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	< 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
	15-Jul-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
	19-Aug-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
	15-Jul-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
	19-Aug-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-Sep-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
	15-Jul-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
	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

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
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
BH11	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
	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
	15-Jul-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
	19-Aug-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-Sep-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-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
	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
	19-Aug-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-Sep-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
MW239S	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
	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
	15-Jul-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
	19-Aug-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- Soil and Water Management Plan, July 2021
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
Adopted Site Specific Trigger Values (SWMP 2021)[3]		0.003	0.07	0.002	0.1	0.0002	0.004	0.006	0.083	4.1 (8.84 for BH1)	0.001	0.136	0.0001	0.02	0.01	0.01	0.085 (0.1 for BH1)
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
	15-Jul-21	<0.001	0.002	<0.001	< 0.05	<0.0001	<0.001	<0.001	<0.001	0.31	<0.001	0.02	<0.0001	<0.001	<0.01	<0.01	0.037
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
	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
	15-Jul-21	<0.001	0.003	<0.001	< 0.05	<0.0001	<0.001	<0.001	0.005	0.07	<0.001	0.017	<0.0001	<0.001	<0.01	<0.01	0.006
	19-Aug-21	<0.001	0.003	-	-	-	<0.001	-	0.007	< 0.05	-	-	-	<0.001	-	-	< 0.005
	22-Sep-21	< 0.001	-	-	-	-	-	-	-	< 0.05	-	0.013	-	-	-	-	-
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
BH4	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
	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

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
Adopted Site Specific Trigger Values (SWMP 2021)[3]		0.003	0.07	0.002	0.1	0.0002	0.004	0.006	0.083	4.1 (8.84 for BH1)	0.001	0.136	0.0001	0.02	0.01	0.01	0.085 (0.1 for BH1)
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-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
	15-Jul-21	<0.001	0.009	<0.001	< 0.05	<0.0001	<0.001	0.001	0.168	0.08	<0.001	0.024	<0.0001	< 0.001	<0.01	<0.01	0.008
	19-Aug-21	<0.001	0.011	< 0.001	< 0.05	< 0.0001	<0.001	0.001	0.198	0.14	< 0.001	0.022	< 0.0001	0.001	< 0.01	< 0.01	0.013
	22-Sep-21	< 0.001	0.009	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	0.172	0.1	< 0.001	0.02	< 0.0001	< 0.001	< 0.01	< 0.01	0.006
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
BH6	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
	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
	15-Jul-21	0.002	0.031	<0.001	< 0.05	<0.0001	<0.001	<0.001	<0.001	1.04	<0.001	0.005	<0.0001	<0.001	<0.01	<0.01	< 0.005
	19-Aug-21	0.005	0.037	< 0.001	< 0.05	< 0.0001	<0.001	<0.001	<0.001	0.55	< 0.001	0.004	< 0.0001	<0.001	< 0.01	< 0.01	<0.005
	22-Sep-21	0.002	0.02	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	0.55	< 0.001	0.005	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
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
	15-Jul-21	<0.001	0.003	<0.001	< 0.05	<0.0001	0.002	0.002	<0.001	1.15	<0.001	0.01	<0.0001	0.002	<0.01	<0.01	0.006
	19-Aug-21	0.003	0.004	< 0.001	< 0.05	< 0.0001	0.003	0.001	<0.001	0.79	< 0.001	0.006	< 0.0001	0.002	< 0.01	< 0.01	0.006
	22-Sep-21	< 0.001	0.004	< 0.001	< 0.05	< 0.0001	0.003	< 0.001	< 0.001	0.62	< 0.001	0.005	< 0.0001	0.002	< 0.01	< 0.01	< 0.005
	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

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
Adopted Site Specific Trigger Values (SWMP 2021)[3]		0.003	0.07	0.002	0.1	0.0002	0.004	0.006	0.083	4.1 (8.84 for BH1)	0.001	0.136	0.0001	0.02	0.01	0.01	0.085 (0.1 for BH1)
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																
BH8	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
	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
	15-Jul-21	0.001	0.009	<0.001	< 0.05	<0.0001	0.002	<0.001	<0.001	2.96	<0.001	0.006	<0.0001	0.001	<0.01	<0.01	< 0.005
	19-Aug-21	0.003	0.008	-	-	-	0.002	-	<0.001	3.72	-	-	-	0.002	-	-	< 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
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
	15-Jul-21	<0.001	0.003	<0.001	< 0.05	<0.0001	<0.001	<0.001	<0.001	0.23	<0.001	0.023	<0.0001	0.003	<0.01	<0.01	0.006
	19-Aug-21	<0.001	0.003	<0.001	< 0.05	<0.0001	<0.001	<0.001	<0.001	0.26	<0.001	0.03	<0.0001	0.003	<0.01	<0.01	0.006
	22-Sep-21	< 0.001	0.003	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	0.32	< 0.001	0.027	< 0.0001	0.003	< 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
	15-Jul-21	<0.001	0.016	<0.001	< 0.05	<0.0001	0.002	<0.001	<0.001	0.1	<0.001	0.008	<0.0001	0.001	<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

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
Adopted Site Specific Trigger Values (SWMP 2021)[3]		0.003	0.07	0.002	0.1	0.0002	0.004	0.006	0.083	4.1 (8.84 for BH1)	0.001	0.136	0.0001	0.02	0.01	0.01	0.085 (0.1 for BH1)
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	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**
	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**
	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**
	15-Jul-21	<0.001	**0.005**	<0.001	< 0.05	<0.0001	**0.002**	<0.001	**0.002**	**0.41**	<0.001	**0.002**	<0.0001	**0.003**	<0.01	<0.01	**0.031**
	19-Aug-21	**0.001**	**0.009**	<0.001	< 0.05	<0.0001	**0.003**	<0.001	<0.001	**0.62**	<0.001	**0.003**	<0.0001	**0.004**	<0.01	<0.01	**0.047**
	22-Sep-21	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**0.72**	< 0.001	**0.003**	< 0.0001	**0.004**	< 0.01	< 0.01	**0.042**
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
	15-Jul-21	<0.001	**0.004**	<0.001	< 0.05	<0.0001	**0.002**	<0.001	<0.001	**0.67**	<0.001	**0.006**	<0.0001	**0.002**	<0.01	<0.01	**0.007**
	19-Aug-21	<0.001	**0.004**	<0.001	< 0.05	<0.0001	**0.001**	<0.001	<0.001	**0.53**	<0.001	**0.006**	<0.0001	**0.002**	<0.01	<0.01	<0.005
	22-Sep-21	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	< 0.001	**0.65**	< 0.001	**0.004**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.005**
WPW	22-Sep-21	< 0.001	-	-	-	-	-	-	-	**0.08**	-	**0.051**	-	-	-	-	-

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%
** denotes 95% Level of protection in freshwater
RPD - Relative Percentage Difference
[1] value for CR VI
[2] as inorganioc
[3] Soil and Water Management Plan (July 2021)

Table GW3
Groundwater Analytical Data - 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
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	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	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
Adopted Site Specific Trigger Values (SWMP 2021)^1												0.56																		0.07		
HEPA NEMP 2020***						0.00023						19																				
HEPA NEMP 2020^4												5.6																		0.7		
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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	<0.02	<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
	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	< 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	<0.02	<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
	15-Jul-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	< 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	< 0.02	< 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
	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	<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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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-Jul-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	< 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-Aug-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	< 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	< 0.02	< 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	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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	**0.02**
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	<0.02	<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
	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	<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	<0.02	<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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	15-Jul-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	< 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-Aug-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	< 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	< 0.02	< 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	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	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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-Jul-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	< 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-Aug-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	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	15-Jul-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	< 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-Aug-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	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	15-Jul-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	< 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-Aug-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	< 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	< 0.02	< 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	**0.14**	< 0.05	< 0.05	<0.01	< 0.01	**0.14**
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	<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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

Analyte		Perfluoralkyl 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)	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)	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 (WADER List)	Sum of PFAS
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	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	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
Adopted Site Specific Trigger Values ISWMP 2021?												0.56																		0.07		
HEPA NEMP 2020***						0.00023						19																				
HEPA NEMP 2020?												5.6																		0.7		
BH10	15-Jul-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	< 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-Aug-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	< 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-Sep-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	< 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	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	< 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	< 0.02	< 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
	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	< 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-Jul-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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	15-Jul-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	< 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	< 0.02	< 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
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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	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	< 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	< 0.02	< 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
	15-Jul-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	< 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-Aug-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	< 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-Sep-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	< 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 reporting
µg/L - Micrograms per litre
*** 99% Level of protection in freshwater
[1] Soil and Water Management Plan July 2021
2- Denotes duplicate value used.
3- Denotes triplicate vbalue used.
? Recreation water
* BHBA 16/08/2020 Sample required dilution prior to extraction due to matrix interferences. LOR values have been adjusted accordingly

Table GW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

		Anions and Cations																			Alkalinity						Inorganics		
Analyte		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	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		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
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	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Adopted Site Specific Trigger Values (SWMP 2021)[1]		77	5	11	2	70	148	0.2	-	2	-	-	-	0.5	5.9	-	-	-	-	-	-	-	-	-	-	500	-	-	4.2-6.5
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																												
BH1	21-Feb-19															Blocked													
	15-Mar-19	11	2.0	1.0	< 1.0	< 1.0	25	< 0.1	-	-	-	-	-	-	-	-	0.66	0.88	-	-	9.0	< 1.0	< 1.0	9.0	9.0	104	68	129	5.67
	23-Apr-19	14	1.0	2.0	< 1.0	4.0	25	< 0.1	-	-	-	-	-	-	-	-	0.82	0.99	-	-	10	< 1.0	< 1.0	10	11	84	55	97	5.83
	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	0.69	1.01	-	1.7	10	< 1.0	< 1.0	10	8.0	105	68	164	5.82
	14-Jun-19	10	< 1.0	2.0	< 1.0	3.0	24	< 0.1	-	-	-	-	-	-	-	-	0.6	0.94	-	-	10	< 1.0	< 1.0	10	8.0	99	64	72	5.52
	16-Jul-19	15	< 1.0	2.0	< 1.0	4.0	23	< 0.1	-	-	-	-	-	-	-	-	0.82	0.95	-	-	11	< 1.0	< 1.0	11	8.0	102	66	84	5.62
	15-Aug-19	14	< 1.0	2.0	< 1.0	2.0	21	< 0.1	-	-	-	-	-	-	-	-	0.77	0.91	-	-	14	< 1.0	< 1.0	14	8.0	128	83	82	6.22
	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	0.73	0.76	-	1.84	8.0	< 1.0	< 1.0	8.0	8.0	102	66	88	5.44
	15-Oct-19	13	< 1.0	2.0	< 1.0	2.0	21	< 0.1	-	-	-	-	-	-	-	-	0.73	0.71	-	-	4.0	< 1.0	< 1.0	4.0	8.0	98	64	-	5.5
	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	0.86	1.19	-	2.26	24	< 1.0	< 1.0	24	8.0	126	82	-	6.29
	17-Dec-19	14	<1	2	<1	5	23	<0.1	-	-	-	-	-	-	-	-	0.77	1.05	-	-	15	<1	<1	15	8	118	77	-	6.05
	16-Jan-20	16	<1	3	<1	3	25	<0.1	-	-	-	-	-	-	-	-	0.94	1.21	-	-	22	<1	<1	22	12	112	73	-	6.23
	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	0.77	0.94	-	1.98	9	<1	<1	9	8	103	67	-	6.2
	26-Mar-20	12	<1	2	<1	<1	24	<0.1	-	-	-	-	-	-	-	-	0.69	0.88	-	-	10	<1	<1	10	8	118	77	-	5.61
	27-Apr-20	15	<1	2	1	<1	24	<0.1	-	-	-	-	-	-	-	-	0.84	0.92	-	-	12	<1	<1	12	8	131	85	-	5.7
	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	0.86	1.06	-	2.26	12	<1	<1	12	8	137	89	-	6.12
	19-Jun-20	15	<1	2	<1	2	27	0.2	-	-	-	-	-	-	-	-	1.04	1.14	-	-	17	<1.0	<1.0	17	8	140	91		5.91
	16-Jul-20	17	<1	2	2	3	24	<0.1	-	-	-	-	-	-	-	-	0.96	1.26	-	-	26	<1.0	<1.0	26	8	135	88		5.91
	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	0.82	0.95	-	2.12	9	<1	<1	9	8	113	73	100	5.76
	16-Sep-20	13	< 1.0	2.0	< 1.0	2.0	21	< 0.1	-	-	-	-	-	-	-	-	0.73	0.81	-	-	9.0	< 1.0	< 1.0	9.0	8.0	95	62	81	5.87
	16-Oct-20	14	< 1.0	2.0	< 1.0	4.0	21	< 0.1	-	-	-	-	-	-	-	-	0.77	0.84	-	-	8.0	< 1.0	< 1.0	8.0	8.0	88	57	-	5.7
	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	1.02	1.05	-	1.55	22	< 1.0	< 1.0	22	8.0	120	78	76	5.98
	16-Dec-20	13	< 1.0	2.0	1.0	6.0	22	< 0.1	-	-	-	-	-	-	-	-	0.93	1.16	-	-	21	< 1.0	< 1.0	21	8.0	134	87	-	5.76
	14-Jan-21	12	< 1.0	2.0	< 1.0	5.0	23	< 0.1	-	-	-	-	-	-	-	-	0.96	1.07	-	-	16	< 1.0	< 1.0	16	8.0	124	81	-	5.63
	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	0.8	1.05	-	1.98	12	< 1.0	< 1.0	12	8.0	116	75	89	5.57
	17-Mar-21	14	1.0	2.0	< 1.0	4.0	23	< 0.1	-	-	-	-	-	-	-	-	0.82	0.95	-	-	11	< 1.0	< 1.0	11	11	111	72	-	6.02
	22-Apr-21	13	1.0	2.0	< 1.0	5.0	24	0.1	-	-	-	-	-	-	-	-	0.78	1.34	-	-	28	< 1.0	< 1.0	28	11	120	78	-	5.09
	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	0.88	0.98	-	1.65	10	<1.0	<1.0	10	12	131	85	72	5.60
	18-Jun-21	15	< 1.0	3	< 1.0	5	25	< 0.1	-	-	-	-	-	-	-	-	0.90	0.87	-	-	3	< 1.0	< 1.0	3	12	99	64	59	5.27
	15-Jul-21	14	< 1.0	3.0	< 1.0	6.0	30	< 0.1	-	-	-	-	-	-	-	-	0.86	0.97	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	121	79	76	4.74
BH2	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	0.79	0.74	-	1.44	< 1.0	< 1.0	< 1.0	< 1.0	13	91	128	-	4.87
	15-Mar-19	10	3.0	2.0	< 1.0	7.0	23	< 0.1	-	-	-	-	-	-	-	-	0.75	0.79	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	101	66	90	4.71
	23-Apr-19	14	2.0	2.0	< 1.0	6.0	23	< 0.1	-	-	-	-	-	-	-	-	0.87	0.77	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	70	46	84	4.82
	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	0.79	1.06	-	1.44	< 1.0	< 1.0	< 1.0	< 1.0	13	94	61	144	4.85
	14-Jun-19	11	1.0	2.0	< 1.0	5.0	23	< 0.1	-	-	-	-	-	-	-	-	0.69	0.75	-	-	< 1.0	< 1.0	< 1.0	< 1.0	11	91	59	51	4.76
	16-Jul-19	13	2.0	2.0	< 1.0	9.0	20	< 0.1	-	-	-	-	-	-	-	-	0.83	0.75	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	90	58	63	4.84
	15-Aug-19	12	1.0	2.0	< 1.0	8.0	20	< 0.1	-	-	-	-	-	-	-	-	0.74	0.73	-	-	< 1.0	< 1.0	< 1.0	< 1.0	11	110	72	61	5.2
	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	0.74	0.67	-	1.32	< 1.0	< 1.0	< 1.0	< 1.0	13	96	62	60	4.72
	15-Oct-19	12	2.0	2.0	< 1.0	5.0	20	< 0.1	-	-	-	-	-	-	-	-	0.79	0.67	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	102	66	-	5.06
	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	0.79	0.68	-	2.02	< 1.0	< 1.0	< 1.0	< 1.0	9.0	102	66	-	5.47
	17-Dec-19	13	2	2	<1	8	17	<0.1	-	-	-	-	-	-	-	-	0.83	0.69	-	-	2	<1	<1	2	13	106	69	-	5.43
	16-Jan-20	13	2	2	<1	6	17	<0.1	-	-	-	-	-	-	-	-	0.83	0.72	-	-	6	<1	<1	6	13	102	66	-	5.61
	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	0.74	0.6	-	1.32	1	<1	<1	1	13	98	64	-	5.23
	26-Mar-20	12	2	1	<1	7	23	<0.1									0.7	0.79	-		10	<1	<1	10	9	113	73	-	5.18
	27-Apr-20	12	2	1	<1	7	19	<0.1	-	-	-	-	-	-	-	-	0.7	0.72	-	-	2	<1	<1	2	9	109	71	-	5.25
	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	0.75	0.72	-	1.87	3	<1	<1	3	9	108	70	-	5.31
	19-Jun-20	12	2	2	<1	6	18	<0.1	-	-	-	-	-	-	-	-	0.79	0.64	-	-	2	<1	<1	2	13	107	70	-	5.13
	16-Jul-20	11	2	1	<1	6	16	<0.1	-	-	-	-	-	-	-	-	0.66	0.78	-	-	10	<1	<1	10	9	101	66	-	5.34
	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	0.62	0.63		1.44	3	<1	<1	3	9	92	60	120	5.22
	16-Sep-20	11	2.0	2.0	< 1.0	7.0	17	< 0.1	-	-	-	-	-	-	-	-	0.74	0.62	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	99	64	76	4.85
	16-Oct-20	11	2.0	2.0	< 1.0	6.0	16	< 0.1	-	-	-	-	-	-	-	-	0.74	0.58	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	90	58	-	5.07
	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	0.74	0.7	-	1.32	3.0	< 1.0	< 1.0	3.0	13	119	77	91	5.09
	16-Dec-20	11	2.0	2.0	< 1.0	7.0	15	< 0.1	-	-	-	-	-	-	-	-	0.74	0.57	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	105	68	-	4.66
	14-Jan-21	9.0	2.0	2.0	< 1.0	7.0	13	< 0.1	-	-	-	-	-	-	-	-	0.66	0.57	-	-	3.0	< 1.0	< 1.0	3.0	13	93	60	-	5.04
	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	0.65	0.5	-	2.03	< 1.0	< 1.0	< 1.0	< 1.0	7.0	89	58	67	4.84
	17-Mar-21	10	2.0	2.0	< 1.0	7.0	13	< 0.1	-	-	-	-	-	-	-	-	0.7	0.53	-	-	1.0	< 1.0	< 1.0	1.0	13	88	57	-	5.28
	22-Apr-21	6.0	1.0	2.0	< 1.0	6.0	7.0	< 1.0	-	-	-	-	-	-	-	-	0.48	0.32	-	-	< 1.0	< 1.0	< 1.0	< 1.0	11	60	39	-	4.37
	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	0.44	0.33	-	0.86	1	<1.0	<1.0	1	9	57	37	32	5.00
	18-Jun-21	9	2	2	< 1.0	7	11	<0.1	-	-	-	-	-	-	-	-	0.66	0.50	-	-	2	< 1.0	< 1.0	2	13	61	40	43	4.85
	15-Jul-21	9.0	2.0	2.0	< 1.0	11	16	< 0.1	-	-	-	-	-	-	-	-	0.66	0.68	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	84	55	61	4.84
	19-Aug-21	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	0.46	0.54	-	0.46	9.0	< 1.0	< 1.0	9.0	14	60	438	-	5.55
BH4	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	0.56	0.7	-	1.15	6.0	< 1.0	< 1.0	6.0	9.0	73	96	-	5.4
	15-Mar-19	9.0	2.0	< 1.0	< 1.0	5.0	18	< 0.1	-	-	-	-	-	-	-	-	0.49	0.61	-	-	< 1.0	< 1.0	< 1.0	< 1.0	5.0	77	50	70	5.12
	23-Apr-19	10	2.0	1.0	1.0	3.0	19	< 0.1	-	-	-	-	-	-	-	-	0.64	0.6	-	-	< 1.0	< 1.0	< 1.0	< 1.0	9.0	54	35	61	5.05
	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	0.6	0.99	-	1.3	< 1.0	< 1.0	< 1.0	< 1.0	9.0	73	47	100	4.99
	14-Jun-19	6.0	1.0	1.0	< 1.0	4.0	18	< 0.1	-	-	-	-	-	-	-	-	0.39	0.59	-	-	< 1.0	< 1.0	< 1.0	< 1.0	7.0	69	45	36	4.84
	16-Jul-19	10	2.0	2.0	1.0	6.0	18	< 0.1	-	-	-	-	-	-	-	-	0.72	0.63	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	75	49	42	4.96
	15-Aug-19	8.0	2.0	1.0	1.0	5.0	16	< 0.1	-	-	-	-	-	-	-	-	0.56	0.56	-	-	< 1.0	< 1.0	< 1.0	< 1.0	9.0	85	55	49	5.01
	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	0.74	0.7	-	1.32	< 1.0	< 1.0	< 1.0	< 1.0	13	95	62	58	4.83
	15-Oct-19	10	1.0	1.0	< 1.0	4.0	18	< 0.1	-	-	-	-	-	-	-	-	0.57	0.59	-	-	< 1.0	< 1.0	< 1.0	< 1.0	7.0	85	55	-	4.93
	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	0.61	0.63	-	1.86	< 1.0	< 1.0	< 1.0	< 1.0	7.0	86	56	-	5.34
	17-Dec-19	9	1	1	1	6	16	<0.1	-	-	-	-	-	-	-	-	0.55	0.64	-	-	3	<1	<1	3	7	85	55	-	5.44
	16-Jan-20	13	2	2	2	6	18	<0.1	-	-	-	-	-	-	-	-	0.88	0.71	-	-	4	<1	<1	4	13	85	55	-	5.5
	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	0.87	0.96	-	1.67	2	<1	<1	2	13	123	80	-	5.57
	26-Mar-20	12	2	2	<1	10	27	<0.1	-	-	-	-	-	-	-	-	0.79	1.01	-	-	2	<1	<1	2	13	126	82		5.36
	27-Apr-20	16	1	2	1	10	25	<0.1	-	-	-	-	-	-	-	-	0.94	0.99	-	-	4	<1	<1	4	11	130	84	-	5.68
	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	1.21	1.33	-	2.97	3	<1	<1	3	8	438	101	-	5.04
	19-Jun-20	23	1	2	1	13	36	<0.1	-	-	-	-	-	-	-	-	1.24	1.33	-	-	2	<1	<1	2	11	172	112	-	5.07
	16-Jul-20	35	<1	6	<1	21	50	<0.1	-	-	-	-	-	-	-	-	2.02	2.01	-	-	8	<1	<1	8	25	257	167	-	5.22
	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	0.95	1.21		2.54	2	<1	<1	2	8	148	96	96	5.02
	16-Sep-20	20	< 1.0	2.0	< 1.0	11	31	< 0.1	-	-	-	-	-	-	-	-	1.03	1.1	-	-	< 1.0	< 1.0	< 1.0	< 1.0	8.0	148	96	74	4.66
	16-Oct-20	19	1.0	3.0	< 1.0	10	34	< 0.1	-	-	-	-	-	-	-	-	1.12	1.21	-	-	2.0	< 1.0	< 1.0	2.0	15	133	86	-	5.21
	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	0.95	1.03	-	2.54	1.0	< 1.0	< 1.0	1.0	8.0	146	95	90	4.98
	16-Dec-20	25	1.0	4.0	< 1.0	15	43	< 0.1	-	-	-	-	-	-	-	-	1.47	1.58	-	-	3.0	< 1.0	< 1.0	3.0	19	193	125	-	4.81
	14-Jan-21	36	1.0	4.0	< 1.0	23	54	< 0.1	-	-	-	-	-	-	-	-	1.94	2.02	-	-	1.0	< 1.0	< 1.0	1.0	19	258	168	-	5.23
	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	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	77	2.0	11	1.0	26	128	< 0.1	-	-	-	-	-	-	-	-	4.38	4.21	1.96	-	3.0	< 1.0	< 1.0	3.0	50	501	326	-	5.07
	22-Apr-21	14	2.0	2.0	1.0	9.0	24	< 0.1	-	-	-	-	-	-	-	-	0.9	0.86	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	118	77	-	4.56
	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	0.89	0.77	-	1.47	<1.0	<1.0	<1.0	<1.0	15	119	77	78	4.64
	18-Jun-21	14	1	3	1	14	24	<0.1	-	-	-	-	-	-	-	-	0.93	0.97	-	-	< 1.0	< 1.0	< 1.0	< 1.0	15	111	72	85	4.60
	15-Jul-21	16	1.0	3.0	< 1.0	13	29	< 0.1	-	-	-	-	-	-	-	-	0.99	1.09	-	-	< 1.0	< 1.0	< 1.0	< 1.0	15	124	81	72	4.68
	19-Aug-21	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	2.35	2.34	-	3.59	< 1.0	< 1.0	< 1.0	< 1.0	25	250	211	-	4.87
	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	1.08	1.53		2.03	<1	<1	<1	<1	15	180	117	100	4.49
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	1.72	1.77	-	2.49	< 1.0	< 1.0	< 1.0	< 1.0	24	177	144	-	4.37
	14-Mar-19	23	2.0	4.0	1.0	17	37	< 0.1	-	-	-	-	-	-	-	-	1.46	1.44	-	-	2.0	< 1.0	< 1.0	2.0	21	179	116	146	4.95
	23-Apr-19	25	3.0	4.0	1.0	18	42	< 0.1	-	-	-	-	-	-	-	-	1.59	1.56	-	-	< 1.0	< 1.0	< 1.0	< 1.0	24	136	88	115	4.64
	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	1.5	1.64	-	2.04	< 1.0	< 1.0	< 1.0	< 1.0	24	175	114	214	4.88
	14-Jun-19	20	2.0	4.0	1.0	16	42	< 0.1	-	-	-	-	-	-	-	-	1.32	1.52	-	-	< 1.0	< 1.0	< 1.0	< 1.0	21	174	113	90	4.82
	16-Jul-19	23	2.0	4.0	1.0	20	35	< 0.1	-	-	-	-	-	-	-	-	1.46	1.4	-	-	< 1.0	< 1.0	< 1.0	< 1.0	21	161	105	82	4.73
	15-Aug-19	23	2.0	3.0	1.0	21	38	< 0.1	-	-	-	-	-	-	-	-	1.37	1.51	-	-	< 1.0	< 1.0	< 1.0	< 1.0	17	201	131	104	4.87
	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	1.51	1.55	-	2.44	2.0	< 1.0	< 1.0	2.0	20	197	128	124	4.68
	15-Oct-19	25	2.0	4.0	1.0	13	41	< 0.1	-	-	-	-	-	-	-	-	1.54	1.43	-	-	< 1.0	< 1.0	< 1.0	< 1.0	21	202	131	-	5.17
	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	1.6	1.64	-	2.64	< 1.0	< 1.0	< 1.0	< 1.0	20	204	133	-	5.32
	17-Dec-19	26	2	4	1	16	42	<0.1	-	-	-	-	-	-	-	-	1.58	1.62	-	-	5	<1	<1	5	21	207	134	-	5.58
	16-Jan-20	30	3	4	2	15	50	0.2	-	-	-	-	-	-	-	-	1.83	1.86	-	-	7	<1	<1	7	24	218	142	-	5.51
	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	1.63	1.63	-	2.54	< 1.0	< 1.0	< 1.0	< 1.0	21	220	143	-	4.72
	26-Mar-20	26	2	4	1	18	48	<0.1	-	-	-	-	-	-	-	-	1.58	1.73	-	-	< 1.0	< 1.0	< 1.0	< 1.0	21	222	144		5.13
	27-Apr-20	31	2	4	2	7	119	<0.1	-	-	-	-	-	-	-	-	1.83	1.94	-	-	5	<1	<1	5	44	264	172	-	5.72
	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	2.39	2.43	-	3.61	3	<1	<1	3	26	310	202	-	5.11
	19-Jun-20	67	4	7	2	13	127	<0.1	-	-	-	-	-	-	-	-	3.53	3.89	4.6	-	2	<1	<1	2	39	462	300	-	5.16
	16-Jul-20	54	4	6	2	16	102	<0.1	-	-	-	-	-	-	-	-	3.09	3.37	4.28	-	8	<1	<1	8	35	407	264	-	5.12
	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	2.84	3.03	3.27	3.93	4	<1	<1	4	30	353	229	205	5.26
	16-Sep-20	36	2.0	4.0	1.0	16	55	< 0.1	-	-	-	-	-	-	-	-	2.02	1.9	-	-	1.0	< 1.0	< 1.0	1.0	21	273	177	121	4.98
	16-Oct-20	36	2.0	5.0	1.0	12	64	< 0.1	-	-	-	-	-	-	-	-	2.1	2.14	-	-	4.0	< 1.0	< 1.0	4.0	26	249	162	-	5.3
	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	2.22	2.2	-	3.04	< 1.0	< 1.0	< 1.0	< 1.0	28	321	209	205	4.45
	16-Dec-20	46	3.0	6.0	2.0	15	75	< 0.1	-	-	-	-	-	-	-	-	2.7	2.43	-	-	< 1.0	< 1.0	< 1.0	< 1.0	32	321	209	-	4.63
	14-Jan-21	39	3.0	5.0	2.0	21	73	< 0.1	-	-	-	-	-	-	-	-	2.31	2.5	-	-	< 1.0	< 1.0	< 1.0	< 1.0	28	332	216	-	4.33
	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	2.56	2.46	-	3.3	3.0	< 1.0	< 1.0	3.0	32	316	205	182	4.89
	17-Mar-21	51	4.0	9.0	1.0	25	80	< 0.1	-	-	-	-	-	-	-	-	3.18	2.82	-	-	2.0	< 1.0	< 1.0	2.0	47	358	233	-	5.07
	22-Apr-21	36	3.0	5.0	1.0	30	51	< 0.1	-	-	-	-	-	-	-	-	2.15	2.06	-	-	< 1.0	< 1.0	< 1.0	< 1.0	28	278	181	-	4.4

Table GW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

Analyte		Anions and Cations																			Alkalinity						Inorganics		
		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	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		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
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	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Adopted Site Specific Trigger Values (SWMP 2021)[1]		77	5	11	2	70	148	0.2	-	2	-	-	-	0.5	5.9	-	-	-	-	-	-	-	-	-	-	500	-	-	4.2-6.5
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																												
	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**	**2.88**	**2.90**	-	**4.64**	<1.0	<1.0	<1.0	<1.0	**26**	**370**	**240**	**204**	**4.88**
	18-Jun-21	**40**	**3**	**7**	< 1.0	**42**	**58**	<0.1	-	-	-	-	-	-	-	-	**2.46**	**2.55**	-	-	**2**	< 1.0	< 1.0	**2**	**36**	**286**	**186**	**167**	**4.82**
	15-Jul-21	**36**	**2.0**	**6.0**	< 1.0	**20**	**70**	< 0.1	-	-	-	-	-	-	-	-	**2.16**	**2.39**	-	-	< 1.0	< 1.0	< 1.0	< 1.0	**30**	**259**	**168**	**142**	**4.88**
	19-Aug-21	-	-	**5.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Analyte		Anions and Cations																			Alkalinity						Inorganics		
		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	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		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
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	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Adopted Site Specific Trigger Values (SWMP 2021)[1]		77	5	11	2	70	148	0.2	-	2	-	-	-	0.5	5.9	-	-	-	-	-	-	-	-	-	-	500	-	-	4.2-6.5
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																												
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	1.94	2.06	-	3.16	< 1.0	< 1.0	< 1.0	< 1.0	20	213	196	-	4.76
	14-Mar-19	36	< 1.0	6.0	2.0	16	61	< 0.1	-	-	-	-	-	-	-	-	2.11	2.05	1.37	-	< 1.0	< 1.0	< 1.0	< 1.0	25	271	176	212	4.73
	23-Apr-19	38	< 1.0	6.0	2.0	17	62	< 0.1	-	-	-	-	-	-	-	-	2.2	2.1	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	205	133	185	4.51
	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	1.98	2.23	-	3.26	< 1.0	< 1.0	< 1.0	< 1.0	20	235	153	310	4.87
	14-Jun-19	31	< 1.0	4.0	2.0	11	56	0.1	-	-	-	-	-	-	-	-	1.73	1.81	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	213	138	145	4.91
	16-Jul-19	36	< 1.0	5.0	2.0	12	46	< 0.1	-	-	-	-	-	-	-	-	2.03	1.55	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	202	131	164	5.0
	15-Aug-19	32	< 1.0	4.0	2.0	15	49	0.1	-	-	-	-	-	-	-	-	1.77	1.85	-	-	8.0	< 1.0	< 1.0	8.0	16	232	151	168	5.53
	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	1.53	1.86	-	2.79	5.0	< 1.0	< 1.0	5.0	16	222	144	181	5.07
	15-Oct-19	34	< 1.0	5.0	2.0	12	53	< 0.1	-	-	-	-	-	-	-	-	1.94	1.74	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	252	164	-	4.95
	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	1.78	1.89	-	2.89	< 1.0	< 1.0	< 1.0	< 1.0	20	239	155	-	4.97
	17-Dec-19	26	<1	5	1	15	44	<0.1	-	-	-	-	-	-	-	-	1.57	1.59	-	-	2.0	<1	<1	2.0	20	210	136	-	5.14
	16-Jan-20	27	<1	4	1	13	46	0.2	-	-	-	-	-	-	-	-	1.53	1.63	-	-	3.0	<1	<1	3.0	16	202	131	-	5.27
	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	1.36	1.41	-	2.38	<1	<1	<1	<1	16	194	126	-	4.77
	26-Mar-20	25	<1	4	1	18	44	<0.1	-	-	-	-	-	-	-	-	1.44	1.24	-	-	<1	<1	<1	<1	16	199	129		4.92
	27-Apr-20	28	<1	2	2	<1	42	<0.1	-	-	-	-	-	-	-	-	1.43	1.26	-	-	4	<1	<1	4	8	207	134	-	5.16
	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	1.47	1.51	-	3.18	4	<1	<1	4	12	244	159	-	5.17
	19-Jun-20	27	<1	3	2	1	44	<0.1	-	-	-	-	-	-	-	-	1.47	1.34	-	-	4	<1	<1	4	12	192	125	-	5.16
	16-Jul-20	26	<1	3	2	20	44	<0.1	-	-	-	-	-	-	-	-	1.43	1.35	-	-	7	<1	<1	7	12	196	127	-	5.21
	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	1.68	1.84		3.1	3	<1	<1	3	16	233	151	169	5.18
	16-Sep-20	33	< 1.0	5.0	2.0	12	62	0.1	-	-	-	-	-	-	-	-	1.9	2.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	248	161	140	4.81
	16-Oct-20	34	< 1.0	5.0	2.0	9.0	64	< 0.1	-	-	-	-	-	-	-	-	1.94	1.99	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	243	158	-	4.87
	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	1.77	1.71	-	2.79	< 1.0	< 1.0	< 1.0	< 1.0	20	245	159	168	4.57
	16-Dec-20	30	< 1.0	6.0	2.0	9.0	58	0.1	-	-	-	-	-	-	-	-	1.85	1.82	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	265	172	-	4.34
	14-Jan-21	31	< 1.0	5.0	2.0	10	63	0.1	-	-	-	-	-	-	-	-	1.81	1.98	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	267	174	-	4.62
	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	2.02	2.06	-	2.9	< 1.0	< 1.0	< 1.0	< 1.0	25	270	176	161	4.54
	17-Mar-21	36	< 1.0	7.0	2.0	11	68	< 0.1	-	-	-	-	-	-	-	-	2.19	2.15	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	279	181	-	4.9
	22-Apr-21	39	< 1.0	8.0	2.0	11	78	0.2	-	-	-	-	-	-	-	-	2.4	2.43	-	-	< 1.0	< 1.0	< 1.0	< 1.0	33	318	207	-	4.43
	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	2.54	2.53	-	3.12	<1.0	<1.0	<1.0	<1.0	33	341	222	189	4.89
	18-Jun-21	33	< 1.0	6	2	15	59	0.1	-	-	-	-	-	-	-	-	1.98	1.98	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	232	151	185	4.84
	15-Jul-21	28	< 1.0	4.0	1.0	12	46	< 0.1	-	-	-	-	-	-	-	-	1.57	1.55	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	187	122	140	4.92
	19-Aug-21	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table GW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

Analyte		Anions and Cations																			Alkalinity						Inorganics		
		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	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		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
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	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Adopted Site Specific Trigger Values (SWMP 2021)[1]		77	5	11	2	70	148	0.2	-	2	-	-	-	0.5	5.9	-	-	-	-	-	-	-	-	-	-	500	-	-	4.2-6.5
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																												
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	2.76	2.77	-	4.44	< 1.0	< 1.0	< 1.0	< 1.0	25	352	258	-	4.46
	14-Mar-19	45	< 1.0	6.0	< 1.0	6.0	76	< 0.1	-	-	-	-	-	-	-	-	2.45	2.27	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	319	207	253	4.77
	23-Apr-19	53	< 1.0	7.0	< 1.0	8.0	89	< 0.1	-	-	-	-	-	-	-	-	2.88	2.68	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	264	172	223	4.76
	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	2.37	2.43	-	4.86	1.0	< 1.0	< 1.0	1.0	16	302	196	354	4.9
	14-Jun-19	47	< 1.0	5.0	< 1.0	4.0	89	< 0.1	-	-	-	-	-	-	-	-	2.46	2.59	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	315	205	194	4.82
	16-Jul-19	57	< 1.0	5.0	< 1.0	70	121	0.1	-	-	-	-	-	-	-	-	2.89	4.87	26	-	< 1.0	< 1.0	< 1.0	< 1.0	20	353	229	226	4.78
	15-Aug-19	42	< 1.0	3.0	< 1.0	4.0	63	< 0.1	-	-	-	-	-	-	-	-	2.07	1.86	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	260	169	140	5.0
	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	2.25	2.06	-	5.43	< 1.0	< 1.0	< 1.0	< 1.0	12	293	190	206	4.85
	15-Oct-19	45	< 1.0	4.0	< 1.0	4.0	70	< 0.1	-	-	-	-	-	-	-	-	2.29	2.06	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	303	197	-	5.02
	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	2.46	2.42	-	5.06	< 1.0	< 1.0	< 1.0	< 1.0	16	316	205	-	5.12
	17-Dec-19	50	<1	4	<1	10	75	<0.1	-	-	-	-	-	-	-	-	2.5	2.36	-	-	2	<1	<1	2	16	328	213	-	5.02
	16-Jan-20	49	<1	4	<1	13	78	<0.1	-	-	-	-	-	-	-	-	2.46	6.61	-	-	7	<1	<1	7	16	318	207	-	5.55
	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	1.72	1.81	-	4.01	< 1.0	< 1.0	< 1.0	< 1.0	12	250	162	-	4.57
	26-Mar-20	30	<1	3	<1	16	50	<0.1	-	-	-	-	-	-	-	-	1.55	1.74	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	221	144		4.76
	27-Apr-20	28	<1	4	<1	13	50	<0.1	-	-	-	-	-	-	-	-	1.55	1.68	-	-	<1	<1	<1	<1	16	242	157	-	4.84
	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	1.72	2	-	3.31	2	<1	<1	2	16	250	162	-	4.93
	19-Jun-20	48	<1	5	<1	9	74	<0.1	-	-	-	-	-	-	-	-	2.5	2.29	-	-	1	<1	<1	1	20	318	207	-	4.99
	16-Jul-20	50	<1	5	<1	10	76	<0.1	-	-	-	-	-	-	-	-	2.59	2.49	-	-	7	<1	<1	7	20	342	222	-	5.03
	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	2.89	3.1	3.58	5.68	2	<1	<1	2	16	367	238	236	5.16
	16-Sep-20	58	< 1.0	4.0	< 1.0	9.0	109	< 0.1	-	-	-	-	-	-	-	-	3.1	3.26	2.57	-	< 1.0	< 1.0	< 1.0	< 1.0	16	391	254	216	4.79
	16-Oct-20	43	< 1.0	4.0	< 1.0	12	70	< 0.1	-	-	-	-	-	-	-	-	2.2	2.22	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	268	174	-	5.01
	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	2.58	2.35	-	4.1	< 1.0	< 1.0	< 1.0	< 1.0	25	341	222	212	4.75
	16-Dec-20	35	< 1.0	4.0	< 1.0	14	56	< 0.1	-	-	-	-	-	-	-	-	1.85	1.87	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	256	166	-	4.82
	14-Jan-21	44	< 1.0	5.0	< 1.0	13	77	< 0.1	-	-	-	-	-	-	-	-	2.32	2.44	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	317	206	-	4.76
	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	2.67	2.58	-	4.27	< 1.0	< 1.0	< 1.0	< 1.0	25	335	218	184	4.68
	17-Mar-21	50	< 1.0	6.0	< 1.0	19	75	< 0.1	-	-	-	-	-	-	-	-	2.67	2.51	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	329	214	-	4.57
	22-Apr-21	45	< 1.0	5.0	< 1.0	44	52	< 0.1	-	-	-	-	-	-	-	-	2.37	2.38	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	331	215	-	4.2
	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	2.02	1.96	-	4.03	<1.0	<1.0	<1.0	<1.0	16	275	179	153	4.71
	18-Jun-21	62	2	6	< 1.0	40	89	0.2	-	-	-	-	-	-	-	-	3.29	3.42	1.98	-	4	< 1.0	< 1.0	4	30	390	254	276	4.83
	15-Jul-21	48	< 1.0	5.0	< 1.0	35	67	< 1.0	-	-	-	-	-	-	-	-	2.5	2.62	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	292	190	168	4.85
	19-Aug-21	-	-	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	0.57	0.66		1.69	2	<1.0	<1.0	2	7	80	52	63	5.17
BH9A	16-Sep-20	35	5.0	5.0	1.0	41	38	< 0.1	-	-	-	-	-	-	-	-	2.21	2.06	-	-	7.0	< 1.0	< 1.0	7.0	33	276	179	310	5.78
	16-Oct-20	32	3.0	6.0	1.0	33	48	< 0.1	-	-	-	-	-	-	-	-	2.06	2.06	-	-	1.0	< 1.0	< 1.0	1.0	32	237	154	-	5.15
	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	1.46	1.51	-	2.16	2.0	< 1.0	< 1.0	2.0	21	195	127	142	4.93
	16-Dec-20	23	1.0	3.0	1.0	9.0	37	< 0.1	-	-	-	-	-	-	-	-	1.32	1.23	-	-	< 1.0	< 1.0	< 1.0	< 1.0	15	175	114	-	4.83
	14-Jan-21	24	1.0	3.0	1.0	15	43	< 0.1	-	-	-	-	-	-	-	-	1.37	1.52	-	-	< 1.0	< 1.0	< 1.0	< 1.0	15	196	127	-	4.96
	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	1.41	1.42	-	2.82	2.0	< 1.0	< 1.0	2.0	15	181	118	135	4.72
	17-Mar-21	25	1.0	3.0	< 1.0	12	35	< 0.1	-	-	-	-	-	-	-	-	1.38	1.32	-	-	4.0	< 1.0	< 1.0	4.0	15	164	107	-	5.23
	22-Apr-21	22	1.0	4.0	< 1.0	21	35	< 0.1	-	-	-	-	-	-	-	-	1.34	1.42	-	-	< 1.0	< 1.0	< 1.0	< 1.0	19	192	125	-	4.53
	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	1.52	1.36	-	3.05	<1.0	<1.0	<1.0	<1.0	15	196	127	108	4.94
	18-Jun-21	26	< 1.0	3	1	15	39	<0.1	-	-	-	-	-	-	-	-	1.40	1.57	-	-	8	< 1.0	< 1.0	8	12	165	107	103	4.81
	15-Jul-21	26	2.0	3.0	1.0	15	41	< 0.1	-	-	-	-	-	-	-	-	1.5	1.47	-	-	< 1.0	< 1.0	< 1.0	< 1.0	17	174	113	96	4.77
	19-Aug-21	25	1.0	3.0	1.0	14	37	< 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.8	0.8	1.41	1.42	-	2.82	4.0	< 1.0	< 1.0	4.0	15	180	117	-	5.03
BH10	22-Apr-21	33	2.0	5.0	3.0	26	40	< 0.1	-	-	-	-	-	-	-	-	2.02	1.75	-	-	4.0	< 1.0	< 1.0	4.0	26	225	146	-	5.3
	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	1.69	1.70	-	2.51	<1.0	<1.0	<1.0	<1.0	20	259	168	147	4.24
	18-Jun-21	26	< 1.0	4	9	23	41	<0.1	-	-	-	-	-	-	-	-	1.69	1.64	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	199	129	111	4.66
	15-Jul-21	29	< 1.0	4.0	4.0	20	54	< 0.1	-	-	-	-	-	-	-	-	1.69	1.94	-	-	< 1.0	< 1.0	< 1.0	< 1.0	16	216	140	151	4.71
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	2.91	2.76	-	3.21	< 1.0	< 1.0	< 1.0	< 1.0	41	346	278	-	4.67
	15-Mar-19	26	< 1.0	2.0	< 1.0	2.0	52	< 0.1	-	-	-	-	-	-	-	-	1.3	1.51	-	-	< 1.0	< 1.0	< 1.0	< 1.0	8.0	186	121	144	4.82
	23-Apr-19	32	< 1.0	5.0	< 1.0	2.0	57	< 0.1	-	-	-	-	-	-	-	-	1.8	1.65	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	150	98	135	4.99
	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	1.59	1.59	-	3.0	< 1.0	< 1.0	< 1.0	< 1.0	16	188	122	216	4.91
	14-Jun-19	26	< 1.0	3.0	< 1.0	< 1.0	53	< 0.1	-	-	-	-	-	-	-	-	1.38	1.5	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	175	114	107	4.84
	16-Jul-19	49	< 1.0	8.0	< 1.0	8.0	73	0.2	-	-	-	-	-	-	-	-	2.79	2.22	-	-	< 1.0	< 1.0	< 1.0	< 1.0	33	318	207	192	4.68
	15-Aug-19	28	< 1.0	3.0	< 1.0	4.0	47	< 0.1	-	-	-	-	-	-	-	-	1.46	1.41	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	197	128	135	4.88
	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	1.42	1.4	-	3.18	< 1.0	< 1.0	< 1.0	< 1.0	12	195	127	140	4.66
	15-Oct-19	28	< 1.0	3.0	< 1.0	3.0	44	< 0.1	-	-	-	-	-	-	-	-	1.46	1.3	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	194	126	-	4.92
	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	1.46	1.5	-	3.3	< 1.0	< 1.0	< 1.0	< 1.0	12	193	125	-	5.12
	17-Dec-19	26	<1	4	<1	<1	48	<0.1	-	-	-	-	-	-	-	-	1.46	1.39	-	-	2	<1	<1	2	16	196	127	-	5.03
	16-Jan-20	25	<1	3	<1	<1	46	<0.1	-	-	-	-	-	-	-	-	1.33	1.34	-	-	2	<1	<1	2	12	168	109	-	5.09
	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	1.12	1.16	-	2.36	<1	<1	<1	<1	12	165	107	-	4.35
	26-Mar-20	20	1	2	<1	<1	40	<0.1	-	-	-	-	-	-	-	-	1.08	1.13	-	-	<1	<1	<1	<1	11	156	101	-	5.14
	27-Apr-20	22	<1	2	<1	1	36	<0.1	-	-	-	-	-	-	-	-	1.12	1.24	-	-	10	<1	<1	10	16	151	98	-	6.14
	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	1.08	1.2	-	-	10	<1	<1	10	16	151	98	-	6.14
	19-Jun-20	22	<1	2	<1	1	42	<0.1	-	-	-	-	-	-	-	-	1.12	1.2	-	-	<1	<1	<1	<1	8	168	109	-	4.9
	16-Jul-20	24	<1	3	<1	2	41	<0.1	-	-	-	-	-	-	-	-	1.29	1.32	-	-	6	<1	<1	6	12	184	120	-	4.91
	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	1.29	1.38		2.27	2	<1	<1	2	16	172	112	119	4.89
	16-Sep-20	29	< 1.0	5.0	< 1.0	6.0	48	< 0.1	-	-	-	-	-	-	-	-	1.67	1.48	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	223	145	111	4.61
	16-Oct-20	29	< 1.0	6.0	< 1.0	4.0	61	< 0.1	-	-	-	-	-	-	-	-	1.76	1.8	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	218	142	-	4.8
	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	1.58	1.51	-	2.51	< 1.0	< 1.0	< 1.0	< 1.0	20	217	141	146	4.81
	16-Dec-20	31	< 1.0	6.0	< 1.0	7.0	60	< 0.1	-	-	-	-	-	-	-	-	1.84	1.84	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	249	162	-	4.74
	14-Jan-21	32	< 1.0	6.0	< 1.0	12	63	< 0.1	-	-	-	-	-	-	-	-	1.88	2.03	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	264	172	-	4.41
	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	1.83	1.8	-	2.98	< 1.0	< 1.0	< 1.0	< 1.0	20	235	153	149	4.73
	17-Mar-21	29	< 1.0	6.0	< 1.0	17	48	< 0.1	-	-	-	-	-	-	-	-	1.76	1.71	-	-	< 1.0	< 1.0	< 1.0	< 1.0	25	223	145	-	4.66
	22-Apr-21	20	< 1.0	3.0	< 1.0	14	29	< 0.1	-	-	-	-	-	-	-	-	1.12	1.11	-	-	< 1.0	< 1.0	< 1.0	< 1.0	12	151	98	-	4.23
	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	1.37	1.29	-	2.48	<1.0	<1.0	<1.0	<1.0	16	190	124	111	4.51
	18-Jun-21	31	< 1.0	5	< 1.0	20	46	<0.1	-	-	-	-	-	-	-	-	1.76	1.71	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	202	131	158	4.48
	15-Jul-21	33	< 1.0	5.0	< 1.0	18	58	< 0.1	-	-	-	-	-	-	-	-	1.85	2.01	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	222	144	122	4.57
	19-Aug-21	58	< 1.0	7.0	< 1.0	9.0	110	0.1	<0.01	0.08	<0.01	<0.01	<0.01	<0.01	1.4	1.4	3.1	3.29	3.0	4.6	< 1.0	< 1.0	< 1.0	< 1.0	29	403	262	-	4.38
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	1.4	1.35	-	1.69	2	<1	<1	2	26	170	110	139	5.26
	16-Sep-20	24	< 1.0	7.0	1.0	22	38	< 0.1	-	-	-	-	-	-	-	-	1.64	1.57	-	-	2.0	< 1.0	< 1.0	2.0	29	206	134	118	5.37
	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	1.31	1.52	-	2.27	7.0	< 1.0	< 1.0	7.0	16	190	124	134	5.92
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	3.15	3.06	1.43	5.21	< 1.0	< 1.0	< 1.0	< 1.0	25	329	234	-	4.89
	14-Mar-19	64	< 1.0	6.0	< 1.0	2.0	126	< 0.1	-	-	-	-	-	-	-	-	3.28	3.64	5.18	-	2.0	< 1.0	< 1.0	2.0	25	410	266	232	5.02
	23-Apr-19	64	< 1.0	7.0	1.0	9.0	97	< 0.1	-	-	-	-	-	-	-	-	3.38	2.92	7.32	-	< 1.0	< 1.0	< 1.0	< 1.0	29	294	191	208	4.92
	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	2.76	2.75	-	4.44	< 1.0	< 1.0	< 1.0	< 1.0	25	327	212	320	4.87
	14-Jun-19	50	< 1.0	6.0	< 1.0	13	87	< 0.1	-	-	-	-	-	-	-	-	2.67	2.86	-	-	7.0	< 1.0	< 1.0	7.0	25	334	217	220	5.39
	16-Jul-19	52	< 1.0	7.0	1.0	16	73	< 0.1	-	-	-	-	-	-	-	-	2.86	2.39	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	353	229	188	4.85
	15-Aug-19	54	< 1.0	7.0	< 1.0	11	88	< 0.1	-	-	-	-	-	-	-	-	2.92	2.71	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	359	233	195	4.83
	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	2.91	2.69	-	4.7	< 1.0	< 1.0	< 1.0	< 1.0	25	373	242	224	4.66
	15-Oct-19	58	< 1.0	6.0	< 1.0	8.0	108	< 0.1	-	-	-	-	-	-	-	-	3.02	3.21	3.15	-	< 1.0	< 1.0	< 1.0	< 1.0	25	404	263	-	4.86
	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	3.26	3.5	3.48	5.38	< 1.0	< 1.0	< 1.0	< 1.0	25	419	272	-	4.76
	17-Dec-19	65	<1	8	<1	6	127	<0.1	-	-	-	-	-	-	-	-	3.48	3.75	3.62	-	2	<1	<1	2	33	439	285	-	5.01
	16-Jan-20	67	<1	8	<1	7	120	<0.1	-	-	-	-	-	-	-	-	3.57	3.57	0.03	-	2	<1	<1	2	33	423	275	-	5.02
	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	3.36	3.78	5.93	5.08	< 1.0	< 1.0	< 1.0	< 1.0	29	475	309	-	4.45
	26-Mar-20	66	<1	6	<1	5	133	<0.1	-	-	-	-	-	-	-	-	3.36	3.86	6.8	-	< 1.0	< 1.0	< 1.0	< 1.0	30	420	273	-	4.98
	27-Apr-20	64	<1	6	<1	7	119	<0.1	-	-	-	-	-	-	-	-	3.28	3.56	4.16	-	3	<1	<1	3	25	453	294	-	5.13
	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	3.41	3.89	6.58	5.64	2	<1	<1	2	25	438	285	-	4.92
	19-Jun-20	70	<1	8	1	22	125	<0.1	-	-	-	-	-	-	-	-	3.73	3.98	3.31	-	<1.0	<1	<1	<1.0	33	456	296	-	4.76
	16-Jul-20	65	<1	9	1	27	110	<0.1	-	-	-	-	-	-	-	-	3.59	3.8	2.86	-	7	<1	<1	7	37	451	293	-	5.32
	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	3.46	3.56	1.44	4.36	<1	<1	<1	<1	37	455	296	276	4.71
	16-Sep-20	53	< 1.0	8.0	1.0	36	86	0.1	-	-	-	-	-	-	-	-	2.99	3.24	3.95	-	3.0	< 1.0	< 1.0	3.0	33	390	254	244	5.2
	16-Oct-20	76	< 1.0	9.0	1.0	17	148	< 0.1	-	-	-	-	-	-	-	-	4.14	4.57	4.99	-	2.0	< 1.0	< 1.0	2.0	37	458	298	-	4.73
	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	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	68	< 1.0	10	1.0	24	126	< 0.1	-	-	-	-	-	-	-	-	3.81	4.05	3.15	-	< 1.0	< 1.0	< 1.0	< 1.0	41	484	315	-	4.68
	14-Jan-21	58	< 1.0	9.0	2.0	37	102	< 0.1	-	-	-	-	-	-	-	-	3.31	3.65	4.78	-	< 1.0	< 1.0	< 1.0	< 1.0	37	430	280	-	4.44
	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	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	49	< 1.0	7.0	1.0	38	70	< 0.1	-	-	-	-	-	-	-	-	2.73	2.76	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	343	223	-	4.73
	22-Apr-21	33	< 1.0	5.0	1.0	23	51	< 0.1	-	-	-	-	-	-	-	-	1.87	1.92	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	257	167	-	4.44
	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	2.52	2.54	-	3.49	<1.0	<1.0	<1.0	<1.0	29	334	217	190	4.41
	18-Jun-21	33	< 1.0	5	< 1.0	31	46	<0.1	-	-	-	-	-	-	-	-	1.85	1.94	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	231	150	167	4.66
	15-Jul-21	31	< 1.0	5.0	< 1.0	30	51	< 0.1	-	-	-	-	-	-	-	-	1.76	2.06	-	-	< 1.0	< 1.0	< 1.0	< 1.0	20	222	144	154	4.68

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] Soil and Water Management Plan, July 2021

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
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	-	-	-	-	-	-	-	-	-	-	-	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
	15-Jul-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
	19-Aug-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

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
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
	15-Jul-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
	19-Aug-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-Sep-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 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
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
	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	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
SW3	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
	15-Jul-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
	19-Aug-21	< 1.0	**2.0**	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	**2.0**	< 20	< 50	< 100	< 50	< 50	< 20	< 20	< 100	< 100	< 100	< 100	< 100
	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
SW4	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

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
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	100	-	100	100	-
NHMRC ADWG 2018		1	800	300	-	350	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																				
	15-Jul-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
	19-Aug-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- Soil and Water Management Plan, July 2021
** 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
Adopted Site Specific Trigger Values (SWMP 2021)[3]		0.006	0.08	0.002	0.1	0.0002	0.004	0.006	0.033	7.25 (32 for SW3 & SW4)	0.003	0.841	0.0001	0.02	0.01	0.01	0.535
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																
	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	**0.283**
	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																
	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	**0.07**	< 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**
	15-Jul-21	< 0.001	**0.008**	< 0.001	< 0.05	< 0.0001	**0.001**	< 0.001	**0.039**	**1.16**	< 0.001	**0.045**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.041**
	19-Aug-21	< 0.001	**0.011**	-	< 0.05	-	**0.001**	< 0.001	**0.002**	**0.86**	-	-	-	**0.002**	-	-	**0.056**
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	< 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**
	15-Jul-21	< 0.001	**0.005**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.002**	< 0.001	**0.39**	< 0.001	**0.041**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.081**
	19-Aug-21	< 0.001	**0.004**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.001**	< 0.001	**0.55**	< 0.001	**0.045**	< 0.0001	**0.002**	< 0.01	< 0.01	**0.022**
	22-Sep-21	< 0.001	**0.007**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.003**	< 0.001	**1.11**	< 0.001	**0.087**	< 0.0001	**0.005**	< 0.01	< 0.01	**0.134**
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**
	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
	15-Jul-21	**0.001**	**0.004**	< 0.001	< 0.05	< 0.0001	**0.002**	< 0.001	< 0.001	**12.6**	< 0.001	**0.028**	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	19-Aug-21	**0.001**	**0.005**	-	< 0.05	-	< 0.001	< 0.001	< 0.001	**7.14**	-	-	-	< 0.001	-	-	< 0.005
SW4	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**
	15-Jul-21	< 0.001	**0.019**	< 0.001	< 0.05	< 0.0001	< 0.001	**0.001**	< 0.001	**1.15**	< 0.001	**0.044**	< 0.0001	**0.001**	< 0.01	< 0.01	**0.007**
	19-Aug-21	< 0.001	**0.022**	-	< 0.05	-	< 0.001	**0.001**	< 0.001	**2.13**	-	-	-	**0.001**	-	-	**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%
RPD - Relative Percentage Difference

** 95% Level of protection in freshwater
[1] value for CR VI
[2] as inorganic
[3] Soil and Water Management Plan, July 2021

Analyte		Perfluoroalkyl Sulfonic Acids						Perfluoroalkyl Carboxylic Acids											Perfluoroalkyl Sulfonamides							(n:2) Fluorotelom	
		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)
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	0.05	0.05	0.05	0.02	0.02	0.05	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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	-	-	-	-	-	-	-	-	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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	15-Jul-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	19-Aug-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	22-Sep-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
SW2	22-Feb-19	DRY																									
	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	< 0.02	< 0.02	< 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
	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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	15-Jul-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	19-Aug-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	22-Sep-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
SW3	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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	15-Jul-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	19-Aug-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
SW4	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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 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	< 0.02	< 0.02	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	15-Jul-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	19-Aug-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05
	22-Sep-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 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

		ver Sulfonic Acids		Sum of PFAS		
Analyte		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	0.01	0.01	0.01
Units		µg/L	µg/L	µg/L	µg/L	µg/L
Adopted Site Specific Trigger Values (SWMP 2021)		-	-	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	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Jan-20	< 0.05	< 0.05	**0.02**	**0.02**	**0.02**
	15-May-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Jun-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	17-Mar-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Jul-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 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	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Jul-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW3	22-Feb-19	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jan-20					
	27-Feb-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-May-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Jun-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Aug-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Apr-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Jun-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Jul-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW4	16-May-19	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	**0.03 ***	**0.01**	**0.01**
	25-Sep-19	< 0.05	< 0.05	**0.05**	**0.05**	**0.05**
	18-Nov-19	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jan-20					
	27-Feb-20	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	15-May-20	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	19-Jun-20	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	16-Jul-20	< 0.05	< 0.05	<0.01	<0.01	<0.01
	14-Aug-20	< 0.05	< 0.05	<0.01	<0.01	<0.01
	16-Sep-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	**0.02**	**0.02**	**0.02**
	16-Dec-20	< 0.05	< 0.05	**0.55 [2]**	**0.8 [3]**	**0.82 [3]**
	14-Jan-21	< 0.05	< 0.05	**0.07**	**0.07**	**0.07**
	16-Feb-21	< 0.05	< 0.05	**0.03**	**0.03**	**0.03**
	17-Mar-21	< 0.05	< 0.05	**0.04**	**0.04**	**0.04**
	22-Apr-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	20-May-21	< 0.05	< 0.05	**0.01**	**0.01**	**0.01**
	18-Jun-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Jul-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

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

Table SW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

Analyte		Anions and Cations																			Alkalinity						Inorganics		
		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	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		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
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	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Adopted Site Specific Trigger Values (SWMP 2021)[1]		142	40	52	8	324	234	0.8	-	0.17	-	-	-	0.2	5.9	-	-	-	-	-	-	-	-	-	-	500	-	-	4.2-6.5
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																												
SW1	22-Feb-19	Dry																											
	14-Mar-19	Dry																											
	23-Apr-19	94	34	52	6.0	310	95	0.5	-	-	-	-	-	-	-	-	10	9.13	5.6	-	< 1.0	< 1.0	< 1.0	< 1.0	299	893	580	707	4.01
	16-May-19	86	24	42	6.0	324	112	0.3	< 0.01	0.13	< 0.01	< 0.01	< 0.01	< 0.01	1.8	1.8	8.94	9.9	5.13	2.45	< 1.0	< 1.0	< 1.0	< 1.0	233	947	616	715	4.6
	14-Jun-19	77	20	34	5.0	182	112	0.4	-	-	-	-	-	-	-	-	7.27	6.95	2.28	-	< 1.0	< 1.0	< 1.0	< 1.0	190	847	550	512	4.5
	16-Jul-19	90	20	35	4.0	240	130	0.4	-	-	-	-	-	-	-	-	7.9	8.66	4.64	-	< 1.0	< 1.0	< 1.0	< 1.0	194	876	569	568	4.42
	15-Aug-19	97	18	32	4.0	212	134	0.4	-	-	-	-	-	-	-	-	7.85	8.19	2.12	-	< 1.0	< 1.0	< 1.0	< 1.0	177	813	528	548	4.53
	16-Sep-19	117	21	39	4.0	244	193	0.7	< 0.01	0.05	< 0.01	0.02	0.02	< 0.01	1.2	1.2	9.45	11	5.38	3.49	< 1.0	< 1.0	< 1.0	< 1.0	213	1,080	702	689	4.32
	15-Oct-19	124	16	31	3.0	127	191	0.6	-	-	-	-	-	-	-	-	8.82	8.03	4.68	-	< 1.0	< 1.0	< 1.0	< 1.0	168	1,050	682	-	5.32
	18-Nov-19	142	14	30	4.0	165	234	0.5	< 0.01	0.02	< 0.01	< 0.01	< 0.01	0.03	1.1	1.1	9.45	10	3.03	4.91	< 1.0	< 1.0	< 1.0	< 1.0	158	1,090	708	-	5.06
	17-Dec-19	Dry																											
	16-Jan-20	Dry																											
	27-Feb-20	56	34	10	8.0	73	64	0.4	< 0.01	0.17	<0.05	<0.05	<0.05	0.16	2.4	2.4	5.16	4.58	5.91	2.17	63	< 1.0	< 1.0	63	126	550	358	-	6.83
	26-Mar-20	12	27	2	4.0	6.0	11	<0.1	-	-	-	-	-	-	-	-	2.14	1.45	-	-	51	< 1.0	< 1.0	51	76	234	152	-	7.09
	27-Apr-20	12	13	1	5.0	18	12	0.3	-	-	-	-	-	-	-	-	1.38	1.51	-	-	40	< 1.0	< 1.0	40	36	163	106	-	6.94
	15-May-20	9.0	18	1.0	3.0	29	8.0	<0.1	0.05	0.17	0.02	0.33	0.35	0.07	1.4	1.0	1.45	1.63		0.56	40			40	49	178	116		7.06
	19-Jun-20	7.0	21	1.0	2.0	8.0	7.0	<0.1	-	-	-	-	-	-	-	-	1.48	1.52		-	58	< 1.0	< 1.0	58	56	159	103	-	6.68
	16-Jul-20	7.0	16	1.0	2.0	6.0	7.0	<0.1	-	-	-	-	-	-	-	-	1.24	1.34		-	51	< 1.0	< 1.0	51	44	133	86	-	6.89
	14-Aug-20	6.0	8.0	2.0	2.0	<10	8.0	<0.1	<0.01	0.04	0.01	0.01	0.02	<0.1	0.7	0.7	0.88	0.64		0.49	21	<1	<1	21	28	82	53	98	6.21
	16-Sep-20	9.0	16	3.0	3.0	< 1.0	< 1.0	0.1	-	-	-	-	-	-	-	-	1.51	1.1	-	-	55	< 1.0	< 1.0	55	52	137	89	152	6.5
	16-Oct-20	12	40	4.0	4.0	< 1.0	16	0.2	-	-	-	-	-	-	-	-	2.95	2.69	-	-	112	< 1.0	< 1.0	112	116	268	174	-	7.29
	16-Nov-20	8.0	13	2.0	3.0	< 1.0	10	< 0.1	< 0.01	0.03	< 0.01	0.04	0.04	< 0.01	0.6	0.6	1.24	1.12	-	0.54	42	< 1.0	< 1.0	42	41	127	82	127	6.5
	16-Dec-20	10	19	2.0	3.0	5.0	12	0.1	-	-	-	-	-	-	-	-	1.62	1.68	-	-	62	< 1.0	< 1.0	62	56	171	111	-	7.01
	14-Jan-21	10	18	2.0	3.0	< 1.0	13	0.1	-	-	-	-	-	-	-	-	1.57	1.46	-	-	55	< 1.0	< 1.0	55	53	154	100	-	6.71
	16-Feb-21	10	15	2.0	3.0	< 1.0	12	0.1	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	0.5	0.5	1.42	1.36	-	0.64	51	< 1.0	< 1.0	51	46	141	92	115	6.93
	17-Mar-21	10	15	2.0	2.0	< 1.0	13	0.1	-	-	-	-	-	-	-	-	1.4	1.26	-	-	45	< 1.0	< 1.0	45	46	139	90	-	6.63
	22-Apr-21	37	7.0	4.0	2.0	< 10	65	0.1	-	-	-	-	-	-	-	-	2.34	1.83	-	-	< 1.0	< 1.0	< 1.0	< 1.0	34	280	182	-	4.72
	20-May-21	32	6	3	2	<10	56	<0.1	<0.05	<0.05	<0.10	<0.10	<0.10	<0.01	1.3	1.3	1.99	1.70	-	2.66	6	<1.0	<1.0	6	27	254	165	232	5.16
	18-Jun-21	31	7	3	2	< 1.0	56	<0.1	-	-	-	-	-	-	-	-	2.00	2.22	-	-	32	< 1.0	< 1.0	32	30	213	138	236	5.76
	15-Jul-21	26	5.0	3.0	2.0	< 10	52	0.2	-	-	-	-	-	-	-	-	1.68	1.49	-	-	1.0	< 1.0	< 1.0	1.0	25	186	121	199	5.36
	19-Aug-21	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW2	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																											
	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	12	2.0	2.0	< 1.0	6.0	16	0.2	-	-	-	-	-	-	-	-	0.79	0.58	-	-	< 1.0	< 1.0	< 1.0	< 1.0	13	83	54	-	5.08
	22-Apr-21	9.0	2.0	1.0	< 1.0	< 10	17	< 0.1	-	-	-	-	-	-	-	-	0.57	0.58	-	-	5.0	< 1.0	< 1.0	5.0	9.0	86	56	-	4.95
	20-May-21	11	<1.0	<1.0	<1.0	3	15	<0.1	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.7	0.7	0.48	0.50	-	2.63	1	<1.0	<1.0	1	<1.0	82	53	71	4.96
	18-Jun-21	11	< 1.0	2	< 1.0	8	20	<0.1	-	-	-	-	-	-	-	-	0.64	0.73	-	-	< 1.0	< 1.0	< 1.0	< 1.0	8	89	58	54	4.51
	15-Jul-21	10	1.0	2.0	< 1.0	7.0	19	< 0.1	-	-	-	-	-	-	-	-	0.65	0.68	-	-	< 1.0	< 1.0	< 1.0	< 1.0	11	84	55	68	4.66
	19-Aug-21	12	< 1.0	1.0	< 1.0	6.0	22	< 0.1	< 0.01	0.07	< 0.01	< 0.01	< 0.01	0.17	1.2	1.2	0.6	0.74	-	2.25	< 1.0	< 1.0	< 1.0	< 1.0	4.0	103	67	-	4.21
SW3	22-Feb-19	40	4.0	4.0	1.0	16	82	< 0.1	< 0.01	0.06	< 0.01	< 0.01	< 0.01	0.16	1.0	1.0	2.55	2.87	-	3.38	11	< 1.0	< 1.0	11	26	262	228	-	6.21
	14-Mar-19	45	6.0	6.0	2.0	44	64	< 0.1	-	-	-	-	-	-	-	-	2.8	2.8	-	-	4.0	< 1.0	< 1.0	4.0	40	344	224	279	5.42
	23-Apr-19	37	8.0	6.0	1.0	42	53	< 0.1	-	-	-	-	-	-	-	-	2.53	2.37	-	-	< 1.0	< 1.0	< 1.0	< 1.0	45	220	143	190	5.2
	16-May-19	35	7.0	5.0	< 1.0	34	54	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.1	0.1	2.28	2.25	-	2.47	1.0	< 1.0	< 1.0	1.0	38	271	176	300	5.24
	14-Jun-19	32	7.0	6.0	< 1.0	41	55	< 0.1	-	-	-	-	-	-	-	-	2.24	2.4	-	-	< 1.0	< 1.0	< 1.0	< 1.0	42	300	195	170	4.58
	16-Jul-19	46	8.0	12	< 1.0	104	57	0.2	-	-	-	-	-	-	-	-	3.39	3.77	5.38	-	< 1.0	< 1.0	< 1.0	< 1.0	69	451	293	246	4.47
	15-Aug-19	38	6.0	7.0	< 1.0	54	56	0.1	-	-	-	-	-	-	-	-	2.53	2.7	-	-	< 1.0	< 1.0	< 1.0	< 1.0	44	338	220	192	4.47
	16-Sep-19	42	7.0	8.0	< 1.0	48	57	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	0.1	0.1	2.83	2.61	-	2.57	< 1.0	< 1.0	< 1.0	< 1.0	50	374	243	201	4.3
	15-Oct-19	40	5.0	7.0	< 1.0	42	57	0.2	-	-	-	-	-	-	-	-	2.56	2.48	-	-	< 1.0	< 1.0	< 1.0	< 1.0	41	383	249	-	4.75
	18-Nov-19	36	5.0	5.0	< 1.0	29	56	< 0.1	< 0.01	0.04	< 0.01	0.01	0.01	0.03	0.6	0.6	2.23	2.18	-	2.72	< 1.0	< 1.0	< 1.0	< 1.0	33	278	181	-	5.39
	17-Dec-19	40	4	7	1	25	57	<0.1	-	-	-	-	-	-	-	-	2.54	2.25	-	-	6	<1	<1	6	39	301	196		5.75
	16-Jan-20	Dry																											
	27-Feb-20	38	8	8	< 1.0	73	56	<0.1	< 0.01	0.01	< 0.01	0.1	0.1	0.02	0.3	0.2	2.71	3.1	-	2.27	< 1.0	< 1.0	< 1.0	< 1.0	53	437	284	-	4.6
	26-Mar-20	34	4	6	< 1.0	50	49	<0.1	-	-	-	-	-	-	-	-	2.39	2.42	-	-	< 1.0	< 1.0	< 1.0	< 1.0	35	326	212	-	4.87
	27-Apr-20	35	4	5	1	38	47	0.2	-	-	-	-	-	-	-	-	2.16	2.12	-	-	< 1.0	< 1.0	< 1.0	< 1.0	30	321	209	-	4.87
	15-May-20	33	6	5	1	35	54	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.2	0.2	2.17	2.31		2.41	3	< 1.0	< 1.0	3	36	294	191	-	5.12
	19-Jun-20	64	9	18	< 1.0	132	76	0.3	-	-	-	-	-	-	-	-	4.71	4.89	1.85	-	< 1.0	< 1.0	< 1.0	< 1.0	96	573	372	-	4.56
	16-Jul-20	52	5	14	< 1.0	110	63	0.2	-	-	-	-	-	-	-	-	3.75	4.07	4.15	-	< 1.0	< 1.0	< 1.0	< 1.0	70	509	331	-	4.56
	14-Aug-20	50	<1	11	<1	67	76	<0.1	<0.01	<0.01	<0.01	0.07	0.07	0.01	0.3	0.2	3.08	3.54	6.93	3.19	<1	<1	<1	<1	45	469	305	255	4.46
	16-Sep-20	39	3.0	8.0	< 1.0	65	55	0.1	-	-	-	-	-	-	-	-	3.12	2.9	3.5	-	< 1.0	< 1.0	< 1.0	< 1.0	40	402	261	224	4.41
	16-Oct-20	40	4.0	6.0	< 1.0	40	63	< 0.1	-	-	-	-	-	-	-	-	2.73	2.61	-	-	< 1.0	< 1.0	< 1.0	< 1.0	35	333	216	-	4.15
	16-Nov-20	34	2.0	5.0	< 1.0	67	53	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.3	0.3	2.6	2.89	-	2.92	< 1.0	< 1.0	< 1.0	< 1.0	26	460	299	201	3.95
	16-Dec-20	36	1.0	5.0	1.0	27	61	< 0.1	-	-	-	-	-	-	-	-	2.05	2.3	-	-	1.0	< 1.0	< 1.0	1.0	23	303	197	-	4.8
	14-Jan-21	27	< 1.0	2.0	< 1.0	26	54	< 0.1	-	-	-	-	-	-	-	-	1.82	2.06	-	-	< 1.0	< 1.0	< 1.0	< 1.0	8.0	301	196	-	4.06
	16-Feb-21	30	2.0	3.0	< 1.0	21	56	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.5	0.5	1.65	2.02	-	3.13	< 1.0	< 1.0	< 1.0	< 1.0	17	273	177	172	4.15
	17-Mar-21	29	< 1.0	2.0	< 1.0	15	51	< 0.1	-	-	-	-	-	-	-	-	1.43	1.75	-	-	< 1.0	< 1.0	< 1.0	< 1.0	8.0	237	154	-	4.65

Table SW4
Groundwater Analytical Data - Inorganics
Williamtown Sand Syndicate

Analyte		Anions and Cations																			Alkalinity						Inorganics		
		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	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		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.01	0.01		0.01	1	1	1	1	1	1	1	10	0.01
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	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units
Adopted Site Specific Trigger Values (SWMP 2021)[1]		142	40	52	8	324	234	0.8	-	0.17	-	-	-	0.2	5.9	-	-	-	-	-	-	-	-	-	-	500	-	-	4.2-6.5
NHMRC ADWG 2018		-	-	-	-	-	-	1.5	-	-	3	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Name	Sample Date																												
	22-Apr-21	31	< 1.0	4.0	1.0	18	54	< 0.1	-	-	-	-	-	-	-	-	1.7	1.96	-	-	3.0	< 1.0	< 1.0	3.0	16	297	193	-	4.94
	20-May-21	28	2	2	1	<10	41	<0.1	<0.05	<0.05	<0.10	<0.10	<0.10	0.02	1.3	1.3	1.51	1.30	-	3.35	7	<1.0	<1.0	7	13	231	150	132	5.76
	18-Jun-21	28	< 1.0	2	< 1.0	14	47	<0.1	-	-	-	-	-	-	-	-	1.38	1.70	-	-	4	< 1.0	< 1.0	4	8	196	127	120	5.27
	15-Jul-21	28	< 1.0	2.0	< 1.0	< 10	49	< 0.1	-	-	-	-	-	-	-	-	1.38	1.4	-	-	1.0	< 1.0	< 1.0	1.0	8.0	191	124	155	5.46
	19-Aug-21	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW4	22-Feb-19	Dry																											
	14-Mar-19																												
	23-Apr-19	39	5.0	5.0	< 1.0	60	64	0.1	-	-	-	-	-	-	-	-	2.36	3.05	13	-	< 1.0	< 1.0	< 1.0	< 1.0	33	293	190	198	4.0
	16-May-19	41	5.0	5.0	< 1.0	41	59	< 0.1	0.01	< 0.01	< 0.01	0.05	0.05	< 0.01	0.2	0.2	2.44	2.52	-	3.1	< 1.0	< 1.0	< 1.0	< 1.0	33	331	215	288	4.08
	14-Jun-19	40	5.0	5.0	< 1.0	39	60	< 0.1	-	-	-	-	-	-	-	-	2.4	2.5	-	-	< 1.0	< 1.0	< 1.0	< 1.0	33	316	205	163	4.31
	16-Jul-19	46	7.0	7.0	< 1.0	67	56	0.2	-	-	-	-	-	-	-	-	2.93	2.97	-	-	< 1.0	< 1.0	< 1.0	< 1.0	46	367	238	207	4.46
	15-Aug-19	40	5.0	5.0	< 1.0	43	55	0.1	-	-	-	-	-	-	-	-	2.4	2.45	-	-	< 1.0	< 1.0	< 1.0	< 1.0	33	308	200	160	4.48
	16-Sep-19	45	7.0	6.0	< 1.0	45	58	0.1	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.1	0.1	2.8	2.57	-	3.01	< 1.0	< 1.0	< 1.0	< 1.0	42	360	234	208	4.35
	15-Oct-19	44	6.0	6.0	< 1.0	38	57	0.1	-	-	-	-	-	-	-	-	2.71	2.4	-	-	< 1.0	< 1.0	< 1.0	< 1.0	40	365	237	-	4.48
	18-Nov-19	41	4.0	5.0	< 1.0	41	64	0.2	< 0.01	< 0.01	< 0.01	0.02	0.02	< 0.01	0.2	0.2	2.76	2.66	-	3.22	< 1.0	< 1.0	< 1.0	< 1.0	30	348	226	-	4.48
	17-Dec-19	Dry																											
	16-Jan-20																												
	27-Feb-20	44	9.0	6.0	1.0	68	59	<0.1	< 0.01	< 0.01	< 0.01	0.01	0.01	< 0.01	0.2	0.2	2.88	3.08	-	2.79	< 1.0	< 1.0	< 1.0	< 1.0	47	479	311	-	3.82
	26-Mar-20	40	5.0	4.0	1.0	46	57	<0.1	-	-	-	-	-	-	-	-	2.34	2.56	-	-	< 1.0	< 1.0	< 1.0	< 1.0	29	346	245	-	5.29
	27-Apr-20	38	5.0	4.0	1.0	38	51	0.1	-	-	-	-	-	-	-	-	2.26	2.29	-	-	3.0	< 1.0	< 1.0	3.0	29	336	218	-	5.54
	15-May-20	41	5.0	4.0	2.0	41	61	<0.1	<0.01	<0.01	<0.01	0.01	0.01	<0.01	0.2	0.2	2.41	2.57	-	3.31	<1.0	<1.0	<1.0	<1.0	29	327	212	-	4.67
	19-Jun-20	59	12	9.0	1.0	84	69	0.3	-	-	-	-	-	-	-	-	3.93	3.7	3.1	-	< 1.0	< 1.0	< 1.0	< 1.0	67	464	302	-	4.5
	16-Jul-20	53	11	8.0	2.0	82	59	0.3	-	-	-	-	-	-	-	-	3.56	3.37	2.77	-	< 1.0	< 1.0	< 1.0	< 1.0	60	439	285	-	4.58
	14-Aug-20	47	10	10	2.0	82	70	0.3	<0.01	<0.01	<0.01	0.02	0.02	0.01	0.4	0.4	3.42	3.68	3.72	2.51	<1	<1	<1	<1	66	450	292	266	4.24
	16-Sep-20	45	6.0	7.0	< 1.0	58	59	0.1	-	-	-	-	-	-	-	-	2.83	2.87	-	-	< 1.0	< 1.0	< 1.0	< 1.0	44	421	274	228	4.16
	16-Oct-20	43	5.0	5.0	< 1.0	40	67	0.1	-	-	-	-	-	-	-	-	2.53	2.72	-	-	< 1.0	< 1.0	< 1.0	< 1.0	33	355	231	-	3.94
	16-Nov-20	37	8.0	6.0	2.0	42	54	0.2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.1	0.1	2.55	2.4	-	2.41	< 1.0	< 1.0	< 1.0	< 1.0	45	338	220	196	4.21
	16-Dec-20	43	4.0	4.0	2.0	24	70	0.2	-	-	-	-	-	-	-	-	2.45	2.79	-	-	16	< 1.0	< 1.0	16	26	323	210	-	6.15
	14-Jan-21	36	16	4.0	2.0	15	58	0.8	-	-	-	-	-	-	-	-	2.74	2.69	-	-	37	< 1.0	< 1.0	37	56	316	205	-	6.38
	16-Feb-21	37	6.0	4.0	2.0	14	61	0.3	< 0.01	0.03	< 0.01	< 0.01	< 0.01	0.02	1.2	1.2	2.29	2.15	-	2.87	7.0	< 1.0	< 1.0	7.0	31	267	174	240	5.91
	17-Mar-21	36	10	4.0	2.0	10	54	0.4	-	-	-	-	-	-	-	-	2.44	2.25	-	-	26	< 1.0	< 1.0	26	41	271	176	-	6.23
	22-Apr-21	32	4.0	4.0	2.0	< 10	56	0.2	-	-	-	-	-	-	-	-	1.97	2.04	-	-	23	< 1.0	< 1.0	23	26	276	179	-	5.54
	20-May-21	35	9	4	2	18	53	0.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.6	0.6	2.35	2.33	-	2.44	23	<1.0	<1.0	23	39	276	179	176	6.26
	18-Jun-21	34	4	4	1	23	57	0.2	-	-	-	-	-	-	-	-	2.03	2.09	-	-	< 1.0	< 1.0	< 1.0	< 1.0	26	250	162	145	4.84
	15-Jul-21	33	5.0	4.0	1.0	20	58	0.2	-	-	-	-	-	-	-	-	2.04	2.09	-	-	2.0	< 1.0	< 1.0	2.0	29	226	147	143	5.48
	19-Aug-21	-	-	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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] Soil and Water Management Plan, July 2021

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)	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)	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 (WADER List)	Sum of PFAS
LOR		**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.001**	**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.0005**	**0.0002**	**0.0005**	**0.0005**	**0.0005**	**0.0005**	**0.0002**	**0.0002**	**0.0005**	**0.0005**	**0.0005**	**0.0005**	**0.0002**	**0.0002**	**0.0002**
Units		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Adopted Site Specific Trigger Values (SWMP 2021)[1]												0.1																		0.01		
HEPA NEMP 2020***												50																		20		
Sample Name	Sample Date																															
WPF	19-Aug-21	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	< 0.0002	**0.0006**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0006	< 0.0002	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0002	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	**0.0006**	**0.0006**
WPF (secondary)	27-Aug-21	< 0.0002	< 0.0002	< 0.0002	< 0.0002	**0.0005**	< 0.0002	< 0.001	< 0.0002	< 0.0002	< 0.0002	**0.0043**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0006	< 0.0002	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0002	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.0005**	**0.0048**	**0.0048**
SAND1 (secondary)	27-Aug-21	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002
RFS	22-Sep-21	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002
WASHED	22-Sep-21	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002
WPF	22-Sep-21	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002

Notes:
- - Not analysed
< - Less than laboratory limit of reporting
mg/kg - Milligrams per kilogram
*** - Soil Human Health Screening Criteria
[1] Soil and Water Management Plan July 2021

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)	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)	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	0.02	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
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
Adopted Site Specific												0.56																		0.07		
HEPA NEMP 2020***						0.00023						19																				
HEPA NEMP 2020[4]												5.6																		0.7		
Sample Name	Sample Date																															
INPUT	22-Sep-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	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
WPW	19-Aug-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	< 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-Sep-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	< 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 reporting
µg/L - Micrograms per litre
*** 99% Level of protection in freshwater
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[4] Recreation water

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_200133300	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 ES200685801	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
TRIP BLANK_JULY_150721	15-Jul-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_JULY_150721	15-Jul-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_150721	15-Jul-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
QW56_150721	15-Jul-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_150721	15-Jul-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
QW57_150721	15-Jul-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_AUG_190821	19-Aug-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_AUG_190821	9-Aug-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_190821	19-Aug-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
QW60_190821	19-Aug-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_190821	19-Aug-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
QW61_190821	19-Aug-21	Triplicate	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.003	< 0.01	-	-	-	-	-	-	< 0.02	< 0.02	< 0.05	< 0.05	< 0.1	< 0.1	< 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

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_1406201	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_1607201	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_1609201	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
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%**
TRIP BLANK_JULY_150721	15-Jul-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_JULY_150721	15-Jul-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_150721	15-Jul-21	Primary	<0.001	0.019	<0.001	<0.05	<0.0001	<0.001	0.001	<0.001	1.15	<0.001	0.044	<0.0001	0.001	<0.01	<0.01	0.007
QW56_150721	15-Jul-21	Duplicate	<0.001	0.022	<0.001	<0.05	<0.0001	<0.001	0.001	<0.001	1.13	<0.001	0.045	<0.0001	0.001	<0.01	<0.01	0.01
Relative Percentage Difference			NC	15%	NC	NC	NC	NC	0%	NC	2%	NC	2%	NC	0%	NC	NC	35%
SW4_150721	15-Jul-21	Primary	<0.001	0.019	<0.001	<0.05	<0.0001	<0.001	0.001	<0.001	1.15	<0.001	0.044	<0.0001	0.001	<0.01	<0.01	0.007
QW57_150721	15-Jul-21	Triplicate	<0.001	<0.02	<0.001	<0.05	<0.0002	<0.001	0.001	<0.001	0.83	<0.001	0.043	<0.0001	0.001	-	<0.005	0.008
Relative Percentage Difference			NC	**62%**	NC	NC	NC	NC	0%	NC	32%	NC	2%	NC	0%	NC	NC	13.30%
TRIP BLANK_AUG_190821	19-Aug-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_AUG_190821	9-Aug-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_190821	19-Aug-21	Primary	< 0.001	0.022	-	< 0.05	-	< 0.001	0.001	< 0.001	2.13	-	-	-	0.001	-	-	0.005
QW60_190821	19-Aug-21	Duplicate	<0.001	0.021	<0.001	<0.05	<0.0001	<0.001	0.001	<0.001	2.15	<0.001	0.048	<0.0001	0.001	<0.01	<0.01	<0.005

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)	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)	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	NC	NC	NC
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	NC	NC	NC
TRIP BLANK_JULY_150721	15-Jul-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_JULY_150721	15-Jul-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
BH4_150721	15-Jul-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
QW58_150721	15-Jul-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%
BH4_150721	15-Jul-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
QW59_150721	15-Jul-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	NC	NC	NC
TRIP BLANK_AUG_190821	19-Aug-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_AUG_190821	19-Aug-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
BH4_190821	19-Aug-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
QW62_190821	19-Aug-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%
BH4_190821	19-Aug-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
QW63_190821	19-Aug-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	< 0.01	< 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	NC	NC	NC
TRIP BLANK_SEP_220921	22-Sep-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_SEP_220921	22-Sep-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
SW2_220921	22-Sep-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
QW64_220921	22-Sep-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
SW2_220921	22-Sep-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
QW65_22092021	22-Sep-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	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

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

Date	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	8.64	6.08	2.56	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	5.954	2.686	9.45	1300	21.1	345	5.96	51.8	clear, sulfur odour
Mar-21	BH1	8.64	5.923	2.717	9.45	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	8.25	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
Jul-21	BH1	8.64	5.113	3.527	8.212	1258	18.9	62	4.48	297.7	Deep yellow / brown, no odour / sheen, well cap hinge broken
Aug-21	BH1	8.64	5.284	3.356	8.212	1250	18.4	113.7	4.79	261	Deep orange / yellow, no odour / sheen, well cap hinge broken
Sep-21	BH1	8.64	5.359	3.281	8.2	-	18.4	104	5.07	234	Light brown, no odour / sheen, well cap hinge broken
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	7.79	6.069	1.721	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	5.293	2.497	9.45	1245	22.6	279	5.58	170.7	light brown, sulfur odour
Mar-21	BH2	7.79	5.244	2.546	9.45	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	8.97	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
Jul-21	BH2	7.79	4.805	2.985	8.905	1235	18.9	91	4.74	216.5	Medium brown, no odour / sheen, well in good condition
Aug-21	BH2	7.79	4.989	2.801	8.905	1235	18.4	96.1	4.75	228	Light brown, no odour / sheen, well in good condition
Sep-21	BH2	7.79	4.99	2.8	8.85	1225	18.9	96	4.75	224	Light 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	7.57	-	-	9.03	-	-	-	-	-	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	3.06	1.881	1.179	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	1.132	1.928	6.45	1115	22.9	1693	5.96	-124.9	clear, sulfur odour
Mar-21	BH4	3.06	1.098	1.962	6.45	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	6.01	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
Jul-21	BH4	3.06	1.002	2.058	5.966	1149	15.9	2.2	4.55	252	Slight cloudy yellow, no odour / sheen, well in good condition
Aug-21	BH4	3.06	1.176	1.884	5.966	1140	17.4	139	4.52	298.3	Clear, no odour / sheen, well in good condition
Sep-21	BH4	3.06	1.063	1.997	6	1150	17	143	4.5	316.7	Light brown, 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.

Date	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	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	7.36	6.061	1.299	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	5.404	1.956	9.28	-	-	-	-	-	No sample taken
Mar-21	BH5	7.36	5.316	2.044	9.28	-	-	-	-	-	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	8.8	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
Jul-21	BH5	7.36	5.159	2.201	8.72	-	ND	ND	ND	ND	No sample taken, well in good condition
Aug-21	BH5	7.36	5.322	2.038	8.72	-	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
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	3.62	2.033	1.587	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	1.171	2.449	4.95	1410	2	1160	5.23	-167.9	Ants nest in casing, clear, sulfur odour
Mar-21	BH6	3.62	0.977	2.643	4.95	-	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	4.52	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
Jul-21	BH6	3.62	0.823	2.797	4.52	1445	15.3	134.1	4.79	-94.1	condition
Aug-21	BH6	3.62	1.038	2.582	4.52	1410	15.7	384.8	4.87	-86.3	Clear, moderate sulphur odour, no sheen, well in good condition
Sep-21	BH6	3.62	0.88	2.74	4.5	955	15.2	318	5.15	-155	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	2.98	1.813	1.167	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	1.235	1.745	4.95	1435	24.1	892	5.02	-146.3	light brown, sulfur odour
Mar-21	BH7	2.98	1.174	1.806	4.95	-	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	4.53	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
Jul-21	BH7	2.98	1.038	1.942	4.52	1510	15.5	101.4	4.82	-50.6	Light brown, slight sulphur odour, no sheen, well in good condition
Aug-21	BH7	2.98	1.177	1.803	4.52	1430	16.3	172.6	4.9	25.2	Light brown, no odour / sheen, well in good condition
Sep-21	BH7	2.98	1.072	1.908	4.52	945	14.7	152	4.91	-100	Cloudy brown, 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	3.88	2.549	1.331	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

Date	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
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	1.9	1.98	6.28	1500	20.7	1105	5.26	-167.6	-
Mar-21	BH8	3.88	1.801	2.079	6.28	-	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	6.1	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
Jul-21	BH8	3.88	1.751	2.129	6.04	1530	16.3	159.3	4.71	72.2	Medium brown, slight sulphur odour, no sheen, well in good condition
Aug-21	BH8	3.88	1.954	1.926	6.04	1445	16.6	389	4.68	-57.4	Light brown, moderate 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	17.5	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
Aug-21	BH9	17.75	15.764	1.986	15.99	-	-	-	-	-	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	8.761	1.489	16.16	1200	22.5	609	5.46	-141.8	dark brown, sulfur odour
Mar-21	BH9A	10.25	8.713	1.537	16.16	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	12.44	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
Jul-21	BH9A	10.25	8.594	1.656	12.485	1215	18.6	92.5	4.67	193	Moderate brown, slight sulphur odour, no sheen, well in good condition
Aug-21	BH9A	10.25	8.769	1.481	12.485	1210	18.3	183.4	4.66	19.1	Light yellow, no odour / sheen, well in good condition
Sep-21	BH9A	10.25	8.675	1.575	8.675	1200	18.8	166	4.8	40.7	Medium brown, slight 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	-	-	-	-	-	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	-	-	-	-	-	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	6.69	Dry	-	3.58	-	-	-	-	-	Well was dry.
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.
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	-	3.68	-	-	-	-	-	Well was dry.
Nov-20	BH10	6.69	Dry	-	3.68	-	-	-	-	-	Well was dry.
Dec-20	BH10	6.69	Dry	-	3.68	-	-	-	-	-	Well was dry.
Jan-21	BH10	6.69	Dry	-	3.68	-	-	-	-	-	Well was dry.
Feb-21	BH10	6.69	DRY	-	3.68	-	-	-	-	-	Well was dry.
Mar-21	BH10	6.69	DRY	-	3.68	-	-	-	-	-	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	3.46	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
Jul-21	BH10	6.69	2.731	3.959	3.42	820	16	284.5	4.61	52	Clear, strong sulphur odour, no sheen, well in good condition
Aug-21	BH10	6.69	2.932	3.758	3.42	ND	ND	ND	ND	ND	No sample taken
Feb-19	BH11	6.63	3.02	3.61	5.21	-	-	402	-	-	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	-	-	324	-	-	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	6.63	4.087	2.543	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	3.246	3.384	5.95	1315	21.1	68	5.3	-107.4	light brown, slight odour
Mar-21	BH11	6.63	3.143	3.487	5.95	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	5.29	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
Jul-21	BH11	6.63	1.889	4.741	5.298	1342	16.9	178	4.54	162	Light yellow, no odour, no sheen, well in good condition
Aug-21	BH11	6.63	2.156	4.474	5.298	1315	16.5	411.9	4.25	67.8	Light yellow, slight sulphur odour, no sheen, well in good condition
Sep-21	BH11	6.63	2.141	4.489	5.29	1255	18	362	4.39	-4.8	Very light brown, slight sulphur odour, no sheen, well in good condition

Date	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	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	8.67	7.149	1.521	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	6.441	2.229	8.39	1335	21.5	534	5.73	-172.9	Well damaged, clear, sulfur odour
Mar-21	BH12	8.67	6.364	2.306	8.39	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	8.22	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
Jul-21	BH12	8.67	6.005	2.665	8.22	-	ND	ND	ND	ND	No sample taken, Hydrasleeve would not fit in 35mm inner PVC piping. Suggest removing inner tube
Aug-21	BH12	8.67	6.147	2.523	8.22	1335	19.1	249.7	4.77	250.8	Clear, no odour / sheen, well in good condition
Sep-21	BH12	8.67	6.079	2.591	8.21	1010	17.5	210	4.98	86.7	Light grey / brown, no odour / sheen, well in good condition
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	3.04	1.576	1.464	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	MW239S	3.04	0.998	2.042	4	1350	22.8	1676	5.12	-155.7	dark brown, sulfur odour
Mar-21	MW239S	3.04	0.923	2.117	4	-	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	3.84	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
Jul-21	MW239S	3.04	0.736	2.304	3.86	1409	15.3	146	4.58	50.9	Medium brown, slight - moderate sulphur odour, no sheen, well in good
Aug-21	MW239S	3.04	0.874	2.166	3.86	1355	15.6	166.5	4.6	-28.4	Light brown, moderate sulphur odour, no sheen, well in good condition
Sep-21	MW239S	3.04	0.786	2.254	3.82	1000	15.4	205	4.66	-142	Cloudy brown, slight 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	3.04	-	-	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	MW239D	3.04	0.984	2.056	20.49	-	-	-	-	-	-
Mar-21	MW239D	3.04	0.901	2.139	20.49	-	-	-	-	-	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	20.57	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
Jul-21	MW239D	3.04	0.716	2.324	20.57	-	ND	ND	ND	ND	No sample taken, well in good condition
Aug-21	MW239D	3.04	0.85	2.19	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.
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	-

Date	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
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
Jul-21	SW1	N/A	0.65	N/A	N/A	1156	12.2	202.3	5.29	208.2	Deep yellow, no odour / sheen
Aug-21	SW1	N/A	0.6	N/A	N/A	1152	12	187	6.05	194.6	Clear / slight yellow, no odour / sheen
Sep-21	SW1	N/A	-	N/A	N/A	-	10.8	145	6.04	139.4	Slight yellow, 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
Jul-21	SW2	N/A	0.25	N/A	N/A	1033	12.2	96.4	4.43	87.4	Natural tannin brown, slight sulphur odour, no sheen
Aug-21	SW2	N/A	0.2	N/A	N/A	1310	11	98.8	4.56	294	Natural tannin brown, slight sulphur odour, no sheen
Sep-21	SW2	N/A	0.6	N/A	N/A	-	13.4	103	4.57	346	Natural tannin orange, 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
Jul-21	SW3	N/A	0.65	N/A	N/A	1020	10.1	213	5.31	-41	Natural tannin brown, strong sulphur odour, no sheen
Aug-21	SW3	N/A	0.6	N/A	N/A	951	8.7	203	5.02	-12.7	Natural tannin brown, 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
Jul-21	SW4	N/A	0.65	N/A	N/A	955	10.2	247	5.3	152	Natural tannin brown, no odour / sheen, flowing towards eastern boundary
Aug-21	SW4	N/A	0.6	N/A	N/A	927	9.4	269	5.13	104	Natural tannin brown (orange algae), no odour / sheen

Date	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
Sep-21	SW4	N/A	0.6	N/A	N/A	-	12.1	236	5.8	149	Natural tannin orange / yellow, no odour / sheen
Sep-21	WPW	N/A	-	N/A	N/A	-	16.6	284	4.94	318	Dark brown

EQUIPMENT CERTIFICATION REPORT

KENNARDS HIRE

PGN9003871 WATER QUALITY METER – MULTIFUNCTION (YSI)

Plant Number: 1082472

SENSOR	CONCENTRATION	SPAN 1	SPAN 2	TRACEABILITY	PASS
pH	pH 4	pH 4		# 366070	☑
pH	pH 7	pH 7		# 363536	☑
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	☑
Turbidity	0 NTU	0 NTU			☑
Turbidity	90 NTU	90 NTU		# 365257	☑

Battery Status 100 (%)	Temperature 19 °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: 14 / 09 / 21 Signed: JArnott

Accessories List:

User's Manual	pH and ORP Storage Solution	Transit Case

KLEINFELDER

HYDRASLEEVE™ SAMPLING LOG

Project Number:	Date:	Site Address:
20222347	22/9/2	

Site Name:	Field Manager:	Weather Observations:
WSS	DK	Partly Cloudy

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	11:50	1.063	6.00		17.9	2.96	143	93	4.50	316.7	112	Light brown, No / NS.
SW1	7:20		–		10.8	3.52	145	94	6.04	139.4	1.98	slight yellow, No / NS.
data logger → BH9A	12:00	8.675	12.4		18.8	2.02	166	108	4.80	40.7	305	medium brown, slight sulfur odour, NS.
BH2	12:25	4.990	8.85		18.9	4.27	96	63	4.75	224	134	light brown, No / NS.
BH1	12:40	5.359	8.2		18.4	3.39	104	68	5.07	234	40	light brown, No / NS.
BH11	12:55	2.141	5.29		18.0	4.27	362	236	4.39	-4.8	40	very light brown, slight sulfur odour, NS.
BH12	10:10	6.079	8.21		17.5	5.02	210	136	4.98	86.7	30.5	light Gray Brown Clear No/NS
MW239S	10:00	0.786	3.82		15.4	2.38	209	136	4.66	-142	195	Slight Sulfur odour - Cloudy Brown
BH6	9:55	0.880	4.5		15.2	3.00	318	207	5.15	-155	73	Strong Sulfur odor - clear
BH7	9:45	1.072	4.52		14.7	1.99	152	99	4.91	-100	183	Strong Sulfur odor - Cloudy Brown
SW4	9:33	0.6	–		12.1	3.95	236	153	5.8	149	14.5	Orange/Yellow No/NS
SW2	10:30	0.6	–		13.4	0.82	103	67	4.57	346	6.30	orange (deep colour) No / NS.
MPW	10:45	–	–		16.6	10.07	284	184	4.99	318	2907	Dark brown
BH9		Dry										Dry

QW64 & QW65 = SW2

ATTACHMENT 3: LAB RESULTS

CERTIFICATE OF ANALYSIS

Work Order	: **ES2134278**	Page	: 1 of 21
Client	: **KLEINFELDER AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL KOUSBROEK	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	: 20222347	Date Samples Received	: 22-Sep-2021 14:06
Order number	:	Date Analysis Commenced	: 22-Sep-2021
C-O-C number	: ----	Issue Date	: 28-Sep-2021 17:42
Sampler	: Megan Ferguson		
Site	: WSS - Cabbage Tree Rd Water Monitoring September 2021		
Quote number	: ME/114/19 ALS Compass		
No. of samples received	: 20		
No. of samples analysed	: 20		

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
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Gregory Towers	Technical Officer	Chemistry, Newcastle West, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, 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.
- EP231X: LOR raised due to the high moisture content.
- 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: SOIL (Matrix: SOIL)			Sample ID	WPF	RFS	WASHED	----	----
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2134278-014	ES2134278-016	ES2134278-017	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**80.4**	**5.2**	**4.6**	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0006	<0.0005	<0.0005	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0006	<0.0005	<0.0005	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	WPF	RFS	WASHED	----	----
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2134278-014	ES2134278-016	ES2134278-017	--------	--------
				Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0006	<0.0005	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0006	<0.0005	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0006	<0.0005	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	94.0	98.0	98.0	----	----
13C8-PFOA	----	0.0002	%	98.0	101	96.0	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH1	BH2	BH4	BH6	BH7
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-001	ES2134278-002	ES2134278-003	ES2134278-004	ES2134278-005
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	----	<0.001	<0.001	**0.002**	<0.001
Boron	7440-42-8	0.05	mg/L	----	----	<0.05	<0.05	<0.05
Barium	7440-39-3	0.001	mg/L	----	----	**0.009**	**0.020**	**0.004**
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	**0.003**
Copper	7440-50-8	0.001	mg/L	----	----	**0.172**	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	----	----	<0.001	<0.001	**0.002**
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	----	----	**0.006**	<0.005	<0.005
Manganese	7439-96-5	0.001	mg/L	----	**0.013**	**0.020**	**0.005**	**0.005**
Iron	7439-89-6	0.05	mg/L	----	<0.05	**0.10**	**0.55**	**0.62**
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	----	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	----	----	----	----
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
>C10 - C16 Fraction	----	100	µg/L	<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	----	----	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH1	BH2	BH4	BH6	BH7
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-001	ES2134278-002	ES2134278-003	ES2134278-004	ES2134278-005
				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	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	----	----	----	----
Toluene	108-88-3	2	µg/L	<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	----
^ Total Xylenes	----	2	µg/L	<2	----	----	----	----
^ Sum of BTEX	----	1	µg/L	<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	115	----	----	----	----
Toluene-D8	2037-26-5	2	%	125	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%	119	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH9A	BH11	BH12	MW239S	SW1
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-006	ES2134278-007	ES2134278-008	ES2134278-009	ES2134278-010
				Result	Result	Result	Result	Result
EA005: pH								
pH Value	----	0.01	pH Unit	4.99	4.47	----	----	----
EA006: Sodium Adsorption Ratio (SAR)								
^ Sodium Adsorption Ratio	----	0.01	-	2.92	4.18	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	172	382	----	----	----
EA016: Calculated TDS (from Electrical Conductivity)								
Total Dissolved Solids (Calc.)	----	1	mg/L	112	248	----	----	----
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	11	25	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	6	<1	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	6	<1	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	12	12	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	35	101	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	1	<1	----	----	----
Magnesium	7439-95-4	1	mg/L	2	6	----	----	----
Sodium	7440-23-5	1	mg/L	22	49	----	----	----
Potassium	7440-09-7	1	mg/L	1	<1	----	----	----
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	0.003	0.007	----	0.005	----
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	0.002	----	0.001	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	----	<0.001	----
Nickel	7440-02-0	0.001	mg/L	0.003	0.004	----	0.001	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	----	<0.001	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH9A	BH11	BH12	MW239S	SW1
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-006	ES2134278-007	ES2134278-008	ES2134278-009	ES2134278-010
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
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	**0.042**	----	**0.005**	----
Manganese	7439-96-5	0.001	mg/L	**0.027**	**0.003**	----	**0.004**	----
Iron	7439-89-6	0.05	mg/L	**0.32**	**0.72**	----	**0.65**	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	----	<0.0001	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	**0.1**	----	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**0.25**	**0.01**	----	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	----	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.03**	**0.01**	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.03**	**0.01**	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**1.0**	**0.8**	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**1.0**	**0.8**	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	**0.16**	**0.01**	----	----	----
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	----	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**1.36**	**3.10**	----	----	----
ø Total Cations	----	0.01	meq/L	**----**	**3.01**	----	----	----
ø Total Cations	----	0.01	meq/L	**1.20**	**----**	----	----	----
ø Ionic Balance	----	0.01	%	**----**	**1.54**	----	----	----
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	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH9A	BH11	BH12	MW239S	SW1
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-006	ES2134278-007	ES2134278-008	ES2134278-009	ES2134278-010
				Result	Result	Result	Result	Result
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup - Continued								
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	----	----
^ 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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH9A	BH11	BH12	MW239S	SW1
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-006	ES2134278-007	ES2134278-008	ES2134278-009	ES2134278-010
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
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
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								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH9A	BH11	BH12	MW239S	SW1
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-006	ES2134278-007	ES2134278-008	ES2134278-009	ES2134278-010
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
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
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	%	115	115	112	----	----
Toluene-D8	2037-26-5	2	%	125	120	121	----	----
4-Bromofluorobenzene	460-00-4	2	%	122	113	116	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	102	106	----	102	103
13C8-PFOA	----	0.02	%	102	101	----	101	98.8

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW2	SW4	WPW	INPUT	QW64
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-011	ES2134278-012	ES2134278-013	ES2134278-015	ES2134278-018
				Result	Result	Result	Result	Result
EA005: pH								
pH Value	----	0.01	pH Unit	3.55	----	----	----	----
EA006: Sodium Adsorption Ratio (SAR)								
^ Sodium Adsorption Ratio	----	0.01	-	1.67	----	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	235	----	----	----	----
EA016: Calculated TDS (from Electrical Conductivity)								
Total Dissolved Solids (Calc.)	----	1	mg/L	153	----	----	----	----
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	13	----	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	<1	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	16	----	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	30	----	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	2	----	----	----	----
Magnesium	7439-95-4	1	mg/L	2	----	----	----	----
Sodium	7440-23-5	1	mg/L	14	----	----	----	----
Potassium	7440-09-7	1	mg/L	2	----	----	----	----
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
Barium	7440-39-3	0.001	mg/L	0.007	----	----	----	0.007
Beryllium	7440-41-7	0.001	mg/L	<0.001	----	----	----	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	<0.0001
Cobalt	7440-48-4	0.001	mg/L	0.003	----	----	----	0.003
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	<0.001
Nickel	7440-02-0	0.001	mg/L	0.005	----	----	----	0.005
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	<0.001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW2	SW4	WPW	INPUT	QW64
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-011	ES2134278-012	ES2134278-013	ES2134278-015	ES2134278-018
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.134**	----	----	----	**0.126**
Manganese	7439-96-5	0.001	mg/L	**0.087**	----	**0.051**	----	**0.085**
Iron	7439-89-6	0.05	mg/L	**1.11**	----	**0.08**	----	**1.34**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	<0.0001
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	**0.1**	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**1.77**	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**1.77**	----	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**1.2**	----	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**3.0**	----	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	**0.08**	----	----	----	----
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	----	----	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**1.18**	----	----	----	----
ø Total Cations	----	0.01	meq/L	**0.92**	----	----	----	----
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
C10 - C14 Fraction	----	50	µg/L	<50	----	----	----	<50
C15 - C28 Fraction	----	100	µg/L	<100	----	----	----	<100
C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	----	----	----	<50

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW2	SW4	WPW	INPUT	QW64
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-011	ES2134278-012	ES2134278-013	ES2134278-015	ES2134278-018
				Result	Result	Result	Result	Result
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
>C10 - C16 Fraction	----	100	µg/L	<100	----	----	----	<100
>C16 - C34 Fraction	----	100	µg/L	<100	----	----	----	<100
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	----	----	----	<100
>C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	----	----	----	<100
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	<20
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	----	----	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	----	----	----	<20
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	----	----	----	<1
Toluene	108-88-3	2	µg/L	<2	----	----	----	<2
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	<2
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	<2
^ Total Xylenes	----	2	µg/L	<2	----	----	----	<2
^ Sum of BTEX	----	1	µg/L	<1	----	----	----	<1
Naphthalene	91-20-3	5	µg/L	<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								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW2	SW4	WPW	INPUT	QW64
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-011	ES2134278-012	ES2134278-013	ES2134278-015	ES2134278-018
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW2	SW4	WPW	INPUT	QW64
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00	22-Sep-2021 00:00
Compound	CAS Number	LOR	Unit	ES2134278-011	ES2134278-012	ES2134278-013	ES2134278-015	ES2134278-018
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
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
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	%	111	----	----	----	114
Toluene-D8	2037-26-5	2	%	115	----	----	----	122
4-Bromofluorobenzene	460-00-4	2	%	115	----	----	----	116
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	94.5	108	102	102	104
13C8-PFOA	----	0.02	%	97.2	100	100	97.0	102

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RINSATE_SEP	TRIP BLANK_SEP	----	----	----
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2134278-019	ES2134278-020	--------	--------	--------
				Result	Result	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	----	----	----
Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	----	----	----
Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	----	----	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	----	----	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	----	----	----
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	----	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	----	----	----
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
C10 - C14 Fraction	----	50	µg/L	<50	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	----	----	----
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
>C10 - C16 Fraction	----	100	µg/L	<100	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	----	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RINSATE_SEP	TRIP BLANK_SEP	----	----	----
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2134278-019	ES2134278-020	--------	--------	--------
				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	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	----	----	----
Toluene	108-88-3	2	µg/L	<2	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	----	----	----
^ Total Xylenes	----	2	µg/L	<2	<2	----	----	----
^ Sum of BTEX	----	1	µg/L	<1	<1	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RINSATE_SEP	TRIP BLANK_SEP	----	----	----
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2134278-019	ES2134278-020	--------	--------	--------
				Result	Result	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<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	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RINSATE_SEP	TRIP BLANK_SEP	----	----	----
			Sampling date / time	22-Sep-2021 00:00	22-Sep-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2134278-019	ES2134278-020	--------	--------	--------
				Result	Result	----	----	----
EP231P: PFAS Sums - Continued								
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	109	104	----	----	----
Toluene-D8	2037-26-5	2	%	117	111	----	----	----
4-Bromofluorobenzene	460-00-4	2	%	110	106	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	106	101	----	----	----
13C8-PFOA	----	0.02	%	101	98.5	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

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	: **ES2134278**	Page	: 1 of 14
Client	: **KLEINFELDER AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL KOUSBROEK	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	: 20222347	Date Samples Received	: 22-Sep-2021
Order number	:	Date Analysis Commenced	: 22-Sep-2021
C-O-C number	: ----	Issue Date	: 28-Sep-2021
Sampler	: Megan Ferguson		
Site	: WSS - Cabbage Tree Rd Water Monitoring September 2021		
Quote number	: ME/114/19 ALS Compass		
No. of samples received	: 20		
No. of samples analysed	: 20		

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
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Gregory Towers	Technical Officer	Chemistry, Newcastle West, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, 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.

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: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3922919)									
ES2133935-020	Anonymous	EA055: Moisture Content	----	0.1	%	0.5	0.6	0.0	No Limit
ES2134278-016	RFS	EA055: Moisture Content	----	0.1	%	5.2	5.2	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3923844)									
ES2134278-017	WASHED	EA055: Moisture Content	----	0.1	%	4.6	4.6	0.0	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3918921)									
EP2111235-003	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2111235-015	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3918921)									
EP2111235-003	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3918921) - continued									
EP2111235-003	Anonymous	EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP2111235-015	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3918921)									
EP2111235-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP2111235-015	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3918921) - continued									
EP2111235-015	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3918921)									
EP2111235-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP2111235-015	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA005: pH (QC Lot: 3917831)									
WN2110898-011	Anonymous	EA005: pH Value	----	0.01	pH Unit	6.69	6.72	0.4	0% - 20%
ES2134273-002	Anonymous	EA005: pH Value	----	0.01	pH Unit	8.04	8.06	0.2	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 3919316)									
WN2110858-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	890	892	0.2	0% - 20%
WN2110859-002	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	2380	2360	1.0	0% - 20%
WN2110860-002	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	2720	2720	0.0	0% - 20%
ES2132262-034	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	181	181	0.0	0% - 20%
ES2132262-003	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	70	70	0.0	0% - 20%
ES2134270-002	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	182	181	0.8	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 3919319)									
ES2134270-002	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	23	24	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	23	24	0.0	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 3918010)									
ES2134047-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	1360	1330	2.1	0% - 20%

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					
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 3918010) - continued									
ES2134278-007	BH11	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	12	12	0.0	0% - 50%
ED045G: Chloride by Discrete Analyser (QC Lot: 3918013)									
ES2134268-002	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	37	37	0.0	0% - 20%
ES2134285-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	615	612	0.5	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 3919193)									
ES2134278-006	BH9A	ED093F: Calcium	7440-70-2	1	mg/L	1	1	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	2	2	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	22	22	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	1	<1	0.0	No Limit
WN2110912-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	27	27	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	20	19	5.7	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	319	307	3.9	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	5	5	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3919191)									
ES2134278-002	BH2	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	0.003	0.003	0.0	No Limit
		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	0.008	0.008	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	0.013	0.013	0.0	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
ES2134278-006	BH9A	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	0.003	0.003	0.0	No Limit
		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	0.027	0.027	0.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.003	0.002	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.005	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: 3919191) - continued									
ES2134278-006	BH9A	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	0.32	0.32	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 3919192)									
ES2134278-005	BH7	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2134278-020	TRIP BLANK_SEP	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK040P: Fluoride by PC Titrator (QC Lot: 3919318)									
ES2134270-002	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 3919142)									
ES2132713-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.01	0.0	No Limit
ES2134268-005	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.30	0.30	0.0	0% - 20%
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 3919144)									
ES2134285-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.03	<0.01	96.3	No Limit
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 3918011)									
ES2134278-006	BH9A	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2134268-002	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 3919143)									
ES2132713-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.03	0.03	0.0	No Limit
ES2134268-005	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.02	0.02	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 3919148)									
ES2134269-005	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.3	0.2	0.0	No Limit
ES2134285-002	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	2.4	2.5	5.9	0% - 20%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 3919149)									
ES2134269-005	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2134285-002	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	0.18	0.18	0.0	0% - 50%
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 3918012)									
ES2134268-002	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2134285-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3919303)									
ES2133350-026	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2134278-001	BH1	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3919303)									
ES2133350-026	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2134278-001	BH1	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 3919303)									
ES2133350-026	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

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					
EP080: BTEXN (QC Lot: 3919303) - continued									
ES2133350-026	Anonymous	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
ES2134278-001	BH1	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: **SOIL**

				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
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3918921)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.0	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.4	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.0	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.0	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.6	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3918921)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	89.0	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.2	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.2	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.4	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.2	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.8	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.4	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.6	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	85.2	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3918921)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	82.4	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	88.6	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	85.1	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.2	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.8	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3918921)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	81.6	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	81.6	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	99.2	65.0	137

Sub-Matrix: **SOIL**

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: 3918921) - continued								
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.8	69.2	143

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
EA005: pH (QCLot: 3917831)								
EA005: pH Value	----	----	pH Unit	----	7.6 pH Unit	100	98.5	102
EA010P: Conductivity by PC Titrator (QCLot: 3919316)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	220 µS/cm	95.6	91.1	107
				<1	2100 µS/cm	99.8	93.2	108
				<1	58301 µS/cm	99.9	93.3	106
ED037P: Alkalinity by PC Titrator (QCLot: 3919319)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	101	81.0	111
				----	50 mg/L	107	80.0	120
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 3918010)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	100	82.0	122
				<1	500 mg/L	92.7	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 3918013)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	102	80.9	127
				<1	1000 mg/L	99.9	80.9	127
ED093F: Dissolved Major Cations (QCLot: 3919193)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	96.0	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	95.5	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	92.6	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	93.7	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 3919191)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	86.1	85.0	114
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	85.3	85.0	115
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	85.6	82.0	110
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	85.6	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	94.4	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	84.2	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	83.6	83.0	111
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	84.4	82.0	110
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	85.8	82.0	112
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	97.5	85.0	115
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.1 mg/L	86.7	83.0	109
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	86.1	81.0	117

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
EG020F: Dissolved Metals by ICP-MS (QCLot: 3919191) - continued								
EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	0.5 mg/L	87.2	85.0	115
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	85.9	82.0	112
EG035F: Dissolved Mercury by FIMS (QCLot: 3919192)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	98.6	83.0	105
EK040P: Fluoride by PC Titrator (QCLot: 3919318)								
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	5 mg/L	104	82.0	116
EK055G: Ammonia as N by Discrete Analyser (QCLot: 3919142)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	104	90.0	114
EK055G: Ammonia as N by Discrete Analyser (QCLot: 3919144)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	102	90.0	114
EK057G: Nitrite as N by Discrete Analyser (QCLot: 3918011)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	104	82.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 3919143)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	104	91.0	113
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 3919148)								
EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	10 mg/L	93.7	69.0	101
				<0.1	1 mg/L	89.4	70.0	118
				<0.1	5 mg/L	97.1	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 3919149)								
EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	4.42 mg/L	# 102	71.0	101
				<0.01	0.442 mg/L	105	72.0	108
				<0.01	1 mg/L	100	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 3918012)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	101	85.0	117
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup (QCLot: 3917446)								
EP071SG: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	71.4	55.8	112
EP071SG: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	92.0	71.6	113
EP071SG: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	82.5	56.0	121
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup (QCLot: 3917446)								
EP071SG: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	87.2	57.9	119
EP071SG: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	70.7	62.5	110
EP071SG: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	71.7	61.5	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3919303)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	100	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3919303)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	102	75.0	127
EP080: BTEXN (QCLot: 3919303)								

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
EP080: BTEXN (QCLot: 3919303) - continued								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	101	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	100.0	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	102	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	103	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	101	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	94.2	70.0	120
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3919482)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	79.8	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	86.4	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	0.25 µg/L	78.6	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	85.0	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	92.8	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	81.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3919482)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	91.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	95.4	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	94.2	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	90.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	104	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	97.0	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	96.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	92.4	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	91.6	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	91.2	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	96.4	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3919482)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	86.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	99.9	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	115	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	95.4	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	73.0	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.8	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	88.4	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3919482)								

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: 3919482) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	96.8	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	95.0	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	111	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: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3918921)							
EP2111235-003	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	78.4	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	88.0	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	88.0	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	90.4	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	86.4	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	94.4	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3918921)							
EP2111235-003	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	79.0	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	87.6	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	92.0	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	88.0	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	86.8	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	85.6	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	90.4	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	83.6	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	86.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	82.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	86.2	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3918921)							
EP2111235-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	87.6	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	88.1	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	87.7	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	117	68.7	130

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%) Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3918921) - continued							
EP2111235-003	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	83.2	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	92.4	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	94.8	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3918921)							
EP2111235-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	78.0	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	85.6	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	113	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	91.2	69.2	143

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%) Low	High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 3918010)							
ES2134047-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	# Not Determined	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 3918013)							
ES2134268-002	Anonymous	ED045G: Chloride	16887-00-6	50 mg/L	113	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 3919191)							
ES2134278-003	BH4	EG020A-F: Arsenic	7440-38-2	1 mg/L	85.6	70.0	130
		EG020A-F: Beryllium	7440-41-7	1 mg/L	91.8	70.0	130
		EG020A-F: Barium	7440-39-3	1 mg/L	87.2	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	88.0	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	99.7	70.0	130
		EG020A-F: Cobalt	7440-48-4	1 mg/L	85.8	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	86.3	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	89.3	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	86.6	70.0	130
		EG020A-F: Vanadium	7440-62-2	1 mg/L	88.3	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	88.2	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3919192)							
ES2134278-004	BH6	EG035F: Mercury	7439-97-6	0.01 mg/L	83.1	70.0	130
EK040P: Fluoride by PC Titrator (QCLot: 3919318)							
ES2134268-002	Anonymous	EK040P: Fluoride	16984-48-8	5 mg/L	88.6	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 3919142)							

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%) Low	High
EK055G: Ammonia as N by Discrete Analyser (QCLot: 3919142) - continued							
ES2132713-001	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	91.8	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 3919144)							
ES2134285-001	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	99.0	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 3918011)							
ES2134268-002	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	103	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 3919143)							
ES2132713-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	117	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 3919148)							
ES2134270-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	5 mg/L	94.1	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 3919149)							
ES2134270-001	Anonymous	EK067G: Total Phosphorus as P	----	1 mg/L	102	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 3918012)							
ES2134268-002	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	93.5	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3919303)							
ES2133350-026	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	84.2	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3919303)							
ES2133350-026	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	84.6	70.0	130
EP080: BTEXN (QCLot: 3919303)							
ES2133350-026	Anonymous	EP080: Benzene	71-43-2	25 µg/L	94.6	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	92.3	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	99.7	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	99.5	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	98.5	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	89.7	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2134278**	Page	: 1 of 13
Client	: **KLEINFELDER AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL KOUSBROEK	Telephone	: +6138549 9630
Project	: 20222347	Date Samples Received	: 22-Sep-2021
Site	: WSS - Cabbage Tree Rd Water Monitoring September 2021	Issue Date	: 28-Sep-2021
Sampler	: Megan Ferguson	No. of samples received	: 20
Order number	:	No. of samples analysed	: 20

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.**
- **Laboratory Control outliers exist - please see following pages for full details.**
- **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

- **NO Analysis Holding Time Outliers exist.**

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
Laboratory Control Spike (LCS) Recoveries							
EK067G: Total Phosphorus as P by Discrete Analyser	QC-MRG2-39191490	----	**Total Phosphorus as P**	----	102 %	71.0-101%	**Recovery greater than upper control limit**
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ES2134047--001	Anonymous	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	0	19	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	0	9	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	0	19	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	0	9	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: **SOIL**

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*
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055) WPF, WASHED	RFS,	**22-Sep-2021**	**----**	----	----	**27-Sep-2021**	06-Oct-2021	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) WPF, WASHED	RFS,	**22-Sep-2021**	**23-Sep-2021**	21-Mar-2022	✓	**23-Sep-2021**	02-Nov-2021	✓

Matrix: **SOIL**

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
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) WPF, WASHED	RFS,	**22-Sep-2021**	**23-Sep-2021**	21-Mar-2022	✓	**23-Sep-2021**	02-Nov-2021	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) WPF, WASHED	RFS,	**22-Sep-2021**	**23-Sep-2021**	21-Mar-2022	✓	**23-Sep-2021**	02-Nov-2021	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) WPF, WASHED	RFS,	**22-Sep-2021**	**23-Sep-2021**	21-Mar-2022	✓	**23-Sep-2021**	02-Nov-2021	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) WPF, WASHED	RFS,	**22-Sep-2021**	**23-Sep-2021**	21-Mar-2022	✓	**23-Sep-2021**	02-Nov-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
EA005: pH								
Clear Plastic Bottle - Natural (EA005) BH9A, SW2	BH11,	**22-Sep-2021**	**----**	----	----	**22-Sep-2021**	22-Sep-2021	✓
EA006: Sodium Adsorption Ratio (SAR)								
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F) BH9A, SW2	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	20-Oct-2021	✓
EA010P: Conductivity by PC Titrator								
Clear Plastic Bottle - Natural (EA010-P) BH9A, SW2	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	20-Oct-2021	✓
EA065: Total Hardness as CaCO3								
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F) BH9A, SW2	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	20-Oct-2021	✓
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P) BH9A, SW2	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	06-Oct-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)								
BH9A,	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	20-Oct-2021	✓
SW2								
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G)								
BH9A,	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	20-Oct-2021	✓
SW2								
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)								
BH9A,	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	20-Oct-2021	✓
SW2								
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)								
BH2,	BH4,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	21-Mar-2022	✓
BH6,	BH7,							
BH9A,	BH11,							
MW239S,	SW2,							
WPW,	QW64,							
RINSATE_SEP,	TRIP BLANK_SEP							
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)								
BH4,	BH6,	**22-Sep-2021**	**----**	----	----	**24-Sep-2021**	20-Oct-2021	✓
BH7,	BH9A,							
BH11,	MW239S,							
SW2,	QW64,							
RINSATE_SEP,	TRIP BLANK_SEP							
EK040P: Fluoride by PC Titrator								
Clear Plastic Bottle - Natural (EK040P)								
BH9A,	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	20-Oct-2021	✓
SW2								
EK055G: Ammonia as N by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK055G)								
BH9A,	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	20-Oct-2021	✓
SW2								
EK057G: Nitrite as N by Discrete Analyser								
Clear Plastic Bottle - Natural (EK057G)								
BH9A,	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	24-Sep-2021	✓
SW2								

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
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK059G)								
BH9A,	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	20-Oct-2021	✓
SW2								
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK061G)								
BH9A,	BH11,	**22-Sep-2021**	**23-Sep-2021**	20-Oct-2021	✓	**23-Sep-2021**	20-Oct-2021	✓
SW2								
EK067G: Total Phosphorus as P by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK067G)								
BH9A,	BH11,	**22-Sep-2021**	**23-Sep-2021**	20-Oct-2021	✓	**23-Sep-2021**	20-Oct-2021	✓
SW2								
EK071G: Reactive Phosphorus as P by discrete analyser								
Clear Plastic Bottle - Natural (EK071G)								
BH9A,	BH11,	**22-Sep-2021**	**----**	----	----	**23-Sep-2021**	24-Sep-2021	✓
SW2								
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
Amber Glass Bottle - Unpreserved (EP071SG)								
BH1,	BH9A,	**22-Sep-2021**	**23-Sep-2021**	29-Sep-2021	✓	**24-Sep-2021**	02-Nov-2021	✓
BH11,	BH12,							
SW2,	QW64,							
RINSATE_SEP,	TRIP BLANK_SEP							
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
Amber Glass Bottle - Unpreserved (EP071SG)								
BH1,	BH9A,	**22-Sep-2021**	**23-Sep-2021**	29-Sep-2021	✓	**24-Sep-2021**	02-Nov-2021	✓
BH11,	BH12,							
SW2,	QW64,							
RINSATE_SEP,	TRIP BLANK_SEP							
EP080/071: Total Petroleum Hydrocarbons								
Amber VOC Vial - Sulfuric Acid (EP080)								
BH1,	BH9A,	**22-Sep-2021**	**24-Sep-2021**	06-Oct-2021	✓	**24-Sep-2021**	06-Oct-2021	✓
BH11,	BH12,							
SW2,	QW64,							
RINSATE_SEP,	TRIP BLANK_SEP							
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Amber VOC Vial - Sulfuric Acid (EP080)								
BH1,	BH9A,	**22-Sep-2021**	**24-Sep-2021**	06-Oct-2021	✓	**24-Sep-2021**	06-Oct-2021	✓
BH11,	BH12,							
SW2,	QW64,							
RINSATE_SEP,	TRIP BLANK_SEP							

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: BTEXN								
Amber VOC Vial - Sulfuric Acid (EP080)								
BH1,	BH9A,	**22-Sep-2021**	**24-Sep-2021**	06-Oct-2021	✓	**24-Sep-2021**	06-Oct-2021	✓
BH11,	BH12,							
SW2,	QW64,							
RINSATE_SEP,	TRIP BLANK_SEP							
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
BH9A,	BH11,	**22-Sep-2021**	**24-Sep-2021**	21-Mar-2022	✓	**24-Sep-2021**	21-Mar-2022	✓
MW239S,	SW1,							
SW2,	SW4,							
WPW,	INPUT,							
QW64,	RINSATE_SEP,							
TRIP BLANK_SEP								
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
BH9A,	BH11,	**22-Sep-2021**	**24-Sep-2021**	21-Mar-2022	✓	**24-Sep-2021**	21-Mar-2022	✓
MW239S,	SW1,							
SW2,	SW4,							
WPW,	INPUT,							
QW64,	RINSATE_SEP,							
TRIP BLANK_SEP								
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X)								
BH9A,	BH11,	**22-Sep-2021**	**24-Sep-2021**	21-Mar-2022	✓	**24-Sep-2021**	21-Mar-2022	✓
MW239S,	SW1,							
SW2,	SW4,							
WPW,	INPUT,							
QW64,	RINSATE_SEP,							
TRIP BLANK_SEP								
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
BH9A,	BH11,	**22-Sep-2021**	**24-Sep-2021**	21-Mar-2022	✓	**24-Sep-2021**	21-Mar-2022	✓
MW239S,	SW1,							
SW2,	SW4,							
WPW,	INPUT,							
QW64,	RINSATE_SEP,							
TRIP BLANK_SEP								

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
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
BH9A,	BH11,	**22-Sep-2021**	**24-Sep-2021**	21-Mar-2022	✓	**24-Sep-2021**	21-Mar-2022	✓
MW239S,	SW1,							
SW2,	SW4,							
WPW,	INPUT,							
QW64,	RINSATE_SEP,							
TRIP BLANK_SEP								

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: **SOIL**

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)							
Moisture Content	EA055	3	15	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	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	
Laboratory Duplicates (DUP)							
Alkalinity by PC Titrator	ED037-P	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	3	29	10.34	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	6	60	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	20	10.00	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	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	19	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
pH	EA005	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	0	9	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
Laboratory Control Samples (LCS)							
Alkalinity by PC Titrator	ED037-P	2	9	22.22	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	16	12.50	10.00	✓	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*	
Laboratory Control Samples (LCS) - Continued							
Conductivity by PC Titrator	EA010-P	5	60	**8.33**	**8.33**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**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	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH	EA005	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	3	19	**15.79**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	3	15	**20.00**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	1	60	**1.67**	**1.67**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**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	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**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	1	9	**11.11**	**5.00**	✓	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*	
Matrix Spikes (MS) - Continued							
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	19	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	0	9	**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
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
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)
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)
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)
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM Schedule B(3)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al, Zhang et al. This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. 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)

Analytical Methods	Method	Matrix	Method Descriptions
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
QuECheRS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
TKN/TP Digestion	EK061/EK067	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM Schedule B(3)
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.

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pH @ WN

Client:	SITE, COC AND CONTACT DATA				Laboratory:
Kleinfelder Australia Pty Ltd	Site Name:	WSS - Cabbage Tree Rd Water Monitoring September 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.:	20222347	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):	Daniel Kousbroek	Newcastle NSW 2304
Phone: 02 4949 5200	Data QA level:	LAB minimum unless specified:	PM e-mail:	dkousbroek@kleinfelder.com	Phone: (02) 4014 2500

CHAIN OF CUSTODY

Relinquished by (print):	Megan Feguson	Received by (print):	KS	Relinquished:	KS	Received by:	[illegible]
(sign)	[signature]	(sign)	[signature]	(sign)	[signature]	(sign)	[signature]
Date / Time:	22/9/21 2:05	Date / Time:	22.9.21 2:06pm	Date / Time:	22.9.21 5pm	Date / Time:	22/9/21 1930
Notes:		Temp. (°C)	-1.2	Notes:		Temp. (°C)	
		Notes:	ice present / no ice seals intact / no seal			Notes:	ice present / no ice seals intact / no seal

Send Results to:
dkousbroek@kleinfelder.com & mferguson@kleinfelder.com
Suite 3, 240-244 Pacific Hwy
Charlestown, NSW 2290
newcastle@kleinfelder.com
Phone: 02 4949 5200

	Sample ID	Lab ID	Sample Point	Sample Type	Date	Start Depth	End Depth	Units	# Containers	W-04 SG TRH SG/BTEX								W-03 Metals_ NEPM 15	iron (dissolved)	8 Metals (As, Ba, Cr, Cu, Fe, Mg, Ni and Zn)	3 metals only (As, Fe & Mn)	2 metals only (B & Co)	NT 14 - Extended Water Suite		EP231X PFAS (28 analytes, standard level)	Comments
										Organic Analytes								Metals			Other Analytes					
1	BH1			Water	22/09/2021				3	X																
2	BH2			Water	22/09/2021				1												X					
3	BH4			Water	22/09/2021				1									X	X							
4	BH6			Water	22/09/2021				1									X	X							
5	BH7			Water	22/09/2021				1									X	X							
	~~BH9~~			~~Water~~	~~22/09/2021~~				~~1~~												X					
6	BH9A			Water	22/09/2021				8	X								X	X				X		X	
7	BH11			Water	22/09/2021				8	X								X	X				X		X	
8	BH12			Water	22/09/2021				3	X																
9	MW239S			Water	22/09/2021				3									X	X						X	
10	SW1			Water	22/09/2021				2																X	
11	SW2			Water	22/09/2021				8	X								X	X				X		X	
12	SW4			Water	22/09/2021				2																X	
13	WPW			Water	22/09/2021				3												X				X	
14	WPF			Sediment	22/09/2021				1																X	
15	INPUT			Water	22/09/2021				2																X	
16	RFS			Sediment	22/09/2021				1																X	

W-03 Metals (NEPM 15) - As, Ba, Be, B, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Ni, Se, V, Zn
NT14 - Extended water suite B

Subcon / Forward Lab / Split WO
Lab / Analysis: [illegible]
Organised By / Date:
Relinquished By / Date:
Connote / Courier:
WO No: ES2134278
Attached Docs / Internal Sheet:

Environmental Division
Sydney
Work Order Reference
ES2134278

Telephone : +61-2-8784 9600

LAB OF ORIGIN:
NEWCASTLE

KLEINFELDER AUSTRALIA PTY LTD

COC number:

KLEINFELDER Bright People. Right Solutions.

Client:	SITE, COC AND CONTACT DATA				Laboratory:
Kleinfelder Australia Pty Ltd	*Site Name:*	WSS - Cabbage Tree Rd Water Monitoring September 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.:*	20222347	*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):*	Daniel Kousbroek	Newcastle NSW 2304
Phone: 02 4949 5200	*Data QA level:*	LAB minimum unless specified:	*PM e-mail:*	dkousbroek@kleinfelder.com	Phone: (02) 4014 2500

CHAIN OF CUSTODY

Relinquished by (print):	Megan Feguson	*Received by (print):*	ES	*Relinquished:*	18	*Received by:*	Scott Ashe
(sign)		*(sign)*		*(sign)*		*(sign)*	
Date / Time:	22/9/21 2:05	*Date / Time:*	22-09-21 2:05pm	*Date / Time:*	22-9-21	*Date / Time:*	22/9/21 3PM 10:30
Notes:		*Temp. (°C)*	-1.2	*Notes:*		*Temp. (°C)*	
		Notes:	ice present / no ice seals intact / no seal			*Notes:*	ice present / no ice seals intact / no seal

Send Results to:

dkousbroek@kleinfelder.com & mferguson@kleinfelder.com

Suite 3, 240-244 Pacific Hwy
Charlestown, NSW 2290
newcastle@kleinfelder.com
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)	8 Metals (As, Ba, Cr, Cu, Fe, Mg, Ni and Zn)	Other Analytes: 3 metals only (As, Fe & Mn)	2 metals only (B & Co)	NT 14 - Extended Water Suite		EP231X PFAS (28 analytes, standard level)	Comments
17	WASHED			Sediment	22/09/2021				1																X	
18	QW64			Water	22/09/2021				6	X								X	X						X	
~~19~~	QW65			Water	22/09/2021				6	X								X	X						X	Send to Eurofins
	~~QW66~~			Water	22/09/2021				2																X	
	~~QW67~~			Water	22/09/2021				2																X	~~Send to Eurofins~~
19	RINSATE_SEP			Water	22/09/2021				6	X								X	X						X	
20	TRIP BLANK_SEP			Water	22/09/2021				6	X								X	X						X	

W-03 Metals (NEPM 15) - As, Ba, Be, B, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Ni, Se, V, Zn
NT14 - Extended water suite B

RECEIVED

LAB OF ORIGIN:
NEWCASTLE

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www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 6253 4444
NATA # 2377 Site # 2370

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

Sample Receipt Advice

Company name:	Kleinfelder Aust Pty Ltd (NEWCASTLE)
Contact name:	Daniel Kousbroek
Project name:	WSS - CABBAGE TREE RD WATER MONITORING SEPTEMBER 2021
Project ID:	20222347
Turnaround time:	5 Day
Date/Time received	Sep 23, 2021 4:05 PM
Eurofins reference	827377

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 Daniel Kousbroek - dkousbroek@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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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

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Mayfield East NSW 2304
PO Box 60 Wickham 2293
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NATA # 1261 Site # 25079

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ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 6253 4444
NATA # 2377 Site # 2370

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

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

Order No.:
Report #: 827377
Phone: 02 4949 5200
Fax:

Received: Sep 23, 2021 4:05 PM
Due: Sep 30, 2021
Priority: 5 Day
Contact Name: Daniel Kousbroek

Project Name: WSS - CABBAGE TREE RD WATER MONITORING SEPTEMBER 2021
Project ID: 20222347

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Iron (filtered)	NEPM 1999 Metals : Metals M15 (Filtered)	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254								
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	
Brisbane Laboratory - NATA # 1261 Site # 20794								X
Mayfield Laboratory - NATA # 1261 Site # 25079								
Perth Laboratory - NATA # 2377 Site # 2370								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	QW65	Sep 22, 2021		Water	S21-Se51488	X	X	X
Test Counts						1	1	1

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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 20794

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: **Daniel Kousbroek**

Report **827377-W**
Project name WSS - CABBAGE TREE RD WATER MONITORING SEPTEMBER 2021
Project ID 20222347
Received Date Sep 23, 2021

Client Sample ID			**QW65**
Sample Matrix			**Water**
Eurofins Sample No.			**S21-Se51488**
Date Sampled			**Sep 22, 2021**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
Naphthalene[N02]	0.01	mg/L	< 0.01
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	98
TRH - 2013 NEPM Fractions (after silica gel clean-up)			
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)			
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	0.1
Heavy Metals			
Arsenic (filtered)	0.001	mg/L	< 0.001
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	< 0.001
Cobalt (filtered)	0.001	mg/L	0.003
Copper (filtered)	0.001	mg/L	0.002
Iron (filtered)	0.05	mg/L	1.4
Lead (filtered)	0.001	mg/L	< 0.001
Manganese (filtered)	0.005	mg/L	0.083
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	0.005
Selenium (filtered)	0.001	mg/L	< 0.001
Vanadium (filtered)	0.005	mg/L	< 0.005
Zinc (filtered)	0.005	mg/L	0.12

Client Sample ID			QW65
Sample Matrix			Water
Eurofins Sample No.			S21-Se51488
Date Sampled			Sep 22, 2021
Test/Reference	LOR	Unit	
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01
13C4-PFBA (surr.)	1	%	58
13C5-PFPeA (surr.)	1	%	88
13C5-PFHxA (surr.)	1	%	119
13C4-PFHpA (surr.)	1	%	136
13C8-PFOA (surr.)	1	%	115
13C5-PFNA (surr.)	1	%	94
13C6-PFDA (surr.)	1	%	81
13C2-PFUnDA (surr.)	1	%	67
13C2-PFDoDA (surr.)	1	%	66
13C2-PFTeDA (surr.)	1	%	76
Perfluoroalkyl sulfonamido substances			
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05
13C8-FOSA (surr.)	1	%	58
D3-N-MeFOSA (surr.)	1	%	54
D5-N-EtFOSA (surr.)	1	%	52
D7-N-MeFOSE (surr.)	1	%	50
D9-N-EtFOSE (surr.)	1	%	43
D5-N-EtFOSAA (surr.)	1	%	64
D3-N-MeFOSAA (surr.)	1	%	44
Perfluoroalkyl sulfonic acids (PFSAs)			
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01
13C3-PFBS (surr.)	1	%	118

Client Sample ID			QW65
Sample Matrix			Water
Eurofins Sample No.			S21-Se51488
Date Sampled			Sep 22, 2021
Test/Reference	LOR	Unit	
Perfluoroalkyl sulfonic acids (PFSAs)			
18O2-PFHxS (surr.)	1	%	120
13C8-PFOS (surr.)	1	%	99
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01
13C2-4:2 FTSA (surr.)	1	%	117
13C2-6:2 FTSA (surr.)	1	%	105
13C2-8:2 FTSA (surr.)	1	%	90
13C2-10:2 FTSA (surr.)	1	%	93
PFASs Summations			
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B1SG: TRH (With Silica Gel Clean up), BTEXN			
BTEX	Sydney	Sep 28, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Sydney	Sep 29, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Sydney	Sep 29, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
NEPM Metals : Metals M15 filtered (ex HexCr)			
Arsenic (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Barium (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Beryllium (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Boron (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Cadmium (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Chromium (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Cobalt (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Copper (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Heavy Metals (filtered)	Sydney	Sep 27, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Lead (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Manganese (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Mercury (filtered)	Sydney	Oct 05, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Nickel (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Selenium (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Vanadium (filtered)	Sydney	Oct 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Zinc (filtered)	Sydney	Oct 05, 2021	6 Months
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Sep 28, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Sep 28, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Sep 28, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Sep 28, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 6253 4444
NATA # 2377 Site # 2370

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

Company Name:	Kleinfelder Aust Pty Ltd (NEWCASTLE)	**Order No.:**		**Received:**	Sep 23, 2021 4:05 PM
Address:	Suite 3, 240-244 Pacific Hwy Charlestown NSW 2290	**Report #:**	827377	**Due:**	Sep 30, 2021
		Phone:	02 4949 5200	**Priority:**	5 Day
		Fax:		**Contact Name:**	Daniel Kousbroek
Project Name:	WSS - CABBAGE TREE RD WATER MONITORING SEPTEMBER 2021				
Project ID:	20222347				

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Iron (filtered)	NEPM 1999 Metals : Metals M15 (Filtered)	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254								
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	
Brisbane Laboratory - NATA # 1261 Site # 20794								X
Mayfield Laboratory - NATA # 1261 Site # 25079								
Perth Laboratory - NATA # 2377 Site # 2370								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	QW65	Sep 22, 2021		Water	S21-Se51488	X	X	X
Test Counts						1	1	1

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.

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
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
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR : No Limit

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

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

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

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

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

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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. 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.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. 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							
Total Recoverable Hydrocarbons							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/L	< 0.1			0.1	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	
Selenium (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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
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							
Total Recoverable Hydrocarbons							
Naphthalene	%	102			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	83			70-130	Pass	
Toluene	%	88			70-130	Pass	
Ethylbenzene	%	91			70-130	Pass	
m&p-Xylenes	%	91			70-130	Pass	
o-Xylene	%	92			70-130	Pass	
Xylenes - Total*	%	91			70-130	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	112			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	117			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	96			80-120	Pass	
Barium (filtered)	%	90			80-120	Pass	
Beryllium (filtered)	%	92			80-120	Pass	
Boron (filtered)	%	98			80-120	Pass	
Cadmium (filtered)	%	93			80-120	Pass	
Chromium (filtered)	%	107			80-120	Pass	
Cobalt (filtered)	%	110			80-120	Pass	
Copper (filtered)	%	108			80-120	Pass	
Iron (filtered)	%	105			80-120	Pass	
Lead (filtered)	%	115			80-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Manganese (filtered)	%	99			80-120	Pass	
Mercury (filtered)	%	114			80-120	Pass	
Nickel (filtered)	%	108			80-120	Pass	
Selenium (filtered)	%	100			80-120	Pass	
Vanadium (filtered)	%	105			80-120	Pass	
Zinc (filtered)	%	101			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	124			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	95			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	95			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	94			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	94			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	95			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	93			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	97			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	104			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	60			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	107			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	95			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	96			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	94			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	100			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	99			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	101			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	88			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	84			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	76			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	83			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	81			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	85			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	96			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	91			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	57			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	93			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	95			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	92			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
Naphthalene	S21-Se51461	NCP	%	97			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Se51461	NCP	%	85			70-130	Pass	
Toluene	S21-Se51461	NCP	%	92			70-130	Pass	
Ethylbenzene	S21-Se51461	NCP	%	92			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	S21-Se51461	NCP	%	93			70-130	Pass	
o-Xylene	S21-Se51461	NCP	%	93			70-130	Pass	
Xylenes - Total*	S21-Se51461	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-Se58739	NCP	%	95			75-125	Pass	
Barium (filtered)	S21-Se58739	NCP	%	85			75-125	Pass	
Beryllium (filtered)	S21-Se58739	NCP	%	85			75-125	Pass	
Boron (filtered)	S21-Se58739	NCP	%	91			75-125	Pass	
Cadmium (filtered)	S21-Se58739	NCP	%	85			75-125	Pass	
Chromium (filtered)	S21-Se58739	NCP	%	93			75-125	Pass	
Cobalt (filtered)	S21-Se58739	NCP	%	94			75-125	Pass	
Copper (filtered)	S21-Se58739	NCP	%	90			75-125	Pass	
Iron (filtered)	S21-Se58739	NCP	%	91			75-125	Pass	
Lead (filtered)	S21-Se58739	NCP	%	97			75-125	Pass	
Manganese (filtered)	S21-Se58739	NCP	%	81			75-125	Pass	
Mercury (filtered)	S21-Se58739	NCP	%	96			75-125	Pass	
Nickel (filtered)	S21-Se58739	NCP	%	91			75-125	Pass	
Selenium (filtered)	S21-Se58739	NCP	%	87			75-125	Pass	
Vanadium (filtered)	S21-Se58739	NCP	%	96			75-125	Pass	
Zinc (filtered)	S21-Se58739	NCP	%	85			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	N21-Se52964	NCP	%	101			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	N21-Se52964	NCP	%	95			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	N21-Se52964	NCP	%	95			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	N21-Se52964	NCP	%	94			50-150	Pass	
Perfluorooctanoic acid (PFOA)	N21-Se52964	NCP	%	95			50-150	Pass	
Perfluorononanoic acid (PFNA)	N21-Se52964	NCP	%	100			50-150	Pass	
Perfluorodecanoic acid (PFDA)	N21-Se52964	NCP	%	101			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	N21-Se52964	NCP	%	95			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	N21-Se52964	NCP	%	104			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	N21-Se52964	NCP	%	71			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	N21-Se52964	NCP	%	100			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	N21-Se52964	NCP	%	97			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	N21-Se52964	NCP	%	98			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	N21-Se52964	NCP	%	94			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N21-Se52964	NCP	%	101			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	N21-Se52964	NCP	%	102			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	N21-Se52964	NCP	%	101			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	N21-Se52964	NCP	%	99			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorobutanesulfonic acid (PFBS)	N21-Se52964	NCP	%	85			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	N21-Se52964	NCP	%	77			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	N21-Se52964	NCP	%	88			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	N21-Se52964	NCP	%	83			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	N21-Se52964	NCP	%	91			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	N21-Se52964	NCP	%	94			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	N21-Se52964	NCP	%	84			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	N21-Se52964	NCP	%	65			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	N21-Se52964	NCP	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	N21-Se52964	NCP	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	N21-Se52964	NCP	%	87			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	N21-Se52964	NCP	%	97			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
Naphthalene	S21-Se49961	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Se49961	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S21-Se49961	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S21-Se49961	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S21-Se49961	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S21-Se49961	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S21-Se49961	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-Se58739	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Barium (filtered)	S21-Se58739	NCP	mg/L	0.03	0.03	4.0	30%	Pass	
Beryllium (filtered)	S21-Se58739	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Boron (filtered)	S21-Se58739	NCP	mg/L	0.07	0.07	2.0	30%	Pass	
Cadmium (filtered)	S21-Se58739	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-Se58739	NCP	mg/L	0.001	0.001	1.0	30%	Pass	
Cobalt (filtered)	S21-Se58739	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S21-Se58739	NCP	mg/L	0.002	0.002	1.0	30%	Pass	
Iron (filtered)	S21-Se58739	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Lead (filtered)	S21-Se58739	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	S21-Se58739	NCP	mg/L	0.073	0.075	2.0	30%	Pass	
Mercury (filtered)	S21-Se58739	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-Se58739	NCP	mg/L	0.002	0.002	5.0	30%	Pass	
Selenium (filtered)	S21-Se58739	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vanadium (filtered)	S21-Se58739	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Zinc (filtered)	S21-Se58739	NCP	mg/L	0.017	0.015	13	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
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
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
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson
General Manager

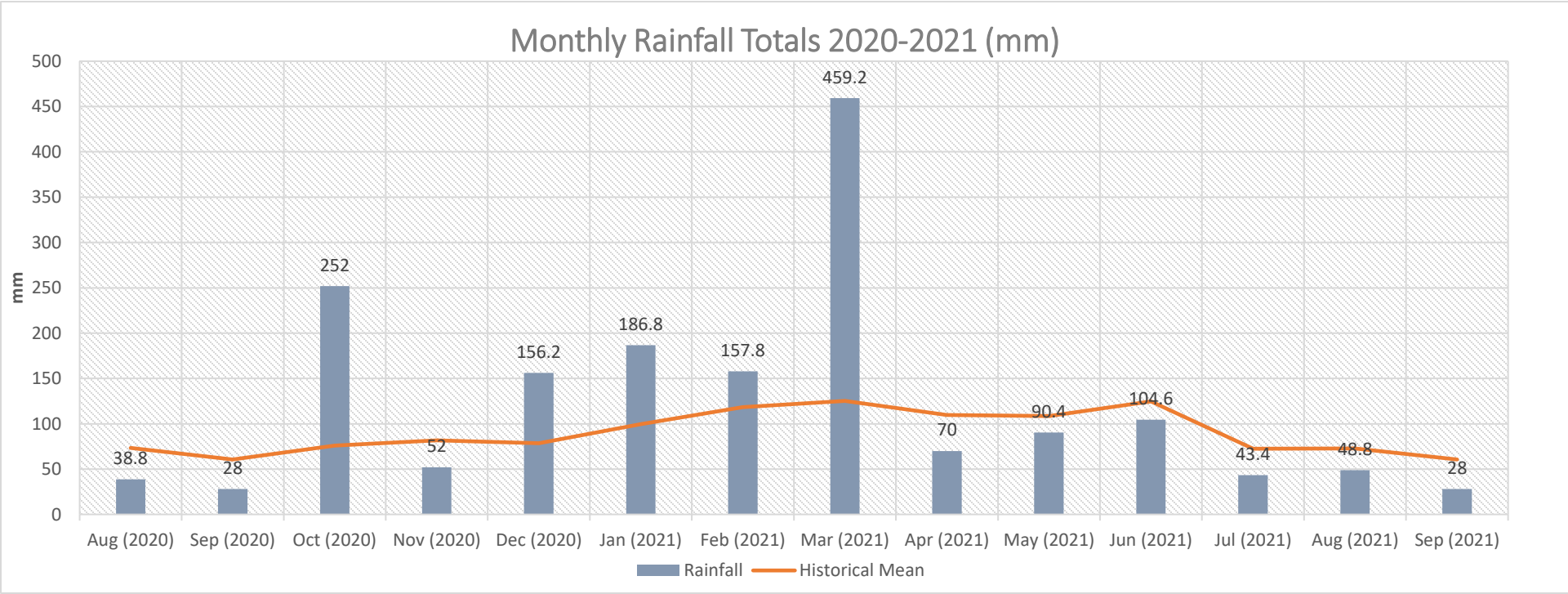
Final Report – this report replaces any previously issued Report

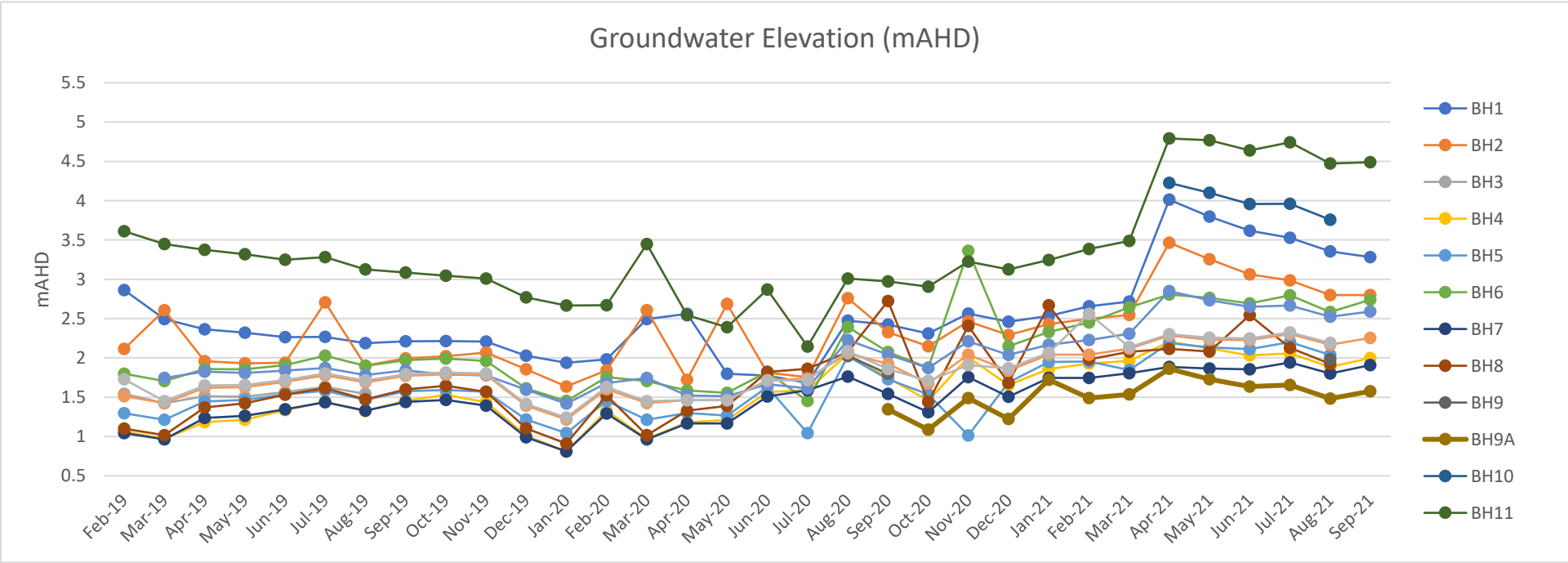
- Indicates Not Requested

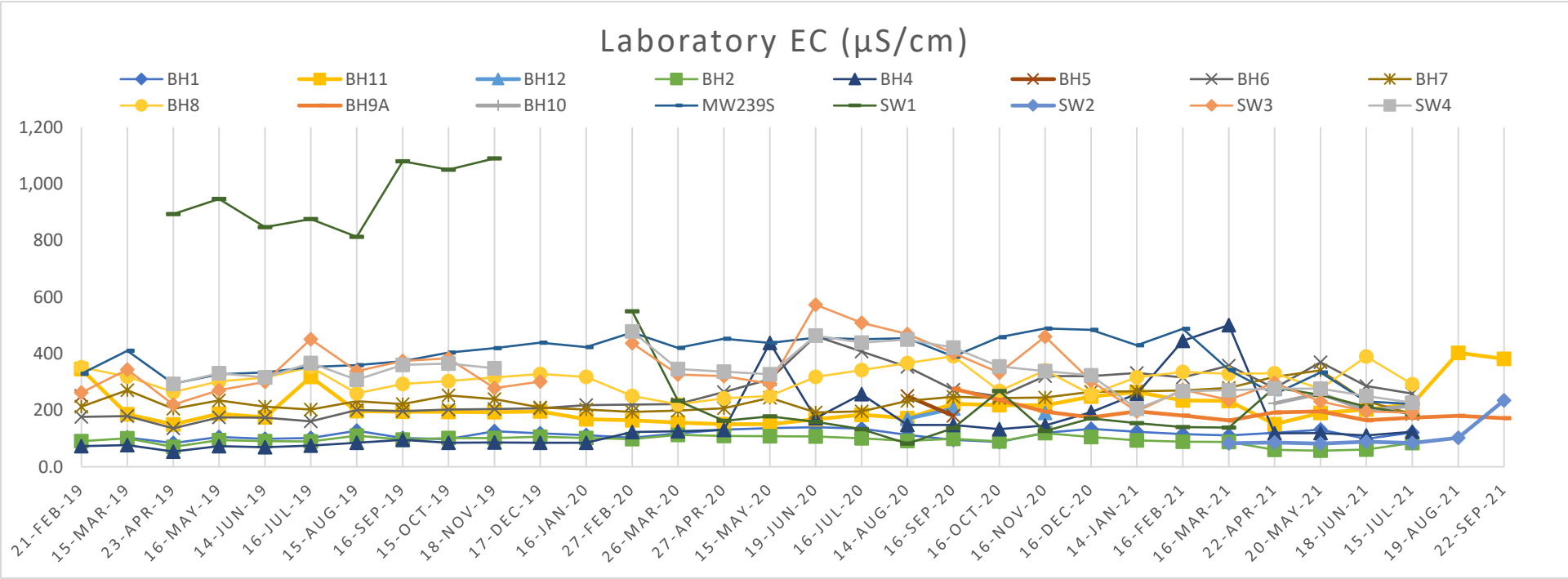
* Indicates NATA accreditation does not cover the performance of this service

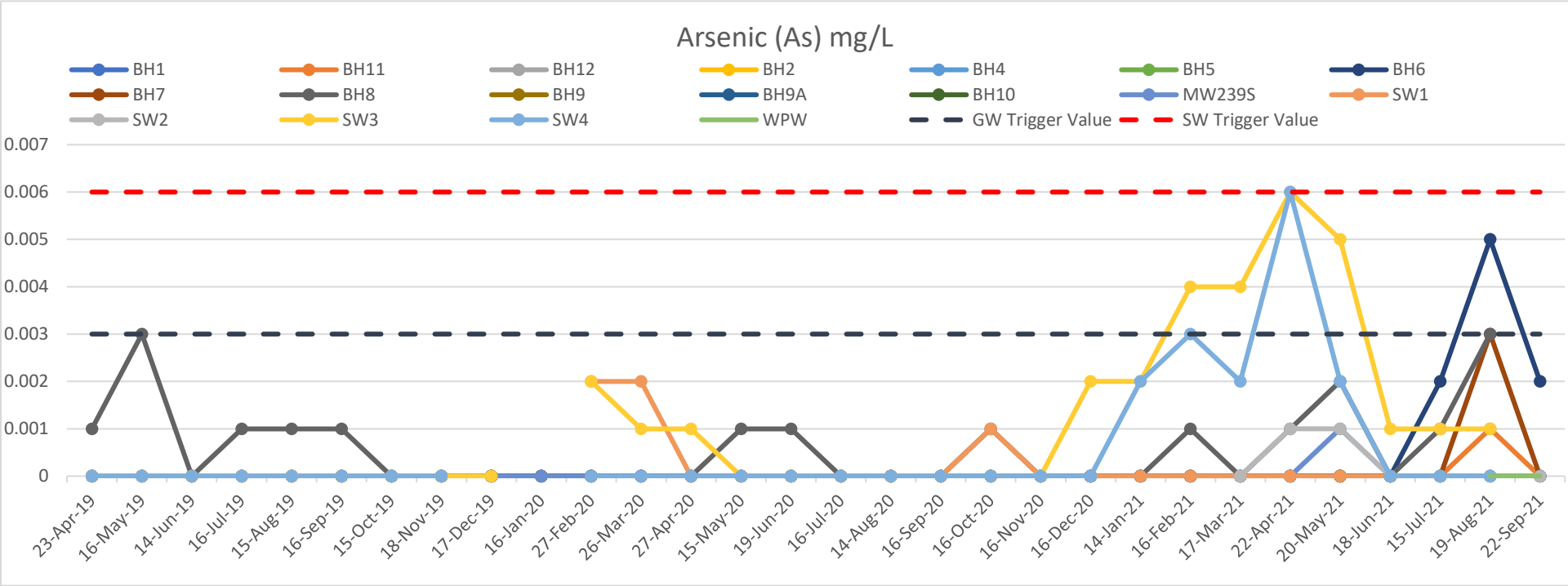
Measurement uncertainty of test data is available on request or please click here.

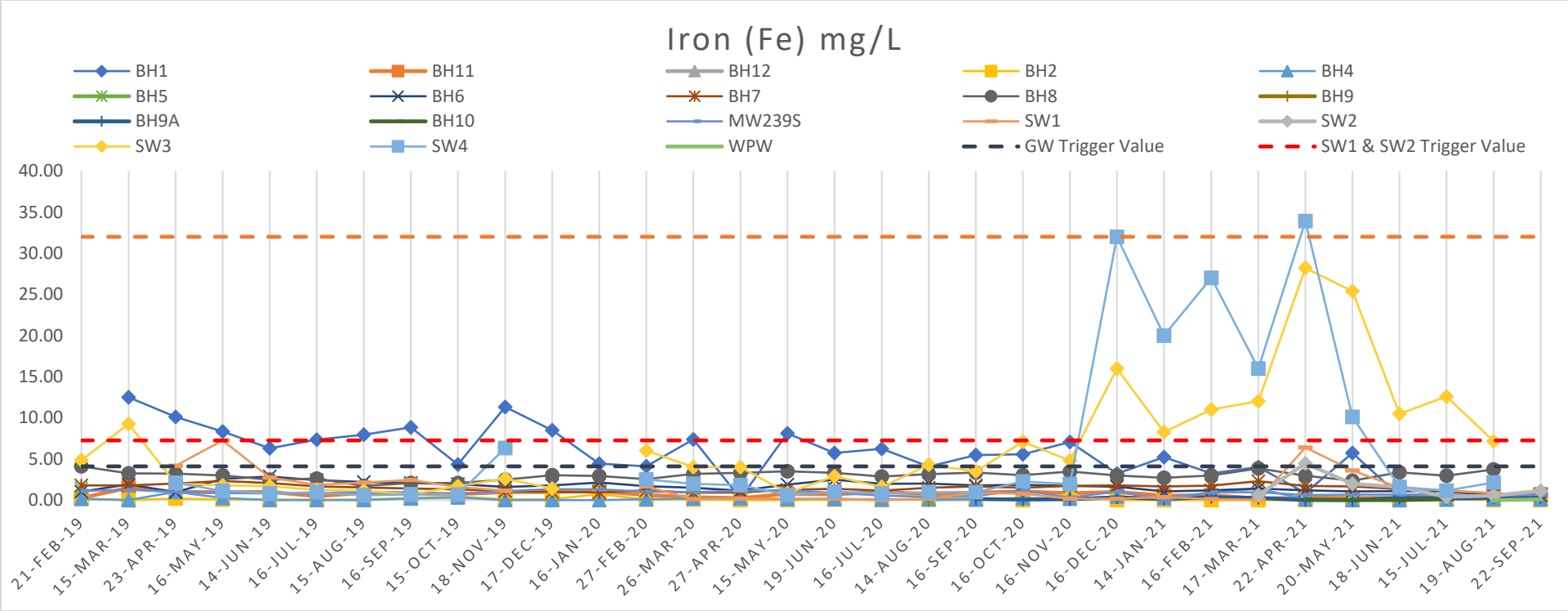
ATTACHMENT 4: DATA TRENDS

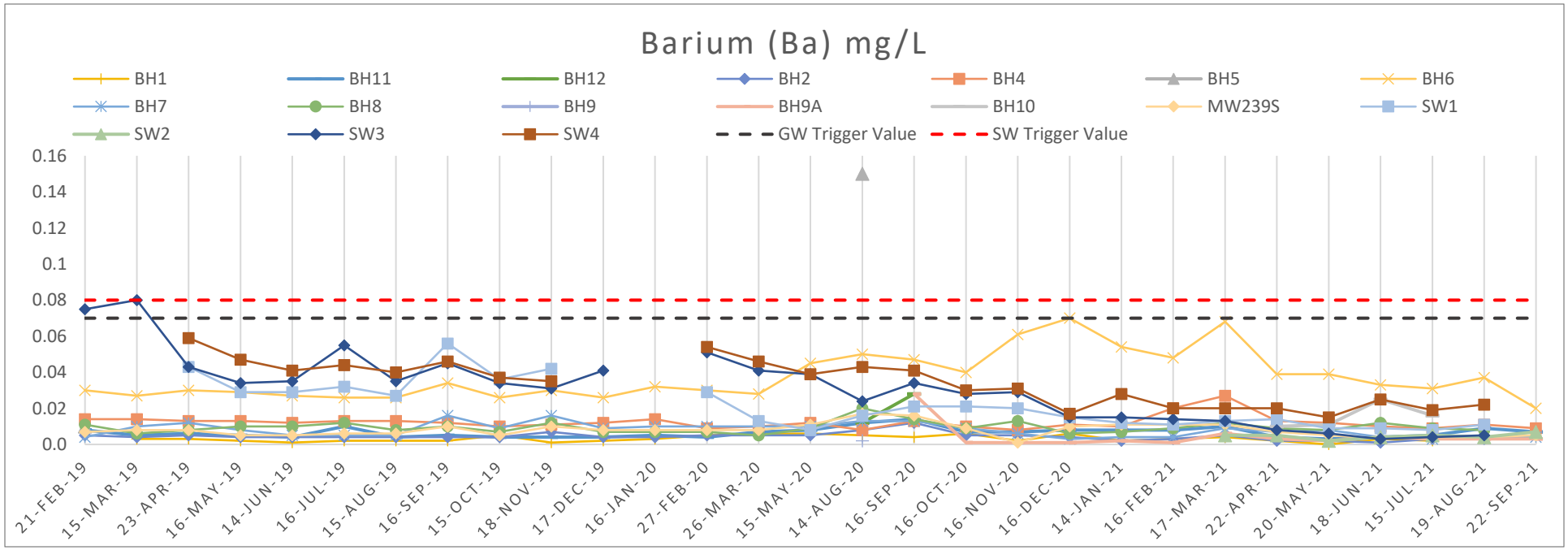

Monthly Rainfall Totals 2020-2021 (mm)
mm
500
450
400
350
300
250
200
150
100
50
0
38.8
28
252
52
156.2
186.8
157.8
459.2
70
90.4
104.6
43.4
48.8
28
Aug (2020)
Sep (2020)
Oct (2020)
Nov (2020)
Dec (2020)
Jan (2021)
Feb (2021)
Mar (2021)
Apr (2021)
May (2021)
Jun (2021)
Jul (2021)
Aug (2021)
Sep (2021)
Rainfall
Historical Mean

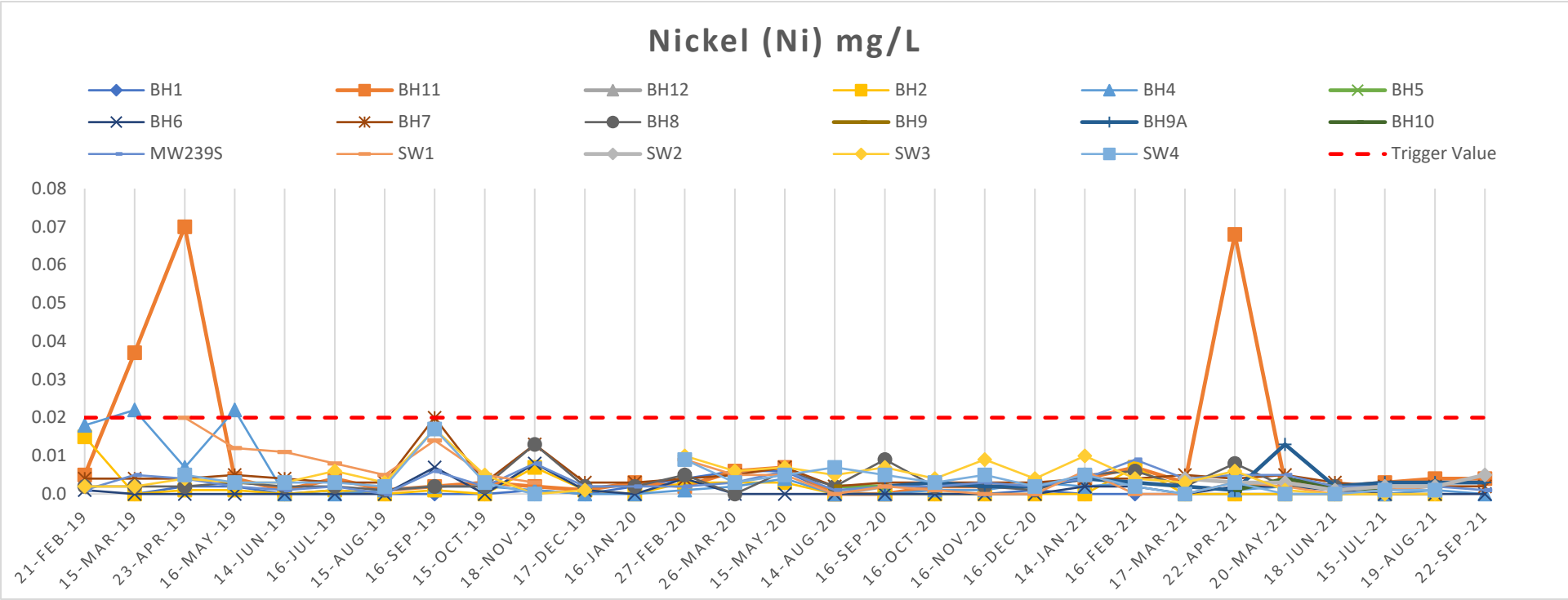

Groundwater Elevation (mAHD)
mAHD
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
Feb-19
Mar-19
Apr-19
May-19
Jun-19
Jul-19
Aug-19
Sep-19
Oct-19
Nov-19
Dec-19
Jan-20
Feb-20
Mar-20
Apr-20
May-20
Jun-20
Jul-20
Aug-20
Sep-20
Oct-20
Nov-20
Dec-20
Jan-21
Feb-21
Mar-21
Apr-21
May-21
Jun-21
Jul-21
Aug-21
Sep-21
BH1
BH2
BH3
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
BH11

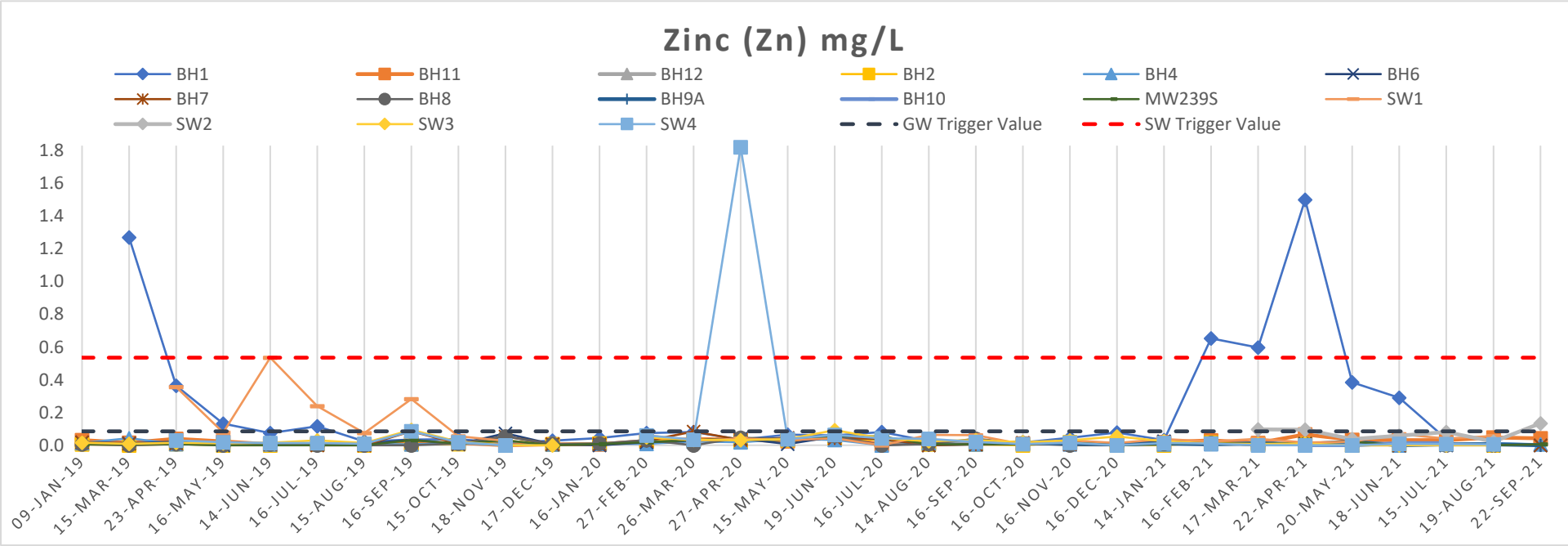

Laboratory EC (µS/cm)
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
1,200
1,000
800
600
400
200
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20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

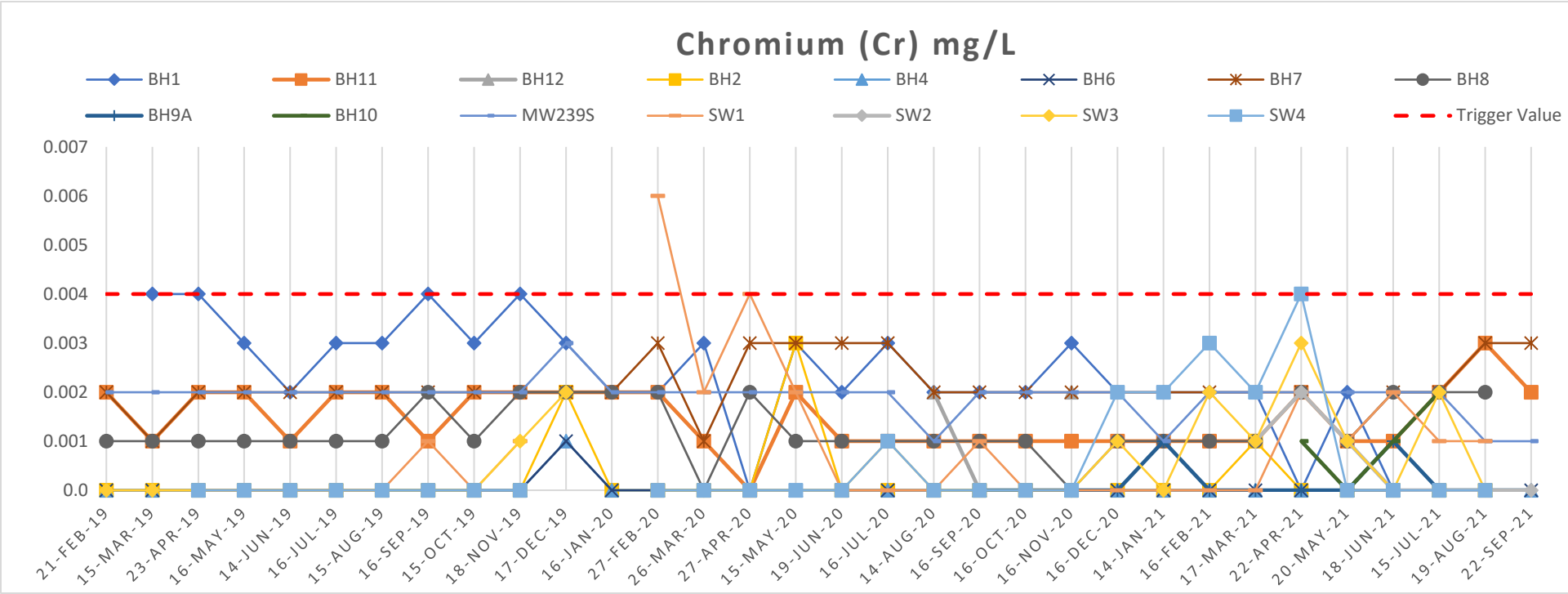

Arsenic (As) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
WPW
GW Trigger Value
SW Trigger Value
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
23-Apr-19
16-May-19
14-Jun-19
16-Jul-19
15-Aug-19
16-Sep-19
15-Oct-19
18-Nov-19
17-Dec-19
16-Jan-20
27-Feb-20
26-Mar-20
27-Apr-20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

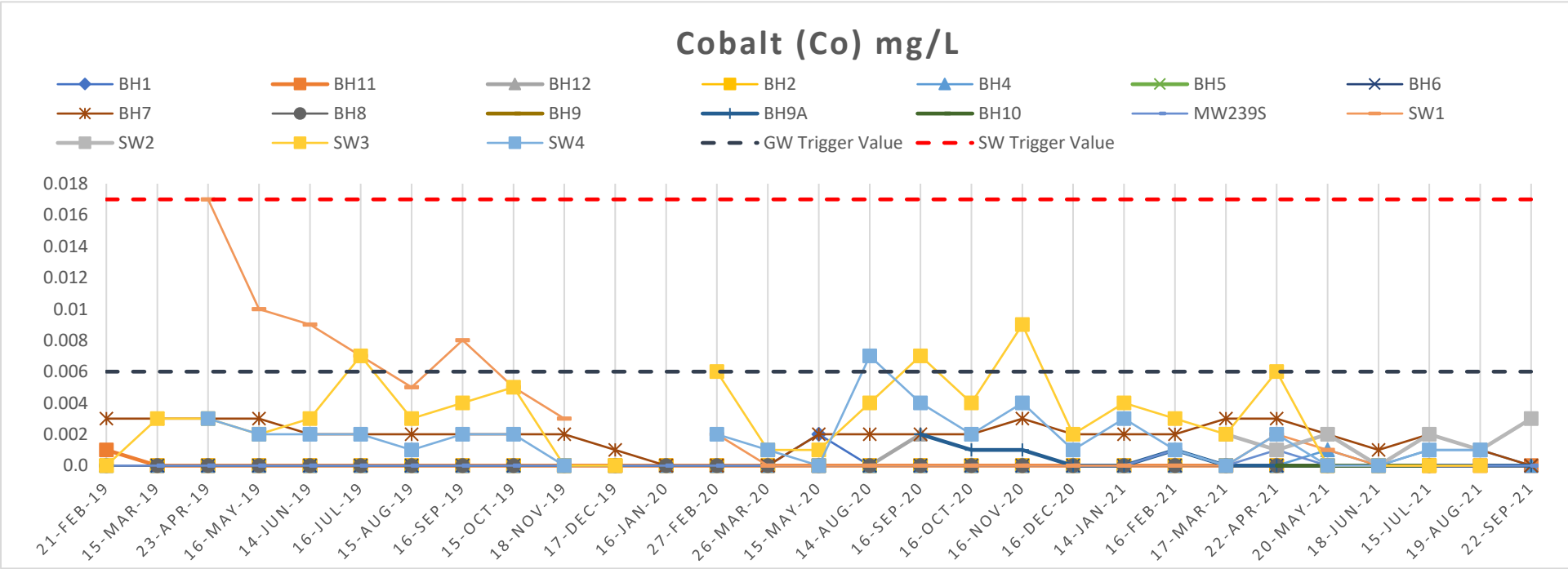

Iron (Fe) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
WPW
GW Trigger Value
SW1 & SW2 Trigger Value
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20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

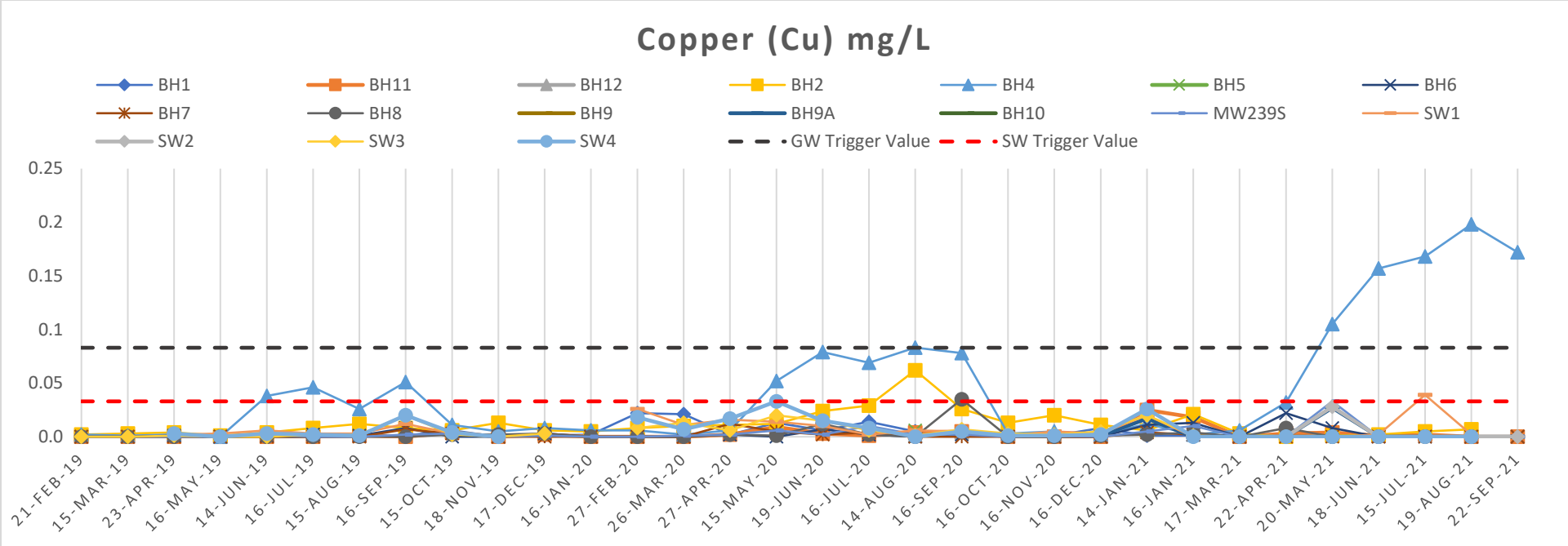

Barium (Ba) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
GW Trigger Value
SW Trigger Value
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20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

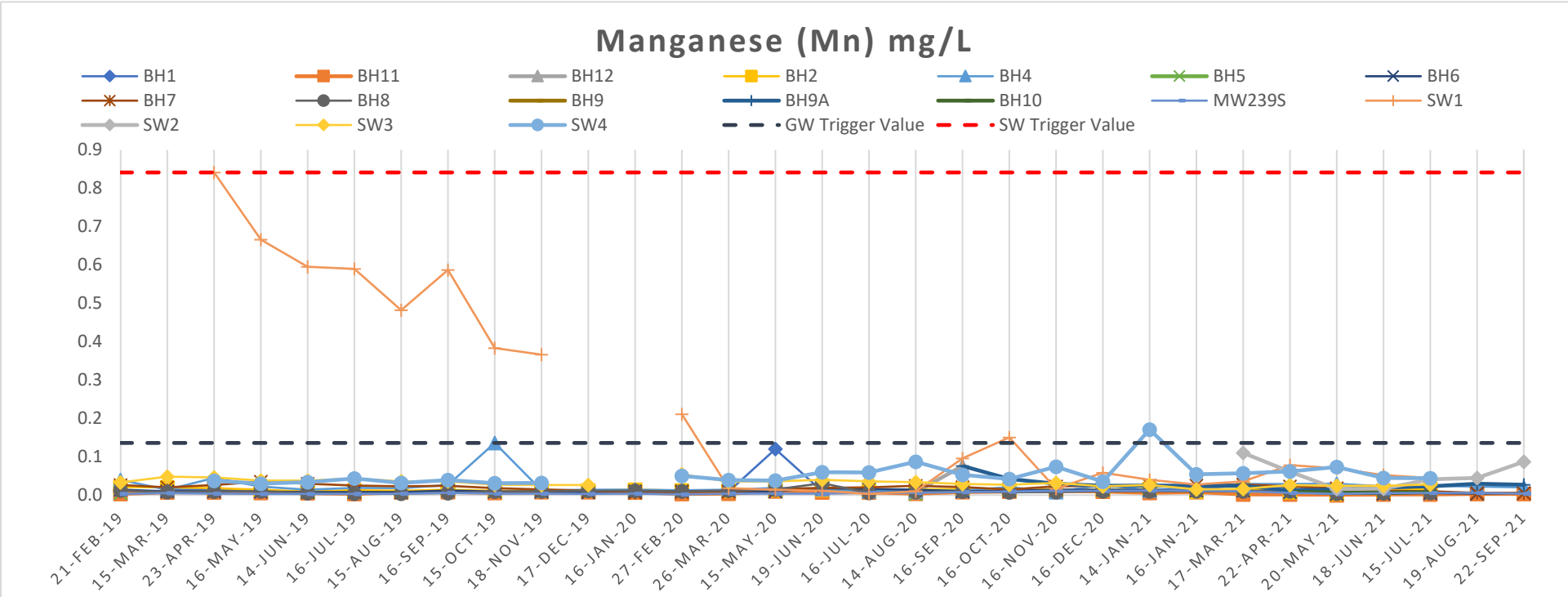

Nickel (Ni) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
Trigger Value
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
15-MAY-20
14-AUG-20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

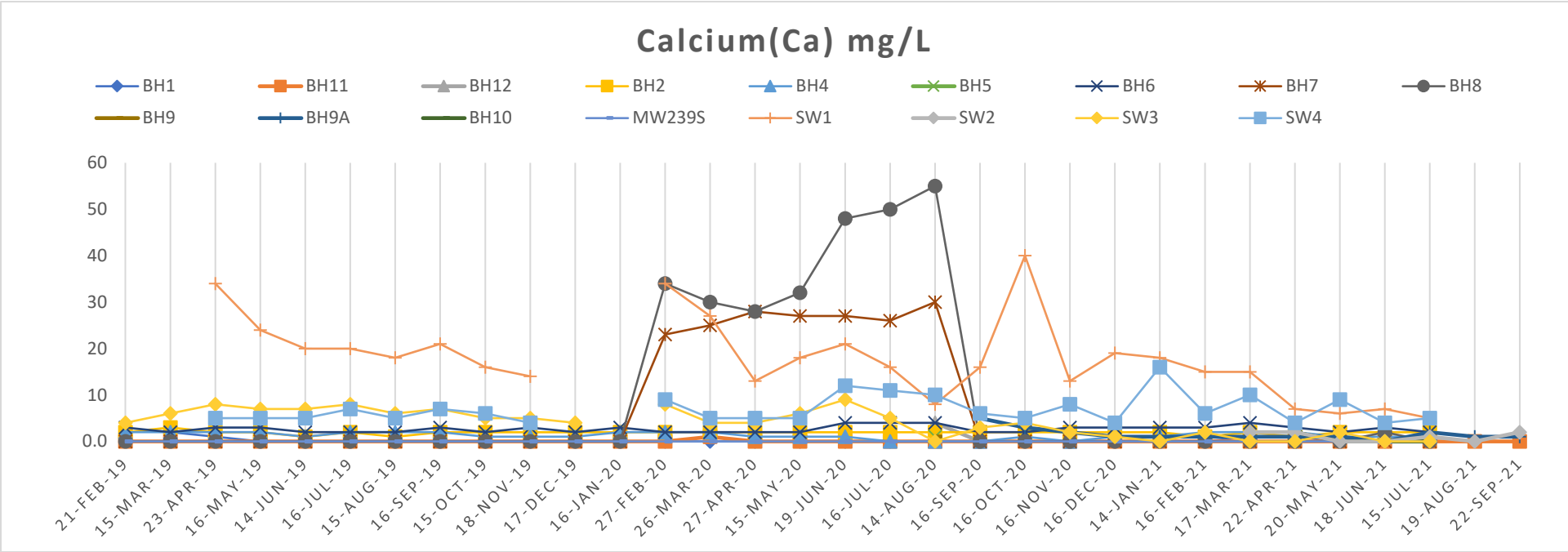

Zinc (Zn) mg/L
BH1
BH11
BH12
BH2
BH4
BH6
BH7
BH8
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
GW Trigger Value
SW Trigger Value
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
09-JAN-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20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


Chromium (Cr) mg/L
BH1
BH11
BH12
BH2
BH4
BH6
BH7
BH8
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
Trigger Value
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
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
15-JUL-21
19-AUG-21
22-SEP-21


Cobalt (Co) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
GW Trigger Value
SW Trigger Value
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
15-JUL-21
19-AUG-21
22-SEP-21


Copper (Cu) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
GW Trigger Value
SW Trigger Value
0.25
0.2
0.15
0.1
0.05
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-JAN-21
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21
15-JUL-21
19-AUG-21
22-SEP-21


Manganese (Mn) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
GW Trigger Value
SW Trigger Value
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
14-AUG-20
16-SEP-20
16-OCT-20
16-NOV-20
16-DEC-20
14-JAN-21
16-JAN-21
17-MAR-21
22-APR-21
20-MAY-21
18-JUN-21
15-JUL-21
19-AUG-21
22-SEP-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
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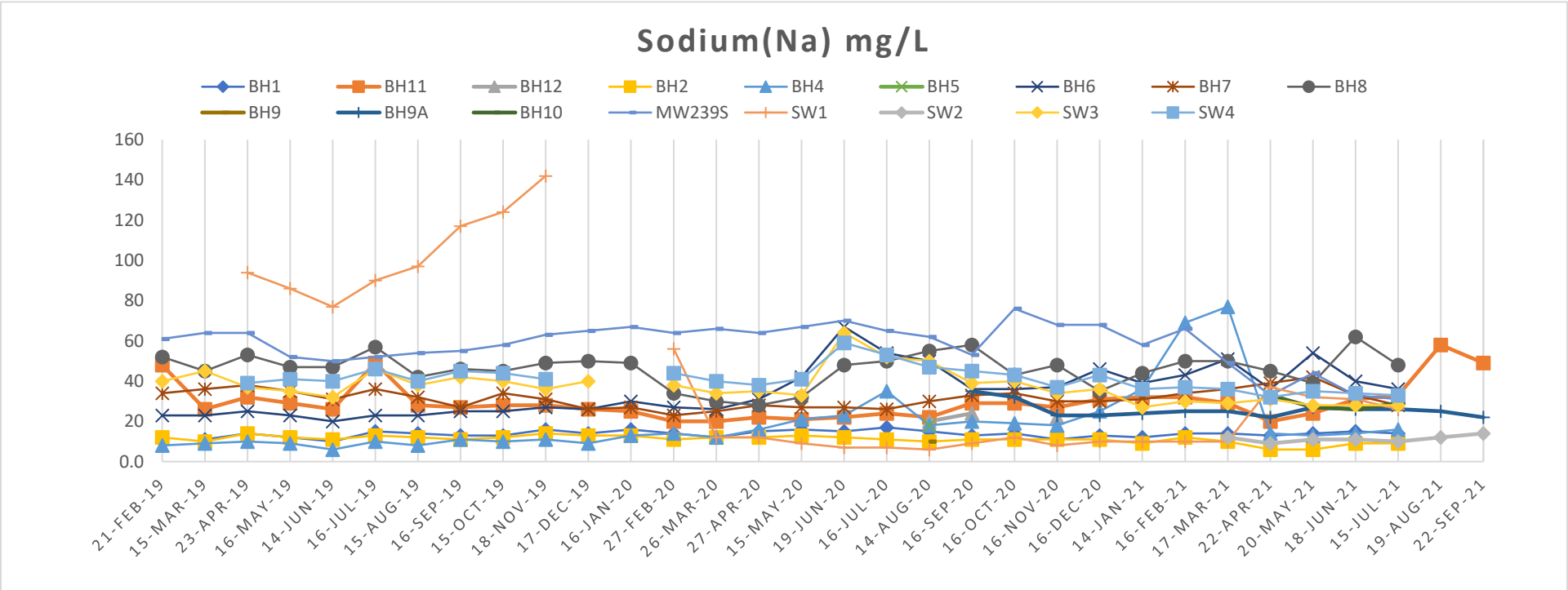
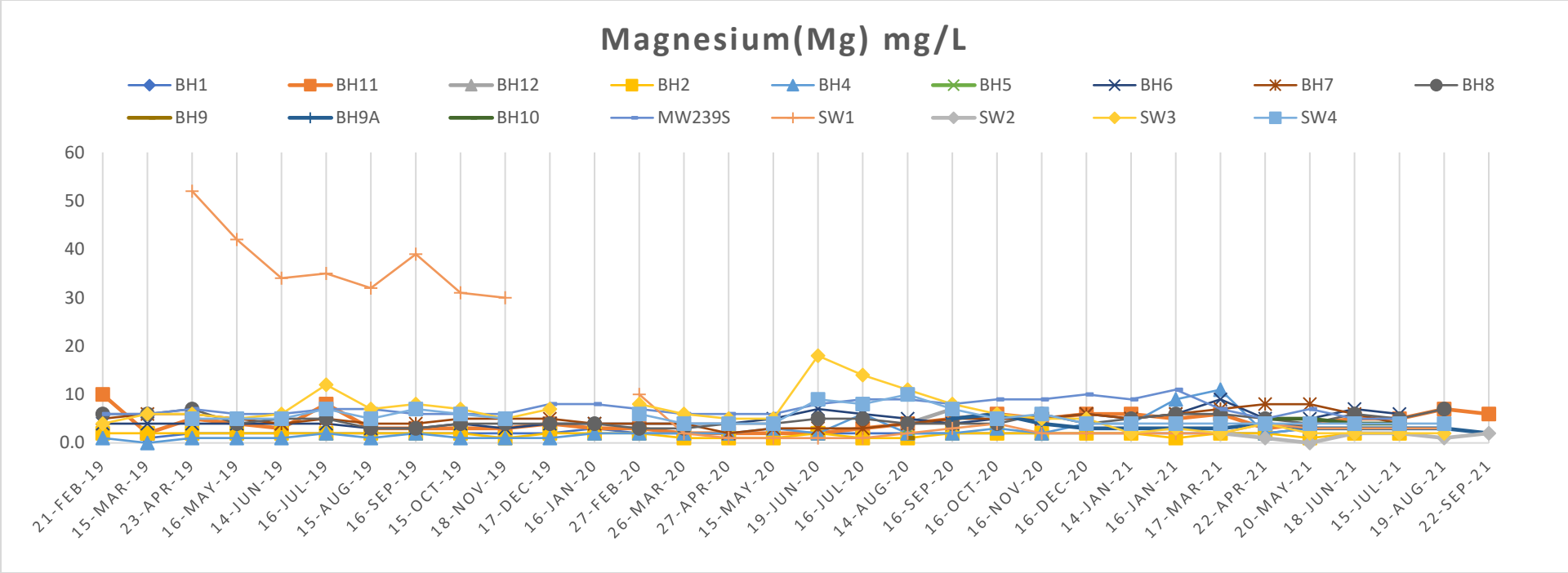
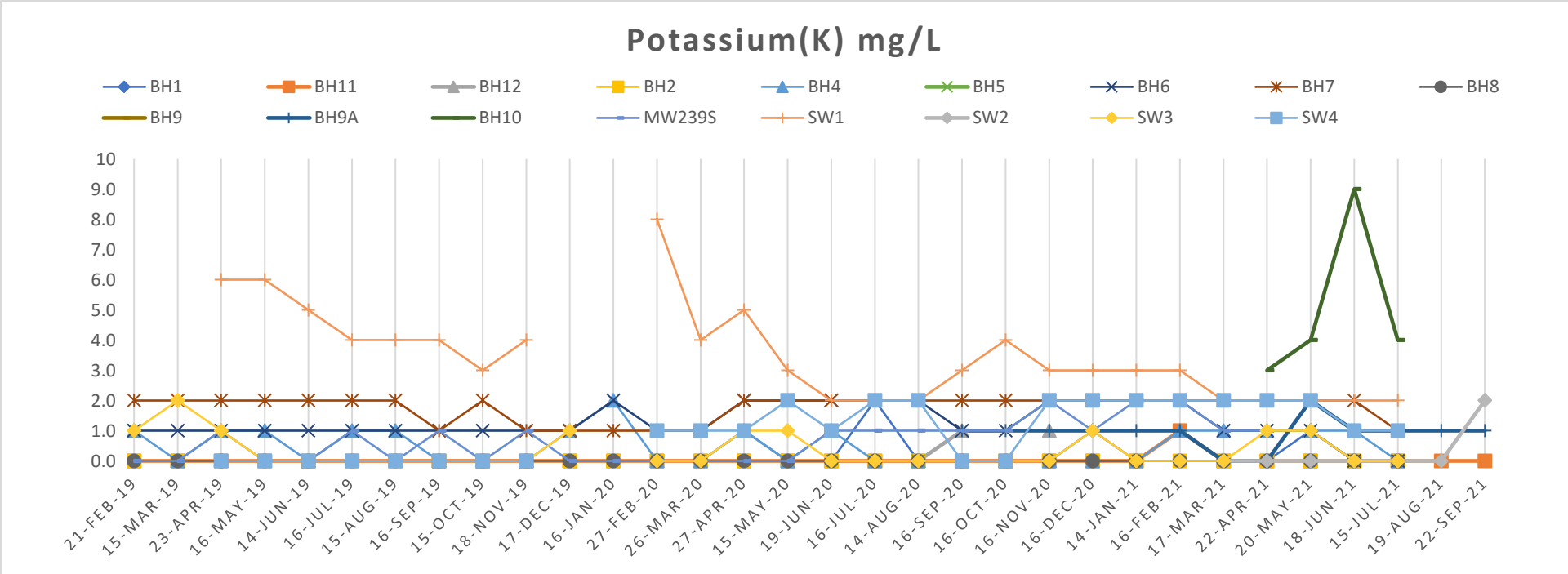
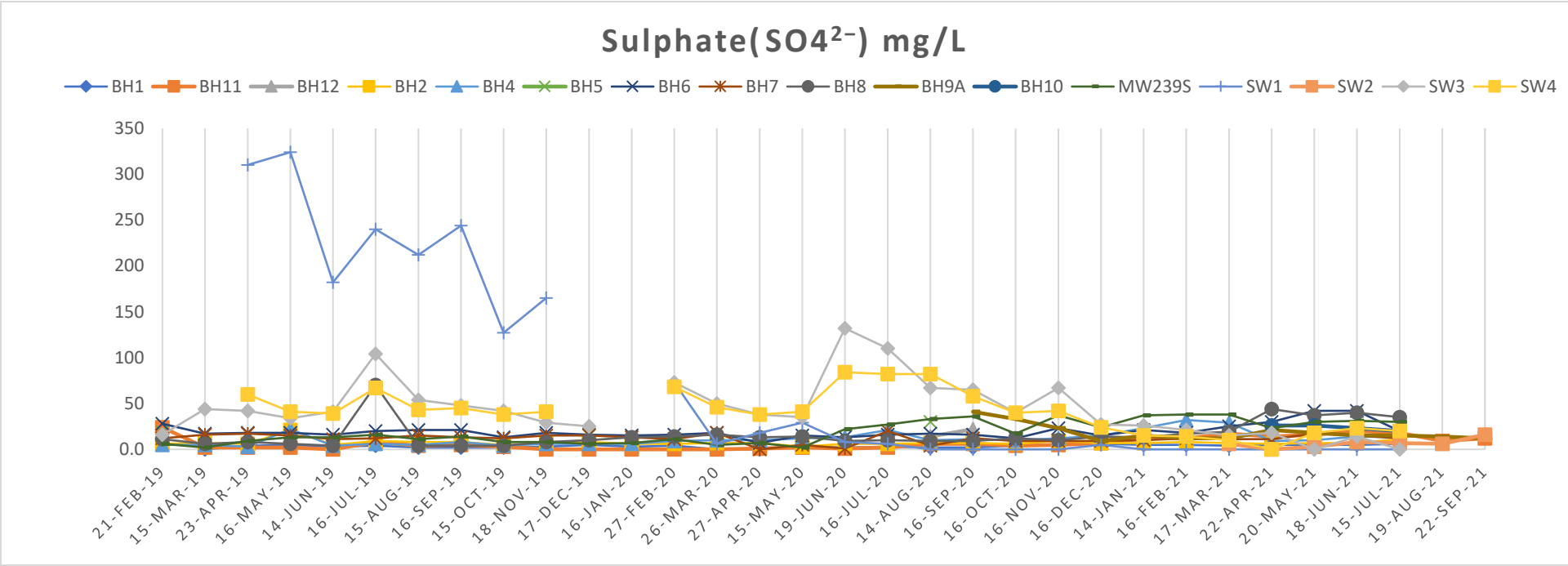
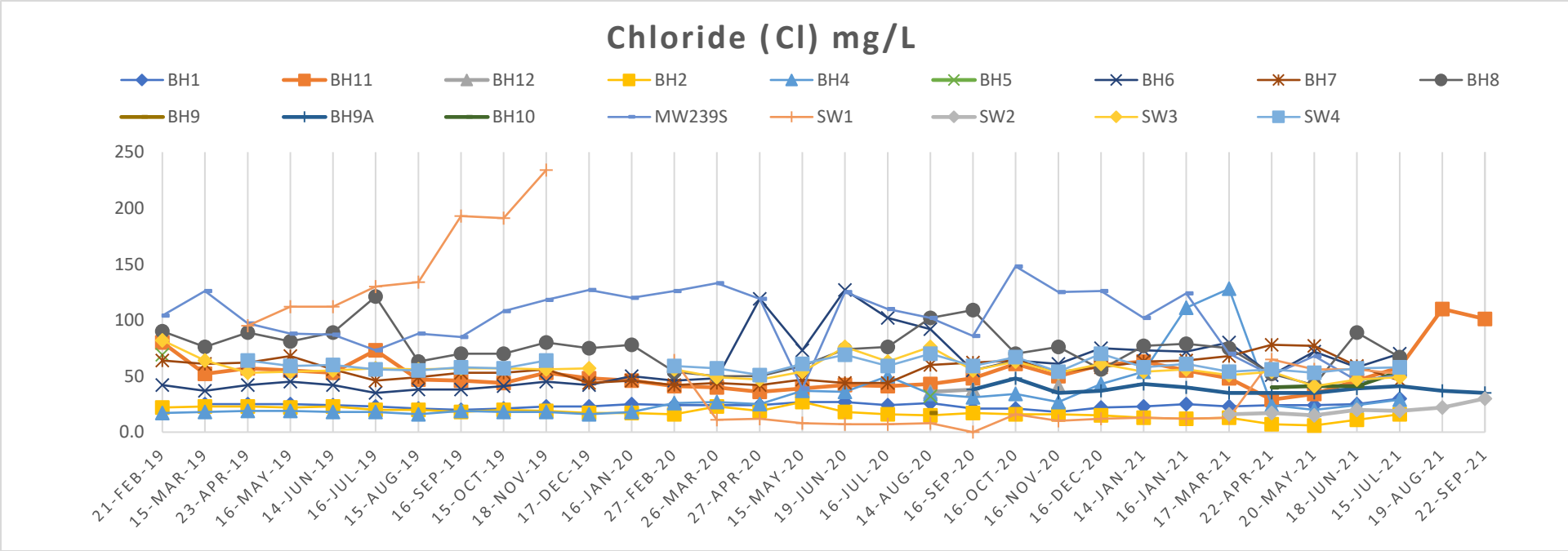
22-APR-21
20-MAY-21
18-JUN-21
15-JUL-21
19-AUG-21
22-SEP-21

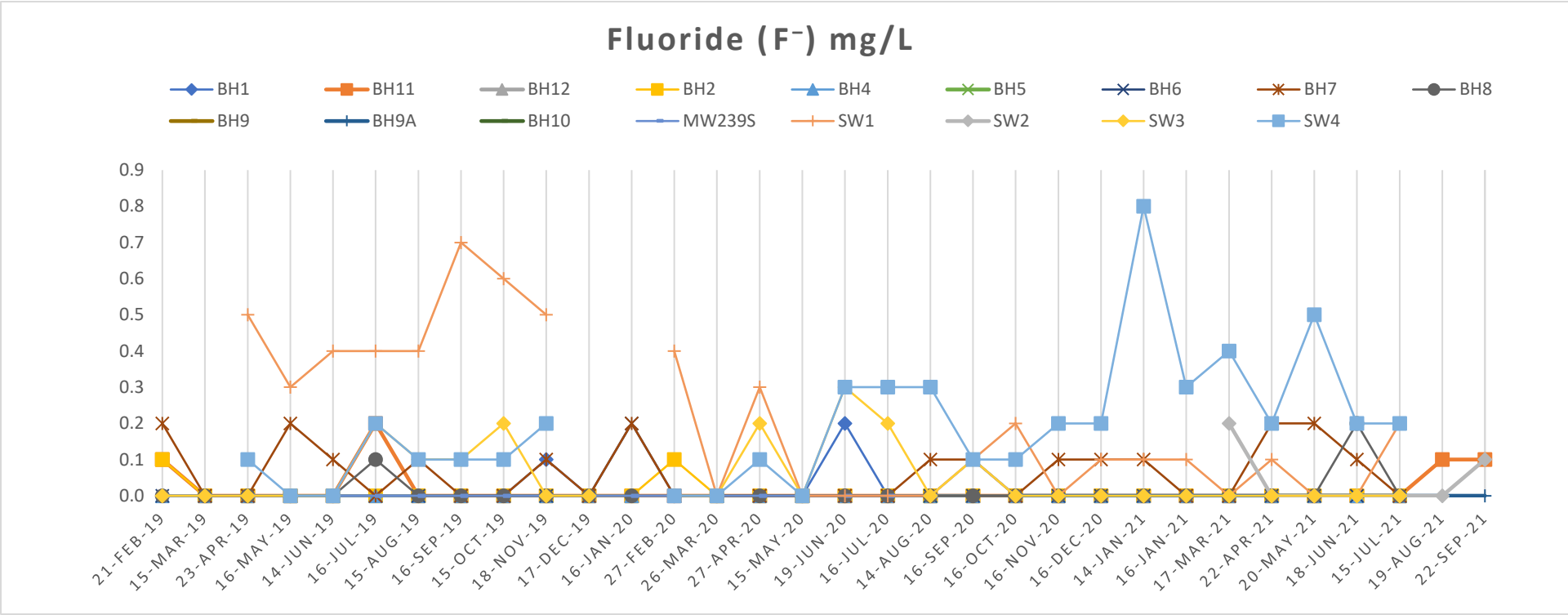

Sodium(Na) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
160
140
120
100
80
60
40
20
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20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

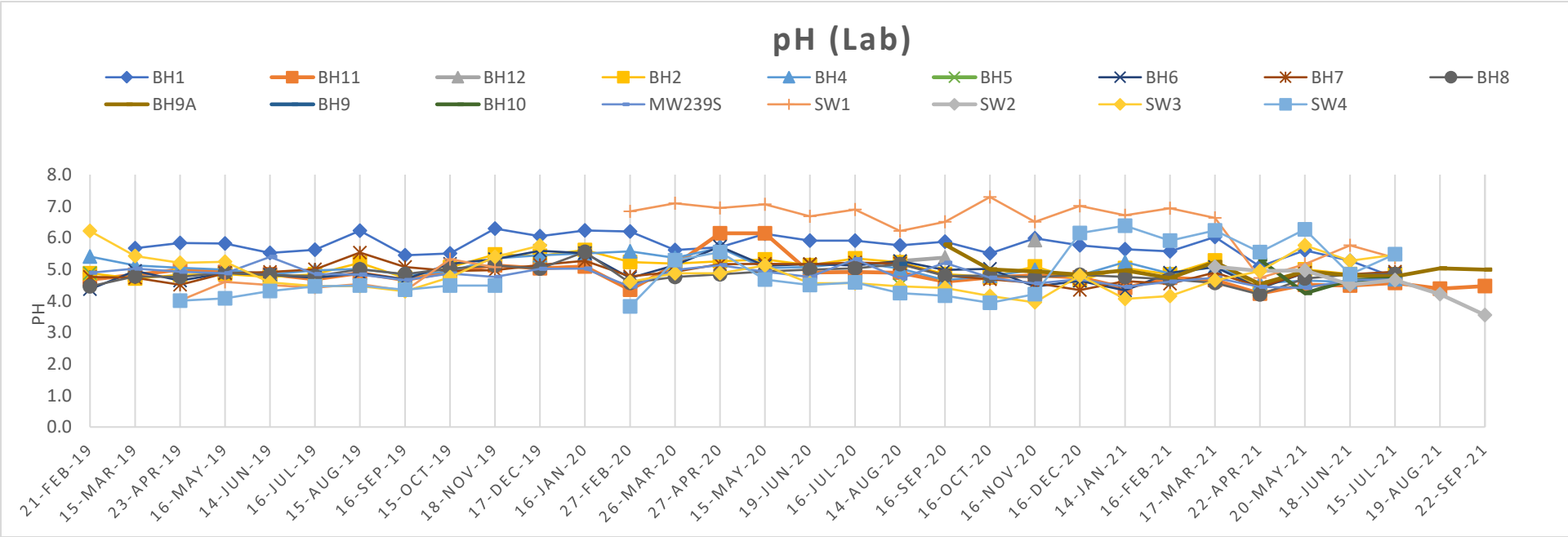

Magnesium(Mg) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
60
50
40
30
20
10
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20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

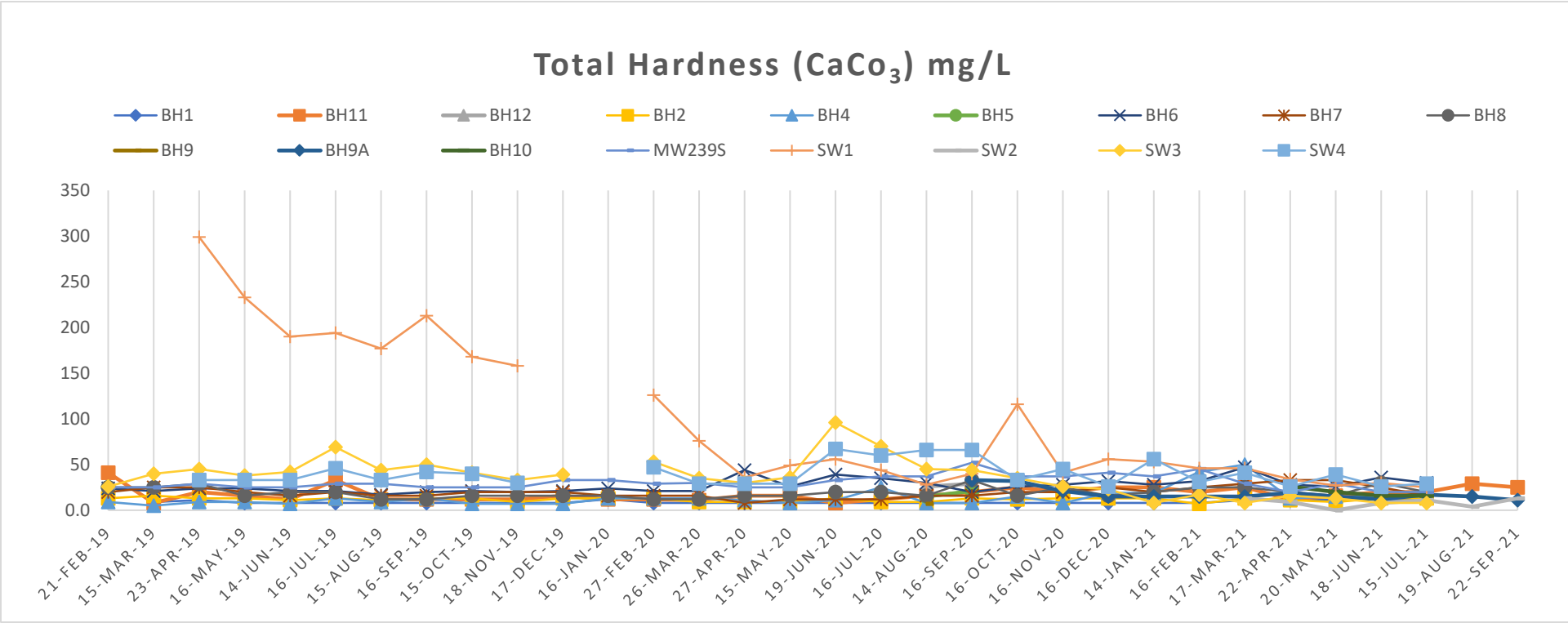

Potassium(K) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
10
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20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

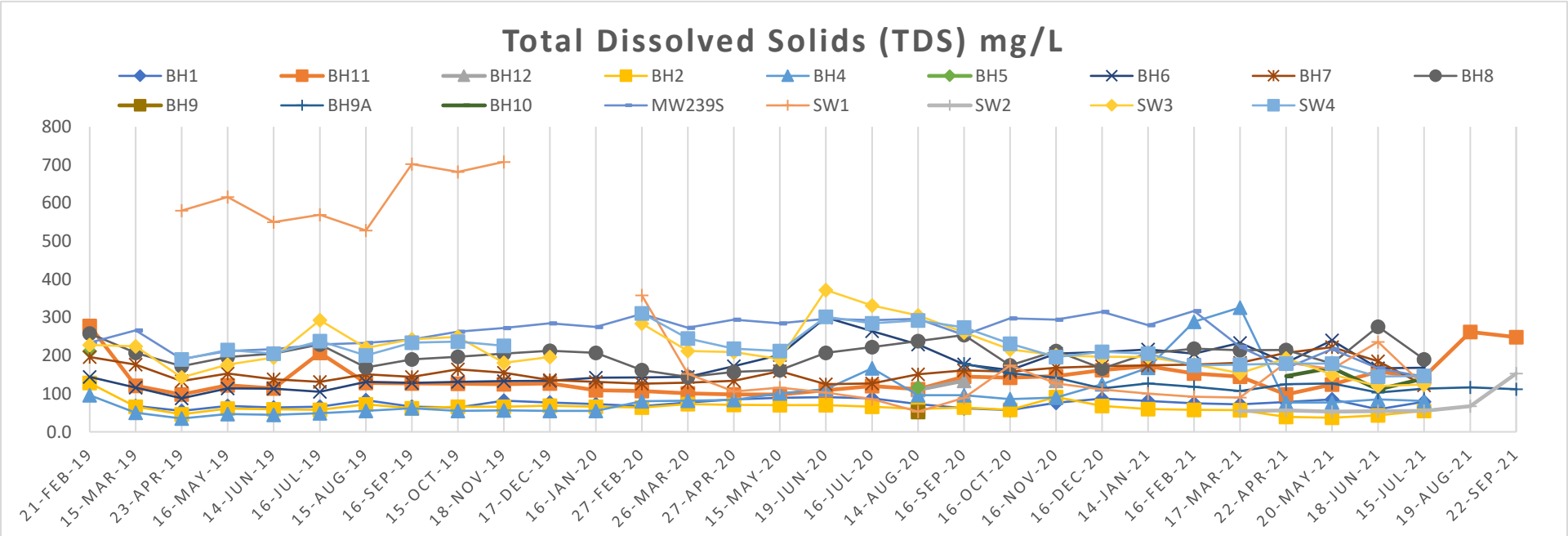

Sulphate($SO4^{2-}$) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
350
300
250
200
150
100
50
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20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

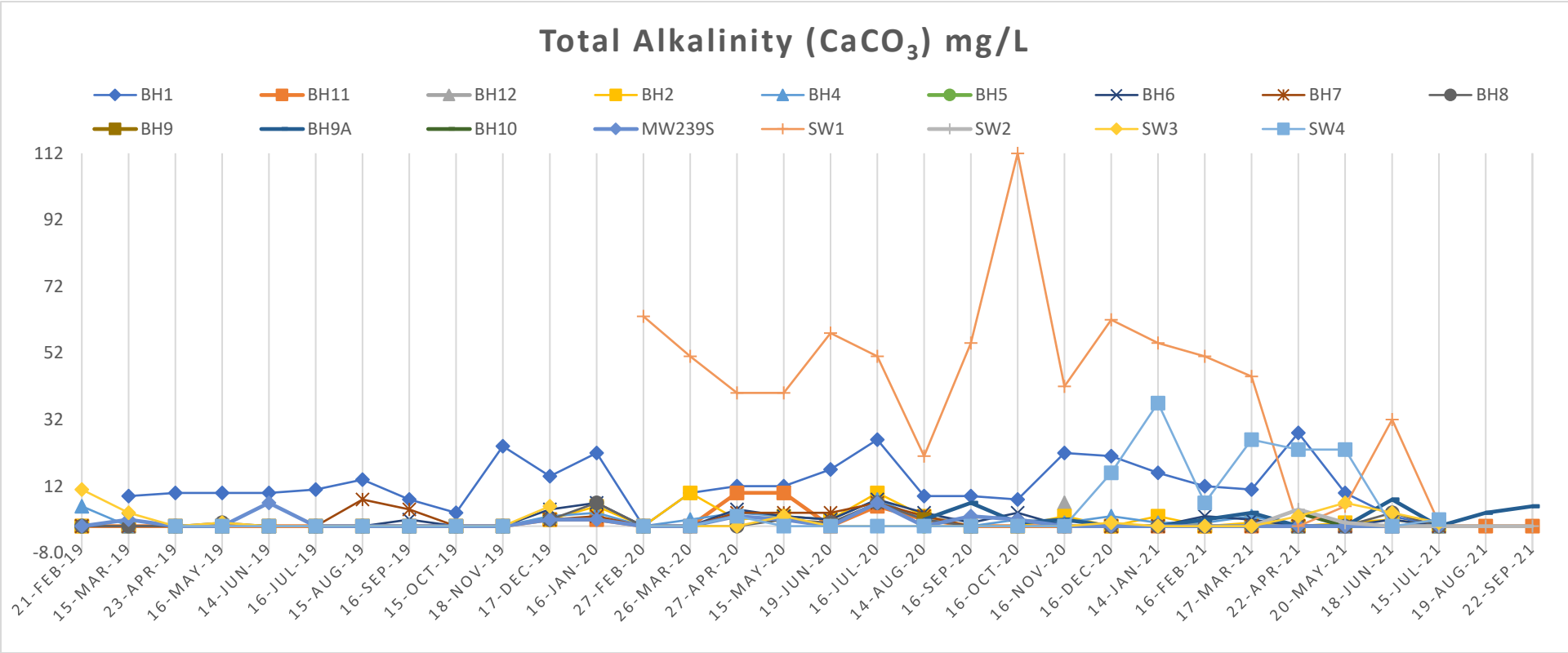

Chloride (Cl) mg/L
BH1
BH11
BH12
BH2
BH4
BH5
BH6
BH7
BH8
BH9
BH9A
BH10
MW239S
SW1
SW2
SW3
SW4
250
200
150
100
50
0.0
21-FEB-19
15-MAR-19
23-APR-19
16-MAY-19
14-JUN-19
16-JUL-19
15-AUG-19
16-SEP-19
15-OCT-19
18-NOV-19
17-DEC-19
16-JAN-20
27-FEB-20
26-MAR-20
27-APR-20
15-MAY-20
19-JUN-20
16-JUL-20
14-AUG-20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