

# Quarterly Water Quality Monitoring Results, Cabbage Tree Road Sand Quarry, NSW

## May 2023 Monitoring Event

**NCA23R154031**

18 June 2023



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

**Attention: Darren Williams**

**Subject:** Quarterly Water Quality Monitoring Results, Cabbage Tree Road Sand Quarry, NSW May 2023 Monitoring Event

Please find enclosed the quarterly water quality monitoring results for the May 2023 monitoring event undertaken by Kleinfelder at the Cabbage Tree Road Sand Quarry, NSW (herein referred to as the 'site').

## 1 SCOPE OF WORK

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

The scheduled May 2023 monitoring event included gauging of 11 monitoring wells, recording of field parameters for groundwater, and sampling from eight monitoring wells, four surface water samples one Wash Plant Water (WPW) sample and one Wash Plant Fines (WPF) samples as outlined in the Soil and Water Management Plan (SWMP, 2021) for the quarry.

## 2 SITE WORK

The monthly monitoring round was conducted on the 16<sup>th</sup> of May 2023 and comprised:

- Gauging of 11 monitoring wells (BH1A, BH2, BH4, BH6, BH7, BH8, BH9, BH9A, BH11, BH12A & MW239S). as summarised in **Table 2** and detailed in **Attachment 2**.
- Groundwater sampling from eight monitoring wells (BH2, BH4, BH6, BH7, BH8, BH9A, BH11 & MW239S) as summarised in **Table 5** and detailed in **Attachment 2**.
- Surface water sampling from four locations (SW1, SW2, SW3 & SW4) as summarised in **Table 6** and detailed in **Attachment 2**.
- One WPW sample (WPW2) as summarised in **Table 7** and detailed in **Attachment 2**.
- One WPF sample 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 and WPW samples were collected directly into laboratory supplied sample containers using a nitrile-gloved hand. Where access was deemed unsafe, a telescopic sampling pole was used.

The WPF sample was collected directly into a laboratory supplied container. All samples collected were placed into an ice chilled esky and 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 (May 2023)**

Analysis	Number of Samples				
	Primary	Intra-lab (Duplicate)	Inter-lab (Triplicate)	Transport Blank	Rinsate Blank
TRH, BTEXN (Water) <sup>1</sup>	12	1	1	1	1
Metals <sup>2</sup> (Groundwater)	9	0	0	0	0
Metals <sup>3</sup> (Surface water)	4	1	1	1	1
Metals <sup>4</sup> (Wash plant water)	1	0	0	0	0
Metals <sup>5</sup> (Wash plant fines)	1	0	0	0	0
PFAS (28 analytes, standard level)	13 (Water), 1 (Soil)	1	1	1	1

<sup>1</sup> TRH (C6 – C40) & BTEXN, (Silica Gel Clean-up)

<sup>2</sup> 8 Metals (dissolved) for groundwater – As, Ba, Cr, Cu, Fe, Mg, Ni & Zn

<sup>3</sup> 10 Metals (dissolved) for Surface Water – As, B, Ba, Cr, Co, Cu, Fe, Mg, Ni & Zn

<sup>4</sup> 3 Metals (dissolved) for Wash plant water – As, Fe, Mn

<sup>5</sup> 8 Metals for wash plant fines - As, Ba, Cr, Cu, Fe, Mg, Ni & Zn

**Table 2** provides a summary of the gauging data for May 2023. The full set of gauging data for each monitoring location is provided in **Table 13, Attachment 2**. Additionally, Watershed HydroGeo (2019) outlined a Trigger Action and Response Plan (TARP) to mitigate groundwater elevations that may potentially impact Cabbage Tree Road Sand Quarry operations (primarily sand excavation depths). Based on these recommendations, groundwater elevation has been shaded to correspond to triggers and actions outlined in **Table 3**. There was no instances of TARP Level Exceedances during the April monitoring event.



**Table 2: Summary of Gauging Data (May 2023)**

Well ID	Top of Casing (mAHD)	Depth to Water (mBTOC)	Ground-water Elevation (mAHD)	Well Total Depth Current (mBTOC)	Well Total Depth 2014 (mBTOC)	Inferred Max GW Elevation (mAHD) <sup>1</sup>	Difference Between Inferred Max and Measured GW Elevation (mAHD)	Comment
BH1A	8.98	5.292	3.688	12.160	N/A	4.5 <sup>2</sup>	0.812	Gauge only
BH2	7.79	5.136	2.654	8.850	9.45	3.8	1.146	Brown, no odour / sheen, well in good condition
BH4	3.06	1.289	1.771	5.992	6.45	3.0 <sup>3</sup>	1.229	Clear, no odour / sheen, well in good condition
BH6	3.62	1.140	2.48	4.515	4.95	4.4	1.92	Clear, low Sulphur odour, no sheen, well in good condition
BH7	2.98	1.265	1.715	4.520	4.95	3.7	1.985	Light yellow, low sulphur odour, no sheen, well in good condition
BH8	3.88	2.022	1.858	6.025	6.28	4.0	2.142	Yellow, strong sulphur odour, no sheen, well in good condition
BH9	17.75	15.918	1.832	16.075	18.8	3.0 <sup>3</sup>	1.168	Gauge only
BH9A	10.75	8.879	1.871	12.235	16.16	3.0 <sup>3</sup>	1.129	Light brown, low sulphur odour, no sheen, well in good condition
BH11	6.63	2.228	4.402	5.295	5.95	5.5	1.098	Light yellow, strong sulphur odour, no sheen, well in good condition
BH12A	5.62	2.922	2.698	7.300	NA	4.0 <sup>5</sup>	1.302	Gauge only
MW239S	3.04	0.938	2.102	3.787	4.0	3.9 <sup>4</sup>	1.798	Light brown, moderate sulphur odour, no sheen, well in good condition
SW1	N/A	N/A	N/A	0.3	N/A	N/A	N/A	Light brown, green algae, biofilm, no odour



SW2	N/A	N/A	N/A	0.1	N/A	N/A	N/A	Light brown, red/brown algae, low Sulphur odour, no sheen
SW3	N/A	N/A	N/A	0.2	N/A	N/A	N/A	Clear, no odour, no sheen
SW4	N/A	N/A	N/A	0.3	N/A	N/A	N/A	Clear, no odour, no sheen

<sup>1</sup> – Sourced from Watershed HydroGeo ,2019, *Maximum Extraction Depth Management Plan, Cabbage Tree Road Sand Quarry*, May 2019.

<sup>2</sup> – Inferred Max Groundwater level based on former adjacent well (BH1).

<sup>3</sup> – Inferred Max Groundwater level based on adjacent wells (BH4 & BH9).

<sup>4</sup> – Inferred Max Groundwater level based on adjacent well (MW239S).

<sup>5</sup> – Inferred Max Groundwater level based on former adjacent well (BH12).

N/A – Not Applicable/Not Gauged



**Table 3: Groundwater Level Monitoring TARP Rules (Watershed HydroGeo, 2019)**

Level	Trigger	Action and Response	Report / Response Actions
<b>0</b>	Groundwater levels more than 0.5 m below <i>inferred</i> maximum historical level ( <b>Table 2</b> ).	Standard operations – monthly dipping of operational on-site monitoring bores.	N/A
<b>1</b>	Groundwater levels within 0.5 m below <i>inferred</i> maximum historical level ( <b>Table 2</b> ) 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 <b>Table 2</b> .	Internal and environmental consultant. Include note in Annual Report.
<b>2</b>	Groundwater levels within 0.25 m of <i>inferred</i> maximum historical level ( <b>Table 2</b> ) at any on-site bore.	Weekly (or more frequent) monitoring (dipping) of groundwater levels.  Re-analysis and review of Minimum Extraction Level (MEL).	WSS to issue letter to DPIE, documenting groundwater level and rainfall trends, review and make recommendations regarding MEL.
<b>3</b>	Groundwater levels within resource area rise above previously <i>inferred</i> maximum groundwater level ( <b>Table 2</b> ).	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, Dol 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 May 2023 monitoring event. One instance of site-specific criteria (4.2-6.5) exceedance was recorded in field pH at SW4 (3.96) this monitoring round. All field parameters for each monitoring location are detailed in the field sheets provided in **Attachment 2**.

**Table 4: Summary of Field Measurements**

Borehole	Turbidity (NTU)	Temp (°C)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)
BH1A	ND	ND	ND	ND	ND	ND	ND
BH2	110.1	18.6	3.27	64.1	47	4.54	234.0
BH4	19.03	16.8	3.96	65.5	56	4.84	217.9
BH6	49.3	20.2	3.45	195.1	140	4.80	-39.9
BH7	17.23	20.0	1.84	75.2	54	4.18	161.2
BH8	82.50	18.6	2.72	113.1	84	4.81	-85.5
BH9	ND	ND	ND	ND	ND	ND	ND
BH9A	76.69	17.1	6.01	103.9	80	4.6	44.1
BH11	61.3	18.4	3.13	111.1	83	4.45	-60
BH12A	ND	ND	ND	ND	ND	ND	ND
MW239S	131.23	18.6	2.75	84.7	63	4.52	-50.4
SW1	10.22	13.3	3.58	82.4	69	6.34	75.7
SW2	13.72	15.8	3.62	147.8	116	4.02	206.2
SW3	5.52	14.7	0.98	176.0	143	4.36	-24.0
SW4	4.00	14.0	3.74	209.7	172	3.96	292.9
WPW	83.43	17.8	9.61	230.1	173	4.71	249.7

ND: No Data – no sample taken

**Table 5** below presents a summary of the water monitoring results for key analytes found to be elevated above the laboratory limit of reporting (LOR) for groundwater. Two analyte exceedances occurred at groundwater locations during this monitoring round, Iron at BH6 (4.56mg/L) exceeded the site-specific trigger value (4.1mg/L) for the third consecutive month and Copper at BH4 (0.135mg/L) exceeded the site-specific trigger value (0.083mg/L) for the first time this year. Noting that 6:2 FTS was detected at BH4 at the LOR (0.05µg/L) during this monitoring round, this compound has been detected in groundwater samples on-site previously and is within the range of historical results. The primary laboratory performed a re-extraction and re-analysis on BH4 to confirm this result.

**Table 7** presents the summary of surface water monitoring results for key analytes found to be elevated above the LOR. **Table 7** presents a summary of the wash plant sample results for key PFAS analytes in water. **Table 8** presents a summary of the wash plant fines soil sample results for key PFAS analytes reported above the LOR. The site-specific groundwater criteria outlined in the SWMP (2021) has been applied to this monthly report including a comparison of results with previous data.

The WPW2 sample recorded one detection for PFAS compound PFOS (0.03µg/L) during this monitoring round. The WPF2 sample recorded five detections of PFAS compounds, PFOA, PFOS, PFBA, MeFOSA and EtFOSE during this monitoring round.

Full results summary tables, including quality assurance/quality control (QA/QC) sample analyses, are provided in **Attachment 2**. Field rinsate and trip blank samples collected by Kleinfelder did not detect any analyte above the laboratory LOR. Based on a review of the QA/QC Compliance Assessment provided by ALS, the overall data quality is considered acceptable for interpretive use. Copies of the final NATA endorsed laboratory reports, including internal QA/QC results and chain-of-custody documentation for both laboratories are provided in **Attachment 3**.



**Table 5: Groundwater Results and Screening Criteria.**

Analyte	Metals								PFAS	Discussion of results relative to previous monitoring (details on specific data trends provided in Section 4 below)
	Arsenic	Barium	Chromium	Copper	Nickel	Zinc	Iron	Magnesium	6:2 FtS	
LOR	0.001	0.001	0.001	0.001	0.001	0.005	0.05	1	0.05	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	
Adopted Site Specific Trigger Values (SWMP 2021)	0.003	0.07	0.004	0.083	0.02	0.085	4.1	11	-	
								Samples		
BH1A	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for BH1A were not analysed - gauge only.
BH2	<0.001	0.002	<0.001	0.004	0.001	0.05	0.08	1	<0.05	Metal concentrations were generally consistent with historical results and remain below the adopted criteria. BH2 is located marginally down hydraulic gradient from the current quarry operations footprint.
BH4	<0.001	0.008	<0.001	0.135	<0.001	0.027	0.09	1	0.05	Metal concentrations were generally consistent with historical variations and remain below the adopted criteria, except for copper which has exceeded the site-specific trigger value. BH4 is located down hydraulic gradient (approximately 700 m) from current quarry operations and on the southernmost boundary of the site adjacent to Cabbage Tree Road.
BH6	<0.001	0.007	<0.001	<0.001	<0.001	0.024	4.56	3	<0.05	Metal concentrations are generally consistent with historical results and remain below the adopted criteria, except for Iron which has exceeded the site-specific trigger value. BH6 is considered up hydraulic gradient (approximately 860 m) from current quarry operations and the most north-eastern location at the site.
BH7	<0.001	0.002	0.002	0.001	0.002	0.025	0.47	2	<0.05	Metal concentrations were generally consistent with historical results and are below the adopted criteria. BH7 is located (approximately 960 m) east of the current quarry operations.
BH8	0.002	0.004	0.003	<0.001	0.001	0.015	1.37	2	<0.05	Metal concentrations for BH8 were generally consistent with historical results remaining below the adopted criteria.



Analyte	Metals								PFAS	Discussion of results relative to previous monitoring (details on specific data trends provided in Section 4 below)
	Arsenic	Barium	Chromium	Copper	Nickel	Zinc	Iron	Magnesium		
LOR	0.001	0.001	0.001	0.001	0.001	0.005	0.05	1	0.05	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	
Adopted Site Specific Trigger Values (SWMP 2021)	0.003	0.07	0.004	0.083	0.02	0.085	4.1	11	-	
					Samples					
										BH8 is located (approximately 974m) east of the current quarry operations on site.
BH9	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for BH9 were not analysed - gauge only.
BH9A	<0.001	0.004	<0.001	<0.001	0.002	0.029	0.26	2	<0.05	Metal concentrations were generally consistent with historical results and below the adopted criteria. BH9A is down gradient (approximately 700m) from current quarry operations and is on the southern-most boundary of the site adjacent to Cabbage Tree Road.
BH11	<0.001	0.002	0.003	0.001	0.003	0.065	1.04	2	<0.05	Metal concentrations were generally consistent with historical results and below the adopted criteria. BH11 is located approximately 460 m from current quarry operations and at the most north-western point of the site.
BH12A	NS	NS	NS	NS	NS	NS	NS	NS	NS	Metals for BH12A were not analysed - gauge only.
MW239S	<0.001	0.002	0.002	<0.001	0.002	0.027	0.21	1	<0.05	Metal concentrations were generally consistent with historical results and below the adopted criteria. MW239S is located approximately 800 m east of the current quarry operations.

**Notes:**

< - Less than laboratory limit of reporting

NS – No Sample



**Table 6: Surface water results and performance criteria.**

Analyte	Metals								Discussion of results relative to previous monitoring (details on specific data trends provided in Section 4 below)
	Arsenic	Barium	Cobalt	Copper	Iron	Nickel	Zinc	Magnesium	
LOR	0.001	0.001	0.001	0.001	0.05	0.001	0.005	1	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Adopted Site Specific Trigger Values (SWMP 2021)	0.006	0.08	0.006	0.033	7.25 (32 for SW3 & SW4)	0.02	0.535	52	
Samples									
SW1	<0.001	<0.001	<0.001	0.001	0.39	<0.001	0.013	2	Metal concentrations were generally in line with historical variations and below the Site-Specific Trigger Values. SW1 is located on the southernmost boundary of the quarry adjacent to Cabbage Tree Road
SW2	<0.001	0.018	0.004	0.003	0.87	0.005	0.284	3	SW2 was previously dry during all sampling periods from 2019 – February 2021. Metal concentrations were generally consistent with historical variations and 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	0.001	0.004	<0.001	<0.001	4.81	<0.001	0.008	3	Analyte concentrations were generally consistent with historical variations and reported below the site-specific trigger values. SW3 is located within a drainage channel that travels from west to east along the south-eastern perimeter of the quarry. SW3 is approximately 476 m east of the current quarry operations.
SW4	<0.001	0.025	0.003	0.004	0.38	0.003	0.018	4	Metal concentrations at SW4 appear to be stable across all analytes. SW4 is located downstream of SW3 on the eastern most perimeter of the quarry.

**Notes:**

< - Less than laboratory limit of reporting



Table 7: Wash Plant Water Sample Results and Screening Criteria

Analyte	PFAS				Discussion of results
	PFOA	PFOS	PFHxS	Sum of PFOS + PFHxS	
LOR	0.01	0.01	0.01	0.01	
Units	µg/L	µg/L	µg/L	µg/L	
Site Specific Trigger Values (SWMP 2021)	0.56	N/A	N/A	0.07	
Sample Name	Sand Wash Plant				
WPW2	<0.01	0.03	<0.01	0.03	PFOS was detected at this location at concentrations below the adopted criteria during this reporting period. The findings for PFAS compounds are generally consistent with historical results.  WPW dissolved metals concentrations reported results consistent with previous results.

**Notes:**

< - Less than laboratory limit of reporting



**Table 8: Wash Plant Fines Sample Results and Screening Criteria**

Analyte	PFAS							Discussion of results
	PFOA	PFOS	Sum of PFOS + PFHxS	PFBA	MeFOSA	EtFOSE	Sum of PFAS	
LOR	0.0002	0.0002	0.0002	0.001	0.0005	0.0005	0.0002	
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Site Specific Trigger Values (SWMP 2021)	0.1	-	0.01	-	-	-	0.0083	
Sample Name	Sand Wash Plant							
WPF2	0.0003	0.0036	0.0036	<0.001	<0.0005	<0.0005	0.0039	Five PFAS compounds, PFOA, PFOS, PFBA, MeFOSA and EtFOSE were detected in the WPF sample during this monitoring round. This was the first time a WPF sample had been analysed from the new wash plant set up. These PFAS findings are higher than results previously recorded for WPF samples.  WPF metals results were found to be within the range expected from previous results and presented in <b>Attachment 2</b> .

**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 2022/23. The total monthly rainfall for April 2023 was recorded to be above the monthly mean and has remained generally stable when compared to the previous two months. Based on current rainfall data (daily monthly totals) for May 2023, it is expected that groundwater elevations will stabilise and decrease during the subsequent months due to a lag in groundwater response, consistent with current groundwater trend data.

**Table 9: 2022-2023 Rainfall data (12-month period)**

Date	Jun (22)	Jul (22)	Aug (22)	Sep (22)	Oct (22)	Nov (22)	Dec (22)	Jan (23)	Feb (23)	Mar (23)	Apr (23)	May 23
1st	0	0	0	2.0	4.4	9	0	0	0	0.2	0	0
2nd	0	14.6	0.2	0	0	0	0	0	0	0	11.2	0
3rd	0	42.0	0	28.0	0	0	0	0	0	0	2.4	0
4th	1.6	59.8	0	4.2	0	0.4	0	0	0.6	1	3.4	0
5th	0	49.8	12.0	0.4	0	0	0	13.8	0	0		0
6th	0	36.6	0	0	23.4	0	0.4	5.6	0	0	6.8	0
7th	0	37.0	0	0.2	0.2	0	0	21.2	0	0	3	0
8th	0	0	0	0	6.6	0	0	4.8	0	0	10.6	4.6
9th	0	0	1.4	0.2	32.6	0	0	-	0	0	0.2	0
10th	0	3.2	18.4	2.2	0	0	0	0	0	0	0	0
11th	0	44.2	0.2	0	1.2	0	0	0	0.2	0	0	0
12th	0	0.2	0	0	0.2	0	0	0	0	0	0	0
13th	0	0	5.2	0	0	2.8	5.6	0	0	4.2	11.6	0
14th	0	12.4	0.2	0.6	0.2	24.2	0	0	21.2	1.6	25.4	0.2
15th	0	12.0	0	0.2	0.2	-	0	-	1	7.4	2	0
16th	0	0	0	5.4	0	-	0.2	0	0.2	0.2	0	0
17th	0	0	0	0	0.4	0	4.2	0	0	0	0	11.4
18th	1.0	0	0	0	0	0	2.8	0	0	0	0	22.2
19th	18.4	0.2	0	0	0	0	3	0.2	1.8	0	0	2.2
20th	7.4	7.8	0	0	1.6	0	0	21.4	0.2	0	3.2	0
21st	0.2	0.4	0	0	4	0	2	0.8	0	0.6	29.4	0
22nd	0	2.0	0	7.2	3.4	0	0	9.0	45.6	0	0.8	0
23rd	0	0	0	5.4	2.2	0	0.2	4.4	35	0	0	0
24th	0	1.8	0.6	0.4	3.4	0	0.8	0	1.2	25.6	0.2	0
25th	0	1.4	0	4.6	5.6	0	0	0	0	31.4	0	0
26th	0	1.2	0	0.2	0.4	1.6	0	0	0	1.8	0	ND*
27th	0	0.6	0	0	0	0	0	3.6	0	0	0	ND*
28th	0	0	0.2	0.2	0.8	12	0	0	0.4	22.4	0	ND*
29th	0	0	0	0	0	0	0	0	-	8.8	0	ND*



30th	0	0.2	0	13.0	0	0	0	3.4	-	0.8	8.2	ND*
31st	-	0	0	-	0	-	0	18.0	-	0	-	ND*
Total	28.6	327.4	38.4	74.4	90.8	50.0	19.2	106.2	107.4	106	118.4	40.6*
Historical Mean	124.6	72.6	72.8	60.6	75.9	82.9	77.8	99.5	118.8	128.3	109.5	108.5

**Notes:**

ND – no data retrieved.

\* - full monthly rainfall for May 23 not included.

## 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, groundwater elevations have been steadily increasing over the last four years with a notable spike in elevation following the March 2021 and February 2022 water monitoring events. A general increase in groundwater elevations across the site occurred during 2022 and is predominantly due to the above average rainfall recorded for most months during the year. Since October 2022 groundwater elevations have decreased across the site with more recent monitoring events (March & April 2023) recording a small rebound in elevation which has since stabilised during the current monitoring round consistent with rainfall data noted in **Section 3**.

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

- Iron – The reported Iron concentration at BH6 (4.56mg/L) has been on a generally increasing trend since April 2022. The Iron concentration reached a peak in reported concentration (4.97mg/L) in the March 2023 monitoring event and has currently stabilised at a level slightly above the site-specific trigger value (4.1mg/L).
- Copper – The reported copper concentration at BH4 (0.135mg/L) has increased above the site-specific trigger value for the first time this year. During all previous monitoring years (2019 to present), a trend has been observed in copper concentration at this location between the months of April and October. A Water Trigger Investigation – Copper (BH4) (KLF, 2021) was undertaken in 2021, which concluded that a seasonal trend exists that is not considered related to quarrying activities.
- Field pH – the field pH result recorded at SW3 (3.96) has returned a reading marginally below the site-specific trigger value range (4.2-6.5) during this monitoring event. This result is consistent with previous reported pH at this location.
- PFAS –
  - WPW – concentrations of PFOS (0.03 µg/L) were detected in the WPW sample during this monitoring event this is the highest recorded concentration recorded within the new wash plant and generally consistent compared to historical wash plant water results.
  - WPF – concentrations of five PFAS compounds, PFOA (0.0003 mg/kg) and PFOS (0.0039 mg/kg) were detected in the first wash plant fines sample taken from the new wash plant.



## 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. Groundwater level monitoring TARP rules, outlined in **Section 2**, recorded no exceedances at any locations during the May 2023 monitoring event.

Two marginal analyte exceedances, Iron (4.56mg/L) at BH6 and Copper (0.135mg/L) at BH4 was recorded during the May 2023 GME. The Copper exceedance reported at BH4 has been shown to be a fluctuating seasonal trend that has been previously investigated (KLF, 2021). This result is considered to be caused by a seasonal trend and not related quarrying activities it is recommended that this analyte should continue to be monitored to ensure it decreases around October 2023

The reported Iron exceedance recorded at BH6 is the third consecutive result above the adopted criteria. BH6 is located 860m upgradient from current quarrying activities and therefore considered indicative of natural background fluctuations. This result is in line with past reported concentrations at this location and was found to be below the value reported during the previous March 2023 GME.

There is no cause to suggest that the elevated concentrations are related to quarrying activities due to the distance and upgradient location of this monitoring well. Iron concentrations have been on an increasing trend doing the previous six months and will continue to be monitored during future sampling rounds, as per Section 3 from the SWMP below.

*4. Where two consecutive samples are:*

*a. ABOVE the adopted trigger value, BUT LESS than previous data, this may suggest an incorrectly set trigger value that does not fully account for seasonal changes.*

*Consider updating trigger value at next management plan update.*

PFAS concentrations were detected at three locations during this monitoring round; BH4, WPW and WPF. The detections of PFAS in the WPW sample is considered normal and within the range of previous detections. The detected concentration of 6.2 FtS reported at BH4 is abnormal but within the range of previously reported data at this location.

Initial results for PFAS compounds were reported in the WPF sample and were considered unusual, with results for PFOS more than three times greater than previously reported results. Subsequent reanalysis by the laboratory found the results to be within the historical range for PFAS at the site.

BH4 will be requiring resampling during the following June monitoring round to gauge if this result was an isolated occurrence.

We trust that the above report meets your requirements. If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

**Kleinfelder Australia Pty Ltd**

**Aaron King**

Graduate Environmental Scientist  
Contaminated Land Management

[AKing@kleinfelder.com](mailto:AKing@kleinfelder.com)

Mobile: 0457 426 013

## Attachments

Attachment 1: Figures

Attachment 2: Results tables and field records

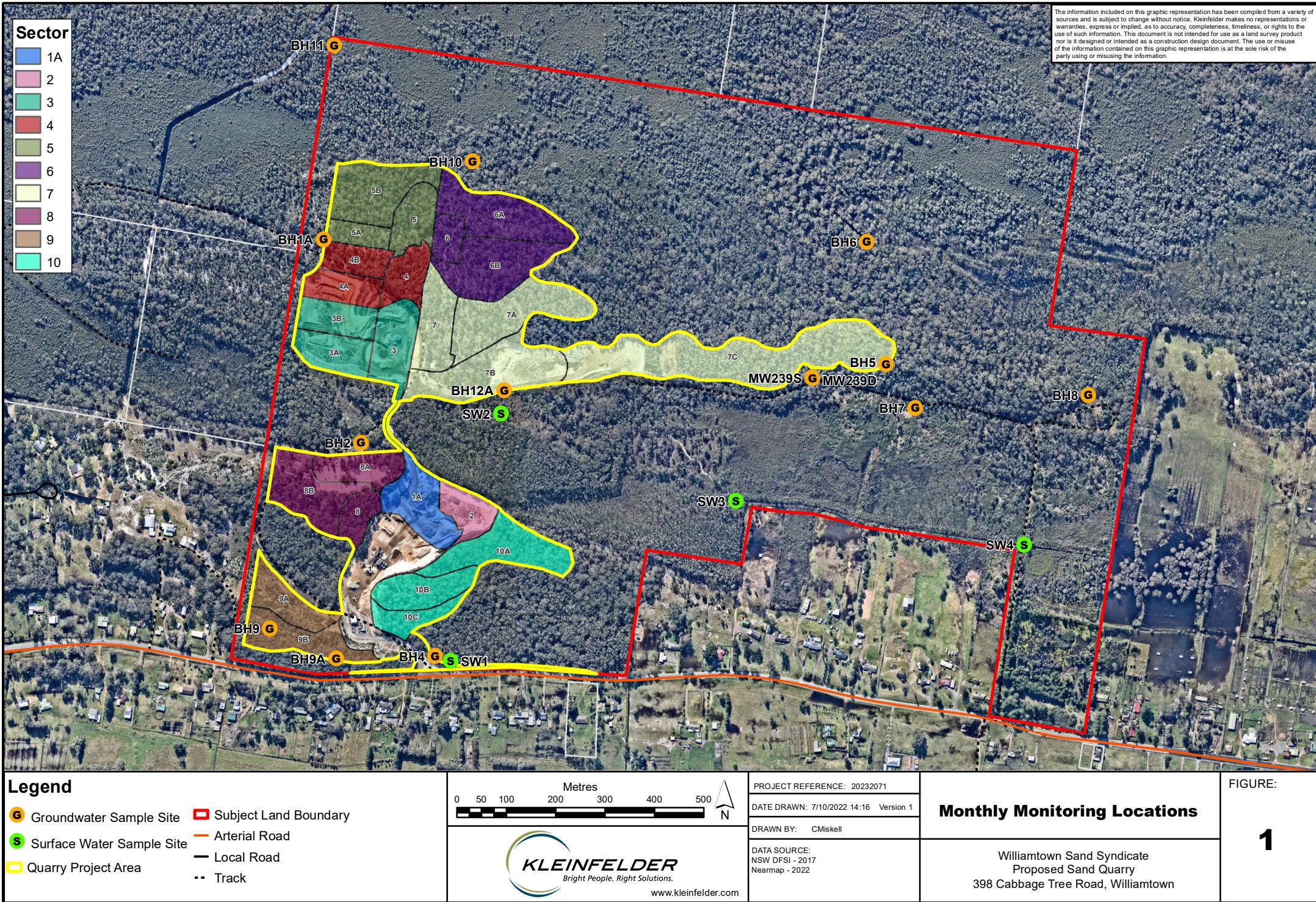
Attachment 3: Lab results

Attachment 4: Data Trends



## ATTACHMENT 1: FIGURES







## ATTACHMENT 2: RESULTS TABLES AND FIELD RECORDS







## Notes

Table 1  
Groundwater - Hydrocarbons

Analyte	BTEXN							Total Petroleum Hydrocarbons					Total Petroleum Hydrocarbons - Silica Clean-up						
	Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Total Xylenes	Naphthalene	Sum of BTEX	C <sub>6</sub> - C <sub>9</sub>	C <sub>10</sub> - C <sub>14</sub>	C <sub>15</sub> - C <sub>28</sub>	C <sub>29</sub> - C <sub>35</sub>	C <sub>36</sub> sum	C <sub>10</sub> -C <sub>14</sub> - Silica Cleanup	C <sub>15</sub> -C <sub>28</sub> - Silica Cleanup	C <sub>29</sub> -C <sub>35</sub> - Silica Cleanup	C <sub>36</sub> Sum - Silica Cleanup	C <sub>6</sub> - C <sub>10</sub>	C <sub>6</sub> - C <sub>10</sub> minus BTEX (F1)
LOR	1	2	2	2	2	5	1	20	50	100	50	50	50	100	50	50	20	20	
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	
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	20

-- - Not analysed

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

BTEXN - Benzene, toluene, ethylbenzene, total xylenes, naphthalene

**Bold** indicates a detection above the laboratory limit of reporting

Highlighting indicates an exceedance of the corresponding criteria (highlighting corresponds to the guideline with the highest criteria value where analytical result exceeds more than one guideline)

**Criteria:**  
SWMP 2021 - Soil and Water Management Plan, July 2021

Table 1  
Groundwater - Hydrocarbons

Analyte	Total Recoverable Hydrocarbons					Total Recoverable Hydrocarbons - Silica Clean-up					
	>C <sub>10</sub> - C <sub>16</sub>	>C <sub>10</sub> - C <sub>16</sub> minus Naphthalene (F2)	>C <sub>16</sub> - C <sub>34</sub>	>C <sub>10</sub> - C <sub>40</sub>	>C <sub>10</sub> - C <sub>40</sub> (sum)	>C <sub>10</sub> -C <sub>16</sub> - Silica Cleanup	F2 - Silica Cleanup	>C <sub>16</sub> -C <sub>34</sub> - Silica Cleanup	>C <sub>34</sub> -C <sub>40</sub> - Silica Cleanup	>C <sub>10</sub> -C <sub>40</sub> - Silica Cleanup	
LOR	100	100	100	100	100	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	
Adopted Site Specific Trigger Values (SWMP 2021)	100	--	100	100	--	--	--	--	--	--	
Sample Name	Sample Date										
BH1	15-Mar-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	23-Apr-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-	
	16-May-19	< 100	< 100	< 100	< 100	-	-	-	-	-	
	14-Jun-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Jul-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Aug-19	< 100	< 100	< 100	< 100	-	-	-	-	-	
	16-Sep-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Oct-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	18-Nov-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Sep-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Oct-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Nov-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Dec-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	14-Jan-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Feb-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	17-Mar-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	19-Aug-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	22-Sep-21	-	-	-	-	-	< 100	< 100	< 100	< 100	
	13-Oct-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Nov-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	24-Feb-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
BH1A	15-Feb-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	22-Feb-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Mar-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	23-Apr-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-	
	16-May-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-	
	14-Jun-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Jul-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Aug-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-	
	16-Sep-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Oct-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
BH2	18-Nov-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Dec-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	14-Jan-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Feb-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	17-Mar-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	19-Aug-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	24-Feb-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	27-May-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	12-Aug-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	18-Nov-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Feb-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-May-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	21-Feb-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	21-Feb-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Mar-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
BH4	23-Apr-19	< 100	< 100	280	< 100	280	-	-	-	-	
	16-May-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-	
	14-Jun-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Jul-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Aug-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-	
	16-Sep-19	-	-	-	-	< 100	140	< 100	140	< 100	
	15-Oct-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	18-Nov-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Sep-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Oct-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Nov-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Dec-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	14-Jan-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-Feb-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	17-Mar-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
BH5	19-Aug-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	24-Feb-22	-	-	-	-	< 100	< 100	370	< 100	370	
	27-May-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	12-Aug-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	18-Nov-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Feb-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	16-May-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	22-Feb-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	24-Feb-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	15-Feb-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100	
	22-Feb-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100	



Table 1  
Groundwater - Hydrocarbons

Analyte	Total Recoverable Hydrocarbons					Total Recoverable Hydrocarbons - Silica Clean-up				
	>C <sub>10</sub> - C <sub>16</sub>	>C <sub>10</sub> - C <sub>16</sub> minus Naphthalene (F2)	>C <sub>16</sub> - C <sub>34</sub>	>C <sub>10</sub> - C <sub>40</sub>	>C <sub>10</sub> - C <sub>40</sub> (sum)	>C <sub>10</sub> -C <sub>16</sub> - Silica Cleanup	F2 - Silica Cleanup	>C <sub>16</sub> -C <sub>34</sub> - Silica Cleanup	>C <sub>34</sub> -C <sub>40</sub> - Silica Cleanup	>C <sub>10</sub> -C <sub>40</sub> - Silica Cleanup
	100	100	100	100	100	100	100	100	100	100
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Units										
Adopted Site Specific Trigger Values (SWMP 2021)	100	--	100	100	--	--	--	--	--	--
BH9A	14-Jan-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	19-Aug-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	22-Sep-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	13-Oct-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Nov-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	24-Feb-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	27-May-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	12-Aug-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	18-Nov-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Feb-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-May-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100
BH11	21-Feb-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Mar-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-
	16-May-19	< 100	< 100	< 100	< 100	-	-	-	-	-
	14-Jun-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-
	16-Sep-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	19-Aug-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	22-Sep-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	13-Oct-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Nov-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	24-Feb-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
BH12	15-Feb-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	19-Aug-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	22-Sep-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	13-Oct-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Nov-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	24-Feb-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
BH12A	15-Feb-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	22-Feb-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-
	16-May-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-
	14-Jun-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	< 100	< 100	< 100	< 100	< 100	-	-	-	-
	16-Sep-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	19-Aug-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Nov-21	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	24-Feb-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	27-May-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	12-Aug-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	18-Nov-22	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Feb-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-May-23	-	-	-	-	< 100	< 100	< 100	< 100	< 100
MW239S										

Notes:

Table 1  
Groundwater - Hydrocarbons

Analyte	Total Recoverable Hydrocarbons					Total Recoverable Hydrocarbons - Silica Clean-up			
	>C <sub>10</sub> - C <sub>16</sub>	>C <sub>10</sub> - C <sub>16</sub> minus Naphthalene (F2)	>C <sub>16</sub> - C <sub>34</sub>	>C <sub>34</sub> - C <sub>40</sub>	>C <sub>10</sub> - C <sub>40</sub> (sum)	>C <sub>10</sub> -C <sub>16</sub> - Silica Cleanup	F2 - Silica Cleanup	>C <sub>16</sub> -C <sub>34</sub> - Silica Cleanup	>C <sub>34</sub> -C <sub>40</sub> - Silica Cleanup
LOR	100	100	100	100	100	100	100	100	100
Units	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)	100	--	100	100	--	--	--	--	--
-- Not analysed									

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

BTEX-N - Benzene, toluene, ethylbenzene, total xylenes

**Bold** indicates a detection above the laboratory limit or

Highlighting indicates an exceedance of the correspond-

**Criteria:**  
SWMP 2021 - Soil and Water Management Plan, July 2

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Anions and Cations														
		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N	Nitrate	Nitrate as N	
LOR		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	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		
Adopted Site Specific Trigger Values (SWMP 2021)		77	5.0	11	2.0	70	148	0.2	--	--	2.0	--	--	--		
Sample Name	Sample Date															
BH1	15-Mar-19	<b>11</b>	<b>2.0</b>	<b>1.0</b>	< 1.0	< 1.0	<b>25</b>	< 0.1	-	-	-	-	-	-		
	23-Apr-19	<b>14</b>	<b>1.0</b>	<b>2.0</b>	< 1.0	<b>4.0</b>	<b>25</b>	< 0.1	-	-	-	-	-	-		
	16-May-19	<b>12</b>	< 1.0	<b>2.0</b>	< 1.0	<b>5.0</b>	<b>25</b>	< 0.1	-	<b>0.03</b>	< 0.01	-	< 0.01	< 0.01		
	14-Jun-19	<b>10</b>	< 1.0	<b>2.0</b>	< 1.0	<b>3.0</b>	<b>24</b>	< 0.1	-	-	-	-	-	-		
	16-Jul-19	<b>15</b>	< 1.0	<b>2.0</b>	< 1.0	<b>4.0</b>	<b>23</b>	< 0.1	-	-	-	-	-	-		
	15-Aug-19	<b>14</b>	< 1.0	<b>2.0</b>	< 1.0	<b>2.0</b>	<b>21</b>	< 0.1	-	-	-	-	-	-		
	16-Sep-19	<b>13</b>	< 1.0	<b>2.0</b>	< 1.0	<b>2.0</b>	<b>20</b>	< 0.1	-	< 0.01	<b>0.06</b>	-	< 0.01	< 0.01		
	15-Oct-19	<b>13</b>	< 1.0	<b>2.0</b>	< 1.0	<b>2.0</b>	<b>21</b>	< 0.1	-	-	-	-	-	< 0.01		
	18-Nov-19	<b>16</b>	< 1.0	<b>2.0</b>	< 1.0	<b>3.0</b>	<b>23</b>	<b>0.1</b>	< 0.01	< 0.01	-	-	< 0.01	<b>0.01</b>		
	16-Sep-20	<b>13</b>	< 1.0	<b>2.0</b>	< 1.0	<b>2.0</b>	<b>21</b>	< 0.1	-	-	-	-	-	-		
	16-Oct-20	<b>14</b>	< 1.0	<b>2.0</b>	< 1.0	<b>4.0</b>	<b>21</b>	< 0.1	-	-	-	-	-	-		
	16-Nov-20	<b>11</b>	< 1.0	<b>2.0</b>	< 1.0	<b>5.0</b>	<b>18</b>	< 0.1	-	< 0.01	<b>0.02</b>	-	< 0.01	< 0.01		
	16-Dec-20	<b>13</b>	< 1.0	<b>2.0</b>	<b>1.0</b>	<b>6.0</b>	<b>22</b>	< 0.1	-	-	-	-	-	-		
	14-Jan-21	<b>12</b>	< 1.0	<b>2.0</b>	< 1.0	<b>5.0</b>	<b>23</b>	< 0.1	-	-	-	-	-	-		
	16-Feb-21	<b>14</b>	< 1.0	<b>2.0</b>	<b>1.0</b>	<b>5.0</b>	<b>25</b>	< 0.1	-	< 0.01	< 0.01	-	< 0.01	<b>0.02</b>		
	17-Mar-21	<b>14</b>	<b>1.0</b>	<b>2.0</b>	< 1.0	<b>4.0</b>	<b>23</b>	< 0.1	-	-	-	-	-	-		
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-		
	24-Feb-22	<b>14</b>	<b>1.0</b>	<b>3.0</b>	< 1.0	<b>10</b>	<b>23</b>	< 0.1	-	-	< 0.01	< 0.01	-	<b>0.02</b>		
BH1A	15-Feb-23	<b>9.0</b>	< 1.0	< 1.0	< 1.0	<b>7.0</b>	<b>13</b>	< 0.1	-	< 0.01	< 0.01	-	< 0.01	-	<b>0.26</b>	
BH2	22-Feb-19	<b>12</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>6.0</b>	<b>22</b>	<b>0.1</b>	-	< 0.01	<b>0.28</b>	-	< 0.01	-	<b>2.76</b>	
	15-Mar-19	<b>10</b>	<b>3.0</b>	<b>2.0</b>	< 1.0	<b>7.0</b>	<b>23</b>	< 0.1	-	-	-	-	-	-		
	23-Apr-19	<b>14</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>6.0</b>	<b>23</b>	< 0.1	-	-	-	-	-	-		
	16-May-19	<b>12</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>21</b>	<b>22</b>	< 0.1	-	< 0.01	<b>0.26</b>	-	< 0.01	-	<b>0.38</b>	
	14-Jun-19	<b>11</b>	<b>1.0</b>	<b>2.0</b>	< 1.0	<b>5.0</b>	<b>23</b>	< 0.1	-	-	-	-	-	-		
	16-Jul-19	<b>13</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>9.0</b>	<b>20</b>	< 0.1	-	-	-	-	-	-		
	15-Aug-19	<b>12</b>	<b>1.0</b>	<b>2.0</b>	< 1.0	<b>8.0</b>	<b>20</b>	< 0.1	-	-	-	-	-	-		
	16-Sep-19	<b>11</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>8.0</b>	<b>18</b>	< 0.1	-	< 0.01	<b>0.28</b>	-	< 0.01	-	<b>1.07</b>	
	15-Oct-19	<b>12</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>5.0</b>	<b>20</b>	< 0.1	-	-	-	-	-	-		
	18-Nov-19	<b>14</b>	<b>2.0</b>	<b>1.0</b>	< 1.0	<b>7.0</b>	<b>19</b>	< 0.1	<b>0.21</b>	< 0.01	-	-	< 0.01	<b>1.01</b>	-	
	16-Sep-20	<b>11</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>7.0</b>	<b>17</b>	< 0.1	-	-	-	-	-	-		
	16-Oct-20	<b>11</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>6.0</b>	<b>16</b>	< 0.1	-	-	-	-	-	-		
	16-Nov-20	<b>11</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>9.0</b>	<b>16</b>	< 0.1	-	< 0.01	<b>0.48</b>	-	< 0.01	-	<b>2.88</b>	
	16-Dec-20	<b>11</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>7.0</b>	<b>15</b>	< 0.1	-	-	-	-	-	-		
	14-Jan-21	<b>9.0</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>7.0</b>	<b>13</b>	< 0.1	-	-	-	-	-	-		
	16-Feb-21	<b>12</b>	<b>1.0</b>	<b>1.0</b>	< 1.0	<b>8.0</b>	<b>12</b>	< 0.1	-	< 0.01	<b>0.15</b>	-	< 0.01	-	<b>2.58</b>	
	17-Mar-21	<b>10</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>7.0</b>	<b>13</b>	< 0.1	-	-	-	-	-	-		
	19-Aug-21	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-		
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-		
	16-Nov-21	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-		
	24-Feb-22	<b>8.0</b>	<b>2.0</b>	<b>1.0</b>	< 1.0	<b>7.0</b>	<b>14</b>	< 0.1	-	-	<b>0.06</b>	< 0.01	-	<b>0.05</b>	-	
BH3	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-		
	27-May-22	-	-	<b>1.0</b>	-	-	-	-	-	-	-	-	-	-		
	12-Aug-22	-	-	<b>1.0</b>	-	-	-	-	-	-	-	-	-	-		
	18-Nov-22	-	-	<b>1.0</b>	-	-	-	-	-	-	-	-	-	-		
	15-Feb-23	<b>9.0</b>	< 1.0	<b>1.0</b>	< 1.0	<b>6.0</b>	<b>16</b>	< 0.1	-	< 0.01	<b>0.22</b>	-	< 0.01	-	<b>0.04</b>	
	16-May-23	-	-	<b>1.0</b>	-	-	-	-	-	-	-	-	-	-		
	21-Feb-19	<b>4.0</b>	<b>4.0</b>	<b>1.0</b>	< 1.0	<b>4.0</b>	<b>10</b>	< 0.1	-	< 0.01	<b>2.76</b>	-	< 0.01	-	<b>0.78</b>	
	21-Feb-19	<b>8.0</b>	<b>2.0</b>	<b>1.0</b>	<b>1.0</b>	<b>5.0</b>	<b>17</b>	< 0.1	-	< 0.01	<b>0.19</b>	-	< 0.01	-	<b>0.35</b>	
	15-Mar-19	<b>9.0</b>	<b>2.0</b>	< 1.0	< 1.0	<b>5.0</b>	<b>18</b>	< 0.1	-	-	-	-	-	-		
	23-Apr-19	<b>10</b>	<b>2.0</b>	<b>1.0</b>	<b>1.0</b>	<b>3.0</b>	<b>19</b>	< 0.1	-	-	-	-	-	-		
	16-May-19	<b>9.0</b>	<b>2.0</b>	<b>1.0</b>	<b>1.0</b>	<b>2.0</b>	<b>22</b>	<b>19</b>	< 0.1	-	< 0.01	<b>0.97</b>	-	< 0.01	-	<b>0.29</b>
	14-Jun-19	<b>6.0</b>	<b>1.0</b>	<b>1.0</b>	< 1.0	<b>4.0</b>	<b>18</b>	< 0.1	-	-	-	-	-	-		
	16-Jul-19	<b>10</b>	<b>2.0</b>	<b>2.0</b>	<b>1.0</b>	<b>6.0</b>	<b>18</b>	< 0.1	-	-	-	-	-	-		
	15-Aug-19	<b>8.0</b>	<b>2.0</b>	<b>1.0</b>	<b>1.0</b>	<b>5.0</b>	<b>16</b>	< 0.1	-	-	-	-	-	-		
	16-Sep-19	<b>11</b>	<b>2.0</b>	<b>2.0</b>	< 1.0	<b>8.0</b>	<b>19</b>	< 0.1	-	< 0.01	<b>0.4</b>	-	< 0.01	-	<b>0.24</b>	
	15-Oct-19	<b>10</b>	<b>1.0</b>	<b>1.0</b>	< 1.0	<b>4.0</b>	<b>18</b>	< 0.1	-	-	-	-	-	-		
	18-Nov-19	<b>11</b>	<b>1.0</b>	<b>1.0</b>	< 1.0	<b>6.0</b>	<b>18</b>	< 0.1	<b>0.08</b>	< 0.01	-	-	< 0.01	<b>0.29</b>	-	
	16-Sep-20	<b>20</b>	< 1.0	<b>2.0</b>	< 1.0	<b>11</b>	<b>31</b>	< 0.1	-	-	-	-	-	-		

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Anions and Cations													
		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N	Nitrate	Nitrate as N
LOR		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	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
Adopted Site Specific Trigger Values (SWMP 2021)		77	5.0	11	2.0	70	148	0.2	--	--	2.0	--	--	--	--
BH4	16-Oct-20	19	1.0	3.0	< 1.0	10	34	< 0.1	-	-	-	-	-	-	-
	16-Nov-20	18	< 1.0	2.0	< 1.0	12	27	< 0.1	-	< 0.01	0.06	-	< 0.01	-	0.1
	16-Dec-20	25	1.0	4.0	< 1.0	15	43	< 0.1	-	-	-	-	-	-	-
	14-Jan-21	36	1.0	4.0	< 1.0	23	54	< 0.1	-	-	-	-	-	-	-
	16-Feb-21	69	2.0	9.0	1.0	32	111	< 0.1	-	< 0.01	0.11	-	< 0.01	-	< 0.01
	17-Mar-21	77	2.0	11	1.0	26	128	< 0.1	-	-	-	-	-	-	-
	19-Aug-21	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	7.0	1.0	2.0	< 1.0	7.0	15	< 0.1	-	-	0.3	< 0.01	-	0.21	-
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	10	1.0	1.0	1.0	7.0	18	< 0.1	-	< 0.01	0.11	-	< 0.01	-	0.33
	16-May-23	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-
BH5	22-Feb-19	42	< 1.0	6.0	1.0	19	69	0.2	-	< 0.01	0.34	-	< 0.01	-	< 0.01
	24-Feb-22	40	< 1.0	8.0	< 1.0	42	60	< 0.1	-	-	0.29	< 0.01	-	0.02	-
	15-Feb-23	18	< 1.0	2.0	< 1.0	17	24	< 0.1	-	< 0.01	0.32	-	< 0.01	-	0.01
BH6	22-Feb-19	28	3.0	4.0	1.0	28	42	< 0.1	-	< 0.01	0.05	-	< 0.01	-	0.09
	14-Mar-19	23	2.0	4.0	1.0	17	37	< 0.1	-	-	-	-	-	-	-
	23-Apr-19	25	3.0	4.0	1.0	18	42	< 0.1	-	-	-	-	-	-	-
	16-May-19	23	3.0	4.0	1.0	18	45	< 0.1	-	< 0.01	0.13	-	< 0.01	-	< 0.01
	14-Jun-19	20	2.0	4.0	1.0	16	42	< 0.1	-	-	-	-	-	-	-
	16-Jul-19	23	2.0	4.0	1.0	20	35	< 0.1	-	-	-	-	-	-	-
	15-Aug-19	23	2.0	3.0	1.0	21	38	< 0.1	-	-	-	-	-	-	-
	16-Sep-19	25	3.0	3.0	1.0	21	38	< 0.1	-	< 0.01	0.15	-	< 0.01	-	0.07
	15-Oct-19	25	2.0	4.0	1.0	13	41	< 0.1	-	-	-	-	-	-	-
	18-Nov-19	27	3.0	3.0	1.0	18	45	< 0.1	0.06	< 0.01	-	-	< 0.01	< 0.01	-
	16-Sep-20	36	2.0	4.0	1.0	16	55	< 0.1	-	-	-	-	-	-	-
	16-Oct-20	36	2.0	5.0	1.0	12	64	< 0.1	-	-	-	-	-	-	-
	16-Nov-20	37	3.0	5.0	2.0	23	61	< 0.1	-	0.01	0.08	-	< 0.01	-	0.01
	16-Dec-20	46	3.0	6.0	2.0	15	75	< 0.1	-	-	-	-	-	-	-
	14-Jan-21	39	3.0	5.0	2.0	21	73	< 0.1	-	-	-	-	-	-	-
	16-Feb-21	43	3.0	6.0	2.0	18	72	< 0.1	-	< 0.01	0.1	-	< 0.01	-	< 0.01
	17-Mar-21	51	4.0	9.0	1.0	25	80	< 0.1	-	-	-	-	-	-	-
BH7	19-Aug-21	-	-	5.0	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	30	< 1.0	4.0	< 1.0	10	61	< 0.1	-	-	0.11	< 0.01	-	0.02	-
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	4.0	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	4.0	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	32	< 1.0	4.0	< 1.0	21	59	< 0.1	-	< 0.01	0.03	-	< 0.01	-	< 0.01
	16-May-23	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-
	22-Feb-19	34	< 1.0	5.0	2.0	12	64	0.2	-	< 0.01	0.13	-	< 0.01	-	0.02
	14-Mar-19	36	< 1.0	6.0	2.0	16	61	< 0.1	-	-	-	-	-	-	-
	23-Apr-19	38	< 1.0	6.0	2.0	17	62	< 0.1	-	-	-	-	-	-	-
	16-May-19	35	< 1.0	5.0	2.0	15	68	0.2	-	< 0.01	0.06	-	< 0.01	-	< 0.01
	14-Jun-19	31	< 1.0	4.0	2.0	11	56	0.1	-	-	-	-	-	-	-
	16-Jul-19	36	< 1.0	5.0	2.0	12	46	< 0.1	-	-	-	-	-	-	-
	15-Aug-19	32	< 1.0	4.0	2.0	15	49	0.1	-	-	-	-	-	-	-
	16-Sep-19	27	< 1.0	4.0	1.0	13	53	< 0.1	-	< 0.01	0.09	-	< 0.01	-	0.06
	15-Oct-19	34	< 1.0	5.0	2.0	12	53	< 0.1	-	-	-	-	-	-	-
	18-Nov-19	31	< 1.0	5.0	1.0	15	56	0.1	0.02	< 0.01	-	-	< 0.01	< 0.01	-
	16-Sep-20	33	< 1.0	5.0	2.0	12	62	0.1	-	-	-	-	-	-	-
	16-Oct-20	34	< 1.0	5.0	2.0	9.0	64	< 0.1	-	-	-	-	-	-	-
	16-Nov-20	30	< 1.0	5.0	2.0	9.0	54	0.1	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01
	16-Dec-20	30	< 1.0	6.0	2.0	9.0	58	0.1	-	-	-	-	-	-	-
	14-Jan-21	31	< 1.0	5.0	2.0	10	63	0.1	-	-	-	-	-	-	-

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Anions and Cations													
		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N	Nitrate	Nitrate as N
LOR		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	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
Adopted Site Specific Trigger Values (SWMP 2021)		77	5.0	11	2.0	70	148	0.2	--	--	2.0	--	--	--	--
BH8	16-Feb-21	<b>34</b>	< 1.0	<b>6.0</b>	<b>2.0</b>	<b>12</b>	<b>64</b>	< 0.1	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01
	17-Mar-21	<b>36</b>	< 1.0	<b>7.0</b>	<b>2.0</b>	<b>11</b>	<b>68</b>	< 0.1	-	-	-	-	-	-	-
	19-Aug-21	-	-	<b>3.0</b>	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>17</b>	< 1.0	<b>2.0</b>	<b>1.0</b>	<b>8.0</b>	<b>25</b>	< 0.1	-	-	<b>0.12</b>	< 0.01	-	<b>0.02</b>	-
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	<b>1.0</b>	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	<b>10</b>	< 1.0	<b>1.0</b>	< 1.0	<b>1.0</b>	<b>14</b>	< 0.1	-	< 0.01	<b>0.23</b>	-	< 0.01	-	< 0.01
	16-May-23	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-	-
	21-Feb-19	<b>52</b>	< 1.0	<b>6.0</b>	< 1.0	<b>11</b>	<b>90</b>	< 0.1	-	< 0.01	<b>1.97</b>	-	< 0.01	-	< 0.01
	14-Mar-19	<b>45</b>	< 1.0	<b>6.0</b>	< 1.0	<b>6.0</b>	<b>76</b>	< 0.1	-	-	-	-	-	-	-
	23-Apr-19	<b>53</b>	< 1.0	<b>7.0</b>	< 1.0	<b>8.0</b>	<b>89</b>	< 0.1	-	-	-	-	-	-	-
	16-May-19	<b>47</b>	< 1.0	<b>4.0</b>	< 1.0	<b>6.0</b>	<b>81</b>	< 0.1	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01
BH9A	14-Jun-19	<b>47</b>	< 1.0	<b>5.0</b>	< 1.0	<b>4.0</b>	<b>89</b>	< 0.1	-	-	-	-	-	-	-
	16-Jul-19	<b>57</b>	< 1.0	<b>5.0</b>	< 1.0	<b>70</b>	<b>121</b>	<b>0.1</b>	-	-	-	-	-	-	-
	15-Aug-19	<b>42</b>	< 1.0	<b>3.0</b>	< 1.0	<b>4.0</b>	<b>63</b>	< 0.1	-	-	-	-	-	-	-
	16-Sep-19	<b>46</b>	< 1.0	<b>3.0</b>	< 1.0	<b>4.0</b>	<b>70</b>	< 0.1	-	< 0.01	<b>0.43</b>	-	< 0.01	-	< 0.01
	15-Oct-19	<b>45</b>	< 1.0	<b>4.0</b>	< 1.0	<b>4.0</b>	<b>70</b>	< 0.1	-	-	-	-	-	-	-
	18-Nov-19	<b>49</b>	< 1.0	<b>4.0</b>	< 1.0	<b>8.0</b>	<b>80</b>	< 0.1	<b>0.58</b>	< 0.01	-	-	< 0.01	<b>0.01</b>	-
	16-Sep-20	<b>58</b>	< 1.0	<b>4.0</b>	< 1.0	<b>9.0</b>	<b>109</b>	< 0.1	-	-	-	-	-	-	-
	16-Oct-20	<b>43</b>	< 1.0	<b>4.0</b>	< 1.0	<b>12</b>	<b>70</b>	< 0.1	-	-	-	-	-	-	-
	16-Nov-20	<b>48</b>	< 1.0	<b>6.0</b>	< 1.0	<b>10</b>	<b>76</b>	< 0.1	-	< 0.01	<b>0.14</b>	-	< 0.01	-	< 0.01
	16-Dec-20	<b>35</b>	< 1.0	<b>4.0</b>	< 1.0	<b>14</b>	<b>56</b>	< 0.1	-	-	-	-	-	-	-
	14-Jan-21	<b>44</b>	< 1.0	<b>5.0</b>	< 1.0	<b>13</b>	<b>77</b>	< 0.1	-	-	-	-	-	-	-
	16-Feb-21	<b>50</b>	< 1.0	<b>6.0</b>	< 1.0	<b>17</b>	<b>79</b>	< 0.1	-	< 0.01	<b>0.14</b>	-	< 0.01	-	< 0.01
	17-Mar-21	<b>50</b>	< 1.0	<b>6.0</b>	< 1.0	<b>19</b>	<b>75</b>	< 0.1	-	-	-	-	-	-	-
	19-Aug-21	-	-	<b>7.0</b>	-	-	-	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	<b>8.0</b>	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>55</b>	< 1.0	<b>5.0</b>	< 1.0	<b>54</b>	<b>70</b>	< 0.1	-	-	<b>0.3</b>	< 0.01	-	<b>0.72</b>	-
	27-May-22	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	<b>1.0</b>	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	<b>16</b>	< 1.0	<b>1.0</b>	< 1.0	<b>15</b>	<b>22</b>	< 0.1	-	< 0.01	<b>0.19</b>	-	< 0.01	-	< 0.01
	16-May-23	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-	-
BH9A	16-Sep-20	<b>35</b>	<b>5.0</b>	<b>5.0</b>	<b>1.0</b>	<b>41</b>	<b>38</b>	< 0.1	-	-	-	-	-	-	-
	16-Oct-20	<b>32</b>	<b>3.0</b>	<b>6.0</b>	<b>1.0</b>	<b>33</b>	<b>48</b>	< 0.1	-	-	-	-	-	-	-
	16-Nov-20	<b>23</b>	<b>2.0</b>	<b>4.0</b>	<b>1.0</b>	<b>23</b>	<b>35</b>	< 0.1	-	< 0.01	<b>0.11</b>	-	< 0.01	-	<b>2.35</b>
	16-Dec-20	<b>23</b>	<b>1.0</b>	<b>3.0</b>	<b>1.0</b>	<b>9.0</b>	<b>37</b>	< 0.1	-	-	-	-	-	-	-
	14-Jan-21	<b>24</b>	<b>1.0</b>	<b>3.0</b>	<b>1.0</b>	<b>15</b>	<b>43</b>	< 0.1	-	-	-	-	-	-	-
	16-Feb-21	<b>25</b>	<b>1.0</b>	<b>3.0</b>	<b>1.0</b>	<b>12</b>	<b>40</b>	< 0.1	-	< 0.01	<b>1.74</b>	-	< 0.01	-	< 0.01
	17-Mar-21	<b>25</b>	<b>1.0</b>	<b>3.0</b>	< 1.0	<b>12</b>	<b>35</b>	< 0.1	-	-	-	-	-	-	-
	19-Aug-21	<b>25</b>	<b>1.0</b>	<b>3.0</b>	<b>1.0</b>	<b>14</b>	<b>37</b>	< 0.1	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01
	22-Sep-21	<b>22</b>	<b>1.0</b>	<b>2.0</b>	<b>1.0</b>	<b>12</b>	<b>35</b>	< 0.1	-	< 0.01	<b>0.16</b>	-	< 0.01	-	<b>0.03</b>
	13-Oct-21	<b>24</b>	< 1.0	<b>2.0</b>	<b>1.0</b>	<b>11</b>	<b>38</b>	< 0.1	-	< 0.01	<b>0.13</b>	-	< 0.01	-	< 0.01
	16-Nov-21	<b>24</b>	<b>2.0</b>	<b>3.0</b>	<b>1.0</b>	<b>17</b>	<b>32</b>	< 0.1	-	< 0.01	<b>0.05</b>	-	< 0.01	-	<b>0.04</b>
	24-Feb-22	<b>21</b>	<b>2.0</b>	<b>4.0</b>	<b>1.0</b>	<b>17</b>	<b>32</b>	< 0.1	-	-	<b>0.19</b>	< 0.01	-	< 0.01	-
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	<b>3.0</b>	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	<b>3.0</b>	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	<b>18</b>	< 1.0	<b>2.0</b>	<b>1.0</b>	<b>20</b>	<b>19</b>	< 0.1	-	< 0.01	<b>0.13</b>	-	< 0.01	-	< 0.01
	16-May-23	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-	-	-
	21-Feb-19	<b>48</b>	< 1.0	<b>10</b>	< 1.0	<b>24</b>	<b>80</b>	<b>0.1</b>	-	< 0.01	<b>0.03</b>	-	< 0.01	-	<b>0.04</b>
	15-Mar-19	<b>26</b>	< 1.0	<b>2.0</b>	< 1.0	<b>2.0</b>	<b>52</b>	< 0.1	-	-	-	-	-	-	-
	23-Apr-19	<b>32</b>	< 1.0	<b>5.0</b>	< 1.0	<b>2.0</b>	<b>57</b>	< 0.1	-	-	-	-	-	-	-
	16-May-19	<b>29</b>	< 1.0	<b>4.0</b>	< 1.0	<b>2.0</b>	<b>55</b>	< 0.1	-	< 0.01	<b>0.01</b>	-	< 0.01	-	< 0.01
	14-Jun-19	<b>26</b>	< 1.0	<b>3.0</b>	< 1.0	< 1.0	<b>53</b>	< 0.1	-	-	-	-	-	-	-

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Anions and Cations												
		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N	Nitrate
LOR		1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	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
Adopted Site Specific Trigger Values (SWMP 2021)		77	5.0	11	2.0	70	148	0.2	--	--	2.0	--	--	--
BH11	16-Jul-19	49	< 1.0	8.0	< 1.0	8.0	73	0.2	-	-	-	-	-	-
	15-Aug-19	28	< 1.0	3.0	< 1.0	4.0	47	< 0.1	-	-	-	-	-	-
	16-Sep-19	27	< 1.0	3.0	< 1.0	5.0	46	< 0.1	-	< 0.01	0.12	-	< 0.01	-
	15-Oct-19	28	< 1.0	3.0	< 1.0	3.0	44	< 0.1	-	-	-	-	-	-
	18-Nov-19	28	< 1.0	3.0	< 1.0	< 1.0	53	< 0.1	2.11	< 0.01	-	< 0.01	0.06	-
	16-Sep-20	29	< 1.0	5.0	< 1.0	6.0	48	< 0.1	-	-	-	-	-	-
	16-Oct-20	29	< 1.0	6.0	< 1.0	4.0	61	< 0.1	-	-	-	-	-	-
	16-Nov-20	27	< 1.0	5.0	< 1.0	5.0	50	< 0.1	-	< 0.01	0.06	-	< 0.01	< 0.01
	16-Dec-20	31	< 1.0	6.0	< 1.0	7.0	60	< 0.1	-	-	-	-	-	-
	14-Jan-21	32	< 1.0	6.0	< 1.0	12	63	< 0.1	-	-	-	-	-	-
	16-Feb-21	32	< 1.0	5.0	1.0	12	55	< 0.1	-	< 0.01	< 0.01	< 0.01	-	< 0.01
	17-Mar-21	29	< 1.0	6.0	< 1.0	17	48	< 0.1	-	-	-	-	-	-
	19-Aug-21	58	< 1.0	7.0	< 1.0	9.0	110	0.1	-	< 0.01	0.08	-	< 0.01	< 0.01
	22-Sep-21	49	< 1.0	6.0	< 1.0	12	101	0.1	-	< 0.01	0.01	-	< 0.01	0.01
	13-Oct-21	51	< 1.0	8.0	< 1.0	29	90	< 0.1	-	< 0.01	0.03	-	< 0.01	< 0.01
	16-Nov-21	37	< 1.0	8.0	< 1.0	24	55	< 0.1	-	< 0.01	0.03	-	< 0.01	< 0.01
	24-Feb-22	41	< 1.0	6.0	< 1.0	4.0	80	< 0.1	-	< 0.01	< 0.01	< 0.01	< 0.01	-
	06-Mar-22	-	-	3.0	-	-	-	-	-	-	-	-	-	-
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	2.0	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	17	< 1.0	2.0	< 1.0	< 1.0	29	< 0.1	-	< 0.01	0.04	-	< 0.01	< 0.01
	16-May-23	-	-	2.0	-	-	-	-	-	-	-	-	-	-
BH12	16-Sep-20	24	< 1.0	7.0	1.0	22	38	< 0.1	-	-	-	-	-	-
	16-Nov-20	22	< 1.0	4.0	1.0	11	41	< 0.1	-	< 0.01	< 0.01	-	< 0.01	0.02
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	20	< 1.0	4.0	2.0	18	28	< 0.1	-	-	0.12	< 0.01	0.01	-
BH12A	15-Feb-23	16	< 1.0	2.0	< 1.0	8.0	29	< 0.1	-	< 0.01	1.74	-	0.02	-
MW239S	22-Feb-19	61	< 1.0	6.0	< 1.0	6.0	104	< 0.1	-	< 0.01	0.56	-	< 0.01	< 0.01
	14-Mar-19	64	< 1.0	6.0	< 1.0	2.0	126	< 0.1	-	-	-	-	-	-
	23-Apr-19	64	< 1.0	7.0	1.0	9.0	97	< 0.1	-	-	-	-	-	-
	16-May-19	52	< 1.0	6.0	< 1.0	13	88	< 0.1	-	< 0.01	0.43	-	< 0.01	< 0.01
	14-Jun-19	50	< 1.0	6.0	< 1.0	13	87	< 0.1	-	-	-	-	-	-
	16-Jul-19	52	< 1.0	7.0	1.0	16	73	< 0.1	-	-	-	-	-	-
	15-Aug-19	54	< 1.0	7.0	< 1.0	11	88	< 0.1	-	-	-	-	-	-
	16-Sep-19	55	< 1.0	6.0	1.0	14	85	< 0.1	-	< 0.01	0.32	-	< 0.01	< 0.01
	15-Oct-19	58	< 1.0	6.0	< 1.0	8.0	108	< 0.1	-	-	-	-	-	-
	18-Nov-19	63	< 1.0	6.0	1.0	8.0	118	< 0.1	0.23	< 0.01	-	< 0.01	< 0.01	-
	16-Sep-20	53	< 1.0	8.0	1.0	36	86	0.1	-	-	-	-	-	-
	16-Oct-20	76	< 1.0	9.0	1.0	17	148	< 0.1	-	-	-	-	-	-
	16-Nov-20	68	< 1.0	9.0	2.0	37	125	< 0.1	-	< 0.01	0.59	-	< 0.01	< 0.01
	16-Dec-20	68	< 1.0	10	1.0	24	126	< 0.1	-	-	-	-	-	-
	14-Jan-21	58	< 1.0	9.0	2.0	37	102	< 0.1	-	-	-	-	-	-
	16-Feb-21	66	< 1.0	11	2.0	38	124	< 0.1	-	< 0.01	0.58	-	< 0.01	< 0.01
	17-Mar-21	49	< 1.0	7.0	1.0	38	70	< 0.1	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	24	< 1.0	3.0	< 1.0	15	33	< 0.1	-	-	0.33	< 0.01	0.16	-
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	2.0	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	2.0	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	1.0	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	14	< 1.0	2.0	< 1.0	7.0	25	< 0.1	-	< 0.01	0.31	-	< 0.01	< 0.01
	16-May-23	-	-	1.0	-	-	-	-	-	-	-	-	-	-

**Notes:**

- Not analysed
- < - Less than laboratory limit of reporting
- LOR - Laboratory limit of reporting
- mg/L - Milligrams per litre
- µS/cm - Microsiemens per centimeter

Table 2  
Groundwater - Inorganics and Nutrients

Analyte	Anions and Cations													
	Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N	Nitrate	Nitrate as N
LOR	1	1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	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
Adopted Site Specific Trigger Values (SWMP 2021)	77	5.0	11	2.0	70	148	0.2	--	--	2.0	--	--	--	--

**Bold** indicates a detection above the laboratory limit of reporting

Highlighting indicates an exceedance of the corresponding criteria (highlighting corresponds to the guideline with the highest criteria value where analytical result exceeds more than one guideline

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Alkalinity												
		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	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3
LOR		0.01	0.1	0.1	0.01	0.01	0.01	0.01	0.01	1	1	1	1	1
Units		mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	0.5	5.9	--	--	--	--	--	--	--	--	--	--
Sample Name	Sample Date													
BH1	15-Mar-19	-	-	-	-	<b>0.66</b>	<b>0.88</b>	-	-	<b>9.0</b>	< 1.0	< 1.0	<b>9.0</b>	
	23-Apr-19	-	-	-	-	<b>0.82</b>	<b>0.99</b>	-	-	<b>10</b>	< 1.0	< 1.0	<b>10</b>	
	16-May-19	< 0.01	<b>0.11</b>	<b>0.3</b>	<b>0.3</b>	<b>0.69</b>	<b>1.01</b>	-	<b>1.7</b>	<b>10</b>	< 1.0	< 1.0	<b>10</b>	
	14-Jun-19	-	-	-	-	<b>0.6</b>	<b>0.94</b>	-	-	<b>10</b>	< 1.0	< 1.0	<b>10</b>	
	16-Jul-19	-	-	-	-	<b>0.82</b>	<b>0.95</b>	-	-	<b>11</b>	< 1.0	< 1.0	<b>11</b>	
	15-Aug-19	-	-	-	-	<b>0.77</b>	<b>0.91</b>	-	-	<b>14</b>	< 1.0	< 1.0	<b>14</b>	
	16-Sep-19	< 0.01	<b>0.12</b>	<b>0.3</b>	<b>0.3</b>	<b>0.73</b>	<b>0.76</b>	-	<b>1.84</b>	<b>8.0</b>	< 1.0	< 1.0	<b>8.0</b>	
	15-Oct-19	-	-	-	-	<b>0.73</b>	<b>0.71</b>	-	-	<b>4.0</b>	< 1.0	< 1.0	<b>4.0</b>	
	18-Nov-19	<b>0.01</b>	<b>0.13</b>	<b>0.3</b>	<b>0.3</b>	<b>0.86</b>	<b>1.19</b>	-	<b>2.26</b>	<b>24</b>	< 1.0	< 1.0	<b>24</b>	
	16-Sep-20	-	-	-	-	<b>0.73</b>	<b>0.81</b>	-	-	<b>9.0</b>	< 1.0	< 1.0	<b>9.0</b>	
	16-Oct-20	-	-	-	-	<b>0.77</b>	<b>0.84</b>	-	-	<b>8.0</b>	< 1.0	< 1.0	<b>8.0</b>	
	16-Nov-20	< 0.01	<b>0.07</b>	<b>0.2</b>	<b>0.2</b>	<b>1.02</b>	<b>1.05</b>	-	<b>1.55</b>	<b>22</b>	< 1.0	< 1.0	<b>22</b>	
	16-Dec-20	-	-	-	-	<b>0.93</b>	<b>1.16</b>	-	-	<b>21</b>	< 1.0	< 1.0	<b>21</b>	
	14-Jan-21	-	-	-	-	<b>0.96</b>	<b>1.07</b>	-	-	<b>16</b>	< 1.0	< 1.0	<b>16</b>	
	16-Feb-21	<b>0.02</b>	<b>0.05</b>	< 0.1	< 0.1	<b>0.8</b>	<b>1.05</b>	-	<b>1.98</b>	<b>12</b>	< 1.0	< 1.0	<b>12</b>	
	17-Mar-21	-	-	-	-	<b>0.82</b>	<b>0.95</b>	-	-	<b>11</b>	< 1.0	< 1.0	<b>11</b>	
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	
	24-Feb-22	<b>0.02</b>	<b>0.11</b>	<b>0.2</b>	<b>0.2</b>	<b>0.9</b>	<b>1.18</b>	-	-	<b>16</b>	-	< 1.0	< 1.0	<b>16</b>
BH1A	15-Feb-23	<b>0.26</b>	<b>0.04</b>	<b>0.5</b>	<b>0.2</b>	<b>0.39</b>	<b>0.51</b>	-	<b>2.15</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	22-Feb-19	<b>2.76</b>	<b>0.05</b>	<b>4.0</b>	<b>1.2</b>	<b>0.79</b>	<b>0.74</b>	-	<b>1.44</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Mar-19	-	-	-	-	<b>0.75</b>	<b>0.79</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	23-Apr-19	-	-	-	-	<b>0.87</b>	<b>0.77</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-19	<b>0.38</b>	<b>0.01</b>	<b>1.3</b>	<b>0.9</b>	<b>0.79</b>	<b>1.06</b>	-	<b>1.44</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jun-19	-	-	-	-	<b>0.69</b>	<b>0.75</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Jul-19	-	-	-	-	<b>0.83</b>	<b>0.75</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Aug-19	-	-	-	-	<b>0.74</b>	<b>0.73</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-19	<b>1.07</b>	<b>0.04</b>	<b>2.7</b>	<b>1.6</b>	<b>0.74</b>	<b>0.67</b>	-	<b>1.32</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Oct-19	-	-	-	-	<b>0.79</b>	<b>0.67</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	18-Nov-19	<b>1.01</b>	<b>0.05</b>	<b>2.1</b>	<b>1.1</b>	<b>0.79</b>	<b>0.68</b>	-	<b>2.02</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-20	-	-	-	-	<b>0.74</b>	<b>0.62</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Oct-20	-	-	-	-	<b>0.74</b>	<b>0.58</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Nov-20	<b>2.88</b>	< 0.01	<b>4.8</b>	<b>1.9</b>	<b>0.74</b>	<b>0.7</b>	-	<b>1.32</b>	<b>3.0</b>	< 1.0	< 1.0	< 1.0	<b>3.0</b>
	16-Dec-20	-	-	-	-	<b>0.74</b>	<b>0.57</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jan-21	-	-	-	-	<b>0.66</b>	<b>0.57</b>	-	-	<b>3.0</b>	< 1.0	< 1.0	<b>3.0</b>	
	16-Feb-21	<b>2.58</b>	< 0.01	<b>3.5</b>	<b>0.9</b>	<b>0.65</b>	<b>0.5</b>	-	<b>2.03</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	17-Mar-21	-	-	-	-	<b>0.7</b>	<b>0.53</b>	-	-	<b>1.0</b>	< 1.0	< 1.0	<b>1.0</b>	
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-	-	
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	
	16-Nov-21	-	-	-	-	-	-	-	-	-	-	-	-	
	24-Feb-22	<b>0.05</b>	<b>0.01</b>	<b>0.4</b>	<b>0.3</b>	<b>0.53</b>	<b>0.6</b>	-	-	<b>3.0</b>	-	< 1.0	< 1.0	<b>3.0</b>
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-	
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-	
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-	
	15-Feb-23	<b>0.04</b>	<b>0.01</b>	<b>1.4</b>	<b>1.4</b>	<b>0.47</b>	<b>0.62</b>	-	<b>1.69</b>	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>	
	16-May-23	-	-	-	-	-	-	-	-	-	-	-	-	
BH3	21-Feb-19	<b>0.78</b>	<b>0.3</b>	<b>5.9</b>	<b>5.1</b>	<b>0.46</b>	<b>0.54</b>	-	<b>0.46</b>	<b>9.0</b>	< 1.0	< 1.0	<b>9.0</b>	
	21-Feb-19	<b>0.35</b>	<b>0.04</b>	<b>0.6</b>	<b>0.3</b>	<b>0.56</b>	<b>0.7</b>	-	<b>1.15</b>	<b>6.0</b>	< 1.0	< 1.0	<b>6.0</b>	
	15-Mar-19	-	-	-	-	<b>0.49</b>	<b>0.61</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	23-Apr-19	-	-	-	-	<b>0.64</b>	<b>0.6</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-19	<b>0.29</b>	< 0.01	<b>1.0</b>	<b>0.7</b>	<b>0.6</b>	<b>0.99</b>	-	<b>1.3</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jun-19	-	-	-	-	<b>0.39</b>	<b>0.59</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Jul-19	-	-	-	-	<b>0.72</b>	<b>0.63</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Aug-19	-	-	-	-	<b>0.56</b>	<b>0.56</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-19	<b>0.24</b>	<b>0.02</b>	<b>0.6</b>	<b>0.4</b>	<b>0.74</b>	<b>0.7</b>	-	<b>1.32</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Oct-19	-	-	-	-	<b>0.57</b>	<b>0.59</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	18-Nov-19	<b>0.29</b>	< 0.01	<b>0.3</b>	< 0.1	<b>0.61</b>	<b>0.63</b>	-	<b>1.86</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-20	-	-	-	-	<b>1.03</b>	<b>1.1</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Alkalinity												
		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	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3
LOR		0.01	0.1	0.1	0.01	0.01	0.01	0.01	1	1	1	1	1	
Units		mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	0.5	5.9	--	--	--	--	--	--	--	--	--	--
BH4	16-Oct-20	-	-	-	-	<b>1.12</b>	<b>1.21</b>	-	-	<b>2.0</b>	< 1.0	< 1.0	2.0	2.0
	16-Nov-20	<b>0.1</b>	< 0.01	<b>0.1</b>	< 0.1	<b>0.95</b>	<b>1.03</b>	-	<b>2.54</b>	-	<b>1.0</b>	< 1.0	< 1.0	1.0
	16-Dec-20	-	-	-	-	<b>1.47</b>	<b>1.58</b>	-	-	<b>3.0</b>	< 1.0	< 1.0	3.0	3.0
	14-Jan-21	-	-	-	-	<b>1.94</b>	<b>2.02</b>	-	-	<b>1.0</b>	< 1.0	< 1.0	1.0	1.0
	16-Feb-21	< 0.01	<b>0.03</b>	< 0.1	< 0.1	<b>3.87</b>	<b>3.82</b>	<b>0.65</b>	<b>4.63</b>	-	<b>1.0</b>	< 1.0	< 1.0	1.0
	17-Mar-21	-	-	-	-	<b>4.38</b>	<b>4.21</b>	<b>1.96</b>	-	-	<b>3.0</b>	< 1.0	< 1.0	3.0
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>0.21</b>	<b>0.01</b>	<b>0.6</b>	<b>0.4</b>	<b>0.52</b>	<b>0.61</b>	-	-	<b>2.0</b>	-	< 1.0	< 1.0	2.0
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5	15-Feb-23	<b>0.33</b>	<b>0.02</b>	<b>0.7</b>	<b>0.4</b>	<b>0.59</b>	<b>0.65</b>	-	<b>1.69</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-23	-	-	-	-	-	-	-	-	-	-	-	-	-
	22-Feb-19	< 0.01	<b>0.09</b>	<b>3.0</b>	<b>3.0</b>	<b>2.35</b>	<b>2.34</b>	-	<b>3.59</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	24-Feb-22	<b>0.02</b>	<b>0.21</b>	<b>1.2</b>	<b>1.2</b>	<b>2.4</b>	<b>2.63</b>	-	-	<b>3.0</b>	-	< 1.0	< 1.0	3.0
	15-Feb-23	<b>0.01</b>	<b>0.06</b>	<b>3.9</b>	<b>3.9</b>	<b>0.95</b>	<b>1.07</b>	-	<b>2.54</b>	-	<b>2.0</b>	< 1.0	< 1.0	2.0
BH6	22-Feb-19	<b>0.09</b>	<b>0.14</b>	<b>0.5</b>	<b>0.4</b>	<b>1.72</b>	<b>1.77</b>	-	<b>2.49</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Mar-19	-	-	-	-	<b>1.46</b>	<b>1.44</b>	-	-	<b>2.0</b>	< 1.0	< 1.0	2.0	2.0
	23-Apr-19	-	-	-	-	<b>1.59</b>	<b>1.56</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-19	< 0.01	<b>0.14</b>	<b>0.6</b>	<b>0.6</b>	<b>1.5</b>	<b>1.64</b>	-	<b>2.04</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jun-19	-	-	-	-	<b>1.32</b>	<b>1.52</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Jul-19	-	-	-	-	<b>1.46</b>	<b>1.4</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	15-Aug-19	-	-	-	-	<b>1.37</b>	<b>1.51</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-19	<b>0.07</b>	<b>0.19</b>	<b>0.8</b>	<b>0.7</b>	<b>1.51</b>	<b>1.55</b>	-	<b>2.44</b>	-	<b>2.0</b>	< 1.0	< 1.0	2.0
	15-Oct-19	-	-	-	-	<b>1.54</b>	<b>1.43</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	18-Nov-19	< 0.01	<b>0.23</b>	<b>0.4</b>	<b>0.4</b>	<b>1.6</b>	<b>1.64</b>	-	<b>2.64</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-20	-	-	-	-	<b>2.02</b>	<b>1.9</b>	-	-	<b>1.0</b>	< 1.0	< 1.0	1.0	1.0
	16-Oct-20	-	-	-	-	<b>2.1</b>	<b>2.14</b>	-	-	<b>4.0</b>	< 1.0	< 1.0	4.0	4.0
	16-Nov-20	<b>0.01</b>	<b>0.22</b>	<b>0.3</b>	<b>0.3</b>	<b>2.22</b>	<b>2.2</b>	-	<b>3.04</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Dec-20	-	-	-	-	<b>2.7</b>	<b>2.43</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jan-21	-	-	-	-	<b>2.31</b>	<b>2.5</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Feb-21	< 0.01	<b>0.25</b>	< 0.1	< 0.1	<b>2.56</b>	<b>2.46</b>	-	<b>3.3</b>	-	<b>3.0</b>	< 1.0	< 1.0	3.0
	17-Mar-21	-	-	-	-	<b>3.18</b>	<b>2.82</b>	-	-	<b>2.0</b>	< 1.0	< 1.0	2.0	2.0
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>0.02</b>	<b>0.04</b>	<b>0.4</b>	<b>0.4</b>	<b>1.63</b>	<b>1.93</b>	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	< 0.01	<b>0.03</b>	<b>0.4</b>	<b>0.4</b>	<b>1.93</b>	<b>2.1</b>	-	<b>3.31</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-23	-	-	-	-	-	-	-	-	-	-	-	-	-
	22-Feb-19	<b>0.02</b>	<b>0.34</b>	<b>2.2</b>	<b>2.2</b>	<b>1.94</b>	<b>2.06</b>	-	<b>3.16</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Mar-19	-	-	-	-	<b>2.11</b>	<b>2.05</b>	<b>1.37</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	23-Apr-19	-	-	-	-	<b>2.2</b>	<b>2.1</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-19	< 0.01	<b>0.27</b>	<b>0.9</b>	<b>0.9</b>	<b>1.98</b>	<b>2.23</b>	-	<b>3.26</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jun-19	-	-	-	-	<b>1.73</b>	<b>1.81</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Jul-19	-	-	-	-	<b>2.03</b>	<b>1.55</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	15-Aug-19	-	-	-	-	<b>1.77</b>	<b>1.85</b>	-	-	<b>8.0</b>	< 1.0	< 1.0	< 1.0	8.0
	16-Sep-19	<b>0.06</b>	<b>0.2</b>	<b>1.2</b>	<b>1.1</b>	<b>1.53</b>	<b>1.86</b>	-	<b>2.79</b>	-	<b>5.0</b>	< 1.0	< 1.0	5.0
	15-Oct-19	-	-	-	-	<b>1.94</b>	<b>1.74</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	18-Nov-19	< 0.01	<b>0.17</b>	<b>0.5</b>	<b>0.5</b>	<b>1.78</b>	<b>1.89</b>	-	<b>2.89</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-20	-	-	-	-	<b>1.9</b>	<b>2.0</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Oct-20	-	-	-	-	<b>1.94</b>	<b>1.99</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Nov-20	< 0.01	<b>0.3</b>	<b>0.6</b>	<b>0.6</b>	<b>1.77</b>	<b>1.71</b>	-	<b>2.79</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Dec-20	-	-	-	-	<b>1.85</b>	<b>1.82</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jan-21	-	-	-	-	<b>1.81</b>	<b>1.98</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Alkalinity												
		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	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3
LOR		0.01	0.1	0.1	0.01	0.01	0.01	0.01	1	1	1	1	1	
Units		mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	0.5	5.9	--	--	--	--	--	--	--	--	--	--
BH8	16-Feb-21	< 0.01	<b>0.3</b>	<b>0.6</b>	<b>0.6</b>	<b>2.02</b>	<b>2.06</b>	-	<b>2.9</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	17-Mar-21	-	-	-	-	<b>2.19</b>	<b>2.15</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>0.02</b>	<b>0.08</b>	<b>1.0</b>	<b>1.0</b>	<b>0.93</b>	<b>0.87</b>	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	< 0.01	<b>0.03</b>	<b>1.6</b>	<b>1.6</b>	<b>0.52</b>	<b>0.46</b>	-	<b>1.88</b>	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>
	16-May-23	-	-	-	-	-	-	-	-	-	-	-	-	-
	21-Feb-19	< 0.01	<b>0.5</b>	<b>2.4</b>	<b>2.4</b>	<b>2.76</b>	<b>2.77</b>	-	<b>4.44</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Mar-19	-	-	-	-	<b>2.45</b>	<b>2.27</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	23-Apr-19	-	-	-	-	<b>2.88</b>	<b>2.68</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
BH9A	16-May-19	< 0.01	<b>0.12</b>	<b>0.4</b>	<b>0.4</b>	<b>2.37</b>	<b>2.43</b>	-	<b>4.86</b>	-	<b>1.0</b>	< 1.0	< 1.0	<b>1.0</b>
	14-Jun-19	-	-	-	-	<b>2.46</b>	<b>2.59</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Jul-19	-	-	-	-	<b>2.89</b>	<b>4.87</b>	<b>26</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Aug-19	-	-	-	-	<b>2.07</b>	<b>1.86</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-19	< 0.01	<b>0.13</b>	<b>1.1</b>	<b>1.1</b>	<b>2.25</b>	<b>2.06</b>	-	<b>5.43</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Oct-19	-	-	-	-	<b>2.29</b>	<b>2.06</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	18-Nov-19	<b>0.01</b>	<b>0.17</b>	<b>1.3</b>	<b>1.3</b>	<b>2.46</b>	<b>2.42</b>	-	<b>5.06</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-20	-	-	-	-	<b>3.1</b>	<b>3.26</b>	<b>2.57</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Oct-20	-	-	-	-	<b>2.2</b>	<b>2.22</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Nov-20	< 0.01	<b>0.13</b>	<b>0.6</b>	<b>0.6</b>	<b>2.58</b>	<b>2.35</b>	-	<b>4.1</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Dec-20	-	-	-	-	<b>1.85</b>	<b>1.87</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jan-21	-	-	-	-	<b>2.32</b>	<b>2.44</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Feb-21	< 0.01	<b>0.12</b>	< 0.1	< 0.1	<b>2.67</b>	<b>2.58</b>	-	<b>4.27</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	17-Mar-21	-	-	-	-	<b>2.67</b>	<b>2.51</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>0.72</b>	<b>0.13</b>	<b>1.7</b>	<b>1.0</b>	<b>2.8</b>	<b>3.2</b>	<b>6.58</b>	-	<b>5.0</b>	-	< 1.0	< 1.0	<b>5.0</b>
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	< 0.01	<b>0.06</b>	<b>1.7</b>	<b>1.7</b>	<b>0.78</b>	<b>0.93</b>	-	<b>3.0</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-23	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9B	16-Sep-20	-	-	-	-	<b>2.21</b>	<b>2.06</b>	-	-	<b>7.0</b>	< 1.0	< 1.0	< 1.0	<b>7.0</b>
	16-Oct-20	-	-	-	-	<b>2.06</b>	<b>2.06</b>	-	-	<b>1.0</b>	< 1.0	< 1.0	< 1.0	<b>1.0</b>
	16-Nov-20	<b>2.35</b>	< 0.01	<b>2.8</b>	<b>0.5</b>	<b>1.46</b>	<b>1.51</b>	-	<b>2.16</b>	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>
	16-Dec-20	-	-	-	-	<b>1.32</b>	<b>1.23</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jan-21	-	-	-	-	<b>1.37</b>	<b>1.52</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Feb-21	< 0.01	<b>0.15</b>	<b>5.1</b>	<b>5.1</b>	<b>1.41</b>	<b>1.42</b>	-	<b>2.82</b>	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>
	17-Mar-21	-	-	-	-	<b>1.38</b>	<b>1.32</b>	-	-	-	<b>4.0</b>	< 1.0	< 1.0	<b>4.0</b>
	19-Aug-21	< 0.01	< 0.01	<b>0.8</b>	<b>0.8</b>	<b>1.41</b>	<b>1.42</b>	-	<b>2.82</b>	-	<b>4.0</b>	< 1.0	< 1.0	<b>4.0</b>
	22-Sep-21	<b>0.03</b>	<b>0.25</b>	<b>1.0</b>	<b>1.0</b>	<b>1.2</b>	<b>1.36</b>	-	<b>2.92</b>	-	<b>6.0</b>	< 1.0	< 1.0	<b>6.0</b>
	13-Oct-21	< 0.01	<b>0.31</b>	<b>0.9</b>	<b>0.9</b>	<b>1.23</b>	<b>1.46</b>	-	<b>3.39</b>	-	<b>8.0</b>	< 1.0	< 1.0	<b>8.0</b>
	16-Nov-21	<b>0.04</b>	<b>0.21</b>	<b>1.1</b>	<b>1.1</b>	<b>1.42</b>	<b>1.36</b>	-	<b>2.51</b>	-	<b>5.0</b>	< 1.0	< 1.0	<b>5.0</b>
	24-Feb-22	< 0.01	<b>0.25</b>	<b>1.0</b>	<b>1.0</b>	<b>1.37</b>	<b>1.26</b>	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	< 0.01	<b>0.27</b>	<b>2.0</b>	<b>2.0</b>	<b>0.97</b>	<b>1.01</b>	-	<b>2.54</b>	-	<b>3.0</b>	< 1.0	< 1.0	<b>3.0</b>
	16-May-23	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9C	21-Feb-19	<b>0.04</b>	<b>0.06</b>	<b>1.8</b>	<b>1.8</b>	<b>2.91</b>	<b>2.76</b>	-	<b>3.21</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Mar-19	-	-	-	-	<b>1.3</b>	<b>1.51</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	23-Apr-19	-	-	-	-	<b>1.8</b>	<b>1.65</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-19	< 0.01	<b>0.12</b>	<b>0.4</b>	<b>0.4</b>	<b>1.59</b>	<b>1.59</b>	-	<b>3.0</b>	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jun-19	-	-	-	-	<b>1.38</b>	<b>1.5</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Alkalinity											
		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	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3
LOR		0.01	0.1	0.1	0.01	0.01	0.01	0.01	1	1	1	1	1
Units		mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	0.5	5.9	--	--	--	--	--	--	--	--	--
BH11	16-Jul-19	-	-	-	-	<b>2.79</b>	<b>2.22</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Aug-19	-	-	-	-	<b>1.46</b>	<b>1.41</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-19	< 0.01	<b>0.15</b>	<b>0.7</b>	<b>0.7</b>	<b>1.42</b>	<b>1.4</b>	-	<b>3.18</b>	-	< 1.0	< 1.0	< 1.0
	15-Oct-19	-	-	-	-	<b>1.46</b>	<b>1.3</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	18-Nov-19	<b>0.06</b>	<b>0.18</b>	<b>5.9</b>	<b>5.8</b>	<b>1.46</b>	<b>1.5</b>	-	<b>3.3</b>	-	< 1.0	< 1.0	< 1.0
	16-Sep-20	-	-	-	-	<b>1.67</b>	<b>1.48</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Oct-20	-	-	-	-	<b>1.76</b>	<b>1.8</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Nov-20	< 0.01	<b>0.08</b>	<b>0.5</b>	<b>0.5</b>	<b>1.58</b>	<b>1.51</b>	-	<b>2.51</b>	-	< 1.0	< 1.0	< 1.0
	16-Dec-20	-	-	-	-	<b>1.84</b>	<b>1.84</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jan-21	-	-	-	-	<b>1.88</b>	<b>2.03</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Feb-21	< 0.01	<b>0.08</b>	< 0.1	< 0.1	<b>1.83</b>	<b>1.8</b>	-	<b>2.98</b>	-	< 1.0	< 1.0	< 1.0
	17-Mar-21	-	-	-	-	<b>1.76</b>	<b>1.71</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	19-Aug-21	< 0.01	< 0.01	<b>1.4</b>	<b>1.4</b>	<b>3.1</b>	<b>3.29</b>	<b>3.0</b>	<b>4.6</b>	-	< 1.0	< 1.0	< 1.0
	22-Sep-21	<b>0.01</b>	<b>0.01</b>	<b>0.8</b>	<b>0.8</b>	<b>3.01</b>	<b>3.1</b>	<b>1.54</b>	<b>4.18</b>	-	< 1.0	< 1.0	< 1.0
	13-Oct-21	< 0.01	< 0.01	<b>0.8</b>	<b>0.8</b>	<b>2.88</b>	<b>3.14</b>	<b>4.42</b>	<b>3.79</b>	-	< 1.0	< 1.0	< 1.0
	16-Nov-21	< 0.01	< 0.01	<b>0.9</b>	<b>0.9</b>	<b>2.27</b>	<b>2.05</b>	-	<b>2.75</b>	-	< 1.0	< 1.0	< 1.0
	24-Feb-22	< 0.01	<b>0.02</b>	<b>0.6</b>	<b>0.6</b>	<b>2.28</b>	<b>2.4</b>	-	<b>3.0</b>	-	< 1.0	< 1.0	<b>3.0</b>
	06-Mar-22	-	-	-	-	-	-	-	-	-	-	-	-
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	< 0.01	<b>0.07</b>	<b>1.0</b>	<b>1.0</b>	<b>0.9</b>	<b>0.82</b>	-	<b>2.4</b>	-	< 1.0	< 1.0	< 1.0
	16-May-23	-	-	-	-	-	-	-	-	-	-	-	-
BH12	16-Sep-20	-	-	-	-	<b>1.64</b>	<b>1.57</b>	-	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>
	16-Nov-20	<b>0.02</b>	< 0.01	<b>0.2</b>	<b>0.2</b>	<b>1.31</b>	<b>1.52</b>	-	<b>2.27</b>	-	<b>7.0</b>	< 1.0	< 1.0
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>0.01</b>	<b>0.01</b>	<b>0.4</b>	<b>0.4</b>	<b>1.25</b>	<b>1.2</b>	-	-	<b>2.0</b>	-	< 1.0	< 1.0
BH12A	15-Feb-23	<b>0.04</b>	<b>0.21</b>	<b>3.2</b>	<b>3.2</b>	<b>0.86</b>	<b>0.98</b>	-	<b>2.26</b>	-	< 1.0	< 1.0	< 1.0
MW239S	22-Feb-19	< 0.01	<b>0.18</b>	<b>3.9</b>	<b>3.9</b>	<b>3.15</b>	<b>3.06</b>	<b>1.43</b>	<b>5.21</b>	-	< 1.0	< 1.0	< 1.0
	14-Mar-19	-	-	-	-	<b>3.28</b>	<b>3.64</b>	<b>5.18</b>	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>
	23-Apr-19	-	-	-	-	<b>3.38</b>	<b>2.92</b>	<b>7.32</b>	-	-	< 1.0	< 1.0	< 1.0
	16-May-19	< 0.01	<b>0.09</b>	<b>1.7</b>	<b>1.7</b>	<b>2.76</b>	<b>2.75</b>	-	<b>4.44</b>	-	< 1.0	< 1.0	< 1.0
	14-Jun-19	-	-	-	-	<b>2.67</b>	<b>2.86</b>	-	-	-	<b>7.0</b>	< 1.0	< 1.0
	16-Jul-19	-	-	-	-	<b>2.86</b>	<b>2.39</b>	-	-	-	< 1.0	< 1.0	< 1.0
	15-Aug-19	-	-	-	-	<b>2.92</b>	<b>2.71</b>	-	-	-	< 1.0	< 1.0	< 1.0
	16-Sep-19	< 0.01	<b>0.1</b>	<b>1.4</b>	<b>1.4</b>	<b>2.91</b>	<b>2.69</b>	-	<b>4.7</b>	-	< 1.0	< 1.0	< 1.0
	15-Oct-19	-	-	-	-	<b>3.02</b>	<b>3.21</b>	<b>3.15</b>	-	-	< 1.0	< 1.0	< 1.0
	18-Nov-19	< 0.01	<b>0.17</b>	<b>1.2</b>	<b>1.2</b>	<b>3.26</b>	<b>3.5</b>	<b>3.48</b>	<b>5.38</b>	-	< 1.0	< 1.0	< 1.0
	16-Sep-20	-	-	-	-	<b>2.99</b>	<b>3.24</b>	<b>3.95</b>	-	-	<b>3.0</b>	< 1.0	< 1.0
	16-Oct-20	-	-	-	-	<b>4.14</b>	<b>4.57</b>	<b>4.99</b>	-	-	<b>2.0</b>	< 1.0	< 1.0
	16-Nov-20	< 0.01	<b>0.01</b>	<b>2.6</b>	<b>2.6</b>	<b>4.21</b>	<b>4.3</b>	<b>1.0</b>	<b>4.78</b>	-	< 1.0	< 1.0	< 1.0
	16-Dec-20	-	-	-	-	<b>3.81</b>	<b>4.05</b>	<b>3.15</b>	-	-	< 1.0	< 1.0	< 1.0
	14-Jan-21	-	-	-	-	<b>3.31</b>	<b>3.65</b>	<b>4.78</b>	-	-	< 1.0	< 1.0	< 1.0
	16-Feb-21	< 0.01	<b>0.06</b>	<b>2.5</b>	<b>2.5</b>	<b>4.03</b>	<b>4.29</b>	<b>3.1</b>	<b>4.21</b>	-	< 1.0	< 1.0	< 1.0
	17-Mar-21	-	-	-	-	<b>2.73</b>	<b>2.76</b>	-	-	-	< 1.0	< 1.0	< 1.0
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>0.16</b>	<b>0.04</b>	<b>1.8</b>	<b>1.6</b>	<b>1.29</b>	<b>1.3</b>	-	-	<b>3.0</b>	-	< 1.0	< 1.0
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	< 0.01	<b>0.04</b>	<b>1.5</b>	<b>1.5</b>	<b>0.77</b>	<b>0.89</b>	-	<b>1.98</b>	-	<b>2.0</b>	< 1.0	< 1.0
	16-May-23	-	-	-	-	-	-	-	-	-	-	-	-

**Notes:**  
 - Not analysed  
 < - Less than laboratory limit of reporting  
 LOR - Laboratory limit of reporting  
 mg/L - Milligrams per litre  
 µS/cm - Microsiemens per centimeter

Table 2  
Groundwater - Inorganics and Nutrients

Analyte	Alkalinity												
	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	Bicarbonate Alkalinity as CaCO <sub>3</sub>	Carbonate Alkalinity as CaCO <sub>3</sub>	Hydroxide Alkalinity as CaCO <sub>3</sub>	Total Alkalinity as CaCO <sub>3</sub>
LOR	0.01	0.1	0.1	0.01	0.01	0.01	0.01	0.01	1	1	1	1	1
Units	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	--	0.5	5.9	--	--	--	--	--	--	--	--	--	--

**Bold** indicates a detection above the laboratory limit

Highlighting indicates an exceedance of the corresponding trigger value

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Total Hardness as CaCO <sub>3</sub>	Inorganics						
			Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
LOR		1	1	1	1	0.01	0.01	0.1	0.01
Units		mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	--	--	--
Sample Name	Sample Date								
BH1	15-Mar-19	<b>9.0</b>	-	<b>104</b>	<b>68</b>	<b>78</b>	<b>5.67</b>	-	-
	23-Apr-19	<b>11</b>	-	<b>84</b>	<b>97</b>	<b>248</b>	<b>5.83</b>	-	-
	16-May-19	<b>8.0</b>	-	<b>105</b>	<b>164</b>	<b>80</b>	<b>5.82</b>	-	-
	14-Jun-19	<b>8.0</b>	-	<b>99</b>	<b>72</b>	<b>39</b>	<b>5.52</b>	-	-
	16-Jul-19	<b>8.0</b>	-	<b>102</b>	<b>84</b>	<b>26</b>	<b>5.62</b>	-	-
	15-Aug-19	<b>8.0</b>	-	<b>128</b>	<b>82</b>	<b>181</b>	<b>6.22</b>	-	-
	16-Sep-19	<b>8.0</b>	-	<b>102</b>	<b>88</b>	<b>108</b>	<b>5.44</b>	-	-
	15-Oct-19	<b>8.0</b>	-	<b>98</b>	<b>64</b>	-	<b>5.5</b>	-	-
	18-Nov-19	<b>8.0</b>	-	<b>126</b>	<b>82</b>	-	<b>6.29</b>	-	-
	16-Sep-20	<b>8.0</b>	-	<b>95</b>	<b>81</b>	<b>58</b>	<b>5.87</b>	-	-
	16-Oct-20	<b>8.0</b>	-	<b>88</b>	<b>57</b>	-	<b>5.7</b>	-	-
	16-Nov-20	<b>8.0</b>	-	<b>120</b>	<b>78</b>	<b>41</b>	<b>5.98</b>	-	-
	16-Dec-20	<b>8.0</b>	-	<b>134</b>	<b>87</b>	-	<b>5.76</b>	-	-
	14-Jan-21	<b>8.0</b>	-	<b>124</b>	<b>81</b>	-	<b>5.63</b>	-	-
	16-Feb-21	<b>8.0</b>	-	<b>116</b>	<b>75</b>	<b>20</b>	<b>5.57</b>	-	-
	17-Mar-21	<b>11</b>	-	<b>111</b>	<b>72</b>	-	<b>6.02</b>	-	-
	13-Oct-21	-	-	-	-	-	<b>5.66</b>	<b>98</b>	-
	24-Feb-22	<b>15</b>	-	<b>127</b>	<b>82</b>	-	<b>5.95</b>	-	< 0.01
BH1A	15-Feb-23	< 1.0	-	<b>70</b>	<b>46</b>	-	<b>4.49</b>	-	-
BH2	22-Feb-19	<b>13</b>	-	<b>91</b>	<b>128</b>	<b>376</b>	<b>4.87</b>	-	-
	15-Mar-19	<b>16</b>	-	<b>101</b>	<b>66</b>	<b>352</b>	<b>4.71</b>	-	-
	23-Apr-19	<b>13</b>	-	<b>70</b>	<b>84</b>	<b>575</b>	<b>4.82</b>	-	-
	16-May-19	<b>13</b>	-	<b>94</b>	<b>144</b>	<b>111</b>	<b>4.85</b>	-	-
	14-Jun-19	<b>11</b>	-	<b>91</b>	<b>51</b>	<b>215</b>	<b>4.76</b>	-	-
	16-Jul-19	<b>13</b>	-	<b>90</b>	<b>63</b>	<b>92</b>	<b>4.84</b>	-	-
	15-Aug-19	<b>11</b>	-	<b>110</b>	<b>61</b>	<b>310</b>	<b>5.2</b>	-	-
	16-Sep-19	<b>13</b>	-	<b>96</b>	<b>60</b>	<b>216</b>	<b>4.72</b>	-	-
	15-Oct-19	<b>13</b>	-	<b>102</b>	<b>66</b>	-	<b>5.06</b>	-	-
	18-Nov-19	<b>9.0</b>	-	<b>102</b>	<b>66</b>	-	<b>5.47</b>	-	-
	16-Sep-20	<b>13</b>	-	<b>99</b>	<b>76</b>	<b>356</b>	<b>4.85</b>	-	-
	16-Oct-20	<b>13</b>	-	<b>90</b>	<b>58</b>	-	<b>5.07</b>	-	-
	16-Nov-20	<b>13</b>	-	<b>119</b>	<b>77</b>	<b>952</b>	<b>5.09</b>	-	-
	16-Dec-20	<b>13</b>	-	<b>105</b>	<b>68</b>	-	<b>4.66</b>	-	-
	14-Jan-21	<b>13</b>	-	<b>93</b>	<b>60</b>	-	<b>5.04</b>	-	-
	16-Feb-21	<b>7.0</b>	-	<b>89</b>	<b>58</b>	<b>86</b>	<b>4.84</b>	-	-
	17-Mar-21	<b>13</b>	-	<b>88</b>	<b>57</b>	-	<b>5.28</b>	-	-
	19-Aug-21	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	<b>5.09</b>	<b>101</b>	-
	16-Nov-21	-	-	-	-	-	-	-	-
	24-Feb-22	<b>9.0</b>	-	<b>70</b>	<b>46</b>	-	<b>5.18</b>	-	< 0.01
	12-Apr-22	-	-	-	-	-	-	<b>462</b>	-
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	<b>4.0</b>	-	<b>73</b>	<b>47</b>	-	<b>4.67</b>	-	-
	16-May-23	-	-	-	-	-	-	-	-
BH3	21-Feb-19	<b>14</b>	-	<b>60</b>	<b>438</b>	<b>3,800</b>	<b>5.55</b>	-	-
	21-Feb-19	<b>9.0</b>	-	<b>73</b>	<b>96</b>	<b>122</b>	<b>5.4</b>	-	-
	15-Mar-19	<b>5.0</b>	-	<b>77</b>	<b>50</b>	<b>45</b>	<b>5.12</b>	-	-
	23-Apr-19	<b>9.0</b>	-	<b>54</b>	<b>61</b>	<b>147</b>	<b>5.05</b>	-	-
	16-May-19	<b>9.0</b>	-	<b>73</b>	<b>100</b>	<b>44</b>	<b>4.99</b>	-	-
	14-Jun-19	<b>7.0</b>	-	<b>69</b>	<b>36</b>	<b>186</b>	<b>4.84</b>	-	-
	16-Jul-19	<b>13</b>	-	<b>75</b>	<b>42</b>	<b>74</b>	<b>4.96</b>	-	-
	15-Aug-19	<b>9.0</b>	-	<b>85</b>	<b>49</b>	<b>30</b>	<b>5.01</b>	-	-
	16-Sep-19	<b>13</b>	-	<b>95</b>	<b>58</b>	<b>49</b>	<b>4.83</b>	-	-
	15-Oct-19	<b>7.0</b>	-	<b>85</b>	<b>55</b>	-	<b>4.93</b>	-	-
	18-Nov-19	<b>7.0</b>	-	<b>86</b>	<b>56</b>	-	<b>5.34</b>	-	-
	16-Sep-20	<b>8.0</b>	-	<b>148</b>	<b>74</b>	<b>24</b>	<b>4.66</b>	-	-

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Total Hardness as CaCO <sub>3</sub>	Inorganics					
			Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity
LOR		1	1	1	0.01	0.01	0.1	0.01
Units		mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	--	--
BH4	16-Oct-20	15	-	133	86	-	5.21	-
	16-Nov-20	8.0	-	146	95	15	4.98	-
	16-Dec-20	19	-	193	125	-	4.81	-
	14-Jan-21	19	-	258	168	-	5.23	-
	16-Feb-21	42	-	445	289	56	4.86	-
	17-Mar-21	50	-	501	326	-	5.07	-
	19-Aug-21	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	4.51	56
	24-Feb-22	11	-	74	48	-	5.07	-
	12-Apr-22	-	-	-	-	-	-	61
	27-May-22	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-
	15-Feb-23	7.0	-	84	55	-	5.06	-
	16-May-23	-	-	-	-	-	-	-
BH5	22-Feb-19	25	-	250	211	458	4.87	-
	24-Feb-22	33	-	276	179	-	4.67	< 0.01
	15-Feb-23	8.0	-	126	82	-	4.64	-
	22-Feb-19	24	-	177	144	41	4.37	-
BH6	14-Mar-19	21	-	179	116	144	4.95	-
	23-Apr-19	24	-	136	115	62	4.64	-
	16-May-19	24	-	175	214	106	4.88	-
	14-Jun-19	21	-	174	90	32	4.82	-
	16-Jul-19	21	-	161	82	23	4.73	-
	15-Aug-19	17	-	201	104	16	4.87	-
	16-Sep-19	20	-	197	124	71	4.68	-
	15-Oct-19	21	-	202	131	-	5.17	-
	18-Nov-19	20	-	204	133	-	5.32	-
	16-Sep-20	21	-	273	121	49	4.98	-
	16-Oct-20	26	-	249	162	-	5.3	-
	16-Nov-20	28	-	321	209	12	4.45	-
	16-Dec-20	32	-	321	209	-	4.63	-
	14-Jan-21	28	-	332	216	-	4.33	-
	16-Feb-21	32	-	316	205	20	4.89	-
	17-Mar-21	47	-	358	233	-	5.07	-
BH7	19-Aug-21	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	6.1	51
	24-Feb-22	16	-	241	157	-	3.92	< 0.01
	12-Apr-22	-	-	-	-	-	-	33
	27-May-22	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-
	15-Feb-23	16	-	265	172	-	3.95	-
	16-May-23	-	-	-	-	-	-	-
	22-Feb-19	20	-	213	196	152	4.76	-
	14-Mar-19	25	-	271	176	149	4.73	-
	23-Apr-19	25	-	205	185	20	4.51	-
	16-May-19	20	-	235	310	29	4.87	-
	14-Jun-19	16	-	213	145	39	4.91	-
	16-Jul-19	20	-	202	164	61	5.0	-
	15-Aug-19	16	-	232	168	44	5.53	-
	16-Sep-19	16	-	222	181	44	5.07	-
	15-Oct-19	20	-	252	164	-	4.95	-
	18-Nov-19	20	-	239	155	-	4.97	-
	16-Sep-20	20	-	248	140	24	4.81	-
	16-Oct-20	20	-	243	158	-	4.87	-
	16-Nov-20	20	-	245	159	6.0	4.57	-
	16-Dec-20	25	-	265	172	-	4.34	-
	14-Jan-21	20	-	267	174	-	4.62	-

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Total Hardness as CaCO <sub>3</sub>	Inorganics						
			Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
LOR		1	1	1	1	0.01	0.01	0.1	0.01
Units		mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	--	--	--
BH8	16-Feb-21	25	-	270	176	9.0	4.54	-	-
	17-Mar-21	29	-	279	181	-	4.9	-	-
	19-Aug-21	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	5.22	170	-
	24-Feb-22	8.0	-	124	81	-	4.43	-	< 0.01
	12-Apr-22	-	-	-	-	-	-	33	-
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	4.0	-	66	43	-	4.83	-	-
	16-May-23	-	-	-	-	-	-	-	-
	21-Feb-19	25	-	352	258	438	4.46	-	-
	14-Mar-19	25	-	319	207	138	4.77	-	-
	23-Apr-19	29	-	264	223	121	4.76	-	-
	16-May-19	16	-	302	354	312	4.9	-	-
	14-Jun-19	20	-	315	194	83	4.82	-	-
	16-Jul-19	20	-	353	226	145	4.78	-	-
	15-Aug-19	12	-	260	140	98	5.0	-	-
	16-Sep-19	12	-	293	206	79	4.85	-	-
	15-Oct-19	16	-	303	197	-	5.02	-	-
	18-Nov-19	16	-	316	205	-	5.12	-	-
	16-Sep-20	16	-	391	216	34	4.79	-	-
	16-Oct-20	16	-	268	174	-	5.01	-	-
	16-Nov-20	25	-	341	222	14	4.75	-	-
	16-Dec-20	16	-	256	166	-	4.82	-	-
	14-Jan-21	20	-	317	206	-	4.76	-	-
	16-Feb-21	25	-	335	218	63	4.68	-	-
	17-Mar-21	25	-	329	214	-	4.57	-	-
	19-Aug-21	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	-	-	-	-	-	-
	24-Feb-22	20	-	329	214	-	4.67	-	< 0.01
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	4.0	-	135	88	-	4.93	-	-
	16-May-23	-	-	-	-	-	-	-	-
BH9A	16-Sep-20	33	-	276	310	1,060	5.78	-	-
	16-Oct-20	32	-	237	154	-	5.15	-	-
	16-Nov-20	21	-	195	127	2,220	4.93	-	-
	16-Dec-20	15	-	175	114	-	4.83	-	-
	14-Jan-21	15	-	196	127	-	4.96	-	-
	16-Feb-21	15	-	181	118	2,030	4.72	-	-
	17-Mar-21	15	-	164	107	-	5.23	-	-
	19-Aug-21	15	-	180	117	-	5.03	-	-
	22-Sep-21	11	-	172	112	-	4.99	-	-
	13-Oct-21	8.0	-	156	101	-	5.21	105	-
	16-Nov-21	-	17	163	106	-	5.51	-	-
	24-Feb-22	21	-	164	107	-	4.85	-	< 0.01
	12-Apr-22	-	-	-	-	-	-	289	-
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	8.0	-	141	92	-	4.65	-	-
	16-May-23	-	-	-	-	-	-	-	-
BH9B	21-Feb-19	41	-	346	278	144	4.67	-	-
	15-Mar-19	8.0	-	186	121	152	4.82	-	-
	23-Apr-19	20	-	150	135	112	4.99	-	-
	16-May-19	16	-	188	216	156	4.91	-	-
	14-Jun-19	12	-	175	107	136	4.84	-	-

Table 2  
Groundwater - Inorganics and Nutrients

Analyte		Total Hardness as CaCO <sub>3</sub>	Inorganics						
			Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
LOR		1	1	1	1	0.01	0.01	0.1	0.01
Units		mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	--	--	--
BH11	16-Jul-19	33	-	318	192	223	4.68	-	-
	15-Aug-19	12	-	197	135	303	4.88	-	-
	16-Sep-19	12	-	195	140	533	4.66	-	-
	15-Oct-19	12	-	194	126	-	4.92	-	-
	18-Nov-19	12	-	193	125	-	5.12	-	-
	16-Sep-20	20	-	223	111	136	4.61	-	-
	16-Oct-20	25	-	218	142	-	4.8	-	-
	16-Nov-20	20	-	217	141	100	4.81	-	-
	16-Dec-20	25	-	249	162	-	4.74	-	-
	14-Jan-21	25	-	264	172	-	4.41	-	-
	16-Feb-21	20	-	235	153	386	4.73	-	-
	17-Mar-21	25	-	223	145	-	4.66	-	-
	19-Aug-21	29	-	403	262	-	4.38	-	-
	22-Sep-21	25	-	382	248	-	4.47	-	-
	13-Oct-21	33	-	373	242	-	4.27	18	-
	16-Nov-21	-	33	268	174	-	4.54	-	-
	24-Feb-22	25	-	260	169	-	4.57	-	< 0.01
	06-Mar-22	-	-	-	-	-	-	-	-
	12-Apr-22	-	-	-	-	-	24	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	8.0	-	118	77	-	4.54	-	-
	16-May-23	-	-	-	-	-	-	-	-
BH12	16-Sep-20	29	-	206	118	446	5.37	-	-
	16-Nov-20	16	-	190	124	438	5.92	-	-
	13-Oct-21	-	-	-	-	-	5.75	398	-
	24-Feb-22	16	-	148	96	-	5.03	-	< 0.01
BH12A	15-Feb-23	8.0	-	129	84	-	4.91	-	-
MW239S	22-Feb-19	25	-	329	234	149	4.89	-	-
	14-Mar-19	25	-	410	266	504	5.02	-	-
	23-Apr-19	29	-	294	208	385	4.92	-	-
	16-May-19	25	-	327	320	371	4.87	-	-
	14-Jun-19	25	-	334	220	427	5.39	-	-
	16-Jul-19	29	-	353	188	70	4.85	-	-
	15-Aug-19	29	-	359	195	363	4.83	-	-
	16-Sep-19	25	-	373	224	179	4.66	-	-
	15-Oct-19	25	-	404	263	-	4.86	-	-
	18-Nov-19	25	-	419	272	-	4.76	-	-
	16-Sep-20	33	-	390	244	350	5.2	-	-
	16-Oct-20	37	-	458	298	-	4.73	-	-
	16-Nov-20	37	-	489	318	562	4.55	-	-
	16-Dec-20	41	-	484	315	-	4.68	-	-
	14-Jan-21	37	-	430	280	-	4.44	-	-
	16-Feb-21	45	-	488	317	346	4.61	-	-
	17-Mar-21	29	-	343	223	-	4.73	-	-
	13-Oct-21	-	-	-	-	-	4.87	295	-
	24-Feb-22	12	-	159	103	-	4.67	-	< 0.01
	12-Apr-22	-	-	-	-	-	-	104	-
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	8.0	-	111	72	-	4.63	-	-
	16-May-23	-	-	-	-	-	-	-	-

**Notes:**

- Not analysed
- < - Less than laboratory limit of reporting
- LOR - Laboratory limit of reporting
- mg/L - Milligrams per litre
- µS/cm - Microsiemens per centimeter

Table 2  
Groundwater - Inorganics and Nutrients

Analyte	Total Hardness as CaCO <sub>3</sub>	Inorganics						
		Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
LOR	1	1	1	1	0.01	0.01	0.1	0.01
Units	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	--	--	--	--	--	--

**Bold** indicates a detection above the laboratory limit

Highlighting indicates an exceedance of the corresponding trigger value

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July

Table 3  
Groundwater - Metals

Analyte		Metals															
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium	
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	
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	
Adopted Site Specific Trigger Values (SWMP 2021)		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	
Sample Name	Sample Date																
BH1	15-Mar-19	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	<b>0.004</b>	< 0.001	< 0.001	<b>13</b>	< 0.001	<b>0.014</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	23-Apr-19	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	<b>0.004</b>	< 0.001	<b>0.002</b>	<b>10</b>	<b>0.001</b>	<b>0.015</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	16-May-19	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	< 0.001	<b>8.33</b>	< 0.001	<b>0.009</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	14-Jun-19	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.001</b>	<b>6.31</b>	< 0.001	<b>0.009</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	16-Jul-19	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	<b>0.002</b>	<b>7.35</b>	< 0.001	<b>0.01</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	
	15-Aug-19	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	<b>0.002</b>	<b>7.96</b>	< 0.001	<b>0.008</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	16-Sep-19	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.004</b>	< 0.001	<b>0.001</b>	<b>8.84</b>	< 0.001	<b>0.009</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	15-Oct-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	<b>0.006</b>	-	< 0.001	<b>0.007</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	18-Nov-19	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	<b>0.004</b>	< 0.001	< 0.001	<b>11</b>	< 0.001	<b>0.008</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	
	16-Sep-20	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.005</b>	<b>5.48</b>	< 0.001	<b>0.01</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	16-Oct-20	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.001</b>	<b>5.55</b>	< 0.001	<b>0.009</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	16-Nov-20	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	<b>0.001</b>	<b>7.05</b>	< 0.001	<b>0.012</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	16-Dec-20	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.008</b>	<b>3.21</b>	< 0.001	<b>0.011</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	
	14-Jan-21	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.001</b>	<b>5.21</b>	< 0.001	<b>0.013</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	16-Feb-21	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.001</b>	<b>3.24</b>	< 0.001	<b>0.015</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	17-Mar-21	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>4.0</b>	< 0.001	<b>0.027</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	24-Feb-22	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>7.7</b>	< 0.001	<b>0.018</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
BH1A	15-Feb-23	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	<b>0.003</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	22-Feb-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	<b>0.14</b>	< 0.001	<b>0.021</b>	< 0.0001	<b>0.015</b>	< 0.001	< 0.01	< 0.01	
	15-Mar-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.003</b>	< 0.05	< 0.001	<b>0.02</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01	
	23-Apr-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.004</b>	<b>0.19</b>	< 0.001	<b>0.018</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	< 0.01	
	16-May-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.001</b>	<b>0.06</b>	< 0.001	<b>0.014</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	< 0.01	
	14-Jun-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.004</b>	<b>0.08</b>	< 0.001	<b>0.009</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01	
	16-Jul-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.008</b>	<b>0.05</b>	< 0.001	<b>0.013</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	< 0.01	
	15-Aug-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.012</b>	<b>0.08</b>	< 0.001	<b>0.011</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01	
	16-Sep-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.008</b>	<b>0.26</b>	< 0.001	<b>0.014</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	< 0.01	
	15-Oct-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.006</b>	-	< 0.001	<b>0.011</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01	
	18-Nov-19	< 0.001	<b>0.007</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.013</b>	<b>0.08</b>	< 0.001	<b>0.011</b>	< 0.0001	<b>0.007</b>	< 0.001	< 0.01	< 0.01	
	16-Sep-20	< 0.001	<b>0.012</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.026</b>	<b>0.07</b>	< 0.001	<b>0.016</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01	
	16-Oct-20	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.013</b>	-	< 0.005	<b>0.015</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01	
	16-Nov-20	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	<b>0.36</b>	< 0.001	<b>0.015</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01	
	16-Dec-20	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.011</b>	-	< 0.005	<b>0.014</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01	
	14-Jan-21	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.006</b>	-	< 0.005	<b>0.016</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01	
	16-Feb-21	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.021</b>	-	< 0.005	< 0.001	<b>0.009</b>	< 0.0001	<b>0.007</b>	< 0.01	< 0.01	
	17-Mar-21	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.003</b>	-	< 0.005	<b>0.016</b>	< 0.0001	< 0.001	<b>0.007</b>	< 0.01	< 0.01	
	19-Aug-21	< 0.001	<b>0.003</b>	-	-	-	-	-	-	-	<b>0.015</b>	-	-	-	-	-	
	22-Sep-21	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	13-Oct-21	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	16-Nov-21	< 0.001	<b>0.003</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	
	15-Dec-21	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	18-Jan-22	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	24-Feb-22	<b>0.002</b>	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	<b>0.009</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01
	17-Mar-22	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12-Apr-22	<b>0.001</b>	-	-	-	-	-	-	-	-	-	<b>0.25</b>	-	<b>0.009</b>	-	-	
	27-May-22	< 0.001	<b>0.002</b>	-	-	-	-	<b>0.004</b>	< 0.05	-	-	-	-	< 0.001	-	-	
	17-Jun-22	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	27-Jul-22	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12-Aug-22	< 0.001	<b>0.005</b>	-	-	-	-	-	-	-	-	<b>0.12</b>	< 0.05	-	<b>0.012</b>	-	
	16-Sep-22	< 0.001	-	-	-	-	-	-	-	-	-	<b>0.15</b>	-	<b>0.009</b>	-	-	
	24-Oct-22	< 0.001	-	-	-	-	-	-	-	-	-	-	-	<b>0.005</b>	-	-	
	18-Nov-22	< 0.001	<b>0.004</b>	-	-	-	-	<b>0.001</b>	<b>0.001</b>	<b>0.002</b>	<b>0.14</b>	-	<b>0.005</b>	-	< 0.001	-	
	14-Dec-22	< 0.001	-	-	-	-	-	-	-	-	-	<b>0.09</b>	-	<b>0.004</b>	-	-	
	17-Jan-23	&															

Table 3  
Groundwater - Metals

Analyte		Metals														
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium
LOR	0.001	0.001	0.001	0.05	0.0001	0.001	0.001	0.006	0.083	4.1 (8.84 for BH1)	0.001	0.136	0.0001	0.001	0.01	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	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	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	0.001	0.01	0.01	0.01
BH3	21-Feb-19	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>0.06</b>	< 0.001	<b>0.005</b>	< 0.0001	<b>0.053</b>	< 0.01	< 0.01
	21-Feb-19	< 0.001	<b>0.014</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.002</b>	<b>0.16</b>	< 0.001	<b>0.039</b>	< 0.0001	<b>0.018</b>	< 0.01	< 0.01
	15-Mar-19	< 0.001	<b>0.014</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.001</b>	< 0.05	< 0.001	<b>0.014</b>	< 0.0001	<b>0.022</b>	< 0.01	< 0.01
	23-Apr-19	< 0.001	<b>0.013</b>	< 0.001	<b>0.05</b>	< 0.0001	< 0.001	< 0.001	<b>0.002</b>	<b>0.99</b>	< 0.001	<b>0.045</b>	< 0.0001	<b>0.007</b>	< 0.01	< 0.01
	16-May-19	< 0.001	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>0.27</b>	< 0.001	<b>0.022</b>	< 0.0001	<b>0.022</b>	< 0.01	< 0.01
	14-Jun-19	< 0.001	<b>0.012</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.038</b>	< 0.05	< 0.001	<b>0.014</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	16-Jul-19	< 0.001	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.046</b>	< 0.05	< 0.001	<b>0.019</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	15-Aug-19	< 0.001	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.026</b>	< 0.05	< 0.001	<b>0.018</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	16-Sep-19	< 0.001	<b>0.012</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.051</b>	<b>0.19</b>	< 0.001	<b>0.026</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	15-Oct-19	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.011</b>	-	< 0.001	<b>0.136</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	18-Nov-19	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.005</b>	< 0.05	< 0.001	<b>0.013</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	16-Sep-20	< 0.001	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.078</b>	<b>0.06</b>	< 0.001	<b>0.012</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	16-Oct-20	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.003</b>	<b>0.25</b>	< 0.001	<b>0.021</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	16-Nov-20	< 0.001	<b>0.008</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.005</b>	<b>0.18</b>	< 0.001	<b>0.008</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	16-Dec-20	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.002</b>	<b>0.46</b>	< 0.001	<b>0.027</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	14-Jan-21	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.012</b>	<b>0.27</b>	< 0.001	<b>0.012</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	16-Feb-21	< 0.001	<b>0.02</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.002</b>	<b>0.94</b>	< 0.001	<b>0.023</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	17-Mar-21	< 0.001	<b>0.027</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.006</b>	<b>1.39</b>	< 0.001	<b>0.029</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	19-Aug-21	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.001</b>	<b>0.198</b>	<b>0.14</b>	< 0.001	<b>0.022</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	22-Sep-21	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.172</b>	<b>0.1</b>	< 0.001	<b>0.02</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	13-Oct-21	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.026</b>	<b>1.65</b>	< 0.001	<b>0.019</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	16-Nov-21	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.012</b>	<b>0.38</b>	< 0.001	<b>0.021</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	15-Dec-21	< 0.001	-	-	-	-	-	-	-	<b>0.69</b>	-	<b>0.016</b>	-	-	-	-
	18-Jan-22	< 0.001	-	-	-	-	-	-	-	<b>0.52</b>	-	<b>0.018</b>	-	-	-	-
	24-Feb-22	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.62</b>	< 0.001	<b>0.017</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01
	17-Mar-22	< 0.001	-	-	-	-	-	-	-	<b>0.09</b>	-	<b>0.018</b>	-	-	-	-
	12-Apr-22	< 0.001	-	-	-	-	-	-	-	<b>0.27</b>	-	<b>0.017</b>	-	-	-	-
	27-May-22	< 0.001	<b>0.011</b>	-	-	-	< 0.001	-	<b>0.097</b>	< 0.05	-	-	-	< 0.001	-	-
	17-Jun-22	< 0.001	-	-	-	-	-	-	<b>0.082</b>	< 0.05	-	<b>0.014</b>	-	-	-	-
	27-Jul-22	< 0.001	-	-	-	-	-	-	<b>0.09</b>	-	<b>0.014</b>	-	-	-	-	-
	12-Aug-22	< 0.001	<b>0.013</b>	-	-	-	-	-	<b>0.05</b>	< 0.05	-	<b>0.013</b>	-	< 0.001	-	-
	16-Sep-22	< 0.001	-	-	-	-	-	-	<b>0.11</b>	-	<b>0.014</b>	-	-	-	-	-
	24-Oct-22	< 0.001	-	-	-	-	-	-	<b>0.19</b>	-	<b>0.016</b>	-	-	-	-	-
	18-Nov-22	< 0.001	<b>0.012</b>	-	-	-	< 0.001	< 0.001	<b>0.006</b>	<b>0.13</b>	-	<b>0.016</b>	-	< 0.001	-	-
	14-Dec-22	< 0.001	-	-	-	-	-	-	<b>0.14</b>	-	<b>0.015</b>	-	-	-	-	-
	17-Jan-23	< 0.001	-	-	-	-	-	-	<b>0.12</b>	-	<b>0.022</b>	-	-	-	-	-
	15-Feb-23	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.012</b>	<b>0.06</b>	< 0.001	<b>0.012</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	15-Mar-23	< 0.001	-	-	-	-	-	-	-	< 0.05	-	<b>0.022</b>	-	-	-	-
	18-Apr-23	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.059</b>	<b>0.05</b>	< 0.001	<b>0.012</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	16-May-23	< 0.001	<b>0.008</b>	-	-	-	< 0.0001	-	<b>0.135</b>	<b>0.09</b>	-	-	-	< 0.001	-	-
	22-Feb-19	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	-	<b>1.03</b>	< 0.001	<b>0.014</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	24-Feb-22	< 0.001	<b>0.024</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>1.64</b>	< 0.001	<b>0.005</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	15-Feb-23	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.47</b>	< 0.001	<b>0.047</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	22-Feb-19	< 0.001	<b>0.03</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	-	<b>1.03</b>	< 0.001	<b>0.014</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	14-Mar-19	< 0.001	<b>0.027</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	-	<b>1.9</b>	< 0.001	<b>0.01</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	23-Apr-19	< 0.001	<b>0.03</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.001</b>	<b>0.96</b>	< 0.001	<b>0.01</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	16-May-19	< 0.001	<b>0.029</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	-	<b>2.57</b>	< 0.001	<b>0.009</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	14-Jun-19	< 0.001	<b>0.027</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.001</b>	<b>2.86</b>	< 0.001	<b>0.008</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	16-Jul-19	< 0.001	<b>0.026</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.002</b>	<b>2.41</b>	< 0.001	<b>0.008</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	15-Aug-19	< 0.001	<b>0.026</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.001</b>	<b>2.19</b>	< 0.001	<b>0.008</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	16-Sep-19	< 0.001	<b>0.034</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.008</b>	<b>2.08</b>	< 0.001	<b>0.012</b>	< 0.0001	<b>0.007</b>	< 0.01	< 0.01
	15-Oct-19	< 0.001	<b>0.026</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	-	< 0.001	<b>0.009</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.001	<b>0.03</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	-							

Table 3  
Groundwater - Metals

Analyte		Metals														
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	
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	
Adopted Site Specific Trigger Values (SWMP 2021)	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	
BH6	14-Jan-21	< 0.001	<b>0.054</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.011</b>	<b>1.06</b>	< 0.001	<b>0.014</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	16-Feb-21	< 0.001	<b>0.048</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.013</b>	<b>1.18</b>	< 0.001	<b>0.012</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	17-Mar-21	< 0.001	<b>0.068</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>1.39</b>	< 0.001	<b>0.012</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	19-Aug-21	<b>0.005</b>	<b>0.037</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.55</b>	< 0.001	<b>0.004</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	22-Sep-21	<b>0.002</b>	<b>0.02</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.55</b>	< 0.001	<b>0.005</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	13-Oct-21	<b>0.002</b>	<b>0.014</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.65</b>	< 0.001	<b>0.004</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	16-Nov-21	< 0.001	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.83</b>	< 0.001	<b>0.004</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	15-Dec-21	< 0.001	-	-	-	-	-	-	<b>0.66</b>	-	<b>0.002</b>	-	-	-	-	
	18-Jan-22	< 0.001	-	-	-	-	-	-	<b>0.7</b>	-	<b>0.003</b>	-	-	-	-	
	24-Feb-22	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.55</b>	< 0.001	<b>0.001</b>	< 0.0001	< 0.001	< 0.01	< 0.01	
	17-Mar-22	< 0.001	-	-	-	-	-	-	<b>0.81</b>	-	<b>0.002</b>	-	-	-	-	
	12-Apr-22	< 0.001	-	-	-	-	-	-	<b>3.24</b>	-	<b>0.016</b>	-	-	-	-	
	27-May-22	< 0.001	<b>0.007</b>	-	-	-	< 0.001	-	<b>3.45</b>	-	-	< 0.001	-	-	-	
	17-Jun-22	< 0.001	-	-	-	-	-	-	<b>2.7</b>	-	<b>0.005</b>	-	-	-	-	
	27-Jul-22	< 0.001	-	-	-	-	-	-	<b>2.38</b>	-	<b>0.001</b>	-	-	-	-	
	12-Aug-22	< 0.001	<b>0.008</b>	-	-	-	< 0.001	-	<b>2.38</b>	-	<b>0.002</b>	-	< 0.001	-	-	
	16-Sep-22	<b>0.001</b>	-	-	-	-	-	-	<b>3.45</b>	-	<b>0.002</b>	-	-	-	-	
	24-Oct-22	< 0.001	-	-	-	-	-	-	<b>3.44</b>	-	<b>0.002</b>	-	-	-	-	
	18-Nov-22	< 0.001	<b>0.009</b>	-	-	-	< 0.001	< 0.001	<b>4.39</b>	-	<b>0.006</b>	-	<b>0.002</b>	-	-	
	14-Dec-22	< 0.001	-	-	-	-	-	-	<b>3.23</b>	-	<b>0.012</b>	-	-	-	-	
	17-Jan-23	< 0.001	-	-	-	-	-	-	<b>3.61</b>	-	<b>0.014</b>	-	-	-	-	
	15-Feb-23	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.002</b>	<b>3.82</b>	< 0.001	<b>0.009</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	15-Mar-23	< 0.001	-	-	-	-	-	-	<b>4.97</b>	-	<b>0.006</b>	-	-	-	-	
	18-Apr-23	< 0.001	<b>0.007</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>4.13</b>	< 0.001	<b>0.003</b>	< 0.0001	< 0.001	< 0.01	< 0.01	-
	16-May-23	< 0.001	<b>0.007</b>	-	-	< 0.001	-	< 0.001	<b>4.56</b>	-	-	< 0.001	-	-	-	
BH7	22-Feb-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.003</b>	< 0.001	<b>1.8</b>	< 0.001	<b>0.026</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01
	14-Mar-19	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.003</b>	< 0.001	<b>1.8</b>	< 0.001	<b>0.02</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01
	23-Apr-19	< 0.001	<b>0.012</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.003</b>	< 0.001	<b>2.0</b>	< 0.001	<b>0.026</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01
	16-May-19	< 0.001	<b>0.008</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.003</b>	< 0.001	<b>2.32</b>	< 0.001	<b>0.035</b>	< 0.0001	<b>0.005</b>	< 0.01	< 0.01
	14-Jun-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	< 0.001	<b>2.06</b>	< 0.001	<b>0.03</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01
	16-Jul-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	< 0.001	<b>1.66</b>	< 0.001	<b>0.025</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	15-Aug-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	< 0.001	<b>1.54</b>	< 0.001	<b>0.023</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	16-Sep-19	< 0.001	<b>0.016</b>	< 0.001	<b>0.05</b>	< 0.0001	<b>0.002</b>	<b>0.002</b>	<b>0.007</b>	<b>1.42</b>	<b>0.001</b>	<b>0.024</b>	< 0.0001	<b>0.02</b>	< 0.01	< 0.01
	15-Oct-19	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	<b>0.003</b>	-	< 0.001	<b>0.018</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	18-Nov-19	< 0.001	<b>0.016</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	< 0.001	<b>1.1</b>	< 0.001	<b>0.015</b>	< 0.0001	<b>0.013</b>	< 0.01	< 0.01
	16-Sep-20	< 0.001	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	< 0.001	<b>1.67</b>	< 0.001	<b>0.021</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	16-Oct-20	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	< 0.001	<b>1.49</b>	< 0.001	<b>0.015</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	16-Nov-20	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.003</b>	< 0.001	<b>1.72</b>	< 0.001	<b>0.023</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	16-Dec-20	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	< 0.001	<b>1.79</b>	< 0.001	<b>0.024</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	14-Jan-21	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	<b>0.004</b>	<b>1.65</b>	< 0.001	<b>0.025</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01
	16-Feb-21	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	<b>0.002</b>	<b>1.74</b>	< 0.001	<b>0.025</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01
	17-Mar-21	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.003</b>	< 0.001	<b>2.28</b>	< 0.001	<b>0.028</b>	< 0.0001	<b>0.005</b>	< 0.01	< 0.01
	19-Aug-21	<b>0.003</b>	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	<b>0.001</b>	< 0.001	<b>0.79</b>	< 0.001	<b>0.006</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	22-Sep-21	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	< 0.001	<b>0.62</b>	< 0.001	<b>0.005</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	13-Oct-21	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	< 0.001	<b>0.69</b>	<b>0.002</b>	<b>0.005</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	16-Nov-21	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	< 0.001	<b>0.39</b>	< 0.001	<b>0.003</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	15-Dec-21	< 0.001	-	-	-	-	-	-	<b>0.47</b>	-	<b>0.002</b>	-	-	-	-	
	18-Jan-22	< 0.001	-	-	-	-	-	-	<b>0.45</b>	-	<b>0.002</b>	-	-	-	-	
	24-Feb-22	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	< 0.001	<b>0.66</b>	< 0.001	<b>0.003</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	17-Mar-22	< 0.001	-	-	-	-	-	-	<b>0.45</b>	-	<b>0.003</b>	-	-	-	-	
	12-Apr-22	< 0.001	-	-	-	-	-	-	<b>0.43</b>	-	<b>0.004</b>	-	-	-	-	
	27-May-22	< 0.001	<b>0.003</b>	-	-	-	<b>0.003</b>	-	< 0.001	<b>0.52</b>	-	-	-	<b>0.002</b>	-	-
	17-Jun-22	< 0.001	-	-	-	-	-	-	<b>0.56</b>	-	<b>0.004</b>	-	-	-	-	
	27-Jul-22	< 0.001	-	-	-	-	-	-	<b>0.51</b>	-	<b>0.004</b>	-	-	-	-	
	12-Aug-22	< 0.001	<b>0.003</b>	-	-	-	-	-	<b>0.56</b>	-	<b>0.004</b>	-	<b>0.002</b>	-	-	
	16-Sep-22	<b>0.001</b>	-	-	-	-	-	-	<b>0.54</b>	-	<b>0.004</b>	-	-	-	-	
	24-Oct-22	< 0.001	-	-	-	-	-	-	<b>0.5</b>	-	<b>0.003</b>	-	-	-	-	
	18-Nov-22</															

Table 3  
 Groundwater - Metals

Analyte		Metals															
LOR	Units	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium	
		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)		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	
BH8	14-Dec-22	< 0.001	-	-	-	-	-	-	-	<b>0.32</b>	-	<b>0.002</b>	-	-	-	-	
	17-Jan-23	< 0.001	-	-	-	-	-	-	-	<b>0.29</b>	-	<b>0.002</b>	-	-	-	-	
	15-Feb-23	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>0.31</b>	< 0.001	<b>0.003</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	
	15-Mar-23	< 0.001	-	-	-	-	-	-	-	<b>0.34</b>	-	<b>0.003</b>	-	-	-	-	
	18-Apr-23	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.002</b>	<b>0.46</b>	< 0.001	<b>0.003</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	16-May-23	< 0.001	<b>0.002</b>	-	-	-	<b>0.002</b>	-	<b>0.001</b>	<b>0.47</b>	-	-	-	<b>0.002</b>	-	-	
	21-Feb-19	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>4.1</b>	< 0.001	<b>0.012</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	14-Mar-19	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>3.25</b>	< 0.001	<b>0.008</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	23-Apr-19	<b>0.001</b>	<b>0.008</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>3.2</b>	< 0.001	<b>0.009</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	16-May-19	<b>0.003</b>	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>3.0</b>	< 0.001	<b>0.01</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	
BH9	14-Jun-19	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>2.5</b>	< 0.001	<b>0.005</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	16-Jul-19	<b>0.001</b>	<b>0.012</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>2.6</b>	< 0.001	<b>0.004</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	15-Aug-19	<b>0.001</b>	<b>0.008</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>1.72</b>	< 0.001	<b>0.004</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	
	16-Sep-19	<b>0.001</b>	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>2.06</b>	< 0.001	<b>0.005</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	15-Oct-19	< 0.001	<b>0.007</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>0.002</b>	-	< 0.001	<b>0.009</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	18-Nov-19	< 0.001	<b>0.012</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.002</b>	<b>2.49</b>	< 0.001	<b>0.01</b>	< 0.0001	<b>0.013</b>	< 0.01	< 0.01	
	16-Sep-20	< 0.001	<b>0.014</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.035</b>	<b>3.35</b>	<b>0.001</b>	<b>0.009</b>	< 0.0001	<b>0.009</b>	< 0.01	< 0.01	
	16-Oct-20	<b>0.001</b>	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.001</b>	<b>3.03</b>	< 0.001	<b>0.007</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	16-Nov-20	< 0.001	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>3.48</b>	< 0.001	<b>0.008</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	16-Dec-20	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.001</b>	<b>2.98</b>	< 0.001	<b>0.01</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	
	14-Jan-21	< 0.001	<b>0.007</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.002</b>	<b>2.71</b>	< 0.001	<b>0.01</b>	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	
	16-Feb-21	<b>0.001</b>	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.004</b>	<b>2.99</b>	< 0.001	<b>0.01</b>	< 0.0001	<b>0.006</b>	< 0.01	< 0.01	
	17-Mar-21	< 0.001	<b>0.012</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>3.86</b>	< 0.001	<b>0.01</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	19-Aug-21	<b>0.003</b>	<b>0.008</b>	-	-	-	<b>0.002</b>	-	< 0.001	<b>3.72</b>	-	-	-	<b>0.002</b>	-	-	
	16-Nov-21	<b>0.001</b>	<b>0.01</b>	-	-	-	<b>0.002</b>	-	< 0.001	<b>4.23</b>	-	-	-	<b>0.002</b>	-	-	
	16-Dec-21	-	-	-	-	-	-	-	-	<b>3.78</b>	-	-	-	-	-	-	
	24-Feb-22	<b>0.001</b>	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>2.98</b>	< 0.001	<b>0.007</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	
	27-May-22	<b>0.001</b>	<b>0.004</b>	-	-	-	<b>0.002</b>	-	< 0.001	<b>1.1</b>	-	-	-	<b>0.001</b>	-	-	
	12-Aug-22	<b>0.001</b>	<b>0.006</b>	-	-	-	<b>0.002</b>	-	< 0.001	<b>1.54</b>	-	<b>0.003</b>	-	<b>0.001</b>	-	-	
	18-Nov-22	<b>0.002</b>	<b>0.004</b>	-	-	-	<b>0.002</b>	< 0.001	< 0.001	<b>1.16</b>	-	<b>0.001</b>	-	< 0.001	-	-	
	15-Feb-23	<b>0.001</b>	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.001</b>	<b>0.96</b>	< 0.001	<b>0.002</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	
	16-May-23	-	-	-	-	-	<b>0.003</b>	-	< 0.001	<b>1.37</b>	-	-	-	<b>0.001</b>	-	-	
BH9A	16-Nov-21	< 0.001	-	-	-	-	-	-	-	< 0.05	-	<b>0.014</b>	-	-	-	-	
	16-Sep-20	< 0.001	<b>0.028</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.004</b>	<b>0.14</b>	< 0.001	<b>0.076</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	-	-
	16-Oct-20	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.001</b>	<b>0.06</b>	< 0.001	<b>0.042</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	-	-
	16-Nov-20	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.001</b>	<b>0.11</b>	< 0.001	<b>0.03</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	-	-
	16-Dec-20	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.001</b>	<b>0.31</b>	< 0.001	<b>0.024</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	-	-
	14-Jan-21	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.017</b>	<b>0.14</b>	< 0.001	<b>0.025</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	-
	16-Feb-21	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.001</b>	<b>0.35</b>	< 0.001	<b>0.024</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	-	-
	17-Mar-21	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.27</b>	< 0.001	<b>0.024</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	-	-
	19-Aug-21	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.26</b>	< 0.001	<b>0.03</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	-	-
	22-Sep-21	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.32</b>	< 0.001	<b>0.027</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	-	-
	13-Oct-21	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.51</b>	< 0.001	<b>0.033</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	-	-
	16-Nov-21	< 0.001	<b>0.007</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.001</b>	<b>0.33</b>	< 0.001	<b>0.025</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	-	-
	15-Dec-21	< 0.001	-	-	-	-	-	-	<b>0.48</b>	-	<b>0.025</b>	-	-	-	-	-	-
	18-Jan-22	< 0.001	-	-	-	-	-	-	<b>0.44</b>	-	<b>0.03</b>	-	-	-	-	-	-
	24-Feb-22	< 0.001	<b>0.008</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.001</b>	<b>0.5</b>	< 0.001	<b>0.042</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	-	-
	17-Mar-22	< 0.001	-	-	-	-	-	-	<b>0.32</b>	-	<b>0.036</b>	-	-	-	-	-	-
	12-Apr-22	< 0.001	-	-	-	-	-	-	<b>0.48</b>	-	<b>0.038</b>	-	-	-	-	-	-
	27-May-22	< 0.001	<b>0.007</b>	-	-	-	-	-	< 0.001	<b>0.35</b>	-	-	-	<b>0.003</b>	-	-	-
	17-Jun-22	< 0.001	-	-	-	-	-	-	<b>0.42</b>	-	<b>0.032</b>	-	-	-	-	-	-
	27-Jul-22	< 0.001	-	-	-	-	-	-	<b>0.16</b>	-	<b>0.019</b>	-	-	-	-	-	-
	12-Aug-22	< 0.001	<b>0.009</b>	-	-	-	-	-	<b>0.004</b>	-	<b>0.025</b>	-	<b>0.004</b>	-	-	-	-
	16-Sep-22	< 0.001	-	-	-	-	-	-	<b>0.54</b>	-	<b>0.031</b>	-	-	-	-	-	-
	24-Oct-22	&lt															

Table 3  
Groundwater - Metals

Analyte		Metals															
LOR	Units	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium	
		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)		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	
BH11	17-Jan-23	< 0.001	-	-	-	-	-	-	0.49	-	0.035	-	-	-	-	-	
	15-Feb-23	< 0.001	0.007	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	0.001	0.61	< 0.001	0.041	< 0.0001	0.003	< 0.01	< 0.01	
	15-Mar-23	< 0.001	-	-	-	-	-	-	0.15	-	0.02	-	-	-	-	-	
	18-Apr-23	< 0.001	0.006	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	0.004	0.5	< 0.001	0.033	< 0.0001	0.004	< 0.01	< 0.01	
	16-May-23	< 0.001	0.004	-	-	-	< 0.001	-	< 0.001	0.26	-	-	-	0.002	-	-	
BH12	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	
	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	
	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	
	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	
	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	
	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	
	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	
	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	
	15-Oct-19	< 0.001	0.004	< 0.001	< 0.05	< 0.0001	0.002	< 0.001	< 0.001	0.04	-	< 0.001	0.006	< 0.0001	0.003	< 0.01	< 0.01
	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	
	16-Sep-20	< 0.001	0.014	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	< 0.001	0.05	0.9	< 0.001	0.008	< 0.0001	< 0.01	< 0.01	
	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	
	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	
	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	
	14-Jan-21	< 0.001	0.008	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	< 0.001	0.25	0.56	< 0.001	0.006	< 0.0001	0.004	< 0.01	< 0.01
	16-Feb-21	< 0.001	0.008	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	< 0.001	0.18	0.59	< 0.001	0.008	< 0.0001	0.007	< 0.01	< 0.01
	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	
	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	
	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	
	13-Oct-21	< 0.001	0.007	< 0.001	< 0.05	< 0.0001	0.002	< 0.001	< 0.001	0.69	< 0.001	0.005	< 0.0001	0.002	< 0.01	< 0.01	
	16-Nov-21	< 0.001	0.005	< 0.001	< 0.05	< 0.0001	0.003	< 0.001	< 0.001	0.92	< 0.001	0.002	< 0.0001	0.004	< 0.01	< 0.01	
	15-Dec-21	< 0.001	-	-	-	-	-	-	-	0.92	-	0.003	-	-	-	-	
	18-Jan-22	< 0.001	-	-	-	-	-	-	-	1.06	-	0.003	-	-	-	-	
	24-Feb-22	< 0.001	0.007	< 0.001	< 0.05	< 0.0001	0.003	< 0.001	< 0.001	1.25	< 0.001	0.003	< 0.0001	0.004	< 0.01	< 0.01	
	06-Mar-22	< 0.001	0.004	-	-	-	0.002	-	< 0.001	1.27	-	-	-	0.002	-	-	
	17-Mar-22	< 0.001	-	-	-	-	-	-	-	1.06	-	0.004	-	-	-	-	
	12-Apr-22	< 0.001	-	-	-	-	-	-	-	1.06	-	0.004	-	-	-	-	
	17-Jun-22	< 0.001	-	-	-	-	-	-	-	1.24	-	0.004	-	-	-	-	
	27-Jul-22	< 0.001	-	-	-	-	-	-	-	1.03	-	0.004	-	-	-	-	
	16-Sep-22	< 0.001	-	-	-	-	-	-	-	1.14	-	0.004	-	-	-	-	
	24-Oct-22	< 0.001	-	-	-	-	-	-	-	1.14	-	0.003	-	-	-	-	
	18-Nov-22	< 0.001	0.002	-	-	-	0.003	< 0.001	< 0.001	1.06	-	0.003	-	0.003	-	-	
	14-Dec-22	< 0.001	-	-	-	-	-	-	-	0.96	-	0.003	-	-	-	-	
	17-Jan-23	< 0.001	-	-	-	-	-	-	-	0.86	-	0.003	-	-	-	-	
	15-Feb-23	< 0.001	0.002	< 0.001	< 0.05	< 0.0001	0.003	< 0.001	< 0.001	0.008	0.91	< 0.001	0.003	< 0.0001	0.005	< 0.01	< 0.01
	15-Mar-23	< 0.001	-	-	-	-	-	-	-	0.99	-	0.002	-	-	-	-	
	18-Apr-23	0.001	0.001	< 0.001	< 0.05	< 0.0001	0.004	< 0.001	< 0.001	1.07	< 0.001	0.003	< 0.0001	0.002	< 0.01	< 0.01	
	16-May-23	< 0.001	0.004 *	-	-	-	0.003	-	0.002 *	1.04	-	-	-	0.003	-	-	
BH12A	16-Nov-20	< 0.001	-	-	-	< 0.0001	0.002	-	0.002	-	< 0.001	-	< 0.0001	0.002	-	-	
	24-Feb-22	< 0.001	0.004	< 0.001	< 0.05	< 0.0001	0.002	< 0.001	< 0.001	0.33	< 0.001	0.006	< 0.0001	< 0.01	< 0.01	< 0.01	
	15-Feb-23	< 0.001	0.002	< 0.001	< 0.05	< 0.0001	0.003	< 0.001	0.003	3.64	< 0.001	0.019	< 0.0001	< 0.001	< 0.01	< 0.01	
	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	
	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	
	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	
	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	
	14-Jun-19	< 0.001	0.005	< 0.001	< 0.05	< 0.0001	0.002	< 0.001	< 0.001	0.02	< 0.001	0.003	< 0.0001	0.001	< 0.01	< 0.01	
	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	
	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	0.004	< 0.01	< 0.01	
	16-Sep-19	< 0.001	0.01	< 0.001	< 0.05	< 0.0001	0.002	< 0.001	< 0.001	0.002	< 0.001	0.006	< 0.0001	0.006	< 0.01	< 0.01	
	15-Oct-19	< 0.001	0.005	< 0.001	< 0.05	< 0.0001	0.002	< 0.001	< 0.001	0.03	-	0.004	< 0.0001	0.002	< 0.01	< 0.01	
	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	
	16-Sep-20	< 0.001	0.016	< 0.001	< 0.05	< 0.0001	0.002	< 0.001	< 0.001	0.002	< 0.001	0.008	< 0.0001	0.002	< 0.01	< 0.01	

Table 3  
Groundwater - Metals

Analyte		Metals														
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium
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	0.01
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	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	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	0.01
MW239S	16-Oct-20	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>1.17</b>	< 0.001	<b>0.009</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	16-Nov-20	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.001</b>	<b>0.3</b>	< 0.001	<b>0.011</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01
	16-Dec-20	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>1.06</b>	< 0.001	<b>0.011</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	14-Jan-21	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.005</b>	<b>0.77</b>	< 0.001	<b>0.012</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01
	16-Feb-21	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.001</b>	<b>0.01</b>	<b>0.92</b>	< 0.001	<b>0.012</b>	< 0.0001	<b>0.009</b>	< 0.01	< 0.01
	17-Mar-21	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>0.95</b>	< 0.001	<b>0.01</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01
	19-Aug-21	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>0.53</b>	< 0.001	<b>0.006</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	22-Sep-21	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>0.65</b>	< 0.001	<b>0.004</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	13-Oct-21	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>0.79</b>	< 0.001	<b>0.008</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	16-Nov-21	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>0.68</b>	< 0.001	<b>0.006</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	15-Dec-21	< 0.001	-	-	-	-	-	-	-	<b>0.77</b>	-	<b>0.005</b>	-	-	-	-
	18-Jan-22	< 0.001	-	-	-	-	-	-	-	<b>0.48</b>	-	<b>0.003</b>	-	-	-	-
	24-Feb-22	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>0.55</b>	< 0.001	<b>0.004</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01
	17-Mar-22	< 0.001	-	-	-	-	-	-	-	<b>0.48</b>	-	<b>0.005</b>	-	-	-	-
	12-Apr-22	< 0.001	-	-	-	-	-	-	-	<b>0.93</b>	-	<b>0.007</b>	-	-	-	-
	27-May-22	< 0.001	<b>0.004</b>	-	-	-	<b>0.002</b>	-	< 0.001	<b>0.56</b>	-	-	-	<b>0.001</b>	-	-
	17-Jun-22	< 0.001	-	-	-	-	-	-	-	<b>0.36</b>	-	<b>0.004</b>	-	-	-	-
	27-Jul-22	< 0.001	-	-	-	-	-	-	-	<b>0.43</b>	-	<b>0.004</b>	-	-	-	-
	12-Aug-22	< 0.001	<b>0.002</b>	-	-	-	<b>0.002</b>	-	< 0.001	<b>0.4</b>	-	<b>0.005</b>	-	<b>0.001</b>	-	-
	16-Sep-22	< 0.001	-	-	-	-	-	-	-	<b>0.44</b>	-	<b>0.006</b>	-	-	-	-
	24-Oct-22	< 0.001	-	-	-	-	-	-	-	<b>0.38</b>	-	<b>0.004</b>	-	-	-	-
	18-Nov-22	< 0.001	<b>0.003</b>	-	-	-	<b>0.001</b>	< 0.001	< 0.001	<b>0.28</b>	-	<b>0.002</b>	-	<b>0.002</b>	-	-
	14-Dec-22	< 0.001	-	-	-	-	-	-	-	<b>0.26</b>	-	<b>0.003</b>	-	-	-	-
	17-Jan-23	< 0.001	-	-	-	-	-	-	-	<b>0.2</b>	-	<b>0.003</b>	-	-	-	-
	15-Feb-23	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>0.17</b>	< 0.001	<b>0.004</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01
	15-Mar-23	< 0.001	-	-	-	-	-	-	-	<b>0.29</b>	-	<b>0.004</b>	-	-	-	-
	18-Apr-23	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>0.27</b>	< 0.001	<b>0.004</b>	< 0.0001	< 0.001	< 0.01	< 0.01
	16-May-23	< 0.001	<b>0.002</b>	-	-	-	<b>0.002</b>	-	< 0.001	<b>0.21</b>	-	-	-	<b>0.002</b>	-	-

**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%

Highlighting indicates an exceedance of the corresponding criteria (highlighting corresponds to the guideline with the highest criteria value where analytical result exceeds more than one guideline)

RPD - Relative Percentage Difference

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 3  
Groundwater - Metals

Analyte		Zinc
LOR		0.005
Units		mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		0.085 (0.1 for BH1)
Sample Name	Sample Date	
BH1	15-Mar-19	<b>1.27</b>
	23-Apr-19	<b>0.363</b>
	16-May-19	<b>0.132</b>
	14-Jun-19	<b>0.074</b>
	16-Jul-19	<b>0.116</b>
	15-Aug-19	<b>0.023</b>
	16-Sep-19	<b>0.034</b>
	15-Oct-19	<b>0.037</b>
	18-Nov-19	<b>0.012</b>
	16-Sep-20	<b>0.016</b>
	16-Oct-20	<b>0.017</b>
	16-Nov-20	<b>0.045</b>
	16-Dec-20	<b>0.077</b>
	14-Jan-21	<b>0.032</b>
	16-Feb-21	<b>0.652</b>
	17-Mar-21	<b>0.596</b>
	24-Feb-22	<b>0.106</b>
BH1A	15-Feb-23	<b>0.013</b>
BH2	22-Feb-19	<b>0.006</b>
	15-Mar-19	< 0.005
	23-Apr-19	<b>0.008</b>
	16-May-19	< 0.005
	14-Jun-19	< 0.005
	16-Jul-19	<b>0.006</b>
	15-Aug-19	< 0.005
	16-Sep-19	<b>0.007</b>
	15-Oct-19	<b>0.007</b>
	18-Nov-19	<b>0.028</b>
	16-Sep-20	<b>0.006</b>
	16-Oct-20	< 0.005
	16-Nov-20	<b>0.018</b>
	16-Dec-20	< 0.005
	14-Jan-21	< 0.005
	16-Feb-21	<b>0.017</b>
	17-Mar-21	<b>0.006</b>
	19-Aug-21	< 0.005
	22-Sep-21	-
	13-Oct-21	-
	16-Nov-21	< 0.005
	15-Dec-21	-
	18-Jan-22	-
	24-Feb-22	< 0.005
	17-Mar-22	-
	12-Apr-22	-
	27-May-22	<b>0.005</b>
	17-Jun-22	-
	27-Jul-22	-
	12-Aug-22	<b>0.169</b>
	16-Sep-22	<b>0.125</b>
	24-Oct-22	<b>0.086</b>
	18-Nov-22	<b>0.086</b>
	14-Dec-22	-
	17-Jan-23	-
	15-Feb-23	<b>0.048</b>
	15-Mar-23	-
	18-Apr-23	<b>0.039</b>
	16-May-23	<b>0.05</b>

Table 3  
Groundwater - Metals

Analyte		Zinc
LOR	0.005	
Units	mg/L	
Adopted Site Specific Trigger Values (SWMP 2021)	0.085 (0.1 for BH1)	
BH3	21-Feb-19	< 0.005
	21-Feb-19	<b>0.014</b>
	15-Mar-19	<b>0.043</b>
	23-Apr-19	<b>0.008</b>
	16-May-19	<b>0.011</b>
	14-Jun-19	<b>0.005</b>
	16-Jul-19	<b>0.007</b>
	15-Aug-19	<b>0.007</b>
	16-Sep-19	<b>0.005</b>
	15-Oct-19	<b>0.014</b>
	18-Nov-19	< 0.005
	16-Sep-20	<b>0.006</b>
	16-Oct-20	<b>0.018</b>
	16-Nov-20	<b>0.005</b>
	16-Dec-20	< 0.005
	14-Jan-21	<b>0.006</b>
	16-Feb-21	<b>0.008</b>
	17-Mar-21	<b>0.019</b>
	19-Aug-21	<b>0.013</b>
	22-Sep-21	<b>0.006</b>
BH4	13-Oct-21	< 0.005
	16-Nov-21	<b>0.006</b>
	15-Dec-21	-
	18-Jan-22	-
	24-Feb-22	<b>0.008</b>
	17-Mar-22	-
	12-Apr-22	-
	27-May-22	< 0.005
	17-Jun-22	-
	27-Jul-22	-
	12-Aug-22	<b>0.013</b>
	16-Sep-22	-
	24-Oct-22	-
	18-Nov-22	<b>0.011</b>
	14-Dec-22	-
	17-Jan-23	-
	15-Feb-23	<b>0.015</b>
	15-Mar-23	-
	18-Apr-23	<b>0.008</b>
	16-May-23	<b>0.017</b>
BH5	22-Feb-19	<b>0.008</b>
	24-Feb-22	< 0.005
	15-Feb-23	<b>0.018</b>
	22-Feb-19	<b>0.019</b>
	14-Mar-19	<b>0.012</b>
	23-Apr-19	<b>0.022</b>
	16-May-19	< 0.005
	14-Jun-19	<b>0.008</b>
	16-Jul-19	<b>0.005</b>
	15-Aug-19	<b>0.007</b>
	16-Sep-19	<b>0.035</b>
	15-Oct-19	<b>0.006</b>
	18-Nov-19	<b>0.073</b>
	16-Sep-20	<b>0.006</b>
	16-Oct-20	<b>0.007</b>
	16-Nov-20	<b>0.01</b>
	16-Dec-20	<b>0.007</b>

Table 3  
Groundwater - Metals

Analyte	Zinc
LOR	0.005
Units	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	0.085 (0.1 for BH1)
14-Jan-21	<b>0.025</b>
16-Feb-21	<b>0.012</b>
17-Mar-21	<b>0.006</b>
19-Aug-21	< 0.005
22-Sep-21	< 0.005
13-Oct-21	< 0.005
16-Nov-21	< 0.005
15-Dec-21	-
18-Jan-22	-
24-Feb-22	<b>0.031</b>
17-Mar-22	-
12-Apr-22	-
27-May-22	< 0.005
17-Jun-22	-
27-Jul-22	-
12-Aug-22	<b>0.008</b>
16-Sep-22	-
24-Oct-22	-
18-Nov-22	<b>0.005</b>
14-Dec-22	-
17-Jan-23	-
15-Feb-23	<b>0.032</b>
15-Mar-23	-
18-Apr-23	< 0.005
16-May-23	<b>0.024</b>
22-Feb-19	<b>0.019</b>
14-Mar-19	<b>0.009</b>
23-Apr-19	<b>0.01</b>
16-May-19	<b>0.013</b>
14-Jun-19	<b>0.006</b>
16-Jul-19	< 0.005
15-Aug-19	< 0.005
16-Sep-19	<b>0.085</b>
15-Oct-19	<b>0.011</b>
18-Nov-19	<b>0.053</b>
16-Sep-20	<b>0.006</b>
16-Oct-20	<b>0.015</b>
16-Nov-20	<b>0.006</b>
16-Dec-20	< 0.005
14-Jan-21	<b>0.017</b>
16-Feb-21	<b>0.013</b>
17-Mar-21	< 0.005
19-Aug-21	<b>0.006</b>
22-Sep-21	< 0.005
13-Oct-21	< 0.005
16-Nov-21	<b>0.007</b>
15-Dec-21	-
18-Jan-22	-
24-Feb-22	< 0.005
17-Mar-22	-
12-Apr-22	-
27-May-22	<b>0.005</b>
17-Jun-22	-
27-Jul-22	-
12-Aug-22	< 0.005
16-Sep-22	-
24-Oct-22	-
18-Nov-22	<b>0.009</b>

Table 3  
Groundwater - Metals

Analyte		Zinc
LOR	0.005	
Units	mg/L	
Adopted Site Specific Trigger Values (SWMP 2021)	0.085 (0.1 for BH1)	
14-Dec-22	-	
17-Jan-23	-	
15-Feb-23	<b>0.011</b>	
15-Mar-23	-	
18-Apr-23	<b>0.011</b>	
16-May-23	<b>0.025</b>	
21-Feb-19	<b>0.005</b>	
14-Mar-19	< 0.005	
23-Apr-19	<b>0.008</b>	
16-May-19	< 0.005	
14-Jun-19	<b>0.006</b>	
16-Jul-19	< 0.005	
15-Aug-19	< 0.005	
16-Sep-19	< 0.005	
15-Oct-19	<b>0.011</b>	
18-Nov-19	<b>0.053</b>	
16-Sep-20	<b>0.039</b>	
16-Oct-20	<b>0.012</b>	
16-Nov-20	< 0.005	
16-Dec-20	< 0.005	
14-Jan-21	<b>0.009</b>	
16-Feb-21	<b>0.013</b>	
17-Mar-21	< 0.005	
19-Aug-21	< 0.005	
16-Nov-21	< 0.005	
16-Dec-21	-	
24-Feb-22	<b>0.012</b>	
27-May-22	< 0.005	
12-Aug-22	<b>0.007</b>	
18-Nov-22	<b>0.008</b>	
15-Feb-23	<b>0.034</b>	
16-May-23	<b>0.015</b>	
BH9	16-Nov-21	-
	16-Sep-20	<b>0.02</b>
	16-Oct-20	<b>0.016</b>
	16-Nov-20	<b>0.011</b>
	16-Dec-20	<b>0.006</b>
	14-Jan-21	<b>0.011</b>
	16-Feb-21	<b>0.006</b>
	17-Mar-21	<b>0.01</b>
	19-Aug-21	<b>0.006</b>
	22-Sep-21	< 0.005
	13-Oct-21	<b>0.021</b>
	16-Nov-21	<b>0.031</b>
	15-Dec-21	-
	18-Jan-22	-
	24-Feb-22	<b>0.006</b>
	17-Mar-22	-
	12-Apr-22	-
	27-May-22	< 0.005
	17-Jun-22	-
	27-Jul-22	-
	12-Aug-22	<b>0.008</b>
	16-Sep-22	-
	24-Oct-22	-
	18-Nov-22	<b>0.012</b>
	14-Dec-22	-

Table 3  
Groundwater - Metals

Analyte	Zinc
LOR	0.005
Units	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	0.085 (0.1 for BH1)
17-Jan-23	-
15-Feb-23	<b>0.015</b>
15-Mar-23	-
18-Apr-23	<b>0.038</b>
16-May-23	<b>0.029</b>
21-Feb-19	<b>0.031</b>
15-Mar-19	<b>0.016</b>
23-Apr-19	<b>0.04</b>
16-May-19	<b>0.024</b>
14-Jun-19	<b>0.005</b>
16-Jul-19	<b>0.007</b>
15-Aug-19	<b>0.005</b>
16-Sep-19	<b>0.012</b>
15-Oct-19	<b>0.016</b>
18-Nov-19	< 0.005
16-Sep-20	<b>0.009</b>
16-Oct-20	<b>0.01</b>
16-Nov-20	<b>0.016</b>
16-Dec-20	<b>0.008</b>
14-Jan-21	<b>0.018</b>
16-Feb-21	<b>0.03</b>
17-Mar-21	<b>0.014</b>
19-Aug-21	<b>0.047</b>
22-Sep-21	<b>0.042</b>
13-Oct-21	<b>0.037</b>
16-Nov-21	<b>0.036</b>
15-Dec-21	-
18-Jan-22	-
24-Feb-22	<b>0.036</b>
06-Mar-22	<b>0.028</b>
17-Mar-22	-
12-Apr-22	-
17-Jun-22	-
27-Jul-22	-
16-Sep-22	-
24-Oct-22	-
18-Nov-22	<b>0.042</b>
14-Dec-22	-
17-Jan-23	-
15-Feb-23	<b>0.076</b>
15-Mar-23	-
18-Apr-23	<b>0.029</b>
16-May-23	<b>0.065</b>
BH11	
16-Nov-20	<b>0.017</b>
24-Feb-22	< 0.005
BH12	
15-Feb-23	<b>0.015</b>
BH12A	
22-Feb-19	<b>0.006</b>
14-Mar-19	<b>0.008</b>
23-Apr-19	<b>0.007</b>
16-May-19	< 0.005
14-Jun-19	< 0.005
16-Jul-19	< 0.005
15-Aug-19	< 0.005
16-Sep-19	<b>0.032</b>
15-Oct-19	<b>0.011</b>
18-Nov-19	<b>0.03</b>
16-Sep-20	<b>0.006</b>

Table 3  
Groundwater - Metals

Analyte	Zinc
LOR	0.005
Units	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	0.085 (0.1 for BH1)
16-Oct-20	<b>0.005</b>
16-Nov-20	<b>0.021</b>
16-Dec-20	< 0.005
14-Jan-21	<b>0.011</b>
16-Feb-21	<b>0.014</b>
17-Mar-21	<b>0.009</b>
19-Aug-21	< 0.005
22-Sep-21	<b>0.005</b>
MW239S	13-Oct-21 <b>0.016</b>
	16-Nov-21 <b>0.01</b>
	15-Dec-21 -
	18-Jan-22 -
	24-Feb-22 <b>0.006</b>
	17-Mar-22 -
	12-Apr-22 -
	27-May-22 <b>0.009</b>
	17-Jun-22 -
	27-Jul-22 -
	12-Aug-22 < 0.005
	16-Sep-22 -
	24-Oct-22 -
	18-Nov-22 <b>0.006</b>
	14-Dec-22 -
	17-Jan-23 -
	15-Feb-23 <b>0.019</b>
	15-Mar-23 -
	18-Apr-23 <b>0.006</b>
	16-May-23 <b>0.027</b>

**Notes:**

- - Not analysed

< - Less than laboratory limit of reporting

mg/L - Milligrams per litre

**Bold** indicates a detection above the laboratory limit of

"\*n" denotes duplicate/triplicate sample result adopted ft

Highlighting indicates an exceedance of the correspondi

RPD - Relative Percentage Difference

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 20

Table 4  
Groundwater - PFAS

Analyte	Perfluorooctane sulfonamide (FOSA)	N-Methyl-perfluorooctane sulfonamide (MeFOSA)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	Perfluorobutanoic acid (PFBA)	Perfluoro-n-pentanoic acid (PFPeA)	Perfluorophenoxyacid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoate (PFOA)	Perfluorononanoic acid (PFNA)
LOR	0.02	0.05	0.05	0.05	0.05	0.02	0.02	0.1	0.02	0.02	0.02	0.01	0.02
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	--	--	--	--	--	--	--	--	--	0.56	--
	16-May-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

**Bold** indicates a detection above the laboratory limit of reporting

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 4  
Groundwater - PFAS

Analyte	PFAS Compounds											
	Perfluorodecanoic acid (PFDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptane sulfonate (PFHpS)	Perfluoroctanesulfonic acid (PFOS)	Perfluorodecanesulfonic acid (PFDS)	4:2 Fluorotelomer Sulfonate (4:2 FTS)
LOR	0.02	0.02	0.02	0.02	0.05	0.02	0.02	0.01	0.02	0.01	0.02	0.05
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	--	--	--	--	--	--	--	--	--	--
16-May-23	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

**Bold** indicates a detection above the laboratory limit

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July

Table 4  
Groundwater - PFAS

Analyte		6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS		
LOR		0.05	0.05	0.05	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
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	0.07	--	--
Sample Name	Sample Date						
BH1	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH1A	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH3	21-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	21-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Mar-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	23-Apr-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jun-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Aug-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	<b>0.02</b>
	15-Oct-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	<b>0.15</b>	< 0.05	< 0.05	< 0.01	<b>0.15</b>	<b>0.15</b>
	24-Feb-22	<b>0.06</b>	< 0.05	< 0.05	< 0.01	<b>0.06</b>	<b>0.06</b>
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	<b>0.05</b>	< 0.05	< 0.05	< 0.01	<b>0.05</b>	<b>0.05</b>
BH5	22-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Mar-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	23-Apr-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jun-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Aug-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Oct-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

Table 4  
Groundwater - PFAS

Analyte		6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS		
LOR Units		0.05 µg/L	0.05 µg/L	0.05 µg/L	Sum of PFHxS and PFOS µg/L	Sum of PFAS (WA DER List) µg/L	Sum of PFAS µg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	0.07	--	--
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH6	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH7	22-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Mar-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	23-Apr-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jun-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Aug-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Oct-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH8	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	21-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Mar-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	23-Apr-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jun-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Aug-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Oct-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

Table 4  
Groundwater - PFAS

Analyte		6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS		
LOR	Units	0.05 µg/L	0.05 µg/L	0.05 µg/L	0.01 µg/L	0.01 µg/L	0.01 µg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	0.07	--	--
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH9A	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	13-Oct-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	21-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH11	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	13-Oct-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	06-Mar-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH12	24-Feb-22	<b>0.07</b>	< 0.05	< 0.05	< 0.01	<b>0.07</b>	<b>0.07</b>
BH12A	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
MW239S	22-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	13-Oct-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

Table 4  
Groundwater - PFAS

Analyte	Sum of PFAS					
	6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS
LOR	0.05	0.05	0.05	0.01	0.01	0.01
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	--	0.07	--	--
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

**Bold** indicates a detection above the laboratory limit

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July

**Table 5**  
**Surface Water - Hydrocarbons**



Table 5  
Surface Water - Hydrocarbons

Analyte		BTEXN									Total Petroleum Hydrocarbons					
		Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Total Xylenes	Naphthalene	Sum of BTEX	C <sub>6</sub> - C <sub>9</sub>	C <sub>10</sub> - C <sub>14</sub>	C <sub>15</sub> - C <sub>28</sub>	C <sub>29</sub> - C <sub>36</sub>	C <sub>10</sub> - C <sub>36</sub> sum	C <sub>10</sub> -C <sub>14</sub> - Silica Cleanup	C <sub>15</sub> -C <sub>28</sub> - Silica Cleanup
LOR	1	2	2	2	2	2	2	5	1	20	50	100	50	50	50	50
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
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW4	16-May-23	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 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	-	-
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	-	-
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 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	-	-
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	19-Aug-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	16-Nov-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	24-Feb-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	27-May-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	12-Aug-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	18-Nov-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	15-Feb-23	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100
	16-May-23	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100

**Notes:**

- Not analysed  
< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

BTEXN - Benzene, toluene, ethylbenzene, total xylenes, naphthalene

**Bold** indicates a detection above the laboratory limit of reporting

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021



Table 5  
Surface Water - Hydrocarbons

Analyte	Hydrocarbons - Silica Clean-up		Total Recoverable Hydrocarbons							Total Recoverable Hydrocarbons - Silica Clean-up				
	C <sub>29</sub> -C <sub>36</sub> - Silica Cleanup	C <sub>10</sub> -C <sub>36</sub> Sum - Silica Cleanup	C <sub>6</sub> - C <sub>10</sub>	C <sub>6</sub> - C <sub>10</sub> minus BTEX (F1)	>C <sub>10</sub> - C <sub>16</sub>	>C <sub>10</sub> - C <sub>16</sub> minus Naphthalene (F2)	>C <sub>16</sub> - C <sub>34</sub>	>C <sub>34</sub> - C <sub>40</sub>	>C <sub>10</sub> - C <sub>40</sub> (sum)	>C <sub>10</sub> -C <sub>16</sub> - Silica Cleanup	F2 - Silica Cleanup	>C <sub>16</sub> -C <sub>34</sub> - Silica Cleanup	>C <sub>34</sub> -C <sub>40</sub> - Silica Cleanup	>C <sub>10</sub> -C <sub>40</sub> - Silica Cleanup
LOR	50	50	20	20	100	100	100	100	100	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
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	20	20	100	--	100	100	--	--	--	--	--	--
	16-May-23	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
SW4	23-Apr-19	-	-	< 20	< 20	< 100	< 100	< 100	< 100	-	-	-	-	-
	16-May-19	-	-	< 20	< 20	< 100	< 100	< 100	< 100	-	-	-	-	-
	14-Jun-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Jul-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Aug-19	-	-	< 20	< 20	< 100	< 100	< 100	< 100	-	-	-	-	-
	16-Sep-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Oct-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	19-Aug-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-Nov-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	24-Feb-22	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	27-May-22	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	12-Aug-22	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	18-Nov-22	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Feb-23	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	16-May-23	< 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, total xylene  
**Bold** indicates a detection above the laboratory limit

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July



Table 6  
Surface Water - Inorganics and Nutrients

Analyte		Anions and Cations													
		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N	Nitrate	Nitrate as N
LOR		1	1	1	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	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	
Adopted Site Specific Trigger Values (SWMP 2021)		142	40	52	8.0	324	234	0.8	--	--	0.17	--	--	--	
SW4	18-Nov-22	-	-	<b>3.0</b>	-	-	-	-	-	-	-	-	-	-	
	15-Feb-23	<b>33</b>	< 1.0	<b>2.0</b>	<b>1.0</b>	<b>20</b>	<b>76</b>	< 0.1	-	< 0.01	< 0.01	-	<b>0.02</b>	-	< 0.01
	16-May-23	-	-	<b>3.0</b>	-	-	-	-	-	-	-	-	-	-	
	23-Apr-19	<b>39</b>	<b>5.0</b>	<b>5.0</b>	< 1.0	<b>60</b>	<b>64</b>	<b>0.1</b>	-	-	-	-	-	-	
	16-May-19	<b>41</b>	<b>5.0</b>	<b>5.0</b>	< 1.0	<b>41</b>	<b>59</b>	< 0.1	-	<b>0.01</b>	< 0.01	-	< 0.01	-	<b>0.05</b>
	14-Jun-19	<b>40</b>	<b>5.0</b>	<b>5.0</b>	< 1.0	<b>39</b>	<b>60</b>	< 0.1	-	-	-	-	-	-	
	16-Jul-19	<b>46</b>	<b>7.0</b>	<b>7.0</b>	< 1.0	<b>67</b>	<b>56</b>	<b>0.2</b>	-	-	-	-	-	-	
	15-Aug-19	<b>40</b>	<b>5.0</b>	<b>5.0</b>	< 1.0	<b>43</b>	<b>55</b>	<b>0.1</b>	-	-	-	-	-	-	
	16-Sep-19	<b>45</b>	<b>7.0</b>	<b>6.0</b>	< 1.0	<b>45</b>	<b>58</b>	<b>0.1</b>	-	< 0.01	<b>0.01</b>	-	< 0.01	-	
	15-Oct-19	<b>44</b>	<b>6.0</b>	<b>6.0</b>	< 1.0	<b>38</b>	<b>57</b>	<b>0.1</b>	-	-	-	-	-	-	
	18-Nov-19	<b>41</b>	<b>4.0</b>	<b>5.0</b>	< 1.0	<b>41</b>	<b>64</b>	<b>0.2</b>	< 0.01	< 0.01	-	-	< 0.01	<b>0.02</b>	-
	16-Sep-20	<b>45</b>	<b>6.0</b>	<b>7.0</b>	< 1.0	<b>58</b>	<b>59</b>	<b>0.1</b>	-	-	-	-	-	-	
	16-Oct-20	<b>43</b>	<b>5.0</b>	<b>5.0</b>	< 1.0	<b>40</b>	<b>67</b>	<b>0.1</b>	-	-	-	-	-	-	
	16-Nov-20	<b>37</b>	<b>8.0</b>	<b>6.0</b>	<b>2.0</b>	<b>42</b>	<b>54</b>	<b>0.2</b>	-	< 0.01	< 0.01	-	< 0.01	-	
	16-Dec-20	<b>43</b>	<b>4.0</b>	<b>4.0</b>	<b>2.0</b>	<b>24</b>	<b>70</b>	<b>0.2</b>	-	-	-	-	-	-	
	14-Jan-21	<b>36</b>	<b>16</b>	<b>4.0</b>	<b>2.0</b>	<b>15</b>	<b>58</b>	<b>0.8</b>	-	-	-	-	-	-	
	16-Feb-21	<b>37</b>	<b>6.0</b>	<b>4.0</b>	<b>2.0</b>	<b>14</b>	<b>61</b>	<b>0.3</b>	-	< 0.01	<b>0.03</b>	-	< 0.01	-	
	17-Mar-21	<b>36</b>	<b>10</b>	<b>4.0</b>	<b>2.0</b>	<b>10</b>	<b>54</b>	<b>0.4</b>	-	-	-	-	-	-	
	19-Aug-21	-	-	<b>4.0</b>	-	-	-	-	-	-	-	-	-	-	
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-	
	16-Nov-21	-	-	<b>4.0</b>	-	-	-	-	-	-	-	-	-	-	
	24-Feb-22	<b>35</b>	<b>3.0</b>	<b>4.0</b>	< 1.0	<b>27</b>	<b>63</b>	< 0.1	-	-	< 0.01	< 0.01	-	< 0.01	
	27-May-22	-	-	<b>4.0</b>	-	-	-	-	-	-	-	-	-	-	
	12-Aug-22	-	-	<b>3.0</b>	-	-	-	-	-	-	-	-	-	-	
	18-Nov-22	-	-	<b>3.0</b>	-	-	-	-	-	-	-	-	-	-	
	15-Feb-23	<b>34</b>	<b>1.0</b>	<b>3.0</b>	< 1.0	<b>9.0</b>	<b>63</b>	< 0.1	-	< 0.01	<b>0.02</b>	-	< 0.01	-	< 0.01
	16-May-23	-	-	<b>4.0</b>	-	-	-	-	-	-	-	-	-	-	

**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

Highlighting indicates an exceedance of the corresponding criteria (highlighting corresponds to the guideline with the highest criteria value where analytical result exceeds more than one guideline)

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 6  
Surface Water - Inorganics and Nutrients

Table 6  
Surface Water - Inorganics and Nutrients

Analyte												Alkalinity			
	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	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3		
LOR	0.01	0.1	0.1	0.01	0.01	0.01	0.01	0.01	1	1	1	1	1		
Units	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	-	mg/L	mg/L	mg/L	mg/L	mg/L		
Adopted Site Specific Trigger Values (SWMP 2021)		--	0.2	5.9	--	--	--	--	--	--	--	--	--	--	--
18-Nov-22		-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-Feb-23		<b>0.02</b>	<b>0.21</b>	<b>2.8</b>	<b>2.8</b>	<b>2.13</b>	<b>2.56</b>	-	<b>4.66</b>	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
16-May-23		-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW4	23-Apr-19	-	-	-	<b>2.36</b>	<b>3.05</b>	<b>13</b>	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-19	<b>0.05</b>	< 0.01	<b>0.2</b>	<b>0.2</b>	<b>2.44</b>	<b>2.52</b>	-	<b>3.1</b>	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jun-19	-	-	-	<b>2.4</b>	<b>2.5</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Jul-19	-	-	-	<b>2.93</b>	<b>2.97</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	15-Aug-19	-	-	-	<b>2.4</b>	<b>2.45</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-19	< 0.01	< 0.01	<b>0.1</b>	<b>0.1</b>	<b>2.8</b>	<b>2.57</b>	-	<b>3.01</b>	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	15-Oct-19	-	-	-	<b>2.71</b>	<b>2.4</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	18-Nov-19	<b>0.02</b>	< 0.01	<b>0.2</b>	<b>0.2</b>	<b>2.76</b>	<b>2.66</b>	-	<b>3.22</b>	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-20	-	-	-	<b>2.83</b>	<b>2.87</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Oct-20	-	-	-	<b>2.53</b>	<b>2.72</b>	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Nov-20	< 0.01	< 0.01	<b>0.1</b>	<b>0.1</b>	<b>2.55</b>	<b>2.4</b>	-	<b>2.41</b>	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	16-Dec-20	-	-	-	<b>2.45</b>	<b>2.79</b>	-	-	-	<b>16</b>	< 1.0	< 1.0	< 1.0	<b>16</b>	
	14-Jan-21	-	-	-	<b>2.74</b>	<b>2.69</b>	-	-	-	<b>37</b>	< 1.0	< 1.0	< 1.0	<b>37</b>	
	16-Feb-21	< 0.01	<b>0.02</b>	<b>1.2</b>	<b>1.2</b>	<b>2.29</b>	<b>2.15</b>	-	<b>2.87</b>	-	<b>7.0</b>	< 1.0	< 1.0	<b>7.0</b>	
	17-Mar-21	-	-	-	<b>2.44</b>	<b>2.25</b>	-	-	-	<b>26</b>	< 1.0	< 1.0	<b>26</b>		
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-	-	-	
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-	
	16-Nov-21	-	-	-	-	-	-	-	-	-	-	-	-	-	
	24-Feb-22	< 0.01	< 0.01	<b>0.3</b>	<b>0.3</b>	<b>2.0</b>	<b>2.34</b>	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-	-	
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-	-	
	15-Feb-23	< 0.01	<b>0.04</b>	<b>0.7</b>	<b>0.7</b>	<b>1.78</b>	<b>2.02</b>	-	<b>3.84</b>	-	<b>3.0</b>	< 1.0	< 1.0	<b>3.0</b>	
	16-May-23	-	-	-	-	-	-	-	-	-	-	-	-	-	

**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  
Highlighting indicates an exceedance of the corresp

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July

Table 6  
Surface Water - Inorganics and Nutrients

Analyte	Total Hardness as CaCO <sub>3</sub>	Inorganics						
		Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
LOR	1	1	1	1	0.01	0.01	0.1	0.01
Units	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	--	--	--	--	--	--
Sample Name	Sample Date							
SW1	23-Apr-19	<b>299</b>	-	<b>893</b>	<b>707</b>	<b>32</b>	<b>4.01</b>	-
	16-May-19	<b>233</b>	-	<b>947</b>	<b>715</b>	<b>59</b>	<b>4.6</b>	-
	14-Jun-19	<b>190</b>	-	<b>847</b>	<b>512</b>	<b>26</b>	<b>4.5</b>	-
	16-Jul-19	<b>194</b>	-	<b>876</b>	<b>568</b>	<b>17</b>	<b>4.42</b>	-
	15-Aug-19	<b>177</b>	-	<b>813</b>	<b>548</b>	<b>5.0</b>	<b>4.53</b>	-
	16-Sep-19	<b>213</b>	-	<b>1,080</b>	<b>689</b>	<b>15</b>	<b>4.32</b>	-
	15-Oct-19	<b>168</b>	-	<b>1,050</b>	<b>682</b>	-	<b>5.32</b>	-
	18-Nov-19	<b>158</b>	-	<b>1,090</b>	<b>708</b>	-	<b>5.06</b>	-
	16-Sep-20	<b>52</b>	-	<b>137</b>	<b>152</b>	<b>8.0</b>	<b>6.5</b>	-
	16-Oct-20	<b>116</b>	-	<b>268</b>	<b>174</b>	-	<b>7.29</b>	-
	16-Nov-20	<b>41</b>	-	<b>127</b>	<b>82</b>	< 5.0	<b>6.5</b>	-
	16-Dec-20	<b>56</b>	-	<b>171</b>	<b>111</b>	-	<b>7.01</b>	-
	14-Jan-21	<b>53</b>	-	<b>154</b>	<b>100</b>	-	<b>6.71</b>	-
	16-Feb-21	<b>46</b>	-	<b>141</b>	<b>92</b>	<b>6.0</b>	<b>6.93</b>	-
	17-Mar-21	<b>46</b>	-	<b>139</b>	<b>90</b>	-	<b>6.63</b>	-
	19-Aug-21	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	<b>6.82</b>	<b>3.3</b>
	16-Nov-21	-	-	-	-	-	-	-
	24-Feb-22	<b>31</b>	-	<b>89</b>	<b>58</b>	-	<b>6.38</b>	-
	27-May-22	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-
	15-Feb-23	<b>33</b>	-	<b>141</b>	<b>92</b>	-	<b>6.59</b>	-
	16-May-23	-	-	-	-	-	-	-
SW2	17-Mar-21	<b>13</b>	-	<b>83</b>	<b>54</b>	-	<b>5.08</b>	-
	19-Aug-21	<b>4.0</b>	-	<b>103</b>	<b>67</b>	-	<b>4.21</b>	-
	22-Sep-21	<b>13</b>	-	<b>235</b>	<b>153</b>	-	<b>3.55</b>	-
	13-Oct-21	<b>4.0</b>	-	<b>77</b>	<b>50</b>	-	<b>4.58</b>	<b>4.7</b>
	16-Nov-21	-	<b>13</b>	<b>93</b>	<b>60</b>	-	<b>4.39</b>	-
	24-Feb-22	<b>7.0</b>	-	<b>97</b>	<b>63</b>	-	<b>4.32</b>	-
	17-Mar-22	-	-	-	-	-	-	-
	27-May-22	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-
	15-Feb-23	<b>17</b>	-	<b>150</b>	<b>98</b>	-	<b>4.2</b>	-
	16-May-23	-	-	-	-	-	-	-
SW3	22-Feb-19	<b>26</b>	-	<b>262</b>	<b>228</b>	<b>58</b>	<b>6.21</b>	-
	14-Mar-19	<b>40</b>	-	<b>344</b>	<b>224</b>	<b>34</b>	<b>5.42</b>	-
	23-Apr-19	<b>45</b>	-	<b>220</b>	<b>190</b>	<b>9.0</b>	<b>5.2</b>	-
	16-May-19	<b>38</b>	-	<b>271</b>	<b>300</b>	<b>14</b>	<b>5.24</b>	-
	14-Jun-19	<b>42</b>	-	<b>300</b>	<b>170</b>	<b>12</b>	<b>4.58</b>	-
	16-Jul-19	<b>69</b>	-	<b>451</b>	<b>246</b>	<b>7.0</b>	<b>4.47</b>	-
	15-Aug-19	<b>44</b>	-	<b>338</b>	<b>192</b>	< 5.0	<b>4.47</b>	-
	16-Sep-19	<b>50</b>	-	<b>374</b>	<b>201</b>	<b>7.0</b>	<b>4.3</b>	-
	15-Oct-19	<b>41</b>	-	<b>383</b>	<b>249</b>	-	<b>4.75</b>	-
	18-Nov-19	<b>33</b>	-	<b>278</b>	<b>181</b>	-	<b>5.39</b>	-
	16-Sep-20	<b>40</b>	-	<b>402</b>	<b>224</b>	<b>6.0</b>	<b>4.41</b>	-
	16-Oct-20	<b>35</b>	-	<b>333</b>	<b>216</b>	-	<b>4.15</b>	-
	16-Nov-20	<b>26</b>	-	<b>460</b>	<b>299</b>	< 5.0	<b>3.95</b>	-
	16-Dec-20	<b>23</b>	-	<b>303</b>	<b>197</b>	-	<b>4.8</b>	-
	14-Jan-21	<b>8.0</b>	-	<b>301</b>	<b>196</b>	-	<b>4.06</b>	-
	16-Feb-21	<b>17</b>	-	<b>273</b>	<b>177</b>	< 5.0	<b>4.15</b>	-
	17-Mar-21	<b>8.0</b>	-	<b>237</b>	<b>154</b>	-	<b>4.65</b>	-
	19-Aug-21	-	-	-	-	-	-	-
	16-Nov-21	-	-	-	-	-	-	-
	24-Feb-22	<b>8.0</b>	-	<b>183</b>	<b>119</b>	-	<b>4.59</b>	-
	27-May-22	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-

Table 6  
Surface Water - Inorganics and Nutrients

Analyte	Total Hardness as CaCO <sub>3</sub>	Inorganics						
		Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
LOR	1	1	1	1	0.01	0.01	0.1	0.01
Units	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	--	--	--	--	--	--
18-Nov-22	-	-	-	-	-	-	-	-
15-Feb-23	<b>8.0</b>	-	<b>247</b>	<b>160</b>	-	<b>4.08</b>	-	-
16-May-23	-	-	-	-	-	-	-	-
23-Apr-19	<b>33</b>	-	<b>293</b>	<b>198</b>	< 5.0	<b>4.0</b>	-	-
16-May-19	<b>33</b>	-	<b>331</b>	<b>288</b>	<b>13</b>	<b>4.08</b>	-	-
14-Jun-19	<b>33</b>	-	<b>316</b>	<b>163</b>	< 5.0	<b>4.31</b>	-	-
16-Jul-19	<b>46</b>	-	<b>367</b>	<b>207</b>	<b>6.0</b>	<b>4.46</b>	-	-
15-Aug-19	<b>33</b>	-	<b>308</b>	<b>160</b>	< 5.0	<b>4.48</b>	-	-
16-Sep-19	<b>42</b>	-	<b>360</b>	<b>208</b>	< 5.0	<b>4.47</b>	-	-
15-Oct-19	<b>40</b>	-	<b>365</b>	<b>237</b>	-	<b>4.48</b>	-	-
18-Nov-19	<b>30</b>	-	<b>348</b>	<b>226</b>	-	<b>4.48</b>	-	-
16-Sep-20	<b>44</b>	-	<b>421</b>	<b>228</b>	< 5.0	<b>4.16</b>	-	-
16-Oct-20	<b>33</b>	-	<b>355</b>	<b>231</b>	-	<b>3.94</b>	-	-
16-Nov-20	<b>45</b>	-	<b>338</b>	<b>220</b>	<b>6.0</b>	<b>4.21</b>	-	-
16-Dec-20	<b>26</b>	-	<b>323</b>	<b>210</b>	-	<b>6.15</b>	-	-
14-Jan-21	<b>56</b>	-	<b>316</b>	<b>205</b>	-	<b>6.38</b>	-	-
16-Feb-21	<b>31</b>	-	<b>267</b>	<b>174</b>	<b>48</b>	<b>5.91</b>	-	-
17-Mar-21	<b>41</b>	-	<b>271</b>	<b>176</b>	-	<b>6.23</b>	-	-
19-Aug-21	-	-	-	-	-	-	-	-
13-Oct-21	-	-	-	-	-	<b>5.86</b>	<b>8.6</b>	-
16-Nov-21	-	-	-	-	-	-	-	-
24-Feb-22	<b>24</b>	-	<b>275</b>	<b>179</b>	-	<b>3.96</b>	-	< 0.01
27-May-22	-	-	-	-	-	-	-	-
12-Aug-22	-	-	-	-	-	-	-	-
18-Nov-22	-	-	-	-	-	-	-	-
15-Feb-23	<b>15</b>	-	<b>250</b>	<b>162</b>	-	<b>5.44</b>	-	-
16-May-23	-	-	-	-	-	-	-	-

**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

Highlighting indicates an exceedance of the corresp

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July

Table 7  
 Surface Water - Metals

Analyte		Metals													
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium
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
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
Adopted Site Specific Trigger Values (SWMP 2021)		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
Sample Name	Sample Date														
SW1	23-Apr-19	< 0.001	<b>0.043</b>	< 0.001	<b>0.14</b>	< 0.0001	< 0.001	<b>0.017</b>	<b>0.002</b>	<b>4.16</b>	< 0.001	<b>0.841</b>	< 0.0001	<b>0.02</b>	< 0.01
	16-May-19	< 0.001	<b>0.029</b>	< 0.001	<b>0.1</b>	< 0.0001	< 0.001	<b>0.01</b>	<b>0.003</b>	<b>7.25</b>	< 0.001	<b>0.666</b>	< 0.0001	<b>0.012</b>	< 0.01
	14-Jun-19	< 0.001	<b>0.029</b>	< 0.001	<b>0.09</b>	<b>0.0002</b>	< 0.001	<b>0.009</b>	<b>0.006</b>	<b>2.75</b>	< 0.001	<b>0.595</b>	< 0.0001	<b>0.011</b>	< 0.01
	16-Jul-19	< 0.001	<b>0.032</b>	< 0.001	<b>0.08</b>	<b>0.0001</b>	< 0.001	<b>0.007</b>	<b>0.003</b>	<b>1.86</b>	< 0.001	<b>0.59</b>	< 0.0001	<b>0.008</b>	< 0.01
	15-Aug-19	< 0.001	<b>0.027</b>	< 0.001	<b>0.09</b>	< 0.0001	< 0.001	<b>0.005</b>	<b>0.003</b>	<b>2.15</b>	< 0.001	<b>0.482</b>	< 0.0001	<b>0.005</b>	< 0.01
	16-Sep-19	< 0.001	<b>0.056</b>	< 0.001	<b>0.09</b>	<b>0.0002</b>	<b>0.001</b>	<b>0.008</b>	<b>0.012</b>	<b>2.45</b>	<b>0.001</b>	<b>0.587</b>	< 0.0001	<b>0.014</b>	< 0.01
	15-Oct-19	< 0.001	<b>0.036</b>	< 0.001	<b>0.07</b>	< 0.0001	< 0.001	<b>0.005</b>	<b>0.003</b>	-	< 0.001	<b>0.383</b>	< 0.0001	<b>0.005</b>	< 0.01
	18-Nov-19	< 0.001	<b>0.042</b>	< 0.001	<b>0.11</b>	< 0.0001	<b>0.001</b>	<b>0.003</b>	< 0.001	<b>1.14</b>	< 0.001	<b>0.366</b>	< 0.0001	<b>0.003</b>	< 0.01
	16-Sep-20	< 0.001	<b>0.021</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.005</b>	<b>0.87</b>	<b>0.001</b>	<b>0.096</b>	< 0.0001	<b>0.002</b>	< 0.01
	16-Oct-20	<b>0.001</b>	<b>0.021</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.001</b>	<b>0.76</b>	< 0.001	<b>0.15</b>	< 0.0001	<b>0.001</b>	< 0.01
	16-Nov-20	< 0.001	<b>0.02</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.005</b>	<b>0.18</b>	< 0.001	<b>0.017</b>	< 0.0001	< 0.001	< 0.01
	16-Dec-20	< 0.001	<b>0.015</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.003</b>	<b>0.18</b>	< 0.001	<b>0.058</b>	< 0.0001	< 0.001	< 0.01
	14-Jan-21	< 0.001	<b>0.012</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.02</b>	<b>0.35</b>	< 0.001	<b>0.04</b>	< 0.0001	<b>0.006</b>	< 0.01
	16-Feb-21	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>0.12</b>	< 0.001	<b>0.028</b>	< 0.0001	< 0.001	< 0.01
	17-Mar-21	< 0.001	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>0.16</b>	< 0.001	<b>0.036</b>	< 0.0001	< 0.001	< 0.01
	19-Aug-21	< 0.001	<b>0.011</b>	-	< 0.05	-	<b>0.001</b>	< 0.001	<b>0.002</b>	<b>0.86</b>	-	-	-	<b>0.002</b>	-
	16-Nov-21	< 0.001	<b>0.006</b>	-	< 0.05	-	< 0.001	< 0.001	<b>0.002</b>	<b>1.0</b>	-	-	-	<b>0.001</b>	-
	24-Feb-22	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>0.12</b>	< 0.001	<b>0.025</b>	< 0.0001	< 0.001	< 0.01
	27-May-22	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.005</b>	<b>0.51</b>	< 0.001	<b>0.06</b>	< 0.0001	<b>0.001</b>	< 0.01
	16-May-23	< 0.001	-	< 0.05	-	< 0.0001	< 0.001	< 0.001	<b>0.001</b>	<b>0.39</b>	-	-	-	-	< 0.001
SW2	17-Mar-21	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.002</b>	< 0.001	<b>0.62</b>	< 0.001	<b>0.11</b>	< 0.0001	<b>0.004</b>	< 0.01
	19-Aug-21	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.001</b>	< 0.001	<b>0.55</b>	< 0.001	<b>0.045</b>	< 0.0001	<b>0.002</b>	< 0.01
	22-Sep-21	< 0.001	<b>0.007</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.003</b>	< 0.001	<b>1.11</b>	< 0.001	<b>0.087</b>	< 0.0001	<b>0.005</b>	< 0.01
	13-Oct-21	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>0.88</b>	< 0.001	<b>0.049</b>	< 0.0001	<b>0.002</b>	< 0.01
	16-Nov-21	<b>0.001</b>	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.002</b>	< 0.001	<b>5.59</b>	< 0.001	<b>0.064</b>	< 0.0001	<b>0.004</b>	< 0.01
	24-Feb-22	< 0.001	<b>0.008</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.002</b>	< 0.001	<b>16</b>	< 0.001	<b>0.032</b>	< 0.0001	<b>0.006</b>	< 0.01
	17-Mar-22	-	-	-	-	-	-	-	-	<b>1.62</b>	-	-	-	-	-
	27-May-22	< 0.001	<b>0.005</b>	-	< 0.05	-	<b>0.001</b>	<b>0.001</b>	< 0.001	<b>1.7</b>	-	-	-	<b>0.002</b>	-
	12-Aug-22	< 0.001	<b>0.005</b>	-	< 0.05	-	<b>0.001</b>	< 0.001	<b>2.79</b>	-	-	-	-	<b>0.001</b>	-
	18-Nov-22	< 0.001	<b>0.004</b>	-	< 0.05	-	< 0.001	< 0.001	<b>0.45</b>	-	-	<b>0.011</b>	-	< 0.001	-
SW3	15-Feb-23	< 0.001	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	<b>0.003</b>	<b>2.37</b>	< 0.001	<b>0.056</b>	< 0.0001	<b>0.004</b>	< 0.01
	16-May-23	< 0.001	<b>0.018</b>	-	< 0.05	-	< 0.001	<b>0.004</b>	<b>0.003</b>	<b>0.87</b>	-	-	-	<b>0.005</b>	-
	22-Feb-19	<b>0.003</b>	<b>0.075</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>4.84</b>	< 0.001	<b>0.033</b>	< 0.0001	<b>0.002</b>	< 0.01
	14-Mar-19	<b>0.006</b>	<b>0.08</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.003</b>	< 0.001	<b>9.26</b>	< 0.001	<b>0.048</b>	< 0.0001	<b>0.002</b>	< 0.01
	23-Apr-19	< 0.001	<b>0.043</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.003</b>	<b>0.001</b>	<b>2.01</b>	< 0.001	<b>0.046</b>	< 0.0001	<b>0.004</b>	< 0.01
	16-May-19	< 0.001	<b>0.034</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	< 0.001	<b>1.78</b>	< 0.001	<b>0.038</b>	< 0.0001	<b>0.003</b>	< 0.01
	14-Jun-19	< 0.001	<b>0.035</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.003</b>	< 0.001	<b>1.68</b>	< 0.001	<b>0.038</b>	< 0.0001	<b>0.003</b>	< 0.01
	16-Jul-19	< 0.001	<b>0.055</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.007</b>	<b>0.002</b>	<b>1.25</b>	< 0.001	<b>0.043</b>	< 0.0001	<b>0.006</b>	< 0.01
	15-Aug-19	< 0.001	<b>0.035</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.003</b>	<b>0.002</b>	<b>1.16</b>	< 0.001	<b>0.036</b>	< 0.0001	<b>0.003</b>	< 0.01
	16-Sep-19	< 0.001	<b>0.045</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.004</b>	<b>0.02</b>	<b>0.69</b>	<b>0.001</b>	<b>0.036</b>	< 0.0001	<b>0.017</b>	< 0.01
	15-Oct-19	< 0.001	<b>0.034</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.005</b>	<b>0.002</b>	-	< 0.001	<b>0.027</b>	< 0.0001	<b>0.005</b>	< 0.01
	18-Nov-19	< 0.001	<b>0.031</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>2.6</b>	< 0.001	<b>0.026</b>	< 0.0001	< 0.001	< 0.01
	16-Sep-20	< 0.001	<b>0.034</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.007</b>	<b>0.007</b>	<b>3.49</b>	< 0.001	<b>0.029</b>	< 0.0001	<b>0.007</b>	< 0.01
	16-Oct-20	< 0.001	<b>0.028</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.004</b>	<b>0.003</b>	<b>7.09</b>	< 0.001	<b>0.027</b>	< 0.0001	<b>0.004</b>	< 0.01
	16-Nov-20	< 0.001	<b>0.029</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.009</b>	<b>0.002</b>	<b>4.79</b>	< 0.001	<b>0.032</b>	< 0.0001	<b>0.009</b>	< 0.01
	16-Dec-20	<b>0.002</b>	<b>0.015</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.002</b>	<b>0.005</b>	<b>16</b>	< 0.001	<b>0.023</b>	< 0.0001	<b>0.004</b>	< 0.01
	14-Jan-21	<b>0.002</b>	<b>0.015</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.004</b>	<b>0.02</b>	<b>8.28</b>	< 0.001	<b>0.026</b>	< 0.0001	<b>0.01</b>	< 0.01
	16-Feb-21	<b>0.004</b>	<b>0.014</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.003</b>	<b>0.001</b>	<b>11</b>	< 0.001	<b>0.015</b>	< 0.0001	<b>0.004</b>	< 0.01
	17-Mar-21	<b>0.004</b>	<b>0.013</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.002</b>	< 0.001	<b>12</b>	< 0.001	<b>0.016</b>	< 0.0001	<b>0.003</b>	< 0.01
	19-Aug-21	<b>0.001</b>	<b>0.005</b>	-	< 0.05	-	< 0.001</								

Table 7  
Surface Water - Metals

Analyte		Metals													
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium
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	
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
Adopted Site Specific Trigger Values (SWMP 2021)	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	
SW4	18-Nov-22	<b>0.001</b>	<b>0.012</b>	-	< 0.05	-	< 0.001	<b>0.002</b>	<b>0.002</b>	<b>7.82</b>	-	<b>0.05</b>	-	< 0.001	-
	15-Feb-23	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>5.16</b>	< 0.001	<b>0.01</b>	< 0.0001	< 0.001	< 0.01
	16-May-23	<b>0.001</b>	<b>0.004</b>	-	< 0.05	-	< 0.001	< 0.001	< 0.001	<b>4.81</b>	-	-	-	< 0.001	-
	23-Apr-19	< 0.001	<b>0.059</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.003</b>	<b>0.003</b>	<b>2.09</b>	< 0.001	<b>0.037</b>	< 0.0001	<b>0.005</b>	< 0.01
	16-May-19	< 0.001	<b>0.047</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	< 0.001	<b>1.12</b>	< 0.001	<b>0.03</b>	< 0.0001	<b>0.003</b>	< 0.01
	14-Jun-19	< 0.001	<b>0.041</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	<b>0.003</b>	<b>0.79</b>	< 0.001	<b>0.034</b>	< 0.0001	<b>0.003</b>	< 0.01
	16-Jul-19	< 0.001	<b>0.044</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	<b>0.002</b>	<b>0.96</b>	< 0.001	<b>0.043</b>	< 0.0001	<b>0.003</b>	< 0.01
	15-Aug-19	< 0.001	<b>0.04</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.001</b>	<b>0.001</b>	<b>0.57</b>	< 0.001	<b>0.032</b>	< 0.0001	<b>0.002</b>	< 0.01
	16-Sep-19	< 0.001	<b>0.046</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	<b>0.02</b>	<b>0.7</b>	<b>0.001</b>	<b>0.039</b>	< 0.0001	<b>0.017</b>	< 0.01
	15-Oct-19	< 0.001	<b>0.037</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	<b>0.004</b>	-	< 0.001	<b>0.031</b>	< 0.0001	<b>0.003</b>	< 0.01
	18-Nov-19	< 0.001	<b>0.035</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>6.32</b>	< 0.001	<b>0.032</b>	< 0.0001	<b>0.002</b>	< 0.01
	16-Sep-20	< 0.001	<b>0.041</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.004</b>	<b>0.005</b>	<b>0.97</b>	< 0.001	<b>0.053</b>	< 0.0001	<b>0.005</b>	< 0.01
	16-Oct-20	< 0.001	<b>0.03</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	<b>0.001</b>	<b>2.26</b>	< 0.001	<b>0.042</b>	< 0.0001	<b>0.003</b>	< 0.01
	16-Nov-20	< 0.001	<b>0.031</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.004</b>	<b>0.001</b>	<b>1.93</b>	< 0.001	<b>0.074</b>	< 0.0001	<b>0.005</b>	< 0.01
	16-Dec-20	< 0.001	<b>0.017</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.001</b>	<b>0.002</b>	<b>32</b>	< 0.001	<b>0.035</b>	< 0.0001	<b>0.002</b>	< 0.01
	14-Jan-21	<b>0.002</b>	<b>0.028</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	<b>0.003</b>	<b>0.026</b>	<b>20</b>	< 0.001	<b>0.171</b>	< 0.0001	<b>0.005</b>	< 0.01
	16-Feb-21	<b>0.003</b>	<b>0.02</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	<b>0.001</b>	< 0.001	<b>27</b>	< 0.001	<b>0.054</b>	< 0.0001	<b>0.002</b>	< 0.01
	17-Mar-21	<b>0.002</b>	<b>0.02</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>16</b>	< 0.001	<b>0.057</b>	< 0.0001	< 0.001	< 0.01
	19-Aug-21	< 0.001	<b>0.022</b>	-	< 0.05	-	< 0.001	<b>0.001</b>	< 0.001	<b>2.13</b>	-	-	-	<b>0.001</b>	-
	16-Nov-21	< 0.001	<b>0.016</b>	-	< 0.05	-	< 0.001	<b>0.001</b>	< 0.001	<b>6.59</b>	-	-	-	< 0.001	-
	24-Feb-22	< 0.001	<b>0.03</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.002</b>	< 0.001	<b>1.19</b>	< 0.001	<b>0.034</b>	< 0.0001	<b>0.002</b>	< 0.01
	27-May-22	< 0.001	<b>0.021</b>	-	< 0.05	-	< 0.001	<b>0.001</b>	< 0.001	<b>0.68</b>	-	-	-	<b>0.001</b>	-
	12-Aug-22	< 0.001	<b>0.022</b>	-	< 0.05	-	<b>0.002</b>	<b>0.003</b>	< 0.001	<b>0.39</b>	-	-	-	<b>0.004</b>	-
	18-Nov-22	<b>0.002</b>	<b>0.013</b>	-	< 0.05	-	<b>0.002</b>	<b>0.001</b>	<b>0.003</b>	<b>20</b>	-	<b>0.084</b>	-	<b>0.001</b>	-
	15-Feb-23	<b>0.001</b>	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.001</b>	< 0.001	<b>12</b>	< 0.001	<b>0.017</b>	< 0.0001	<b>0.001</b>	< 0.01
	16-May-23	< 0.001	<b>0.025</b>	-	< 0.05	-	< 0.001	<b>0.003</b>	<b>0.004</b>	<b>0.38</b>	-	-	-	<b>0.003</b>	-

**Notes:**

- Not analysed

< - Less than laboratory limit of reporting

mg/L - Milligrams per litre

**Bold** indicates a detection above the laboratory limit of reporting

Highlighting indicates an exceedance of the corresponding criteria (highlighting corresponds to the guideline with the highest criteria value where analytical result exceeds more than one guideline

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 7  
Surface Water - Metals

Analyte		Vanadium	Zinc
LOR	0.01	0.005	
Units	mg/L	mg/L	
Adopted Site Specific Trigger Values (SWMP 2021)		0.01	0.535
Sample Name	Sample Date		
SW1	23-Apr-19	< 0.01	<b>0.356</b>
	16-May-19	< 0.01	<b>0.077</b>
	14-Jun-19	< 0.01	<b>0.535</b>
	16-Jul-19	< 0.01	<b>0.239</b>
	15-Aug-19	< 0.01	<b>0.075</b>
	16-Sep-19	< 0.01	<b>0.282</b>
	15-Oct-19	< 0.01	<b>0.055</b>
	18-Nov-19	< 0.01	<b>0.026</b>
	16-Sep-20	< 0.01	<b>0.061</b>
	16-Oct-20	< 0.01	<b>0.005</b>
	16-Nov-20	< 0.01	<b>0.03</b>
	16-Dec-20	< 0.01	<b>0.013</b>
	14-Jan-21	< 0.01	<b>0.037</b>
	16-Feb-21	< 0.01	<b>0.024</b>
	17-Mar-21	< 0.01	<b>0.04</b>
	19-Aug-21	-	<b>0.056</b>
	16-Nov-21	-	<b>0.036</b>
	24-Feb-22	< 0.01	<b>0.014</b>
	27-May-22	-	<b>0.047</b>
	12-Aug-22	-	<b>0.019</b>
	18-Nov-22	-	<b>0.022</b>
	15-Feb-23	< 0.01	<b>0.007</b>
	16-May-23	-	<b>0.013</b>
SW2	17-Mar-21	< 0.01	<b>0.097</b>
	19-Aug-21	< 0.01	<b>0.022</b>
	22-Sep-21	< 0.01	<b>0.134</b>
	13-Oct-21	< 0.01	<b>0.06</b>
	16-Nov-21	< 0.01	<b>0.083</b>
	24-Feb-22	< 0.01	<b>0.099</b>
	17-Mar-22	-	-
	27-May-22	-	<b>0.111</b>
	12-Aug-22	-	<b>0.09</b>
	18-Nov-22	-	<b>0.031</b>
SW3	15-Feb-23	< 0.01	<b>0.063</b>
	16-May-23	-	<b>0.284</b>
	22-Feb-19	< 0.01	<b>0.016</b>
	14-Mar-19	< 0.01	<b>0.009</b>
	23-Apr-19	< 0.01	<b>0.016</b>
	16-May-19	< 0.01	<b>0.012</b>
	14-Jun-19	< 0.01	<b>0.016</b>
	16-Jul-19	< 0.01	<b>0.029</b>
	15-Aug-19	< 0.01	<b>0.013</b>
	16-Sep-19	< 0.01	<b>0.094</b>
	15-Oct-19	< 0.01	<b>0.022</b>
	18-Nov-19	< 0.01	< 0.005
	16-Sep-20	< 0.01	<b>0.031</b>
	16-Oct-20	< 0.01	<b>0.019</b>
	16-Nov-20	< 0.01	<b>0.03</b>
	16-Dec-20	< 0.01	<b>0.054</b>
	14-Jan-21	< 0.01	<b>0.025</b>
	16-Feb-21	< 0.01	<b>0.011</b>
	17-Mar-21	< 0.01	<b>0.007</b>
	19-Aug-21	-	< 0.005
	16-Nov-21	-	< 0.005
	24-Feb-22	< 0.01	<b>0.005</b>
	27-May-22	-	< 0.005
	12-Aug-22	-	<b>0.007</b>

Table 7  
Surface Water - Metals

Analyte	Vanadium	Zinc
LOR	0.01	0.005
Units	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)	0.01	0.535
18-Nov-22	-	< 0.005
15-Feb-23	< 0.01	<b>0.009</b>
16-May-23	-	<b>0.008</b>
23-Apr-19	< 0.01	<b>0.03</b>
16-May-19	< 0.01	<b>0.019</b>
14-Jun-19	< 0.01	<b>0.014</b>
16-Jul-19	< 0.01	<b>0.014</b>
15-Aug-19	< 0.01	<b>0.009</b>
16-Sep-19	< 0.01	<b>0.085</b>
15-Oct-19	< 0.01	<b>0.018</b>
18-Nov-19	< 0.01	< 0.005
16-Sep-20	< 0.01	<b>0.02</b>
16-Oct-20	< 0.01	<b>0.007</b>
16-Nov-20	< 0.01	<b>0.016</b>
16-Dec-20	< 0.01	< 0.005
14-Jan-21	< 0.01	<b>0.013</b>
16-Feb-21	< 0.01	<b>0.01</b>
17-Mar-21	< 0.01	< 0.005
19-Aug-21	-	<b>0.005</b>
16-Nov-21	-	< 0.005
24-Feb-22	< 0.01	<b>0.011</b>
27-May-22	-	< 0.005
12-Aug-22	-	<b>0.011</b>
18-Nov-22	-	< 0.005
15-Feb-23	< 0.01	< 0.005
16-May-23	-	<b>0.018</b>

**Notes:**

- Not analysed

< - Less than laboratory limit of reporting

mg/L - Milligrams per litre

**Bold** indicates a detection above the laboratory limit c

Highlighting indicates an exceedance of the correspon

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2



Table 8  
Surface Water - PFAS

Analyte		Perfluorooctane sulfonamide (FOSA)	N-Methyl-perfluorooctane sulfonamide (MeFOSA)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	Perfluorobutanoic acid (PFBA)	Perfluoro-n-pentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluoroctanoate (PFOA)	Perfluorononanoic acid (PFNA)
LOR	0.02	0.05	0.05	0.05	0.05	0.02	0.02	0.1	0.02	0.02	0.02	0.02	0.01	0.02
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Adopted Site Specific Trigger Values (SWMP 2021)	--	--	--	--	--	--	--	--	--	--	--	--	0.56	--
SW4	14-Jan-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02
	16-Feb-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02
	17-Mar-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
	19-Aug-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
	22-Sep-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
	13-Oct-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
	16-Nov-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02
	24-Feb-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
	27-May-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
	12-Aug-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
	18-Nov-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
	15-Feb-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
	16-May-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

**Bold** indicates a detection above the laboratory limit of reporting

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 8  
Surface Water - PFAS

Table 8  
Surface Water - PFAS

Analyte		PFAS Compounds											
LOR	Units	Perfluorodecanoic acid (PFDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptane sulfonate (PFHpS)	Perfluoroctanesulfonic acid (PFOS)	Perfluorodecanesulfonic acid (PFDS)	4:2 Fluorotelomer Sulfonate (4:2 FTS)
		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)		--	--	--	--	--	--	--	--	--	--	--	--
SW4	14-Jan-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.03</b>	< 0.02	<b>0.04</b>	< 0.02	< 0.05
	16-Feb-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	<b>0.03</b>	< 0.02	< 0.05	
	17-Mar-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.02</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05
	19-Aug-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.05
	22-Sep-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.05
	13-Oct-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.05
	16-Nov-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.05
	24-Feb-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	27-May-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	12-Aug-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	18-Nov-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	15-Feb-23	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	16-May-23	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

**Bold** indicates a detection above the laboratory limit

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July

Table 8  
Surface Water - PFAS

Analyte		6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS		
LOR		0.05	0.05	0.05	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
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	0.07	--	--
SW1	Sample Name	Sample Date					
	16-May-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	13-Oct-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW2	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	13-Oct-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
SW3	22-Feb-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.05	< 0.05	< 0.05	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>
	18-Nov-19	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.05	< 0.05	< 0.05	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
	16-Dec-20	< 0.05	< 0.05	< 0.05	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>

Table 8  
Surface Water - PFAS

Analyte		6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS		
LOR	Units	0.05 µg/L	0.05 µg/L	0.05 µg/L	0.01 µg/L	0.01 µg/L	0.01 µg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	0.07	--	--
		14-Jan-21	< 0.05	< 0.05	< 0.05	<b>0.07</b>	<b>0.07</b>
SW4	16-Feb-21	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>
	17-Mar-21	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.04</b>	<b>0.04</b>
	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01
	22-Sep-21	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01
	13-Oct-21	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01
	24-Feb-22	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01
	18-Nov-22	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01
	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01
	16-May-23	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

**Bold** indicates a detection above the laboratory limit

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July

Table 9  
WPW - Metals

Analyte		Metals															
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	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
Sample Name	Sample Date																
WPW	19-Aug-21	< 0.001	-	-	-	-	-	-	-	< 0.05	-	<b>0.062</b>	-	-	-	-	-
	22-Sep-21	< 0.001	-	-	-	-	-	-	-	<b>0.08</b>	-	<b>0.051</b>	-	-	-	-	-
	13-Oct-21	< 0.001	-	-	-	-	-	-	-	<b>0.22</b>	-	<b>0.079</b>	-	-	-	-	-
	16-Nov-21	< 0.001	-	-	-	-	-	-	-	<b>0.29</b>	-	<b>0.045</b>	-	-	-	-	-
	15-Dec-21	< 0.001	-	-	-	-	-	-	-	<b>0.2</b>	-	<b>0.078</b>	-	-	-	-	-
	18-Jan-22	< 0.001	-	-	-	-	-	-	-	<b>0.56</b>	-	<b>0.038</b>	-	-	-	-	-
	24-Feb-22	< 0.001	-	-	-	-	-	-	-	<b>1.02</b>	-	<b>0.084</b>	-	-	-	-	-
	17-Mar-22	< 0.001	-	-	-	-	-	-	-	<b>0.97</b>	-	<b>0.05</b>	-	-	-	-	-
	12-Apr-22	< 0.001	-	-	-	-	-	-	-	<b>0.44</b>	-	<b>0.042</b>	-	-	-	-	-
	27-May-22	< 0.001	-	-	-	-	-	-	-	<b>0.07</b>	-	<b>0.038</b>	-	-	-	-	-
	17-Jun-22	< 0.001	-	-	-	-	-	-	-	<b>0.94</b>	-	<b>0.061</b>	-	-	-	-	-
	27-Jul-22	< 0.001	-	-	-	-	-	-	-	<b>0.27</b>	-	<b>0.038</b>	-	-	-	-	-
	12-Aug-22	< 0.001	-	-	-	-	-	-	-	<b>0.17</b>	-	<b>0.026</b>	-	-	-	-	-
	16-Sep-22	< 0.001	-	-	-	-	-	-	-	<b>0.58</b>	-	<b>0.069</b>	-	-	-	-	-
	24-Oct-22	<b>0.002</b>	-	-	-	-	-	-	-	<b>2.22</b>	-	<b>0.118</b>	-	-	-	-	-
	18-Nov-22	< 0.001	-	-	-	-	-	-	-	<b>0.56</b>	-	<b>0.066</b>	-	-	-	-	-
	14-Dec-22	< 0.001	-	-	-	-	-	-	-	<b>0.42</b>	-	<b>0.062</b>	-	-	-	-	-
	17-Jan-23	< 0.001	-	-	-	-	-	-	-	<b>0.36</b>	-	<b>0.05</b>	-	-	-	-	-
WPW2	15-Feb-23	< 0.001	<b>0.015</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.003</b>	< 0.05	< 0.001	<b>0.004</b>	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.115</b>
	15-Mar-23	< 0.001	-	-	-	-	-	-	-	<b>0.15</b>	-	<b>0.061</b>	-	-	-	-	-
	18-Apr-23	< 0.001	<b>0.009</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	<b>0.001</b>	<b>0.004</b>	<b>0.6</b>	< 0.001	<b>0.049</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.053</b>
	16-May-23	< 0.001	-	-	-	-	-	-	-	<b>0.28</b>	-	<b>0.07</b>	-	-	-	-	-

**Notes:**

-- Not analysed

< - Less than laboratory limit of reporting

mg/L - Milligrams per litre

**Bold** indicates a detection above the laboratory limit of reporting

Table 11  
 WPF - Metals



Analyte		Metals				
		Arsenic	Barium	Chromium	Copper	Manganese
LOR		1	10	2	5	50
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	Sample Date					
WPF	19-Aug-21	<b>10</b>	<b>20</b>	<b>83</b>	<b>9.0</b>	<b>57,700</b>
	24-Feb-22	< 1.0	-	-	-	<b>19,100</b>
	27-May-22	<b>8.0</b>	<b>10</b>	<b>73</b>	< 5.0	<b>40,000</b>
	12-Aug-22	<b>6.0</b>	< 10	<b>64</b>	<b>5.0</b>	<b>42,100</b>
	18-Nov-22	< 5.0	< 10	< 2.0	< 5.0	<b>970</b>
	16-May-23	< 5.0	<b>20</b>	<b>61</b>	<b>9.0</b>	<b>30,900</b>

**Notes:**

-- Not analysed

< - Less than laboratory limit of reporting

mg/kg - Milligrams per kilogram

**Bold** indicates a detection above the laboratory limit of reporting

Table 11  
WPF - Metals



Nickel	Zinc
2	5
mg/kg	mg/kg
<b>6.0</b>	<b>28</b>
-	-
<b>5.0</b>	<b>13</b>
<b>6.0</b>	<b>24</b>
< 2.0	< 5.0
<b>5.0</b>	<b>35</b>

Table 10  
WPW - PFAS

Analyte		Perfluoroctane sulfonamide (FOSA)	N-Methyl-perfluoroctane sulfonamide (MeFOSA)	N-Ethyl perfluoroctane sulfonamide (EtFOSA)	N-Methyl perfluoroctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluoroctane sulfonamidoethanol (EtFOSE)	N-Ethyl perfluoroctane sulfonamidoacetic acid (EtFOSAA)	N-Methyl perfluoroctane sulfonamidoacetic acid (MeFOSAA)	Perfluorobutanoic acid (PFBA)	Perfluoro-n-pentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluoroctanoate (PFOA)	Perfluorononanoate (PFNA)
LOR	0.02	0.05	0.05	0.05	0.05	0.02	0.02	0.1	0.02	0.02	0.02	0.02	0.01	0.02
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Sample Name	Sample Date													
WPW	19-Aug-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	22-Sep-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	13-Oct-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	16-Nov-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	15-Dec-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	18-Jan-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	24-Feb-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	17-Mar-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	12-Apr-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	27-May-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	17-Jun-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	27-Jul-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	12-Aug-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	16-Sep-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	24-Oct-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	18-Nov-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	<b>0.01</b>	< 0.02	
	14-Dec-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	<b>0.01</b>	< 0.02	
	17-Jan-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
WPW2	15-Feb-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	15-Mar-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	
	18-Apr-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	<b>0.01</b>	< 0.02	
	16-May-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

**Bold** indicates a detection above the laboratory limit of reporting

Table 10  
WPW - PFAS

Analyte		PFAS Compounds											
		Perfluorodecanoic acid (PFDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptane sulfonate (PFHpS)	Perfluoroctanesulfonic acid (PFOS)	Perfluorodecanesulfonic acid (PFDS)	4:2 Fluorotelomer Sulfonate (4:2 FTS)
LOR	0.02	0.02	0.02	0.02	0.05	0.02	0.02	0.01	0.02	0.01	0.02	0.05	
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Sample Name	Sample Date	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.05	
WPW	19-Aug-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.05	
	22-Sep-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.05	
	13-Oct-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	<b>0.01</b>	< 0.02	< 0.05	
	16-Nov-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.05	
	15-Dec-21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	<b>0.03</b>	< 0.02	< 0.05
	18-Jan-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	<b>0.03</b>	< 0.02	< 0.05
	24-Feb-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.01</b>	< 0.02	< 0.01	< 0.02	< 0.05
	17-Mar-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05
	12-Apr-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	27-May-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	17-Jun-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	27-Jul-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05
	12-Aug-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	16-Sep-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	24-Oct-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05
	18-Nov-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.02</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05
	14-Dec-22	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05
	17-Jan-23	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.01</b>	< 0.02	<b>0.01</b>	< 0.02	< 0.05
WPW2	15-Feb-23	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01	< 0.02	< 0.05
	15-Mar-23	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05
	18-Apr-23	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.02</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05
	16-May-23	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	<b>0.03</b>	< 0.02	< 0.05

**Notes:**

< - Less than laboratory limit of report

µg/L - Micrograms per litre

**Bold** indicates a detection above the l

Analyte		6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS		
					Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS
LOR		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
Sample Name	Sample Date						
WPW	19-Aug-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	13-Oct-21	< 0.05	< 0.05	< 0.05	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>
	16-Nov-21	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Dec-21	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
	18-Jan-22	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
	24-Feb-22	< 0.05	< 0.05	< 0.05	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>
	17-Mar-22	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
	12-Apr-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Jun-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-Jul-22	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
	12-Aug-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-22	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Oct-22	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
	18-Nov-22	< 0.05	< 0.05	< 0.05	<b>0.04</b>	<b>0.05</b>	<b>0.05</b>
	14-Dec-22	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.04</b>	<b>0.04</b>
	17-Jan-23	< 0.05	< 0.05	< 0.05	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
WPW2	15-Feb-23	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Mar-23	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
	18-Apr-23	< 0.05	< 0.05	< 0.05	<b>0.04</b>	<b>0.05</b>	<b>0.05</b>
	16-May-23	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>

**Notes:**

< - Less than laboratory limit of report

µg/L - Micrograms per litre

**Bold** indicates a detection above the l

Table 12

**Notes:**

$\leq$  Less than laboratory limit of reporting.

< - Less than laboratory limit of reporting  
mg/kg - Milligrams per kilogram

**Bold** indicates a detection above the laboratory limit of reporting.

Table 13  
QAQC - Hydrocarbons RPDs

Analyte			BTEXN								Total Petroleum Hydrocarbons	Total Petroleum Hydrocarbons - Silica Clean-up				Total Recover
			Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Total Xylenes	Naphthalene	Sum of BTEX	C <sub>6</sub> - C <sub>9</sub>	C <sub>10</sub> -C <sub>14</sub> - Silica Cleanup	C <sub>15</sub> -C <sub>28</sub> - Silica Cleanup	C <sub>29</sub> -C <sub>36</sub> - Silica Cleanup	C <sub>10</sub> -C <sub>36</sub> Sum - Silica Cleanup	C <sub>6</sub> - C <sub>10</sub>
LOR		1	2	2	2	2	2	2	5	1	20	50	100	50	50	20
Sample Name	Sample Date	Sample Type	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
TB_160523_16052023	16-May-23	Trip Blank	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20
RB01_16052023	16-May-23	Rinsate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20
BH11_16052023	16-May-23	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20
QC01_16052023	16-May-23	Duplicate	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH11_16052023	16-May-23	Primary	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100	< 50	< 50	< 20
QC01A_16052023	16-May-23	TriPLICATE	-	-	-	-	-	-	-	-	-	< 50	< 100	< 100	< 100	-
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

**Notes:**

-- Not analysed

< - Less than laboratory limit of reporting

NC - Not calculated

µg/L - Micrograms per litre

BTEXN - Benzene, toluene, ethylbenzene, total xylenes, naphthalene

Table 13  
QAQC - Hydrocarbons RPDs

Analyte		able Hydrocarbons	Total Recoverable Hydrocarbons - Silica Clean-up				
			C <sub>6</sub> - C <sub>10</sub> minus BTEX (F1)	>C <sub>10</sub> -C <sub>16</sub> - Silica Cleanup	F2 - Silica Cleanup	>C <sub>16</sub> -C <sub>34</sub> - Silica Cleanup	>C <sub>34</sub> -C <sub>40</sub> - Silica Cleanup
LOR Units		20 µg/L	100 µg/L	100 µg/L	100 µg/L	100 µg/L	100 µg/L
Sample Name	Sample Date	Sample Type					
TB_160523_16052023	16-May-23	Trip Blank	< 20	< 100	< 100	< 100	< 100
RB01_16052023	16-May-23	Rinsate	< 20	< 100	< 100	< 100	< 100
BH11_16052023	16-May-23	Primary	< 20	< 100	< 100	< 100	< 100
QC01_16052023	16-May-23	Duplicate	< 20	< 100	< 100	< 100	< 100
Relative Percentage Difference		NC	NC	NC	NC	NC	NC
BH11_16052023	16-May-23	Primary	< 20	< 100	< 100	< 100	< 100
QC01A_16052023	16-May-23	TriPLICATE	-	< 50	-	< 100	< 100
Relative Percentage Difference		NC	NC	NC	NC	NC	NC

**Notes:**

-- Not analysed

< - Less than laboratory limit of reporting

NC - Not calculated

µg/L - Micrograms per litre

BTEXN - Benzene, toluene, ethylbenzene, total xylenes, naphth

Table 14  
QAQC - Metals RPDs

Analyte			Metals								
			Arsenic	Barium	Boron	Chromium	Cobalt	Copper	Iron	Nickel	Zinc
LOR			0.001	0.001	0.05	0.001	0.001	0.001	0.05	0.001	0.005
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date	Sample Type									
TB_160523_16052023	16-May-23	Trip Blank	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.005
RB01_16052023	16-May-23	Rinsate	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.005
BH11_16052023	16-May-23	Primary	< 0.001	<b>0.002</b>	-	<b>0.003</b>	-	<b>0.001</b>	<b>1.04</b>	<b>0.003</b>	<b>0.065</b>
QC01_16052023	16-May-23	Duplicate	< 0.001	<b>0.004</b>	< 0.05	< 0.001	< 0.001	<b>0.002</b>	<b>0.27</b>	<b>0.002</b>	<b>0.033</b>
Relative Percentage Difference			NC	<b>67%</b>	NC	<b>100%</b>	NC	<b>67%</b>	<b>118%</b>	40%	<b>65%</b>
BH11_16052023	16-May-23	Primary	< 0.001	<b>0.002</b>	-	<b>0.003</b>	-	<b>0.001</b>	<b>1.04</b>	<b>0.003</b>	<b>0.065</b>
QC01A_16052023	16-May-23	Triplicate	< 0.001	< 0.02	-	< 0.001	-	< 0.001	<b>0.38</b>	<b>0.002</b>	<b>0.023</b>
Relative Percentage Difference			NC	<b>164%</b>	NC	<b>100%</b>	NC	<b>0%</b>	<b>93%</b>	40%	<b>95%</b>

**Notes:**

- Not analysed
  - < - Less than laboratory limit of reporting
  - NC - Not calculated
  - mg/L - Milligrams per litre
- Bold** indicates a detection above the laboratory limit of reporting  
 Orange highlighting indicates an RPD in excess of 50%  
 RPD - Relative Percentage Difference

Table 15  
QAQC - PFAS RPDs

Analyte			Perfluoroctane sulfonamide (FOSA)	N-Methyl-perfluoroctane sulfonamide (MeFOSA)	N-Ethyl perfluoroctane sulfonamide (EtFOSA)	N-Methyl perfluoroctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluoroctane sulfonamidoethanol (EtFOSE)	N-Ethyl perfluoroctane sulfonamidoacetic acid (EtFOSAA)	N-Methyl perfluoroctane sulfonamidoacetic acid (MeFOSAA)	Perfluorobutanoic acid (PFBA)	Perfluoro-n-pentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoate (PFOA)
			0.02	0.05	0.05	0.05	0.05	0.02	0.02	0.1	0.02	0.02	0.02	0.01
Sample Name	Sample Date	Sample Type	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
TB_160523_16052023	16-May-23	Trip Blank	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01
RB01_16052023	16-May-23	Rinsate	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01
BH11_16052023	16-May-23	Primary	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01
QC01_16052023	16-May-23	Duplicate	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH11_16052023	16-May-23	Primary	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.01
QC01A_16052023	16-May-23	TriPLICATE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

**Notes:**

- Not analysed

< - Less than laboratory limit of reporting

EPA - Environment Protection Authority

NC - Not calculated

µg/L - Micrograms per litre

Table 15  
QAQC - PFAS RPDs

Analyte			PFAS Compounds										
			Perfluoronanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexamersulfonic acid (PFHxS)	Perfluoroheptane sulfonate (PFHpS)	Perfluoroctanesulfonic acid (PFOS)
			0.02	0.02	0.02	0.02	0.02	0.05	0.02	0.02	0.01	0.02	0.01
Sample Name	Sample Date	Sample Type	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
TB_160523_16052023	16-May-23	Trip Blank	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01
RB01_16052023	16-May-23	Rinsate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01
BH11_16052023	16-May-23	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01
QC01_16052023	16-May-23	Duplicate	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
BH11_16052023	16-May-23	Primary	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01
QC01A_16052023	16-May-23	TriPLICATE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Relative Percentage Difference			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

**Notes:**

-- Not analysed

< - Less than laboratory limit of reporting

EPA - Environment Protection Authority

NC - Not calculated

µg/L - Micrograms per litre

Table 15  
QAQC - PFAS RPDs

Analyte			Perfluorodecanesulfonic acid (PFDS)	4:2 Fluorotelomer Sulfonate (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (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
			0.02	0.05	0.05	0.05	0.05	0.01	0.01	0.01
Sample Name	Sample Date	Sample Type	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
TB_160523_16052023	16-May-23	Trip Blank	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
RB01_16052023	16-May-23	Rinsate	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH11_16052023	16-May-23	Primary	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QC01_16052023	16-May-23	Duplicate	< 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
BH11_16052023	16-May-23	Primary	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
QC01A_16052023	16-May-23	TriPLICATE	< 0.01	< 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

**Notes:**

-- Not analysed

< - Less than laboratory limit of reporting

EPA - Environment Protection Authority

NC - Not calculated

µg/L - Micrograms per litre

Table 16  
Gauging Data

Location	Date	TOC (mAHD)	DTW (mTOC)	Well Depth (m)	Water Table Elevation (mAHD)	Remark	Technician
BH1	27-Jul-22	8.64	3.836	8.21	4.804		M Ferguson
	12-Aug-22	8.64	--	--	--		M Ferguson
	16-Sep-22	8.98	3.95	12.4	5.03		J Roby
	24-Oct-22	8.98	3.946	12.266	5.034		J Roby
	18-Nov-22	8.98	4.17	12.29	4.81	Gauge only	J. Roby
	14-Dec-22	8.98	4.467	12.163	4.513	Gauge only	M Ferguson
	17-Jan-23	8.98	4.838	12.181	4.142	Gauge only	A King
	15-Feb-23	8.98	5.095	12.19	3.885	Clear	A King
	15-Mar-23	8.98	5.214	12.16	3.766		A King
	18-Apr-23	8.98	5.216	12.155	3.764	Gauge only	A King
BH1A	16-May-23	8.98	5.292	12.16	3.688	Gauge only	A King
	27-Jul-22	7.79	3.893	8.94	3.897	Clear	M Ferguson
	12-Aug-22	7.79	4.055	8	3.735	Clear	M Ferguson
	16-Sep-22	7.79	4.119	8.997	3.671	Dark brown	J Roby
	24-Oct-22	7.79	4.182	9.952	3.608	Clear	J Roby
	18-Nov-22	7.79	4.38	9.45	3.41	Light brown, NO, NS	J. Roby
	14-Dec-22	7.79	4.587	8.879	3.203	Very light brown	M Ferguson
	17-Jan-23	7.79	4.873	8.93	2.917	Brown, no odour / sheen	A King
	15-Feb-23	7.79	5.058	8.871	2.732	Odor, Light brown	A King
	15-Mar-23	7.79	5.135	8.842	2.655	Light brown	A King
BH2	18-Apr-23	7.79	5.067	8.861	2.703	Light brown, no odour, no sheen	A King
	16-May-23	7.79	5.136	8.85	2.654	Brown, no odour / sheen, well in good condition	A King
	27-Jul-22	3.06	0.764	5.98	2.296	Clear	M Ferguson
	12-Aug-22	3.06	0.799	5	2.261	Clear	M Ferguson
	16-Sep-22	3.06	0.826	5.99	2.234	Light brown	J Roby
	24-Oct-22	3.06	0.821	6.05	2.239	Clear	J Roby
	18-Nov-22	3.06	0.95	6.01	2.11	Clear, NO/NS	J. Roby
	14-Dec-22	3.06	1.119	6.025	1.941	Clear	M Ferguson
	17-Jan-23	3.06	1.299	6.006	1.761	Clear, no odour / sheen	A King
	15-Feb-23	3.06	1.433	6.015	1.627	Clear	A King
BH4	15-Mar-23	3.06	1.435	6.015	1.625	Clear	A King
	18-Apr-23	3.06	1.228	6.018	1.832	Clear, no odour, no sheen	A King
	16-May-23	3.06	1.289	5.992	1.771	Clear, no odour / sheen, well in good condition	A King
	12-Aug-22	7.36	5.04	0	2.32		M Ferguson
	18-Nov-22	7.36	5.191	8.82	2.169	Gauge only	J. Roby
	15-Feb-23	7.36	5.612	8.735	1.748	Odor, Light brown	A King
	27-Jul-22	3.62	0.706	4.51	2.914	Odor, Clear	M Ferguson
	12-Aug-22	3.62	0.711	4	2.909	Odor, Clear	M Ferguson
	16-Sep-22	3.62	0.716	4.58	2.904	Odor, Clear	J Roby
BH6	24-Oct-22	3.62	0.75	4.554	2.87	Odor, Clear	J Roby
	18-Nov-22	3.62	0.805	4.54	2.815	Cloudy, low sulfur odour, NS	J. Roby
	14-Dec-22	3.62	1.024	4.53	2.596	Odor, Light yellow	M Ferguson
	17-Jan-23	3.62	1.239	4.52	2.381	Yellow, moderate sulfur odour, NS	A King
	15-Feb-23	3.62	1.353	4.529	2.267	Odor, Clear	A King
	15-Mar-23	3.62	1.317	4.535	2.303	Odor, Clear	A King
	18-Apr-23	3.62	1.04	4.535	2.58	Clear, no odour, no sheen	A King
	16-May-23	3.62	1.14	4.515	2.48	Clear, low Sulphur odour, no sheen, well in good condition	A King
BH7	27-Jul-22	2.98	0.906	4.5	2.074	Weak Odor, Light yellow	M Ferguson
	12-Aug-22	2.98	0.945	4	2.035	Light yellow	M Ferguson
	16-Sep-22	2.98	0.953	4.499	2.027	Yellow	J Roby
	24-Oct-22	2.98	0.94	4.53	2.04	Odor, Brown	J Roby
	18-Nov-22	2.98	1.09	5.5	1.89	Light brown, low sulfur odour, NS	J. Roby
	14-Dec-22	2.98	1.278	4.52	1.702	Odor, Light yellow	M Ferguson
	17-Jan-23	2.98	1.396	4.51	1.584	Light yellow, moderate sulfur odour, NS	A King
	15-Feb-23	2.98	1.469	4.52	1.511	Odor, Light brown	A King
	15-Mar-23	2.98	1.445	4.505	1.535	Odor, Light yellow	A King
	18-Apr-23	2.98	1.191	4.52	1.789	Light yellow, no odour, no sheen	A King
BH8	16-May-23	2.98	1.265	4.52	1.715	Light yellow, low sulphur odour, no sheen, well in good condition	A King
	12-Aug-22	3.88	1.689	0	2.191	Strong Odor, Milky white	M Ferguson
	18-Nov-22	3.88	1.825	6.04	2.055	Cloudy, low sulfur odour, NS	J. Roby
	15-Feb-23	3.88	2.34	6.055	1.54	Odor, Light brown	A King
	16-May-23	3.88	2.022	6.025	1.858	Yellow, strong sulphur odour, no sheen, well in good condition	A King
BH9	27-Jul-22	17.75	15.041	16.19	2.709		M Ferguson
	12-Aug-22	17.75	15.15	16	2.6		M Ferguson
	16-Sep-22	17.75	15.256	16.145	2.494		J Roby

Table 16  
Gauging Data

Location	Date	TOC (mAHD)	DTW (mBTOC)	Well Depth (m)	Water Table Elevation (mAHD)	Remark	Technician
BH9	24-Oct-22	17.75	15.279	16	2.471		J Roby
	18-Nov-22	17.75	15.459	16.32	2.291	Gauge only	J. Roby
	14-Dec-22	17.75	15.659	16.11	2.091	Gauge only	M Ferguson
	17-Jan-23	17.75	15.855	16.24	1.895	Gauge only	A King
	15-Feb-23	17.75	16.003	16.108	1.747		A King
	15-Mar-23	17.75	16.043	16.09	1.707		A King
	18-Apr-23	17.75	15.846	16.095	1.904	Gauge only	A King
	16-May-23	17.75	15.918	16.075	1.832	Gauge only	A King
	27-Jul-22	10.75	8.202	12.44	2.548	Weak Odor, Clear	M Ferguson
	12-Aug-22	10.75	8.295	12	2.455	Light yellow	M Ferguson
BH9A	16-Sep-22	10.75	8.355	12.283	2.395	Odor, Light brown	J Roby
	24-Oct-22	10.75	8.366	12.42	2.384	Clear	J Roby
	18-Nov-22	10.75	8.521	12.43	2.229	Brown, NO/NS	J. Roby
	14-Dec-22	10.75	8.697	12.295	2.053	Light yellow	M Ferguson
	17-Jan-22	10.75	8.869	12.264	1.881	Light brown, moderate sulfur odour, NS	A King
	15-Feb-23	10.75	9.006	12.235	1.744	Odor, Light brown	A King
	15-Mar-23	10.75	9.023	12.241	1.727	Light brown	A King
	18-Apr-23	10.75	8.816	12.215	1.934	Light brown, moderate sulfur odour, no sheen	A King
	16-May-23	10.75	8.879	12.235	1.871	Light brown, low sulphur odour, no sheen, well in good condition	A King
	12-Aug-22	6.69	1.699	0	4.991	Gauge only	M Ferguson
BH10	18-Nov-22	6.69	2.09	3.48	4.6	Gauge only	J. Roby
	15-Feb-23	6.69	2.919	3.486	3.771		A King
	27-Jul-22	6.63	0.793	5.28	5.837	Strong Odor, Light yellow	M Ferguson
	16-Sep-22	6.63	0.847	5.304	5.783	Odor, Yellow	J Roby
	24-Oct-22	6.63	0.87	4.315	5.76	Odor, Yellow	J Roby
	18-Nov-22	6.63	1.18	5.29	5.45	Yellow, moderate sulfur odour, NS	J. Roby
	14-Dec-22	6.63	1.456	5.302	5.174	Odor, Light yellow	M Ferguson
	17-Jan-23	6.63	1.794	5.3	4.836	Light brown, moderate sulfur odour, NS	A King
	15-Feb-23	6.63	2.053	5.309	4.577	Odor, Yellow light	A King
	15-Mar-23	6.63	2.199	5.3	4.431	Odor, Yellow	A King
BH11	18-Apr-23	6.63	2.11	5.3	4.52	Light yellow, strong sulfur odour, no sheen	A King
	16-May-23	6.63	2.228	5.295	4.402	Light yellow, strong sulphur odour, no sheen, well in good condition	A King
	16-Sep-22	5.62	2.298	7.337	3.322		J Roby
	24-Oct-22	5.62	2.291	7.34	3.329	Light brown	J Roby
	18-Nov-22	5.62	2.43	7.39	3.19	Gauge only	J. Roby
	14-Dec-22	5.62	2.587	7.37	3.033	Gauge only	M Ferguson
	17-Jan-23	5.62	2.713	7.327	2.907	Gauge only	A King
	15-Feb-23	5.62	2.903	7.335	2.717	Brown	A King
	15-Mar-23	5.62	2.956	7.31	2.664		A King
	18-Apr-23	5.62	2.874	7.312	2.746	Gauge only	A King
BH12A	16-May-23	5.62	2.922	7.3	2.698	Gauge only	A King
	16-Sep-22	5.62	2.298	7.337	3.322		J Roby
	24-Oct-22	5.62	2.291	7.34	3.329	Light brown	J Roby
	18-Nov-22	5.62	2.43	7.39	3.19	Gauge only	J. Roby
	14-Dec-22	5.62	2.587	7.37	3.033	Gauge only	M Ferguson
	17-Jan-23	5.62	2.713	7.327	2.907	Gauge only	A King
	15-Feb-23	5.62	2.903	7.335	2.717	Brown	A King
	15-Mar-23	5.62	2.956	7.31	2.664		A King
	18-Apr-23	5.62	2.874	7.312	2.746	Gauge only	A King
	16-May-23	5.62	2.922	7.3	2.698	Gauge only	A King
MW239D	18-Nov-22	3.04	0.74	20.49	2.3	Gauge only	J. Roby
	15-Feb-23	3.04	1.076	20.5	1.964		A King
	27-Jul-22	3.04	0.53	3.8	2.51	Strong Odor, Light yellow	M Ferguson
	12-Aug-22	3.04	0.595	3	2.445	Odor, Cloudy yellow	M Ferguson
	16-Sep-22	3.04	0.62	3.82	2.42	Odor, Yellow	J Roby
	24-Oct-22	3.04	0.61	3.62	2.43	Odor, Clear	J Roby
	18-Nov-22	3.04	0.76	3.82	2.28	Cloudy, low sulfur odour, NS	J. Roby
	14-Dec-22	3.04	0.911	3.81	2.129	Odor, Light brown	M Ferguson
	17-Jan-23	3.04	1.032	3.618	2.008	Light brown, strong sulfur odour, NS	A King
	15-Feb-23	3.04	1.101	3.815	1.939	Odor, Light brown	A King
MW239S	15-Mar-23	3.04	1.068	3.805	1.952	Odor, Orange brown	A King
	18-Apr-23	3.04	0.885	3.827	2.155	Light brown, moderate sulfur odour, no sheen	A King
	16-May-23	3.04	0.938	3.787	2.102	Light brown, moderate sulphur odour, no sheen, well in good condition	A King
	27-Jul-22	--	--	--	--	Dark cloudy brown	M Ferguson
	12-Aug-22	--	--	--	--	Light brown	M Ferguson
	16-Sep-22	--	--	--	--	Brown	J Roby
	24-Oct-22	--	--	--	--	Dark brown	J Roby
	14-Dec-22	--	--	--	--	Brown, turbid, NO/NS	M Ferguson
	17-Jan-23	--	--	--	--	Brown, turbid, NO/NS	A King
	15-Feb-23	--	--	--	--	Clear	A King
WPW	15-Mar-23	--	--	--	--	Odor, Brown	A King
	18-Apr-23	--	--	--	--	Light brown, low earthy odour, no sheen	A King
	16-May-23	--	--	--	--	Brown, earthy odour, no sheen	A King
	15-Feb-23	--	--	--	--		
WPW2	15-Mar-23	--	--	--	--		
	18-Apr-23	--	--	--	--		
	16-May-23	--	--	--	--		

Location	Date	TOC (mAHD)	DTW (mBTOP)	Well Depth (m)	Water Table Elevation (mAHD)	Remark	Technician
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**Notes:**

DTW = Depth to water

mBTOP = Metres below top of casing

m = Metres

ND = Not detected

Table 17  
Field Parameters

Location	Date	DO mg/L	ORP mV	pH pH units	SC µS/cm	TDS mg/L	TEMP deg C	TURB NTU
BH1A	15-Feb-23	5.8	192.5	4.33	82.6	55	23.8	
	27-Jul-22	5.85	223	4.13	87.6		15.6	131
	12-Aug-22	4.34	269.7	4.52	53		16.7	15.58
	16-Sep-22	3.28	262.7	4.76	80.7	60	18.1	710.34
	24-Oct-22	4.55	218.8	4.71	73.6	55	18.5	33.87
	18-Nov-22	1.9	213.9	4.7	73.2	54	19	52.26
	14-Dec-22	4.14	229.7	4.79	78.6	51	19.3	27.86
	17-Jan-23	3.88	211.3	4.69	75.6	228.72	21.7	240.6
	15-Feb-23	4.2	300.5	4.54	70.9	50	21	133.94
	15-Mar-23	3.62	227.7	4.67	69	49	20.8	103
BH2	18-Apr-23	4.84	224.5	4.88	64.6	4.6	20.2	44.8
	16-May-23	3.27	234	4.54	64.1	47	18.6	110.1
	27-Jul-22	3	190.7	4.6	90.2		14.1	121
	12-Aug-22	3.25	236	4.86	77		15.5	10.2
	16-Sep-22	5.35	163.8	5.29	75.2	60	15.4	34.07
	24-Oct-22	3.52	162.3	5.45		57	17.8	45.42
	18-Nov-22	3.57	170.6	5.32	80.2	62	16.8	20.29
	14-Dec-22	3.95	119.8	5.59	92.5	60	18.1	16.36
	17-Jan-23	1.89	159.5	5.31	128.8	91	20.9	8
	15-Feb-23	2.6	166	5.47	115.5	82	20.8	29.64
BH4	15-Mar-23	4.46	179	5.22	92.5	65	21	8.26
	18-Apr-23	4.84	196.7	5.27	70.3	52	18.7	8.45
	16-May-23	3.96	217.9	4.84	65.5	56	16.8	19.03
	15-Feb-23	3	15.6	4.64	132.9	88	23.9	75.75
	27-Jul-22	4.75	-104	4.76	225		14.2	16.8
	12-Aug-22	3.94	-80	5.1	217		14.2	156
	16-Sep-22	2.64	-112.5	5.18	229.4	71	18.1	101.53
	24-Oct-22	1.75	-66.8	4.01	84.3	171	18.3	65.7
	18-Nov-22	2.29	-85.2	4.14	224.4	156	21.7	73.96
	14-Dec-22	1.72	-45.6	4.11	232.3	151	21.1	35
BH6	17-Jan-23	2.46	-7	3.82	245.5	162	24.5	34.06
	15-Feb-23	3	-57.2	4.55	233.8	148	26.4	88.41
	15-Mar-23	4.29	150.2	4.09	233.2	155	23.9	32.96
	18-Apr-23	2.64	-60.1	4.85	195.4	137	21	19.48
	16-May-23	3.45	-39.9	4.8	195.1	140	20.2	49.3
	27-Jul-22	4.21	26	4.43	117		14.3	489
	12-Aug-22	3.98	11	4.84	110		14.9	110.4
	16-Sep-22	2.92	65.6	4.78	94.1	71	17.6	101.6
	24-Oct-22	3.52	-93.2	4.72	81.9	62	17.7	68.09
	18-Nov-22	3.35	-92.5	4.75	78.4	54	22.1	22.45
BH7	14-Dec-22	3.82	-72.2	4.74	70.1	46	21.6	35.8
	17-Jan-23	2.98	38	4.49	74.1	51	22	15.49
	15-Feb-23	3.4	-50.1	4.68	70.4	45	25.4	70.91
	15-Mar-23	4.06	4	4.62	75.9	51	23.2	28.4
	18-Apr-23	4.02	174.3	4.8	82.9	58	21	51.83
	16-May-23	1.84	161.2	4.18	75.2	54	20	17.23
	12-Aug-22	4.2	-67.9	4.81	135		14.7	782
	18-Nov-22	3.4	-97.2	4.66	98.5	69	20.7	128.9
	15-Feb-23	1.7	-108.51	4.81	129.9	82	26.7	45.25
	16-May-23	2.72	-85.5	4.81	113.1	84	18.6	82.50
BH9A	27-Jul-22	4.93	208.5	4.11	182.8		16.6	52
	12-Aug-22	3.96	249	4.46	186		17.6	41.5
	16-Sep-22	3.65	241.4	4.69	132	99	18	45.22
	24-Oct-22	2.84	196.2	4.76	118	87	19	36.09
	18-Nov-22	2.04	86.3	4.79	112	84	18.1	466.51
	14-Dec-22	2.32	166	4.75	107.7	70	18.7	61
	17-Jan-23	1.94	111.5	4.73	107.4	75	21.4	32.2
	15-Feb-23	3.2	29.5	3.83	171.6	119	21.6	87.9
	15-Mar-23	4.24	171.7	4.83	103.3	72	21.9	51.32
	18-Apr-23	3.5	9.5	4.83	123.5	90	19.5	69.85
	16-May-23	6.01	44.1	4.6	103.9	80	17.1	76.69
	27-Jul-22	4.74	-39	4.2	158		14	9.7
	16-Sep-22	2.46	-63.9	4.54	118.4	89	18	26.3
	24-Oct-22	2.12	-92.9	4.37	120.3	90	18.1	23.72
	18-Nov-22	2.01	-100.5	4.47	120.7	89	18.8	14.15

Table 17  
Field Parameters

Location	Date	DO mg/L	ORP mV	pH units	SC µS/cm	TDS mg/L	TEMP deg C	TURB NTU
BH11	14-Dec-22	3.19	-86	4.48	130.2	85	19.1	73
	17-Jan-23	2.16	-80.5	4.31	133.5	89	23.9	5.8
	15-Feb-23	4	-66.5	4.45	110.1	76	22.1	53.17
	15-Mar-23	3.05	-43.4	4.58	102.9	71	21.6	4.83
	18-Apr-23	3.11	-69.5	4.61	100.1	72	20.1	417.6
	16-May-23	3.13	-60	4.45	111.1	83	18.4	61.3
	24-Oct-22	2.94	141.5	4.95	120.8	89	18.8	146
BH12A	15-Feb-23	2.5	167.5	4.93	138.4	90	24.9	287.01
	27-Jul-22	4	-71	4.32	125		14.2	175
	12-Aug-22	2.73	-69	4.6	115		15.2	310
	16-Sep-22	3.65	-79.71	4.83	102.4	77	17.9	129.37
	24-Oct-22	2.33	-117.7	4.72	86.5	65	18	83.71
	18-Nov-22	1.93	-113	4.74	97.3	67	22	52.37
	14-Dec-22	3.05	-62	4.62	115.4	75	21.5	239
	17-Jan-23	2.61	-9.4	4.52	100.2	67	23.6	105.4
	15-Feb-23	3.1	-62.6	4.51	114.2	72	26.6	145
	15-Mar-23	3.02	-4.1	4.61	102.4	70	22.5	206.44
MW239S	18-Apr-23	3.29	-85	4.78	87.2	63	20.1	84.02
	16-May-23	2.75	-50.4	4.52	84.7	63	18.6	131.23
	12-Aug-22	2.97	182	5.18	140		12.6	4.3
	18-Nov-22	0.89	154.6	5.45	99.5	78	15.9	6.2
	15-Feb-23	4	117.8	6.37	138.5	97	21.1	20.69
	16-May-23	3.58	75.7	6.34	82.4	69	13.3	10.22
	12-Aug-22	1.11	-40	4.95	88.2		12.9	23
SW2	18-Nov-22	2.49	122	4.62	82.5	61	18.4	13.67
	15-Feb-23	2.5	-27.9	4.39	137.7	90	23.9	80.7
	16-May-23	3.62	206.2	4.02	147.8	116	15.8	13.72
	12-Aug-22	1.4	41.1	3.99	259.8		11.9	2.8
SW3	18-Nov-22	3.09	80.4	5.62	227.1	164	19.5	17.11
	15-Feb-23	3	-72	4.72	215.5	138	25.6	43.33
	16-May-23	0.98	-24	4.36	176	143	14.7	5.52
	12-Aug-22	3.75	224	4.57	214		11.3	1.34
SW4	18-Nov-22	3.5	130.2	4.43	217.9	149	22.4	3.96
	15-Feb-23	0.7	-74	5.75	253.3	172	22.7	4.1
	16-May-23	3.74	292.9	3.96	209.7	172	14	4.00
	12-Aug-22	10.09	210	5.06	255		14.7	205
WPW	16-Sep-22	9.42	174.5	4.7	208.2	149	20	1000.34
	24-Oct-22	9.11	145.4	4.73	199.4	143	20.2	4120.3
	18-Nov-22	8.57	209.5	4.77	253.6	167	24.3	23.44
	14-Dec-22	8.64	189.5	4.97	267.8	174	22.1	3055.6
	17-Jan-23	8.24	195.3	4.69	264.1	167	26.5	415
	15-Feb-23	8.2	470.7	6.1	272	164	29	4.88
	15-Mar-23	8.29	171.9	4.83	297.2	195	24.7	468.5
WPW2	18-Apr-23	8.61	203.3	5	226.3	163	20	56.08
	16-May-23	9.61	249.7	4.71	230.1	173	17.8	83.43

QA/QC SAMPLE REGISTER

**Project Number:**

**Site Name**

**Site Address:**

20232071	WSS	Cabbage Tree road.
----------	-----	--------------------

Date Sampled	Field Staff	QC Sample ID	QC Sample Type	Primary Sample	Rinsate Item (Hand auger, low flow pump etc)	Rinsate Water Batch	Analysing Lab	Analysis Requested
16/5	AK	QC01	Dup	BHII			MHS	Metals PFAS HC
		QC01A	Tria	BHII			EPA	Metals PFAS FFC
		RB01	Rinsate				ELIS	
		TB-160523	Triphosphate				L	

**COMMENTS:**

## EQUIPMENT CERTIFICATION REPORT

PGN9003871 WATER QUALITY METER – MULTIFUNCTION (YSI)

Plant Number: 1090142

SENSOR	CONCENTRATION	SPAN 1	SPAN 2	TRACEABILITY	PASS
pH	pH 4	pH 4		# 393112	<input checked="" type="checkbox"/>
	pH 7	pH 7		# 3931B	<input checked="" type="checkbox"/>
Conductivity	12.88 mS/cm	12.88 mS/cm		# 395556	<input checked="" type="checkbox"/>
Dissolved Oxygen	Sodium Sulphite / Air	0.0ppm in Sodium Sulphite	ppm Saturation in Air	# 12110	<input checked="" type="checkbox"/>
ORP	240mV	240mV	Zobell Part A	# 395557	<input checked="" type="checkbox"/>
			Zobell Part B	# 395763	
Turbidity	90 NTU	90 NTU		# 403994	<input checked="" type="checkbox"/>

Battery Status <u>100</u> (%)	Temperature <u>19.2</u> °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: 03/05/23 Signed: J Arnott

### Accessories List:

User's Manual	pH and ORP Storage Solution	Transit Case



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**HYDRASLEEVE™ SAMPLING LOG**

Project Number:	Date:	Site Address:
10232071	16/5	Cabbage Tree Rd.1.
Site Name:	Field Manager:	Weather Observations:
WSS	AK	Overcast fog
<b>Field Measurements</b>		

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)
BH1A		5.292	12.160									Cloudy only
BH2	1040	5.136	8.850		18.6	3.27	64.1	4.7	4.54	234.0	110.1	Brown no o/s
BH4	0922	1.289	5.991		16.8	3.96	65.5	5.6	4.84	217.9	19.03	Clear no o/s
<del>BH6</del>	<del>0922</del>	<del>2.284</del>	<del>—</del>									
BH7	i	1.263	4.520		20.0	1.84	75.2	54	4.18	166.1	17.23	Yellow brown no s
BH8		2.022	6.025		18.6	2.72	113.1	84	4.81	-85.5	82.50	Yellow ST & no she
BH9A		8.879	12.135		17.1	6.01	103.9	80	4.60	44.1	76.69	Yellow brown no s
BH9		15.918	16.075									Cloudy only
BH10A		2.228	5.295		18.4	3.13	111.1	83	4.45	-60	61.3	Yellow ST no s
MW295		9.938	13.787		18.6	2.75	84.7	63	4.32	-50.4	13.23	Yellow - mod no s
SW1	0900	—	—		13.3	3.58	82.4	69	6.34	75.7	10.22	Yellow + bioturb. no o/s
SW2					15.8	3.62	147.8	116	4.02	206.2	13.72	Yellow + red/brown algae. Low o/s
SW3					14.7	0.98	126.0	143	4.36	-24.0	5.52	Clear low o/s no s
SW4					14.0	3.74	209.7	172	3.96	292.9	4.00	Clear no o/s
BH12A	12.922	7.300										Cloudy only
WPW					17.8	9.61	230.1	123	4.71	249.7	85.43	Brown earthy odour - no sheen
BH6	1.140	4.515			20.2	3.45	195.1	140	4.80	-39.9	49.3	Clear <del>yellow</del> low o/s

Damaged wells (identify how damaged):

\*Sample Depth is reported as bottom of hydrosleeve depth



## ATTACHMENT 3: LAB RESULTS





## CERTIFICATE OF ANALYSIS

Work Order	: ES2316242	Page	: 1 of 21
Amendment	: 1		
Client	: KLEINFELDER AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: AARON KING	Contact	: Graeme Jablonskas
Address	: 95 MITCHELL ROAD CARDIFF NSW 2285	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +6138549 9609
Project	: 20232071	Date Samples Received	: 16-May-2023 15:37
Order number	: ----	Date Analysis Commenced	: 17-May-2023
C-O-C number	: ----	Issue Date	: 29-May-2023 16:26
Sampler	: AARON KING		
Site	: WSS - Quarterly GME - May 23		
Quote number	: EN/222		
No. of samples received	: 17		
No. of samples analysed	: 17		

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	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW



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

## 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 Contract 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.
- EG020: Poor precision was obtained for Barium on sample ES2315839-#002 due to matrix issues. Confirmed by reanalysis.
- EP231X: PFAS results for sample #2 confirmed by re-extraction and re-analysis.
- EP23X: Amendment (29/05/2023): This report has been amended following a change to the Method Code EP231X result reported for sample, Client ID WPF, ALS Workorder ES2316242-014 due to false positive of Perfluoroalkyl Sulfonamides (MeFOSE and EtFOSE) and Perfluoroburanoic acid (PFBA). All details are recorded in client query 23SYCC125 and a full investigation will be detailed in corrective action request SYC23072
- 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, PFTDA 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	---	---	---	---	---
		Sampling date / time	16-May-2023 00:00	---	---	---	---	---
Compound	CAS Number	LOR	Unit	ES2316242-014	-----	-----	-----	-----
				Result	---	---	---	---
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	---	0.1	%	<b>62.0</b>	---	---	---	---
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	<5	---	---	---	---
Barium	7440-39-3	10	mg/kg	<b>20</b>	---	---	---	---
Chromium	7440-47-3	2	mg/kg	<b>61</b>	---	---	---	---
Copper	7440-50-8	5	mg/kg	<b>9</b>	---	---	---	---
Iron	7439-89-6	50	mg/kg	<b>30900</b>	---	---	---	---
Nickel	7440-02-0	2	mg/kg	<b>5</b>	---	---	---	---
Zinc	7440-66-6	5	mg/kg	<b>35</b>	---	---	---	---
Magnesium	7439-95-4	50	mg/kg	<b>250</b>	---	---	---	---
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<b>0.0036</b>	---	---	---	---
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	---	---	---	---
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	---	---	---	---
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<b>0.0003</b>	---	---	---	---
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluorododecanoic acid (PFDsDA)	307-55-1	0.0002	mg/kg	<0.0002	---	---	---	---



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID	WPF	---	---	---	---	---
		Sampling date / time	16-May-2023 00:00	---	---	---	---	---
Compound	CAS Number	LOR	Unit	ES2316242-014	-----	-----	-----	-----
				Result	---	---	---	---
<b>EP231B: Perfluoroalkyl Carboxylic Acids - Continued</b>								
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	---	---	---	---
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluoroctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	---	---	---	---
N-Methyl perfluoroctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	---	---	---	---
N-Ethyl perfluoroctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	---	---	---	---
N-Methyl perfluoroctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	---	---	---	---
N-Ethyl perfluoroctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	---	---	---	---
N-Methyl perfluoroctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	---	---	---	---
N-Ethyl perfluoroctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	---	---	---	---
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	---	---	---	---
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	---	---	---	---
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	---	---	---	---
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	---	---	---	---
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	---	0.0002	mg/kg	0.0039	---	---	---	---
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0036	---	---	---	---
Sum of PFAS (WA DER List)	---	0.0002	mg/kg	0.0039	---	---	---	---

## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID	WPF	---	---	---	---	---	
		Sampling date / time	16-May-2023 00:00	---	---	---	---	---	
Compound	CAS Number	LOR	Unit	ES2316242-014	-----	-----	-----	-----	
				Result	---	---	---	---	
<b>EP231S: PFAS Surrogate</b>									
13C4-PFOS		---	0.0002	%	110	---	---	---	
13C8-PFOA		---	0.0002	%	92.5	---	---	---	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH2	BH4	BH6	BH7	BH8	
Compound	CAS Number	LOR	Unit	Sampling date / time	16-May-2023 00:00				
					ES2316242-001	ES2316242-002	ES2316242-003	ES2316242-004	ES2316242-005
				Result	Result	Result	Result	Result	Result
<b>ED093F: Dissolved Major Cations</b>									
Magnesium	7439-95-4	1	mg/L	1	1	3	2	2	
<b>EG020F: Dissolved Metals by ICP-MS</b>									
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001		0.002
Barium	7440-39-3	0.001	mg/L	0.002	0.008	0.007	0.002		0.004
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	0.002		0.003
Copper	7440-50-8	0.001	mg/L	0.004	0.135	<0.001	0.001		<0.001
Nickel	7440-02-0	0.001	mg/L	0.001	<0.001	<0.001	0.002		0.001
Zinc	7440-66-6	0.005	mg/L	0.050	0.017	0.024	0.025		0.015
Iron	7439-89-6	0.05	mg/L	0.08	0.09	4.56	0.47		1.37
<b>EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup</b>									
C10 - C14 Fraction	---	50	µg/L	<50	<50	<50	<50		<50
C15 - C28 Fraction	---	100	µg/L	<100	<100	<100	<100		<100
C29 - C36 Fraction	---	50	µg/L	<50	<50	<50	<50		<50
^ C10 - C36 Fraction (sum)	---	50	µg/L	<50	<50	<50	<50		<50
<b>EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup</b>									
>C10 - C16 Fraction	---	100	µg/L	<100	<100	<100	<100		<100
>C16 - C34 Fraction	---	100	µg/L	<100	<100	<100	<100		<100
>C34 - C40 Fraction	---	100	µg/L	<100	<100	<100	<100		<100
^ >C10 - C40 Fraction (sum)	---	100	µg/L	<100	<100	<100	<100		<100
>C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L	<100	<100	<100	<100		<100
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction	---	20	µg/L	<20	<20	<20	<20		<20
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20		<20
^ C6 - C10 Fraction minus BTEX	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20		<20
<b>EP080: BTEXN</b>									
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1		<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2		<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2		<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2		<2
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2		<2
^ Total Xylenes	----	2	µg/L	<2	<2	<2	<2		<2



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	BH2	BH4	BH6	BH7	BH8	
Compound	CAS Number	LOR	Sampling date / time	16-May-2023 00:00				
			Unit	ES2316242-001	ES2316242-002	ES2316242-003	ES2316242-004	ES2316242-005
			Result	Result	Result	Result	Result	Result
<b>EP080: BTEXN - Continued</b>								
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	<5
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
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
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	BH2	BH4	BH6	BH7	BH8	
		Sampling date / time	16-May-2023 00:00					
Compound	CAS Number	LOR	Unit	ES2316242-001	ES2316242-002	ES2316242-003	ES2316242-004	ES2316242-005
				Result	Result	Result	Result	Result
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
N-Methyl perfluoroctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluoroctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluoroctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluoroctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluoroctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluoroctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.01	µg/L	<0.01	0.05	<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	0.05	<0.01	<0.01	<0.01
<b>EP080S: TPH(V)/BTEX Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	2	%	94.2	94.6	89.3	96.0	97.6
Toluene-D8	2037-26-5	2	%	98.1	97.3	87.5	98.4	103
4-Bromofluorobenzene	460-00-4	2	%	91.2	89.0	80.7	89.0	94.5
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	116	108	105	107	110
13C8-PFOA	----	0.02	%	98.7	101	98.6	90.3	95.3



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BH9A	BH11	MW239S	SW1	SW2	
Compound	CAS Number	LOR	Unit	Sampling date / time	16-May-2023 00:00				
					ES2316242-006	ES2316242-007	ES2316242-008	ES2316242-009	ES2316242-010
				Result	Result	Result	Result	Result	Result
<b>ED093F: Dissolved Major Cations</b>									
Magnesium	7439-95-4	1	mg/L	2	2	1	2	3	
<b>EG020F: Dissolved Metals by ICP-MS</b>									
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	0.004	0.002	0.002	<0.001	<0.001	0.018
Chromium	7440-47-3	0.001	mg/L	<0.001	0.003	0.002	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	---	---	---	<0.001	<0.001	0.004
Copper	7440-50-8	0.001	mg/L	<0.001	0.001	<0.001	0.001	0.001	0.003
Nickel	7440-02-0	0.001	mg/L	0.002	0.003	0.002	<0.001	<0.001	0.005
Zinc	7440-66-6	0.005	mg/L	0.029	0.065	0.027	0.013	0.284	
Boron	7440-42-8	0.05	mg/L	---	---	---	<0.05	<0.05	
Iron	7439-89-6	0.05	mg/L	0.26	1.04	0.21	0.39	0.87	
<b>EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup</b>									
C10 - C14 Fraction	---	50	µg/L	<50	<50	<50	<50	<50	<50
C15 - C28 Fraction	---	100	µg/L	<100	<100	<100	<100	<100	<100
C29 - C36 Fraction	---	50	µg/L	<50	<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	---	50	µg/L	<50	<50	<50	<50	<50	<50
<b>EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup</b>									
>C10 - C16 Fraction	---	100	µg/L	<100	<100	<100	<100	<100	<100
>C16 - C34 Fraction	---	100	µg/L	<100	<100	<100	<100	<100	<100
>C34 - C40 Fraction	---	100	µg/L	<100	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	---	100	µg/L	<100	<100	<100	<100	<100	<100
>C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L	<100	<100	<100	<100	<100	<100
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction	---	20	µg/L	<20	<20	<20	<20	<20	<20
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20	<20	<20
<b>EP080: BTEXN</b>									
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	<2	<2



## **Analytical Results**



## **Analytical Results**

## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	BH9A	BH11	MW239S	SW1	SW2	
		Sampling date / time	16-May-2023 00:00					
Compound	CAS Number	LOR	Unit	ES2316242-006	ES2316242-007	ES2316242-008	ES2316242-009	ES2316242-010
				Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	---	0.02	%	108	106	99.0	106	109
13C8-PFOA	---	0.02	%	95.7	90.7	94.5	96.9	92.9



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	SW3	SW4	WPW	QC01	RB01		
Compound	CAS Number	LOR	Unit	Sampling date / time	16-May-2023 00:00				
				Result	ES2316242-011	ES2316242-012	ES2316242-013	ES2316242-015	ES2316242-016
<b>ED093F: Dissolved Major Cations</b>									
Magnesium	7439-95-4	1	mg/L	3	4	---	2	<1	
<b>EG020F: Dissolved Metals by ICP-MS</b>									
Arsenic	7440-38-2	0.001	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	0.004	0.025	---	0.004	<0.001	<0.001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	---	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	0.003	---	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	0.004	---	0.002	<0.001	
Manganese	7439-96-5	0.001	mg/L	---	---	0.070	---	---	---
Nickel	7440-02-0	0.001	mg/L	<0.001	0.003	---	0.002	<0.001	
Zinc	7440-66-6	0.005	mg/L	0.008	0.018	---	0.033	<0.005	
Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	---	<0.05	<0.05	
Iron	7439-89-6	0.05	mg/L	4.81	0.38	0.28	0.27	<0.05	
<b>EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup</b>									
C10 - C14 Fraction	---	50	µg/L	<50	<50	---	<50	<50	
C15 - C28 Fraction	---	100	µg/L	<100	<100	---	<100	<100	
C29 - C36 Fraction	---	50	µg/L	<50	<50	---	<50	<50	
^ C10 - C36 Fraction (sum)	---	50	µg/L	<50	<50	---	<50	<50	
<b>EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup</b>									
>C10 - C16 Fraction	---	100	µg/L	<100	<100	---	<100	<100	
>C16 - C34 Fraction	---	100	µg/L	<100	<100	---	<100	<100	
>C34 - C40 Fraction	---	100	µg/L	<100	<100	---	<100	<100	
^ >C10 - C40 Fraction (sum)	---	100	µg/L	<100	<100	---	<100	<100	
>C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L	<100	<100	---	<100	<100	
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction	---	20	µg/L	<20	<20	---	<20	<20	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	---	<20	<20	
^ C6 - C10 Fraction minus BTEX	C6_C10-BTEX	20	µg/L	<20	<20	---	<20	<20	
<b>EP080: BTEXN</b>									
Benzene	71-43-2	1	µg/L	<1	<1	---	<1	<1	
Toluene	108-88-3	2	µg/L	<2	<2	---	<2	<2	
Ethylbenzene	100-41-4	2	µg/L	<2	<2	---	<2	<2	



## **Analytical Results**



## **Analytical Results**



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	SW3	SW4	WPW	QC01	RB01	
		Sampling date / time	16-May-2023 00:00					
Compound	CAS Number	LOR	Unit	ES2316242-011	ES2316242-012	ES2316242-013	ES2316242-015	ES2316242-016
			Result				Result	Result
<b>EP231S: PFAS Surrogate - Continued</b>								
13C4-PFOS	---	0.02	%	111	109	112	104	110
13C8-PFOA	---	0.02	%	95.7	97.9	97.6	92.7	96.8



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	TB_160523	---	---	---	---	---
		Sampling date / time	16-May-2023 00:00	---	---	---	---	---
Compound		CAS Number	LOR	Unit	ES2316242-017	-----	-----	-----
				Result	---	---	---	---
<b>ED093F: Dissolved Major Cations</b>								
Magnesium	7439-95-4	1	mg/L	<1	---	---	---	---
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Arsenic	7440-38-2	0.001	mg/L	<0.001	---	---	---	---
Barium	7440-39-3	0.001	mg/L	<0.001	---	---	---	---
Chromium	7440-47-3	0.001	mg/L	<0.001	---	---	---	---
Cobalt	7440-48-4	0.001	mg/L	<0.001	---	---	---	---
Copper	7440-50-8	0.001	mg/L	<0.001	---	---	---	---
Nickel	7440-02-0	0.001	mg/L	<0.001	---	---	---	---
Zinc	7440-66-6	0.005	mg/L	<0.005	---	---	---	---
Boron	7440-42-8	0.05	mg/L	<0.05	---	---	---	---
Iron	7439-89-6	0.05	mg/L	<0.05	---	---	---	---
<b>EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup</b>								
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	---	---	---	---
<b>EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup</b>								
>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	---	---	---	---
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	---	20	µg/L	<20	---	---	---	---
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	---	---	---	---
^ C6 - C10 Fraction minus BTEX	C6_C10-BTEX	20	µg/L	<20	---	---	---	---
<b>EP080: BTEXN</b>								
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	---	---	---	---



## **Analytical Results**



## Analytical Results



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	TB_160523	---	---	---	---	---
		Sampling date / time	16-May-2023 00:00	---	---	---	---	---
Compound	CAS Number	LOR	Unit	ES2316242-017	-----	-----	-----	-----
				Result	---	---	---	---
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	---	0.02	%	103	---	---	---	---
13C8-PFOA	---	0.02	%	96.5	---	---	---	---



## Surrogate Control Limits

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

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137
<b>EP231S: PFAS Surrogate</b>			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



## QUALITY CONTROL REPORT

Work Order	: ES2316242	Page	: 1 of 19
Amendment	: 1		
Client	: KLEINFELDER AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: AARON KING	Contact	: Graeme Jablonskas
Address	: 95 MITCHELL ROAD CARDIFF NSW 2285	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +6138549 9609
Project	: 20232071	Date Samples Received	: 16-May-2023
Order number	: ----	Date Analysis Commenced	: 17-May-2023
C-O-C number	: ----	Issue Date	: 29-May-2023
Sampler	: AARON KING		
Site	: WSS - Quarterly GME - May 23		
Quote number	: EN/222		
No. of samples received	: 17		
No. of samples analysed	: 17		

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	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW



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



## 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 (%)
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5058773)</b>									
ES2315872-001	Anonymous	EG005T: Barium	7440-39-3	10	mg/kg	<10	<10	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	2	83.1	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7	<5	37.1	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	6	6	0.0	No Limit
		EG005T: Iron	7439-89-6	50	mg/kg	1600	1540	4.2	0% - 20%
ES2316272-013	Anonymous	EG005T: Barium	7440-39-3	10	mg/kg	210	240	14.3	0% - 50%
		EG005T: Chromium	7440-47-3	2	mg/kg	57	65	12.8	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	23	26	11.5	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	5	5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	270	311	13.9	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	1200	1380	13.7	0% - 20%
		EG005T: Iron	7439-89-6	50	mg/kg	31400	36300	14.4	0% - 20%
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5058783)</b>									
ES2316187-009	Anonymous	EA055: Moisture Content	---	0.1	%	41.8	40.3	3.7	0% - 20%
ES2316236-016	Anonymous	EA055: Moisture Content	---	0.1	%	1.5	1.1	28.0	0% - 50%
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5058500)</b>									
ES2316196-101	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 (PFHxS)	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	0.0008	0.0007	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



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 (%)
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5058500) - continued</b>									
ES2316482-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: Perfluoroctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0012	<0.0012	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5058500)</b>									
ES2316196-101	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: Perfluoroctanoic 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
ES2316482-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0040	0.0037	5.7	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0013	0.0013	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0040	0.0037	5.7	No Limit
		EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0035	0.0033	6.5	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	0.0026	0.0026	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0040	0.0037	5.7	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0037	0.0042	11.1	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0454	0.0441	2.9	0% - 20%
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	0.0118	0.0094	22.7	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	0.110	0.107	2.6	0% - 20%
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.006	<0.006	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5058500)</b>									
ES2316196-101	Anonymous	EP231X: Perfluoroctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluoroctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluoroctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluoroctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluoroctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit





**Sub-Matrix: WATER**

		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EG020F: Dissolved Metals by ICP-MS (QC Lot: 5053595) - continued</b>									
ES2315839-001	Anonymous	EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.030	0.029	0.0	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.145	0.144	0.9	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.038	0.038	0.0	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.054	0.056	3.8	0% - 50%
		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
ES2315839-011	Anonymous	EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.027	0.026	0.0	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.398	0.386	3.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.009	0.009	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.009	0.010	11.4	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	0.16	0.09	54.4	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	1.09	1.06	2.0	0% - 20%
<b>EG020F: Dissolved Metals by ICP-MS (QC Lot: 5053598)</b>									
ES2316242-009	SW1	EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	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: Manganese	7439-96-5	0.001	mg/L	0.015	0.015	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	0.013	0.013	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	0.39	0.40	0.0	No Limit
EW2302214-003	Anonymous	EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.092	0.092	0.0	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.254	0.258	1.2	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.007	0.007	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.050	0.052	2.1	0% - 50%
		EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	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 (%)
<b>EG020F: Dissolved Metals by ICP-MS (QC Lot: 5053598) - continued</b>									
EW2302214-003	Anonymous	EG020A-F: Iron	7439-89-6	0.05	mg/L	1.76	1.76	0.0	0% - 20%
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5055472)</b>									
ES2316242-001	BH2	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
ES2316242-007	BH11	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5055472)</b>									
ES2316242-001	BH2	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2316242-007	BH11	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
<b>EP080: BTEXN (QC Lot: 5055472)</b>									
ES2316242-001	BH2	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
ES2316242-007	BH11	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5057700)</b>									
ES2316196-133	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.03	0.04	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5058884)</b>									
ES2316266-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2316266-004	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit



**Sub-Matrix: WATER**

		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5058884) - continued</b>									
ES2316266-004	Anonymous	EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5057700)</b>									
ES2316196-133	Anonymous	EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2316266-001	Anonymous	EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2316266-004	Anonymous	EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2316196-133	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5057700)</b>									
ES2316196-133	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit





**Sub-Matrix: WATER**

		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5057700) - continued</b>									
ES2316196-133	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5058884)</b>									
ES2316266-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2316266-004	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 5057700)</b>									
ES2316196-133	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.03	0.04	28.6	No Limit
<b>EP231P: PFAS Sums (QC Lot: 5058884)</b>									
ES2316266-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2316266-004	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	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: Compound	CAS Number	LOR	Unit	Result	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)		
							LCS	Low	High
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5058773)</b>									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	106	88.0	113	
EG005T: Barium	7440-39-3	10	mg/kg	<10	90.5 mg/kg	107	65.0	136	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	117	68.0	132	
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	107	89.0	111	
EG005T: Iron	7439-89-6	50	mg/kg	<50	31660 mg/kg	112	89.0	112	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	104	80.0	120	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	93.0	66.0	133	
EG005T: Magnesium	7439-95-4	----	mg/kg	----	7894 mg/kg	98.1	87.0	113	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5058500)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.4	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.2	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	111	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	59.0	134	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5058500)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	93.1	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.2	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.4	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.6	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.2	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	101	69.0	133	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5058500)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	71.6	129	



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)		
							Low	High	
Method: Compound	CAS Number	LOR	Unit	Result					
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5058500) - continued</b>									
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.2	69.8	131	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	101	68.7	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	109	65.1	134	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	61.0	139	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5058500)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	98.8	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	110	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	100	65.0	137	
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 Blank (MB) Report	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)		
Method: Compound	CAS Number	LOR	Unit				LCS	Low	High
<b>ED093F: Dissolved Major Cations (QCLot: 5053596)</b>									
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	101	90.0	116	
<b>EG020F: Dissolved Metals by ICP-MS (QCLot: 5053595)</b>									
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	94.7	85.0	114	
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	98.1	82.0	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	93.6	82.0	112	
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	91.3	81.0	111	
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	94.5	82.0	110	
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	91.8	82.0	112	
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	97.0	81.0	117	
EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	0.5 mg/L	91.1	85.0	115	
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	94.5	82.0	112	
<b>EG020F: Dissolved Metals by ICP-MS (QCLot: 5053598)</b>									
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	96.0	85.0	114	
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	98.2	82.0	110	
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	95.3	85.0	111	
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	95.4	82.0	112	





**Sub-Matrix: WATER**

<b>Method: Compound</b>	<b>CAS Number</b>	<b>LOR</b>	<b>Unit</b>	<b>Result</b>	<b>Method Blank (MB) Report</b>	<b>Laboratory Control Spike (LCS) Report</b>		
					<b>Spike Concentration</b>	<b>Spike Recovery (%)</b>	<b>Acceptable Limits (%)</b>	
						<b>LCS</b>	<b>Low</b>	<b>High</b>
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5058884) - continued</b>								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	78.8	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	87.4	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	80.0	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	112	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	101	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	93.4	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5057700)</b>								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	76.6	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	89.0	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	87.4	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	91.4	72.0	130
EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	84.4	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	93.8	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	86.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	85.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	86.6	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.6	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	92.6	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5058884)</b>								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	86.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	91.8	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	85.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	88.4	72.0	130
EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	90.0	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	90.2	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	89.8	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	93.6	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.0	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	94.4	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5057700)</b>								
EP231X: Perfluoroctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	92.0	67.0	137
EP231X: N-Methyl perfluoroctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	80.4	68.0	141
EP231X: N-Ethyl perfluoroctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	84.7	62.6	147



**Sub-Matrix: WATER**

<b>Method: Compound</b>	<b>CAS Number</b>	<b>LOR</b>	<b>Unit</b>	<b>Result</b>	<b>Method Blank (MB) Report</b>	<b>Laboratory Control Spike (LCS) Report</b>			
					<b>Spike Concentration</b>	<b>Spike Recovery (%)</b>	<b>Acceptable Limits (%)</b>		
						<b>LCS</b>	<b>Low</b>	<b>High</b>	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5057700) - continued</b>									
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	81.3	66.0	145	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	88.1	57.6	145	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	84.0	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	93.0	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5058884)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	94.4	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	95.1	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	93.2	62.6	147	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	91.8	66.0	145	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	91.5	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	93.4	61.0	135	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5057700)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	87.4	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	103	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	107	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	80.0	71.4	144	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5058884)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	94.2	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	94.4	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	86.6	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	82.8	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**

<b>Laboratory sample ID</b>	<b>Sample ID</b>	<b>Method: Compound</b>	<b>CAS Number</b>	<b>Matrix Spike (MS) Report</b>			
				<b>Spike</b>	<b>Spike Recovery(%)</b>	<b>Acceptable Limits (%)</b>	
						<b>MS</b>	<b>Low</b>
						<b>High</b>	



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)	Acceptable Limits (%)	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5058773)				Concentration	MS	Low	High
ES2315872-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	89.0	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	84.9	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	88.5	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	91.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	91.0	66.0	133
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5058500)							
ES2316196-101	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	80.8	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	95.2	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	83.2	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	112	70.0	132
		EP231X: Perfluoroctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	90.8	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	104	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5058500)							
ES2316196-101	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	87.0	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	92.8	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	98.0	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	95.6	71.0	131
		EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	104	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	97.6	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	102	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	97.6	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	99.6	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	96.4	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	99.2	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5058500)							
ES2316196-101	Anonymous	EP231X: Perfluoroctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	96.4	67.0	137
		EP231X: N-Methyl perfluoroctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	103	71.6	129
		EP231X: N-Ethyl perfluoroctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	94.7	69.8	131
		EP231X: N-Methyl perfluoroctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	92.9	68.7	130
		EP231X: N-Ethyl perfluoroctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	96.3	65.1	134
		EP231X: N-Methyl perfluoroctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	98.0	63.0	144
		EP231X: N-Ethyl perfluoroctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	98.8	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5058500)							



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5058500) - continued</b>							
ES2316196-101	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	99.2	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	103	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	93.2	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	94.8	69.2	143
Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EG020F: Dissolved Metals by ICP-MS (QCLot: 5053595)</b>							
ES2315839-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	122	70.0	130
		EG020A-F: Barium	7440-39-3	1 mg/L	# 20.8	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	112	70.0	130
		EG020A-F: Cobalt	7440-48-4	1 mg/L	89.8	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	91.3	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	# Not Determined	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	83.0	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	87.7	70.0	130
<b>EG020F: Dissolved Metals by ICP-MS (QCLot: 5053598)</b>							
ES2316242-008	MW239S	EG020A-F: Arsenic	7440-38-2	1 mg/L	99.3	70.0	130
		EG020A-F: Barium	7440-39-3	1 mg/L	97.6	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	96.8	70.0	130
		EG020A-F: Cobalt	7440-48-4	1 mg/L	97.1	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	88.4	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	98.4	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	96.4	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	99.4	70.0	130
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 5055472)</b>							
ES2316242-001	BH2	EP080: C6 - C9 Fraction	---	325 µg/L	122	70.0	130
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5055472)</b>							
ES2316242-001	BH2	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	113	70.0	130
<b>EP080: BTEXN (QCLot: 5055472)</b>							
ES2316242-001	BH2	EP080: Benzene	71-43-2	25 µg/L	114	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	117	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	106	70.0	130
		EP080: meta- & para-Xylene	108-38-3	25 µg/L	106	70.0	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	25 µg/L	107	70.0	130



**Sub-Matrix: WATER**

				Matrix Spike (MS) Report			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike	Spike Recovery(%)	Acceptable Limits (%)	
				Concentration	MS	Low	High
<b>EP080: BTEXN (QCLot: 5055472) - continued</b>							
ES2316242-001	BH2	EP080: Naphthalene	91-20-3	25 µg/L	112	70.0	130
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5057700)</b>							
ES2316196-134	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	81.0	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	83.2	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	# Not Determined	68.0	131
		EP231X: Perfluorheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	97.4	69.0	134
		EP231X: Perfluoroctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	104	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5058884)</b>							
ES2316266-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	80.4	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	100	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	87.4	68.0	131
		EP231X: Perfluorheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	113	69.0	134
		EP231X: Perfluoroctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	104	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	94.2	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5057700)</b>							
ES2316196-134	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	86.9	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	90.2	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	98.0	72.0	130
		EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.25 µg/L	101	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	109	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	105	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	100	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	104	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	107	65.0	144
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5058884)</b>							
ES2316266-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	91.2	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	94.2	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	94.0	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	94.6	72.0	130
		EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.25 µg/L	96.2	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	97.6	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	98.8	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	106	69.0	133



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike	Spike Recovery(%)	Acceptable Limits (%)	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5058884) - continued				Concentration	MS	Low	High
ES2316266-002	Anonymous	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	94.4	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	93.4	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	104	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5057700)							
ES2316196-134	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	107	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	93.1	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	89.6	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	100	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	85.8	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	89.0	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	96.4	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5058884)							
ES2316266-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	96.2	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	105	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	96.2	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	99.2	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	97.4	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	96.0	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	96.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5057700)							
ES2316196-134	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	108	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	125	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	117	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	92.8	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5058884)							
ES2316266-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	99.4	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	94.2	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	99.2	67.0	138

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Work Order : ES2316242 Amendment 1  
Client : KLEINFELDER AUSTRALIA PTY LTD  
Project : 20232071



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike	Spike Recovery(%)	Acceptable Limits (%)	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5058884) - continued							
ES2316266-002	Anonymous	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	95.2	71.4	144



## QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2316242	Page	: 1 of 10
Amendment	: 1		
Client	: KLEINFELDER AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: AARON KING	Telephone	: +6138549 9609
Project	: 20232071	Date Samples Received	: 16-May-2023
Site	: WSS - Quarterly GME - May 23	Issue Date	: 29-May-2023
Sampler	: AARON KING	No. of samples received	: 17
Order number	: ----	No. of samples analysed	: 17

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

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

### Summary of Outliers

#### Outliers : Quality Control Samples

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

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

#### Outliers : Analysis Holding Time Compliance

- 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
<b>Matrix Spike (MS) Recoveries</b>							
EG020F: Dissolved Metals by ICP-MS	ES2315839--002	Anonymous	Barium	7440-39-3	20.8 %	70.0-130%	Recovery less than lower data quality objective
EG020F: Dissolved Metals by ICP-MS	ES2315839--002	Anonymous	Manganese	7439-96-5	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	ES2316196--134	Anonymous	Perfluorohexane sulfonic acid (PFHxS)	355-46-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	ES2316196--134	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	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
	QC	Regular	Actual	Expected	
<b>Method</b>					
Laboratory Duplicates (DUP)	3	38	7.89	10.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	0	15	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>					
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	0	15	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
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Soil Glass Jar - Unpreserved (EA055)	WPF	16-May-2023	---	---	---	19-May-2023	30-May-2023	✓


**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
<b>EG005(ED093T): Total Metals by ICP-AES</b>								
Soil Glass Jar - Unpreserved (EG005T) WPF		16-May-2023	19-May-2023	12-Nov-2023	✓	22-May-2023	12-Nov-2023	✓
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
HDPE Soil Jar (EP231X) WPF		16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	28-Jun-2023	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
HDPE Soil Jar (EP231X) WPF		16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	28-Jun-2023	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
HDPE Soil Jar (EP231X) WPF		16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	28-Jun-2023	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
HDPE Soil Jar (EP231X) WPF		16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	28-Jun-2023	✓
<b>EP231P: PFAS Sums</b>								
HDPE Soil Jar (EP231X) WPF		16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	28-Jun-2023	✓

**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
<b>ED093F: Dissolved Major Cations</b>								
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F) BH2, BH6, BH8, BH11, SW1, SW3, QC01, TB_160523	BH4, BH7, BH9A, MW239S, SW2, SW4, RB01,	16-May-2023	----	----	----	17-May-2023	13-Jun-2023	✓
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F) BH2, BH6, BH8, BH11, SW1, SW3, WPW, RB01,	BH4, BH7, BH9A, MW239S, SW2, SW4, QC01, TB_160523	16-May-2023	----	----	----	17-May-2023	12-Nov-2023	✓



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
<b>EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup</b>								
Amber Glass Bottle - Unpreserved (EP071SG)	BH2, BH6, BH8, BH11, SW1, SW3, QC01, TB_160523	BH4, BH7, BH9A, MW239S, SW2, SW4, RB01,	16-May-2023	17-May-2023	23-May-2023	✓	23-May-2023	26-Jun-2023
<b>EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup</b>								
Amber Glass Bottle - Unpreserved (EP071SG)	BH2, BH6, BH8, BH11, SW1, SW3, QC01, TB_160523	BH4, BH7, BH9A, MW239S, SW2, SW4, RB01,	16-May-2023	17-May-2023	23-May-2023	✓	23-May-2023	26-Jun-2023
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
Amber VOC Vial - Sulfuric Acid (EP080)	BH2, BH6, BH8, BH11, SW1, SW3, QC01, TB_160523	BH4, BH7, BH9A, MW239S, SW2, SW4, RB01,	16-May-2023	19-May-2023	30-May-2023	✓	19-May-2023	30-May-2023
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
Amber VOC Vial - Sulfuric Acid (EP080)	BH2, BH6, BH8, BH11, SW1, SW3, QC01, TB_160523	BH4, BH7, BH9A, MW239S, SW2, SW4, RB01,	16-May-2023	19-May-2023	30-May-2023	✓	19-May-2023	30-May-2023



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
<b>EP080: BTEXN</b>								
Amber VOC Vial - Sulfuric Acid (EP080)	BH2, BH6, BH8, BH11, SW1, SW3, QC01, TB_160523	BH4, BH7, BH9A, MW239S, SW2, SW4, RB01,	16-May-2023	19-May-2023	30-May-2023	✓	19-May-2023	30-May-2023
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
HDPE (no PTFE) (EP231X)	BH2, BH6, BH8, BH11, SW1, SW3, WPW, RB01,	BH4, BH7, BH9A, MW239S, SW2, SW4, QC01, TB_160523	16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	12-Nov-2023
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
HDPE (no PTFE) (EP231X)	BH2, BH6, BH8, BH11, SW1, SW3, WPW, RB01,	BH4, BH7, BH9A, MW239S, SW2, SW4, QC01, TB_160523	16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	12-Nov-2023
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
HDPE (no PTFE) (EP231X)	BH2, BH6, BH8, BH11, SW1, SW3, WPW, RB01,	BH4, BH7, BH9A, MW239S, SW2, SW4, QC01, TB_160523	16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	12-Nov-2023



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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
HDPE (no PTFE) (EP231X)	BH2, BH6, BH8, BH11, SW1, SW3, WPW, RB01,	BH4, BH7, BH9A, MW239S, SW2, SW4, QC01, TB_160523	16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	12-Nov-2023
<b>EP231P: PFAS Sums</b>								
HDPE (no PTFE) (EP231X)	BH2, BH6, BH8, BH11, SW1, SW3, WPW, RB01,	BH4, BH7, BH9A, MW239S, SW2, SW4, QC01, TB_160523	16-May-2023	19-May-2023	12-Nov-2023	✓	23-May-2023	12-Nov-2023



## 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

Quality Control Sample Type	Analytical Methods	Method	Count		Rate (%)		Quality Control Specification
			QC	Regular	Actual	Expected	
<b>Laboratory Duplicates (DUP)</b>							
Moisture Content		EA055	2	20	10.00	10.00	✓ NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	2	17	11.76	10.00	✓ NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES		EG005T	2	19	10.53	10.00	✓ NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	1	17	5.88	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES		EG005T	2	19	10.53	5.00	✓ NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	1	17	5.88	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES		EG005T	1	19	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	1	17	5.88	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES		EG005T	1	19	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard

Matrix: WATER

Quality Control Sample Type	Analytical Methods	Method	Count		Rate (%)		Quality Control Specification
			QC	Regular	Actual	Expected	
<b>Laboratory Duplicates (DUP)</b>							
Dissolved Metals by ICP-MS - Suite A		EG020A-F	4	38	10.53	10.00	✓ NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved		ED093F	2	20	10.00	10.00	✓ NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	3	38	7.89	10.00	✗ NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup		EP071SG	0	15	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
<b>Laboratory Control Samples (LCS)</b>							
Dissolved Metals by ICP-MS - Suite A		EG020A-F	2	38	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved		ED093F	1	20	5.00	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	2	38	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup		EP071SG	1	15	6.67	5.00	✓ NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX		EP080	1	20	5.00	5.00	✓ NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Dissolved Metals by ICP-MS - Suite A		EG020A-F	2	38	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved		ED093F	1	20	5.00	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	2	38	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup		EP071SG	1	15	6.67	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	Analytical Methods	Method	Count		Rate (%)		Quality Control Specification
			QC	Regular	Actual	Expected	
<b>Method Blanks (MB) - Continued</b>							
TRH Volatiles/BTEX		EP080	1	20	5.00	5.00	✓ NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Dissolved Metals by ICP-MS - Suite A		EG020A-F	2	38	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	2	38	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup		EP071SG	0	15	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.

<b>Analytical Methods</b>	<b>Method</b>	<b>Matrix</b>	<b>Method Descriptions</b>
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).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. 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.
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.
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	WATER	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM Schedule B(3).
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.



<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
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.
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.

SITE, COC AND CONTACT DATA											
Client: Kleinfelder Australia Pty Ltd Suite 3, 240-244 Pacific Hwy Charlestown, NSW 2290 Phone: 02 4949 5200		Site Name: WSS - Charlestown GME - May 23 QUOTE NUMBER: Job No.: 20230271 Required TAT: 24 hrs Data QC Level: LAB minimum unless specified:		Sample Name: Aaron King Contact Number: 0457426013 Email: dkushbrook@kleinfelder.com EDD Format: KLF - ERWEED		Laboratory: ALS 51585 Mallard Rd Mayfield West, Newcastle NSW 2304 Phone: (02) 4014 2500					
CHAIN OF CUSTODY Reinforced by (print): (sign): <i>Aaron King</i>		Received by (print): (sign): <i>VIS</i>		Reinforced by: (sign): <i>ES2316242</i>		Received by: (sign): <i>AKING</i>		Send Results to: Aking@kleinfelder.com dkushbrook@kleinfelder.com mferguson@kleinfelder.com			
Date / Time: <i>16/05/2023</i>	Date / Time: Time (°C): <i>17.2</i>	Date / Time: Time (°C): <i>17.2</i>	Date / Time: Time (°C): <i>17.2</i>	Date / Time: Time (°C): <i>17.2</i>	Date / Time: Time (°C): <i>17.2</i>	Date / Time: Time (°C): <i>17.2</i>	Date / Time: Time (°C): <i>17.2</i>	Notes: 16/05/23 1940 Notes: Ice present / no ice seals intact / no seal			
Sample ID	Lab ID	Sample Point	Sample Type	Date	Start Depth	End Depth	# Concentrators	Organic Analyses	Metals	Other Analyses	Comments
BH2	WG		Solid		0	X					
BH4	WG	16/05/2023	Solid		0	X					
BH6	WG	16/05/2023	Solid		0	X					
BH7	WG	16/05/2023	Solid		0	X					
BH8	WG	16/05/2023	Solid		0	X					
BH9A	WG	16/05/2023	Solid		0	X					
BH11	VVG	16/05/2023	Solid		0	X					
MW239S	VVG	16/05/2023	Solid		0	X					
SV1	WS	16/05/2023	Solid		0	X					
SW2	VVS	16/05/2023	Solid		0	X					
SV3	VVS	16/05/2023	Solid		0	X					
SV4	VVS	16/05/2023	Solid		0	X					
WPW	VVS	16/05/2023	Solid		3				X		
WPF	Soil	16/05/2023	Solid		3				X		
QC01	VQ	16/05/2023	Solid		5	X			X		
QC01A	VQ	16/05/2023	Solid		5	X			X		
R001	VQ	16/05/2023	Solid		2	X			X		
TB_160523	VQ	16/05/2023	Solid		2	X			X		

NT14 - Extended water suite B

  
**LAB OF ORIGIN**  
**NEWCASTLE**
  
**ES2316242**

Test/Note : + 87-2-8734 8555

RAN

Client Kleinfelder Australia Pty Ltd Suite 2, 240-244 Pitt St, Hay Chatswood NSW 2067 Phone: 02 8469 8200		Site ID and Contact Data Site Name: 240 Pitt Street, Chatswood Address: 240 Pitt Street, Chatswood City: Chatswood State: NSW Postcode: 2067 Phone: 02 8469 8200 Fax: 02 8469 8201 Email: <a href="mailto:kclaustralia@kleinfelder.com">kclaustralia@kleinfelder.com</a>		Contact Person: Alan Kelly Phone: 02 8469 8202 Fax: 02 8469 8201 Email: <a href="mailto:akelly@kleinfelder.com">akelly@kleinfelder.com</a>		Contractors H&P H&P Materials Matthew Weller Neuquen NSW 2067 Phone: 02 8469 8200			
Sample Category Soil		Sample ID: 1122		Sample Date: 11/2/2001		Sample Time: 11:20 AM		Handwritten Notes: Brandis 6/8/01 11:20	
Sample ID	Sample Type	Sample Name	Sample Date	Lab Sample	Sample ID	Sample Date	Organic Analytes	Metals	
								PCDD/Fs	PCDFs
BH2								X	
BH4								X	
BH6								X	
BH7								X	
BH8								X	
DH9A								X	
BH11								X	
BW2108								X	
BW3								X	
BW2								X	
BW1								X	
WPW								X	
WPY								X	
AGU								X	
QC01A								X	
BB01								X	
BB02								X	

Notes: External validation

Subcon / Forward Lab / Split WO

Lab / Analysis:

Organised By / Date:

Relinquished By / Date:

Connote / Courier:

WO No:

Attached By PO / Internal Sheet:

Environmental Division  
Sydney  
Work Order Reference  
**ES2316242**



71 991294

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

**Eurofins Environment Testing NZ Ltd**

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35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 45 51 IANZ# 1327	43 Detroit Drive Rolleston, Christchurch 7675 Tel: 0800 856 450 IANZ# 1290

## Sample Receipt Advice

**Company name:** Kleinfelder Aust Pty Ltd (NEWCASTLE)  
**Contact name:** AARON KING  
**Project name:** WSS-QUATRERLY GME-MAY 23  
**Project ID:** 20232071  
**Turnaround time:** 5 Day  
**Date/Time received**  
**Eurofins reference**  
 May 17, 2023 3:20 PM  
 991294

## 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](mailto:AndrewBlack@eurofins.com)**

Results will be delivered electronically via email to AARON KING - [aking@kleinfelder.com](mailto:aking@kleinfelder.com).

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



web: [www.eurofins.com.au](http://www.eurofins.com.au)

email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road Dandenong South VIC 3175	19/8 Lewalan Street Grovedale VIC 3216	179 Magowan Road Girraween NSW 2145	Unit 1,2 Dacre Street Mitchell ACT 2911	1/21 Smallwood Place Murarrie QLD 4172	1/2 Frost Drive Mayfield West NSW 2303 Tel: +61 2 4968 8448
Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289

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

<b>Company Name:</b>	Kleinfelder Aust Pty Ltd (NEWCASTLE)	<b>Order No.:</b>		<b>Received:</b>	May 17, 2023 3:20 PM					
<b>Address:</b>	Suite 3, 240-244 Pacific Hwy Charlestown NSW 2290	<b>Report #:</b>	991294	<b>Due:</b>	May 23, 2023					
<b>Project Name:</b>	WSS-QUATRERLY GME-MAY 23	<b>Phone:</b>	02 4949 5200	<b>Priority:</b>	5 Day					
<b>Project ID:</b>	20232071	<b>Fax:</b>		<b>Contact Name:</b>	AARON KING					
<b>Eurofins Analytical Services Manager : Andrew Black</b>										
<b>Sample Detail</b>										
Sydney Laboratory - NATA # 1261 Site # 18217		X	X	X	X					
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	QC01A	May 16, 2023		Water	S23-My0049664	X	X	X	X	X
<b>Test Counts</b>						1	1	1	1	1

## Environment Testing

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



NATA Accredited  
 Accreditation Number 1261  
 Site Number 18217

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

Attention: AARON KING

Report 991294-W  
 Project name WSS-QUARTERLY GME-MAY 23  
 Project ID 20232071  
 Received Date May 17, 2023

<b>Client Sample ID</b>			<b>QC01A</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>Eurofins Sample No.</b>			<b>S23-My0049664</b>
<b>Date Sampled</b>			<b>May 16, 2023</b>
Test/Reference	LOR	Unit	
<b>TRH - 2013 NEPM Fractions (after silica gel clean-up)</b>			
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
<b>TRH - 1999 NEPM Fractions (after silica gel clean-up)</b>			
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
<b>Heavy Metals</b>			
Arsenic (filtered)	0.001	mg/L	< 0.001
Barium (filtered)	0.02	mg/L	< 0.02
Chromium (filtered)	0.001	mg/L	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001
Iron (filtered)	0.05	mg/L	0.38
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	0.002
Zinc (filtered)	0.005	mg/L	0.023
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>			
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01
13C4-PFBA (surr.)	1	%	68
13C5-PFPeA (surr.)	1	%	75
13C5-PFHxA (surr.)	1	%	79
13C4-PFHpA (surr.)	1	%	79
13C8-PFOA (surr.)	1	%	88

<b>Client Sample ID</b>			<b>QC01A</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>Eurofins Sample No.</b>			<b>S23-My0049664</b>
<b>Date Sampled</b>			<b>May 16, 2023</b>
Test/Reference	LOR	Unit	
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>			
13C5-PFNA (surr.)	1	%	92
13C6-PFDA (surr.)	1	%	91
13C2-PFUnDA (surr.)	1	%	105
13C2-PFDODA (surr.)	1	%	106
13C2-PFTeDA (surr.)	1	%	99
<b>Perfluoroalkyl sulfonamido substances</b>			
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05
13C8-FOSA (surr.)	1	%	79
D3-N-MeFOSA (surr.)	1	%	148
D5-N-EtFOSA (surr.)	1	%	183
D7-N-MeFOSE (surr.)	1	%	56
D9-N-EtFOSE (surr.)	1	%	71
D5-N-EtFOSAA (surr.)	1	%	181
D3-N-MeFOSAA (surr.)	1	%	138
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>			
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01
Perfluoropropanesulfonic acid (PFPS) <sup>N15</sup>	0.01	ug/L	< 0.01
Perfluoropentanesulfonic acid (PFPSeS) <sup>N15</sup>	0.01	ug/L	< 0.01
Perfluorohexamersulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01
13C3-PFBS (surr.)	1	%	85
18O2-PFHxS (surr.)	1	%	83
13C8-PFOS (surr.)	1	%	86
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTAs)</b>			
1H.1H.2H.2H-perfluorohexamersulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01
13C2-4:2 FTSA (surr.)	1	%	92
13C2-6:2 FTSA (surr.)	1	%	142
13C2-8:2 FTSA (surr.)	1	%	84
13C2-10:2 FTSA (surr.)	1	%	INT

<b>Client Sample ID</b>			<b>QC01A</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>Eurofins Sample No.</b>			<b>S23- My0049664</b>
<b>Date Sampled</b>			<b>May 16, 2023</b>
Test/Reference	LOR	Unit	
<b>PFASs Summations</b>			
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
TRH - 2013 NEPM Fractions (after silica gel clean-up) - Method: LTM-ORG-2010 TRH C6-C40	Sydney	May 19, 2023	7 Days
TRH - 1999 NEPM Fractions (after silica gel clean-up) - Method: LTM-ORG-2010 TRH C6-C40	Sydney	May 19, 2023	7 Days
Heavy Metals (filtered) - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	May 19, 2023	180 Days
Mercury (filtered) - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	May 19, 2023	28 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Sydney	May 19, 2023	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Sydney	May 19, 2023	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Sydney	May 19, 2023	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Sydney	May 19, 2023	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Sydney	May 19, 2023	



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IANZ# 1327	IANZ# 1290

Company Name: Kleinfelder Aust Pty Ltd (NEWCASTLE)

Address: Suite 3, 240-244 Pacific Hwy

Charlestown

NSW 2290

Project Name: WSS-QUATRERLY GME-MAY 23

Project ID: 20232071

Order No.:

Report #: 991294

Phone: 02 4949 5200

Fax:

Received:

May 17, 2023 3:20 PM

Due: May 23, 2023

Priority: 5 Day

Contact Name: AARON KING

Eurofins Analytical Services Manager : Andrew Black

## Sample Detail

## Sydney Laboratory - NATA # 1261 Site # 18217

## External Laboratory

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	X	X	X	X	X	X	X	X	X	X	X	X	X
1	QC01A	May 16, 2023		Water	S23-My0049664	X	X	X	X	X	X	X	X	X	X	X	X	
						1	1	1	1	1	1	1	1	1	1	1	1	

## Test Counts

## 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

**µg/L:** micrograms per litre

**ppm:** parts per million

**ppb:** parts per billion

**%:** Percentage

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

**NTU:** Nephelometric Turbidity Units

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

**CFU:** Colony forming unit

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBT0</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

### QC Data General Comments

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
<b>Method Blank</b>							
<b>TRH - 2013 NEPM Fractions (after silica gel clean-up)</b>							
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	
<b>Method Blank</b>							
<b>TRH - 1999 NEPM Fractions (after silica gel clean-up)</b>							
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	
<b>Method Blank</b>							
<b>Heavy Metals</b>							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Barium (filtered)	mg/L	< 0.02			0.02	Pass	
Chromium (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	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
<b>Method Blank</b>							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluoroctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
<b>Method Blank</b>							
<b>Perfluoroalkyl sulfonamido substances</b>							
Perfluoroctane 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-perfluoroctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluoroctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
<b>Method Blank</b>							
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluoronananesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPoS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexamenesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluoroctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
<b>Method Blank</b>							
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)</b>							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluoroctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
<b>LCS - % Recovery</b>							
<b>TRH - 2013 NEPM Fractions (after silica gel clean-up)</b>							
TRH >C10-C16 (after silica gel clean-up)	%	71			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>TRH - 1999 NEPM Fractions (after silica gel clean-up)</b>							
TRH C10-C14 (after silica gel clean-up)	%	71			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Heavy Metals</b>							
Arsenic (filtered)	%	90			80-120	Pass	
Barium (filtered)	%	92			80-120	Pass	
Chromium (filtered)	%	109			80-120	Pass	
Copper (filtered)	%	100			80-120	Pass	
Iron (filtered)	%	108			80-120	Pass	
Mercury (filtered)	%	103			80-120	Pass	
Nickel (filtered)	%	108			80-120	Pass	
Zinc (filtered)	%	106			80-120	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>							
Perfluorobutanoic acid (PFBA)	%	110			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	112			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	119			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	107			50-150	Pass	
Perfluoroctanoic acid (PFOA)	%	118			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	112			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	105			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	110			50-150	Pass	
Perfluorododecanoic acid (PFDODA)	%	94			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	108			50-150	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl sulfonamido substances</b>							
Perfluoroctane sulfonamide (FOSA)	%	120			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	122			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	96			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	96			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	116			50-150	Pass	
N-ethyl-perfluoroctanesulfonamidoacetic acid (N-EtFOSAA)	%	134			50-150	Pass	
N-methyl-perfluoroctanesulfonamidoacetic acid (N-MeFOSAA)	%	109			50-150	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>							
Perfluorobutanesulfonic acid (PFBS)	%	112			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	85			50-150	Pass	
Perfluoropropanesulfonic acid (PPPrS)	%	80			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	99			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	111			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	133			50-150	Pass	
Perfluoroctanesulfonic acid (PFOS)	%	114			50-150	Pass	
<b>LCS - % Recovery</b>							

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>									
<b>Heavy Metals</b>				Result 1					
Arsenic (filtered)	N23-My0044875	NCP	%	93			75-125	Pass	
Barium (filtered)	N23-My0044875	NCP	%	90			75-125	Pass	
Chromium (filtered)	N23-My0044875	NCP	%	98			75-125	Pass	
Copper (filtered)	N23-My0044875	NCP	%	105			75-125	Pass	
Iron (filtered)	N23-My0044875	NCP	%	98			75-125	Pass	
Mercury (filtered)	N23-My0044875	NCP	%	96			75-125	Pass	
Nickel (filtered)	S23-My0046076	NCP	%	105			75-125	Pass	
Zinc (filtered)	S23-My0046076	NCP	%	105			75-125	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1					
Perfluorobutanoic acid (PFBA)	S23-My0048728	NCP	%	117			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S23-My0048728	NCP	%	120			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S23-My0048728	NCP	%	123			50-150	Pass	
Perfluorooctanoic acid (PFHpA)	S23-My0048728	NCP	%	112			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S23-My0048728	NCP	%	125			50-150	Pass	
Perfluorononanoic acid (PFNA)	S23-My0048728	NCP	%	116			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S23-My0048728	NCP	%	110			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S23-My0048728	NCP	%	114			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S23-My0048728	NCP	%	101			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S23-My0048728	NCP	%	112			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1					
Perfluorooctane sulfonamide (FOSA)	S23-My0048728	NCP	%	121			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S23-My0048728	NCP	%	125			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S23-My0048728	NCP	%	106			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	S23-My0048728	NCP	%	100			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	S23-My0048728	NCP	%	127			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S23-My0048728	NCP	%	139			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S23-My0048728	NCP	%	111			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S23-My0048728	NCP	%	120			50-150	Pass	
Perfluoronananesulfonic acid (PFNS)	S23-My0048728	NCP	%	93			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S23-My0048728	NCP	%	84			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropentanesulfonic acid (PFPeS)	S23-My0048728	NCP	%	106			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S23-My0048728	NCP	%	135			50-150	Pass	
Perfluoroctanesulfonic acid (PFOS)	S23-My0048728	NCP	%	121			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)</b>					Result 1				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S23-My0048728	NCP	%	108			50-150	Pass	
1H.1H.2H.2H-perfluoroctanesulfonic acid(6:2 FTSA)	S23-My0048728	NCP	%	137			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S23-My0048728	NCP	%	131			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S23-My0048728	NCP	%	118			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>TRH - 2013 NEPM Fractions (after silica gel clean-up)</b>					Result 1	Result 2	RPD		
TRH >C10-C16 (after silica gel clean-up)	S23-My0049664	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34 (after silica gel clean-up)	S23-My0049664	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40 (after silica gel clean-up)	S23-My0049664	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
<b>Duplicate</b>									
<b>TRH - 1999 NEPM Fractions (after silica gel clean-up)</b>					Result 1	Result 2	RPD		
TRH C10-C14 (after silica gel clean-up)	S23-My0049664	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28 (after silica gel clean-up)	S23-My0049664	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36 (after silica gel clean-up)	S23-My0049664	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
<b>Duplicate</b>									
<b>Heavy Metals</b>					Result 1	Result 2	RPD		
Arsenic (filtered)	S23-My0049593	NCP	mg/L	0.015	0.016	3.0	30%	Pass	
Barium (filtered)	S23-My0049593	NCP	mg/L	0.02	0.02	<1	30%	Pass	
Chromium (filtered)	S23-My0049593	NCP	mg/L	0.002	0.002	1.1	30%	Pass	
Copper (filtered)	S23-My0049593	NCP	mg/L	0.003	0.003	2.8	30%	Pass	
Iron (filtered)	S23-My0049593	NCP	mg/L	9.7	9.8	<1	30%	Pass	
Mercury (filtered)	S23-My0049593	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S23-My0049593	NCP	mg/L	0.002	0.002	6.0	30%	Pass	
Zinc (filtered)	S23-My0049593	NCP	mg/L	0.027	0.026	3.7	30%	Pass	
<b>Duplicate</b>									
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>					Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	S23-My0051425	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S23-My0051425	NCP	ug/L	0.02	0.02	2.9	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroctanoic acid (PFOA)	S23-My0051425	NCP	ug/L	0.01	0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDsDA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>					Result 1	Result 2	RPD
Perfluorotridecanoic acid (PFTrDA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30% Pass
Perfluorotetradecanoic acid (PFTeDA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30% Pass
Duplicate							
<b>Perfluoroalkyl sulfonamido substances</b>					Result 1	Result 2	RPD
Perfluoroctane sulfonamide (FOSA)	S23-My0051425	NCP	ug/L	< 0.05	< 0.05	<1	30% Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S23-My0051425	NCP	ug/L	< 0.05	< 0.05	<1	30% Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S23-My0051425	NCP	ug/L	< 0.05	< 0.05	<1	30% Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	S23-My0051425	NCP	ug/L	< 0.05	< 0.05	<1	30% Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	S23-My0051425	NCP	ug/L	< 0.05	< 0.05	<1	30% Pass
N-ethyl-perfluoroctanesulfonamidoacetic acid (N-EtFOSAA)	S23-My0051425	NCP	ug/L	< 0.05	< 0.05	<1	30% Pass
N-methyl-perfluoroctanesulfonamidoacetic acid (N-MeFOSAA)	S23-My0051425	NCP	ug/L	< 0.05	< 0.05	<1	30% Pass
Duplicate							
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>					Result 1	Result 2	RPD
Perfluorobutanesulfonic acid (PFBS)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30% Pass
Perfluoropropanesulfonic acid (PFPrS)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30% Pass
Perfluoropentanesulfonic acid (PFPeS)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30% Pass
Perfluorohexamenesulfonic acid (PFHxS)	S23-My0051425	NCP	ug/L	0.11	0.12	4.2	30% Pass
Perfluoroheptanesulfonic acid (PFHpS)	S23-My0051425	NCP	ug/L	0.01	< 0.01	3.2	30% Pass
Perfluoroctanesulfonic acid (PFOS)	S23-My0051425	NCP	ug/L	0.23	0.21	11	30% Pass
Perfluorodecanesulfonic acid (PFDS)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30% Pass
Duplicate							
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTsAs)</b>					Result 1	Result 2	RPD
1H.1H.2H.2H-perfluorohexamenesulfonic acid (4:2 FTSA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30% Pass
1H.1H.2H.2H-perfluoroctanesulfonic acid(6:2 FTSA)	S23-My0051425	NCP	ug/L	< 0.05	< 0.05	<1	30% Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30% Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S23-My0051425	NCP	ug/L	< 0.01	< 0.01	<1	30% Pass

**Comments****Sample Integrity**

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

**Qualifier Codes/Comments**

Code	Description
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

**Authorised by:**

Andrew Black    Analytical Services Manager  
Mickael Ros    Senior Analyst-Metal  
Roopesh Rangarajan                                 Senior Analyst-Organic



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

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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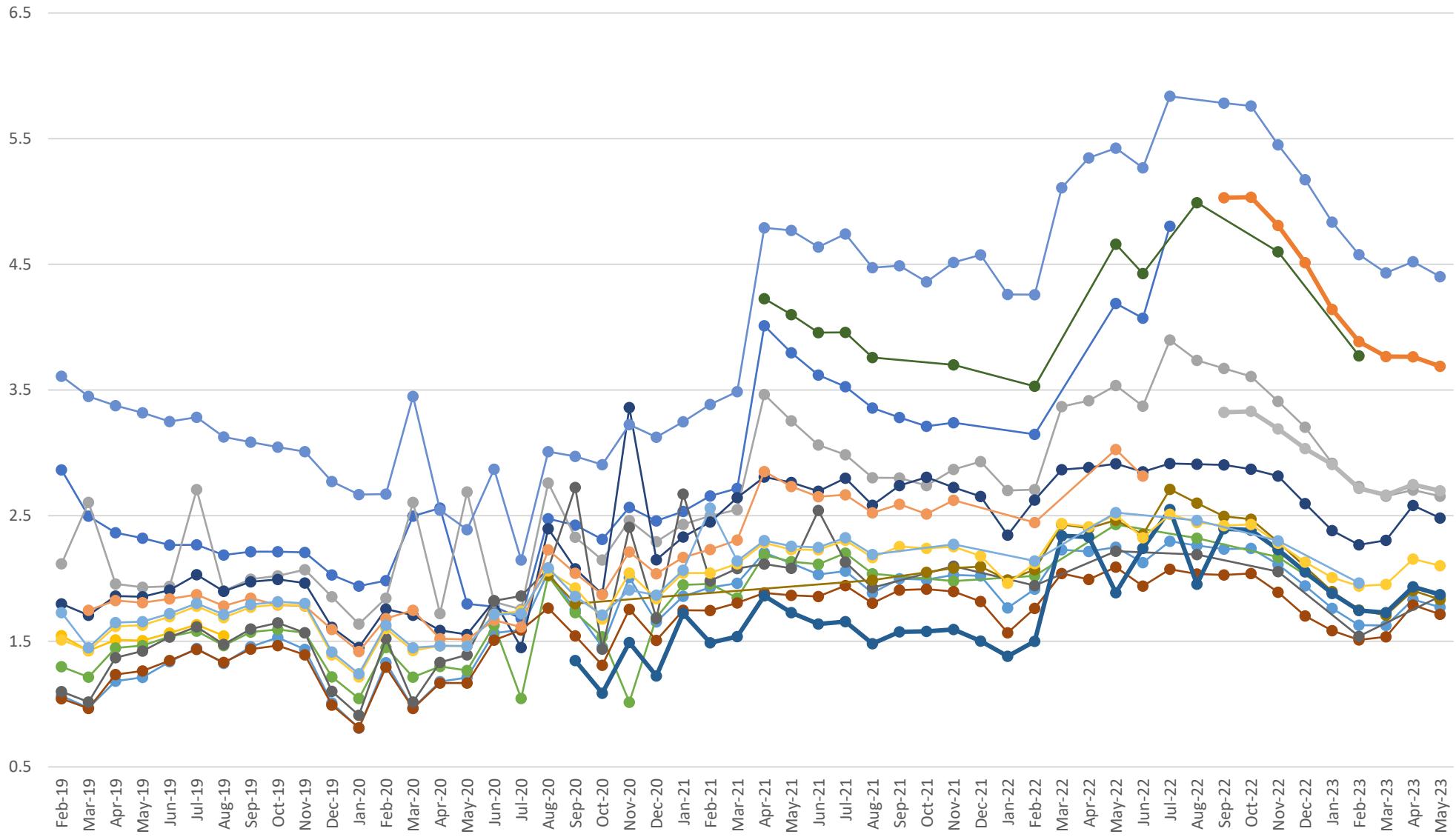


## ATTACHMENT 4: DATA TRENDS

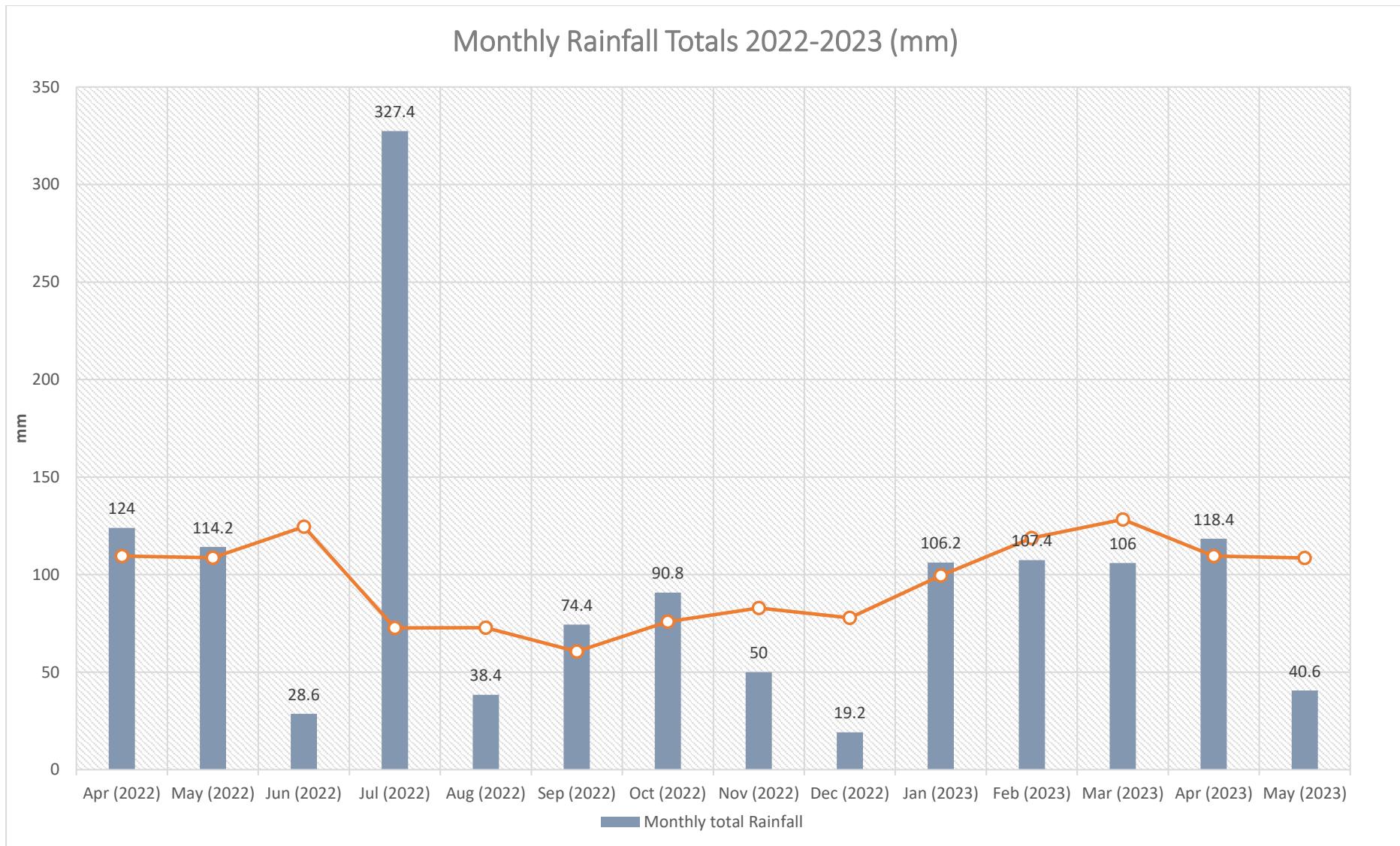


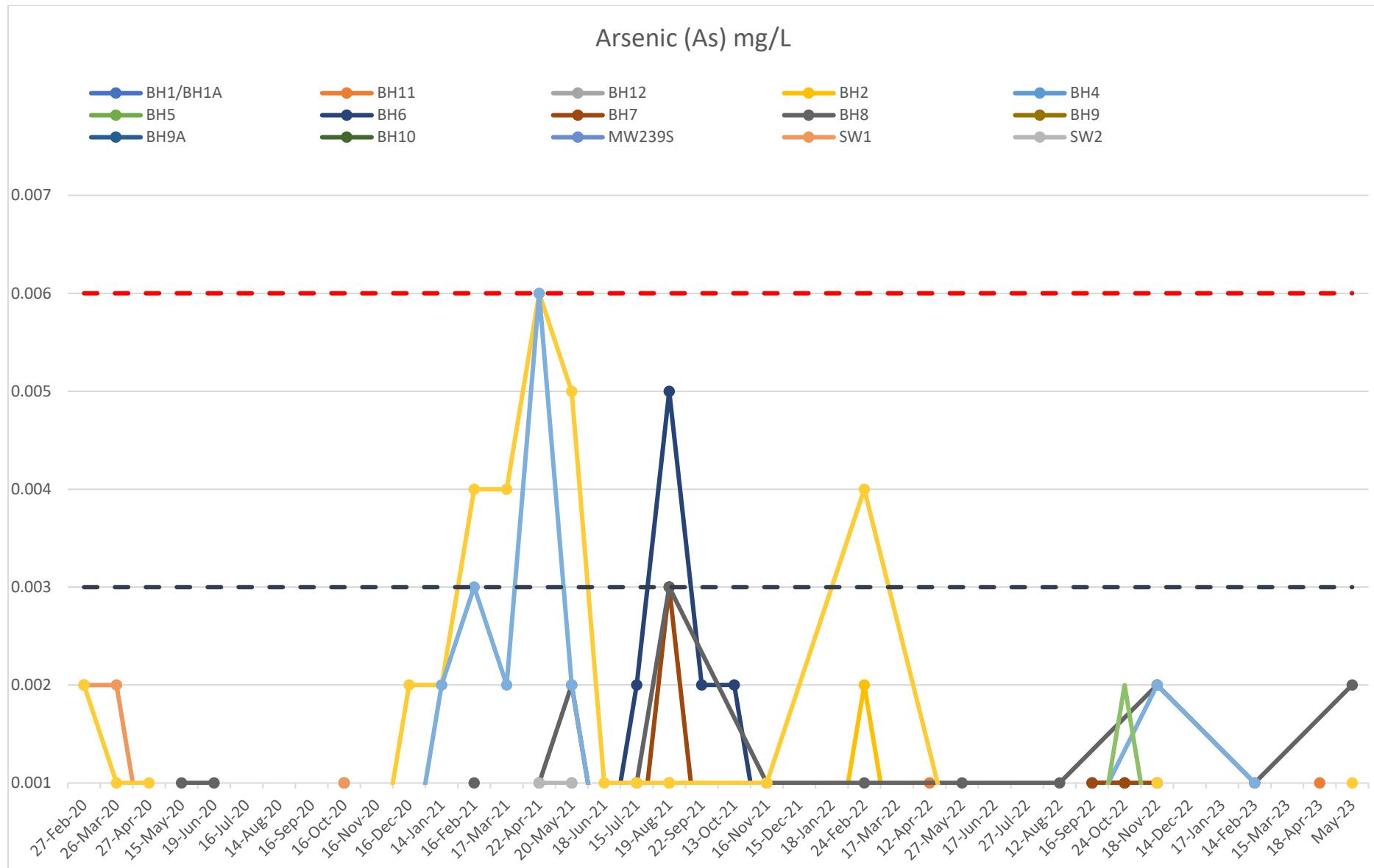
## Groundwater Elevation (mAHD)

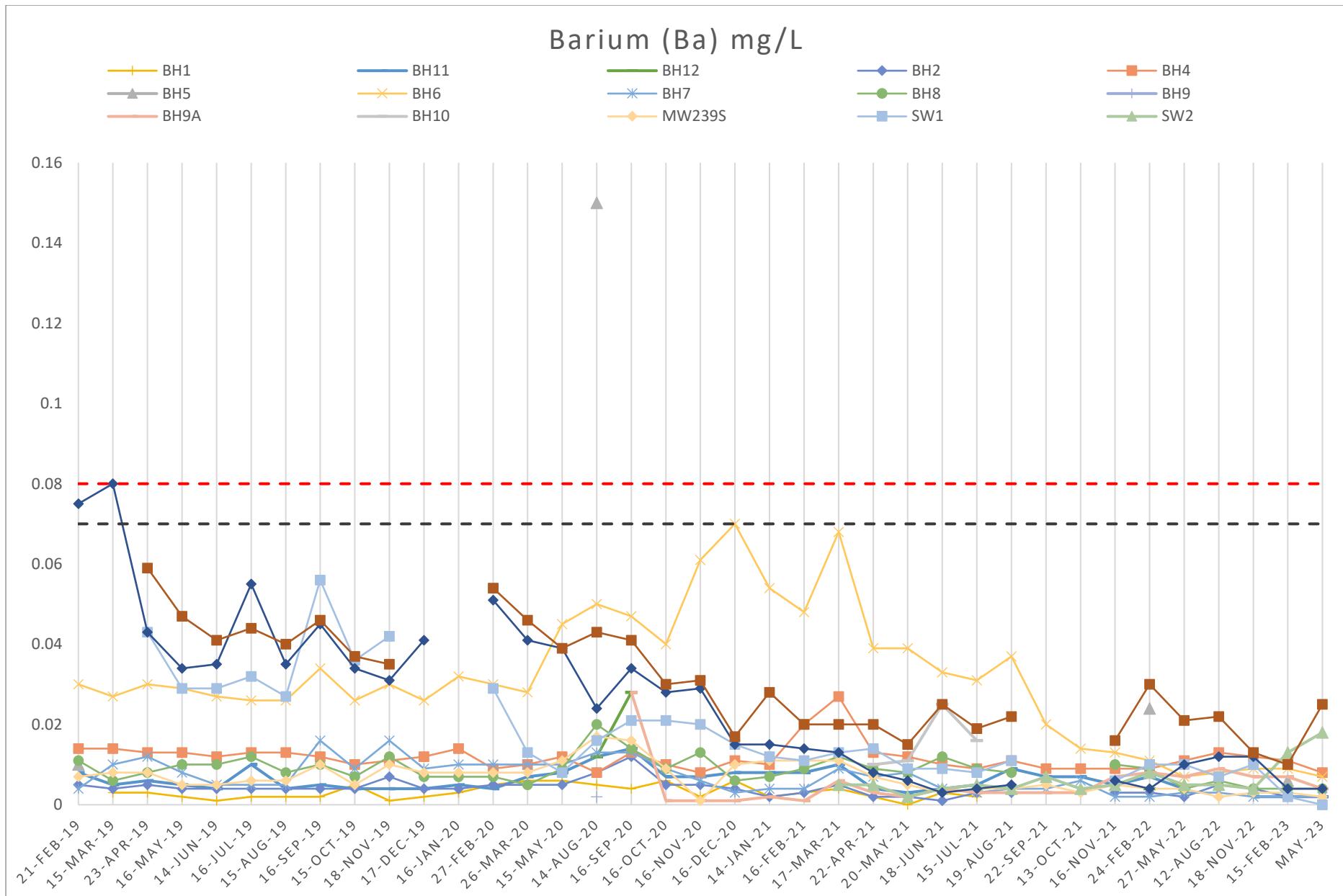
BH1 (blue circle), BH1A (orange circle), BH2 (grey circle), BH3 (yellow circle), BH4 (light blue circle), BH5 (green circle), BH6 (dark blue circle), BH7 (dark brown circle), BH8 (black circle),  
 BH9 (brown circle), BH9A (dark blue circle), BH10 (dark green circle), BH11 (medium blue circle), BH12 (light orange circle), BH12A (light grey circle), MW239S (yellow circle), MW239D (light blue circle)

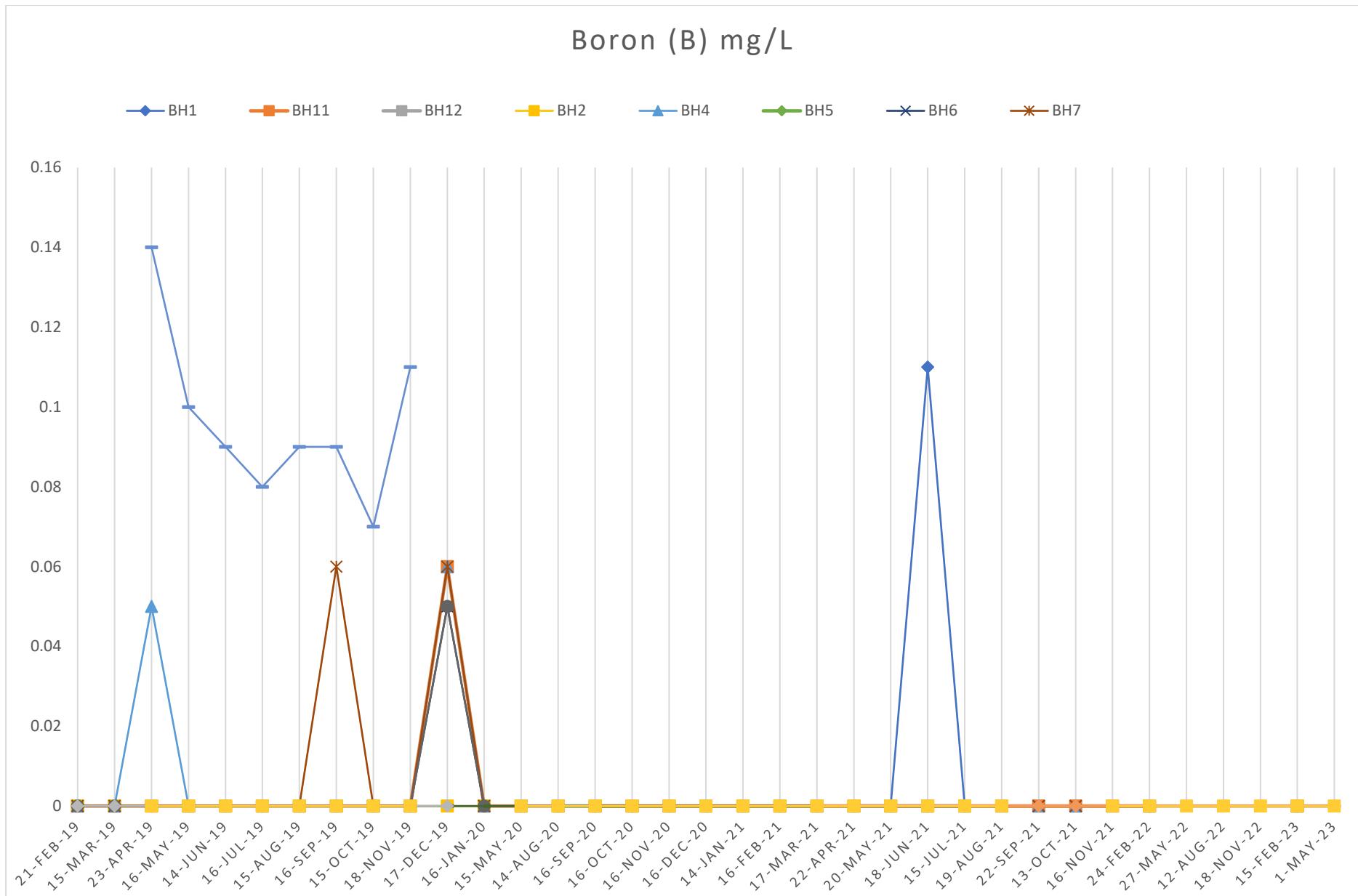


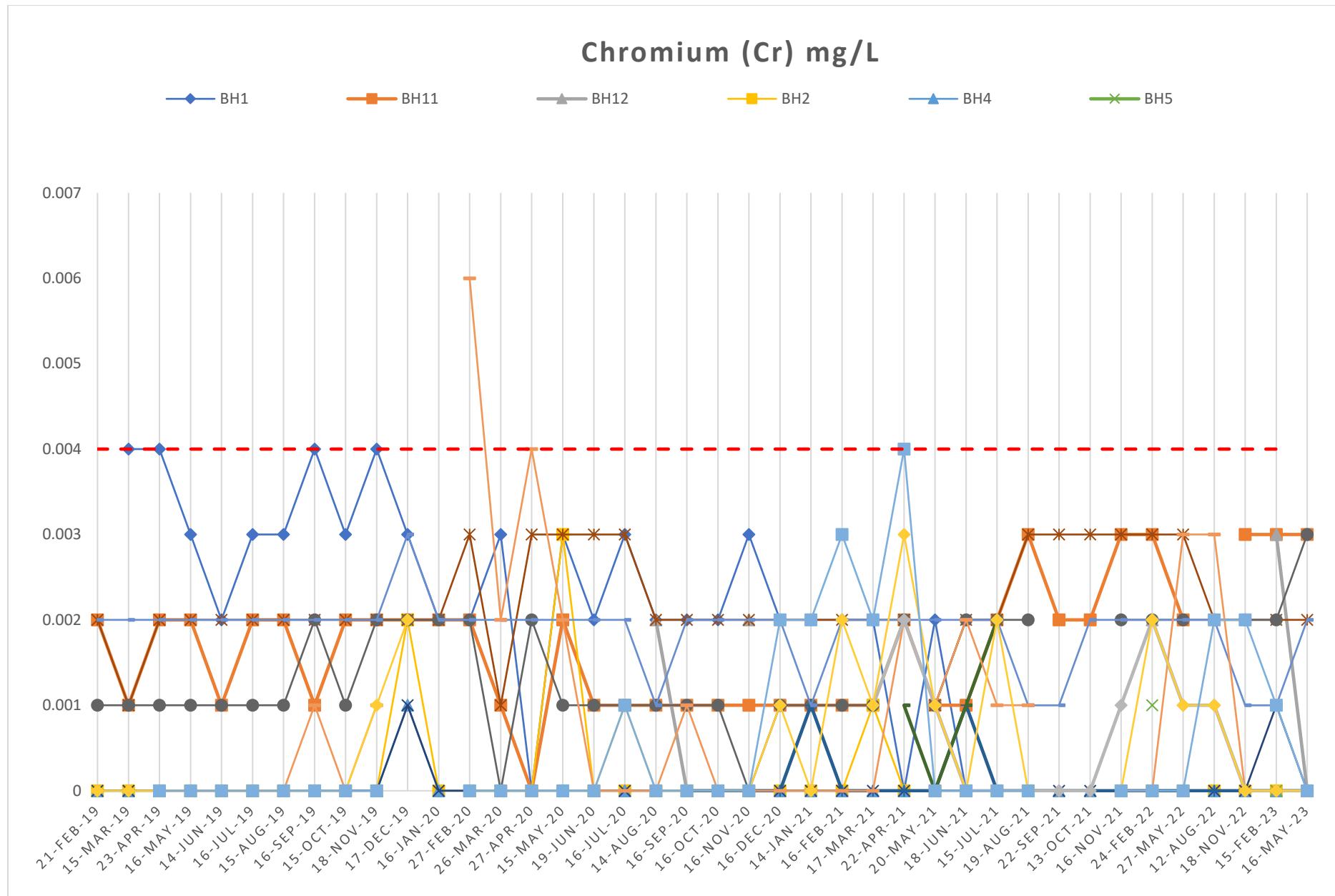




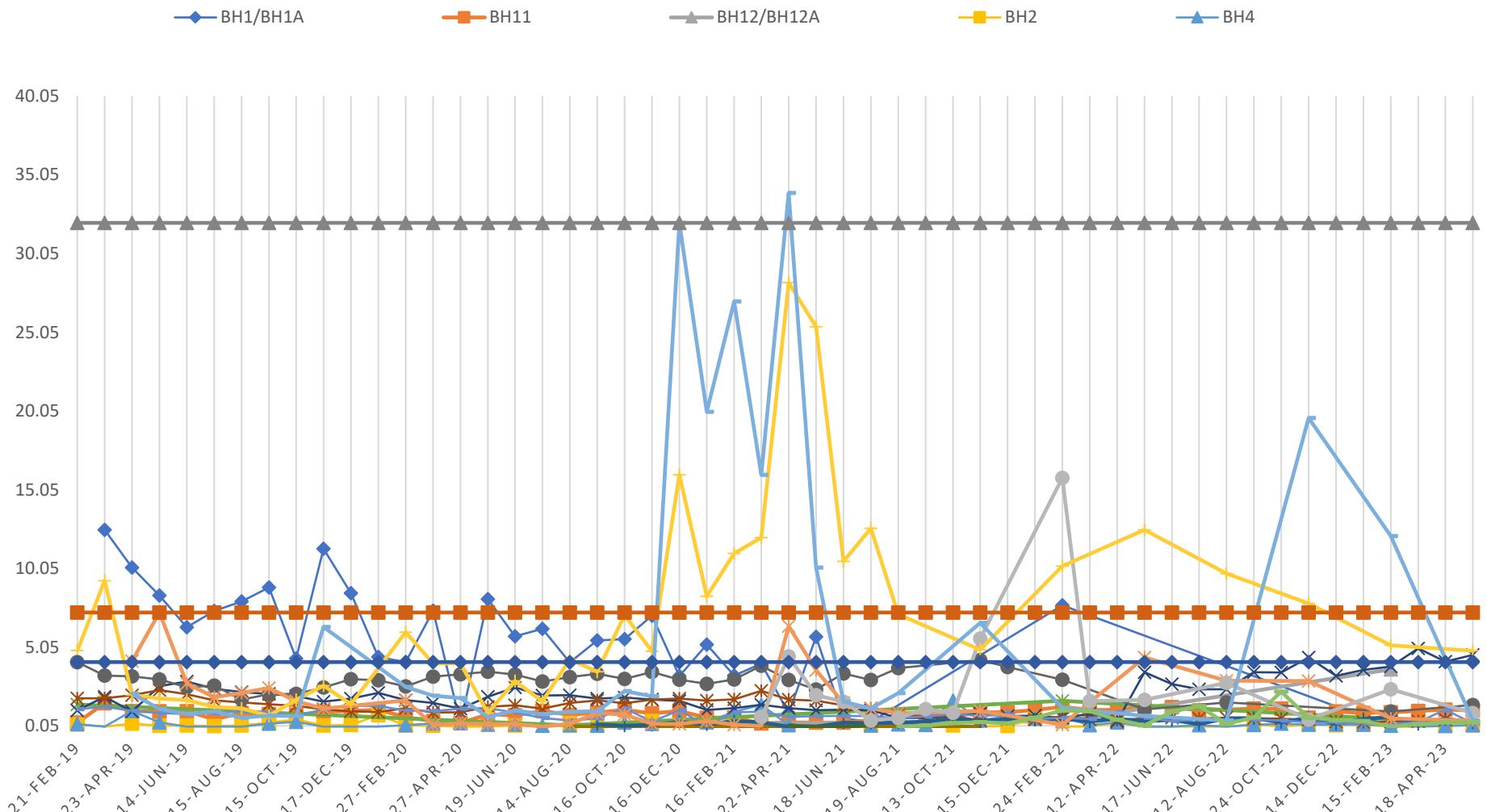








## Iron (Fe) mg/L



## Manganese (Mn) mg/L

