

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

## March 2023 Monitoring Event

NCA23R151715

13 April 2023



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

**Attention: Darren Williams**

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

Please find enclosed the monthly water quality monitoring results for the March 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 monthly groundwater monitoring event undertaken in accordance with the NSW Environment Protection Authority (EPA) and Department of Planning and Environment (DPE) requirements for monthly water quality monitoring at the site. **Figure 1, Attachment 1** presents the groundwater sampling locations.

The scheduled March 2023 monitoring event included gauging of 10 monitoring wells, recording of field parameters for groundwater, and sampling from seven monitoring wells and one Wash Plant Water (WPW) sample 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 15<sup>th</sup> of March 2023 and comprised:

- Gauging of 10 monitoring wells (BH1A, BH2, BH4, BH6, BH7, BH9, BH9A, BH11, BH12A & MW239S).
- Groundwater sampling from seven monitoring wells (BH2, BH4, BH6, BH7, BH9A, BH11 & MW239S) as summarised in **Table 5** and detailed in **Attachment 2**.
- One WPW sample as summarised in **Table 6** 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.

The WPW sample was collected directly into laboratory supplied sample containers using a nitrile-gloved hand.

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 (March 2023)**

Analysis	Number of Samples				
	Primary	Intra-lab (Duplicate)	Inter-lab (Triplicate)	Transport Blank	Rinsate Blank
Metals*	8	1	1	1	1
PFAS (28 analytes, standard level)	1	0	0	1	1

\* Metals Suite (dissolved) – Arsenic (As), Iron (Fe), Manganese (Mn).

**Table 2** provides a summary of the gauging data for March 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 March monitoring event.



Table 2: Summary of Gauging Data (March 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	5.214	3.766	12.160	N/A	4.5 <sup>2</sup>	0.734	Gauge only
BH2	7.79	5.135	2.655	8.842	9.45	3.8	1.145	Light Brown, no odour / sheen, well in good condition
BH4	3.06	1.435	1.625	6.015	6.45	3.0 <sup>3</sup>	1.375	Clear, no odour / sheen, well in good condition
BH6	3.62	1.317	2.303	4.535	4.95	4.4	2.097	Clear, low sulphur odour, no sheen, well in good condition
BH7	2.98	1.445	1.535	4.505	4.95	3.7	2.165	Light yellow, low sulphur odour, no sheen, well in good condition
BH9	17.75	16.043	1.707	16.090	18.8	3.0 <sup>3</sup>	1.293	Gauge only
BH9A	10.75	9.023	1.727	12.241	16.16	3.0 <sup>3</sup>	1.273	Light brown, low sulphur odour, no sheen, well in good condition
BH11	6.63	2.199	4.431	5.3	5.95	5.5	1.069	Light yellow, strong sulphur odour, no sheen, well in good condition
BH12A	5.62	2.956	2.664	7.31	NA	4.0 <sup>5</sup>	1.336	Gauge only
MW239S	3.04	1.088	1.952	3.805	4.0	3.9 <sup>4</sup>	1.948	Orange/brown, moderate sulphur odour, no sheen, well in good condition

<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).



**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 March 2023 monitoring event. All field parameters for each monitoring location are detailed in the field sheets provided in **Attachment 2**. The measured field pH for BH6 (4.09) was marginally below the site-specific trigger value range (4.2-6.5) outlined in the SWMP (2021). BH6 is considered upgradient from current site operations, therefore, the results are considered indicative of natural background fluctuations.

**Table 4: Summary of Field Measurements**

Borehole	Turbidity (NTU)	Temp (°C)	DO (mg/L)	EC (µc/cm)	TDS (mg/L)	pH	Redox (mV)
BH1A	ND	ND	ND	ND	ND	ND	ND
BH2	103.0	20.8	3.62	69	49	4.67	227.7
BH4	8.26	21.0	4.46	92.5	65	5.22	129.0
BH6	32.96	23.9	4.29	233.2	155	4.09	150.2
BH7	28.40	23.2	4.06	75.9	51	4.62	4.0
BH9	ND	ND	ND	ND	ND	ND	ND
BH9A	51.32	21.9	4.24	103.3	72	4.24	171.7
BH11	4.83	21.6	3.05	102.4	70	4.61	-43.4
BH12A	ND	ND	ND	ND	ND	ND	ND
MW239S	206.44	22.5	3.02	102.4	70	4.61	-48.1
WPW	468.5	24.7	8.29	297.2	195	4.83	171.9

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. **Table 6** presents a summary of the wash plant sample results for PFAS analytes in water. 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.

Concentrations of Iron at BH6 (4.97mg/L) were found to be in exceedance of the site-specific trigger value (4.1mg/L). This concentration exceedance is the highest results recorded for this location since monitoring began. The WPW2 sample recorded two detections for PFAS compounds, PFHxS (0.01µg/L) and PFOS (0.02µg/L) 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 (March 2023)**

Analyte	Metals			Discussion of results relative to previous monitoring (details on specific data trends provided in Section 4 below)
	Arsenic	Iron	Manganese	
LOR	0.001	0.05	0.001	
Units	mg/L	mg/L	mg/L	
Adopted Site Specific Trigger Values (SWMP 2021)	0.003	4.1 (8.84 for BH1A)	0.136	
Samples				
BH1A	NS	NS	NS	Metals for BH1A were not analysed - gauge only.
BH2	<0.001	<0.05	0.003	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	<0.05	0.022	Metal concentrations were generally consistent with historical variations and remain below the adopted criteria. 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	4.97	0.006	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 north) from current quarry operations and the most north-eastern location at the site.
BH7	<0.001	0.34	0.003	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.
BH9	NS	NS	NS	Metals for BH9 were not analysed - gauge only.
BH9A	<0.001	0.15	0.20	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	0.99	0.002	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	Metals for BH12A were not analysed - gauge only.



Analyte	Metals			Discussion of results relative to previous monitoring (details on specific data trends provided in Section 4 below)
	Arsenic	Iron	Manganese	
LOR	0.001	0.05	0.001	
Units	mg/L	mg/L	mg/L	
Adopted Site Specific Trigger Values (SWMP 2021)	0.003	4.1 (8.84 for BH1A)	0.136	
MW239S	<0.001	0.29	0.004	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: Wash Plant Water Sample Results and Screening Criteria**

Analyte	PFAS				Metals			Discussion of results
	PFOA	PFOS	PFHxS	Sum of PFOS + PFHxS	Arsenic	Manganese	Iron	
LOR	0.01	0.01	0.01	0.01	0.001	0.001	0.05	
Units	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	
Site Specific Trigger Values (SWMP 2021)	0.56	N/A	N/A	0.07	N/A	N/A	N/A	
Sample Name	Sand Wash Plant							
WPW2	<0.01	0.02	0.01	0.03	<0.001	0.061	0.15	PFOS and PFHxS were detected at this location at concentrations below the adopted criteria during this reporting period. The findings for PFAS compounds and Metals are generally consistent with historical results.

**Notes:**

< - Less than laboratory limit of reporting

### 3 RAINWATER DATA

**Table 7** presents the rainfall data from Williamtown RAAF base (Station Number: 061078, Latitude: 32.79°S; Longitude: 151.84°E; Elevation: 8 m) for the period 2022/23. The total monthly rainfall for March 2023 was recorded to be below the monthly mean and has remained stable when compared to the previous two months. Based on current rainfall data (mean and monthly totals) for March 2023, it is expected that groundwater elevations will stabilise during the subsequent months due to a lag in groundwater response, consistent with current groundwater trend data.

**Table 7: 2022-2023 Rainfall data (12-month period)**

Date	Apr (22)	May (22)	Jun (22)	Jul (22)	Aug (22)	Sep (22)	Oct (22)	Nov (22)	Dec (22)	Jan (23)	Feb (23)	Mar (23)
1st	13.6	2.0	0	0	0	2.0	4.4	9	0	0	0	0.2
2nd	1.4	0	0	14.6	0.2	0	0	0	0	0	0	0
3rd	0	0	0	42.0	0	28.0	0	0	0	0	0	0
4th	ND	0	1.6	59.8	0	4.2	0	0.4	0	0	0.6	1
5th	0.2	4.0	0	49.8	12.0	0.4	0	0	0	13.8	0	0
6th	0.2	ND	0	36.6	0	0	23.4	0	0.4	5.6	0	0
7th	0	0	0	37.0	0	0.2	0.2	0	0	21.2	0	0
8th	36.2	0	0	0	0	0	6.6	0	0	4.8	0	0
9th	1.2	0	0	0	1.4	0.2	32.6	0	0	-	0	0
10th	2.0	1.8	0	3.2	18.4	2.2	0	0	0	0	0	0
11th	0.2	15.8	0	44.2	0.2	0	1.2	0	0	0	0.2	0
12th	8.4	8.8	0	0.2	0	0	0.2	0	0	0	0	0
13th	15.8	5.8	0	0	5.2	0	0	2.8	5.6	0	0	4.2
14th	10.8	4.0	0	12.4	0.2	0.6	0.2	24.2	0	0	21.2	1.6
15th	1.2	0	0	12.0	0	0.2	0.2	-	0	-	1	7.4
16th	0.2	0	0	0	0	5.4	0	-	0.2	0	0.2	0.2
17th	0	0	0	0	0	0	0.4	0	4.2	0	0	0
18th	0	0	1.0	0	0	0	0	0	2.8	0	0	0
19th	0	0	18.4	0.2	0	0	0	0	3	0.2	1.8	0
20th	0.2	2.6	7.4	7.8	0	0	1.6	0	0	21.4	0.2	0
21st	0	15.0	0.2	0.4	0	0	4	0	2	0.8	0	0.6
22nd	14.6	4.4	0	2.0	0	7.2	3.4	0	0	9.0	45.6	0
23rd	6.4	33.0	0	0	0	5.4	2.2	0	0.2	4.4	35	0
24th	10.0	8.0	0	1.8	0.6	0.4	3.4	0	0.8	0	1.2	25.6
25th	0.2	4.6	0	1.4	0	4.6	5.6	0	0	0	0	31.4
26th	0.2	0	0	1.2	0	0.2	0.4	1.6	0	0	0	1.8
27th	0.2	0	0	0.6	0	0	0	0	0	3.6	0	0
28th	0.6	0.2	0	0	0.2	0.2	0.8	12	0	0	0.4	22.4
29th	0.2	0	0	0	0	0	0	0	0	0	-	8.8



30th	0	0	0	0.2	0	13.0	0	0	0	3.4	-	0.8
31st	-	4.2	-	0	0	-	0	-	0	18.0	-	0
Total	124.0	114.2	28.6	327.4	38.4	74.4	90.8	50.0	19.2	106.2	107.4	106
Historical Mean	109.5	108.6	124.6	72.6	72.8	60.6	75.9	82.9	77.8	99.5	118.8	128.3

**Notes:**

ND – no data retrieved.

## 4 DATA TRENDS

Data trends, taken from analyses undertaken throughout the duration of the sampling program (January 2019 – current), are provided as **Attachment 4**. Generally, 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 the October 2022 water monitoring event until present, groundwater elevations have been observed to follow a decreasing trend, likely attributed to the below average rainfall and higher evapotranspiration rates during the warmer months.

Overall, groundwater levels for the current month generally appear to be stabilising following the previous February monitoring event, as noted in **Section 3**. Based on these trends and following the marginally below average rainfalls recorded for the previous three months, it would be expected that groundwater elevations are likely to stabilise across the site due in part to a lag in groundwater response observed following rainfall events.

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

- Iron – The reported Iron concentration at BH6 (4.97mg/L) has been on a generally increasing trend since April 2022. This is the second time in the past 6 months that Iron concentrations at this location have exceeded the site-specific trigger value, the first occurring in November 2022 (4.39mg/L).
- Field pH –
  - Field pH results recorded at BH6 have stabilised with results that are generally below the site-specific trigger value range. This location has recorded six exceedances within the past 12 months including during this most recent March 2023 GME.
  - Field pH recorded at BH9A during the previous February monitoring event (3.83) has returned to levels within the site-specific trigger value range.
- PFAS – PFOS and PFHxS were again detected in the WPW2 sample during the current March 2023 sampling event. This is the first sample taken from the new sand wash plant whilst operational. These analytes were within the range expected based on historical results and all found below the site-specific trigger values.



## 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 March 2023 monitoring event.

The two analyte exceedances recorded during the March 2023 GME occurred at BH6, located 860m upgradient from current quarrying activities. These exceeded results are within the range of past values recorded at the site and there is no cause to suggest that the elevated concentrations are related to quarrying activities. Iron concentrations have been on an increasing trend which will be monitored during future sampling rounds, as per Section 3 from the SWMP below. The marginal pH exceedance is within the range of previous values and as outlined below, in Section 4a, it is suggested that the trigger value may not fully account for seasonal changes and should be reviewed when updating the management plan.

*3. Where the 72-hour followup sampling is not required (as per 8.6.1 p2), but the result is above trigger value, re-sample location and elevated analyte in the following monitoring round to gauge if the previous exceedance was an isolated occurrence potentially due to unknown sampling error, laboratory error, an isolated natural change or may be symptomatic of broader changes in water quality.*

*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.*

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

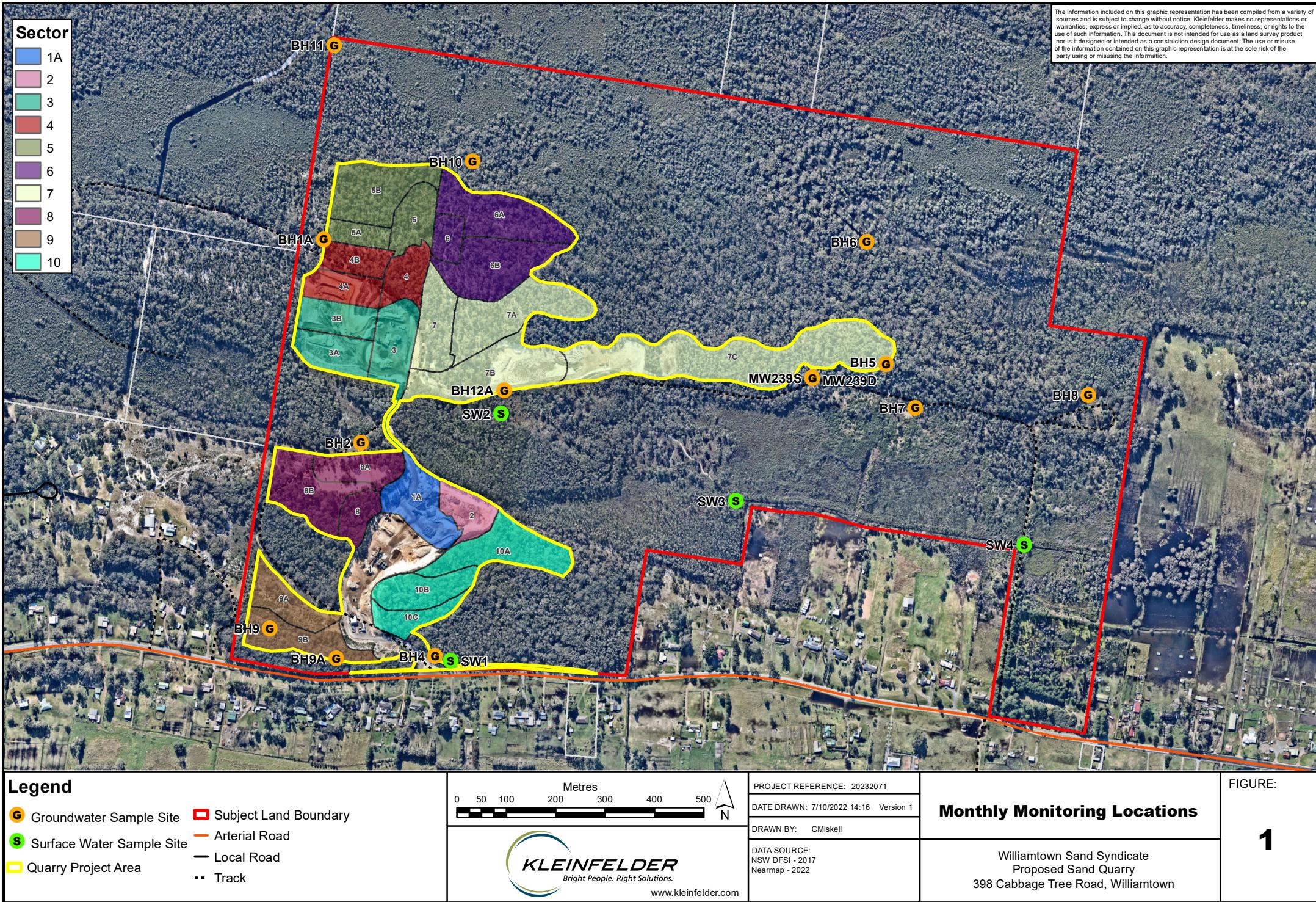
Attachment 3: Lab results

Attachment 4: Data Trends



## ATTACHMENT 1: FIGURES







## ATTACHMENT 2: RESULTS TABLES AND FIELD RECORDS





Table 1  
Groundwater Hydrocarbons

Analyte		BTEXN								Total Petroleum Hydrocarbons						Total Petroleum Hydro	
		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	
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	
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
BH1	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	340	
	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	
BH5	22-Feb-19	< 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	
	15-Feb-23	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100	
BH6	22-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100	
	14-Mar-19	< 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	&lt											

Table 1  
Groundwater Hydrocarbons

Analyte		BTEXN								Total Petroleum Hydrocarbons						Total Petroleum Hydro	
		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	
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	
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
BH8	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	
	21-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100	
	14-Mar-19	< 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	
BH9A	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	
	22-Sep-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100	
	13-Oct-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.											

Table 1  
Groundwater Hydrocarbons

Analyte		BTEXN								Total Petroleum Hydrocarbons						Total Petroleum Hydro	
Units		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	
		µg/L	µg/L	µg/L	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)		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
BH12	19-Aug-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100	
	22-Sep-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100	
	13-Oct-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	
	06-Mar-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-Sep-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	
BH12A	22-Sep-21	< 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	
MW239S	22-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-	-	-	< 50	< 100	
	14-Mar-19	< 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	<													

Table 1  
Groundwater 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
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	--	--	--	--	--	--
Sample Name	Sample Date														
BH1	15-Mar-19	< 50	< 50	1,690	1,690	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	-	-	30	30	< 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	< 100
	16-Jul-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 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	< 100
	15-Oct-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	19-Aug-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	22-Sep-21	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	13-Oct-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Nov-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	24-Feb-22	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
BH1A	15-Feb-23	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
BH2	22-Feb-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	15-Mar-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	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	< 100
	16-Jul-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 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	< 100
	15-Oct-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	18-Nov-19	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Sep-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Oct-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Nov-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Dec-20	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	14-Jan-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Feb-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	17-Mar-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	19-Aug-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100
	16-Nov-21	< 50	< 50	< 20	< 20	-	-	-	-	< 100	< 100				

Table 1  
Groundwater 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
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	--	--	--	--	--	--
BH1	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	340	< 20	< 20	-	-	-	-	-	< 100	< 100	370	< 100	370
	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
BH5	22-Feb-19	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	24-Feb-22	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	15-Feb-23	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
BH6	22-Feb-19	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	-	-	< 20	< 20	< 100	< 100	< 100	< 100	< 100	-	-	-	-	-
	16-May-19	-	-	< 20	< 20	< 100	< 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	< 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
BH7	22-Feb-19	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	-	-	< 20	< 20	< 100	< 100	< 100	< 100	< 100	-	-	-	-	-

Table 1  
Groundwater 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
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	--	--	--	--	--	--
	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
BH8	21-Feb-19	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	-	-	< 20	< 20	< 100	< 100	< 100	< 100	< 100	-	-	-	-	-
	16-May-19	-	-	< 20	< 20	< 100	< 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	< 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
BH9A	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
	22-Sep-21	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	13-Oct-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	<													

Table 1  
Groundwater 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
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	--	--	--	--	--	--
	19-Aug-21	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
BH12	22-Sep-21	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	13-Oct-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
	06-Mar-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-Sep-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
BH12A	22-Sep-21	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	13-Oct-21	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
MW239S	15-Feb-23	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	22-Feb-19	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	< 50	< 50	< 20	< 20	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	-	-	< 20	< 20	< 100	< 100	< 100	< 100	< 100	-	-	-	-	-
	16-May-19	-	-	< 20	< 20	< 100	< 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	< 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	< 20	-	-	-	-	< 100	< 100	< 100	< 100	< 100

Table 2  
Groundwater Inorganics

Analyte		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N	Nitrate	Nitrate as N
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	--	--	--	--
Sample Name	Sample Date														
BH1	15-Mar-19	11	2.0	1.0	< 1.0	< 1.0	25	< 0.1	-	-	-	-	-	-	-
	23-Apr-19	14	1.0	2.0	< 1.0	4.0	25	< 0.1	-	-	-	-	-	-	-
	16-May-19	12	< 1.0	2.0	< 1.0	5.0	25	< 0.1	-	0.03	< 0.01	-	< 0.01	-	< 0.01
	14-Jun-19	10	< 1.0	2.0	< 1.0	3.0	24	< 0.1	-	-	-	-	-	-	-
	16-Jul-19	15	< 1.0	2.0	< 1.0	4.0	23	< 0.1	-	-	-	-	-	-	-
	15-Aug-19	14	< 1.0	2.0	< 1.0	2.0	21	< 0.1	-	-	-	-	-	-	-
	16-Sep-19	13	< 1.0	2.0	< 1.0	2.0	20	< 0.1	-	< 0.01	0.06	-	< 0.01	-	< 0.01
	15-Oct-19	13	< 1.0	2.0	< 1.0	2.0	21	< 0.1	-	-	-	-	-	-	-
	18-Nov-19	16	< 1.0	2.0	< 1.0	3.0	23	0.1	< 0.01	< 0.01	-	-	< 0.01	0.01	-
	16-Sep-20	13	< 1.0	2.0	< 1.0	2.0	21	< 0.1	-	-	-	-	-	-	-
	16-Oct-20	14	< 1.0	2.0	< 1.0	4.0	21	< 0.1	-	-	-	-	-	-	-
	16-Nov-20	11	< 1.0	2.0	< 1.0	5.0	18	< 0.1	-	< 0.01	0.02	-	< 0.01	-	< 0.01
	16-Dec-20	13	< 1.0	2.0	1.0	6.0	22	< 0.1	-	-	-	-	-	-	-
	14-Jan-21	12	< 1.0	2.0	< 1.0	5.0	23	< 0.1	-	-	-	-	-	-	-
	16-Feb-21	14	< 1.0	2.0	1.0	5.0	25	< 0.1	-	< 0.01	< 0.01	-	< 0.01	-	0.02
	17-Mar-21	14	1.0	2.0	< 1.0	4.0	23	< 0.1	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	14	1.0	3.0	< 1.0	10	23	< 0.1	-	-	< 0.01	< 0.01	-	0.02	-
BH1A	15-Feb-23	9.0	< 1.0	< 1.0	< 1.0	7.0	13	< 0.1	-	< 0.01	< 0.01	-	< 0.01	-	0.26
BH2	22-Feb-19	12	2.0	2.0	< 1.0	6.0	22	0.1	-	< 0.01	0.28	-	< 0.01	-	2.76
	15-Mar-19	10	3.0	2.0	< 1.0	7.0	23	< 0.1	-	-	-	-	-	-	-
	23-Apr-19	14	2.0	2.0	< 1.0	6.0	23	< 0.1	-	-	-	-	-	-	-
	16-May-19	12	2.0	2.0	< 1.0	21	22	< 0.1	-	< 0.01	0.26	-	< 0.01	-	0.38
	14-Jun-19	11	1.0	2.0	< 1.0	5.0	23	< 0.1	-	-	-	-	-	-	-
	16-Jul-19	13	2.0	2.0	< 1.0	9.0	20	< 0.1	-	-	-	-	-	-	-
	15-Aug-19	12	1.0	2.0	< 1.0	8.0	20	< 0.1	-	-	-	-	-	-	-
	16-Sep-19	11	2.0	2.0	< 1.0	8.0	18	< 0.1	-	< 0.01	0.28	-	< 0.01	-	1.07
	15-Oct-19	12	2.0	2.0	< 1.0	5.0	20	< 0.1	-	-	-	-	-	-	-
	18-Nov-19	14	2.0	1.0	< 1.0	7.0	19	< 0.1	0.21	< 0.01	-	-	< 0.01	1.01	-
	16-Sep-20	11	2.0	2.0	< 1.0	7.0	17	< 0.1	-	-	-	-	-	-	-
	16-Oct-20	11	2.0	2.0	< 1.0	6.0	16	< 0.1	-	-	-	-	-	-	-
	16-Nov-20	11	2.0	2.0	< 1.0	9.0	16	< 0.1	-	< 0.01	0.48	-	< 0.01	-	2.88
	16-Dec-20	11	2.0	2.0	< 1.0	7.0	15	< 0.1	-	-	-	-	-	-	-
	14-Jan-21	9.0	2.0	2.0	< 1.0	7.0	13	< 0.1	-	-	-	-	-	-	-
	16-Feb-21	12	1.0	1.0	< 1.0	8.0	12	< 0.1	-	< 0.01	0.15	-	< 0.01	-	2.58
	17-Mar-21	10	2.0	2.0	< 1.0	7.0	13	< 0.1	-	-	-	-	-	-	-
	19-Aug-21	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	8.0	2.0	1.0	< 1.0	7.0	14	< 0.1	-	-	0.06	< 0.01	-	0.05	-
BH3	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	9.0	< 1.0	1.0	< 1.0	6.0	16	< 0.1	-	< 0.01	0.22	-	< 0.01	-	0.04
	21-Feb-19	4.0	4.0	1.0	< 1.0	4.0	10	< 0.1	-	< 0.01	2.76	-	< 0.01	-	0.78
	21-Feb-19	8.0	2.0	1.0	1.0	5.0	17	< 0.1	-	< 0.01	0.19	-	< 0.01	-	0.35
	15-Mar-19	9.0	2.0	< 1.0	< 1.0	5.0	18	< 0.1	-	-	-	-	-	-	-
	23-Apr-19	10	2.0	1.0	1.0	3.0	19	< 0.1	-	-	-	-	-	-	-
	16-May-19	9.0	2.0	1.0	1.0	22	19	< 0.1	-	< 0.01	0.97	-	< 0.01	-	0.29
BH4	14-Jun-19	6.0	1.0	1.0	< 1.0	4.0	18	< 0.1	-	-	-	-	-	-	-
	16-Jul-19	10	2.0	2.0	1.0	6.0	18	< 0.1	-	-	-	-	-	-	-
	15-Aug-19	8.0	2.0	1.0	1.0	5.0	16	< 0.1	-	-	-	-	-	-	-
	16-Sep-19														

Table 2  
Groundwater Inorganics

Analyte		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N	Nitrate	Nitrate as N
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	--	--	--	--
BH5	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
	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	-	-	-	-	-	-	-
	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
BH7	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	-	-	-	-	-	-	-
	16-Feb-21	34	< 1.0	6.0	2.0	12	64	< 0.1	-	<					



Table 2  
Groundwater Inorganics

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

**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 2  
Groundwater Inorganics

Analyte		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
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	<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>
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>	-	-	-	<			

Table 2  
Groundwater Inorganics

Analyte		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
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	--	--	--	--	--	--	--	--	--	--
BH5	16-Dec-20	-	-	-	-	<b>1.47</b>	<b>1.58</b>	-	-	-	<b>3.0</b>	< 1.0	< 1.0	<b>3.0</b>
	14-Jan-21	-	-	-	-	<b>1.94</b>	<b>2.02</b>	-	-	-	<b>1.0</b>	< 1.0	< 1.0	<b>1.0</b>
	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	<b>1.0</b>
	17-Mar-21	-	-	-	-	<b>4.38</b>	<b>4.21</b>	<b>1.96</b>	-	-	<b>3.0</b>	< 1.0	< 1.0	<b>3.0</b>
	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	<b>2.0</b>
	12-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-	-
	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
	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	<b>3.0</b>
	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	<b>2.0</b>
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	<b>2.0</b>
	23-Apr-19	-	-	-	-	<b>1.59</b>	<b>1.56</b>	-	-	-	< 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
	16-Jul-19	-	-	-	-	<b>1.46</b>	<b>1.4</b>	-	-	-	< 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
	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	<b>2.0</b>
	15-Oct-19	-	-	-	-	<b>1.54</b>	<b>1.43</b>	-	-	-	< 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	<b>1.0</b>
	16-Oct-20	-	-	-	-	<b>2.1</b>	<b>2.14</b>	-	-	-	<b>4.0</b>	< 1.0	< 1.0	<b>4.0</b>
	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
	14-Jan-21	-	-	-	-	<b>2.31</b>	<b>2.5</b>	-	-	-	< 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	<b>3.0</b>
	17-Mar-21	-	-	-	-	<b>3.18</b>	<b>2.82</b>	-	-	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>
	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	-	-	-	-	-	-	-	-	-	-	-	-	-
	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
BH7	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
	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
	16-Jul-19	-	-	-	-	<b>2.03</b>	<b>1.55</b>	-	-	-	< 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	<b>8.0</b>
	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	<b>5.0</b>
	15-Oct-19	-	-	-	-	<b>1.94</b>	<b>1.74</b>	-	-	-	< 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

Table 2  
Groundwater Inorganics

Analyte		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
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	--	--	--	--	--	--	--	--	--	--
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>
BH8	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
	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
BH9A	16-Sep-20	-	-	-	-	<b>2.21</b>	<b>2.06</b>	-	-	-	<b>7.0</b>	< 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	<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>
BH11	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.</b>							

Table 2  
Groundwater Inorganics

Analyte		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
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	--	--	--	--	--	--	--	--	--	--
		14-Jan-21	-	-	-	1.88	2.03	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
BH12	16-Feb-21	< 0.01	<b>0.08</b>	< 0.1	< 0.1	1.83	1.8	-	2.98	-	< 1.0	< 1.0	< 1.0	< 1.0
	17-Mar-21	-	-	-	-	1.76	1.71	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	19-Aug-21	< 0.01	< 0.01	1.4	1.4	3.1	3.29	3.0	4.6	-	< 1.0	< 1.0	< 1.0	< 1.0
	22-Sep-21	<b>0.01</b>	<b>0.01</b>	0.8	0.8	3.01	3.1	1.54	4.18	-	< 1.0	< 1.0	< 1.0	< 1.0
	13-Oct-21	< 0.01	< 0.01	0.8	0.8	2.88	3.14	4.42	3.79	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Nov-21	< 0.01	< 0.01	0.9	0.9	2.27	2.05	-	2.75	-	< 1.0	< 1.0	< 1.0	< 1.0
	24-Feb-22	< 0.01	<b>0.02</b>	0.6	0.6	2.28	2.4	-	-	<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>	1.0	1.0	0.9	0.82	-	2.4	-	< 1.0	< 1.0	< 1.0	< 1.0
BH12A	16-Sep-20	-	-	-	-	1.64	1.57	-	-	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>
	16-Nov-20	<b>0.02</b>	< 0.01	0.2	0.2	1.31	1.52	-	2.27	-	<b>7.0</b>	< 1.0	< 1.0	<b>7.0</b>
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>0.01</b>	<b>0.01</b>	0.4	0.4	1.25	1.2	-	-	<b>2.0</b>	-	< 1.0	< 1.0	<b>2.0</b>
BH12A		15-Feb-23	<b>0.04</b>	<b>0.21</b>	3.2	3.2	0.86	0.98	-	2.26	-	< 1.0	< 1.0	< 1.0
MW239S	22-Feb-19	< 0.01	<b>0.18</b>	3.9	3.9	3.15	3.06	1.43	5.21	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Mar-19	-	-	-	-	3.28	3.64	5.18	-	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>
	23-Apr-19	-	-	-	-	3.38	2.92	7.32	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-May-19	< 0.01	<b>0.09</b>	1.7	1.7	2.76	2.75	-	4.44	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jun-19	-	-	-	-	2.67	2.86	-	-	-	<b>7.0</b>	< 1.0	< 1.0	<b>7.0</b>
	16-Jul-19	-	-	-	-	2.86	2.39	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Aug-19	-	-	-	-	2.92	2.71	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-19	< 0.01	<b>0.1</b>	1.4	1.4	2.91	2.69	-	4.7	-	< 1.0	< 1.0	< 1.0	< 1.0
	15-Oct-19	-	-	-	-	3.02	3.21	3.15	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	18-Nov-19	< 0.01	<b>0.17</b>	1.2	1.2	3.26	3.5	3.48	5.38	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Sep-20	-	-	-	-	2.99	3.24	3.95	-	-	<b>3.0</b>	< 1.0	< 1.0	<b>3.0</b>
	16-Oct-20	-	-	-	-	4.14	4.57	4.99	-	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</b>
	16-Nov-20	< 0.01	<b>0.01</b>	2.6	2.6	4.21	4.3	1.0	4.78	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Dec-20	-	-	-	-	3.81	4.05	3.15	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	14-Jan-21	-	-	-	-	3.31	3.65	4.78	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	16-Feb-21	< 0.01	<b>0.06</b>	2.5	2.5	4.03	4.29	3.1	4.21	-	< 1.0	< 1.0	< 1.0	< 1.0
	17-Mar-21	-	-	-	-	2.73	2.76	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>0.16</b>	<b>0.04</b>	1.8	1.6	1.29	1.3	-	-	<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	< 0.01	<b>0.04</b>	1.5	1.5	0.77	0.89	-	1.98	-	<b>2.0</b>	< 1.0	< 1.0	<b>2.0</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:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Analyte		Inorganics							
		Total Hardness as CaCO <sub>3</sub>	Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
Units		mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	500	--	--	4.2-6.5	--	--
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
BH3	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>	-	-
	21-Feb-19	<b>14</b>	-	<b>60</b>	<b>438</b>	<b>3,800</b>	<b>5.55</b>	-	-
BH4	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>	-	-
	16-Oct-20	<b>15</b>	-	<b>133</b>	<b>86</b>	-	<b>5.21</b>	-	-
	16-Nov-20	<b>8.0</b>	-	<b>146</b>	<b>95</b>	<b>15</b>	<b>4.98</b>	-	-

Table 2  
Groundwater Inorganics

Analyte		Total Hardness as CaCO <sub>3</sub>	Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
Units		mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	500	--	--	4.2-6.5	--	--
	16-Dec-20	<b>19</b>	-	<b>193</b>	<b>125</b>	-	<b>4.81</b>	-	-
	14-Jan-21	<b>19</b>	-	<b>258</b>	<b>168</b>	-	<b>5.23</b>	-	-
	16-Feb-21	<b>42</b>	-	<b>445</b>	<b>289</b>	<b>56</b>	<b>4.86</b>	-	-
	17-Mar-21	<b>50</b>	-	<b>501</b>	<b>326</b>	-	<b>5.07</b>	-	-
	19-Aug-21	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	<b>4.51</b>	<b>56</b>	-
	24-Feb-22	<b>11</b>	-	<b>74</b>	<b>48</b>	-	<b>5.07</b>	-	< 0.01
	12-Apr-22	-	-	-	-	-	-	<b>61</b>	-
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	<b>7.0</b>	-	<b>84</b>	<b>55</b>	-	<b>5.06</b>	-	-
BH5	22-Feb-19	<b>25</b>	-	<b>250</b>	<b>211</b>	<b>458</b>	<b>4.87</b>	-	-
	24-Feb-22	<b>33</b>	-	<b>276</b>	<b>179</b>	-	<b>4.67</b>	-	< 0.01
	15-Feb-23	<b>8.0</b>	-	<b>126</b>	<b>82</b>	-	<b>4.64</b>	-	-
	22-Feb-19	<b>24</b>	-	<b>177</b>	<b>144</b>	<b>41</b>	<b>4.37</b>	-	-
BH6	14-Mar-19	<b>21</b>	-	<b>179</b>	<b>116</b>	<b>144</b>	<b>4.95</b>	-	-
	23-Apr-19	<b>24</b>	-	<b>136</b>	<b>115</b>	<b>62</b>	<b>4.64</b>	-	-
	16-May-19	<b>24</b>	-	<b>175</b>	<b>214</b>	<b>106</b>	<b>4.88</b>	-	-
	14-Jun-19	<b>21</b>	-	<b>174</b>	<b>90</b>	<b>32</b>	<b>4.82</b>	-	-
	16-Jul-19	<b>21</b>	-	<b>161</b>	<b>82</b>	<b>23</b>	<b>4.73</b>	-	-
	15-Aug-19	<b>17</b>	-	<b>201</b>	<b>104</b>	<b>16</b>	<b>4.87</b>	-	-
	16-Sep-19	<b>20</b>	-	<b>197</b>	<b>124</b>	<b>71</b>	<b>4.68</b>	-	-
	15-Oct-19	<b>21</b>	-	<b>202</b>	<b>131</b>	-	<b>5.17</b>	-	-
	18-Nov-19	<b>20</b>	-	<b>204</b>	<b>133</b>	-	<b>5.32</b>	-	-
	16-Sep-20	<b>21</b>	-	<b>273</b>	<b>121</b>	<b>49</b>	<b>4.98</b>	-	-
	16-Oct-20	<b>26</b>	-	<b>249</b>	<b>162</b>	-	<b>5.3</b>	-	-
	16-Nov-20	<b>28</b>	-	<b>321</b>	<b>209</b>	<b>12</b>	<b>4.45</b>	-	-
	16-Dec-20	<b>32</b>	-	<b>321</b>	<b>209</b>	-	<b>4.63</b>	-	-
	14-Jan-21	<b>28</b>	-	<b>332</b>	<b>216</b>	-	<b>4.33</b>	-	-
	16-Feb-21	<b>32</b>	-	<b>316</b>	<b>205</b>	<b>20</b>	<b>4.89</b>	-	-
	17-Mar-21	<b>47</b>	-	<b>358</b>	<b>233</b>	-	<b>5.07</b>	-	-
	19-Aug-21	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	<b>6.1</b>	<b>51</b>	-
	24-Feb-22	<b>16</b>	-	<b>241</b>	<b>157</b>	-	<b>3.92</b>	-	< 0.01
	12-Apr-22	-	-	-	-	-	-	<b>33</b>	-
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	<b>16</b>	-	<b>265</b>	<b>172</b>	-	<b>3.95</b>	-	-
BH7	22-Feb-19	<b>20</b>	-	<b>213</b>	<b>196</b>	<b>152</b>	<b>4.76</b>	-	-
	14-Mar-19	<b>25</b>	-	<b>271</b>	<b>176</b>	<b>149</b>	<b>4.73</b>	-	-
	23-Apr-19	<b>25</b>	-	<b>205</b>	<b>185</b>	<b>20</b>	<b>4.51</b>	-	-
	16-May-19	<b>20</b>	-	<b>235</b>	<b>310</b>	<b>29</b>	<b>4.87</b>	-	-
	14-Jun-19	<b>16</b>	-	<b>213</b>	<b>145</b>	<b>39</b>	<b>4.91</b>	-	-
	16-Jul-19	<b>20</b>	-	<b>202</b>	<b>164</b>	<b>61</b>	<b>5.0</b>	-	-
	15-Aug-19	<b>16</b>	-	<b>232</b>	<b>168</b>	<b>44</b>	<b>5.53</b>	-	-
	16-Sep-19	<b>16</b>	-	<b>222</b>	<b>181</b>	<b>44</b>	<b>5.07</b>	-	-
	15-Oct-19	<b>20</b>	-	<b>252</b>	<b>164</b>	-	<b>4.95</b>	-	-
	18-Nov-19	<b>20</b>	-	<b>239</b>	<b>155</b>	-	<b>4.97</b>	-	-
	16-Sep-20	<b>20</b>	-	<b>248</b>	<b>140</b>	<b>24</b>	<b>4.81</b>	-	-
	16-Oct-20	<b>20</b>	-	<b>243</b>	<b>158</b>	-	<b>4.87</b>	-	-
	16-Nov-20	<b>20</b>	-	<b>245</b>	<b>159</b>	<b>6.0</b>	<b>4.57</b>	-	-
	16-Dec-20	<b>25</b>	-	<b>265</b>	<b>172</b>	-	<b>4.34</b>	-	-
	14-Jan-21	<b>20</b>	-	<b>267</b>	<b>174</b>	-	<b>4.62</b>	-	-
	16-Feb-21	<b>25</b>	-	<b>270</b>	<b>176</b>	<b>9.0</b>	<b>4.54</b>	-	-
	17-Mar-21	<b>29</b>	-	<b>279</b>	<b>181</b>	-	<b>4.9</b>	-	-
	19-Aug-21	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	<b>5.22</b>	<b>170</b>	-
	24-Feb-22	<b>8.0</b>	-	<b>124</b>	<b>81</b>	-	<b>4.43</b>	-	< 0.01

Table 2  
Groundwater Inorganics

Analyte		Total Hardness as CaCO <sub>3</sub>	Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
Units		mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	500	--	--	4.2-6.5	--	--
	12-Apr-22	-	-	-	-	-	-	<b>33</b>	-
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	<b>4.0</b>	-	<b>66</b>	<b>43</b>	-	<b>4.83</b>	-	-
BH8	21-Feb-19	<b>25</b>	-	<b>352</b>	<b>258</b>	<b>438</b>	<b>4.46</b>	-	-
	14-Mar-19	<b>25</b>	-	<b>319</b>	<b>207</b>	<b>138</b>	<b>4.77</b>	-	-
	23-Apr-19	<b>29</b>	-	<b>264</b>	<b>223</b>	<b>121</b>	<b>4.76</b>	-	-
	16-May-19	<b>16</b>	-	<b>302</b>	<b>354</b>	<b>312</b>	<b>4.9</b>	-	-
	14-Jun-19	<b>20</b>	-	<b>315</b>	<b>194</b>	<b>83</b>	<b>4.82</b>	-	-
	16-Jul-19	<b>20</b>	-	<b>353</b>	<b>226</b>	<b>145</b>	<b>4.78</b>	-	-
	15-Aug-19	<b>12</b>	-	<b>260</b>	<b>140</b>	<b>98</b>	<b>5.0</b>	-	-
	16-Sep-19	<b>12</b>	-	<b>293</b>	<b>206</b>	<b>79</b>	<b>4.85</b>	-	-
	15-Oct-19	<b>16</b>	-	<b>303</b>	<b>197</b>	-	<b>5.02</b>	-	-
	18-Nov-19	<b>16</b>	-	<b>316</b>	<b>205</b>	-	<b>5.12</b>	-	-
	16-Sep-20	<b>16</b>	-	<b>391</b>	<b>216</b>	<b>34</b>	<b>4.79</b>	-	-
	16-Oct-20	<b>16</b>	-	<b>268</b>	<b>174</b>	-	<b>5.01</b>	-	-
	16-Nov-20	<b>25</b>	-	<b>341</b>	<b>222</b>	<b>14</b>	<b>4.75</b>	-	-
	16-Dec-20	<b>16</b>	-	<b>256</b>	<b>166</b>	-	<b>4.82</b>	-	-
	14-Jan-21	<b>20</b>	-	<b>317</b>	<b>206</b>	-	<b>4.76</b>	-	-
	16-Feb-21	<b>25</b>	-	<b>335</b>	<b>218</b>	<b>63</b>	<b>4.68</b>	-	-
	17-Mar-21	<b>25</b>	-	<b>329</b>	<b>214</b>	-	<b>4.57</b>	-	-
	19-Aug-21	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	-	-	-	-	-	-
	24-Feb-22	<b>20</b>	-	<b>329</b>	<b>214</b>	-	<b>4.67</b>	-	< 0.01
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	<b>4.0</b>	-	<b>135</b>	<b>88</b>	-	<b>4.93</b>	-	-
BH9A	16-Sep-20	<b>33</b>	-	<b>276</b>	<b>310</b>	<b>1,060</b>	<b>5.78</b>	-	-
	16-Oct-20	<b>32</b>	-	<b>237</b>	<b>154</b>	-	<b>5.15</b>	-	-
	16-Nov-20	<b>21</b>	-	<b>195</b>	<b>127</b>	<b>2,220</b>	<b>4.93</b>	-	-
	16-Dec-20	<b>15</b>	-	<b>175</b>	<b>114</b>	-	<b>4.83</b>	-	-
	14-Jan-21	<b>15</b>	-	<b>196</b>	<b>127</b>	-	<b>4.96</b>	-	-
	16-Feb-21	<b>15</b>	-	<b>181</b>	<b>118</b>	<b>2,030</b>	<b>4.72</b>	-	-
	17-Mar-21	<b>15</b>	-	<b>164</b>	<b>107</b>	-	<b>5.23</b>	-	-
	19-Aug-21	<b>15</b>	-	<b>180</b>	<b>117</b>	-	<b>5.03</b>	-	-
	22-Sep-21	<b>11</b>	-	<b>172</b>	<b>112</b>	-	<b>4.99</b>	-	-
	13-Oct-21	<b>8.0</b>	-	<b>156</b>	<b>101</b>	-	<b>5.21</b>	<b>105</b>	-
	16-Nov-21	-	<b>17</b>	<b>163</b>	<b>106</b>	-	<b>5.51</b>	-	-
	24-Feb-22	<b>21</b>	-	<b>164</b>	<b>107</b>	-	<b>4.85</b>	-	< 0.01
	12-Apr-22	-	-	-	-	-	-	<b>289</b>	-
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	<b>8.0</b>	-	<b>141</b>	<b>92</b>	-	<b>4.65</b>	-	-
BH11	21-Feb-19	<b>41</b>	-	<b>346</b>	<b>278</b>	<b>144</b>	<b>4.67</b>	-	-
	15-Mar-19	<b>8.0</b>	-	<b>186</b>	<b>121</b>	<b>152</b>	<b>4.82</b>	-	-
	23-Apr-19	<b>20</b>	-	<b>150</b>	<b>135</b>	<b>112</b>	<b>4.99</b>	-	-
	16-May-19	<b>16</b>	-	<b>188</b>	<b>216</b>	<b>156</b>	<b>4.91</b>	-	-
	14-Jun-19	<b>12</b>	-	<b>175</b>	<b>107</b>	<b>136</b>	<b>4.84</b>	-	-
	16-Jul-19	<b>33</b>	-	<b>318</b>	<b>192</b>	<b>223</b>	<b>4.68</b>	-	-
	15-Aug-19	<b>12</b>	-	<b>197</b>	<b>135</b>	<b>303</b>	<b>4.88</b>	-	-
	16-Sep-19	<b>12</b>	-	<b>195</b>	<b>140</b>	<b>533</b>	<b>4.66</b>	-	-
	15-Oct-19	<b>12</b>	-	<b>194</b>	<b>126</b>	-	<b>4.92</b>	-	-
	18-Nov-19	<b>12</b>	-	<b>193</b>	<b>125</b>	-	<b>5.12</b>	-	-
	16-Sep-20	<b>20</b>	-	<b>223</b>	<b>111</b>	<b>136</b>	<b>4.61</b>	-	-
	16-Oct-20	<b>25</b>	-	<b>218</b>	<b>142</b>	-	<b>4.8</b>	-	-
	16-Nov-20	<b>20</b>	-	<b>217</b>	<b>141</b>	<b>100</b>	<b>4.81</b>	-	-
	16-Dec-20	<b>25</b>	-	<b>249</b>	<b>162</b>	-	<b>4.74</b>	-	-

Table 2  
Groundwater Inorganics

Analyte		Total Hardness as CaCO <sub>3</sub>	Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
Units		mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	500	--	--	4.2-6.5	--	--
	14-Jan-21	<b>25</b>	-	<b>264</b>	<b>172</b>	-	<b>4.41</b>	-	-
	16-Feb-21	<b>20</b>	-	<b>235</b>	<b>153</b>	<b>386</b>	<b>4.73</b>	-	-
	17-Mar-21	<b>25</b>	-	<b>223</b>	<b>145</b>	-	<b>4.66</b>	-	-
	19-Aug-21	<b>29</b>	-	<b>403</b>	<b>262</b>	-	<b>4.38</b>	-	-
	22-Sep-21	<b>25</b>	-	<b>382</b>	<b>248</b>	-	<b>4.47</b>	-	-
	13-Oct-21	<b>33</b>	-	<b>373</b>	<b>242</b>	-	<b>4.27</b>	<b>18</b>	-
	16-Nov-21	-	<b>33</b>	<b>268</b>	<b>174</b>	-	<b>4.54</b>	-	-
	24-Feb-22	<b>25</b>	-	<b>260</b>	<b>169</b>	-	<b>4.57</b>	-	< 0.01
	06-Mar-22	-	-	-	-	-	-	-	-
	12-Apr-22	-	-	-	-	-	-	<b>24</b>	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	<b>8.0</b>	-	<b>118</b>	<b>77</b>	-	<b>4.54</b>	-	-
BH12	16-Sep-20	<b>29</b>	-	<b>206</b>	<b>118</b>	<b>446</b>	<b>5.37</b>	-	-
	16-Nov-20	<b>16</b>	-	<b>190</b>	<b>124</b>	<b>438</b>	<b>5.92</b>	-	-
	13-Oct-21	-	-	-	-	<b>5.75</b>	<b>398</b>	-	-
	24-Feb-22	<b>16</b>	-	<b>148</b>	<b>96</b>	-	<b>5.03</b>	-	< 0.01
BH12A	15-Feb-23	<b>8.0</b>	-	<b>129</b>	<b>84</b>	-	<b>4.91</b>	-	-
MW239S	22-Feb-19	<b>25</b>	-	<b>329</b>	<b>234</b>	<b>149</b>	<b>4.89</b>	-	-
	14-Mar-19	<b>25</b>	-	<b>410</b>	<b>266</b>	<b>504</b>	<b>5.02</b>	-	-
	23-Apr-19	<b>29</b>	-	<b>294</b>	<b>208</b>	<b>385</b>	<b>4.92</b>	-	-
	16-May-19	<b>25</b>	-	<b>327</b>	<b>320</b>	<b>371</b>	<b>4.87</b>	-	-
	14-Jun-19	<b>25</b>	-	<b>334</b>	<b>220</b>	<b>427</b>	<b>5.39</b>	-	-
	16-Jul-19	<b>29</b>	-	<b>353</b>	<b>188</b>	<b>70</b>	<b>4.85</b>	-	-
	15-Aug-19	<b>29</b>	-	<b>359</b>	<b>195</b>	<b>363</b>	<b>4.83</b>	-	-
	16-Sep-19	<b>25</b>	-	<b>373</b>	<b>224</b>	<b>179</b>	<b>4.66</b>	-	-
	15-Oct-19	<b>25</b>	-	<b>404</b>	<b>263</b>	-	<b>4.86</b>	-	-
	18-Nov-19	<b>25</b>	-	<b>419</b>	<b>272</b>	-	<b>4.76</b>	-	-
	16-Sep-20	<b>33</b>	-	<b>390</b>	<b>244</b>	<b>350</b>	<b>5.2</b>	-	-
	16-Oct-20	<b>37</b>	-	<b>458</b>	<b>298</b>	-	<b>4.73</b>	-	-
	16-Nov-20	<b>37</b>	-	<b>489</b>	<b>318</b>	<b>562</b>	<b>4.55</b>	-	-
	16-Dec-20	<b>41</b>	-	<b>484</b>	<b>315</b>	-	<b>4.68</b>	-	-
	14-Jan-21	<b>37</b>	-	<b>430</b>	<b>280</b>	-	<b>4.44</b>	-	-
	16-Feb-21	<b>45</b>	-	<b>488</b>	<b>317</b>	<b>346</b>	<b>4.61</b>	-	-
	17-Mar-21	<b>29</b>	-	<b>343</b>	<b>223</b>	-	<b>4.73</b>	-	-
	13-Oct-21	-	-	-	-	-	<b>4.87</b>	<b>295</b>	-
	24-Feb-22	<b>12</b>	-	<b>159</b>	<b>103</b>	-	<b>4.67</b>	-	< 0.01
	12-Apr-22	-	-	-	-	-	-	<b>104</b>	-
	27-May-22	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-
	15-Feb-23	<b>8.0</b>	-	<b>111</b>	<b>72</b>	-	<b>4.63</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:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 3  
Groundwater Metals

Analyte		Metals																
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium	Zinc	
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	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	0.085 (0.1 for BH1)
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	< 0.01	<b>1.27</b>
	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	<b>0.363</b>	
	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	<b>0.132</b>	
	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	<b>0.074</b>	
	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	<b>0.116</b>	
	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	<b>0.023</b>	
	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	<b>0.034</b>	
	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	<b>0.037</b>	
	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	<b>0.012</b>	
	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	<b>0.016</b>	
	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	<b>0.017</b>	
	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	<b>0.045</b>	
	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	<b>0.077</b>	
	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	<b>0.032</b>	
	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	<b>0.652</b>	
	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	<b>0.596</b>	
	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	<b>0.106</b>	
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	<b>0.013</b>	
	22-Feb-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.002</b>	<b>0.14</b>	< 0.001	<b>0.021</b>	< 0.0001	<b>0.015</b>	< 0.01	< 0.01	<b>0.006</b>	
	15-Mar-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.003</b>	< 0.05	< 0.001	<b>0.02</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005	
	23-Apr-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 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	<b>0.008</b>	
	16-May-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 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	< 0.005	
	14-Jun-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.004</b>	<b>0.08</b>	< 0.001	<b>0.009</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005	
	16-Jul-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 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	<b>0.006</b>	
	15-Aug-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.012</b>	<b>0.08</b>	< 0.001	<b>0.011</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005	
	16-Sep-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 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	<b>0.007</b>	
	15-Oct-19	< 0.001	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	<b>0.006</b>	-	< 0.001	<b>0.011</b>	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.007</b>	
	18-Nov-19	< 0.001	<b>0.007</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001</td										

Table 3  
Groundwater Metals

Analyte		Metals																
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium	Zinc	
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	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	0.085 (0.1 for BH1)	
BH4	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	<b>0.007</b>	
	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	<b>0.007</b>	
	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	<b>0.005</b>	
	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	<b>0.014</b>	
	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	< 0.005	
	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	<b>0.001</b>	< 0.01	< 0.01	<b>0.006</b>
	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	<b>0.018</b>	
	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	<b>0.005</b>	
	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	< 0.005	
	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	<b>0.006</b>	
	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	<b>0.008</b>	
	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	< 0.01	<b>0.019</b>
	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	<b>0.013</b>	
	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	<b>0.006</b>	
	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	< 0.005	
	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	<b>0.006</b>	
	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	<b>0.008</b>	
	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	-	-	< 0.005	
	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>	-	-	-	< 0.001	-	<b>0.05</b>	< 0.05	-	-	-	< 0.001	-	-	<b>0.013</b>	
	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	-	-	<b>0.011</b>	
	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	<b>0.015</b>	
	15-Mar-23	< 0.001	-	-	-	-	-	-	-	-	< 0.05	-	<b>0.022</b>	-	-	-	-	
BH5	22-Feb-19	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	< 0.001	<b>1.4</b>	< 0.001	<b>0.005</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.008</b>	
	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							

Table 3  
Groundwater Metals

Analyte		Metals																
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium	Zinc	
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	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	0.085 (0.1 for BH1)
BH7	17-Jun-22	< 0.001	-	-	-	-	-	-	-	2.7	-	0.005	-	-	-	-	-	-
	27-Jul-22	< 0.001	-	-	-	-	-	-	-	2.38	-	0.001	-	-	-	-	-	-
	12-Aug-22	< 0.001	0.008	-	-	-	< 0.001	-	< 0.001	2.38	-	-	-	< 0.001	-	-	0.008	
	16-Sep-22	0.001	-	-	-	-	-	-	-	3.45	-	0.002	-	-	-	-	-	-
	24-Oct-22	< 0.001	-	-	-	-	-	-	-	3.44	-	0.002	-	-	-	-	-	-
	18-Nov-22	< 0.001	0.009	-	-	-	< 0.001	< 0.001	< 0.001	4.39	-	0.006	-	0.002	-	-	0.005	
	14-Dec-22	< 0.001	-	-	-	-	-	-	-	3.23	-	0.012	-	-	-	-	-	-
	17-Jan-23	< 0.001	-	-	-	-	-	-	-	3.61	-	0.014	-	-	-	-	-	-
	15-Feb-23	< 0.001	0.009	< 0.001	< 0.05	< 0.0001	0.001	< 0.001	0.002	3.82	< 0.001	0.009	< 0.0001	< 0.001	< 0.01	< 0.01	0.032	
	15-Mar-23	< 0.001	-	-	-	-	-	-	-	4.97	-	0.006	-	-	-	-	-	-
BH8	22-Feb-19	< 0.001	0.004	< 0.001	< 0.05	< 0.0001	0.002	0.003	< 0.001	1.8	< 0.001	0.026	< 0.0001	0.004	< 0.01	< 0.01	0.019	
	14-Mar-19	< 0.001	0.01	< 0.001	< 0.05	< 0.0001	0.001	0.003	< 0.001	1.8	< 0.001	0.02	< 0.0001	0.004	< 0.01	< 0.01	0.009	
	23-Apr-19	< 0.001	0.012	< 0.001	< 0.05	< 0.0001	0.002	0.003	< 0.001	2.0	< 0.001	0.026	< 0.0001	0.004	< 0.01	< 0.01	0.01	
	16-May-19	< 0.001	0.008	< 0.001	< 0.05	< 0.0001	0.002	0.003	< 0.001	2.32	< 0.001	0.035	< 0.0001	0.005	< 0.01	< 0.01	0.013	
	14-Jun-19	< 0.001	0.005	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	2.06	< 0.001	0.03	< 0.0001	0.004	< 0.01	< 0.01	0.006	
	16-Jul-19	< 0.001	0.005	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	1.66	< 0.001	0.025	< 0.0001	0.003	< 0.01	< 0.01	< 0.005	
	15-Aug-19	< 0.001	0.005	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	1.54	< 0.001	0.023	< 0.0001	0.003	< 0.01	< 0.01	< 0.005	
	16-Sep-19	< 0.001	0.016	< 0.001	0.06	< 0.0001	0.002	0.002	< 0.001	1.42	0.001	0.024	< 0.0001	0.02	< 0.01	< 0.01	0.085	
	15-Oct-19	< 0.001	0.009	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	-	< 0.001	0.018	< 0.0001	0.003	< 0.01	< 0.01	0.011	
	18-Nov-19	< 0.001	0.016	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	1.1	< 0.001	0.015	< 0.0001	0.013	< 0.01	< 0.01	0.053	
	16-Sep-20	< 0.001	0.013	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	1.67	< 0.001	0.021	< 0.0001	0.003	< 0.01	< 0.01	0.006	
	16-Oct-20	< 0.001	0.009	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	1.49	< 0.001	0.015	< 0.0001	0.003	< 0.01	< 0.01	0.015	
	16-Nov-20	< 0.001	0.006	< 0.001	< 0.05	< 0.0001	0.002	0.003	< 0.001	1.72	< 0.001	0.023	< 0.0001	0.003	< 0.01	< 0.01	0.006	
	16-Dec-20	< 0.001	0.003	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	1.79	< 0.001	0.024	< 0.0001	0.003	< 0.01	< 0.01	< 0.005	
	14-Jan-21	< 0.001	0.004	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	1.65	< 0.001	0.025	< 0.0001	0.004	< 0.01	< 0.01	0.017	
	16-Feb-21	< 0.001	0.004	< 0.001	< 0.05	< 0.0001	0.002	0.002	< 0.001	1.74	< 0.001	0.025	< 0.0001	0.004	< 0.01	< 0.01	0.013	
	17-Mar-21	< 0.001	0.009	< 0.001	< 0.05	< 0.0001	0.002	0.003	< 0.001	2.28	< 0.001	0.028	< 0.0001	0.005	< 0.01	< 0.01	< 0.005	
	19-Aug-21	0.003	0.004	< 0.001	< 0.05	< 0.0001	0.003	0.001	< 0.001	0.79	< 0.001	0.006	< 0.0001	0.002	< 0.01	< 0.01	0.006	
	22-Sep-21	< 0.001	0.004	< 0.001	< 0.05	< 0.0001	0.003	< 0.001	< 0.001	0.62	< 0.001	0.005	< 0.0001	0.002	< 0.01	< 0.01	< 0.005	
	13-Oct-21	< 0.001	0.006	< 0.001	< 0.05	< 0.0001	0.003	< 0.001	< 0.001	0.69	0.002	0.005	< 0.0001	0.002	< 0.01	< 0.01	< 0.005	
	16-Nov-21	< 0.001	0.002	< 0.001	< 0.05	< 0.0001	0.003	< 0.001	< 0.001	0.39	< 0.001	0.003	< 0.0001	0.002	< 0.01	< 0.01	0.007	
BH8	15-Dec-21	< 0.001	-	-	-	-	-	-	-	0.47	-	0.002	-	-	-	-	-	
	18-Jan-22	< 0.001	-	-	-	-	-	-	-	0.45	-	0.002	-	-	-	-	-	
	24-Feb-22	< 0.001	0.002	< 0.001	< 0.05	< 0.0001	0.003	< 0.001	< 0.001	0.66	< 0.001	0.003	< 0.0001	0.002	< 0.01	< 0.01	< 0.005	
	17-Mar-22	< 0.001	-	-	-	-	-	-	-	0.45	-	0.003	-	-	-	-	-	
	12-Apr-22	< 0.001	-	-	-	-	-	-	-	0.43	-	0.004	-	-	-	-	-	
	27-May-22	< 0.001	0.003	-</td														

Table 3  
Groundwater Metals

Analyte		Metals																
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium	Zinc	
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	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	0.085 (0.1 for BH1)	
	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	<b>0.013</b>	
	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	< 0.005	
	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>	-	-	< 0.005	
	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>	-	-	< 0.005	
	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	<b>0.012</b>	
	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>	-	-	< 0.005	
	12-Aug-22	<b>0.001</b>	<b>0.006</b>	-	-	-	<b>0.002</b>	-	< 0.001	<b>1.54</b>	-	-	-	<b>0.001</b>	-	-	<b>0.007</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	-	-	-	<b>0.008</b>	
	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	<b>0.034</b>	
BH9	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	< 0.001	<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	<b>0.02</b>	
	16-Oct-20	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<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	<b>0.016</b>	
	16-Nov-20	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<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	<b>0.011</b>	
	16-Dec-20	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.001</b>	<b>0.001</b>	<b>0.31</b>	< 0.001	<b>0.024</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.006</b>	
	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	<b>0.011</b>	
	16-Feb-21	< 0.001	<b>0.001</b>	< 0.001	< 0.05	< 0.0001	<b>0.001</b>	< 0.001	<b>0.35</b>	< 0.001	<b>0.024</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.006</b>		
	17-Mar-21	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>0.27</b>	< 0.001	<b>0.024</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.01</b>	
	19-Aug-21	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>0.26</b>	< 0.001	<b>0.03</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.006</b>	
	22-Sep-21	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>0.32</b>	< 0.001	<b>0.027</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	< 0.005	
	13-Oct-21	< 0.001	<b>0.003</b>	< 0.001	< 0.05	< 0.0001	< 0.001	< 0.001	< 0.001	<b>0.51</b>	< 0.001	<b>0.033</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.021</b>	
	16-Nov-21	< 0.001	<b>0.007</b>	< 0.001	< 0.05	< 0.0001	< 0.001	<b>0.001</b>	< 0.001	<b>0.33</b>	< 0.001	<b>0.025</b>	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.031</b>	
	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	< 0.001	<b>0.001</b>	< 0.001	<b>0.5</b>	< 0.001	<b>0.042</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	<b>0.006</b>	
	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>	-	-	-	-	-	
BH9A	27-May-22	< 0.001	<b>0.007</b>	-	-	-	< 0.001	-	< 0.001	<b>0.35</b>	-	-	-	<b>0.003</b>	-	-	< 0.005	
	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>	-	-	-	< 0.001	-	<b>0.004</b>	<b>0.53</b>	-	-	-	<b>0.004</b>	-	-	<b>0.008</b>	
	16-Sep-22	< 0.001	-	-	-	-	-	-	-	<b>0.54</b>	-	<b>0.031</b>	-	-	-	-	-	
	24-Oct-22	< 0.001	-	-	-	-	-	-	-	<b>0.27</b>	-	<b>0.022</b>	-	-	-	-	-	
	18-Nov-22	< 0.001	<b>0.007</b>	-	-	-	< 0.001	< 0.001	< 0.001	<b>0.56</b>	-	<b>0.034</b>	-	<b>0.002</b>	-	-	<b>0.012</b>	
	14-Dec-22	< 0.001	-	-	-	-	-	-	-	<b>0.18</b>	-	<b>0.023</b>	-	-	-	-	-	
	17-Jan-23	< 0.001	-	-	-													

Table 3  
Groundwater Metals

Analyte		Metals																
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Vanadium	Zinc	
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	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	0.085 (0.1 for BH1)
MW239S	06-Mar-22	< 0.001	<b>0.004</b>	-	-	-	<b>0.002</b>	-	< 0.001	<b>1.27</b>	-	-	-	<b>0.002</b>	-	-	<b>0.028</b>	
	17-Mar-22	< 0.001	-	-	-	-	-	-	-	<b>1.06</b>	-	<b>0.004</b>	-	-	-	-	-	
	12-Apr-22	< 0.001	-	-	-	-	-	-	-	<b>1.06</b>	-	<b>0.004</b>	-	-	-	-	-	
	17-Jun-22	< 0.001	-	-	-	-	-	-	-	<b>1.24</b>	-	<b>0.004</b>	-	-	-	-	-	
	27-Jul-22	< 0.001	-	-	-	-	-	-	-	<b>1.03</b>	-	<b>0.004</b>	-	-	-	-	-	
	16-Sep-22	< 0.001	-	-	-	-	-	-	-	<b>1.14</b>	-	<b>0.004</b>	-	-	-	-	-	
	24-Oct-22	< 0.001	-	-	-	-	-	-	-	<b>1.14</b>	-	<b>0.003</b>	-	-	-	-	-	
	18-Nov-22	< 0.001	<b>0.002</b>	-	-	-	<b>0.003</b>	< 0.001	< 0.001	<b>1.06</b>	-	<b>0.003</b>	-	<b>0.003</b>	-	-	<b>0.042</b>	
	14-Dec-22	< 0.001	-	-	-	-	-	-	-	<b>0.96</b>	-	<b>0.003</b>	-	-	-	-	-	
	17-Jan-23	< 0.001	-	-	-	-	-	-	-	<b>0.86</b>	-	<b>0.003</b>	-	-	-	-	-	
	15-Feb-23	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	<b>0.008</b>	<b>0.91</b>	< 0.001	<b>0.003</b>	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.076</b>	
	15-Mar-23	< 0.001	-	-	-	-	-	-	-	<b>0.99</b>	-	<b>0.002</b>	-	-	-	-	-	
BH12	16-Nov-20	< 0.001	-	-	-	< 0.0001	<b>0.002</b>	-	<b>0.002</b>	-	< 0.001	-	< 0.0001	<b>0.002</b>	-	-	<b>0.017</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>0.33</b>	< 0.001	<b>0.006</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005	
BH12A	15-Feb-23	< 0.001	<b>0.002</b>	< 0.001	< 0.05	< 0.0001	<b>0.003</b>	< 0.001	<b>0.003</b>	<b>3.64</b>	< 0.001	<b>0.019</b>	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.015</b>	
	22-Feb-19	< 0.001	<b>0.007</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>1.11</b>	< 0.001	<b>0.003</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	<b>0.006</b>	
	14-Mar-19	< 0.001	<b>0.008</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>1.25</b>	< 0.001	<b>0.005</b>	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.008</b>	
	23-Apr-19	< 0.001	<b>0.008</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>1.01</b>	< 0.001	<b>0.004</b>	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	<b>0.007</b>	
	16-May-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>0.87</b>	< 0.001	<b>0.003</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	< 0.005	
	14-Jun-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.002</b>	<b>0.8</b>	< 0.001	<b>0.003</b>	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	< 0.005	
	16-Jul-19	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>0.87</b>	< 0.001	<b>0.003</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	< 0.005	
	15-Aug-19	< 0.001	<b>0.006</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>1.0</b>	< 0.001	<b>0.004</b>	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005	
	16-Sep-19	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.002</b>	<b>0.94</b>	< 0.001	<b>0.006</b>	< 0.0001	<b>0.006</b>	< 0.01	< 0.01	<b>0.032</b>	
	15-Oct-19	< 0.001	<b>0.005</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.003</b>	-	< 0.001	<b>0.004</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.011</b>	
	18-Nov-19	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>1.1</b>	< 0.001	<b>0.004</b>	< 0.0001	<b>0.008</b>	< 0.01	< 0.01	<b>0.03</b>	
	16-Sep-20	< 0.001	<b>0.016</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.002</b>	<b>0.51</b>	< 0.001	<b>0.008</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.006</b>	
	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	<b>0.005</b>	
	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	<b>0.021</b>	
	16-Dec-20	< 0.001	<b>0.01</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.001</b>	<b>1.06</b>	< 0.001	<b>0.011</b>	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	< 0.005	
	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	<b>0.011</b>	
	16-Feb-21	< 0.001	<b>0.011</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	<b>0.01</b>	<b>0.92</b>	< 0.001	<b>0.012</b>	< 0.0001	<b>0.009</b>	< 0.01	< 0.01	<b>0.014</b>	
	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	<b>0.009</b>	
	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.							







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)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)
Units		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)		--	--	--	--	--	--	--	--	--	--	--
BH12A	15-Feb-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
MW239S	22-Feb-19	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Sep-20	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	19-Aug-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	22-Sep-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	13-Oct-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Nov-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	24-Feb-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	27-May-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	12-Aug-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	18-Nov-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	15-Feb-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 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									
		Perfluorooctanoate (PFOA)	Perfluorononanoic acid (PFNA)	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)
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)		0.56	--	--	--	--	--	--	--	--	--
BH12A	15-Feb-23	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	22-Feb-19	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Sep-20	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	19-Aug-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	22-Sep-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	13-Oct-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Nov-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	24-Feb-22	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	27-May-22	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	12-Aug-22	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	18-Nov-22	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	15-Feb-23	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01

**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		Sum of PFAS									
		Perfluoroheptane sulfonate (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	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
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)		--	--	--	--	--	--	--	0.07	--	--
Sample Name	Sample Date										
BH1	17-Mar-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH1A	15-Feb-23	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Feb-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH2	16-Sep-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH2	16-Nov-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH2	14-Jan-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH2	17-Mar-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH2	16-Nov-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH2	27-May-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH2	18-Nov-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH3	21-Feb-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	21-Feb-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Mar-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	23-Apr-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-May-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	14-Jun-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Jul-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	15-Aug-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-19	< 0.02	< 0.01	<b>0.02</b>	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	<b>0.02</b>
BH4	15-Oct-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	16-Sep-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	16-Nov-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	14-Jan-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	17-Mar-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	16-Nov-21	< 0.02	< 0.01	< 0.02	< 0.05	<b>0.15</b>	< 0.05	< 0.05	< 0.01	< 0.01	<b>0.15</b>
	24-Feb-22	< 0.02	< 0.01	< 0.02	< 0.05	<b>0.06</b>	< 0.05	< 0.05	< 0.01	< 0.01	<b>0.06</b>
BH4	27-May-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH4	18-Nov-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
BH5	22-Feb-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.02	< 0.01	< 0.0							





Table 4  
Groundwater PFAS

Analyte		Sum of PFAS									
		Perfluoroheptane sulfonate (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	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
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)		--	--	--	--	--	--	--	0.07	--	--
BH12A	15-Feb-23	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Feb-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Dec-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	14-Jan-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Feb-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	17-Mar-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	19-Aug-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	13-Oct-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

**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 5  
Surface Water Hydrocarbons

Analyte		BTEXN								Total Petroleum Hydrocarbons		
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	Naphthalene	Sum of BTEX	µg/L	µg/L	µg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	--	--	--	--	--	--
Sample Name	Sample Date											
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	19-Aug-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Nov-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	24-Feb-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	27-May-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	12-Aug-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	18-Nov-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Feb-23	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
SW2	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	19-Aug-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	22-Sep-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	13-Oct-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Nov-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	24-Feb-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	27-May-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	12-Aug-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	18-Nov-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Feb-23	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
SW3	22-Feb-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	14-Mar-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-

Table 5  
Surface Water Hydrocarbons

Analyte		BTEXN								Total Petroleum Hydrocarbons		
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	Naphthalene	Sum of BTEX	µg/L	µg/L	µg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	--	--	--	--	--	--
SW4	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	19-Aug-21	< 1.0	<b>2.0</b>	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	<b>2.0</b>	< 20	-	-
	16-Nov-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	24-Feb-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	27-May-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	12-Aug-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	18-Nov-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Feb-23	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	23-Apr-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100
	16-May-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100
	14-Jun-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Jul-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Aug-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	< 50	< 100
	16-Sep-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Oct-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	18-Nov-19	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Sep-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Oct-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Nov-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Dec-20	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	14-Jan-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Feb-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	17-Mar-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	19-Aug-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	16-Nov-21	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	24-Feb-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	27-May-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	12-Aug-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	18-Nov-22	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-
	15-Feb-23	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 20	-	-

**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		Total Petroleum Hydrocarbons - Silica Clean-up						Total Recoverable Hydrocarbons			
		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	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)
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)		--	--	--	--	--	--	20	20	100	--
Sample Name	Sample Date										
SW1	23-Apr-19	< 50	< 50	-	-	-	-	< 20	< 20	< 100	< 100
	16-May-19	< 50	< 50	-	-	-	-	< 20	< 20	< 100	< 100
	14-Jun-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Jul-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Aug-19	< 50	< 50	-	-	-	-	< 20	< 20	< 100	< 100
	16-Sep-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Oct-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	18-Nov-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Sep-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Oct-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Nov-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Dec-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	14-Jan-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Feb-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	17-Mar-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	19-Aug-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Nov-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	24-Feb-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	27-May-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	12-Aug-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	18-Nov-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Feb-23	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
SW2	17-Mar-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	19-Aug-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	22-Sep-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	13-Oct-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Nov-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	24-Feb-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	27-May-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	12-Aug-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	18-Nov-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Feb-23	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
SW3	22-Feb-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	14-Mar-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	23-Apr-19	< 50	< 50	-	-	-	-	< 20	< 20	< 100	< 100
	16-May-19	< 50	< 50	-	-	-	-	< 20	< 20	< 100	< 100
	14-Jun-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Jul-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Aug-19	< 50	< 50	-	-	-	-	< 20	< 20	< 100	< 100
	16-Sep-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Oct-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	18-Nov-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Sep-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Oct-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Nov-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-

Table 5  
Surface Water Hydrocarbons

Analyte		Total Petroleum Hydrocarbons - Silica Clean-up						Total Recoverable Hydrocarbons			
		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	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)
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)		--	--	--	--	--	--	20	20	100	--
	16-Dec-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
SW4	14-Jan-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Feb-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	17-Mar-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	19-Aug-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Nov-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	24-Feb-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	27-May-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	12-Aug-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	18-Nov-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Feb-23	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
SW4	23-Apr-19	< 50	< 50	-	-	-	-	< 20	< 20	< 100	< 100
	16-May-19	< 50	< 50	-	-	-	-	< 20	< 20	< 100	< 100
	14-Jun-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Jul-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Aug-19	< 50	< 50	-	-	-	-	< 20	< 20	< 100	< 100
	16-Sep-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Oct-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	18-Nov-19	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Sep-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Oct-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Nov-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Dec-20	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	14-Jan-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Feb-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	17-Mar-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	19-Aug-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	16-Nov-21	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	24-Feb-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	27-May-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	12-Aug-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	18-Nov-22	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-
	15-Feb-23	-	-	< 50	< 100	< 50	< 50	< 20	< 20	-	-

**Notes:**

-- Not analysed

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

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

**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			Total Recoverable Hydrocarbons - Silica Clean-up				
Units		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	--	--	--	--	--	--
Sample Name	Sample Date								
SW1	23-Apr-19	< 100	< 100	< 100	-	-	-	-	-
	16-May-19	< 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	-	-	-	-	-
	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
SW2	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
SW3	22-Feb-19	-	-	-	< 100	< 100	< 100	< 100	< 100
	14-Mar-19	-	-	-	< 100	< 100	< 100	< 100	< 100
	23-Apr-19	< 100	< 100	< 100	-	-	-	-	-
	16-May-19	< 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	-	-	-	-	-
	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

Table 5  
Surface Water Hydrocarbons

Analyte		Hydrocarbons			Total Recoverable Hydrocarbons - Silica Clean-up				
Units		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	--	--	--	--	--	--
	16-Dec-20	-	-	-	< 100	< 100	< 100	< 100	< 100
SW4	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
SW4	23-Apr-19	< 100	< 100	< 100	-	-	-	-	-
	16-May-19	< 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	-	-	-	-	-
	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

**Notes:**

- - Not analysed

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

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

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

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 6  
Surface Water Inorganics

Analyte		Inorganics											
Units		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N
Adopted Site Specific Trigger Values (SWMP 2021)		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												
SW1	23-Apr-19	94	34	52	6.0	310	95	0.5	-	-	-	-	-
	16-May-19	86	24	42	6.0	324	112	0.3	-	< 0.01	0.13	-	< 0.01
	14-Jun-19	77	20	34	5.0	182	112	0.4	-	-	-	-	-
	16-Jul-19	90	20	35	4.0	240	130	0.4	-	-	-	-	-
	15-Aug-19	97	18	32	4.0	212	134	0.4	-	-	-	-	-
	16-Sep-19	117	21	39	4.0	244	193	0.7	-	< 0.01	0.05	-	< 0.01
	15-Oct-19	124	16	31	3.0	127	191	0.6	-	-	-	-	-
	18-Nov-19	142	14	30	4.0	165	234	0.5	0.02	< 0.01	-	-	< 0.01
	16-Sep-20	9.0	16	3.0	3.0	< 1.0	< 1.0	0.1	-	-	-	-	-
	16-Oct-20	12	40	4.0	4.0	< 1.0	16	0.2	-	-	-	-	-
	16-Nov-20	8.0	13	2.0	3.0	< 1.0	10	< 0.1	-	< 0.01	0.03	-	< 0.01
	16-Dec-20	10	19	2.0	3.0	5.0	12	0.1	-	-	-	-	-
	14-Jan-21	10	18	2.0	3.0	< 1.0	13	0.1	-	-	-	-	-
	16-Feb-21	10	15	2.0	3.0	< 1.0	12	0.1	-	< 0.01	0.02	-	< 0.01
	17-Mar-21	10	15	2.0	2.0	< 1.0	13	0.1	-	-	-	-	-
	19-Aug-21	-	-	3.0	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	2.0	-	-	-	-	-	-	-	-	-
	24-Feb-22	6.0	9.0	2.0	2.0	< 1.0	10	< 0.1	-	-	0.11	< 0.01	-
	27-May-22	-	-	2.0	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	2.0	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	1.0	-	-	-	-	-	-	-	-	-
	15-Feb-23	15	10	2.0	< 1.0	6.0	22	0.1	-	0.06	0.06	-	< 0.01
SW2	17-Mar-21	12	2.0	2.0	< 1.0	6.0	16	0.2	-	-	-	-	-
	19-Aug-21	12	< 1.0	1.0	< 1.0	6.0	22	< 0.1	-	< 0.01	0.07	-	< 0.01
	22-Sep-21	14	2.0	2.0	2.0	16	30	0.1	-	< 0.01	0.08	-	< 0.01
	13-Oct-21	10	< 1.0	1.0	< 1.0	6.0	18	< 0.1	-	< 0.01	0.03	-	< 0.01
	16-Nov-21	10	2.0	2.0	< 1.0	7.0	16	0.1	-	< 0.01	0.09	-	< 0.01
	24-Feb-22	10	1.0	1.0	< 1.0	2.0	21	0.1	-	-	0.63	< 0.01	-
	17-Mar-22	-	-	-	-	-	-	-	-	< 0.01	-	-	-
	27-May-22	-	-	< 1.0	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	1.0	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	2.0	-	-	-	-	-	-	-	-	-
	15-Feb-23	14	2.0	3.0	< 1.0	6.0	36	0.4	-	< 0.01	0.16	-	< 0.01
SW3	22-Feb-19	40	4.0	4.0	1.0	16	82	< 0.1	-	< 0.01	0.06	-	< 0.01
	14-Mar-19	45	6.0	6.0	2.0	44	64	< 0.1	-	-	-	-	-
	23-Apr-19	37	8.0	6.0	1.0	42	53	< 0.1	-	-	-	-	-
	16-May-19	35	7.0	5.0	< 1.0	34	54	< 0.1	-	< 0.01	< 0.01	-	< 0.01
	14-Jun-19	32	7.0	6.0	< 1.0	41	55	< 0.1	-	-	-	-	-
	16-Jul-19	46	8.0	12	< 1.0	104	57	0.2	-	-	-	-	-
	15-Aug-19	38	6.0	7.0	< 1.0	54	56	0.1	-	-	-	-	-
	16-Sep-19	42	7.0	8.0	< 1.0	48	57	0.1	-	< 0.01	< 0.01	-	< 0.01
	15-Oct-19	40	5.0	7.0	< 1.0	42	57	0.2	-	-	-	-	-
	18-Nov-19	36	5.0	5.0	< 1.0	29	56	< 0.1	0.04	< 0.01	-	-	< 0.01
	16-Sep-20	39	3.0	8.0	< 1.0	65	55	0.1	-	-	-	-	-
	16-Oct-20	40	4.0	6.0	< 1.0	40	63	< 0.1	-	-	-	-	-
	16-Nov-20	34	2.0	5.0	< 1.0	67	53	< 0.1	-	< 0.01	< 0.01	-	< 0.01
	16-Dec-20	36	1.0	5.0	1.0	27	61	< 0.1	-	-	-	-	-
	14-Jan-21	27	< 1.0	2.0	< 1.0	26	54	< 0.1	-	-	-	-	-
	16-Feb-21	30	2.0	3.0	< 1.0	21	56	< 0.1	-	< 0.01	< 0.01	-	< 0.01
	17-Mar-21	29	< 1.0	2.0	< 1.0	15	51	< 0.1	-	-	-	-	-

Table 6  
Surface Water Inorganics

Analyte		Inorganics											
Units		Sodium	Calcium	Magnesium	Potassium	Sulphate	Chloride	Fluoride	Phosphorus	Reactive phosphorus as P	Total Phosphorus	Nitrite	Nitrite as N
		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	19-Aug-21	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	<b>2.0</b>	-	-	-	-	-	-	-	-	-
	24-Feb-22	<b>27</b>	< 1.0	<b>2.0</b>	< 1.0	<b>8.0</b>	<b>53</b>	< 0.1	-	-	<b>0.03</b>	< 0.01	-
	27-May-22	-	-	<b>3.0</b>	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	<b>3.0</b>	-	-	-	-	-	-	-	-	-
	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>
SW4	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
	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
	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	-
	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

**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

Analyte		Nitrate	Nitrate as N	Nitrite + Nitrate as N	Ammonia as N	Total Nitrogen as N	Total Kjeldahl Nitrogen as N	Anions and Cations				Bicarbonate	Bicarbonate Alkalinity as CaCO3
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Total Cations	Total Anions	Ionic Balance	Sodium Adsorption Ratio	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	0.2	5.9	--	--	--	--	--	--	--
Sample Name	Sample Date												
SW1	23-Apr-19	-	-	-	-	-	-	<b>10</b>	<b>9.13</b>	<b>5.6</b>	-	-	< 1.0
	16-May-19	-	< 0.01	< 0.01	< 0.01	<b>1.8</b>	<b>1.8</b>	<b>8.94</b>	<b>9.9</b>	<b>5.13</b>	<b>2.45</b>	-	< 1.0
	14-Jun-19	-	-	-	-	-	-	<b>7.27</b>	<b>6.95</b>	<b>2.28</b>	-	-	< 1.0
	16-Jul-19	-	-	-	-	-	-	<b>7.9</b>	<b>8.66</b>	<b>4.64</b>	-	-	< 1.0
	15-Aug-19	-	-	-	-	-	-	<b>7.85</b>	<b>8.19</b>	<b>2.12</b>	-	-	< 1.0
	16-Sep-19	-	<b>0.02</b>	<b>0.02</b>	< 0.01	<b>1.2</b>	<b>1.2</b>	<b>9.45</b>	<b>11</b>	<b>5.38</b>	<b>3.49</b>	-	< 1.0
	15-Oct-19	-	-	-	-	-	-	<b>8.82</b>	<b>8.03</b>	<b>4.68</b>	-	-	< 1.0
	18-Nov-19	< 0.01	-	< 0.01	<b>0.03</b>	<b>1.1</b>	<b>1.1</b>	<b>9.45</b>	<b>10</b>	<b>3.03</b>	<b>4.91</b>	-	< 1.0
	16-Sep-20	-	-	-	-	-	-	<b>1.51</b>	<b>1.1</b>	-	-	-	<b>55</b>
	16-Oct-20	-	-	-	-	-	-	<b>2.95</b>	<b>2.69</b>	-	-	-	<b>112</b>
	16-Nov-20	-	<b>0.04</b>	<b>0.04</b>	< 0.01	<b>0.6</b>	<b>0.6</b>	<b>1.24</b>	<b>1.12</b>	-	<b>0.54</b>	-	<b>42</b>
	16-Dec-20	-	-	-	-	-	-	<b>1.62</b>	<b>1.68</b>	-	-	-	<b>62</b>
	14-Jan-21	-	-	-	-	-	-	<b>1.57</b>	<b>1.46</b>	-	-	-	<b>55</b>
	16-Feb-21	-	< 0.01	< 0.01	< 0.01	<b>0.5</b>	<b>0.5</b>	<b>1.42</b>	<b>1.36</b>	-	<b>0.64</b>	-	<b>51</b>
	17-Mar-21	-	-	-	-	-	-	<b>1.4</b>	<b>1.26</b>	-	-	-	<b>45</b>
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	< 0.01	-	< 0.01	<b>0.02</b>	<b>1.0</b>	<b>1.0</b>	<b>0.92</b>	<b>0.8</b>	-	-	<b>26</b>	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	-	< 0.01	< 0.01	<b>0.03</b>	<b>1.1</b>	<b>1.1</b>	<b>1.32</b>	<b>1.36</b>	-	<b>1.13</b>	-	<b>31</b>
SW2	17-Mar-21	-	-	-	-	-	-	<b>0.79</b>	<b>0.58</b>	-	-	-	< 1.0
	19-Aug-21	-	< 0.01	< 0.01	<b>0.17</b>	<b>1.2</b>	<b>1.2</b>	<b>0.6</b>	<b>0.74</b>	-	<b>2.25</b>	-	< 1.0
	22-Sep-21	-	<b>1.77</b>	<b>1.77</b>	< 0.01	<b>3.0</b>	<b>1.2</b>	<b>0.92</b>	<b>1.18</b>	-	<b>1.67</b>	-	< 1.0
	13-Oct-21	-	<b>0.02</b>	<b>0.02</b>	< 0.01	<b>0.6</b>	<b>0.6</b>	<b>0.52</b>	<b>0.63</b>	-	<b>1.88</b>	-	< 1.0
	16-Nov-21	-	< 0.01	< 0.01	< 0.01	<b>1.8</b>	<b>1.8</b>	<b>0.7</b>	<b>0.6</b>	-	<b>1.2</b>	-	< 1.0
	24-Feb-22	< 0.01	-	< 0.01	<b>0.31</b>	<b>7.5</b>	<b>7.5</b>	<b>0.57</b>	<b>0.63</b>	-	-	< 1.0	-
	17-Mar-22	-	-	<b>0.04</b>	<b>0.13</b>	<b>0.4</b>	<b>0.4</b>	-	-	-	-	-	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	-	< 0.01	< 0.01	<b>0.05</b>	<b>5.4</b>	<b>5.4</b>	<b>0.96</b>	<b>1.14</b>	-	<b>1.46</b>	-	< 1.0
SW3	22-Feb-19	-	< 0.01	< 0.01	<b>0.16</b>	<b>1.0</b>	<b>1.0</b>	<b>2.55</b>	<b>2.87</b>	-	<b>3.38</b>	-	<b>11</b>
	14-Mar-19	-	-	-	-	-	-	<b>2.8</b>	<b>2.8</b>	-	-	-	<b>4.0</b>
	23-Apr-19	-	-	-	-	-	-	<b>2.53</b>	<b>2.37</b>	-	-	-	< 1.0
	16-May-19	-	< 0.01	< 0.01	< 0.01	<b>0.1</b>	<b>0.1</b>	<b>2.28</b>	<b>2.25</b>	-	<b>2.47</b>	-	<b>1.0</b>
	14-Jun-19	-	-	-	-	-	-	<b>2.24</b>	<b>2.4</b>	-	-	-	< 1.0
	16-Jul-19	-	-	-	-	-	-	<b>3.39</b>	<b>3.77</b>	<b>5.38</b>	-	-	< 1.0
	15-Aug-19	-	-	-	-	-	-	<b>2.53</b>	<b>2.7</b>	-	-	-	< 1.0
	16-Sep-19	-	< 0.01	< 0.01	<b>0.01</b>	<b>0.1</b>	<b>0.1</b>	<b>2.83</b>	<b>2.61</b>	-	<b>2.57</b>	-	< 1.0
	15-Oct-19	-	-	-	-	-	-	<b>2.56</b>	<b>2.48</b>	-	-	-	< 1.0
	18-Nov-19	<b>0.01</b>	-	<b>0.01</b>	<b>0.03</b>	<b>0.6</b>	<b>0.6</b>	<b>2.23</b>	<b>2.18</b>	-	<b>2.72</b>	-	< 1.0
	16-Sep-20	-	-	-	-	-	-	<b>3.12</b>	<b>2.9</b>	<b>3.5</b>	-	-	< 1.0
	16-Oct-20	-	-	-	-	-	-	<b>2.73</b>	<b>2.61</b>	-	-	-	< 1.0
	16-Nov-20	-	< 0.01	< 0.01	< 0.01	<b>0.3</b>	<b>0.3</b>	<b>2.6</b>	<b>2.89</b>	-	<b>2.92</b>	-	< 1.0
	16-Dec-20	-	-	-	-	-	-	<b>2.05</b>	<b>2.3</b>	-	-	-	<b>1.0</b>
	14-Jan-21	-	-	-	-	-	-	<b>1.82</b>	<b>2.06</b>	-	-	-	< 1.0
	16-Feb-21	-	< 0.01	< 0.01	< 0.01	<b>0.5</b>	<b>0.5</b>	<b>1.65</b>	<b>2.02</b>	-	<b>3.13</b>	-	< 1.0
	17-Mar-21	-	-	-	-	-	-	<b>1.43</b>	<b>1.75</b>	-	-	-	< 1.0

Table 6  
Surface Water Inorganics

Analyte		Nitrate	Nitrate as N	Nitrite + Nitrate as N	Ammonia as N	Total Nitrogen as N	Total Kjeldahl Nitrogen as N	Anions and Cations				Bicarbonate	Bicarbonate Alkalinity as CaCO3
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Total Cations	Total Anions	Ionic Balance	Sodium Adsorption Ratio	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	0.2	5.9	--	--	--	--	--	--	--
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	< 0.01	-	< 0.01	<b>0.02</b>	<b>0.9</b>	<b>0.9</b>	<b>1.34</b>	<b>1.7</b>	-	-	<b>2.0</b>	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	-	< 0.01	<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
SW4	23-Apr-19	-	-	-	-	-	-	<b>2.36</b>	<b>3.05</b>	<b>13</b>	-	-	< 1.0
	16-May-19	-	<b>0.05</b>	<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
	14-Jun-19	-	-	-	-	-	-	<b>2.4</b>	<b>2.5</b>	-	-	-	< 1.0
	16-Jul-19	-	-	-	-	-	-	<b>2.93</b>	<b>2.97</b>	-	-	-	< 1.0
	15-Aug-19	-	-	-	-	-	-	<b>2.4</b>	<b>2.45</b>	-	-	-	< 1.0
	16-Sep-19	-	< 0.01	< 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
	15-Oct-19	-	-	-	-	-	-	<b>2.71</b>	<b>2.4</b>	-	-	-	< 1.0
	18-Nov-19	<b>0.02</b>	-	<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
	16-Sep-20	-	-	-	-	-	-	<b>2.83</b>	<b>2.87</b>	-	-	-	< 1.0
	16-Oct-20	-	-	-	-	-	-	<b>2.53</b>	<b>2.72</b>	-	-	-	< 1.0
	16-Nov-20	-	< 0.01	< 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
	16-Dec-20	-	-	-	-	-	-	<b>2.45</b>	<b>2.79</b>	-	-	-	<b>16</b>
	14-Jan-21	-	-	-	-	-	-	<b>2.74</b>	<b>2.69</b>	-	-	-	<b>37</b>
	16-Feb-21	-	< 0.01	< 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>
	17-Mar-21	-	-	-	-	-	-	<b>2.44</b>	<b>2.25</b>	-	-	-	<b>26</b>
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	< 0.01	-	< 0.01	< 0.01	<b>0.3</b>	<b>0.3</b>	<b>2.0</b>	<b>2.34</b>	-	-	< 1.0	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	-	< 0.01	< 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>

**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 c

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 6  
Surface Water Inorganics

Analyte		Alkalinity					Inorganics					
		Carbonate Alkalinity as CaCO <sub>3</sub>	Hydroxide Alkalinity as CaCO <sub>3</sub>	Total Alkalinity as CaCO <sub>3</sub>	Total Hardness as CaCO <sub>3</sub>	Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
Units		mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	500	--	--	4.2-6.5	--	--
Sample Name	Sample Date											
SW1	23-Apr-19	< 1.0	< 1.0	< 1.0	299	-	893	707	32	4.01	-	-
	16-May-19	< 1.0	< 1.0	< 1.0	233	-	947	715	59	4.6	-	-
	14-Jun-19	< 1.0	< 1.0	< 1.0	190	-	847	512	26	4.5	-	-
	16-Jul-19	< 1.0	< 1.0	< 1.0	194	-	876	568	17	4.42	-	-
	15-Aug-19	< 1.0	< 1.0	< 1.0	177	-	813	548	5.0	4.53	-	-
	16-Sep-19	< 1.0	< 1.0	< 1.0	213	-	1,080	689	15	4.32	-	-
	15-Oct-19	< 1.0	< 1.0	< 1.0	168	-	1,050	682	-	5.32	-	-
	18-Nov-19	< 1.0	< 1.0	< 1.0	158	-	1,090	708	-	5.06	-	-
	16-Sep-20	< 1.0	< 1.0	55	52	-	137	152	8.0	6.5	-	-
	16-Oct-20	< 1.0	< 1.0	112	116	-	268	174	-	7.29	-	-
	16-Nov-20	< 1.0	< 1.0	42	41	-	127	82	< 5.0	6.5	-	-
	16-Dec-20	< 1.0	< 1.0	62	56	-	171	111	-	7.01	-	-
	14-Jan-21	< 1.0	< 1.0	55	53	-	154	100	-	6.71	-	-
	16-Feb-21	< 1.0	< 1.0	51	46	-	141	92	6.0	6.93	-	-
	17-Mar-21	< 1.0	< 1.0	45	46	-	139	90	-	6.63	-	-
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-
	13-Oct-21	-	-	-	-	-	-	-	-	6.82	3.3	-
	16-Nov-21	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	< 1.0	< 1.0	26	31	-	89	58	-	6.38	-	< 0.01
	27-May-22	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	< 1.0	< 1.0	31	33	-	141	92	-	6.59	-	-
SW2	17-Mar-21	< 1.0	< 1.0	< 1.0	13	-	83	54	-	5.08	-	-
	19-Aug-21	< 1.0	< 1.0	< 1.0	4.0	-	103	67	-	4.21	-	-
	22-Sep-21	< 1.0	< 1.0	< 1.0	13	-	235	153	-	3.55	-	-
	13-Oct-21	< 1.0	< 1.0	< 1.0	4.0	-	77	50	-	4.58	4.7	-
	16-Nov-21	< 1.0	< 1.0	< 1.0	-	13	93	60	-	4.39	-	-
	24-Feb-22	< 1.0	< 1.0	< 1.0	7.0	-	97	63	-	4.32	-	< 0.01
	17-Mar-22	-	-	-	-	-	-	-	-	-	-	-
	27-May-22	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	< 1.0	< 1.0	< 1.0	17	-	150	98	-	4.2	-	-
SW3	22-Feb-19	< 1.0	< 1.0	11	26	-	262	228	58	6.21	-	-
	14-Mar-19	< 1.0	< 1.0	4.0	40	-	344	224	34	5.42	-	-
	23-Apr-19	< 1.0	< 1.0	< 1.0	45	-	220	190	9.0	5.2	-	-
	16-May-19	< 1.0	< 1.0	1.0	38	-	271	300	14	5.24	-	-
	14-Jun-19	< 1.0	< 1.0	< 1.0	42	-	300	170	12	4.58	-	-
	16-Jul-19	< 1.0	< 1.0	< 1.0	69	-	451	246	7.0	4.47	-	-
	15-Aug-19	< 1.0	< 1.0	< 1.0	44	-	338	192	< 5.0	4.47	-	-
	16-Sep-19	< 1.0	< 1.0	< 1.0	50	-	374	201	7.0	4.3	-	-
	15-Oct-19	< 1.0	< 1.0	< 1.0	41	-	383	249	-	4.75	-	-
	18-Nov-19	< 1.0	< 1.0	< 1.0	33	-	278	181	-	5.39	-	-
	16-Sep-20	< 1.0	< 1.0	< 1.0	40	-	402	224	6.0	4.41	-	-
	16-Oct-20	< 1.0	< 1.0	< 1.0	35	-	333	216	-	4.15	-	-
	16-Nov-20	< 1.0	< 1.0	< 1.0	26	-	460	299	< 5.0	3.95	-	-
	16-Dec-20	< 1.0	< 1.0	1.0	23	-	303	197	-	4.8	-	-
	14-Jan-21	< 1.0	< 1.0	< 1.0	8.0	-	301	196	-	4.06	-	-
	16-Feb-21	< 1.0	< 1.0	< 1.0	17	-	273	177	< 5.0	4.15	-	-
	17-Mar-21	< 1.0	< 1.0	< 1.0	8.0	-	237	154	-	4.65	-	-

Table 6  
Surface Water Inorganics

Analyte		Alkalinity				Inorganics						
		Carbonate Alkalinity as CaCO <sub>3</sub>	Hydroxide Alkalinity as CaCO <sub>3</sub>	Total Alkalinity as CaCO <sub>3</sub>	Total Hardness as CaCO <sub>3</sub>	Hardness	Electrical Conductivity @ 25°C	Total Dissolved Solids	Total suspended solids	pH	Turbidity	Phosphate Total (as P)
Units		mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	pH units	NTU	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		--	--	--	--	--	500	--	--	4.2-6.5	--	--
	19-Aug-21	-	-	-	-	-	-	-	-	-	-	-
	16-Nov-21	-	-	-	-	-	-	-	-	-	-	-
	24-Feb-22	< 1.0	< 1.0	<b>2.0</b>	<b>8.0</b>	-	<b>183</b>	<b>119</b>	-	<b>4.59</b>	-	< 0.01
	27-May-22	-	-	-	-	-	-	-	-	-	-	-
	12-Aug-22	-	-	-	-	-	-	-	-	-	-	-
	18-Nov-22	-	-	-	-	-	-	-	-	-	-	-
	15-Feb-23	< 1.0	< 1.0	< 1.0	<b>8.0</b>	-	<b>247</b>	<b>160</b>	-	<b>4.08</b>	-	-
SW4	23-Apr-19	< 1.0	< 1.0	< 1.0	<b>33</b>	-	<b>293</b>	<b>198</b>	< 5.0	<b>4.0</b>	-	-
	16-May-19	< 1.0	< 1.0	< 1.0	<b>33</b>	-	<b>331</b>	<b>288</b>	<b>13</b>	<b>4.08</b>	-	-
	14-Jun-19	< 1.0	< 1.0	< 1.0	<b>33</b>	-	<b>316</b>	<b>163</b>	< 5.0	<b>4.31</b>	-	-
	16-Jul-19	< 1.0	< 1.0	< 1.0	<b>46</b>	-	<b>367</b>	<b>207</b>	<b>6.0</b>	<b>4.46</b>	-	-
	15-Aug-19	< 1.0	< 1.0	< 1.0	<b>33</b>	-	<b>308</b>	<b>160</b>	< 5.0	<b>4.48</b>	-	-
	16-Sep-19	< 1.0	< 1.0	< 1.0	<b>42</b>	-	<b>360</b>	<b>208</b>	< 5.0	<b>4.47</b>	-	-
	15-Oct-19	< 1.0	< 1.0	< 1.0	<b>40</b>	-	<b>365</b>	<b>237</b>	-	<b>4.48</b>	-	-
	18-Nov-19	< 1.0	< 1.0	< 1.0	<b>30</b>	-	<b>348</b>	<b>226</b>	-	<b>4.48</b>	-	-
	16-Sep-20	< 1.0	< 1.0	< 1.0	<b>44</b>	-	<b>421</b>	<b>228</b>	< 5.0	<b>4.16</b>	-	-
	16-Oct-20	< 1.0	< 1.0	< 1.0	<b>33</b>	-	<b>355</b>	<b>231</b>	-	<b>3.94</b>	-	-
	16-Nov-20	< 1.0	< 1.0	< 1.0	<b>45</b>	-	<b>338</b>	<b>220</b>	<b>6.0</b>	<b>4.21</b>	-	-
	16-Dec-20	< 1.0	< 1.0	<b>16</b>	<b>26</b>	-	<b>323</b>	<b>210</b>	-	<b>6.15</b>	-	-
	14-Jan-21	< 1.0	< 1.0	<b>37</b>	<b>56</b>	-	<b>316</b>	<b>205</b>	-	<b>6.38</b>	-	-
	16-Feb-21	< 1.0	< 1.0	<b>7.0</b>	<b>31</b>	-	<b>267</b>	<b>174</b>	<b>48</b>	<b>5.91</b>	-	-
	17-Mar-21	< 1.0	< 1.0	<b>26</b>	<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	< 1.0	< 1.0	< 1.0	<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	< 1.0	< 1.0	<b>3.0</b>	<b>15</b>	-	<b>250</b>	<b>162</b>	-	<b>5.44</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 c

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 7  
Surface Water Metals

Analyte		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese
Units		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
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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>	-	-
	16-Nov-21	< 0.001	<b>0.006</b>	-	< 0.05	-	< 0.001	< 0.001	<b>0.002</b>	<b>1.0</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>
	27-May-22	< 0.001	<b>0.01</b>	-	< 0.05	-	<b>0.003</b>	<b>0.001</b>	< 0.001	<b>4.39</b>	-	-
	12-Aug-22	< 0.001	<b>0.007</b>	-	< 0.05	-	<b>0.003</b>	< 0.001	<b>0.001</b>	<b>2.92</b>	-	-
	18-Nov-22	< 0.001	<b>0.01</b>	-	< 0.05	-	< 0.001	<b>0.001</b>	< 0.001	<b>2.89</b>	-	<b>0.038</b>
	15-Feb-23	< 0.001	<b>0.002</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>
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>
	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>
	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>
	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>
	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>
	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>
	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>	-	-
	12-Aug-22	< 0.001	<b>0.005</b>	-	< 0.05	-	<b>0.001</b>	< 0.001	< 0.001	<b>2.79</b>	-	-
	18-Nov-22	< 0.001	<b>0.004</b>	-	< 0.05	-	< 0.001	< 0.001	< 0.001	<b>0.45</b>	-	<b>0.011</b>
	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>
SW3	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	18-Nov											

Table 7  
Surface Water Metals

Analyte		Metals										
Units		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese
		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
SW4	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>
	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>
	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>
	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>
	19-Aug-21	<b>0.001</b>	<b>0.005</b>	-	< 0.05	-	< 0.001	< 0.001	< 0.001	<b>7.14</b>	-	-
	16-Nov-21	<b>0.001</b>	<b>0.006</b>	-	< 0.05	-	< 0.001	< 0.001	< 0.001	<b>4.89</b>	-	-
	24-Feb-22	<b>0.004</b>	<b>0.004</b>	< 0.001	< 0.05	< 0.0001	<b>0.002</b>	< 0.001	< 0.001	<b>10</b>	< 0.001	<b>0.015</b>
	27-May-22	< 0.001	<b>0.01</b>	-	< 0.05	-	<b>0.001</b>	<b>0.002</b>	< 0.001	<b>13</b>	-	-
	12-Aug-22	< 0.001	<b>0.012</b>	-	< 0.05	-	<b>0.001</b>	<b>0.003</b>	< 0.001	<b>9.73</b>	-	-
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	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>
	19-Aug-21	< 0.001	<b>0.022</b>	-	< 0.05	-	< 0.001	<b>0.001</b>	< 0.001	<b>2.13</b>	-	-
	16-Nov-21	< 0.001	<b>0.016</b>	-	< 0.05	-	< 0.001	<b>0.001</b>	< 0.001	<b>6.59</b>	-	-
	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>
	27-May-22	< 0.001	<b>0.021</b>	-	< 0.05	-	< 0.001	<b>0.001</b>	< 0.001	<b>0.68</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>	-	-
	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>
	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>

**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		Mercury	Nickel	Selenium	Vanadium	Zinc
Units		mg/L	mg/L	mg/L	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		0.0001	0.02	0.01	0.01	0.535
Sample Name	Sample Date					
SW1	23-Apr-19	< 0.0001	<b>0.02</b>	< 0.01	< 0.01	<b>0.356</b>
	16-May-19	< 0.0001	<b>0.012</b>	< 0.01	< 0.01	<b>0.077</b>
	14-Jun-19	< 0.0001	<b>0.011</b>	< 0.01	< 0.01	<b>0.535</b>
	16-Jul-19	< 0.0001	<b>0.008</b>	< 0.01	< 0.01	<b>0.239</b>
	15-Aug-19	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.075</b>
	16-Sep-19	< 0.0001	<b>0.014</b>	< 0.01	< 0.01	<b>0.282</b>
	15-Oct-19	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.055</b>
	18-Nov-19	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.026</b>
	16-Sep-20	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.061</b>
	16-Oct-20	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	<b>0.005</b>
	16-Nov-20	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.03</b>
	16-Dec-20	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.013</b>
	14-Jan-21	< 0.0001	<b>0.006</b>	< 0.01	< 0.01	<b>0.037</b>
	16-Feb-21	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.024</b>
	17-Mar-21	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.04</b>
	19-Aug-21	-	<b>0.002</b>	-	-	<b>0.056</b>
	16-Nov-21	-	<b>0.001</b>	-	-	<b>0.036</b>
	24-Feb-22	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.014</b>
	27-May-22	-	<b>0.002</b>	-	-	<b>0.047</b>
	12-Aug-22	-	<b>0.002</b>	-	-	<b>0.019</b>
	18-Nov-22	-	< 0.001	-	-	<b>0.022</b>
	15-Feb-23	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	<b>0.007</b>
SW2	17-Mar-21	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	<b>0.097</b>
	19-Aug-21	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.022</b>
	22-Sep-21	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.134</b>
	13-Oct-21	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.06</b>
	16-Nov-21	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	<b>0.083</b>
	24-Feb-22	< 0.0001	<b>0.006</b>	< 0.01	< 0.01	<b>0.099</b>
	17-Mar-22	-	-	-	-	-
	27-May-22	-	<b>0.002</b>	-	-	<b>0.111</b>
	12-Aug-22	-	<b>0.001</b>	-	-	<b>0.09</b>
	18-Nov-22	-	< 0.001	-	-	<b>0.031</b>
SW3	15-Feb-23	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	<b>0.063</b>
	22-Feb-19	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.016</b>
	14-Mar-19	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.009</b>
	23-Apr-19	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	<b>0.016</b>
	16-May-19	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.012</b>
	14-Jun-19	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.016</b>
	16-Jul-19	< 0.0001	<b>0.006</b>	< 0.01	< 0.01	<b>0.029</b>
	15-Aug-19	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.013</b>
	16-Sep-19	< 0.0001	<b>0.017</b>	< 0.01	< 0.01	<b>0.094</b>
	15-Oct-19	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.022</b>
	18-Nov-19	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	16-Sep-20	< 0.0001	<b>0.007</b>	< 0.01	< 0.01	<b>0.031</b>
	16-Oct-20	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	<b>0.019</b>
	16-Nov-20	< 0.0001	<b>0.009</b>	< 0.01	< 0.01	<b>0.03</b>

Table 7  
Surface Water Metals

Analyte		Mercury	Nickel	Selenium	Vanadium	Zinc
Units		mg/L	mg/L	mg/L	mg/L	mg/L
Adopted Site Specific Trigger Values (SWMP 2021)		0.0001	0.02	0.01	0.01	0.535
	16-Dec-20	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	<b>0.054</b>
SW4	14-Jan-21	< 0.0001	<b>0.01</b>	< 0.01	< 0.01	<b>0.025</b>
	16-Feb-21	< 0.0001	<b>0.004</b>	< 0.01	< 0.01	<b>0.011</b>
	17-Mar-21	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.007</b>
	19-Aug-21	-	< 0.001	-	-	< 0.005
	16-Nov-21	-	< 0.001	-	-	< 0.005
	24-Feb-22	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.005</b>
	27-May-22	-	<b>0.002</b>	-	-	< 0.005
	12-Aug-22	-	<b>0.004</b>	-	-	<b>0.007</b>
	18-Nov-22	-	< 0.001	-	-	< 0.005
	15-Feb-23	< 0.0001	< 0.001	< 0.01	< 0.01	<b>0.009</b>
	23-Apr-19	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.03</b>
	16-May-19	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.019</b>
	14-Jun-19	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.014</b>
	16-Jul-19	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.014</b>
	15-Aug-19	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.009</b>
	16-Sep-19	< 0.0001	<b>0.017</b>	< 0.01	< 0.01	<b>0.085</b>
	15-Oct-19	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.018</b>
	18-Nov-19	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	< 0.005
	16-Sep-20	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.02</b>
	16-Oct-20	< 0.0001	<b>0.003</b>	< 0.01	< 0.01	<b>0.007</b>
	16-Nov-20	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.016</b>
	16-Dec-20	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	< 0.005
	14-Jan-21	< 0.0001	<b>0.005</b>	< 0.01	< 0.01	<b>0.013</b>
	16-Feb-21	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.01</b>
	17-Mar-21	< 0.0001	< 0.001	< 0.01	< 0.01	< 0.005
	19-Aug-21	-	<b>0.001</b>	-	-	<b>0.005</b>
	16-Nov-21	-	< 0.001	-	-	< 0.005
	24-Feb-22	< 0.0001	<b>0.002</b>	< 0.01	< 0.01	<b>0.011</b>
	27-May-22	-	<b>0.001</b>	-	-	< 0.005
	12-Aug-22	-	<b>0.004</b>	-	-	<b>0.011</b>
	18-Nov-22	-	<b>0.001</b>	-	-	< 0.005
	15-Feb-23	< 0.0001	<b>0.001</b>	< 0.01	< 0.01	< 0.005

**Notes:**

-- Not analysed

< - Less than laboratory limit of reporting

mg/L - Milligrams per litre

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

Highlighting indicates an exceedance of the corresponding criteria

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021



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)
Units		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	18-Nov-19	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Sep-20	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Feb-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	19-Aug-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	22-Sep-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	13-Oct-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	16-Nov-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	24-Feb-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	27-May-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	12-Aug-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	18-Nov-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02
	15-Feb-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 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 8  
Surface Water PFAS

Analyte		PFAS Compounds									
		Perfluorooctanoate (PFOA)	Perfluorononanoic acid (PFNA)	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)
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)		0.56	--	--	--	--	--	--	--	--	--
SW4	18-Nov-19	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Sep-20	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Oct-20	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Nov-20	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Dec-20	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	14-Jan-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.03</b>
	16-Feb-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	17-Mar-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	<b>0.02</b>
	19-Aug-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	22-Sep-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	13-Oct-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02
	16-Nov-21	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	24-Feb-22	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	27-May-22	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	12-Aug-22	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	18-Nov-22	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01
	15-Feb-23	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

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

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021



Table 8  
Surface Water PFAS

Analyte									Sum of PFAS		
		Perfluoroheptane sulfonate (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	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
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)		--	--	--	--	--	--	--	0.07	--	--
SW4	18-Nov-19	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Sep-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Oct-20	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-20	< 0.02	<b>0.02</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
	16-Dec-20	< 0.02	<b>0.02</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
	14-Jan-21	< 0.02	<b>0.04</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.07</b>	<b>0.07</b>	<b>0.07</b>
	16-Feb-21	< 0.02	<b>0.03</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
	17-Mar-21	< 0.02	<b>0.02</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>
	19-Aug-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	22-Sep-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	13-Oct-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	16-Nov-21	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	24-Feb-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	27-May-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	12-Aug-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	18-Nov-22	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
	15-Feb-23	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

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

**Criteria:**

SWMP 2021 - Soil and Water Management Plan, July 2021

Table 9  
Wash Plant Water Metals

Analyte		Metals		
		Arsenic	Iron	Manganese
Units		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>
WPW2	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>
	15-Feb-23	< 0.001	< 0.05	<b>0.004</b>
	15-Mar-23	< 0.001	<b>0.15</b>	<b>0.061</b>

**Notes:**

&lt; - Less than laboratory limit of reporting

mg/L - Milligrams per litre

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

Table 10  
Wash Plant 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)
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Sample Name	Sample Date									
INPUT	22-Sep-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
WPW	19-Aug-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	22-Sep-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	13-Oct-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	16-Nov-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	15-Dec-21	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	18-Jan-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	24-Feb-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	17-Mar-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	12-Apr-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	27-May-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	17-Jun-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	27-Jul-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	12-Aug-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	16-Sep-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	24-Oct-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	18-Nov-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	14-Dec-22	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	17-Jan-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
WPW2	15-Feb-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02
	15-Mar-23	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 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  
Wash Plant Water PFAS

Table 10  
Wash Plant Water PFAS

Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptane sulfonate (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	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 PFAS		
								Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
< 0.02	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
< 0.02	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
< 0.02	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
< 0.02	< 0.02	<b>0.01</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>
< 0.01	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
< 0.01	< 0.02	<b>0.03</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
< 0.01	< 0.02	<b>0.03</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
<b>0.01</b>	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>
<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
< 0.01	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
< 0.01	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
< 0.01	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
< 0.01	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
< 0.01	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
<b>0.02</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.04</b>	<b>0.05</b>	<b>0.05</b>
<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.04</b>	<b>0.04</b>
<b>0.01</b>	< 0.02	<b>0.01</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
< 0.01	< 0.02	< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
<b>0.01</b>	< 0.02	<b>0.02</b>	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>

Table 11  
QAQC Rinsate, TripBlank and RPD values Metals

Analyte			Metals		
			Arsenic	Iron	Manganese
Units			mg/L	mg/L	mg/L
Sample Name	Sample Date	Sample Type			
TB01_15032023	15-Mar-23	Trip Blank	< 0.001	< 0.05	< 0.001
RB01_15032023	15-Mar-23	Rinsate	< 0.001	< 0.05	< 0.001
BH2_15032023	15-Mar-23	Primary	< 0.001	< 0.05	<b>0.003</b>
QC01_15032023	15-Mar-23	Duplicate	< 0.001	< 0.05	<b>0.003</b>
Relative Percentage Difference			NC	NC	<b>0%</b>
BH2_15032023	15-Mar-23	Primary	< 0.001	< 0.05	<b>0.003</b>
QC01A_15032023	15-Mar-23	Triplicate	< 0.001	<b>0.06</b>	< 0.005
Relative Percentage Difference			NC	<b>18%</b>	<b>50%</b>

**Notes:**

&lt; - Less than laboratory limit of reporting

NC - Not calculated

mg/L - Milligrams per litre

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

RPD - Relative Percentage Difference

Table 12  
QAQC Rinsate and TripBlank 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)
Units			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Sample Name	Sample Date	Sample Type										
TB01_15032023	15-Mar-23	Trip Blank	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02
RB01_15032023	15-Mar-23	Rinsate	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02

**Notes:**

< - Less than laboratory limit of reporting

µg/L - Micrograms per litre

Table 12  
QAQC Rinsate and TripBlank PFAS

PFAS Compounds											
Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoate (PFOA)	Perfluorononanoic acid (PFNA)	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)
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02
< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.02	< 0.02	< 0.01	< 0.02

Table 12  
QAQC Rinsate and TripBlank PFAS

Perfluorooctanesulfonic acid (PFOS)	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 PFAS		
						Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01
< 0.01	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01

Table 13  
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
BH1A	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
	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
BH2	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
	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
BH4	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
	15-Mar-23	3.06	1.435	6.015	1.625	Clear	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
BH5	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
	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
BH6	15-Mar-23	3.62	1.317	4.535	2.303	Odor, Clear	A King
	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	Yello	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
BH7	15-Mar-23	2.98	1.445	4.505	1.535	Odor, Lght yeloow	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
	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
	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

Table 13  
Gauging Data

Location	Date	TOC (mAHD)	DTW (mBTOC)	Well Depth (m)	Water Table Elevation (mAHD)	Remark	Technician
	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
BH9A	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
	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
BH10	12-Aug-22	6.69	1.699	0	4.991	Gauge only	M Ferguson
	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
BH11	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
BH12A	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
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
MW239S	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
	15-Mar-23	3.04	1.088	3.805	1.952	Odor, Orange brown	A King
WPW	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
WPW2	15-Feb-23	--	--	--	--	Clear	A King
	15-Mar-23	--	--	--	--	Odor, Brown	A King

**Notes:**

DTW = Depth to water

mBTOC = Metres below top of casing

m = Metres

ND = Not detected

Table 14  
Field Water Quality Parameters

Location	Date	DO mg/L	ORP mV	PH pH units	SC uS/cm	TDS mg/L	TEMP deg C	TURB NTU
BH1A	15-Feb-23	5.8	192.5	4.33	82.6	55	23.8	
BH2	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
	27-Jul-22	3	190.7	4.6	90.2		14.1	121
BH4	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
	15-Mar-23	4.46	179	5.22	92.5	65	21	8.26
BH5	15-Feb-23	3	15.6	4.64	132.9	88	23.9	75.75
BH6	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
	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
	27-Jul-22	4.21	26	4.43	117		14.3	489
BH7	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
	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
	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
BH8	15-Feb-23	1.7	-108.51	4.81	129.9	82	26.7	45.25
	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
BH9A	17-Jan-23	1.94	111.5	4.73	107.4	75	21.4	32.2

Table 14  
Field Water Quality Parameters

Location	Date	DO mg/L	ORP mV	pH pH units	SC uS/cm	TDS mg/L	TEMP deg C	TURB NTU
	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
BH11	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
	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
	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
MW239S	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
SW1	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
SW2	12-Aug-22	1.11	-40	4.95	88.2		12.9	23
	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
SW3	12-Aug-22	1.4	41.1	3.99	259.8		11.9	2.8
	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
SW4	12-Aug-22	3.75	224	4.57	214		11.3	1.34
	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
WPW	12-Aug-22	10.09	210	5.06	255		14.7	205
	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
WPW2	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



HYDRASLEEVE™ SAMPLING LOG

Project Number:	Date:	Site Address:
	15/3	

Site Name:	Field Manager:	Weather Observations:
WSS	AK	Cloudy

Damaged wells (identify how damaged):

\*Sample Depth is reported as bottom of hydrosleeve depth

QA/QC SAMPLE REGISTER

Site Name:

WHS

Date: \_\_\_\_\_

Field Manager:  


**Site Address:**

卷之三

Site Name:	WSS
Field Manager:	AK
Date:	15/3
Site Address:	

**COMMENTS:**



## ATTACHMENT 3: LAB RESULTS



## CERTIFICATE OF ANALYSIS

Work Order	<b>ES2308522</b>	Page	: 1 of 8
Client	<b>KLEINFELDER AUSTRALIA PTY LTD</b>	Laboratory	: Environmental Division Sydney
Contact	Megan Ferguson	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	: 15-Mar-2023 13:37
Order number	----	Date Analysis Commenced	: 17-Mar-2023
C-O-C number	----	Issue Date	: 21-Mar-2023 18:34
Sampler	AARON KING		
Site	WSS Cabbage Tree Road March 2023		
Quote number	EN/222		
No. of samples received	11		
No. of samples analysed	11		

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
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

∅ = 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.
- 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: WATER (Matrix: WATER)			Sample ID	BH2	BH4	BH6	BH7	BH9A	
Compound	CAS Number	LOR	Unit	Sampling date / time	15-Mar-2023 00:00				
					Result	Result	Result	Result	Result
<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
Manganese	7439-96-5	0.001	mg/L	<b>0.003</b>	<b>0.022</b>	<b>0.006</b>	<b>0.003</b>	<b>0.020</b>	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<b>4.97</b>	<b>0.34</b>	<b>0.15</b>	

## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	BH11	MW239S	WPW2	QC01	RB01		
Compound	CAS Number	LOR	Unit	Sampling date / time	15-Mar-2023 00:00				
					ES2308522-006	ES2308522-007	ES2308522-008	ES2308522-009	ES2308522-011
<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
Manganese	7439-96-5	0.001	mg/L	0.002	0.004	0.061	0.003	<0.001	
Iron	7439-89-6	0.05	mg/L	0.99	0.29	0.15	<0.05	<0.05	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	---	---	0.01	---	---	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	---	---	0.02	---	---	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	---	---	<0.02	---	---	<0.02
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	---	---	<0.1	---	---	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	---	---	<0.01	---	---	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluorododecanoic acid (PFDaDA)	307-55-1	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	---	---	<0.02	---	---	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	---	---	<0.05	---	---	<0.05
<b>EP231C: Perfluoroalkyl Sulfonamides</b>									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	---	---	<0.02	---	---	<0.02

## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	BH11	MW239S	WPW2	QC01	RB01	
Compound	CAS Number	LOR	Sampling date / time	15-Mar-2023 00:00				
			Unit	ES2308522-006	ES2308522-007	ES2308522-008	ES2308522-009	ES2308522-011
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
N-Methyl perfluoroctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	---	---	<0.05	---	<0.05
N-Ethyl perfluoroctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	---	---	<0.05	---	<0.05
N-Methyl perfluoroctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	---	---	<0.05	---	<0.05
N-Ethyl perfluoroctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	---	---	<0.05	---	<0.05
N-Methyl perfluoroctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	---	---	<0.02	---	<0.02
N-Ethyl perfluoroctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	---	---	<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
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	---	---	<0.05	---	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	---	---	<0.05	---	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	---	---	<0.05	---	<0.05
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	---	0.01	µg/L	---	---	0.03	---	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	---	---	0.03	---	<0.01
Sum of PFAS (WA DER List)	---	0.01	µg/L	---	---	0.03	---	<0.01
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	---	0.02	%	---	---	107	---	104
13C8-PFOA	---	0.02	%	---	---	99.0	---	97.8

## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	TB01	---	---	---	---	---	
Compound	CAS Number	LOR	Unit	Sampling date / time	15-Mar-2023 00:00	---	---	---	---
				Result	ES2308522-012	-----	-----	-----	-----
<b>EG020F: Dissolved Metals by ICP-MS</b>									
Arsenic	7440-38-2	0.001	mg/L	<0.001	---	---	---	---	---
Manganese	7439-96-5	0.001	mg/L	<0.001	---	---	---	---	---
Iron	7439-89-6	0.05	mg/L	<0.05	---	---	---	---	---
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	---	---	---	---	---
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	---	---	---	---	---
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	---	---	---	---	---
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	---	---	---	---	---
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	---	---	---	---	---
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	---	---	---	---	---
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	---	---	---	---	---
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	---	---	---	---	---
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	---	---	---	---	---
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	---	---	---	---	---
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	---	---	---	---	---
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	---	---	---	---	---
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	---	---	---	---	---
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	---	---	---	---	---
Perfluorododecanoic acid (PFDmA)	307-55-1	0.02	µg/L	<0.02	---	---	---	---	---
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	---	---	---	---	---
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	---	---	---	---	---
<b>EP231C: Perfluoroalkyl Sulfonamides</b>									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	---	---	---	---	---

## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	TB01	---	---	---	---	---
Compound	CAS Number	LOR	Sampling date / time	15-Mar-2023 00:00	---	---	---	---
			Unit	ES2308522-012	-----	-----	-----	-----
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
N-Methyl perfluoroctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	---	---	---	---
N-Ethyl perfluoroctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	---	---	---	---
N-Methyl perfluoroctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	---	---	---	---
N-Ethyl perfluoroctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	---	---	---	---
N-Methyl perfluoroctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	---	---	---	---
N-Ethyl perfluoroctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<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	---	---	---	---
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	---	---	---	---
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	---	---	---	---
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	---	---	---	---
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	---	0.01	µg/L	<0.01	---	---	---	---
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	---	---	---	---
Sum of PFAS (WA DER List)	---	0.01	µg/L	<0.01	---	---	---	---
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	---	0.02	%	100	---	---	---	---
13C8-PFOA	---	0.02	%	102	---	---	---	---

### Surrogate Control Limits

Sub-Matrix: WATER

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

## QUALITY CONTROL REPORT

Work Order	: ES2308522	Page	: 1 of 6
Client	: KLEINFELDER AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: Megan Ferguson	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	: 15-Mar-2023
Order number	: ----	Date Analysis Commenced	: 17-Mar-2023
C-O-C number	: ----	Issue Date	: 21-Mar-2023
Sampler	: AARON KING		
Site	: WSS Cabbage Tree Road March 2023		
Quote number	: EN/222		
No. of samples received	: 11		
No. of samples analysed	: 11		

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
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: 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: 4939039)</b>									
ES2308502-001	Anonymous	EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	2.30	2.35	1.8	0% - 20%
		EG020A-F: Iron	7439-89-6	0.05	mg/L	12.1	12.1	0.0	0% - 20%
ES2308567-006	Anonymous	EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.037	0.038	2.9	0% - 20%
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4937045)</b>									
ES2308457-004	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.12	0.12	0.0	0% - 50%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.03	0.03	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>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4937045)</b>									
ES2308457-004	Anonymous	EP231X: Perfluorooctanoic 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

**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>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4937045) - continued</b>									
ES2308457-004	Anonymous	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: 4937045)</b>									
ES2308457-004	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSEA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4937045)</b>									
ES2308457-004	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: 4937045)</b>									
ES2308457-004	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.15	0.15	0.0	0% - 50%

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

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

Sub-Matrix: WATER

Method: 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>EG020F: Dissolved Metals by ICP-MS (QC Lot: 4939039)</b>								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	108	85.0	114
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	106	82.0	110
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	102	82.0	112
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4937045)</b>								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	80.4	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	96.8	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	87.6	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	93.2	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	89.0	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	80.2	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4937045)</b>								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.2	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	86.2	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	94.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	95.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	96.6	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.8	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.4	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	93.0	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	92.0	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	107	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4937045)</b>								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	90.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	95.4	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	84.0	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	94.9	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	97.8	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	91.6	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	91.4	61.0	135

Sub-Matrix: WATER

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>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4937045)</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	98.2	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	95.8	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	85.4	71.4	144

### Matrix Spike (MS) Report

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

Sub-Matrix: WATER

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike	Spike Recovery(%)	Acceptable Limits (%)	
				Concentration	MS	Low	High
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4937045)</b>							
ES2308457-004	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	84.0	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.2	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	88.2	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	96.2	69.0	134
		EP231X: Perfluoroctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	89.8	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	86.6	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4937045)</b>							
ES2308457-004	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	95.4	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	88.2	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	96.0	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.6	72.0	130
		EP231X: Perfluoroctanoic acid (PFOA)	335-67-1	0.25 µg/L	106	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	100	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	95.2	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	95.4	69.0	133
		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	94.4	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	117	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4937045)</b>							
ES2308457-004	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	99.8	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	108	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	97.4	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	95.4	66.0	145

Sub-Matrix: WATER

				Matrix Spike (MS) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike	Spike Recovery(%)	Acceptable Limits (%)		
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4937045) - continued				Concentration	MS	Low	High	
ES2308457-004	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	105	57.6	145	
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	98.8	65.0	136	
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	93.2	61.0	135	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4937045)				757124-72-4	0.25 µg/L	88.8	63.0	143
ES2308457-004	Anonymous	EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	98.8	64.0	140	
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	109	67.0	138	
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	97.6	71.4	144	

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

Work Order	: ES2308522	Page	: 1 of 5
Client	: KLEINFELDER AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: Megan Ferguson	Telephone	: +6138549 9609
Project	: 20232071	Date Samples Received	: 15-Mar-2023
Site	: WSS Cabbage Tree Road March 2023	Issue Date	: 21-Mar-2023
Sampler	: AARON KING	No. of samples received	: 11
Order number	: ----	No. of samples analysed	: 11

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.
- **NO** Matrix Spike outliers occur.
- 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 : Frequency of Quality Control Samples

Matrix: WATER

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
<b>Laboratory Duplicates (DUP)</b>					
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	1	19	5.26	10.00	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>					
Dissolved Metals by ICP-MS - Suite A	0	17	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

### Analysis Holding Time Compliance

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

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

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

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

Matrix: WATER

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

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EG020F: Dissolved Metals by ICP-MS</b>									
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)	BH2, BH6, BH9A, MW239S, QC01, TB01	BH4, BH7, BH11, WPW2, RB01,	15-Mar-2023	----	----	----	20-Mar-2023	11-Sep-2023	✓
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>									
HDPE (no PTFE) (EP231X)	WPW2, TB01	RB01,	15-Mar-2023	20-Mar-2023	11-Sep-2023	✓	21-Mar-2023	11-Sep-2023	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>									
HDPE (no PTFE) (EP231X)	WPW2, TB01	RB01,	15-Mar-2023	20-Mar-2023	11-Sep-2023	✓	21-Mar-2023	11-Sep-2023	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>									
HDPE (no PTFE) (EP231X)	WPW2, TB01	RB01,	15-Mar-2023	20-Mar-2023	11-Sep-2023	✓	21-Mar-2023	11-Sep-2023	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>									
HDPE (no PTFE) (EP231X)	WPW2, TB01	RB01,	15-Mar-2023	20-Mar-2023	11-Sep-2023	✓	21-Mar-2023	11-Sep-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>EP231P: PFAS Sums</b>								
HDPE (no PTFE) (EP231X) WPW2, TB01	RB01,	15-Mar-2023	20-Mar-2023	11-Sep-2023	✓	21-Mar-2023	11-Sep-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: 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>Laboratory Duplicates (DUP)</b>							
Dissolved Metals by ICP-MS - Suite A		EG020A-F	2	17	11.76	10.00	✓ NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	1	19	5.26	10.00	✗ NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Dissolved Metals by ICP-MS - Suite A		EG020A-F	1	17	5.88	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	1	19	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Dissolved Metals by ICP-MS - Suite A		EG020A-F	1	17	5.88	5.00	✓ NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	1	19	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Dissolved Metals by ICP-MS - Suite A		EG020A-F	0	17	0.00	5.00	✗ NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS		EP231X	1	19	5.26	5.00	✓ NEPM 2013 B3 & ALS QC Standard

## 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.

<i>Analytical Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
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.
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>			
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.

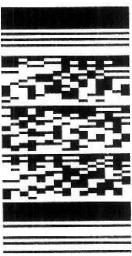


Client: Kleinfelder Australia Pty Ltd Suite 3, 240-244 Pacific Highway Charlestown NSW 2290 Phone: 02 4949 5200		Site Name: WSS Cabbage Tree Road March 2023		SITE, COC AND CONTACT DATA		Laboratory: ALS 5/585 Maitland Rd Mayfield West, Newcastle NSW 2304 Phone: (02) 4014 2500	
QUOTE NUMBER Job No.: Required TAT: Data QA level:		Sampler Name: Aaron King (+61) 457 426 013 Contact e-mail: Akking@kleinfelder.com		Date / Time: 15/3/23 Temp. (°C) Notes:		Date / Time: 15/3/23 Temp. (°C) Notes:	
CHAIN OF CUSTODY Relinquished by (print):  (sign)		Received by (print):  (sign)		Relinquished:  (sign)		Received by:  (sign)	
Date / Time: 15/3/23 Temp. (°C) Notes:		Date / Time: 15/3/23 Temp. (°C) Notes:		Date / Time: 15/3/23 Temp. (°C) Notes:		Date / Time: 15/3/23 Temp. (°C) Notes:	
Sample ID BH2		Lab ID 15/3		Sample Point Water		Organic Analytes	
Sample ID BH4		Lab ID 15/3		Sample Point Water		Metals: Fe Mn As	
Sample ID BH6		Lab ID 15/3		Sample Point Water		PFAS (28 analytes standard Level)	
Sample ID BH7		Lab ID 15/3		Sample Point Water		Extended Water quality suite B	
Sample ID BH9A		Lab ID 15/3		Sample Point Water		Comments	
Sample ID BH11		Lab ID 15/3		Sample Point Water			
Sample ID MW239S		Lab ID 15/3		Sample Point Water			
Sample ID WPW2		Lab ID 15/3		Sample Point Water			
Sample ID QC01		Lab ID 15/3		Sample Point Water			
Sample ID QC01A		Lab ID 15/3		Sample Point Water			
Sample ID RB01		Lab ID 15/3		Sample Point Water			
Sample ID TB01		Lab ID 15/3		Sample Point Water			

please forward to Eurofins

Environmental Division  
Sydney  
Work Order Reference  
**ES2.308522**

~~Materials: As, B, Ba, Be, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Ni, Se, V & Zn~~



REINFELDER AUSTRALIA PTY LTD

KLEINFELDER

#973259



## 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 973259-W  
Project name WSS CABBAGE TREE ROAD MARCH 2023  
Project ID 20232071  
Received Date Mar 17, 2023

Client Sample ID			QC01A
Sample Matrix			Water
Eurofins Sample No.			S23- Ma0044788
Date Sampled			Mar 15, 2023
Test/Reference	LOR	Unit	
<b>Heavy Metals</b>			
Arsenic (filtered)	0.001	mg/L	< 0.001
Iron (filtered)	0.05	mg/L	0.06
Manganese (filtered)	0.005	mg/L	< 0.005

**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
Heavy Metals (filtered) - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Mar 21, 2023	180 Days



web: 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 Magowar 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 2304 WA 6106
Tel: +61 3 8564 5000 NATA# 1261 Site# 1254	Tel: +61 3 8564 5000 NATA# 1261 Site# 25403	Tel: +61 2 9900 8400 NATA# 1261 Site# 18217	Tel: +61 2 6113 8091 NATA# 1261 Site# 25466	Tel: +61 7 3902 4600 NATA# 1261 Site# 20794	NATA# 1261 Site# 25079 & 25289 NATA# 2377 Site# 2370

**Eurofins ARL Pty Ltd**

ABN: 91 05 0159 898

Perth	Auckland	Christchurch
46-48 Banksia Road Welshpool	35 O'Rorke Road Penrose, Auckland 1061	43 Detroit Drive Rolleston, Christchurch 7675

**Eurofins Environment Testing NZ Ltd**

NZBN: 9429046024954

Auckland	Christchurch
43 Detroit Drive IANZ# 1327	43 Detroit Drive IANZ# 1290

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

**Project Name:** WSS CABBAGE TREE ROAD MARCH 2023  
**Project ID:** 20232071

**Order No.:**  
**Report #:** 973259  
**Phone:** 02 4949 5200  
**Fax:**

**Received:** Mar 17, 2023 4:23 PM  
**Due:** Mar 24, 2023  
**Priority:** 5 Day  
**Contact Name:** AARON KING

Eurofins Analytical Services Manager : Andrew Black

**Sample Detail**

Arsenic (filtered)
Iron (filtered)
Manganese (filtered)

**Sydney Laboratory - NATA # 1261 Site # 18217****External Laboratory**

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	QC01A	Mar 15, 2023		Water	S23-Ma0044788	X	X	X
						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>Heavy Metals</b>								
Arsenic (filtered)		mg/L	< 0.001			0.001	Pass	
Iron (filtered)		mg/L	< 0.05			0.05	Pass	
Manganese (filtered)		mg/L	< 0.005			0.005	Pass	
<b>LCS - % Recovery</b>								
<b>Heavy Metals</b>								
Arsenic (filtered)		%	89			80-120	Pass	
Iron (filtered)		%	91			80-120	Pass	
Manganese (filtered)		%	91			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>								
Arsenic (filtered)	S23-Ma0038945	NCP	%	88			75-125	Pass
Iron (filtered)	S23-Ma0038945	NCP	%	87			75-125	Pass
Manganese (filtered)	S23-Ma0038945	NCP	%	85			75-125	Pass
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits
<b>Duplicate</b>								
<b>Heavy Metals</b>								
Arsenic (filtered)	S23-Ma0044298	NCP	mg/L	0.001	0.001	9.4	30%	Pass
Iron (filtered)	S23-Ma0044298	NCP	mg/L	7.2	7.1	1.6	30%	Pass
Manganese (filtered)	S23-Ma0044298	NCP	mg/L	0.049	0.049	<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

**Authorised by:**



**Glenn Jackson**  
**General Manager**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accredited

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

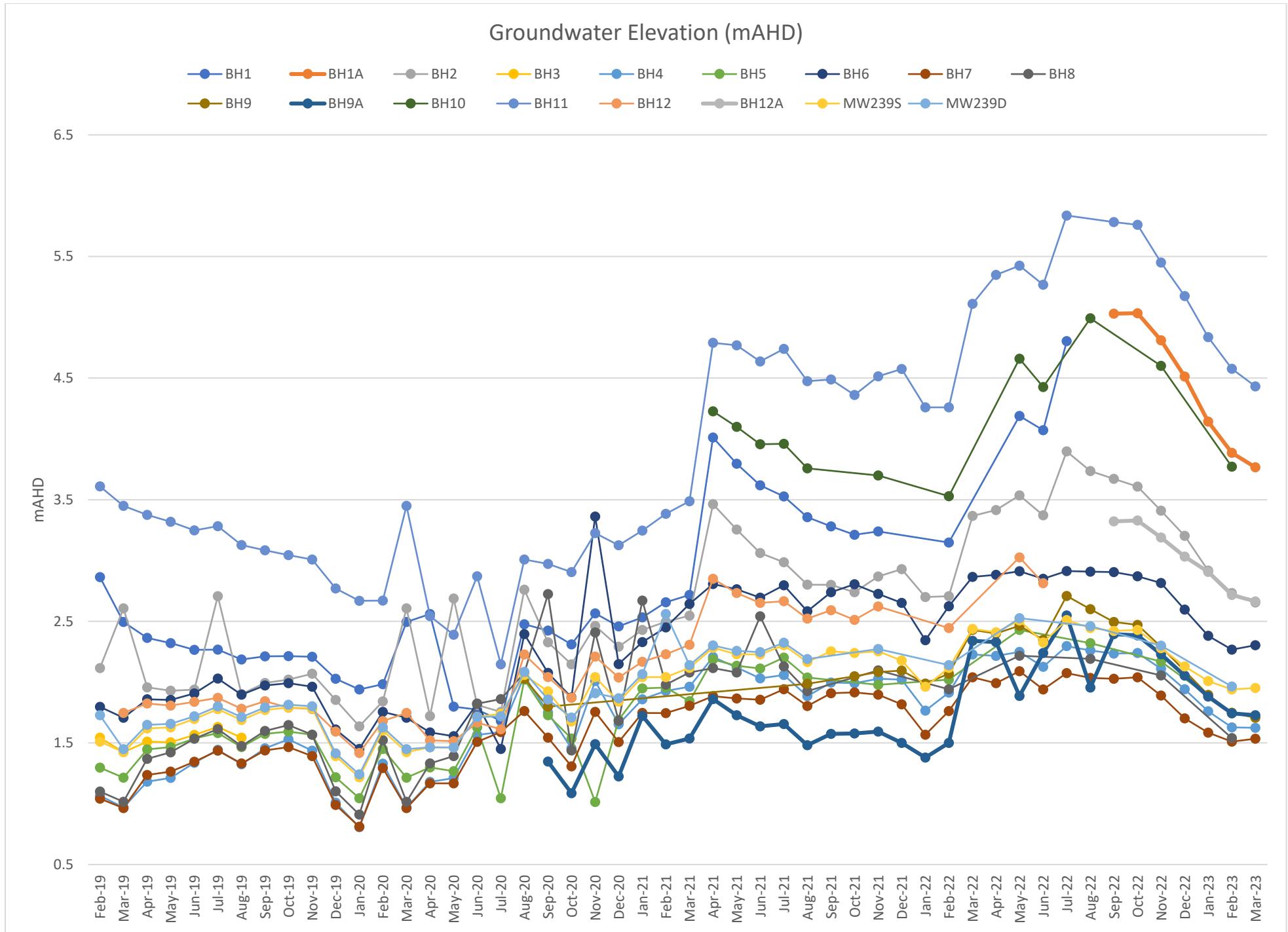
Eurofins shall not be liable for loss, cost, damages or expenses incurred by the c

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the Client, any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

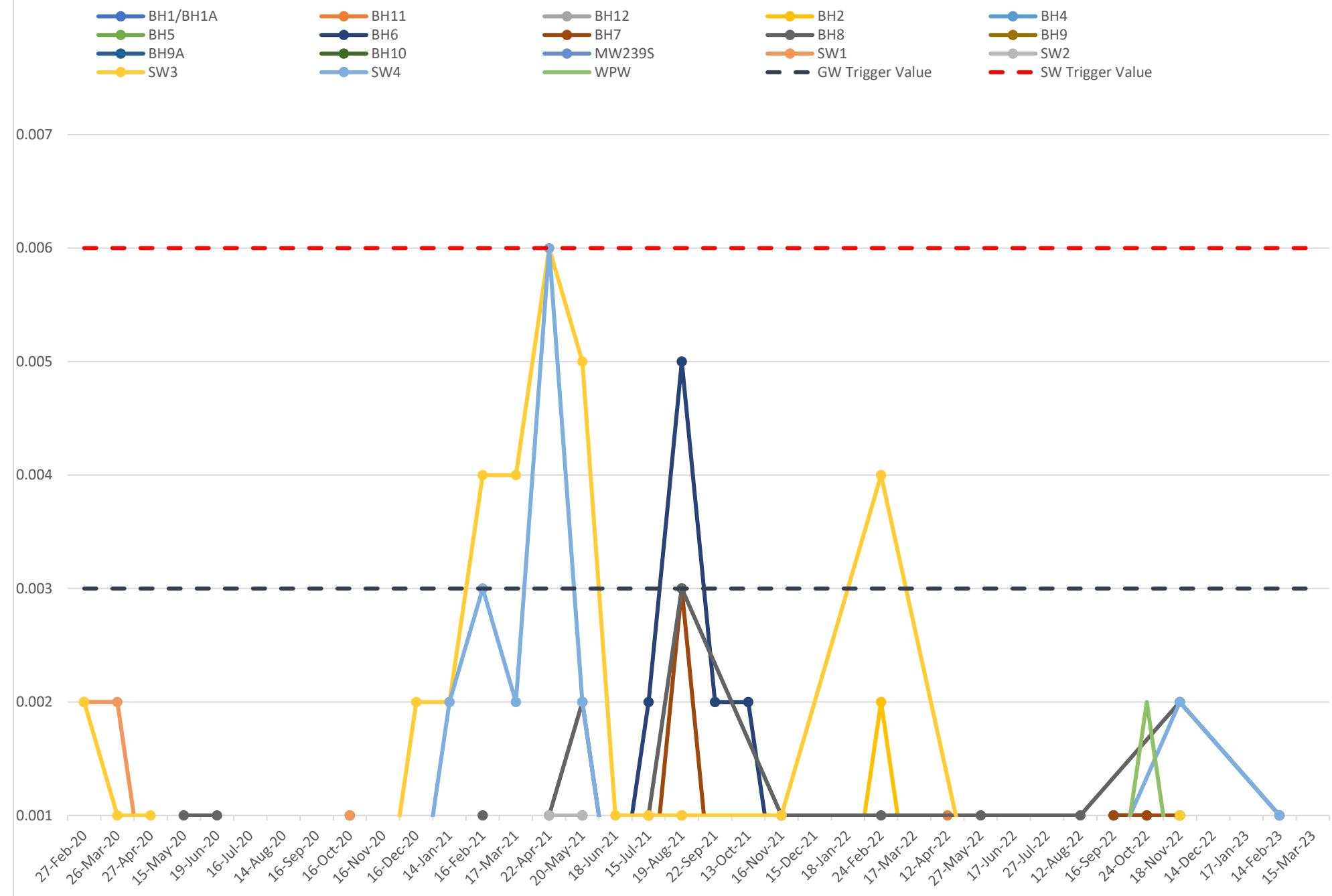


## ATTACHMENT 4: DATA TRENDS

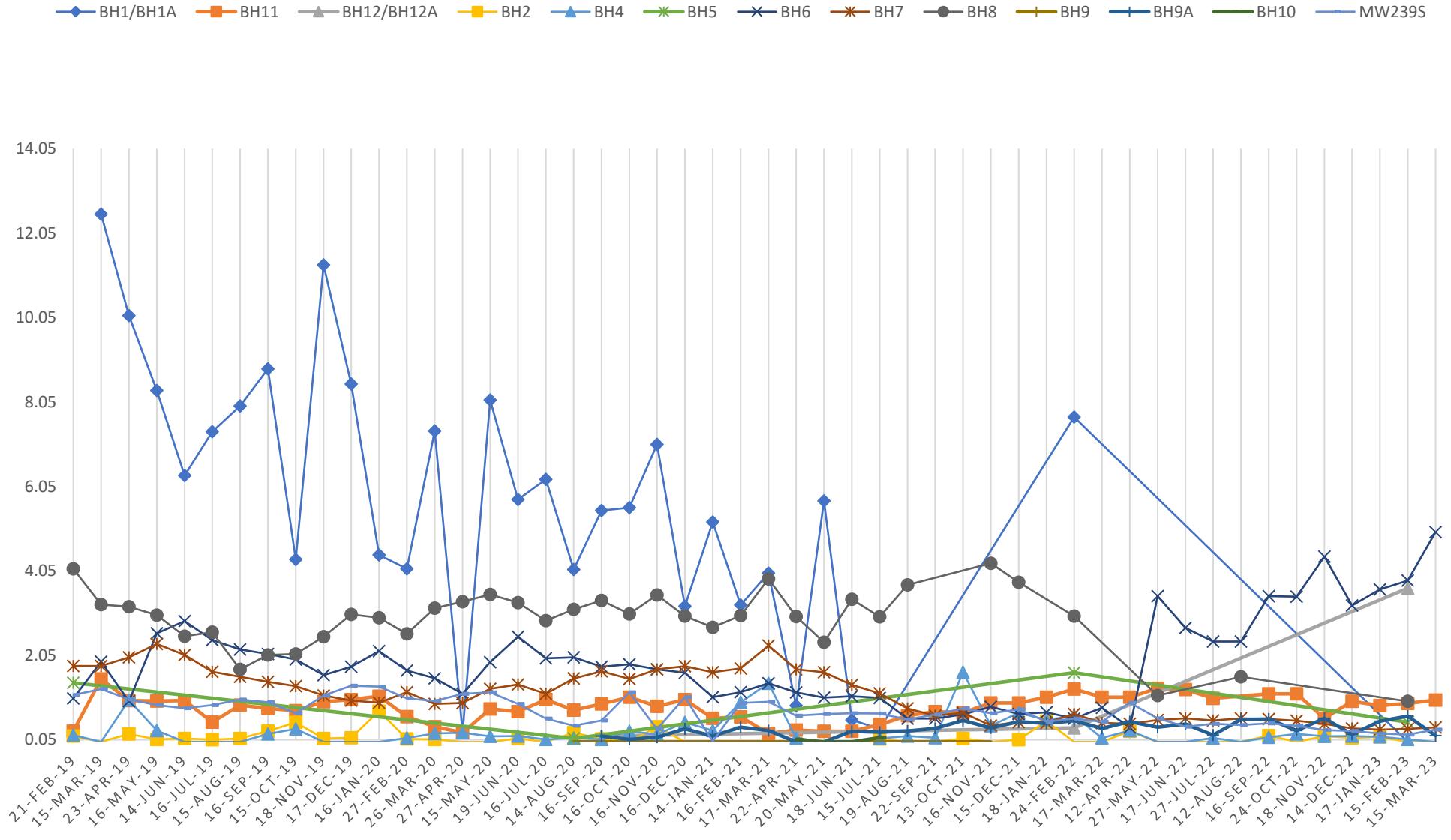




## Arsenic (As) mg/L

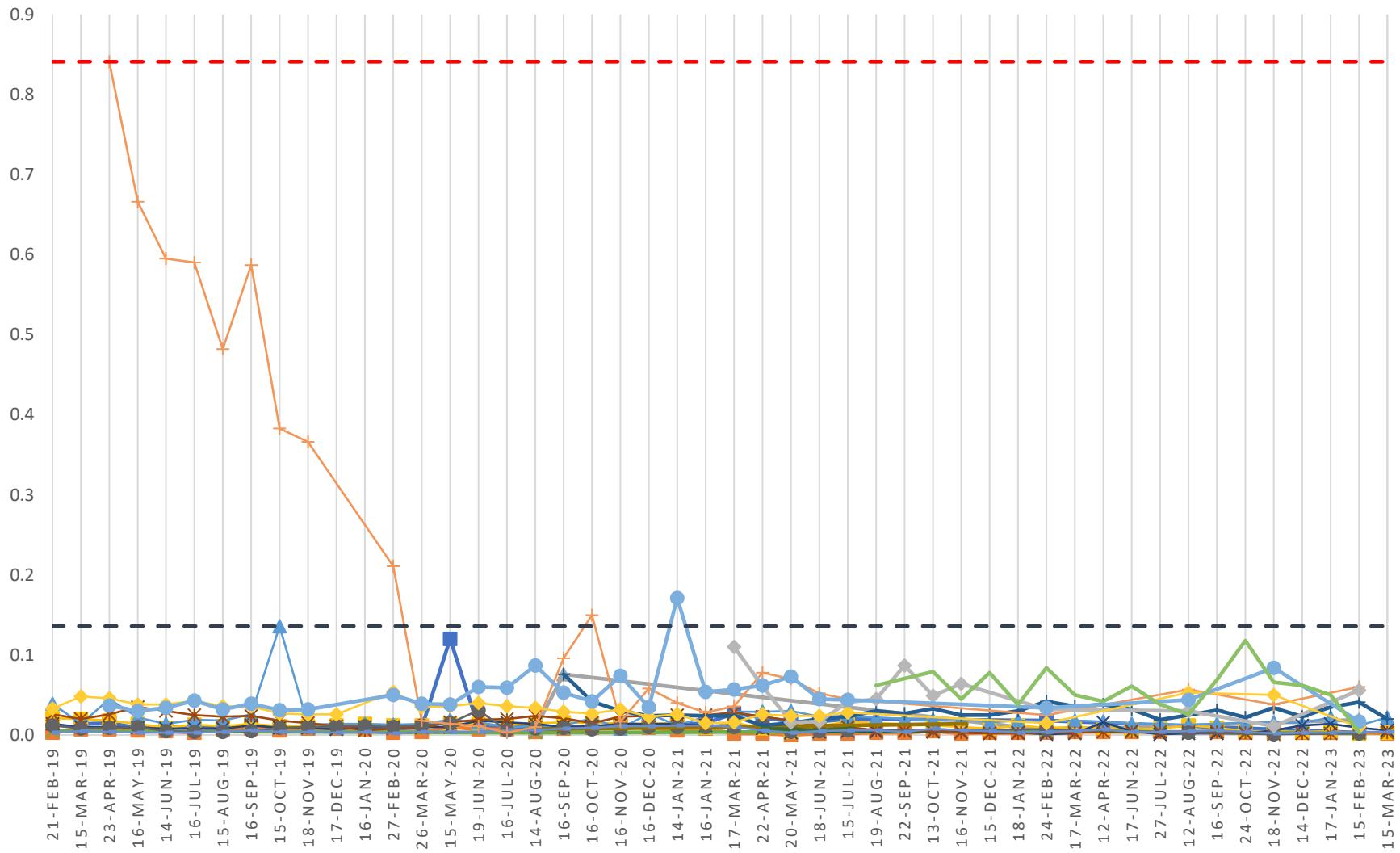


## Iron (Fe) mg/L

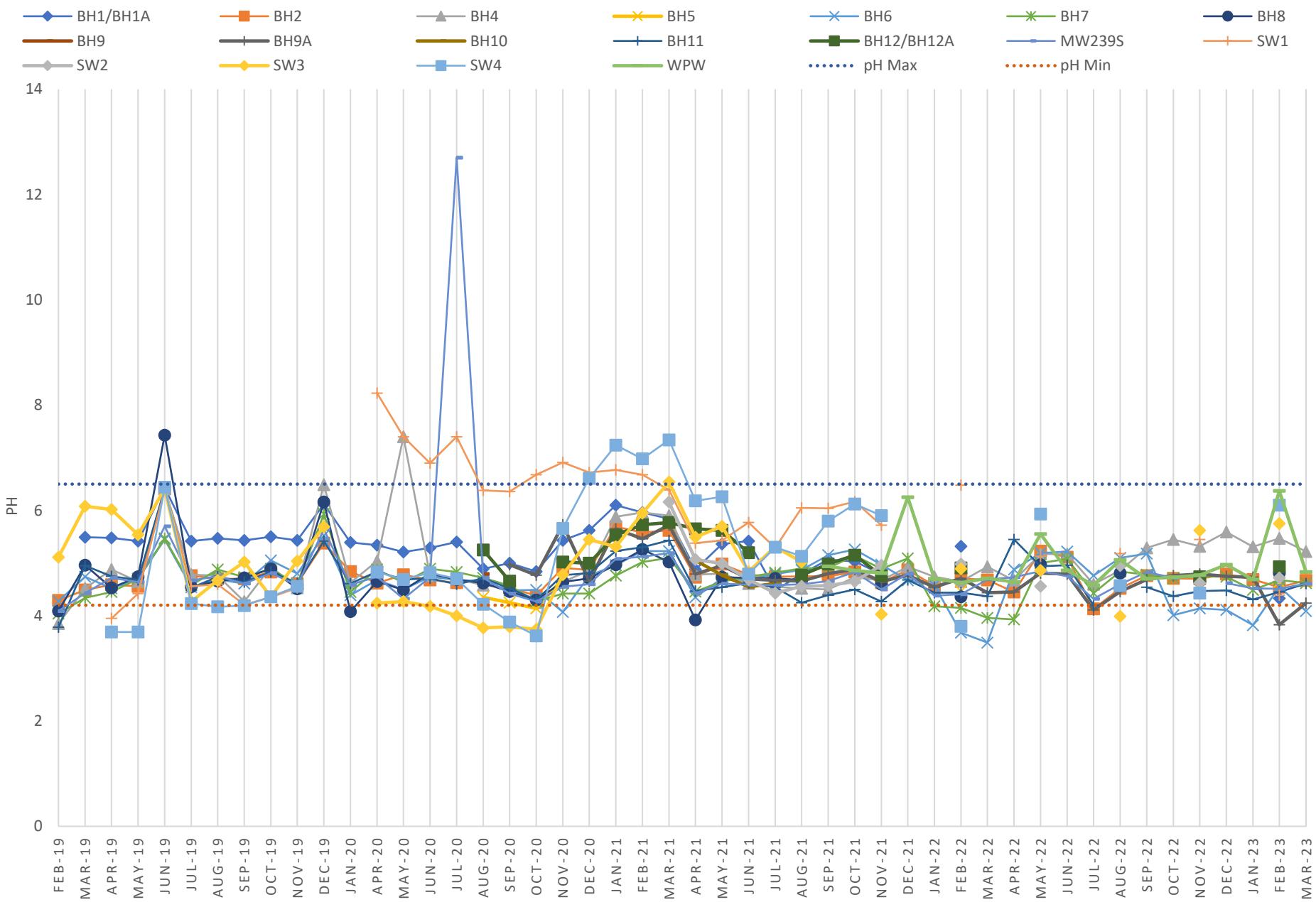


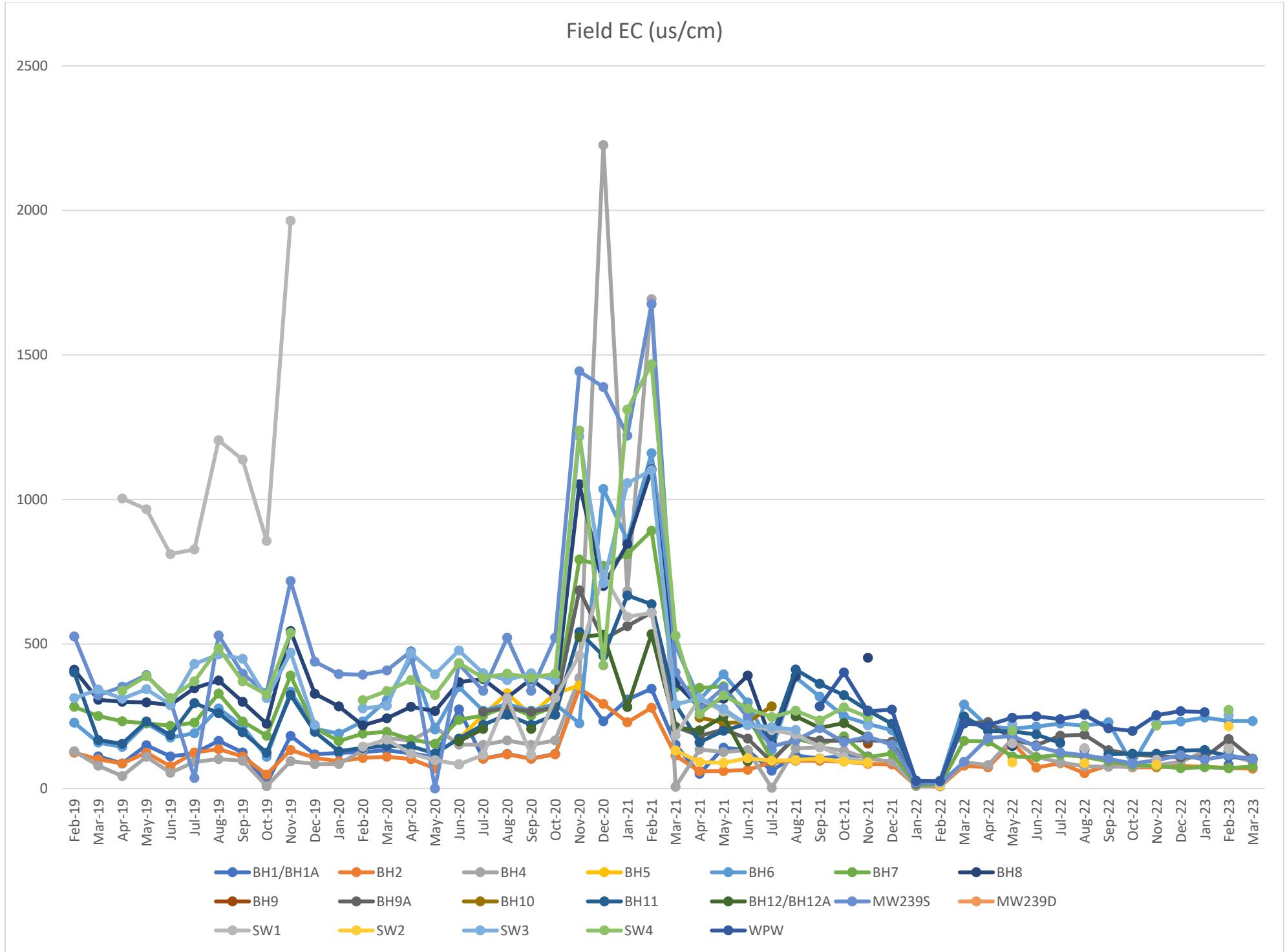
## Manganese (Mn) mg/L

BH1 BH11 BH12 BH2 BH4



## pH (Field)





## Monthly Rainfall Totals 2022-2023 (mm)

