

	Q3 Landfill Groundwater Sampling Results 2023 Dow Silicones UK Ltd Barry	Quarter 3 2023
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Q3-2023 Landfill Groundwater Sampling Results

The impact of bulk storage of materials on the landfill and its performance was monitored in quarter 3 of 2023 and the results shown in this report.

The quarterly sampling plan satisfies both SPMP (Site Protection and Monitoring Programme) and Landfill licence requirements (ref URS design of a site monitoring programme, 44382681, July 2006 and Dow Silicones UK landfill CMS review, 49310733, October 2008).

This report provides sample results for boreholes and surface water bodies. They have been assessed for copper and Trimethylsilanol (TMS) concentrations.

- The boreholes ~~LF1, LF4, LF6, LF7, E1s, E1m, E1d, E2s, E2d, E4s, E4d~~, 210, 312, 412, A2d, LF10S, ~~LF10M, LF10D, LF11S, LF11M, LF11D, LF12S, LF12D, LF13S, LF13M, LF13D, LF14S, LF14M, LF14D~~, CP1S, CP1M, CP1D, CP2S, CP2M, CP2D
- The surface water bodies are Cadoxton pond (North), Cadoxton pond (South), Freshwater pond, Cadoxton River SW2, Cadoxton River SW3 and the Timber Pond.

The graphs illustrated have been prepared from borehole and surface water samples taken for Q3-2007 up till Q3-2023

The following boreholes were lost and are no longer sampled – but the historical data is still in this report for reference. Alternative boreholes were added in 2016 & 2018 to provide additional data because of the unavailability of these ones: E1s, E1m, E1d, E2S, E2D, E4S, E4D, LF1, LF4, LF6, LF13S, LF13M, LF13D.

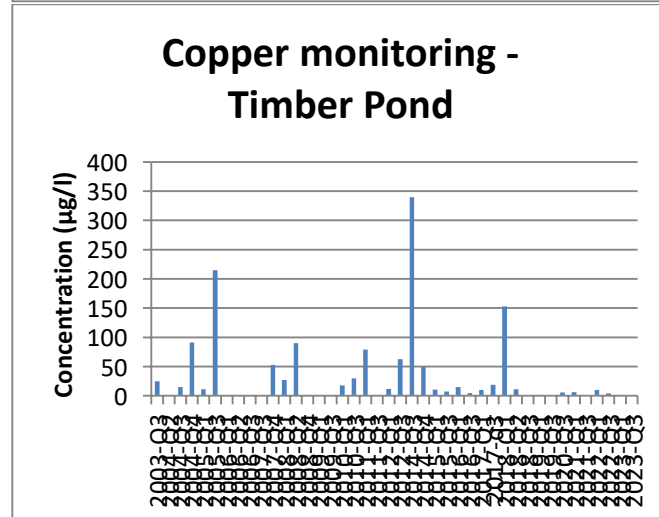
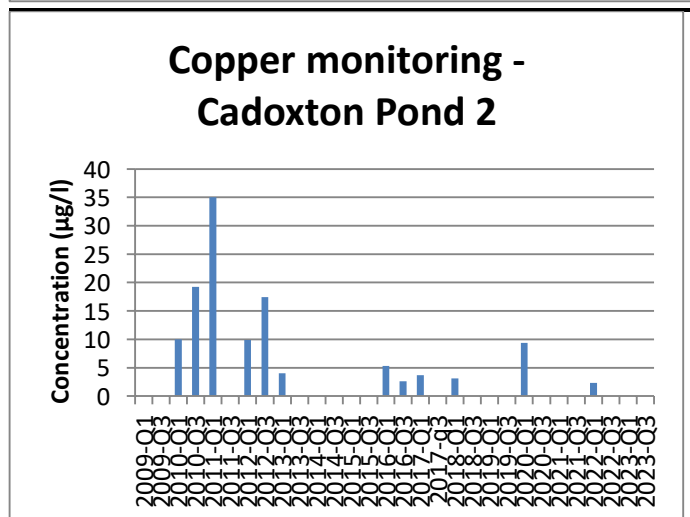
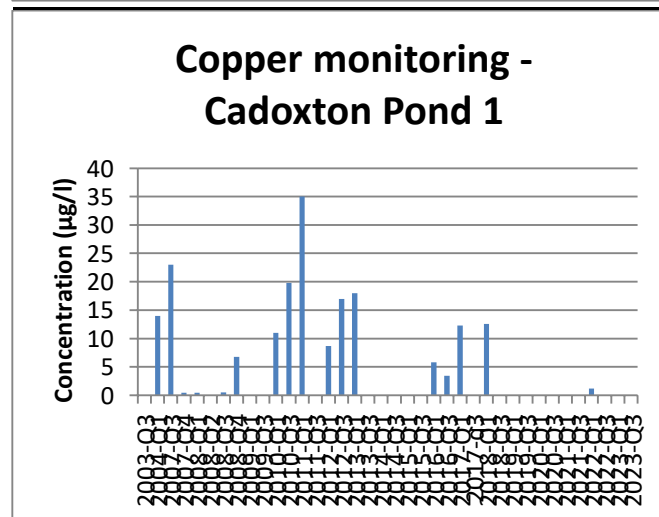
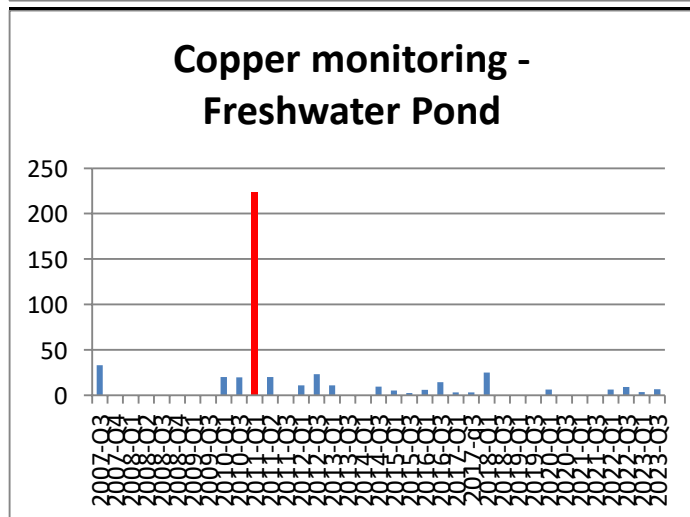
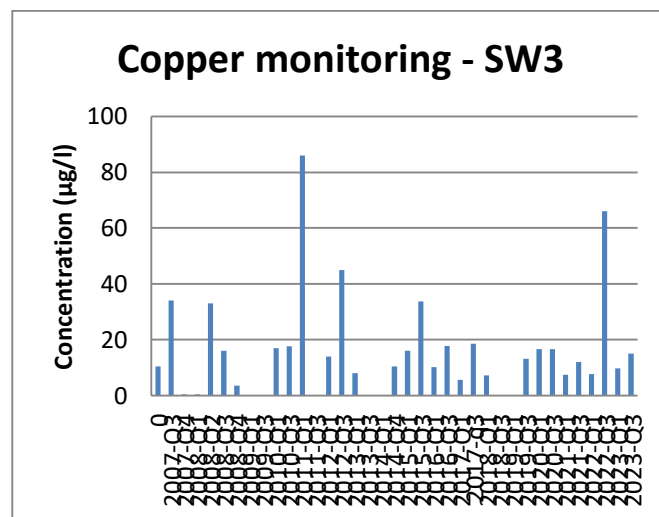
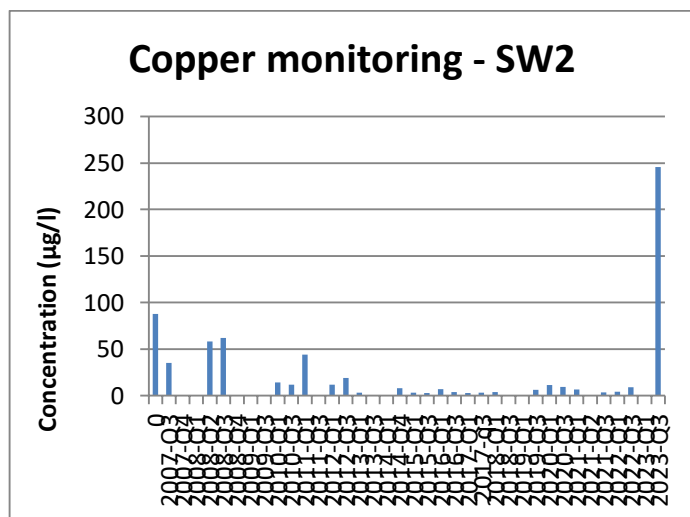
Some of the boreholes were not sampled during Q3 2023 due to being inaccessible, due to being unable to draw a sample or having been lost during the capping work on the landfill. These were: LF10S, LF10M, LF11S, LF11D, LF12S, CP1S, CP1M, CP2S. These boreholes show no results on the charts.

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Leachate graphs.

Copper

The detectable limit for Copper is 0.5 µg/l – any results below this will show on the graphs as 0

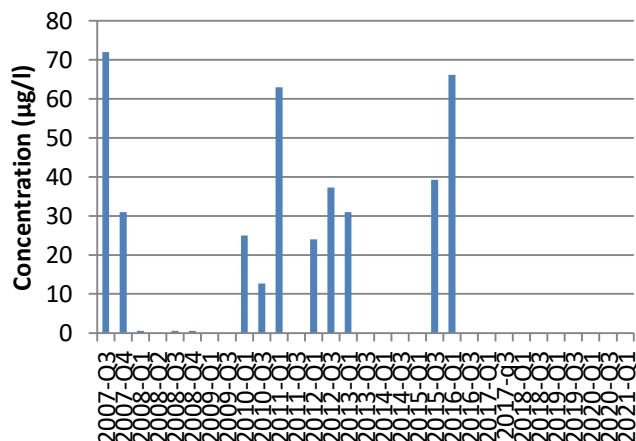




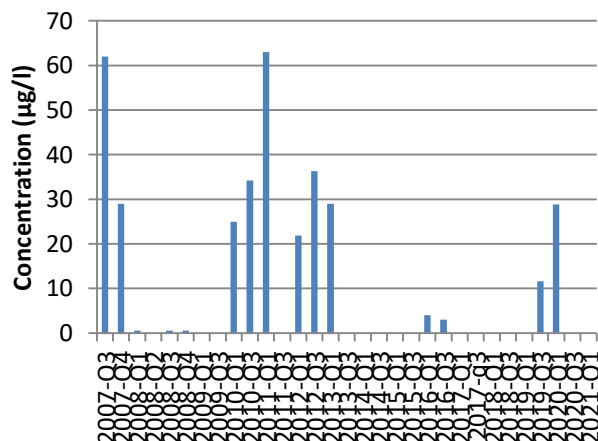
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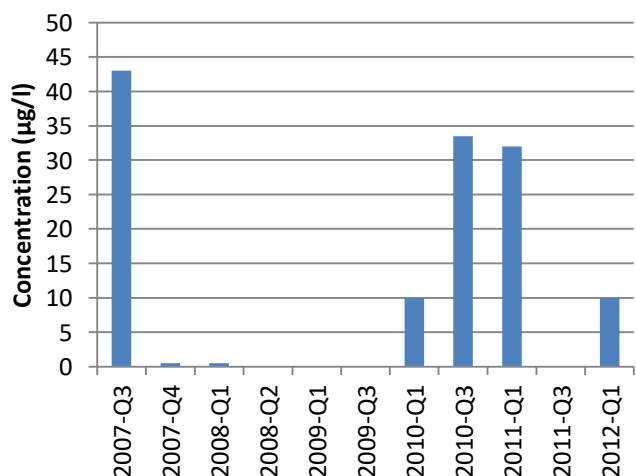
Copper monitoring - E1M



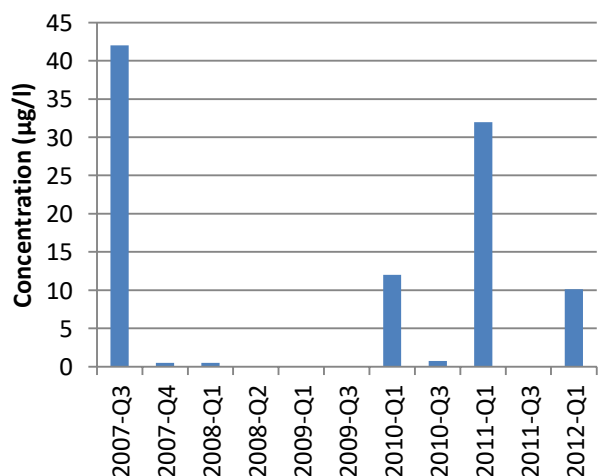
Copper monitoring - E1D



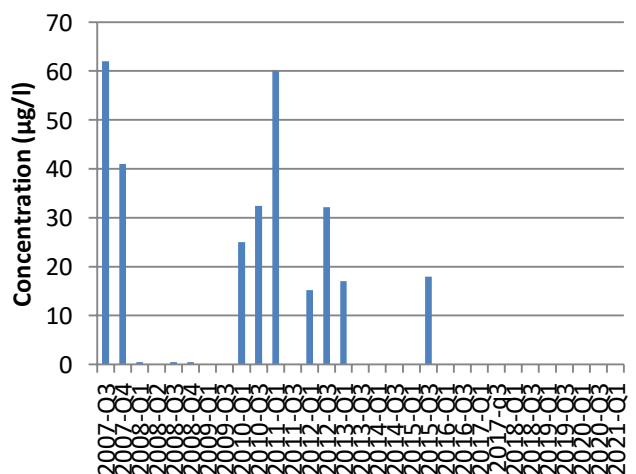
Copper monitoring - E2S



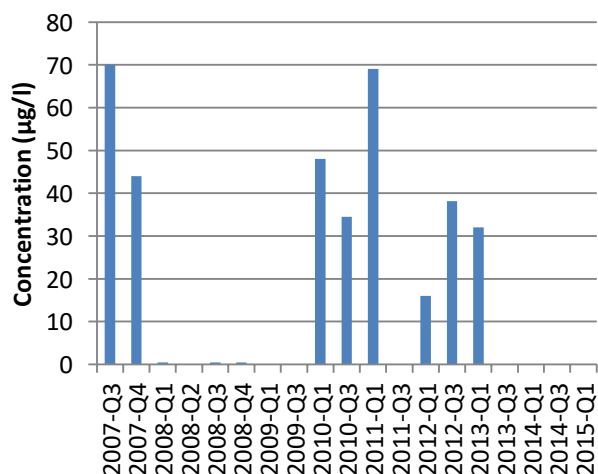
Copper monitoring - E2D



Copper monitoring - E1S



Copper monitoring - E4S

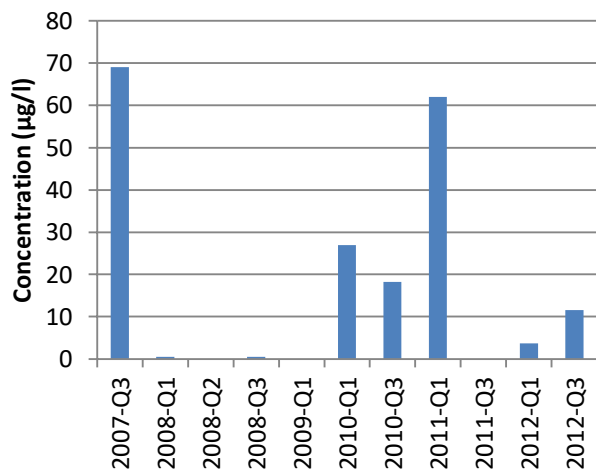




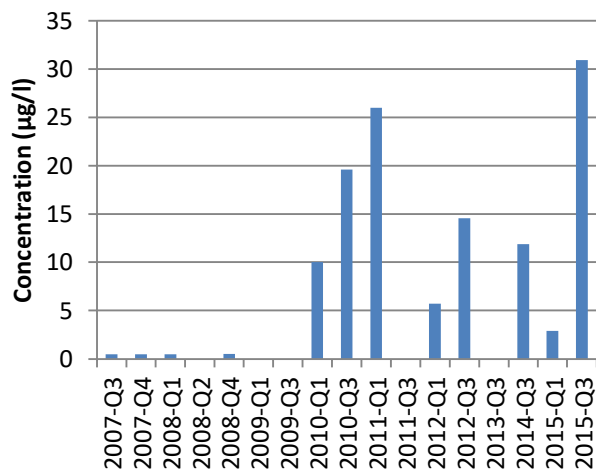
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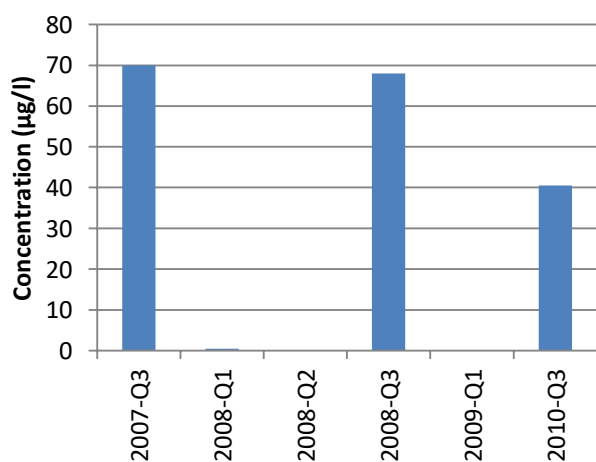
Copper monitoring - LF1



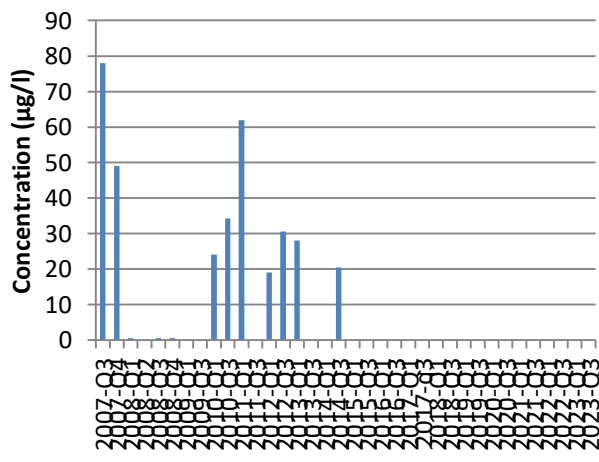
Copper monitoring - LF4



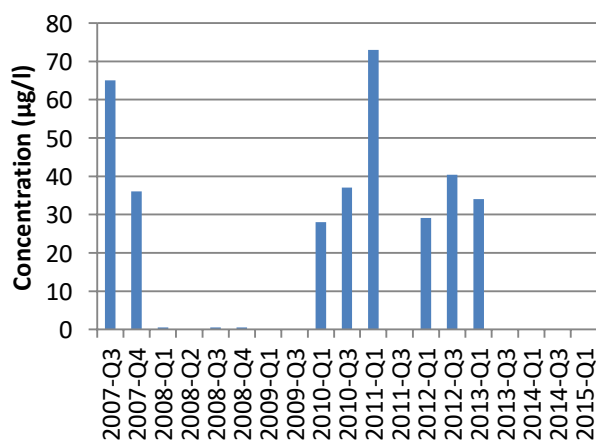
Copper monitoring - LF6



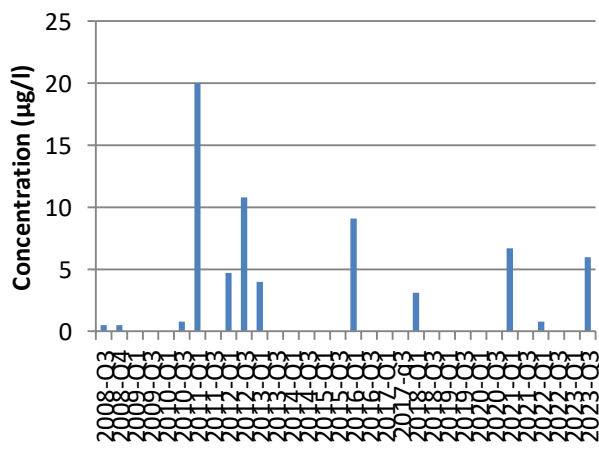
Copper monitoring - LF7



Copper monitoring - E4D

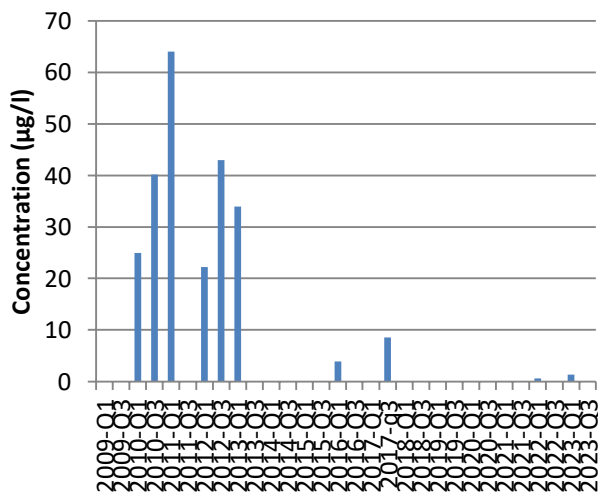


Copper monitoring - BH 210

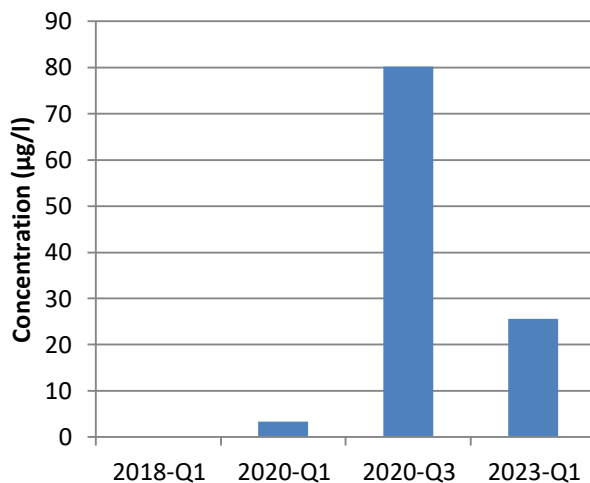




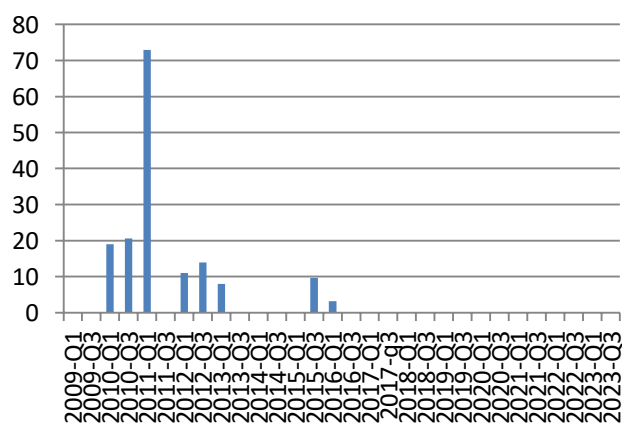
Copper monitoring - BH 412



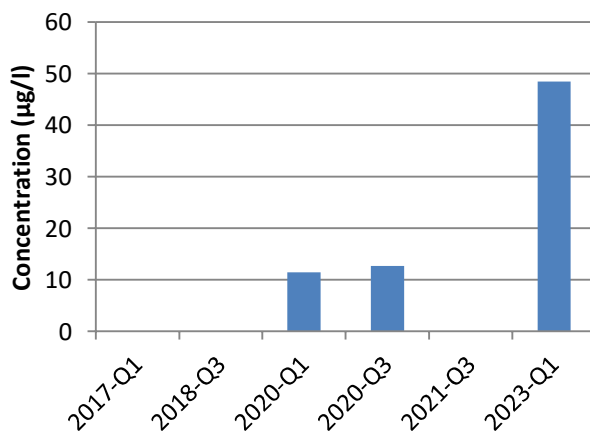
Copper monitoring - CP1S



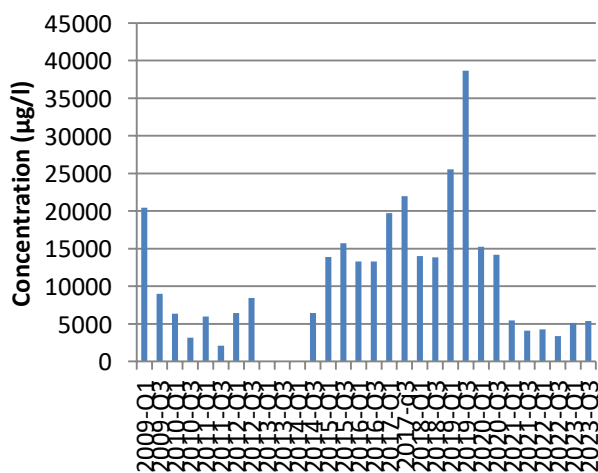
Copper monitoring - BH 312



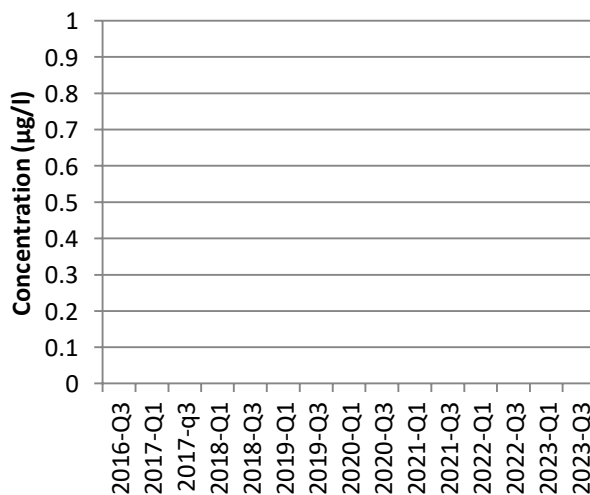
Copper monitoring - CP1M



Copper monitoring - A2D



Copper monitoring - CP1D

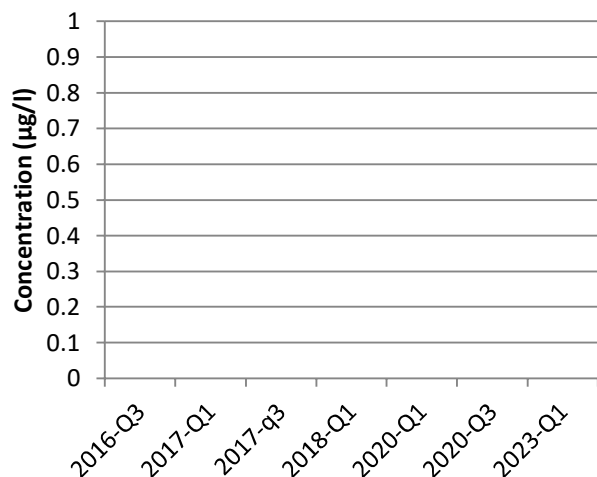




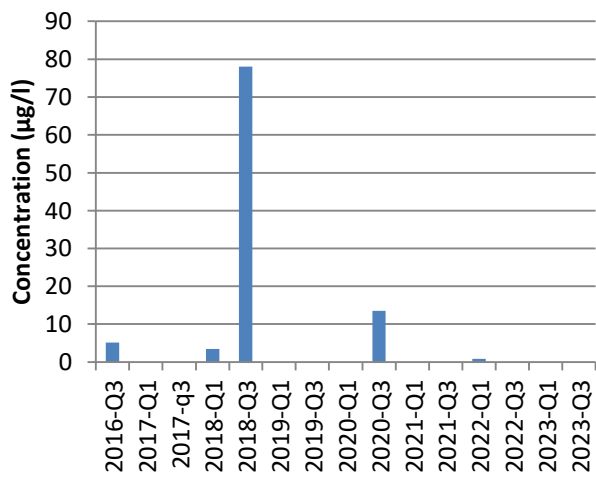
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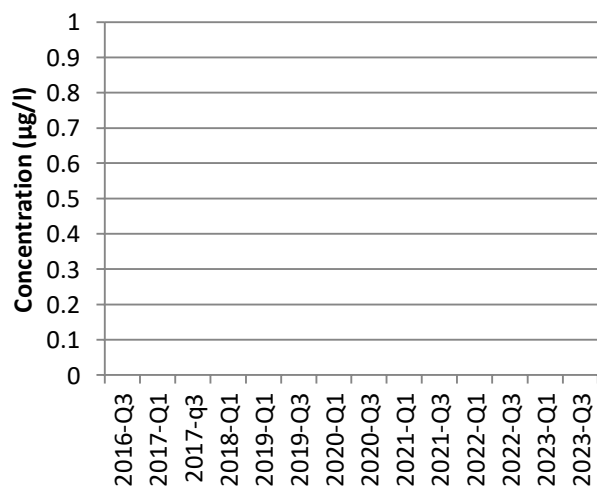
Copper monitoring - CP2S



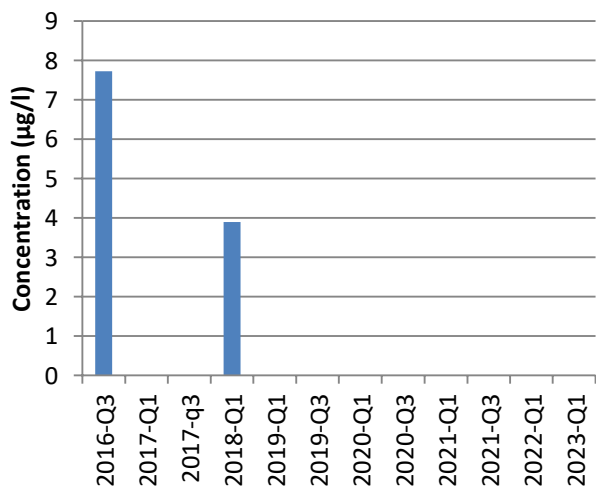
Copper monitoring - LF10S



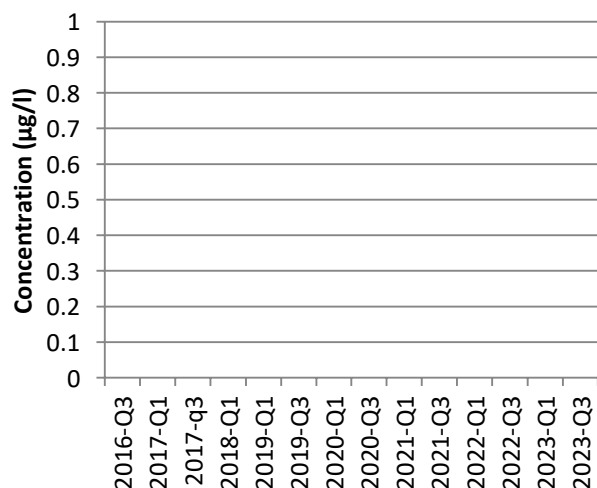
Copper monitoring - CP2M



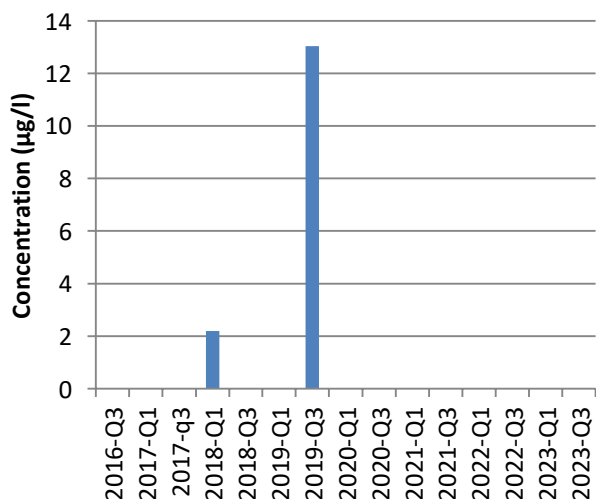
Copper monitoring - LF10M



Copper monitoring - CP2D



Copper monitoring - LF10D

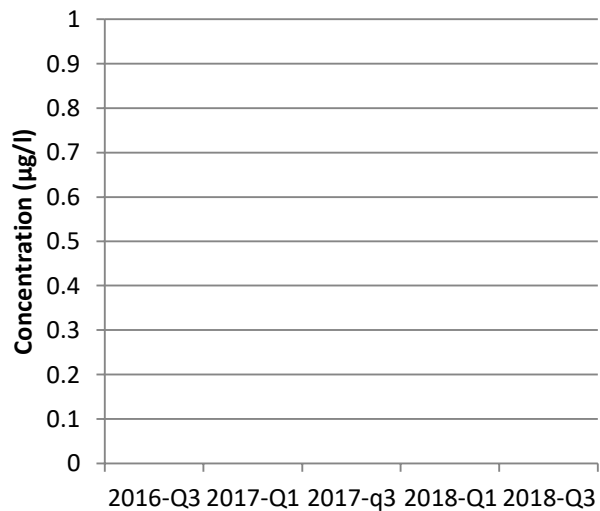




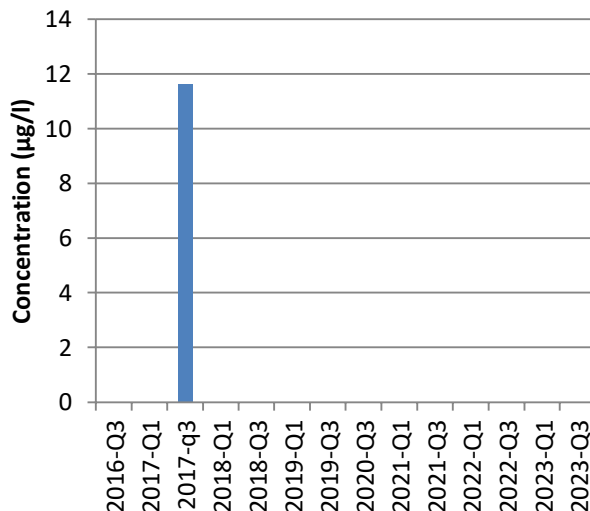
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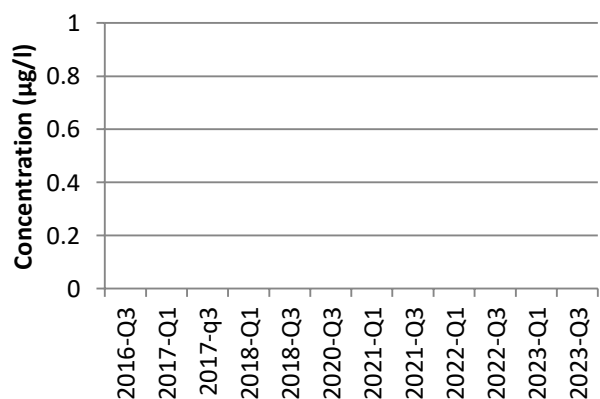
Copper monitoring - LF11S



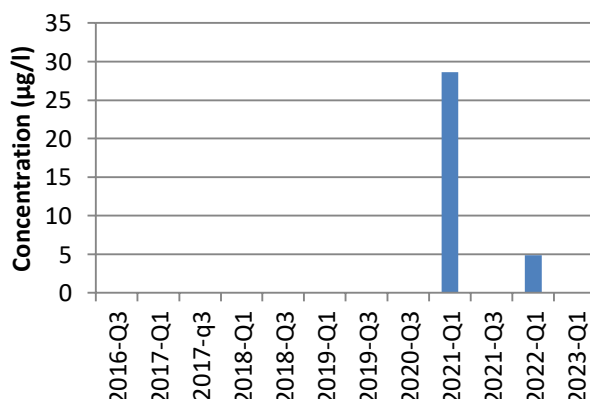
Copper monitoring - LF12M



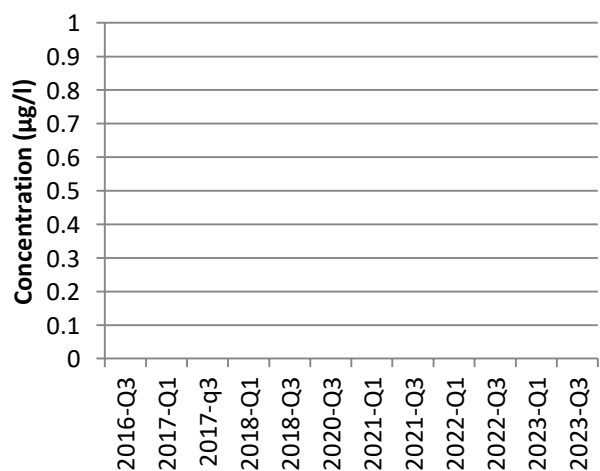
Copper monitoring - LF11M



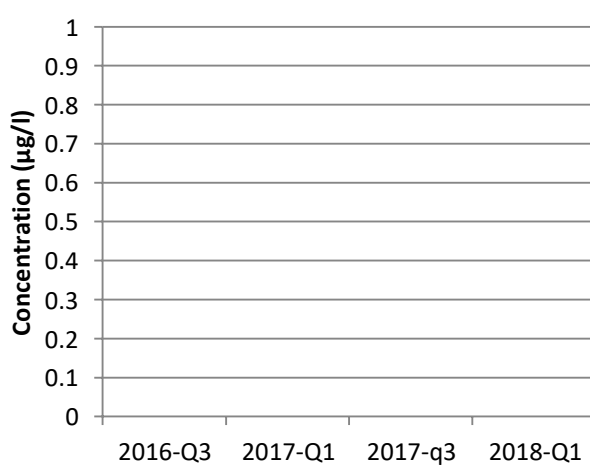
Copper monitoring - LF12D



Copper monitoring - LF11D

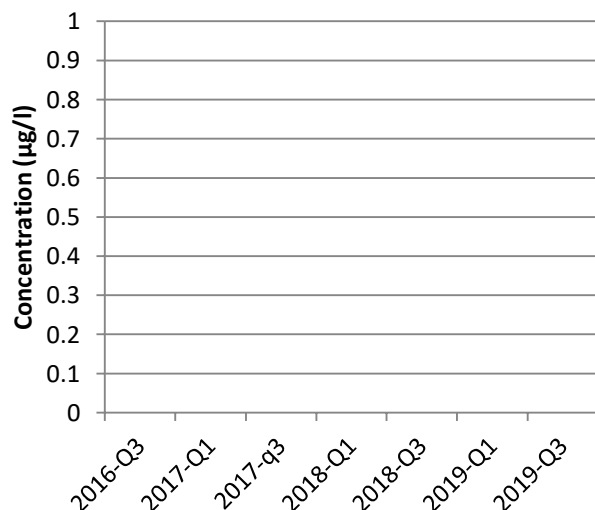


Copper monitoring - LF13S

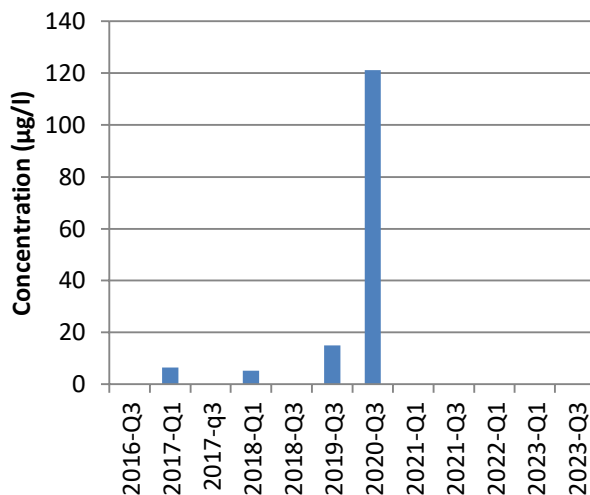




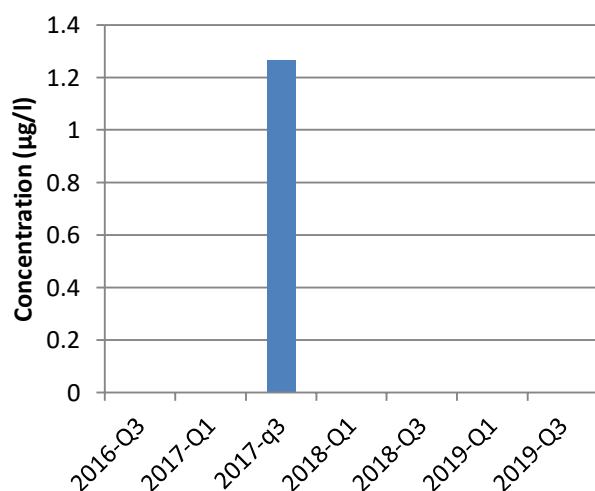
Copper monitoring - LF13M



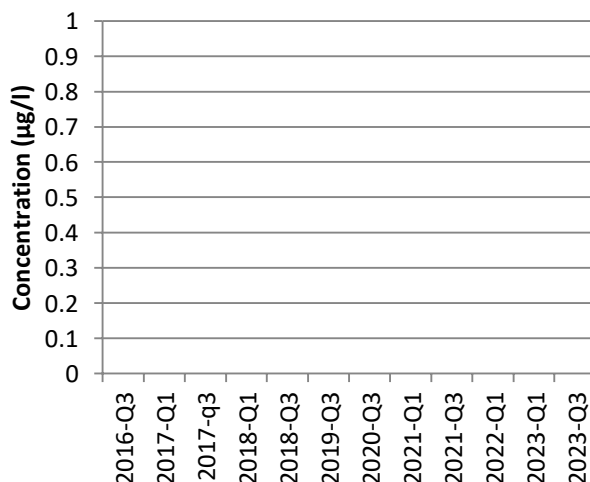
Copper monitoring - LF14M



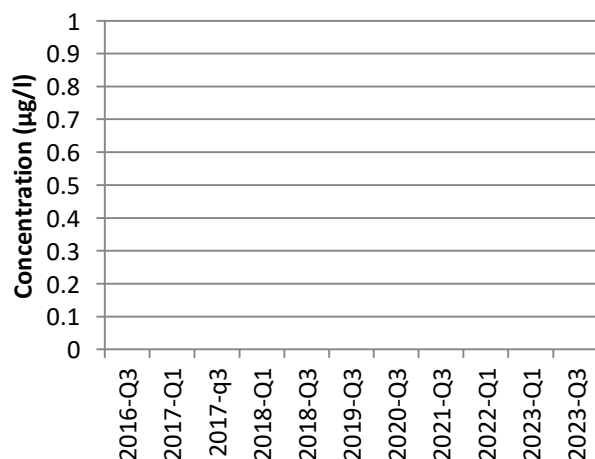
Copper monitoring - LF13D



Copper monitoring - LF14D



Copper monitoring - LF14S



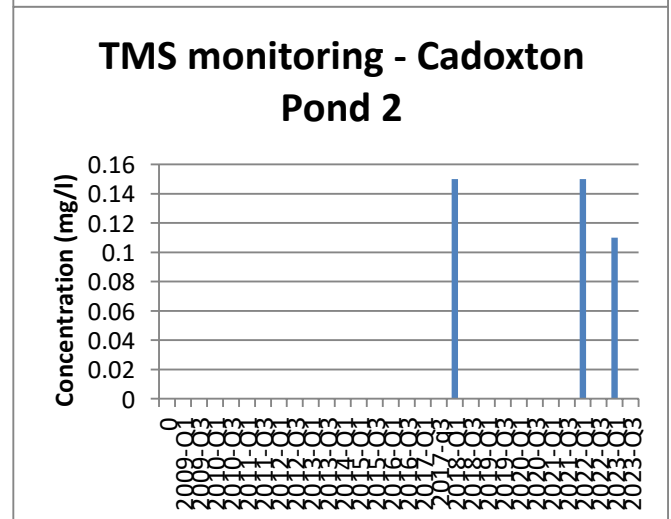
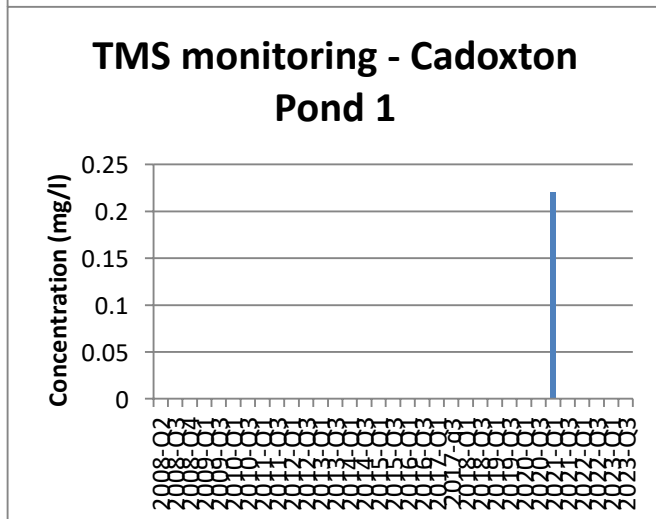
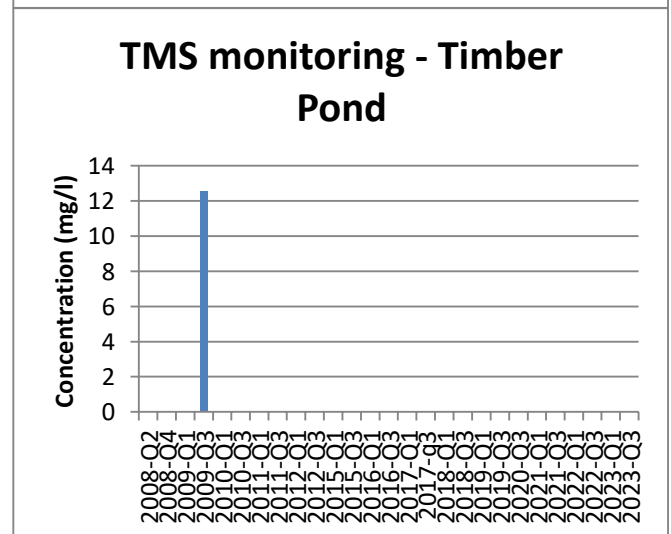
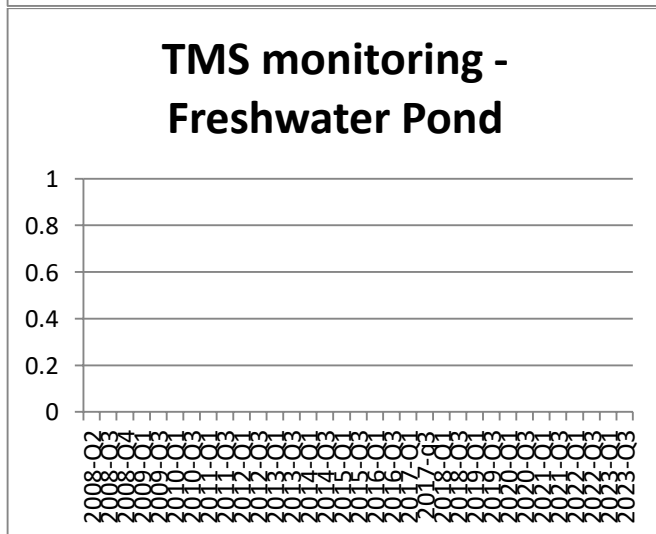
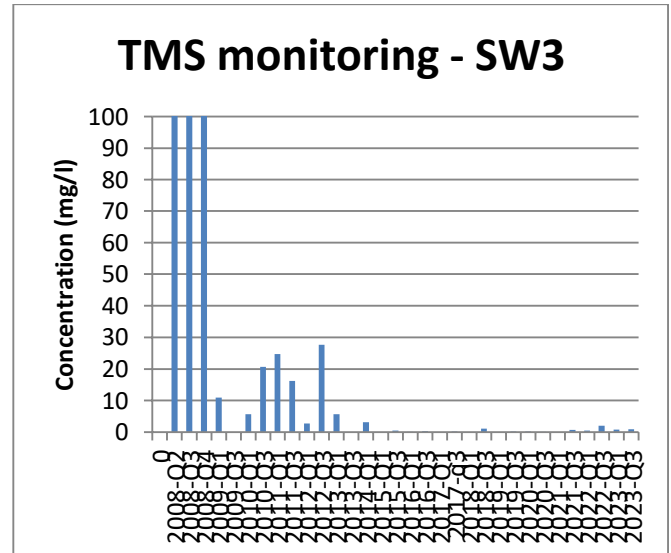
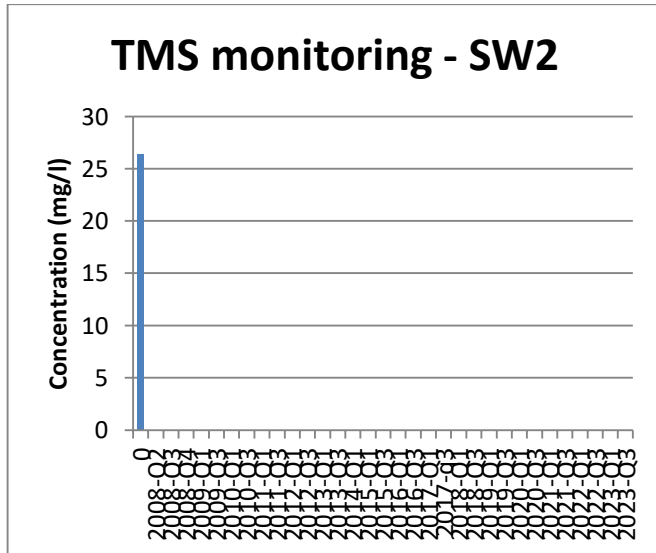
Comments

1. Most results from the sampling this quarter fall within the normal range of the previous sampling data.
2. The only 2 boreholes displaying a significant value for copper was A2D and SW2:
 - A2D results are consistent with previous, the borehole is in the centre of the site and does not pose a risk to any sensitive receptors.
 - SW2 is upstream of the weir before the effluent release point from Dow Silicones UK Ltd. SW3 downstream does not show any elevation from normal, so it is likely to be a false result or contaminated sample.

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TMS

The detectable limit for Trimethylsilanol is 3 mg/l – any results below this will show on the graphs as 0

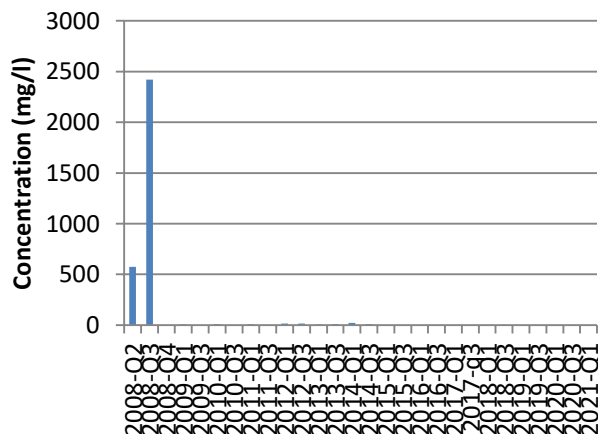




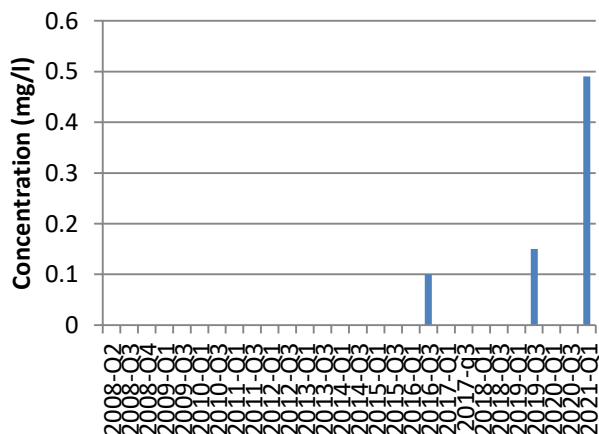
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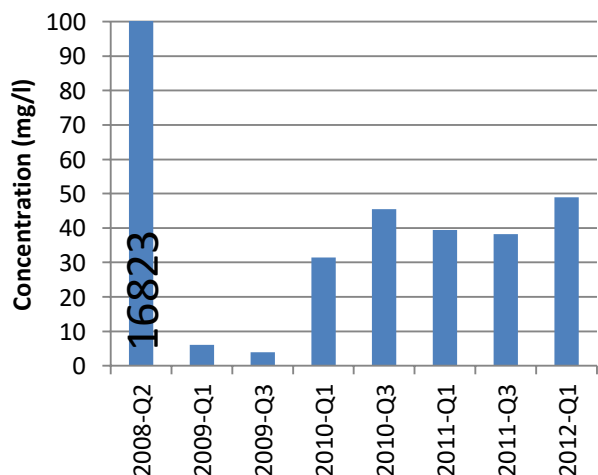
TMS monitoring - E1M



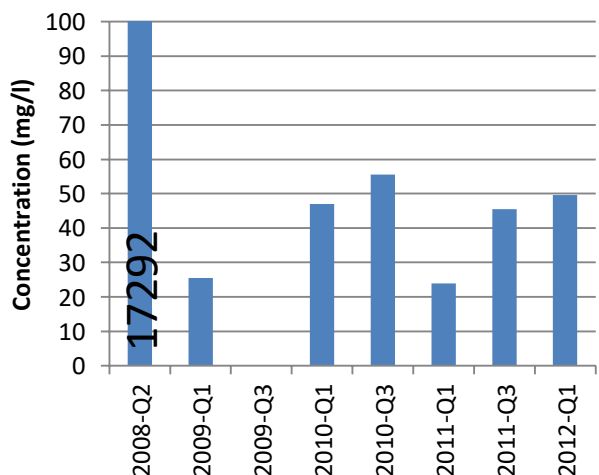
TMS monitoring - E1D



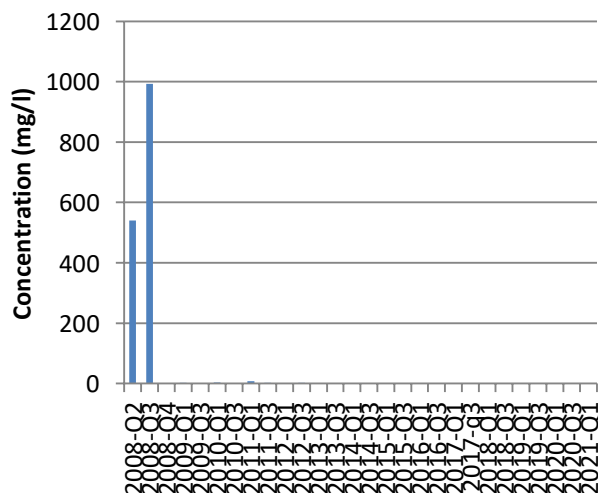
TMS monitoring - E2S



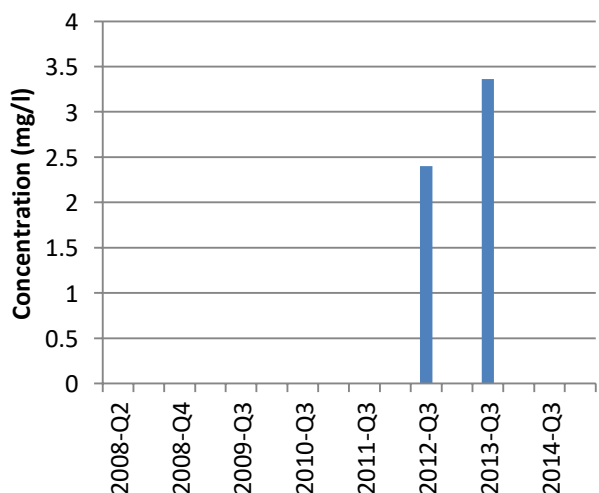
TMS monitoring - E2D



TMS monitoring - E1S



TMS monitoring - E4S

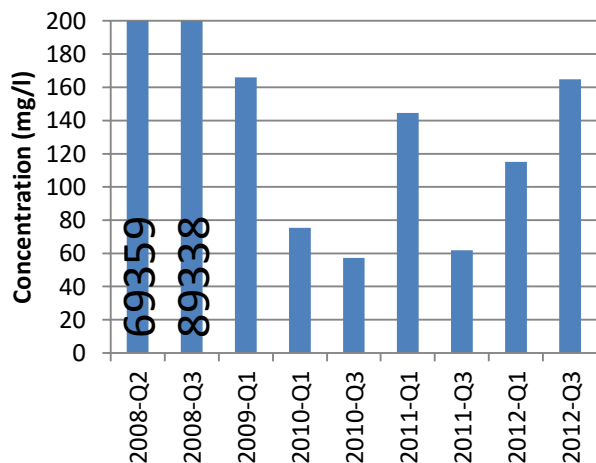




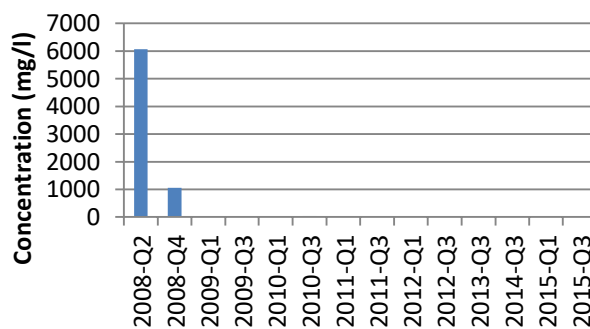
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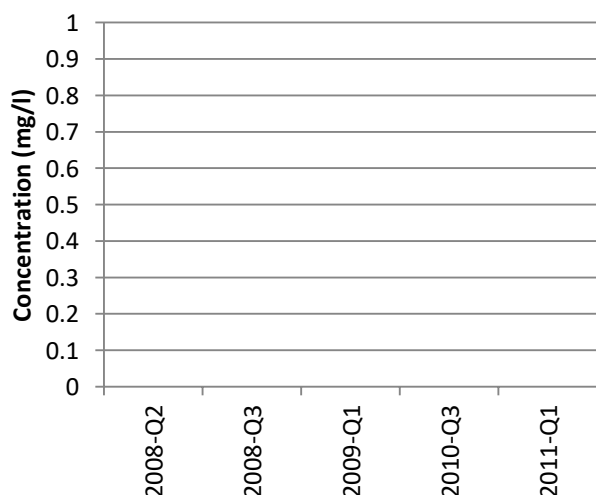
TMS monitoring - LF1



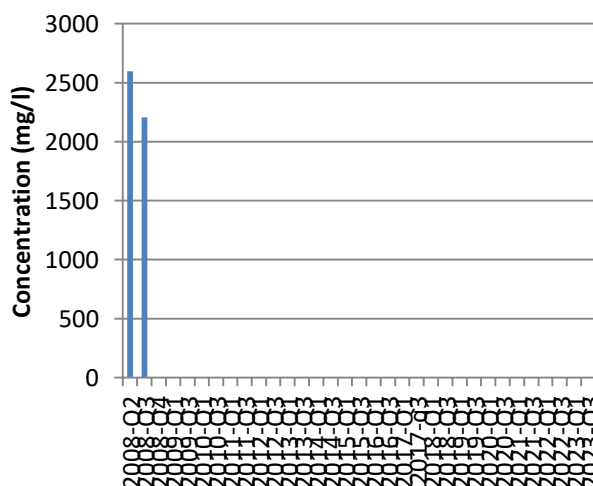
TMS monitoring - LF4



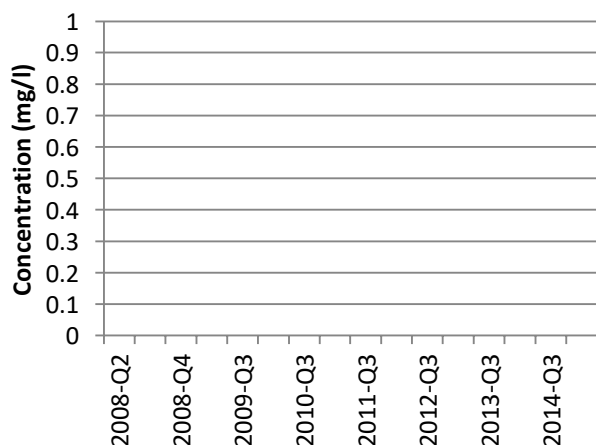
TMS monitoring - LF6



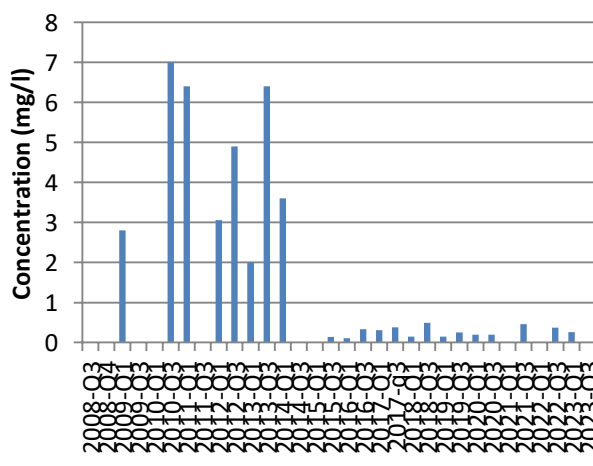
TMS monitoring - LF7



TMS monitoring - E4D



TMS monitoring - BH 210

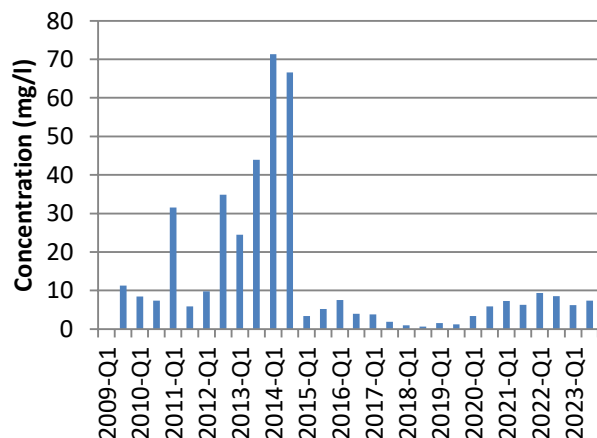




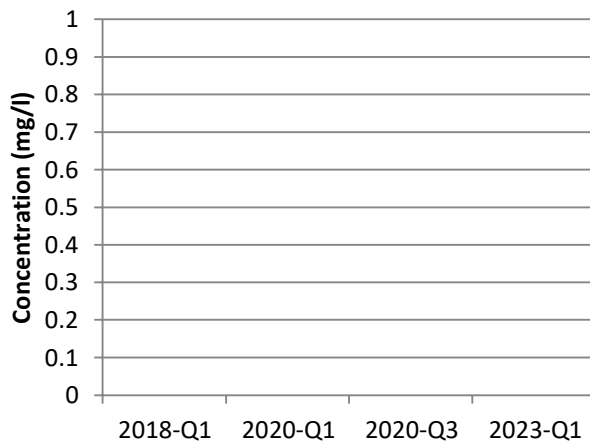
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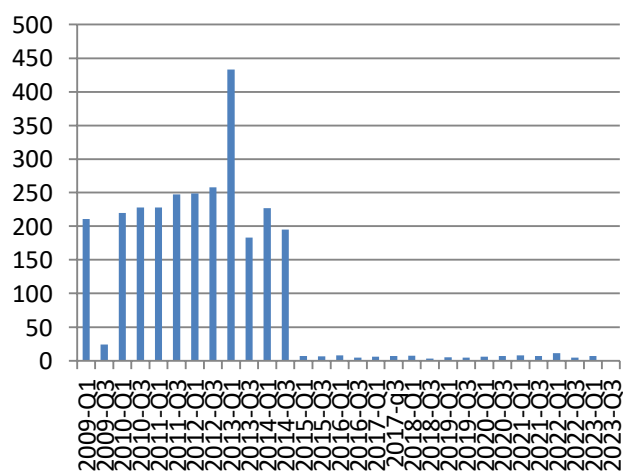
TMS monitoring - BH 412



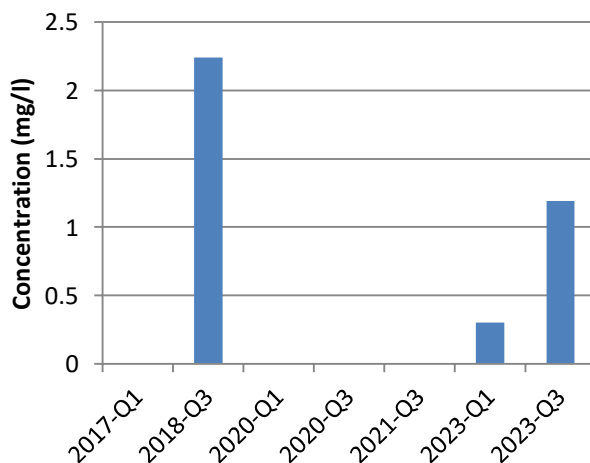
TMS monitoring - CP1S



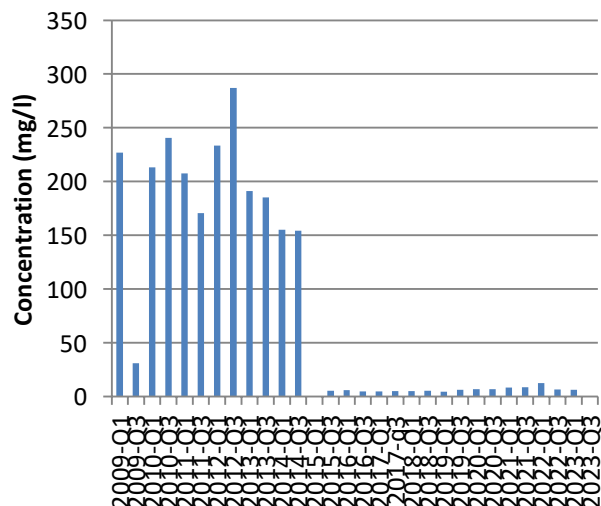
TMS monitoring - BH 312



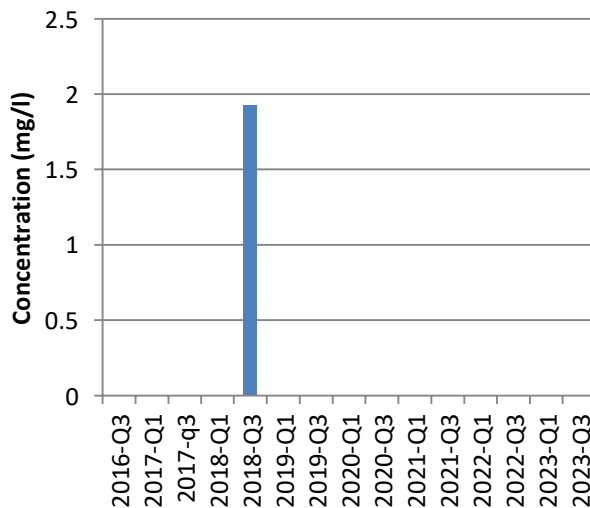
TMS monitoring - CP1M



TMS monitoring - A2D



TMS monitoring - CP1D

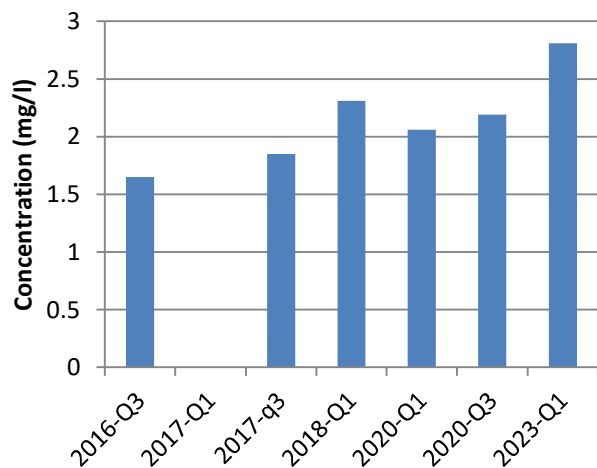




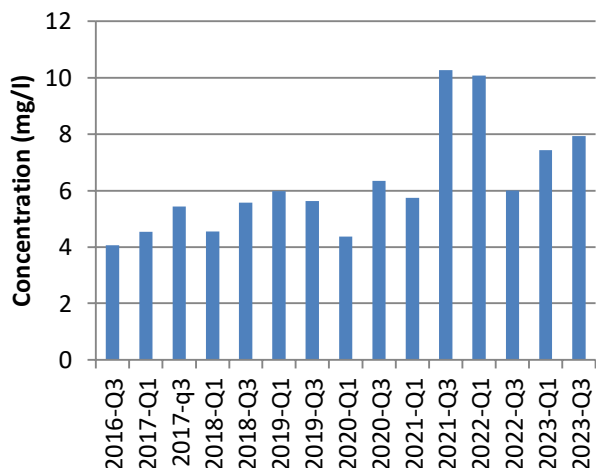
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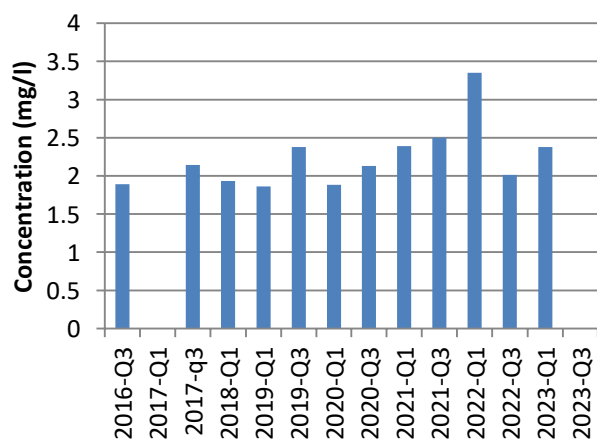
TMS monitoring - CP2S



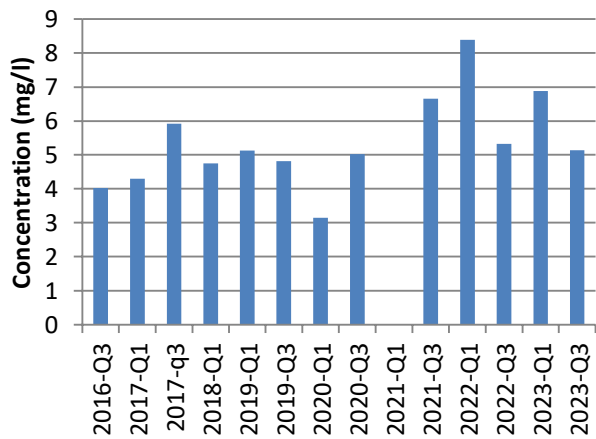
TMS monitoring - LF10S



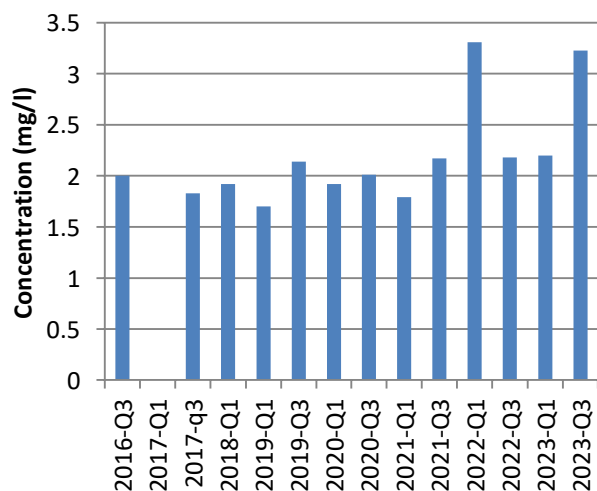
TMS monitoring - CP2M



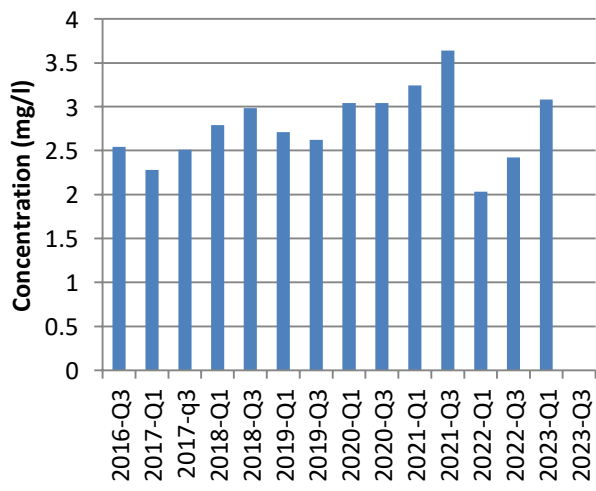
TMS monitoring - LF10M



TMS monitoring - CP2D



TMS monitoring - LF10D

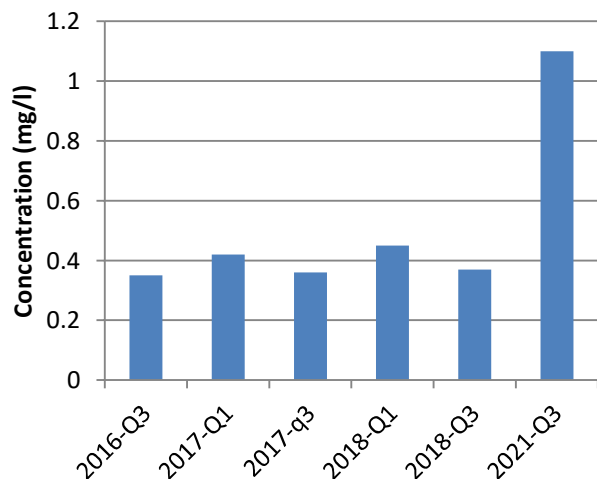




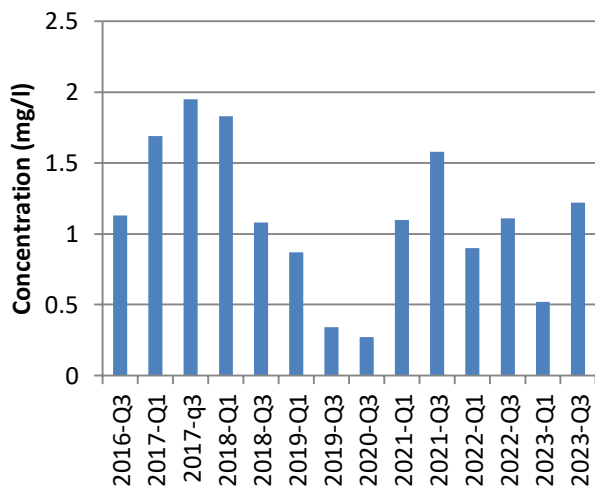
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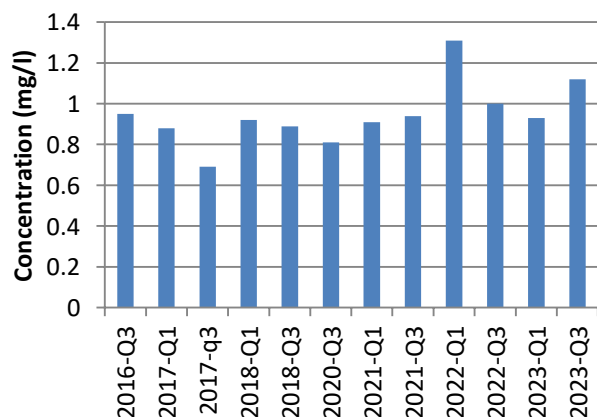
TMS monitoring - LF11S



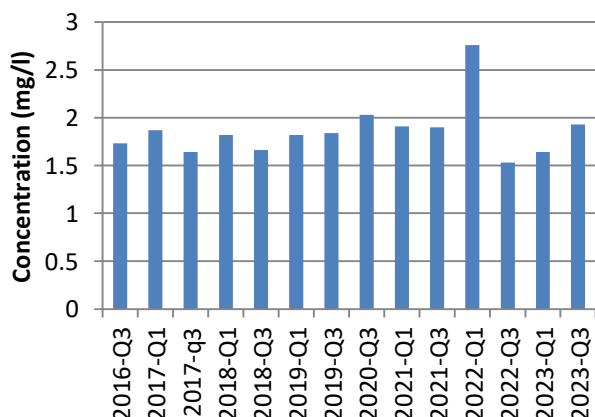
TMS monitoring - LF12M



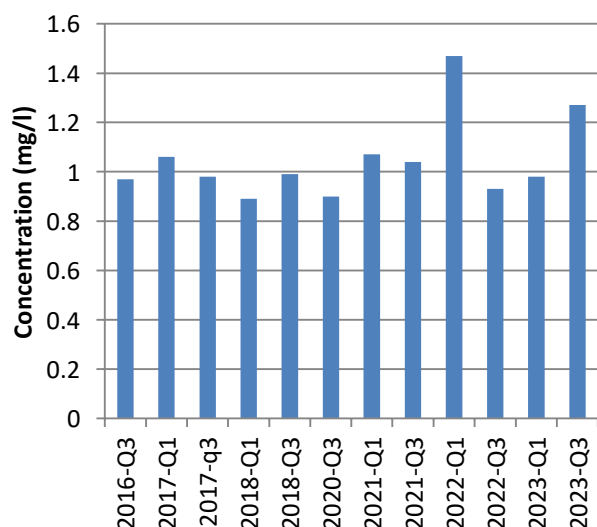
TMS monitoring - LF11M



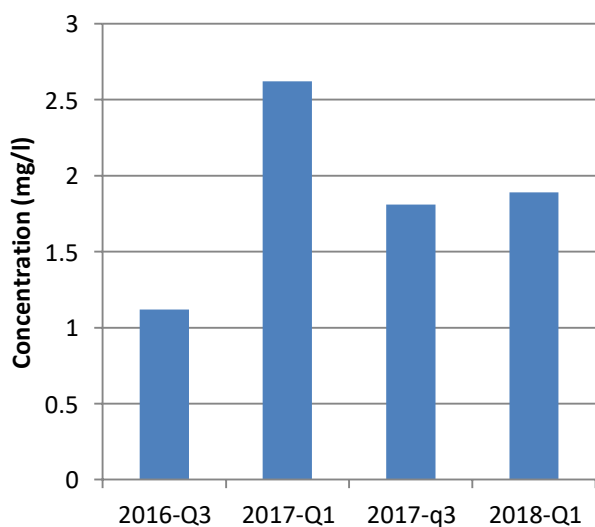
TMS monitoring - LF12D



TMS monitoring - LF11D



TMS monitoring - LF13S

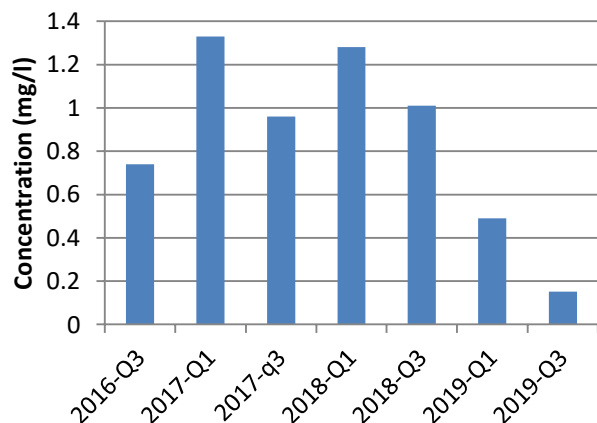




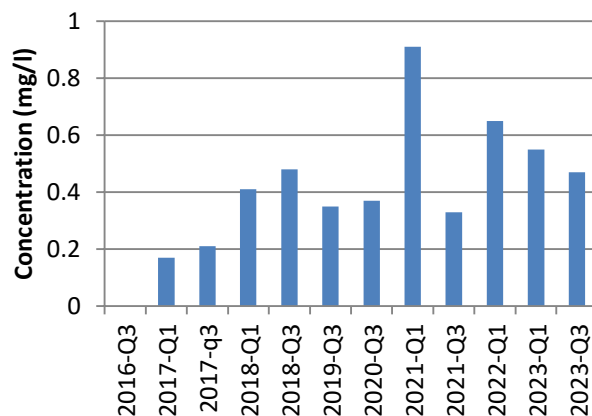
Q3 Landfill Groundwater Sampling Results 2023
Dow Silicones UK Ltd
Barry

Quarter 3 2023

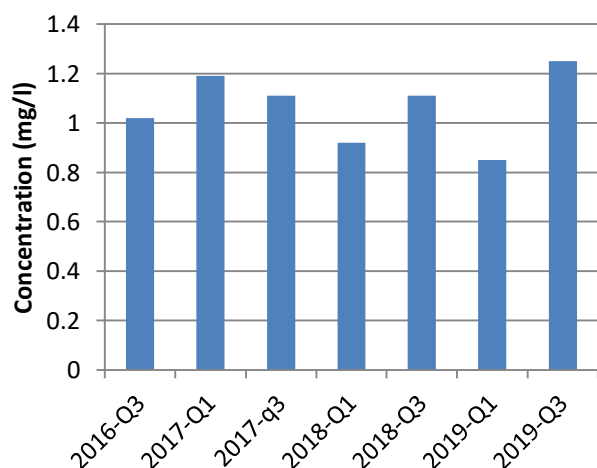
TMS monitoring - LF13M



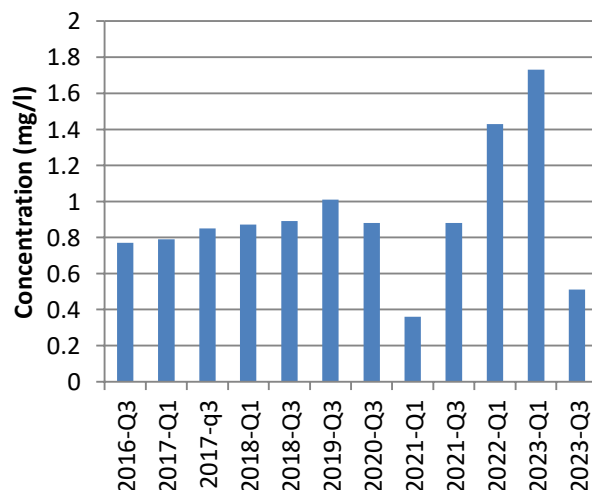
TMS monitoring - LF14M



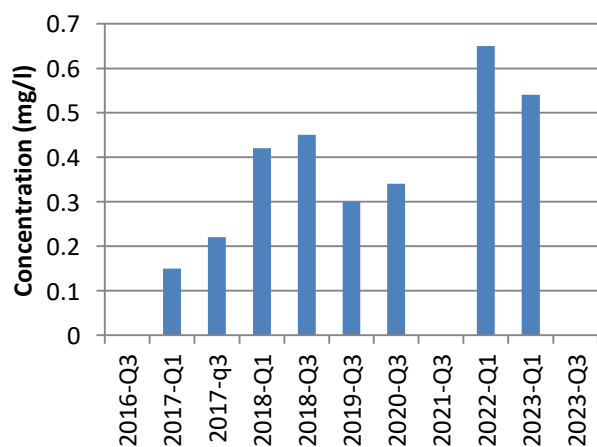
TMS monitoring - LF13D



TMS monitoring - LF14D



TMS monitoring - LF14S



Comments

1. No boreholes show significant TMS concentrations this quarter.
2. The results of sampling the boreholes shows the usual fluctuations.

The next report is to be completed for the next 6months.