

	Q1 Landfill Groundwater Sampling Results 2017 Dow Corning Ltd Barry	Quarter 1 2017
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Q1-2017 Landfill Groundwater Sampling Results

The impact of bulk storage of materials on the landfill and its performance was monitored in quarter 1 of 2017 and the results shown in this report. **The charts for the new boreholes have been included 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 Corning 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 are 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, CP1S, 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 Q1-2017

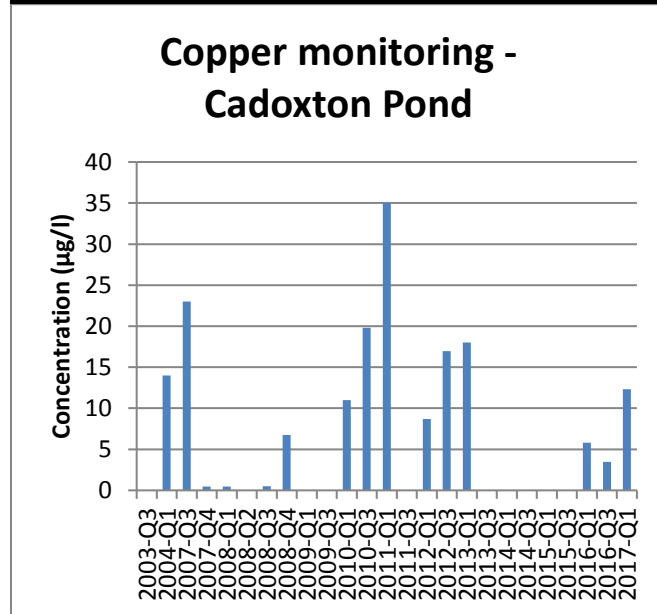
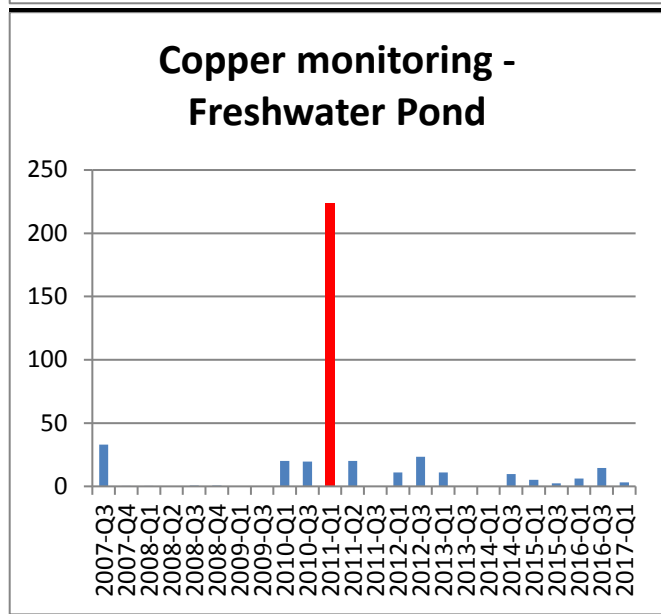
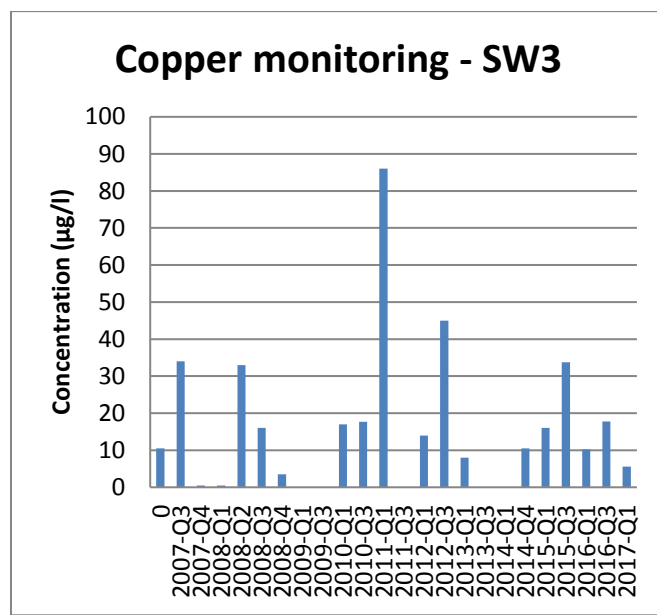
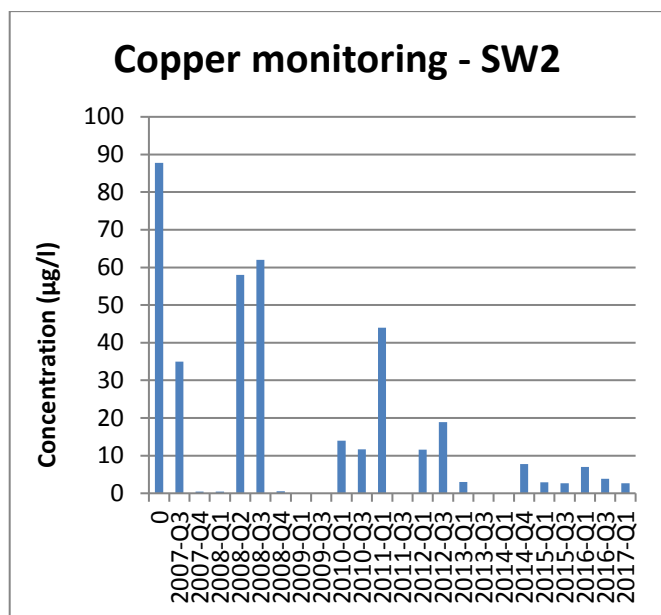
Some of the boreholes were not sampled during Q1 2017 due to being inaccessible due to high water levels or unable to draw a sample. These were: E2S, E2D, LF1, LF6, CP1S, LF12S. These boreholes show no results on the charts (no data has yet been generated for CP1S, LF12S – so no graphs are included)

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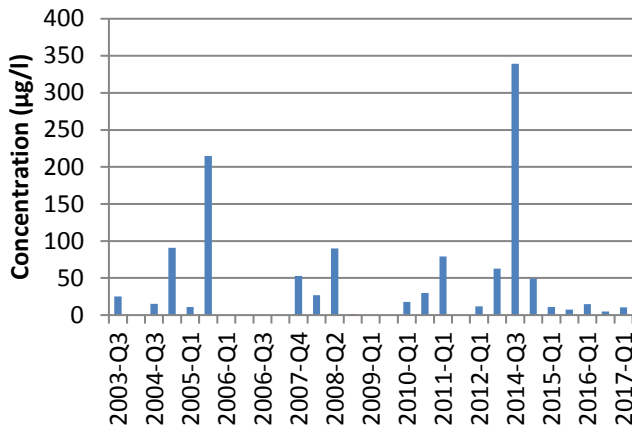
Leachate graphs.

Copper

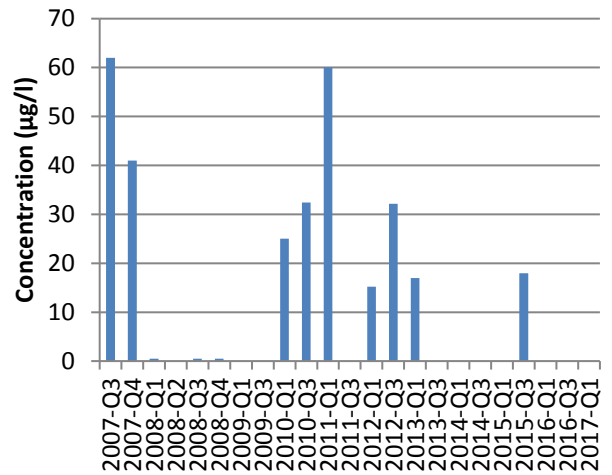
The detectable limit for Copper is 0.5 µg/l – any results below this will show on the graphs as 0



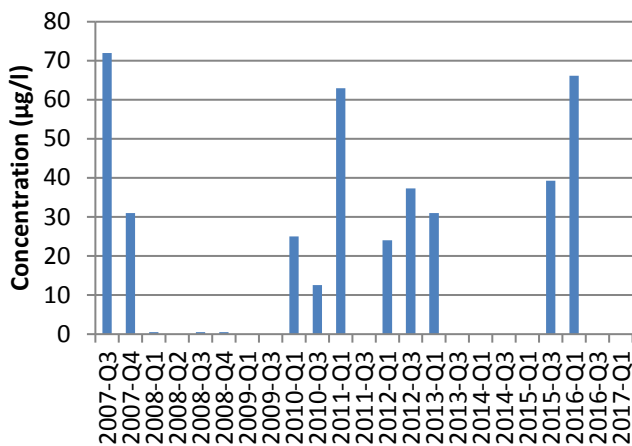
Copper monitoring - Timber Pond



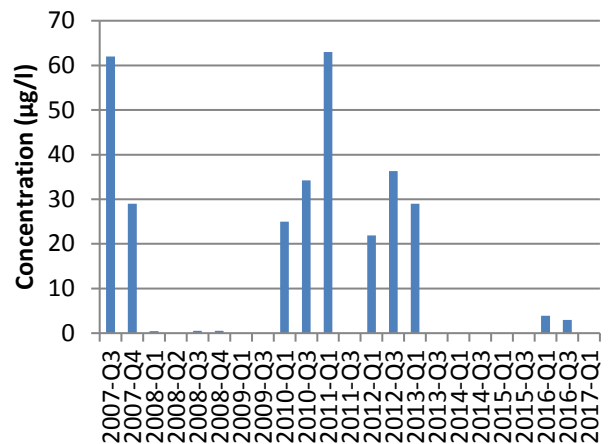
Copper monitoring - E1S



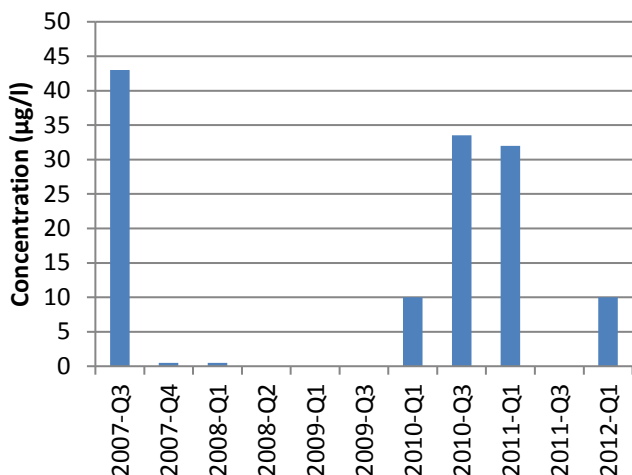
Copper monitoring - E1M



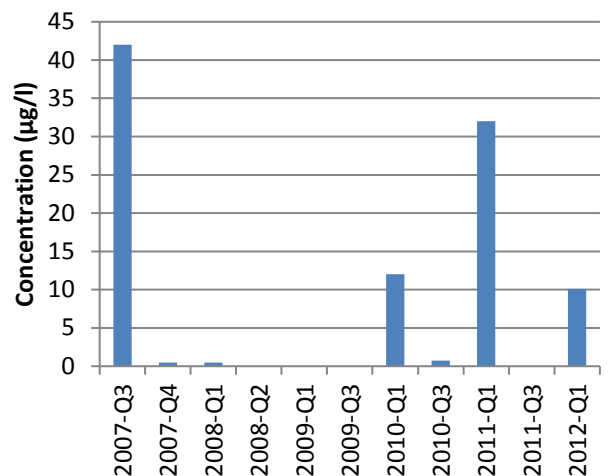
Copper monitoring - E1D



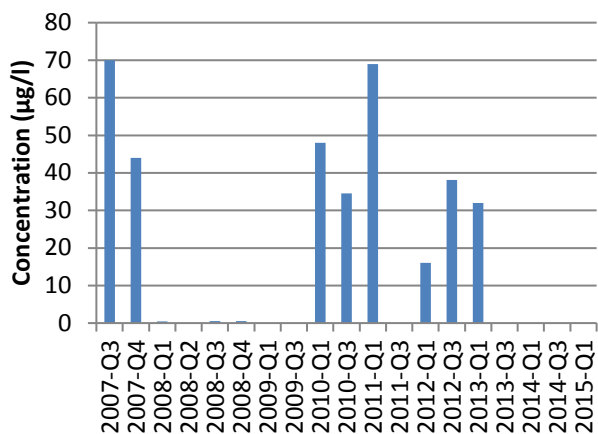
Copper monitoring - E2S



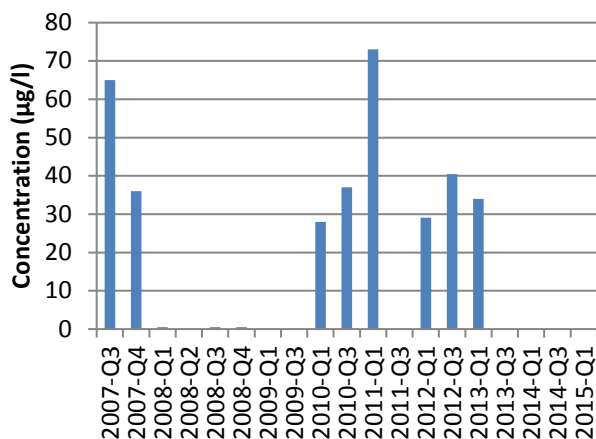
Copper monitoring - E2D



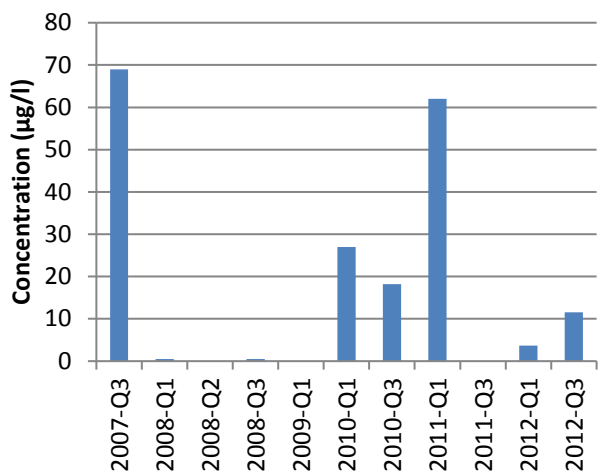
Copper monitoring - E4S



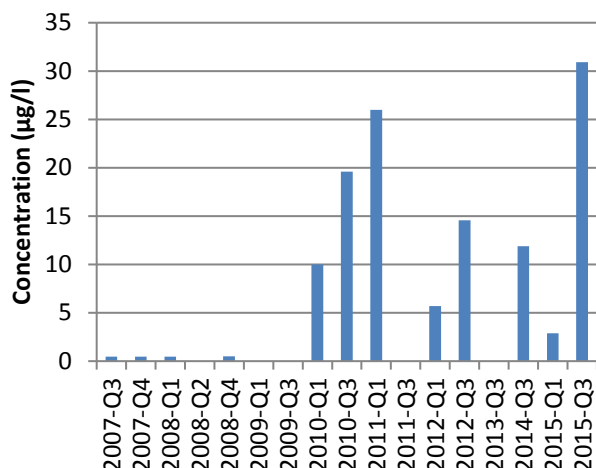
Copper monitoring - E4D



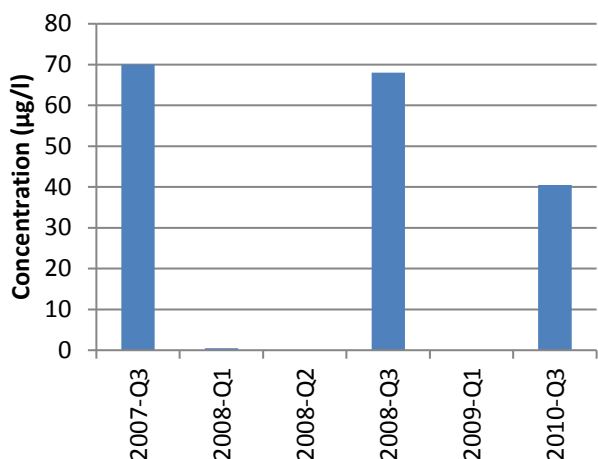
Copper monitoring - LF1



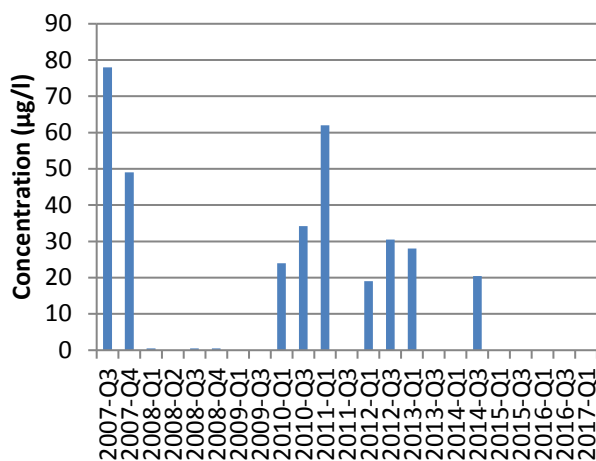
Copper monitoring - LF4



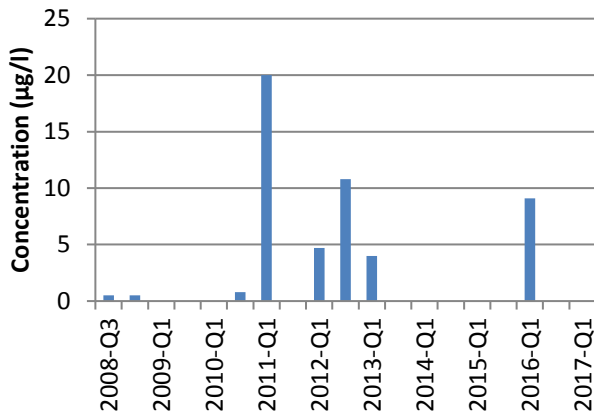
Copper monitoring - LF6



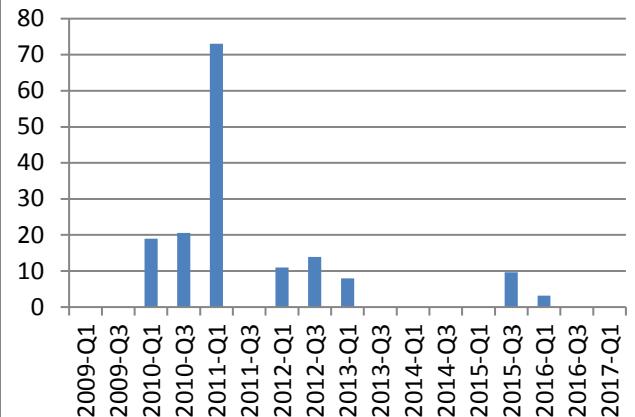
Copper monitoring - LF7



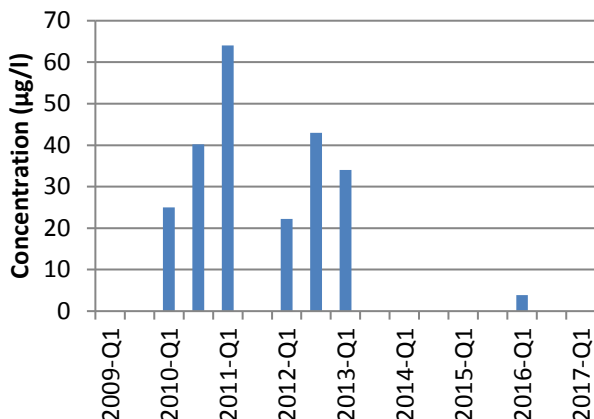
Copper monitoring - BH 210



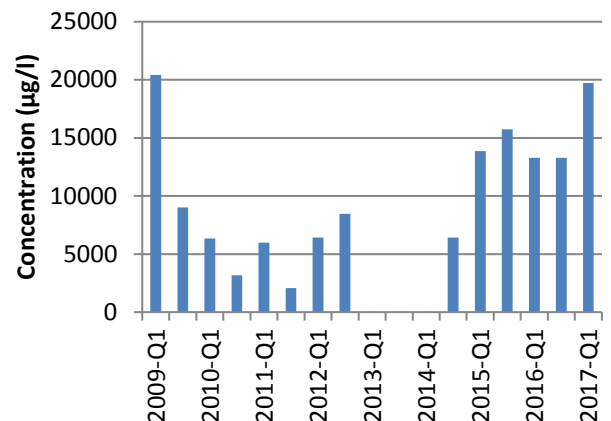
Copper monitoring - BH 312



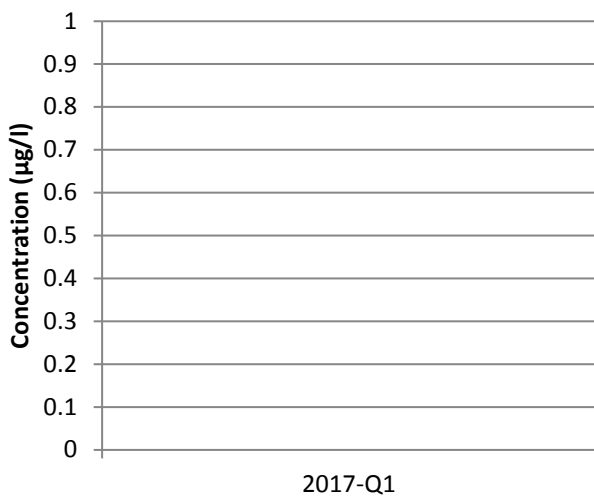
Copper monitoring - BH 412



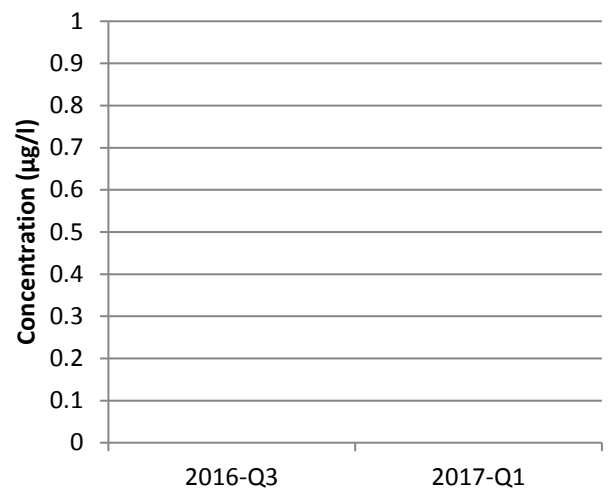
Copper monitoring - A2D

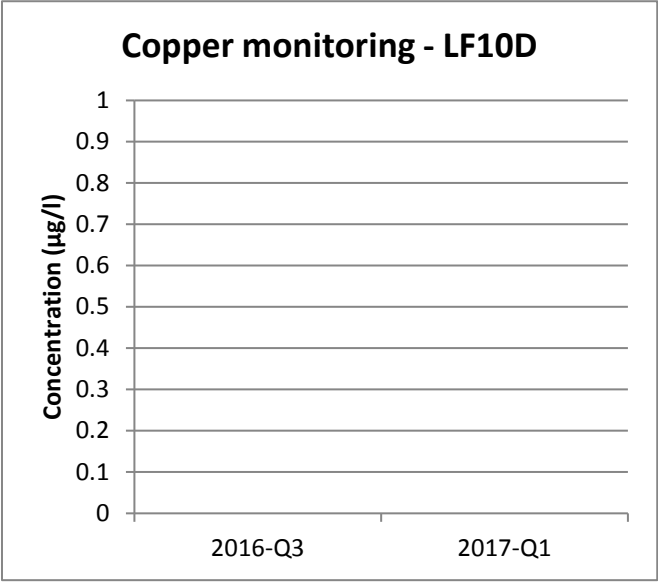
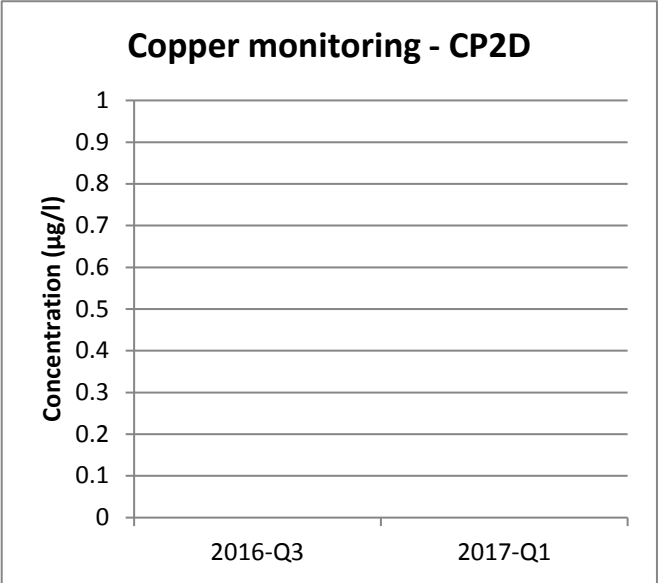
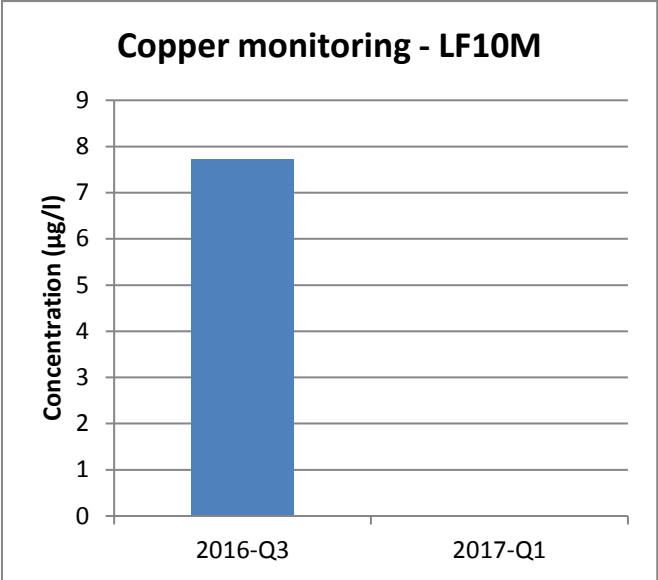
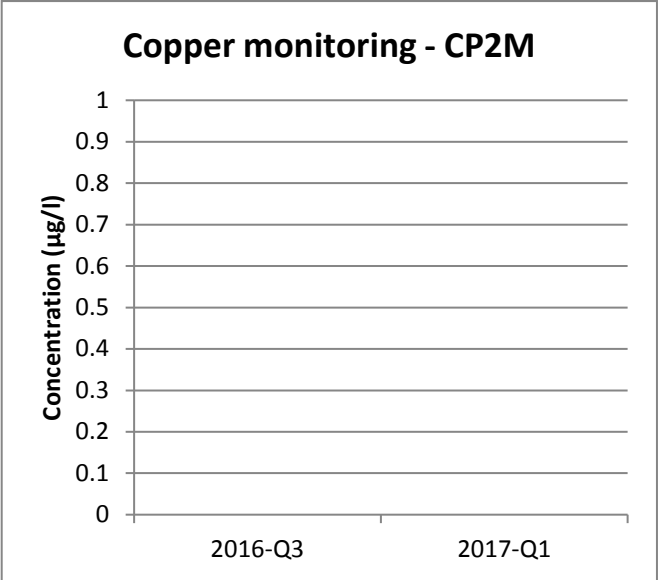
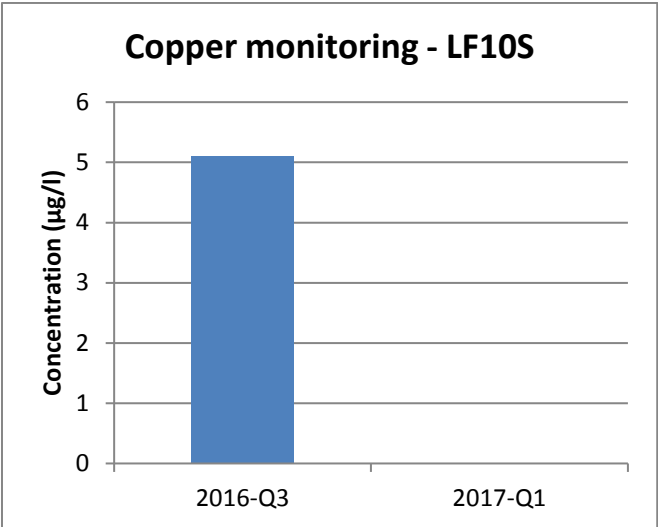
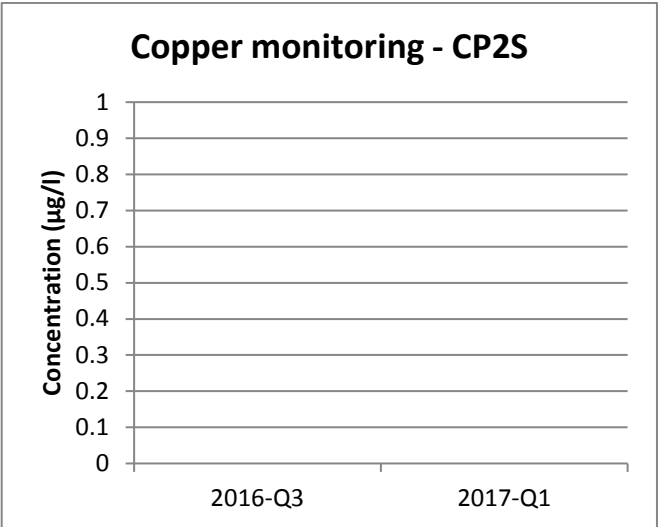


Copper monitoring - CP1M

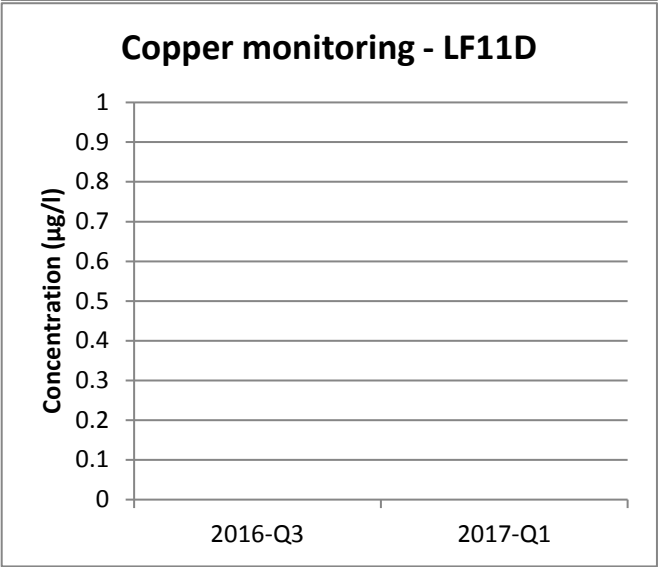
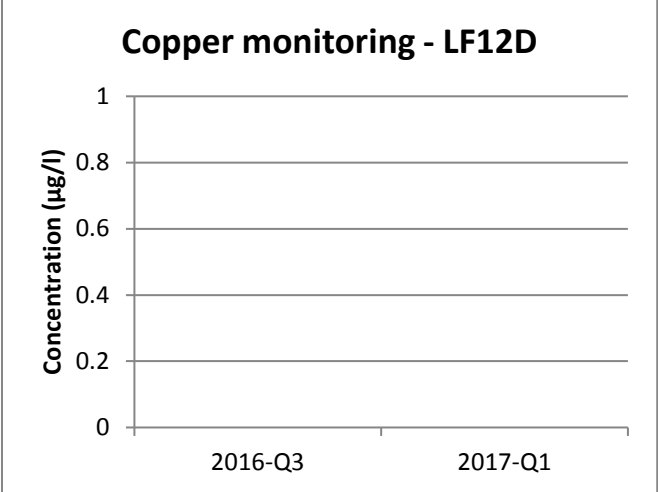
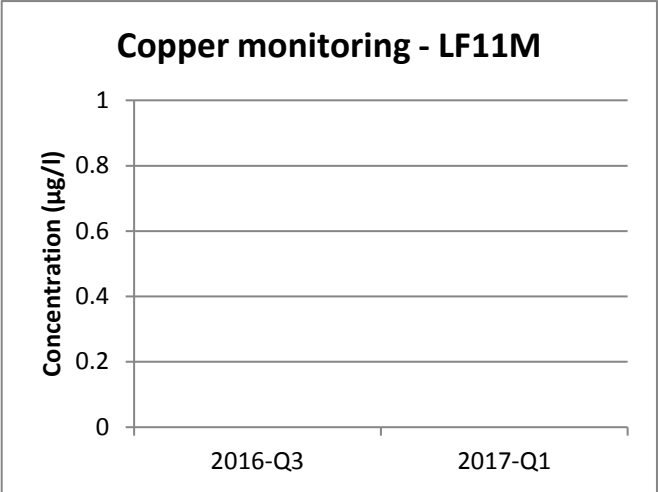
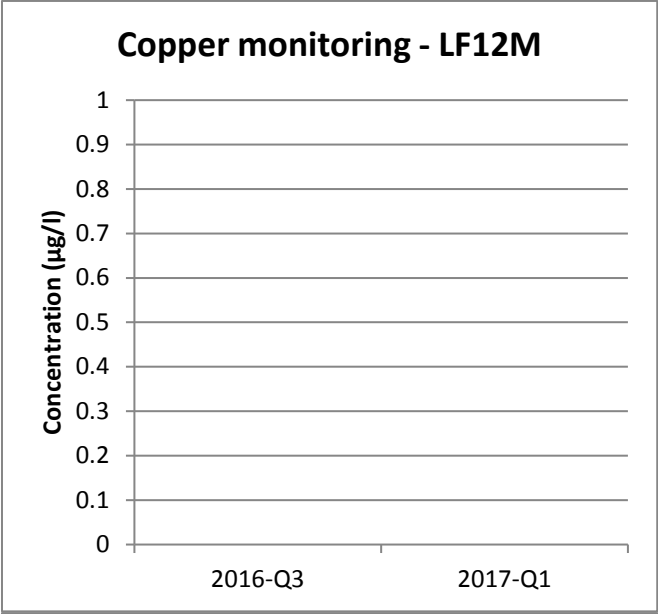
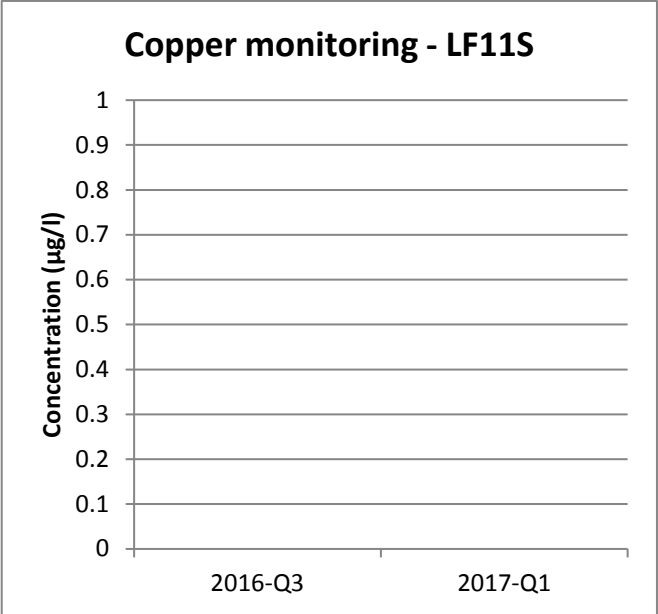


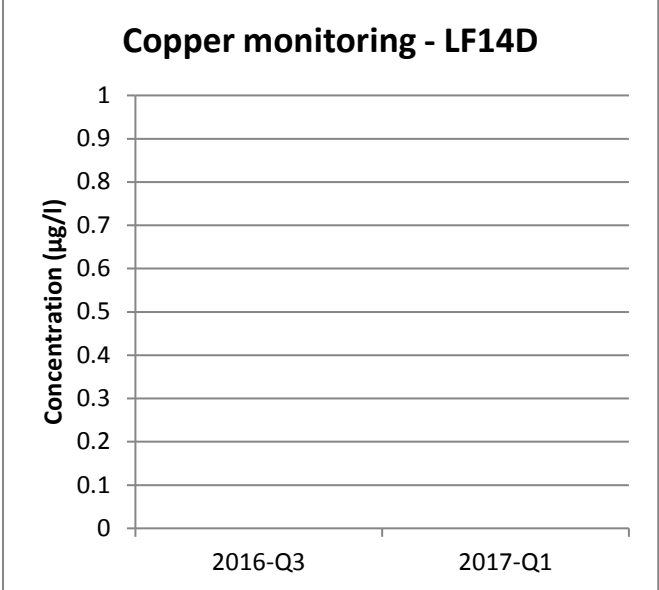
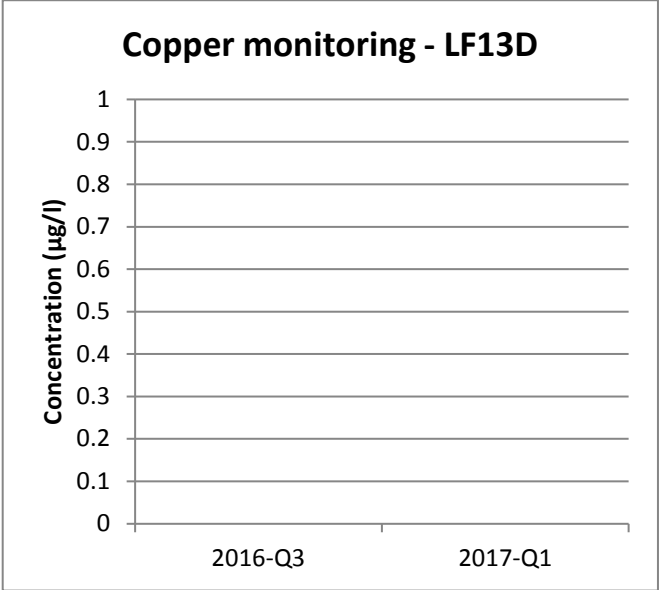
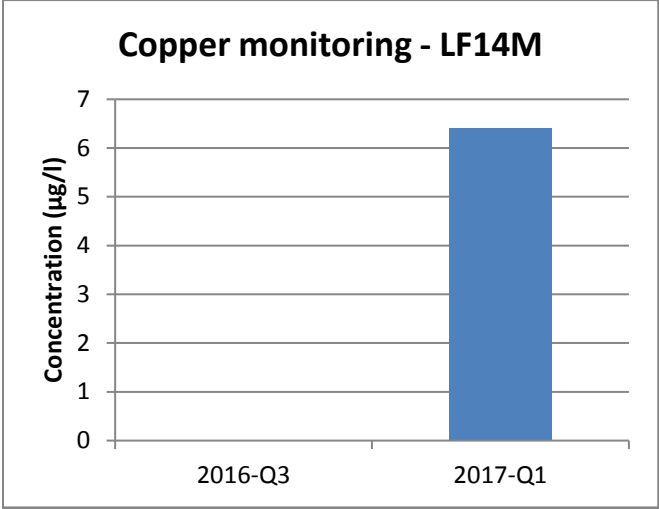
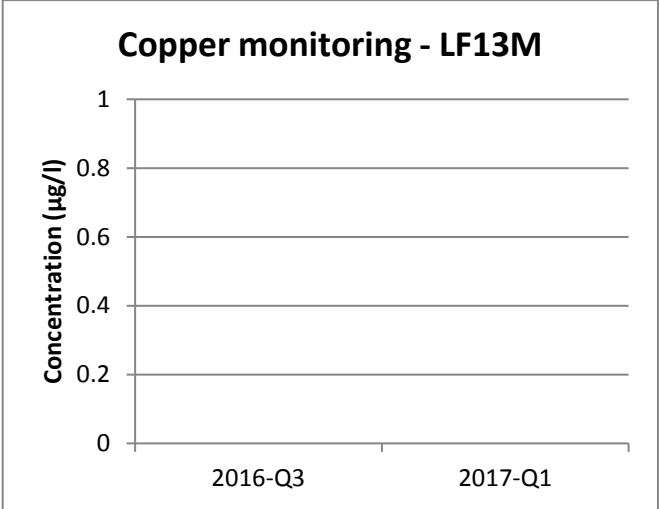
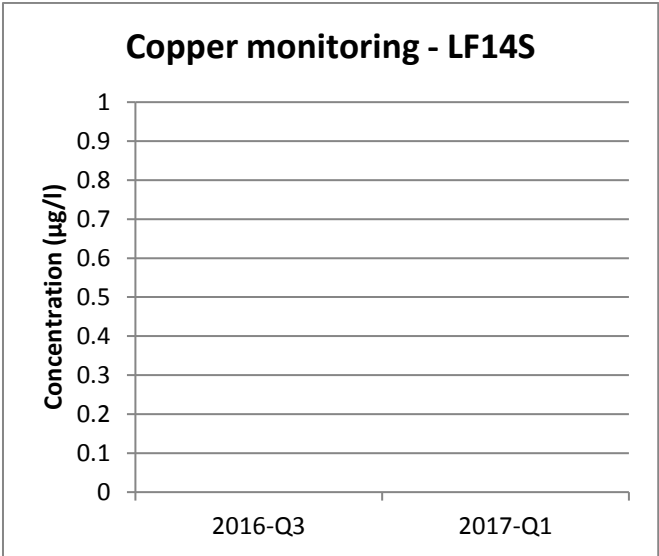
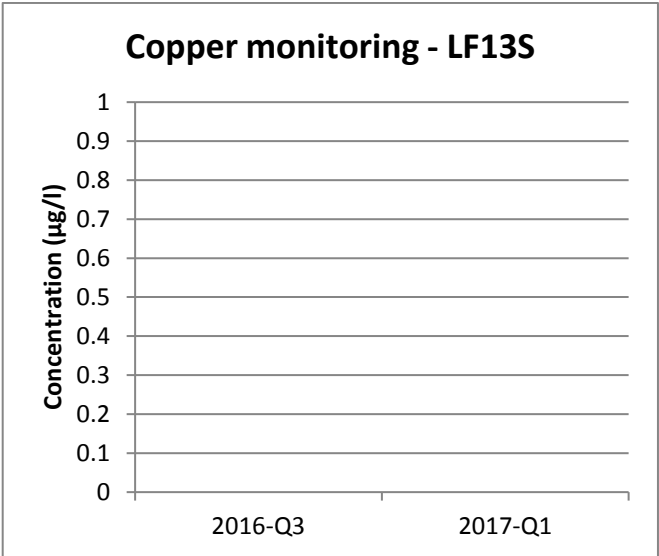
Copper monitoring - CP1D





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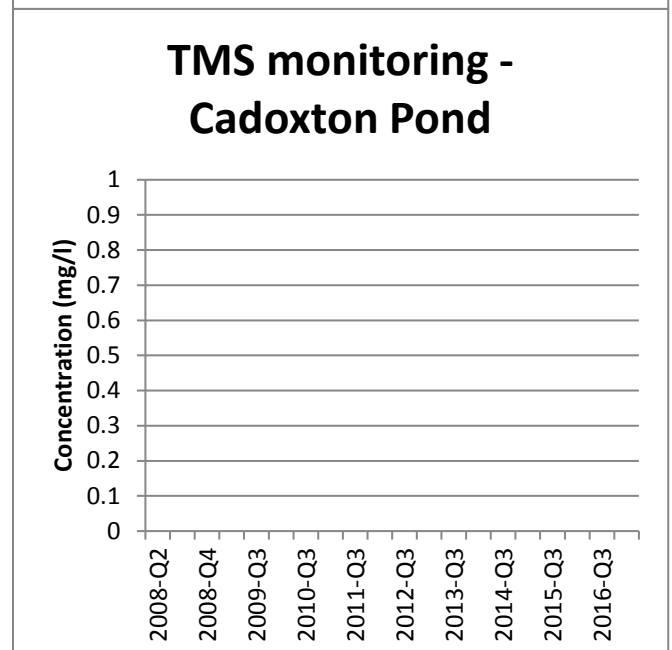
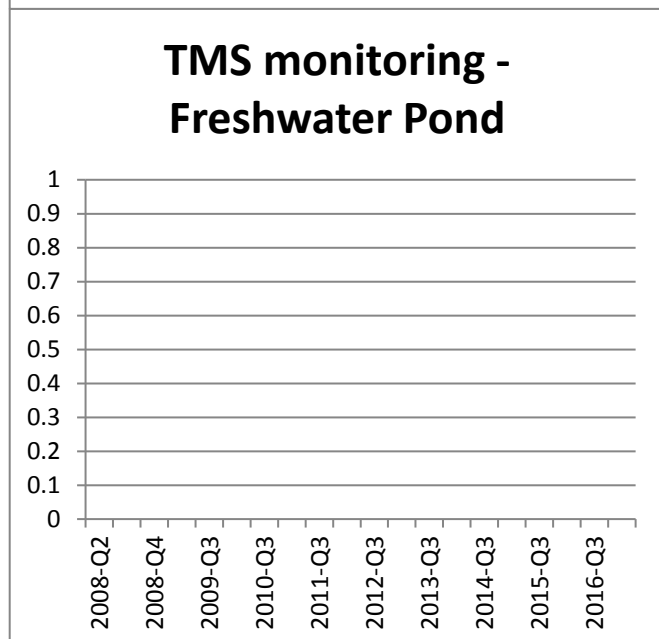
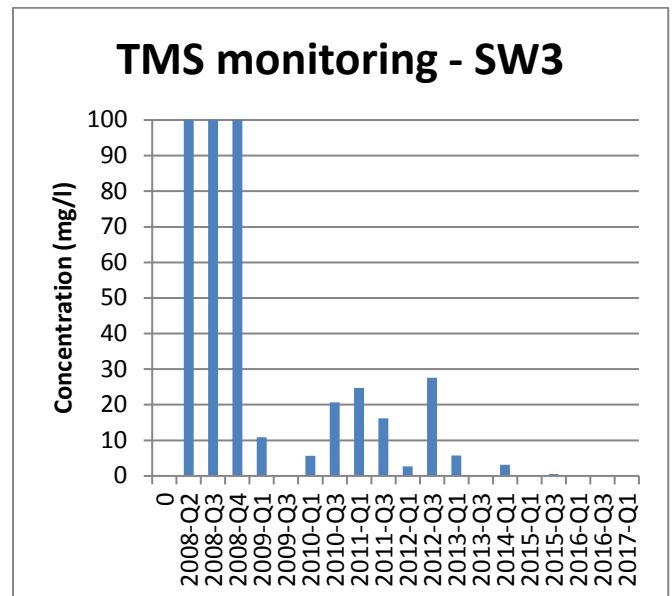
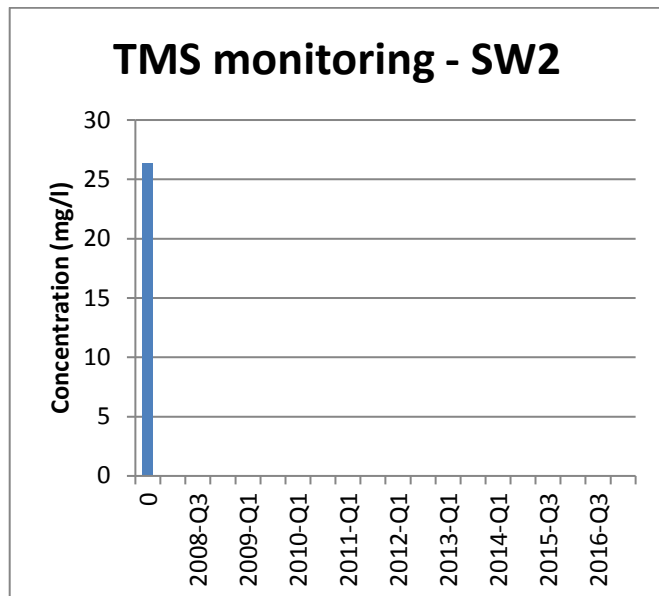
Comments

1. It was not possible to gain a sample from LF4 again this Quarter – this borehole has now been abandoned. LF12M/D have been sunk in this location and the results for this borehole are below detectable levels.
2. As mentioned in the previous reports the results over the past years appear to show fluctuation in the copper levels. It was suspected that the weather could play a part in the variation of the copper levels in the boreholes. Investigation of the weather data in combination with the sample days has been carried out but no specific trends have been identified.
3. All results of the sampling this quarter fall within the normal range of the sampling data.
4. The only borehole which measured a significant value for copper was A2d. This borehole is situated in the middle of the site and therefore poses no risk to local sensitive receptors. The value is of similar magnitude to other reporting periods.

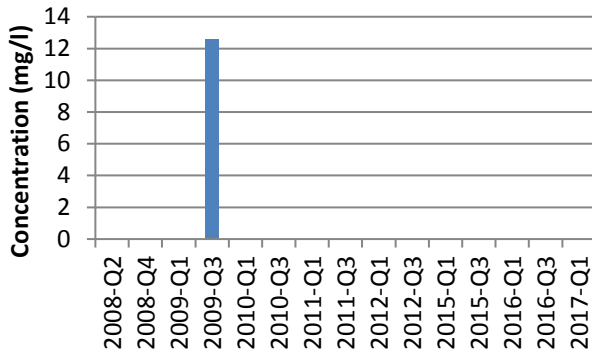
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TMS

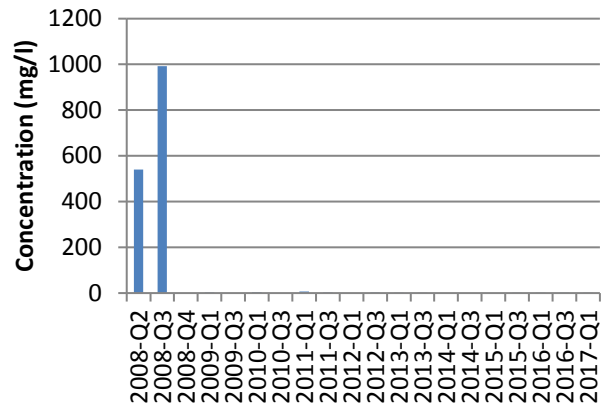
The detectable limit for Trimethylsilanol is 3 mg/l – any results below this will show on the graphs as 0



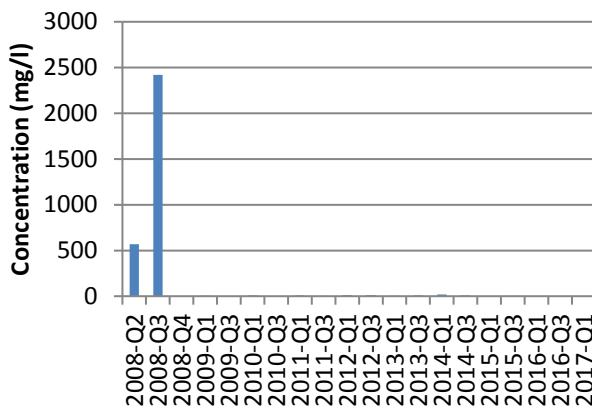
TMS monitoring - Timber Pond



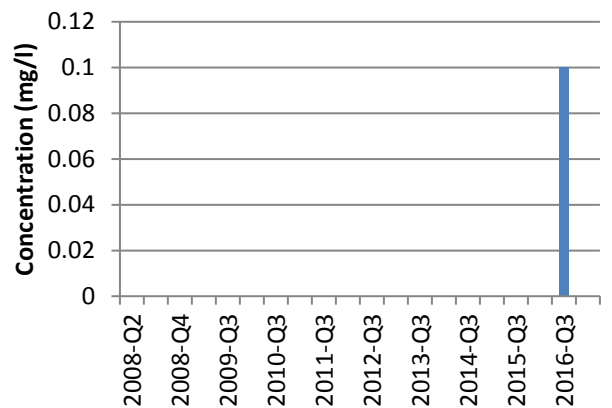
TMS monitoring - E1S



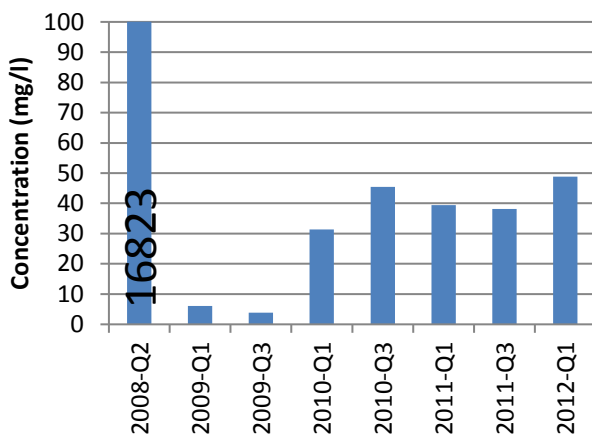
TMS monitoring - E1M



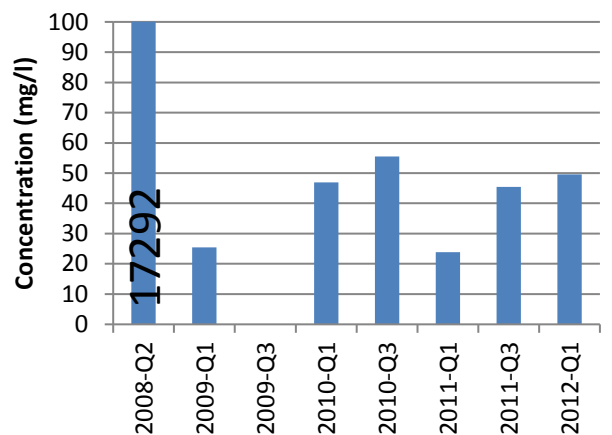
TMS monitoring - E1D



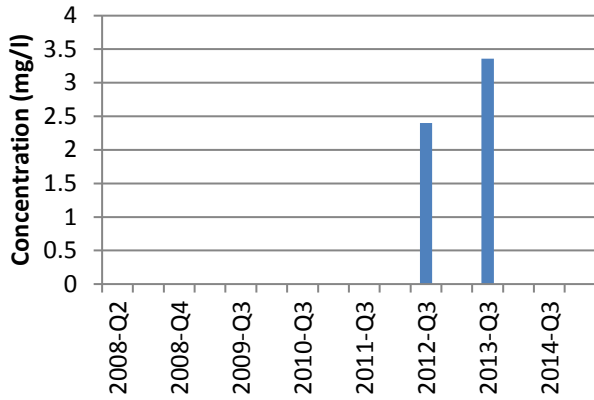
TMS monitoring - E2S



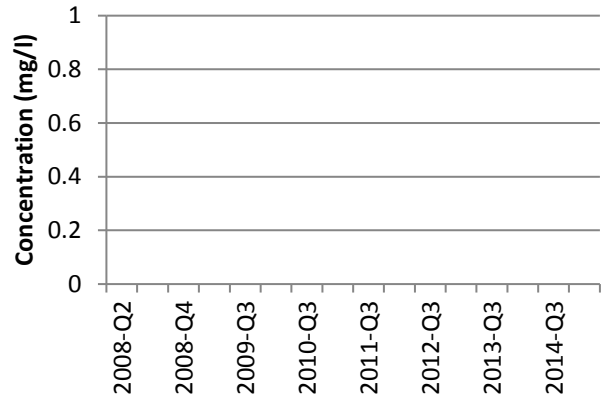
TMS monitoring - E2D



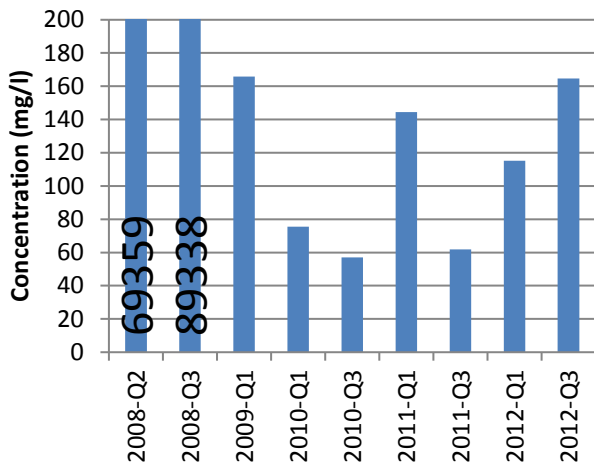
TMS monitoring - E4S



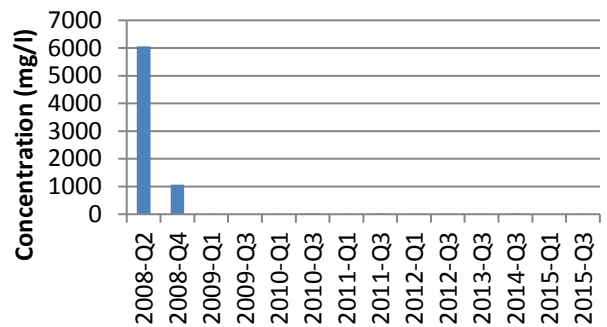
TMS monitoring - E4D



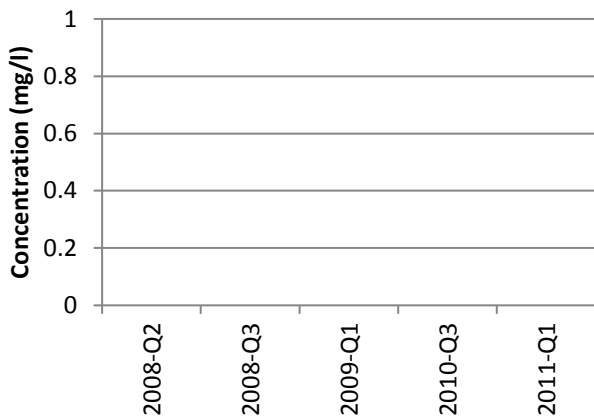
TMS monitoring - LF1



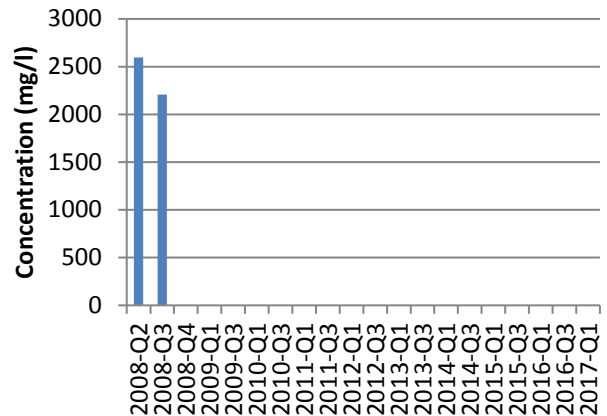
TMS monitoring - LF4



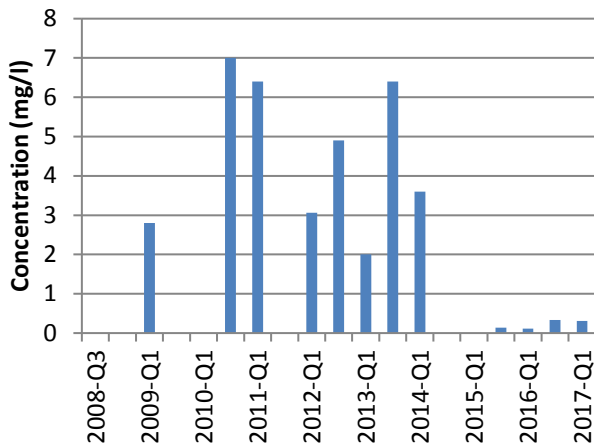
TMS monitoring - LF6



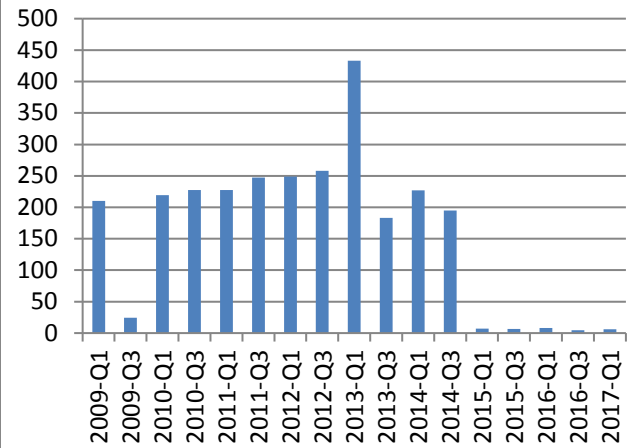
TMS monitoring - LF7



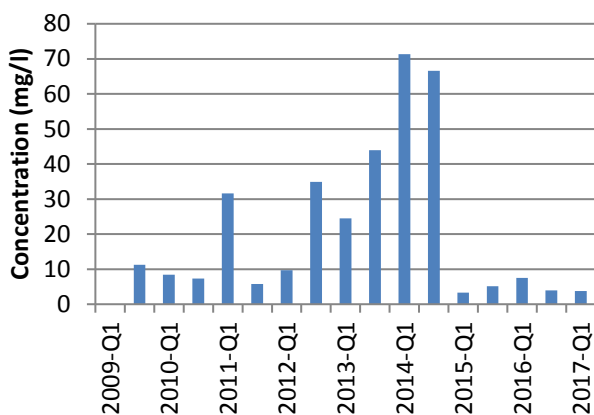
TMS monitoring - BH 210



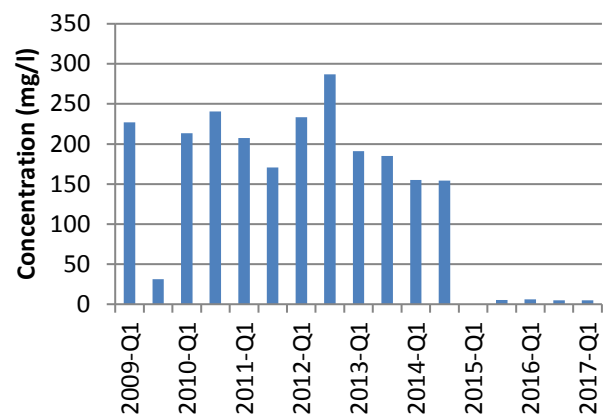
TMS monitoring - BH 312



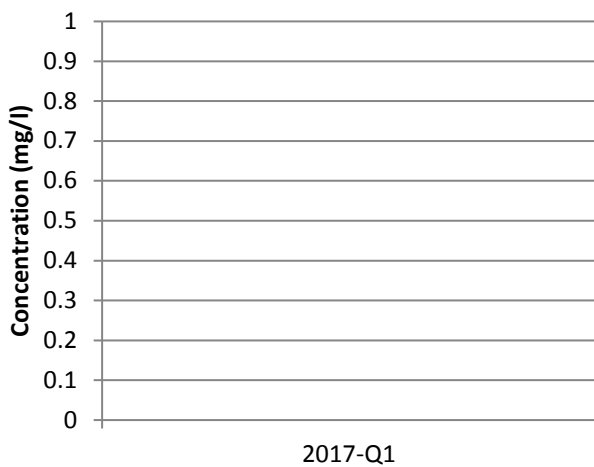
TMS monitoring - BH 412



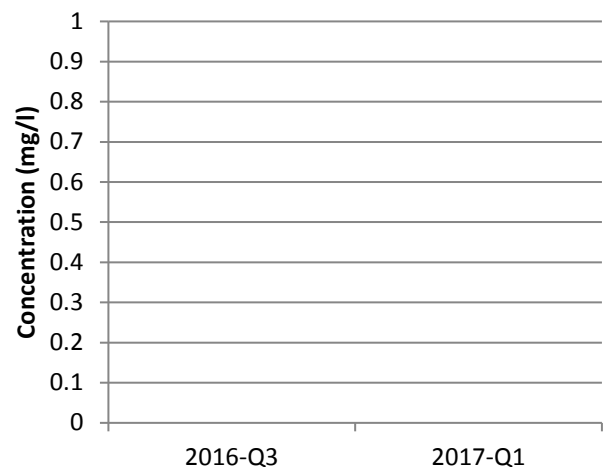
TMS monitoring - A2D



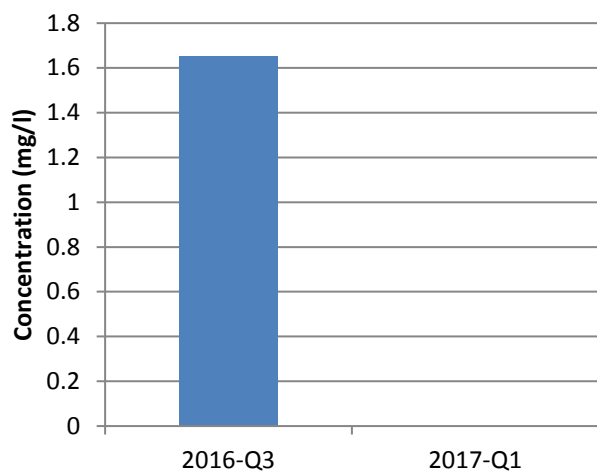
TMS monitoring - CP1M



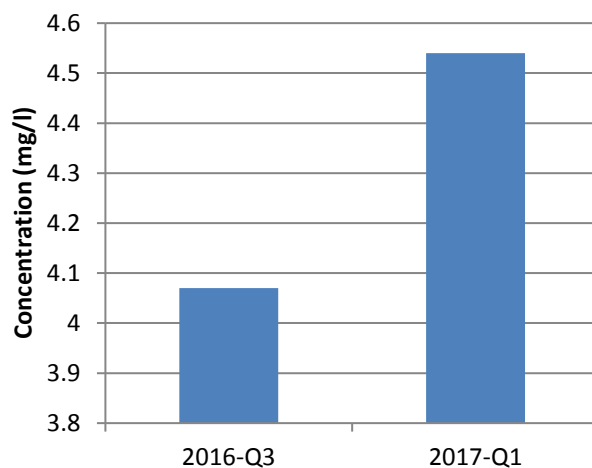
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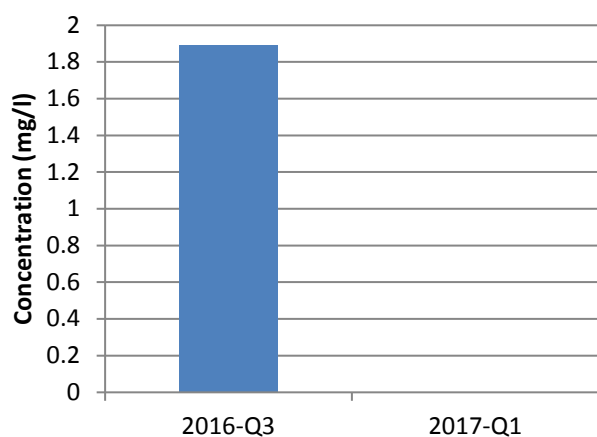
TMS monitoring - CP2S



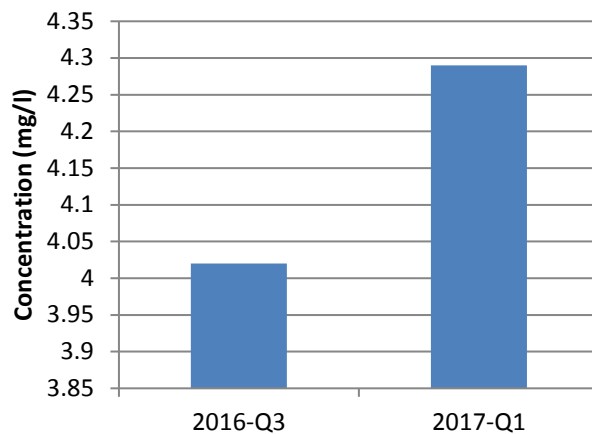
TMS monitoring - LF10S



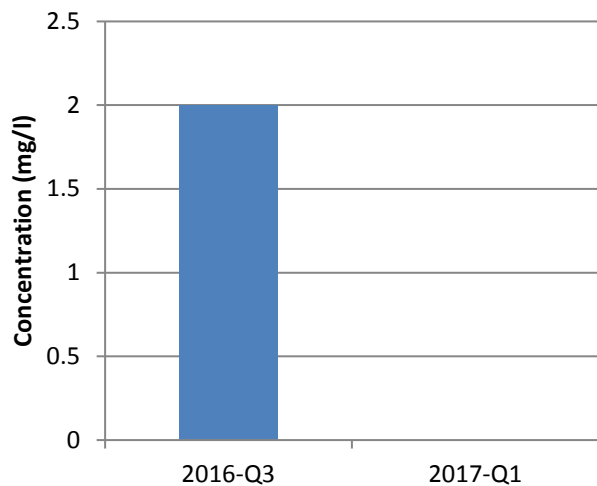
TMS monitoring - CP2M



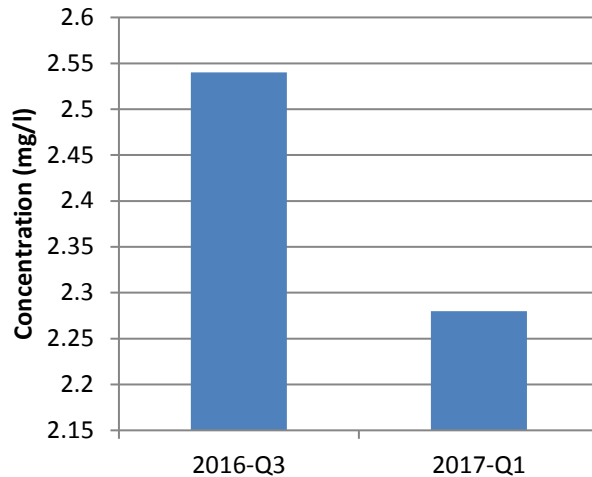
TMS monitoring - LF10M

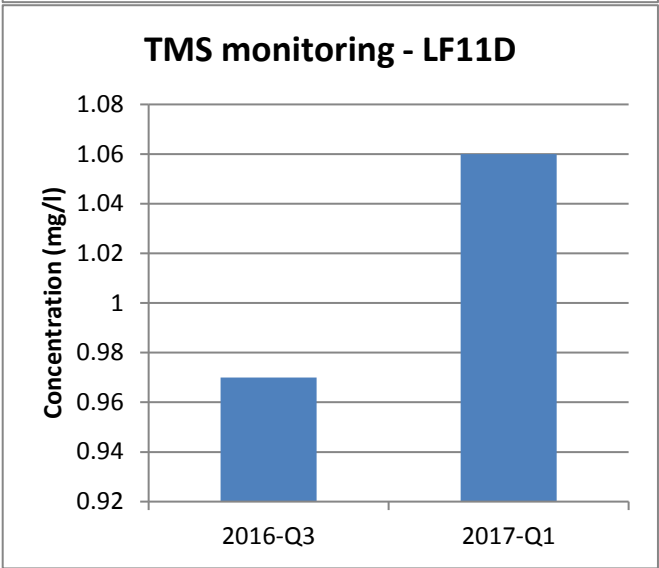
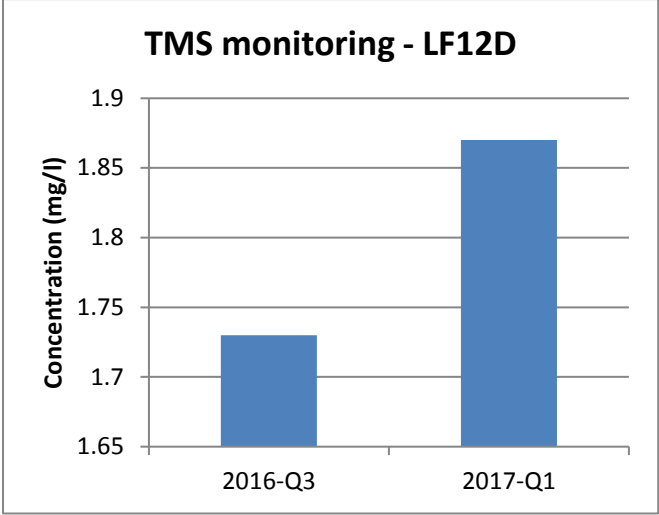
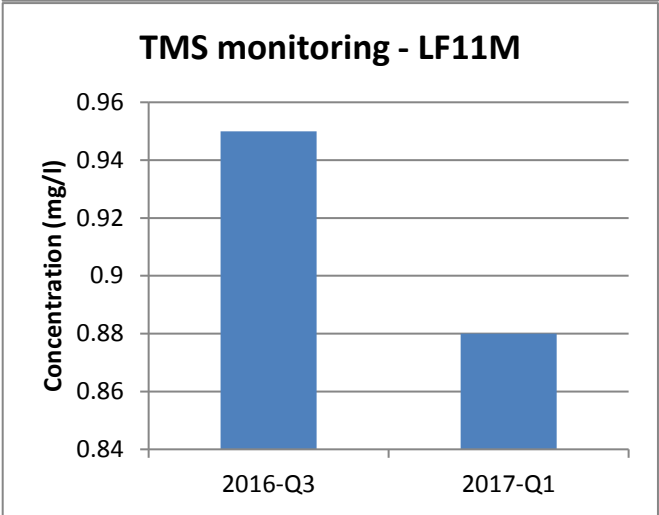
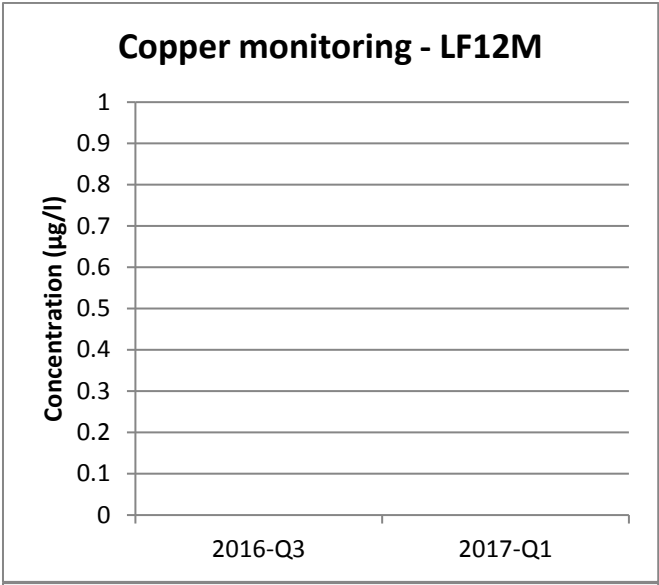
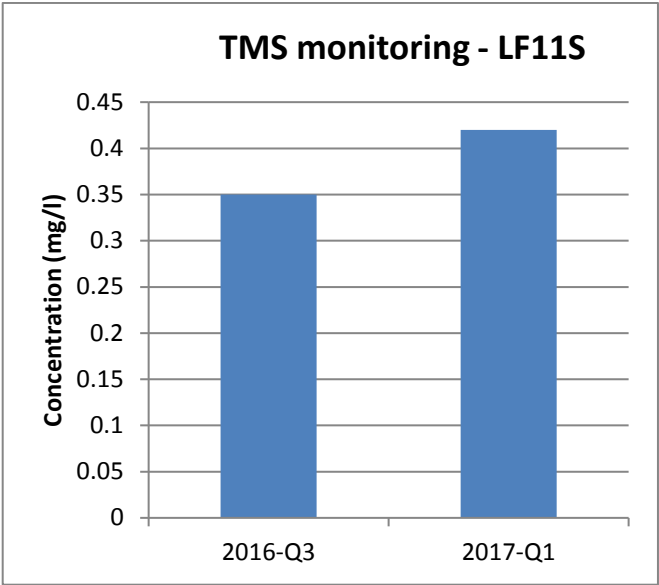


TMS monitoring - CP2D

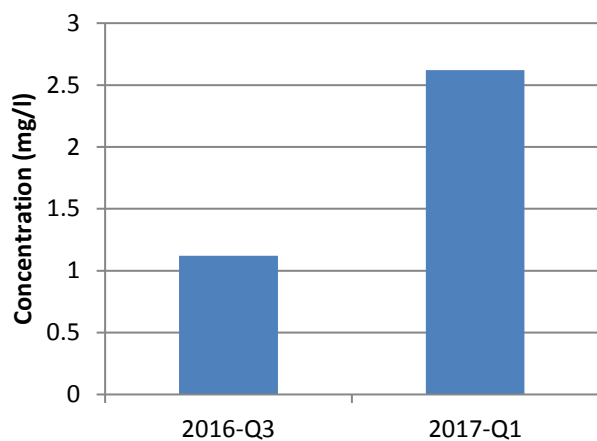


TMS monitoring - LF10D

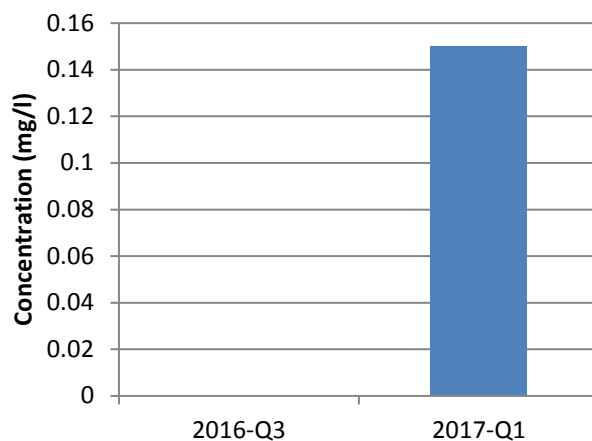




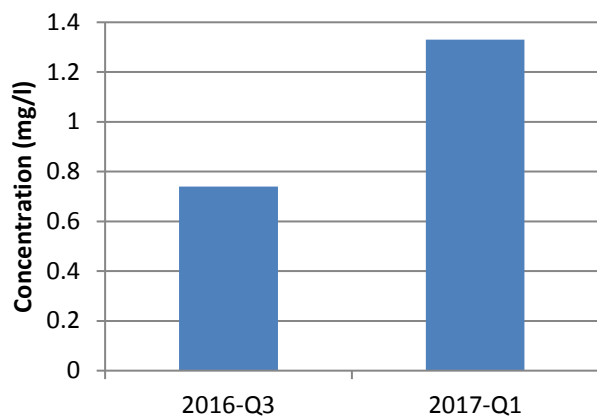
TMS monitoring - LF13S



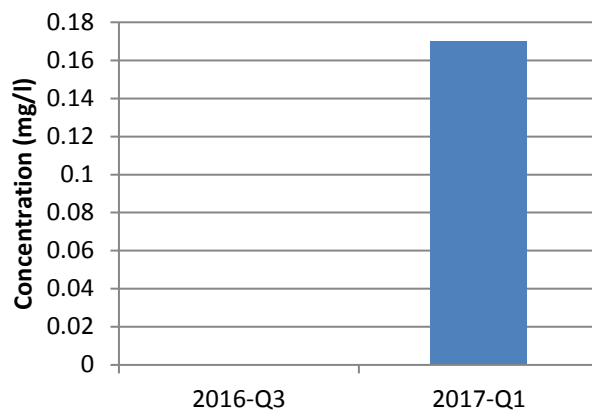
TMS monitoring - LF14S



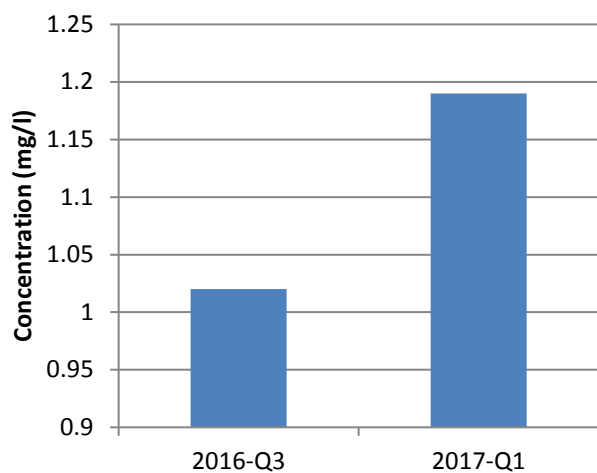
TMS monitoring - LF13M



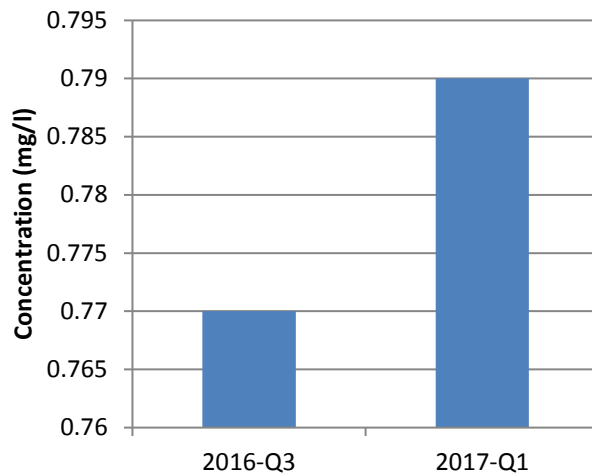
TMS monitoring - LF14M



TMS monitoring - LF13D



TMS monitoring - LF14D



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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.