

	Q3 Landfill Groundwater Sampling Results 2016 Dow Corning Ltd Barry	Quarter 3 2016
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Q3-2016 Landfill Groundwater Sampling Results

The impact of bulk storage of materials on the landfill and its performance was monitored in quarter 3 of 2016 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 Corning landfill CMS review, 49310733, October 2008).

This report provides sample results for boreholes. These boreholes are LF1, LF4, LF6, LF7, E1s, E1m, E1d, E2s, E2d, E4s, E4d, 210, 312, 412, A2d, Timber pond, Cadoxton pond (North), Cadoxton pond (South), Freshwater pond, Cadoxton River SW2, Cadoxton River SW3 and the Timber Pond. They have been assessed for copper and Trimethylsilanol (TMS) concentrations.

The graphs illustrated have been prepared from borehole and surface water samples taken for Q3-2007 up till Q3-2016

Some of the boreholes were not sampled during Q3 2016 due to being lost or inaccessible. These were: E2S, E2D, E4s, E4d, LF1, LF4 and LF6. These boreholes show no results on the charts.

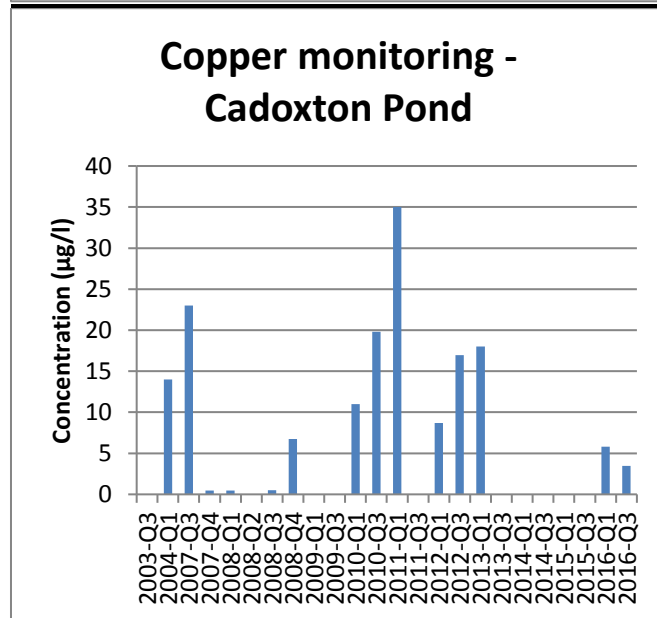
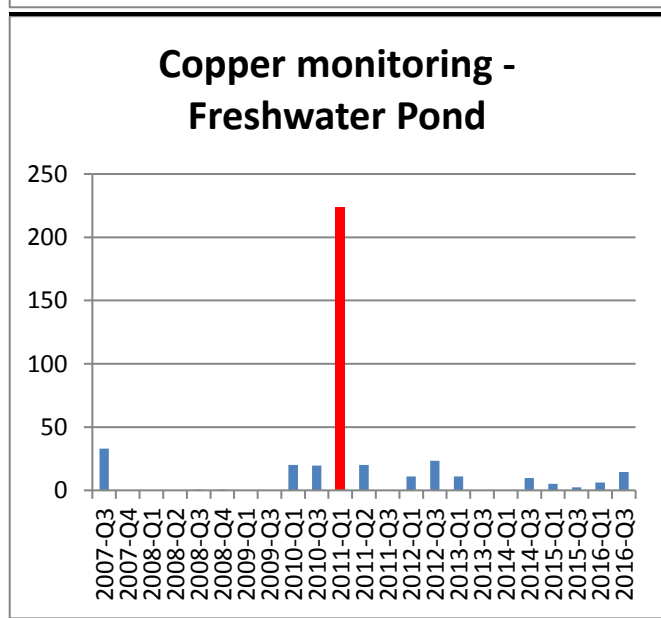
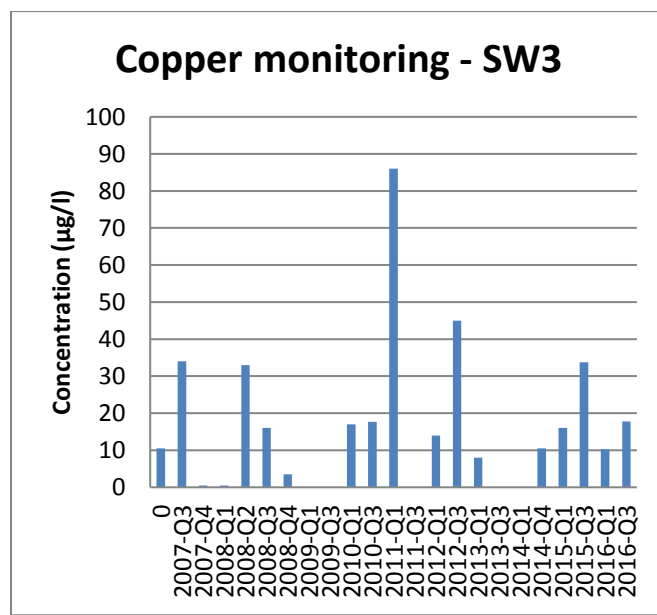
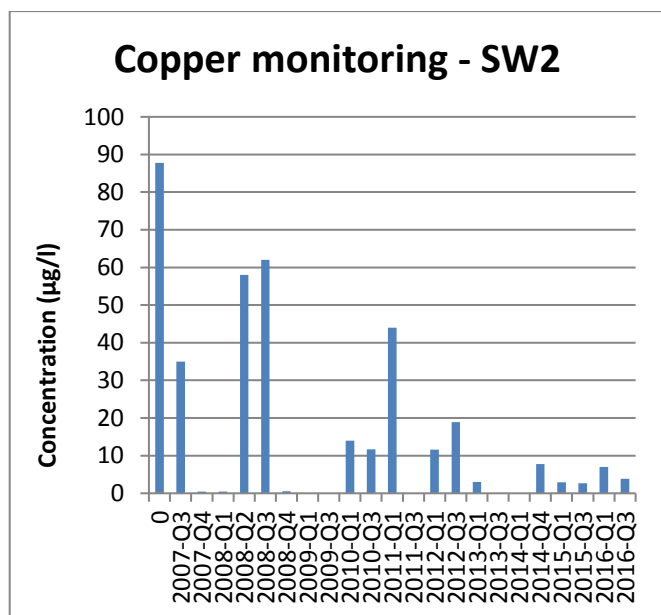
A number of new boreholes were sunk around the landfill area towards the end of 2015. We were unable to sample these in Q1 2016 due to not having the right equipment (the tubes are narrower than our existing boreholes). They were sampled for the first time in Q3 2016. The data for these is included in the spreadsheet, but no comparison charts will be created until there are 3 data points.

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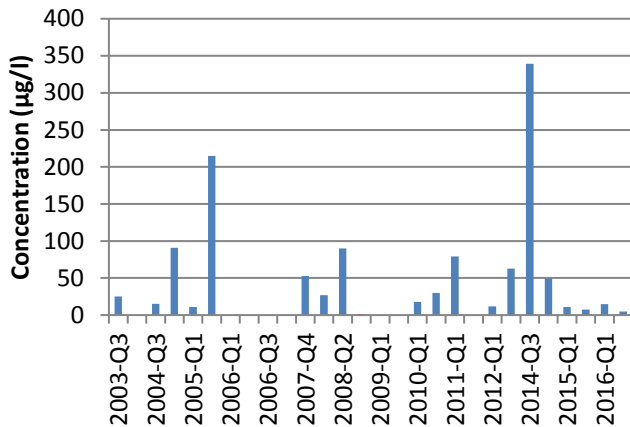
Leachate graphs.

Copper

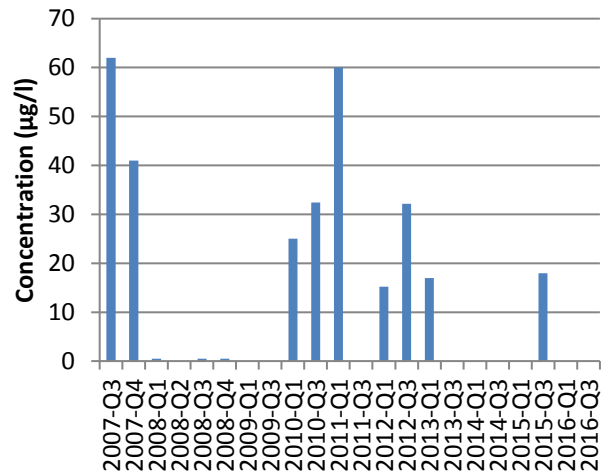
The detectable limit for Copper is 0.5 µg/l – any results below this will show on the graphs as 0



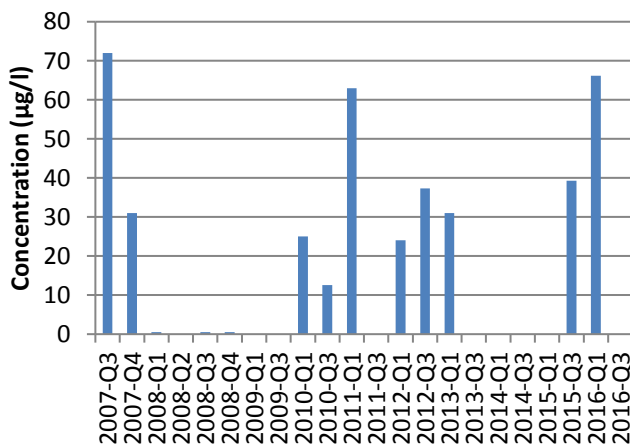
Copper monitoring - Timber Pond



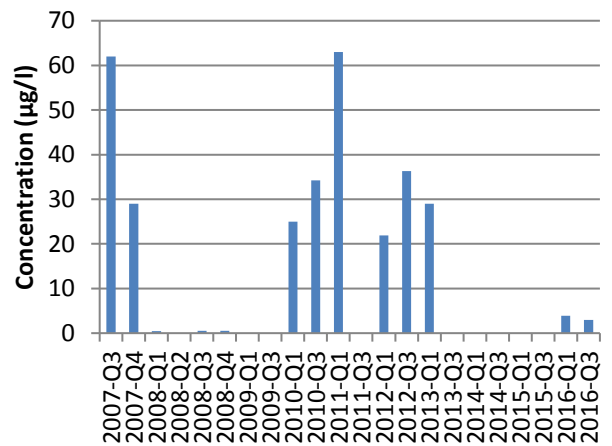
Copper monitoring - E1S



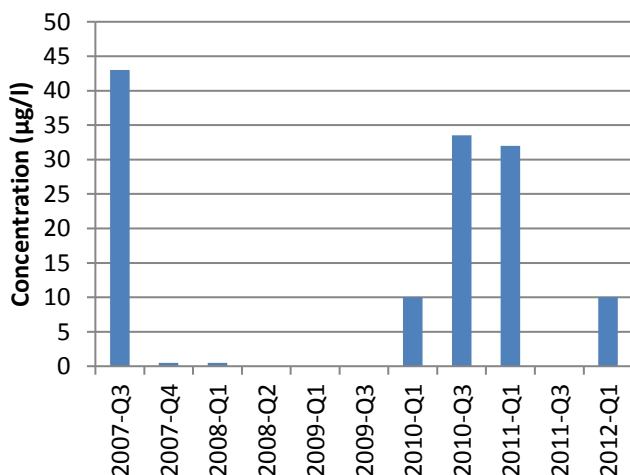
Copper monitoring - E1M



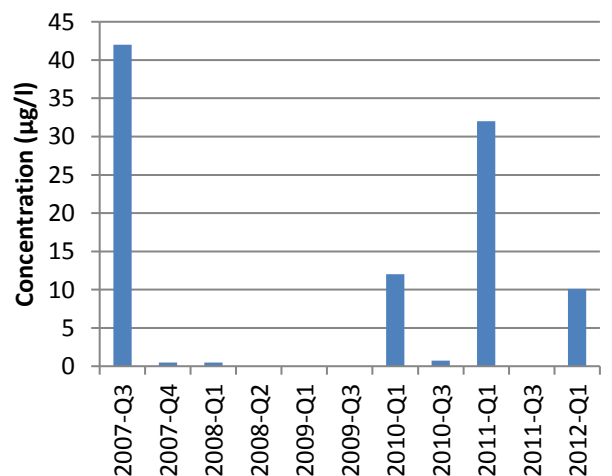
Copper monitoring - E1D



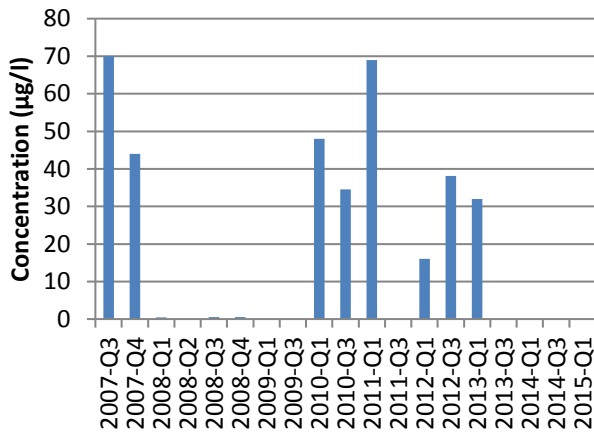
Copper monitoring - E2S



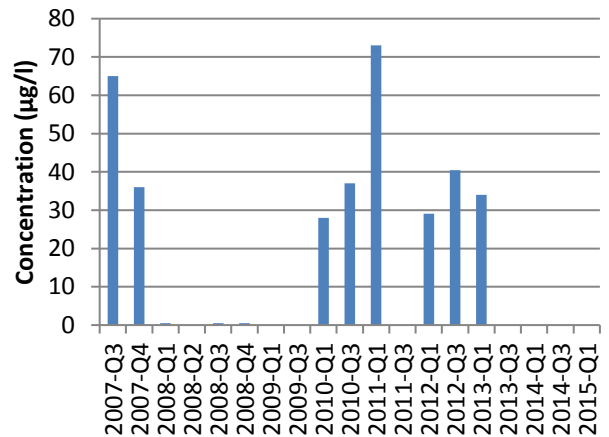
Copper monitoring - E2D



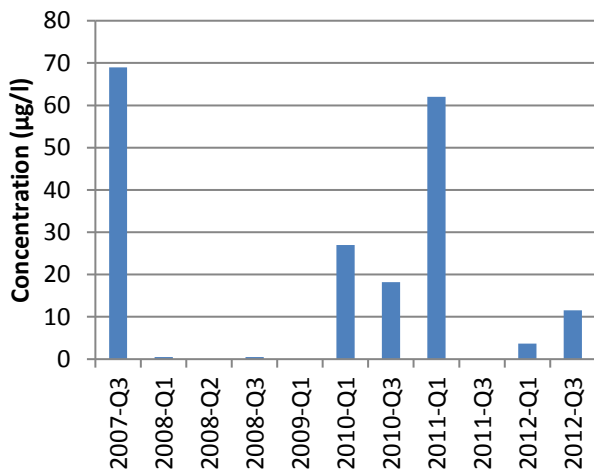
Copper monitoring - E4S



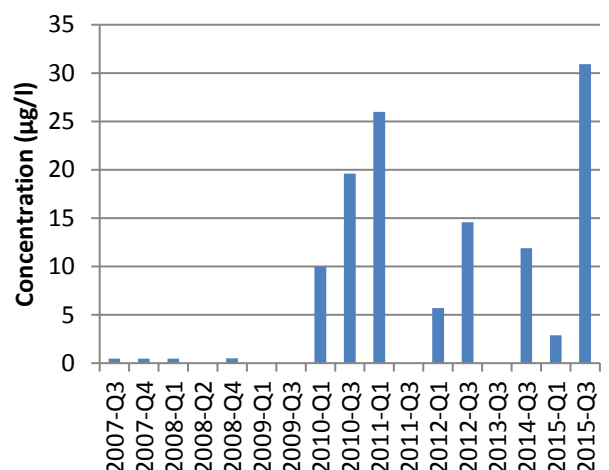
Copper monitoring - E4D



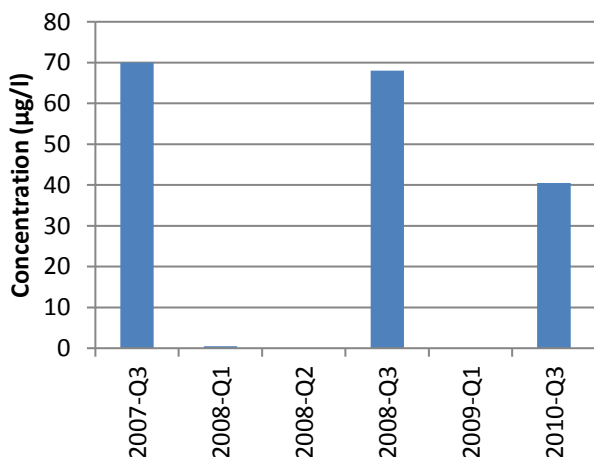
Copper monitoring - LF1



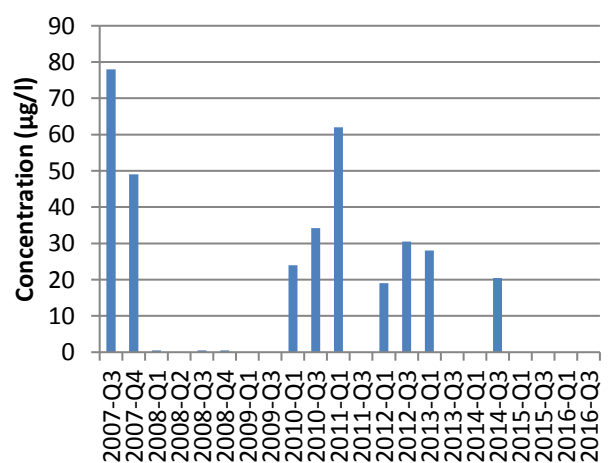
Copper monitoring - LF4



Copper monitoring - LF6

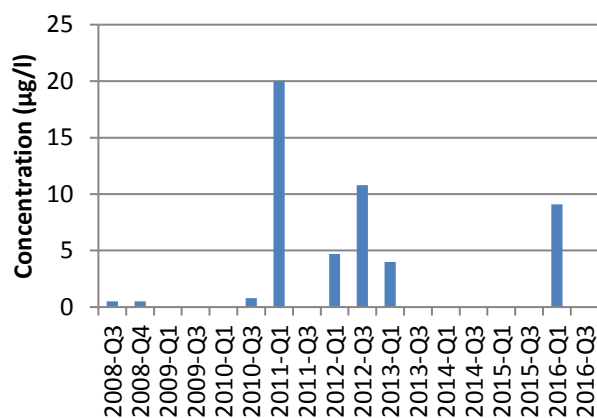


Copper monitoring - LF7

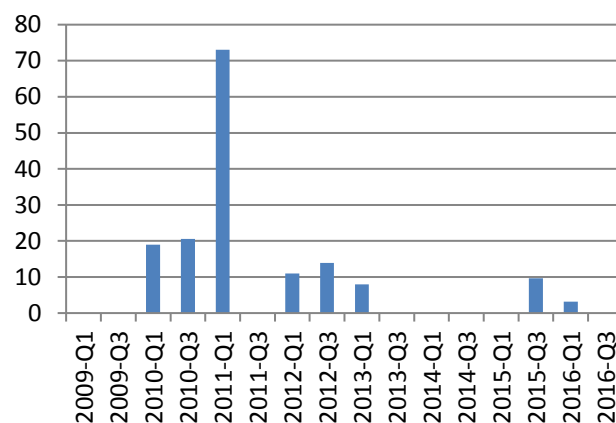


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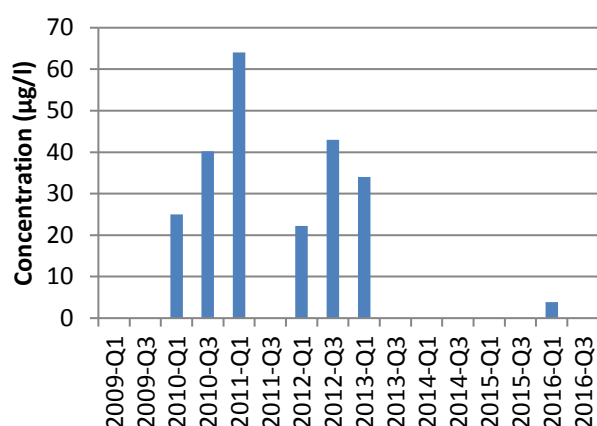
Copper monitoring - BH 210



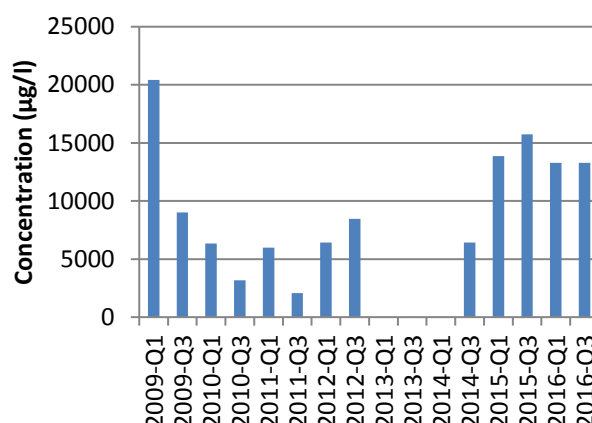
Copper monitoring - BH 312



Copper monitoring - BH 412



Copper monitoring - A2D



Comments

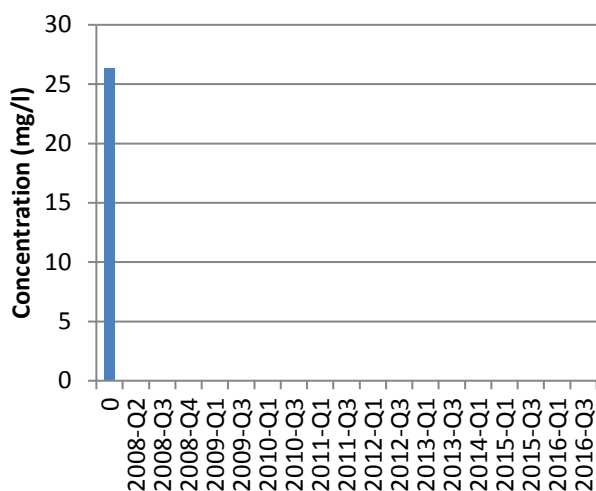
1. It was not possible to gain a sample from LF4 again this Quarter – this borehole has now been abandoned. LF12M/D have been sunk in this location and the results for this borehole are below detectable levels.
2. As mentioned in the previous reports the results over the past years appear to show fluctuation 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. The value was not as high as it has been in previous reporting periods. This borehole is situated in the middle of the site and therefore poses no risk to local sensitive receptors.

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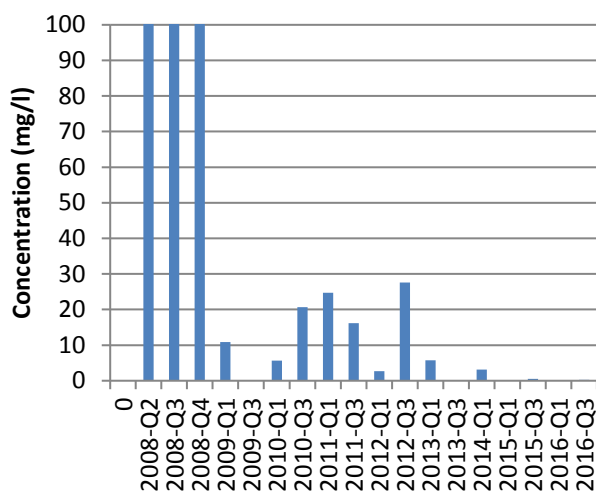
TMS

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

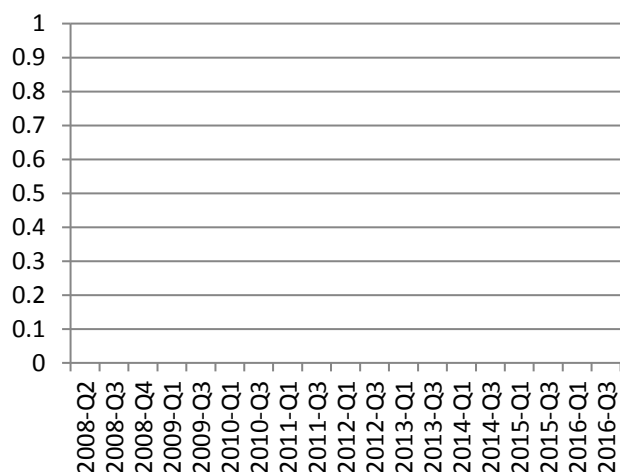
TMS monitoring - SW2



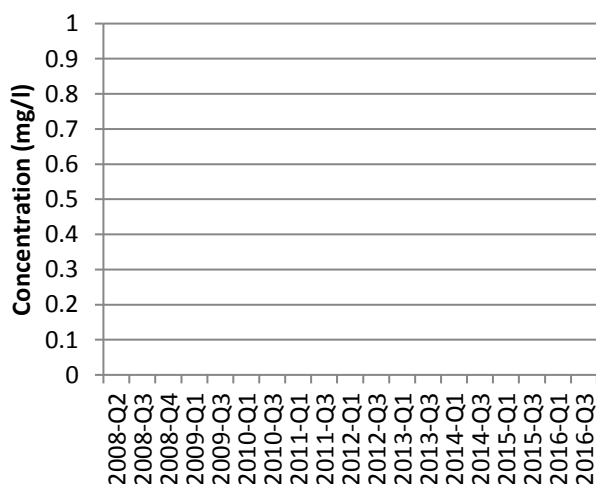
TMS monitoring - SW3



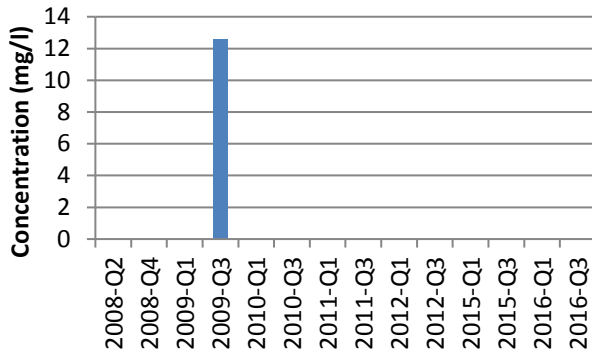
**TMS monitoring -
Freshwater Pond**



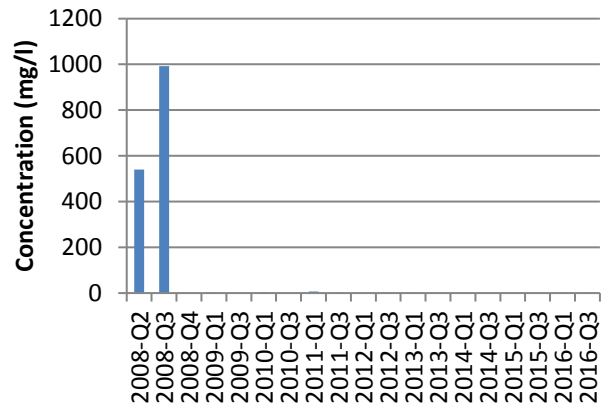
**TMS monitoring -
Cadoxton Pond**



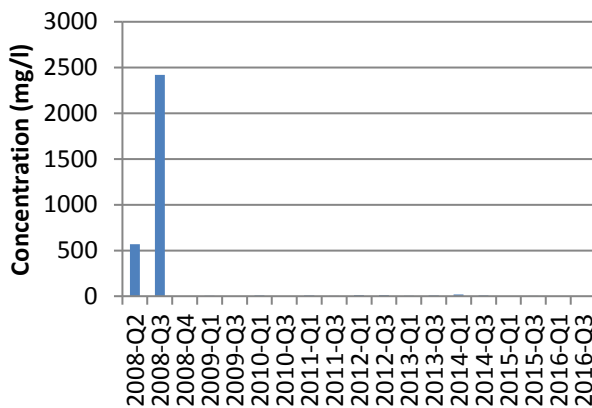
TMS monitoring - Timber Pond



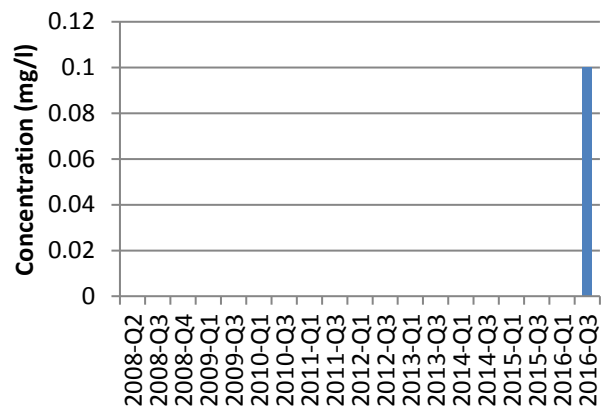
TMS monitoring - E1S



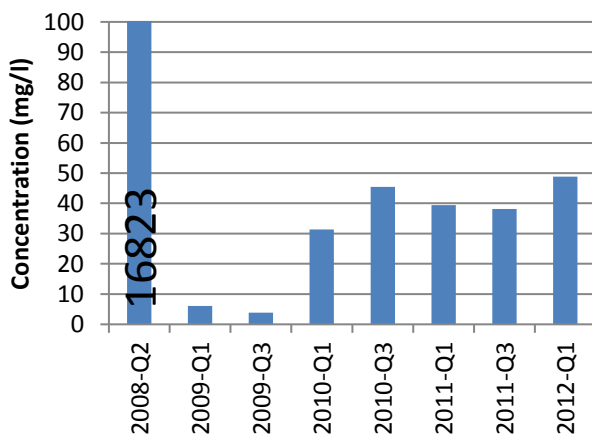
TMS monitoring - E1M



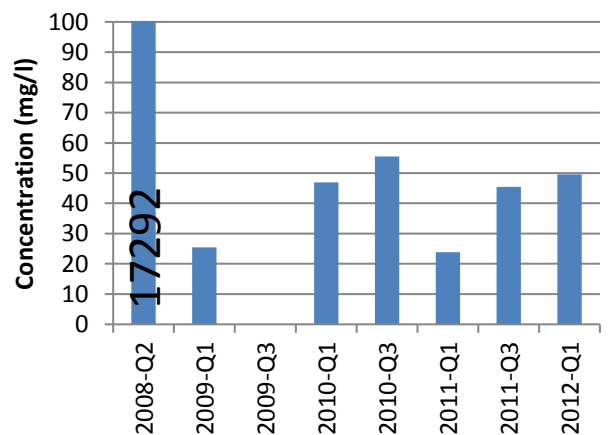
TMS monitoring - E1D



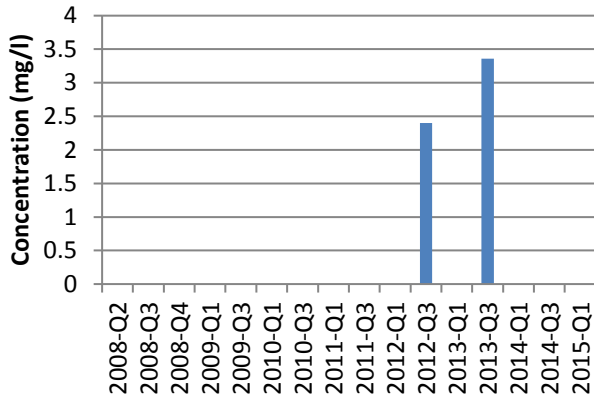
TMS monitoring - E2S



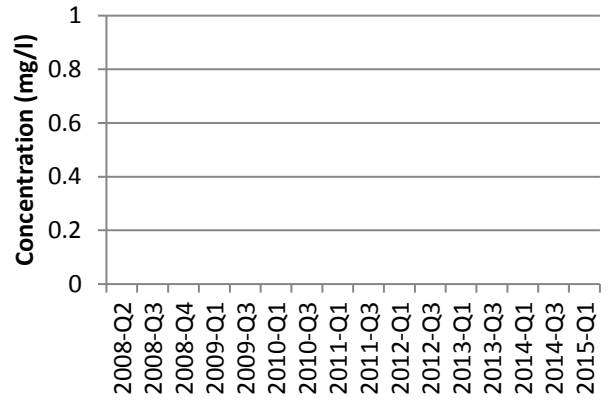
TMS monitoring - E2D



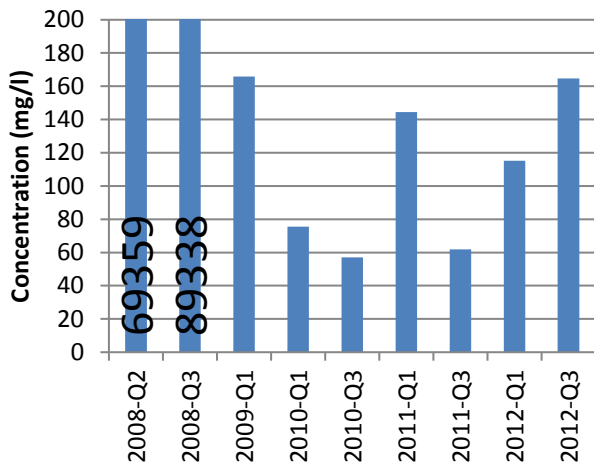
TMS monitoring - E4S



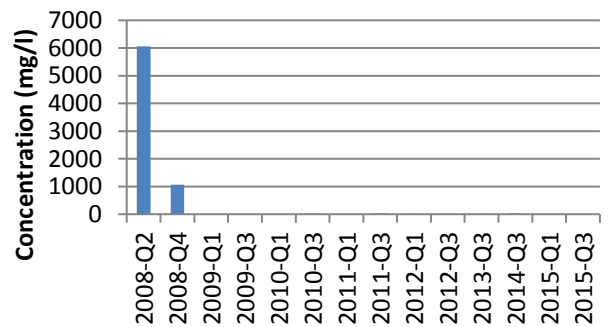
TMS monitoring - E4D



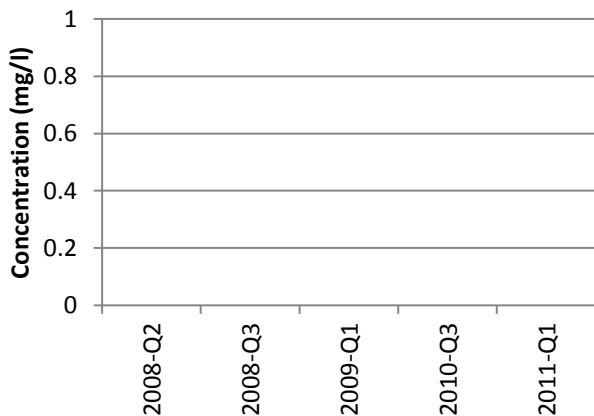
TMS monitoring - LF1



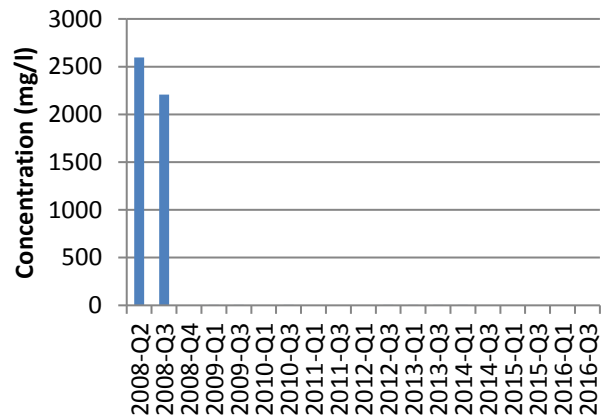
TMS monitoring - LF4



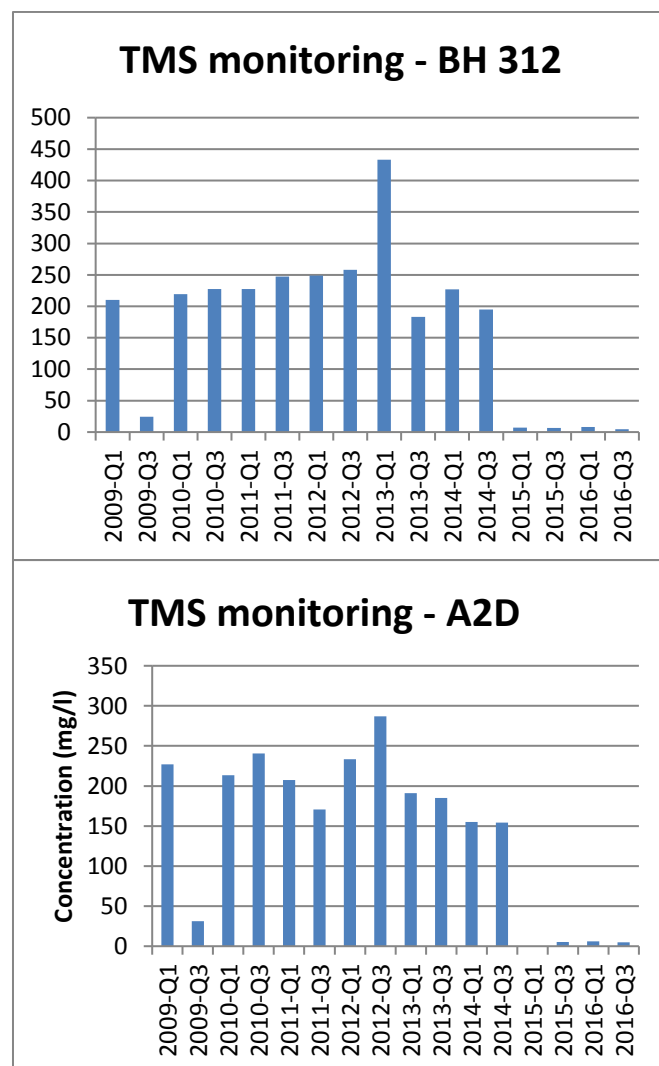
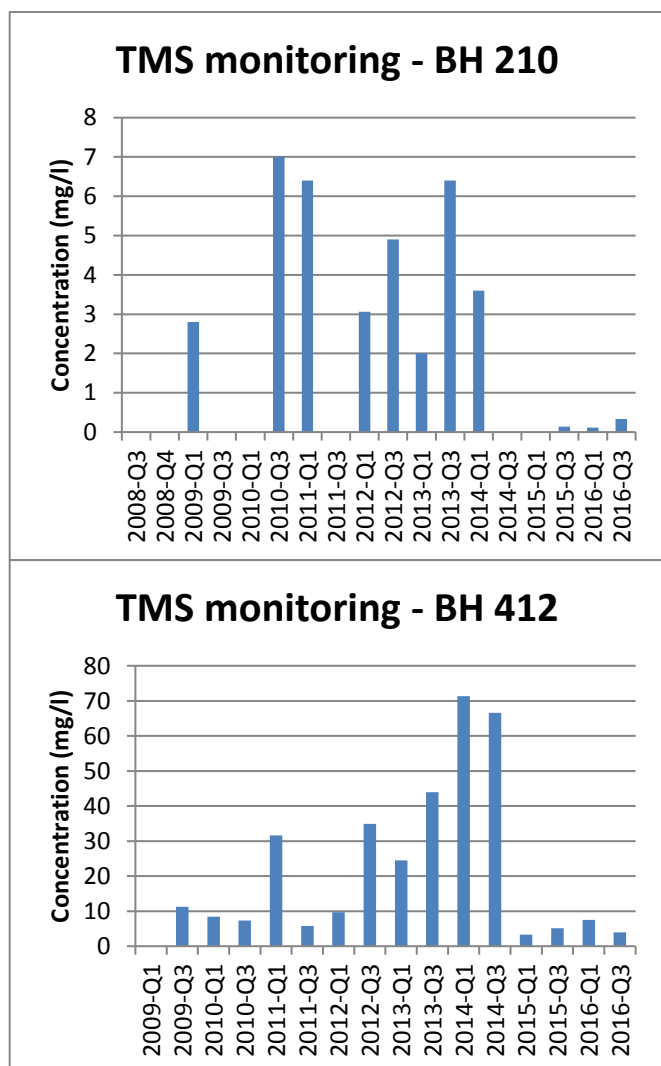
TMS monitoring - LF6



TMS monitoring - LF7



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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.