

	Q3 Landfill Groundwater Sampling Results 2015 Dow Corning Ltd Barry	Quarter 3 2015
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Q3-2015 Landfill Groundwater Sampling Results

The impact of bulk storage of materials on the landfill and its performance was monitored in quarter 3 of 2015 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 Q3-2015

Some of the boreholes were not sampled during Q3 2015 due to various reasons (overgrown plants, insufficient water or boreholes lost). These were: E2S, E2D, E4S, E4D, LF1 and LF6. These boreholes show no results on the charts.

LF4 was taken from the top of the collar and the sample seems to have higher levels of contaminants than usual.

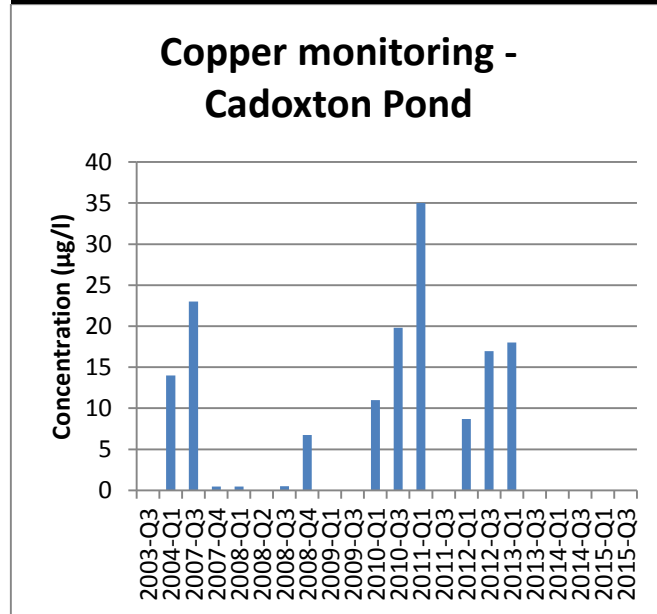
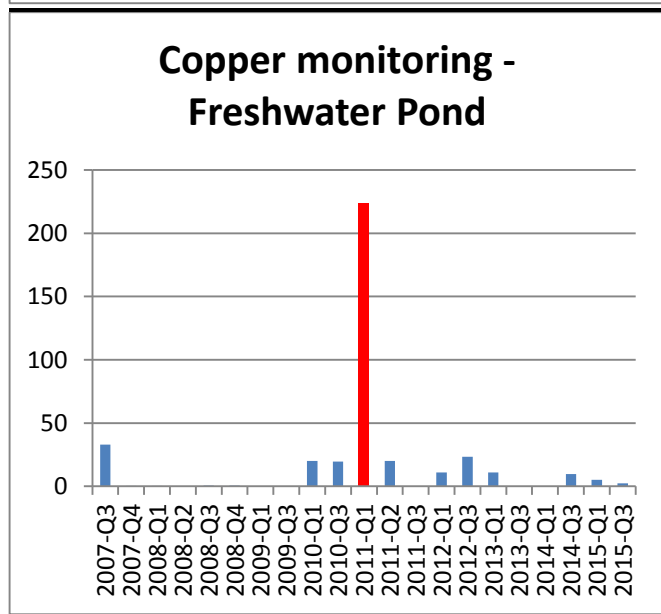
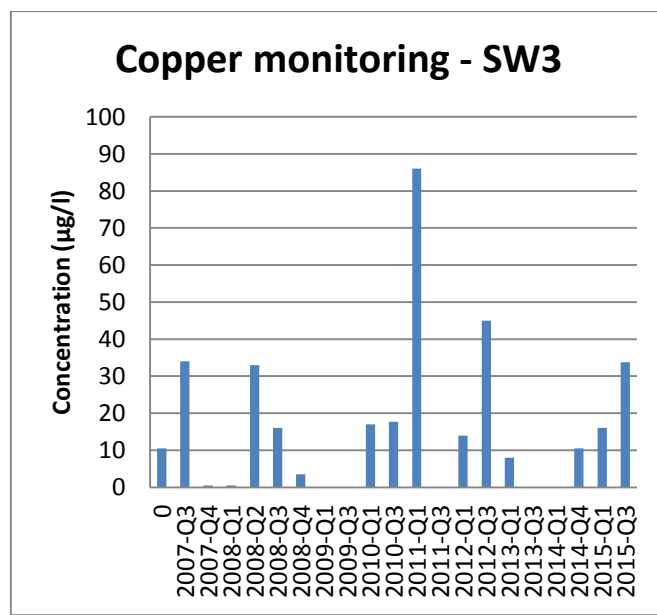
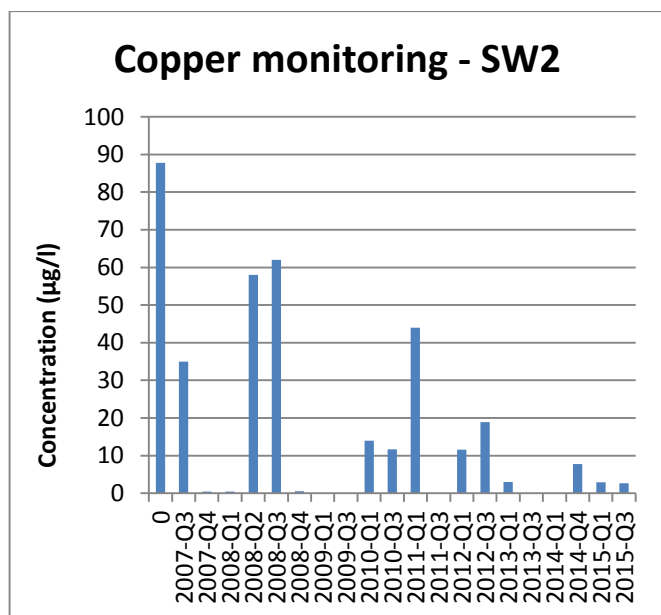
New boreholes are being constructed around the perimeter and vicinity of the landfill and will be added to the reporting schedule when they are complete and samples have been taken.

	Q3 Landfill Groundwater Sampling Results 2015 Dow Corning Ltd Barry	Quarter 3 2015
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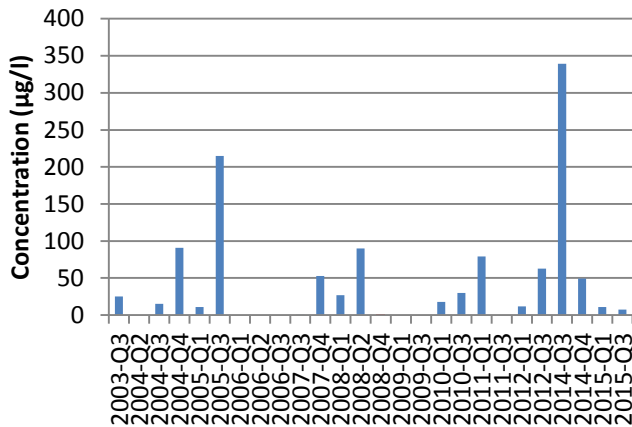
Leachate graphs.

Copper

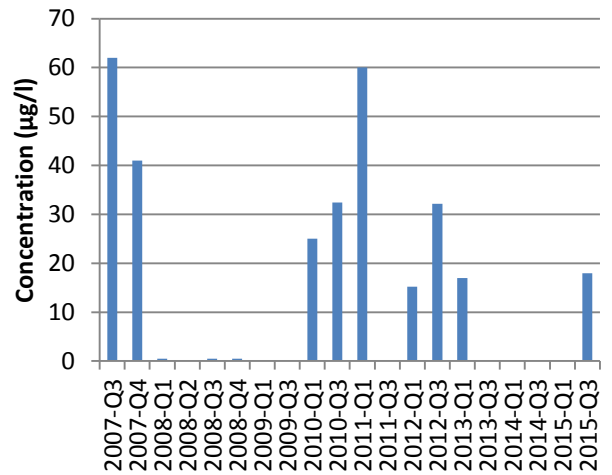
The detectable limit for Copper is 0.5 µg/l – any results below this will show on the graphs show as 0



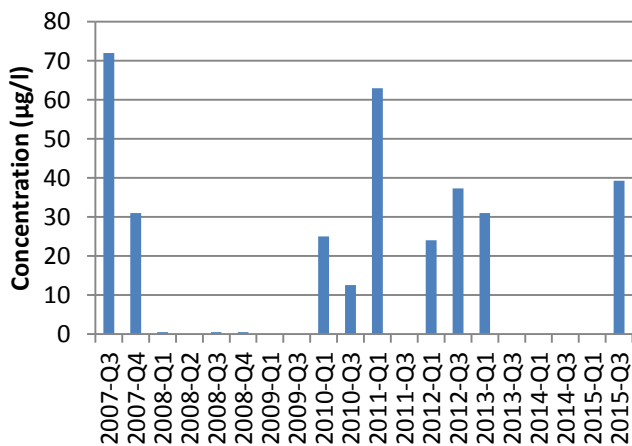
Copper monitoring - Timber Pond



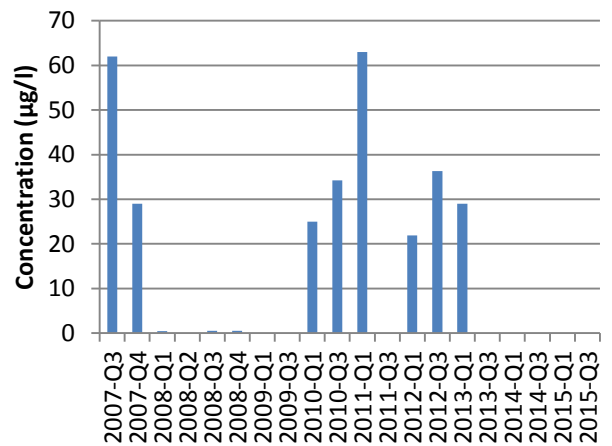
Copper monitoring - E1S



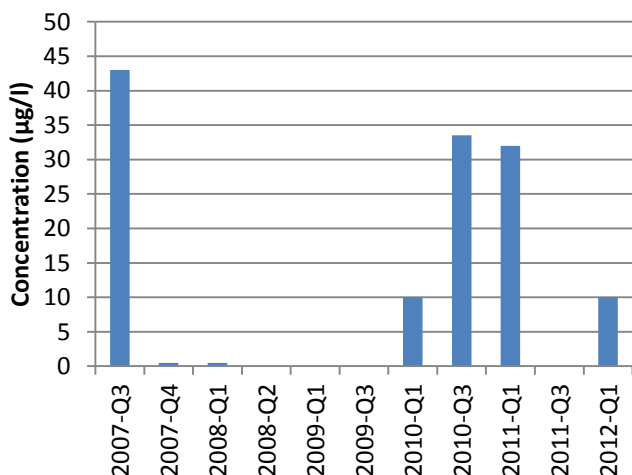
Copper monitoring - E1M



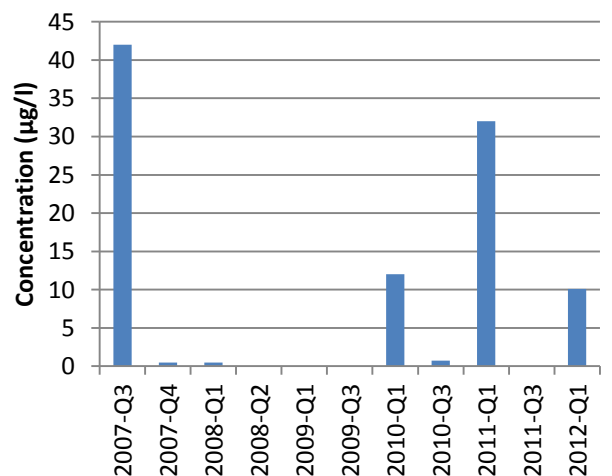
Copper monitoring - E1D



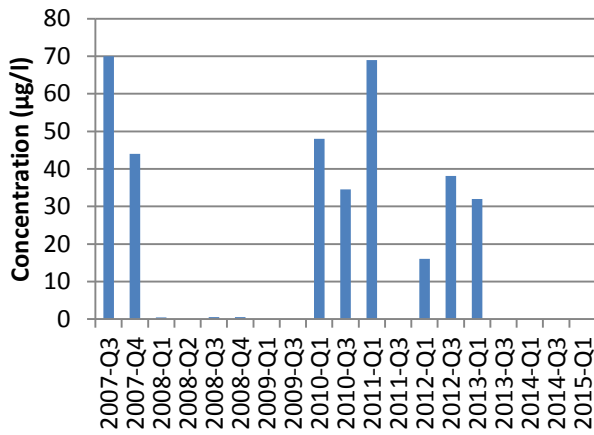
Copper monitoring - E2S



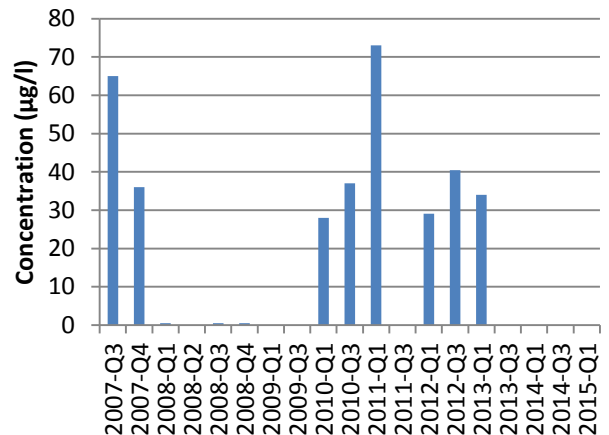
Copper monitoring - E2D



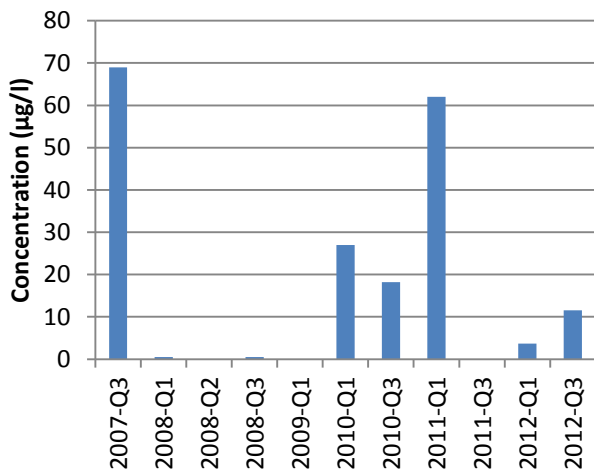
Copper monitoring - E4S



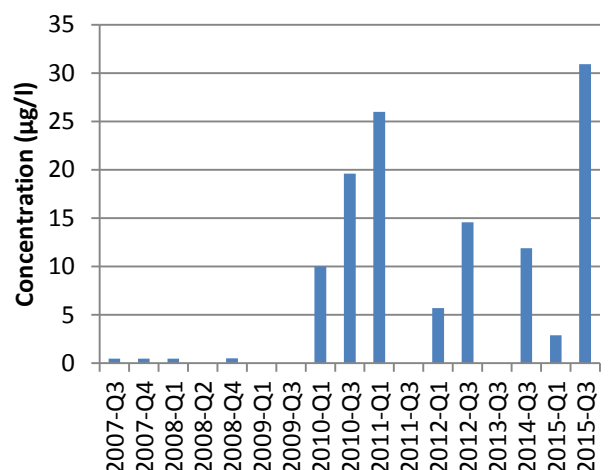
Copper monitoring - E4D



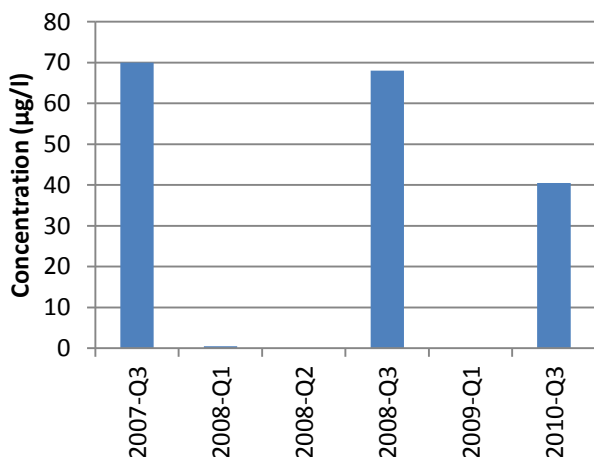
Copper monitoring - LF1



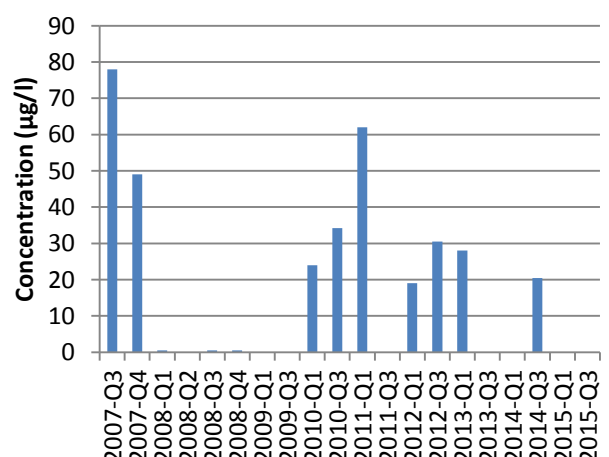
Copper monitoring - LF4



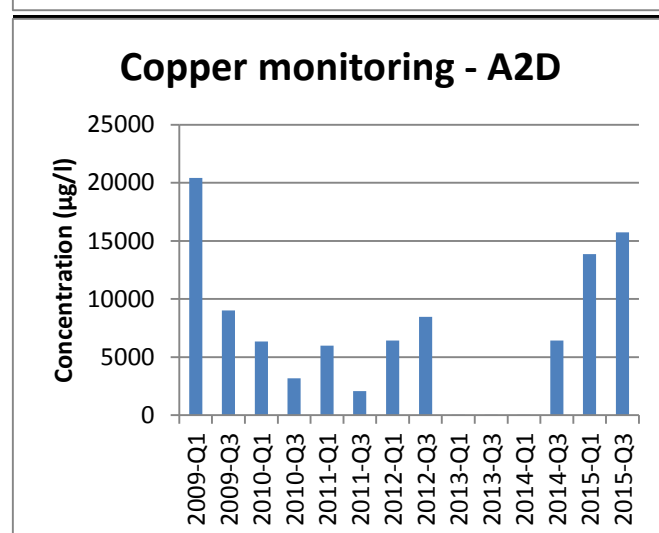
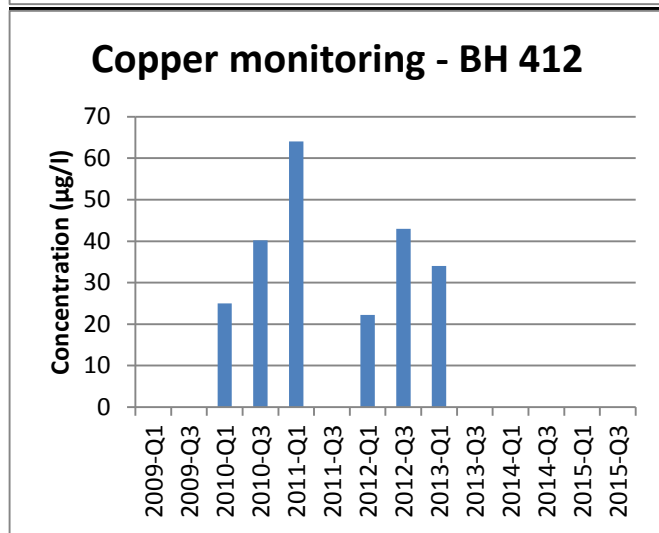
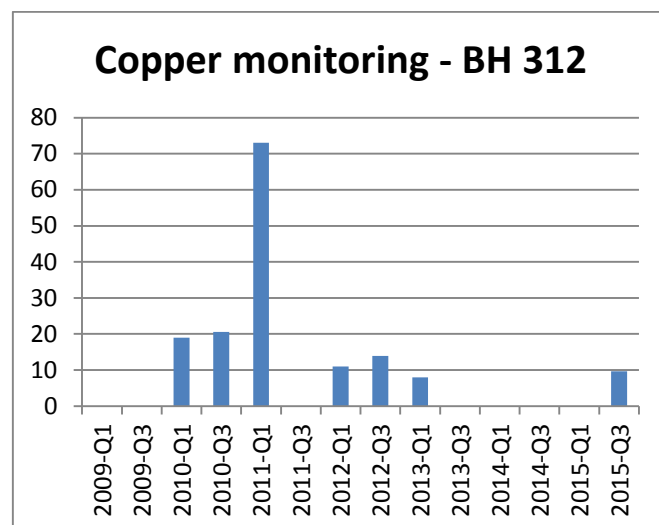
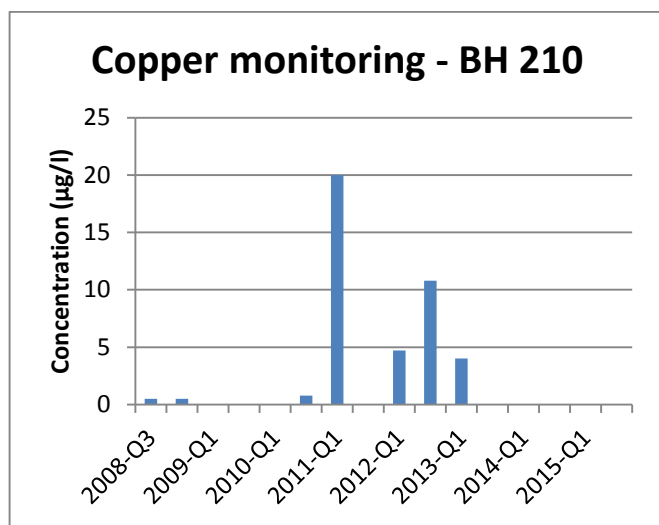
Copper monitoring - LF6



Copper monitoring - LF7



	Q3 Landfill Groundwater Sampling Results 2015 Dow Corning Ltd Barry	Quarter 3 2015
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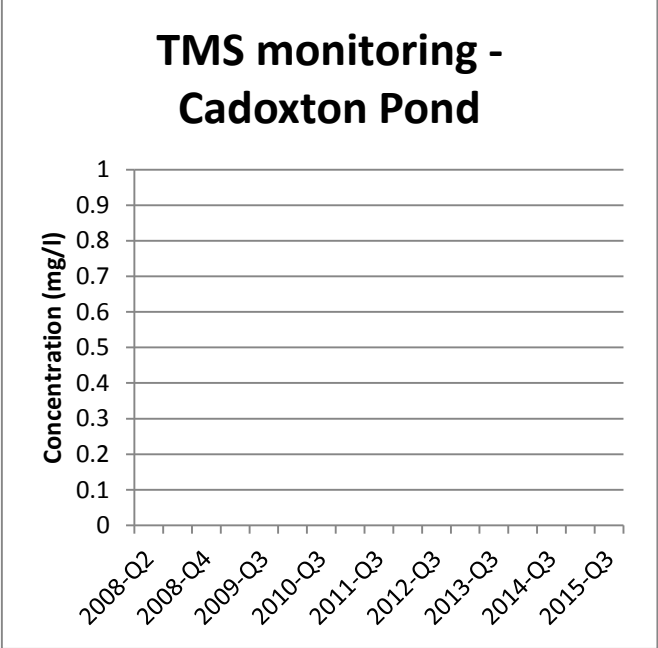
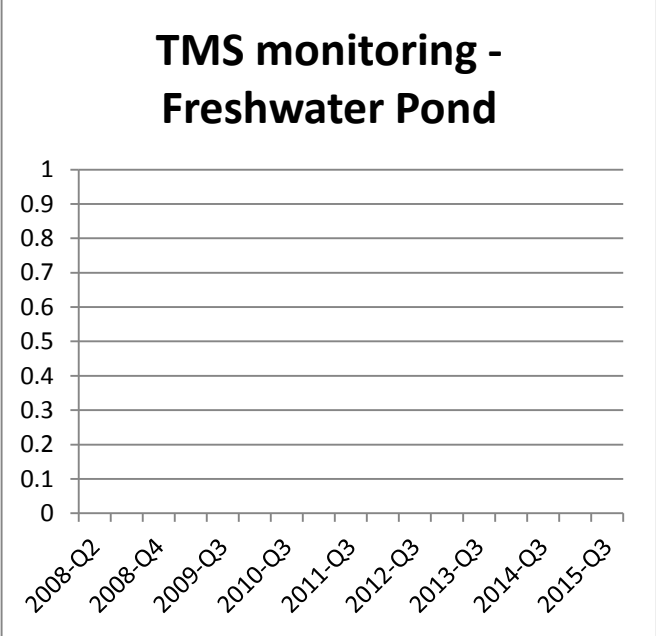
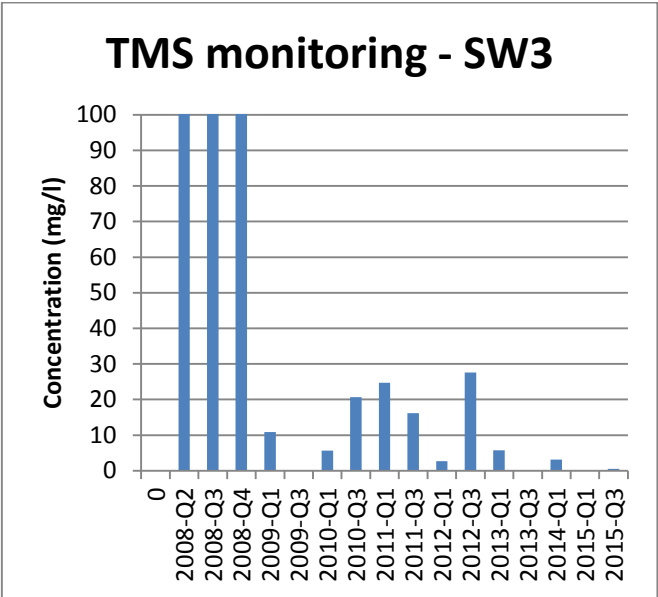
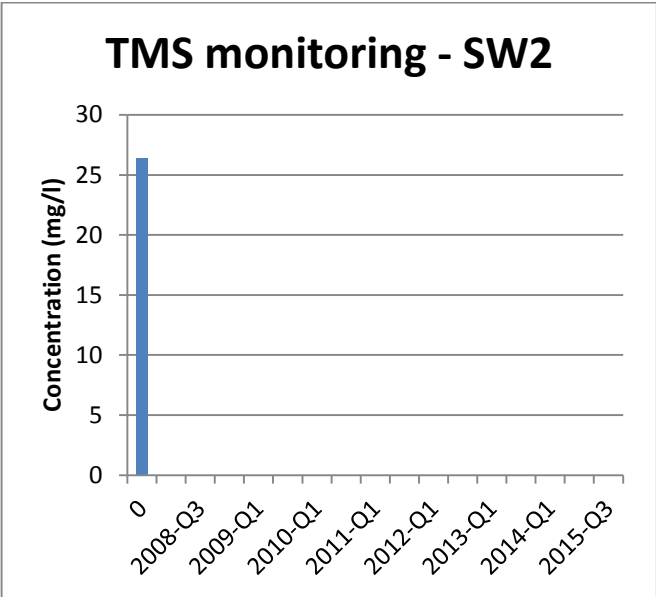


Comments

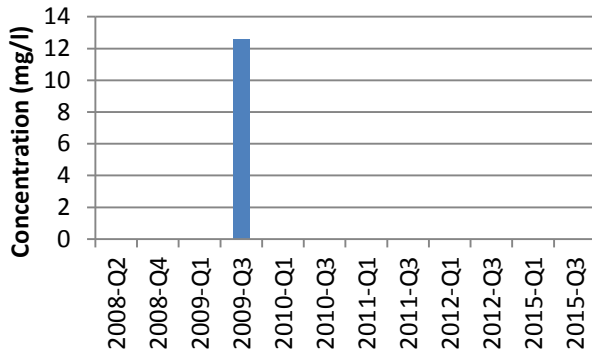
1. The sample taken from LF4 this quarter appears to have been contaminated during sampling as many of the components are much higher than normal. The results will be checked against the next sample taken.
2. As mentioned in the previous reports the results over the past years appear to show fluctuation 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. Some analysis of the pH of each of the samples versus the copper levels has been carried out. Whilst some boreholes have shown a weak correlation of lower pH showing increased copper, other boreholes show no correlation at all.
4. All results of the sampling this quarter fall within the normal range of the sampling data (except for LF4 mentioned in point 1)
5. 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.

TMS

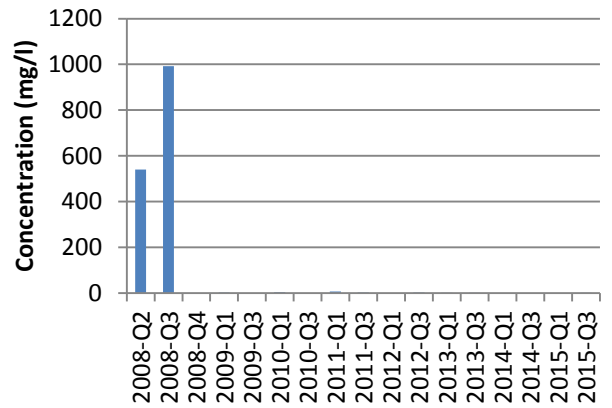
The detectable limit for Trimethylsilanol is 3 mg/l – any results below this will show on the graphs show as 0



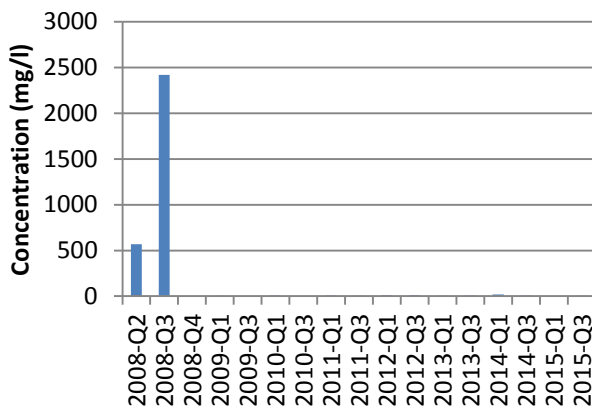
TMS monitoring - Timber Pond



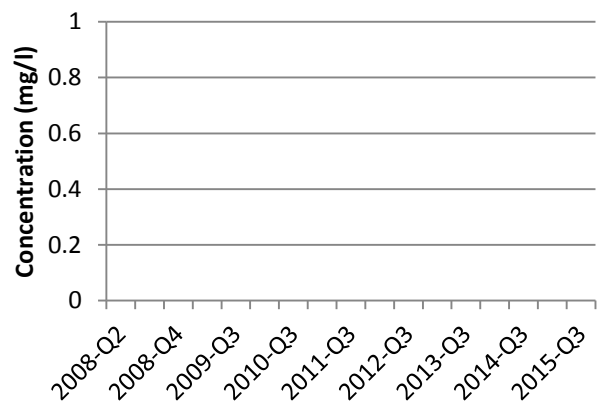
TMS monitoring - E1S



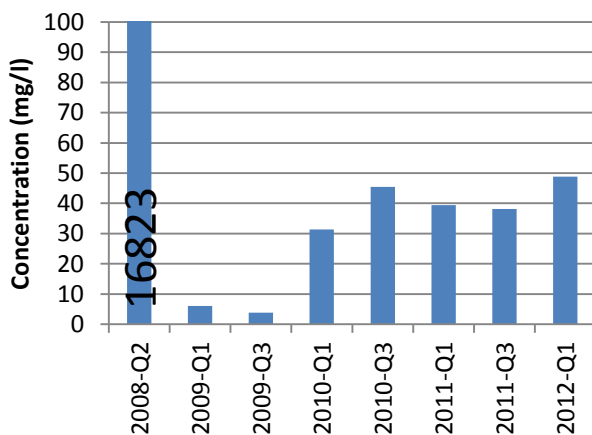
TMS monitoring - E1M



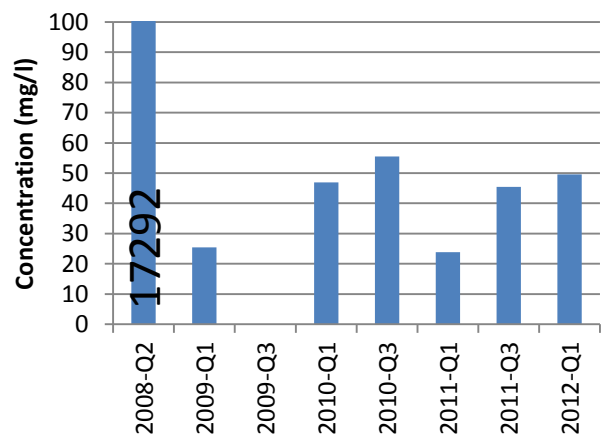
TMS monitoring - E1D



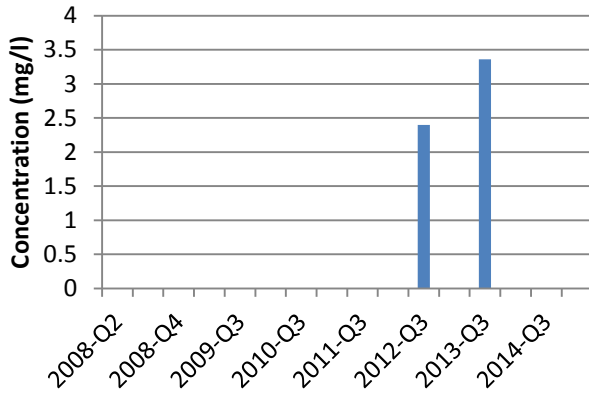
TMS monitoring - E2S



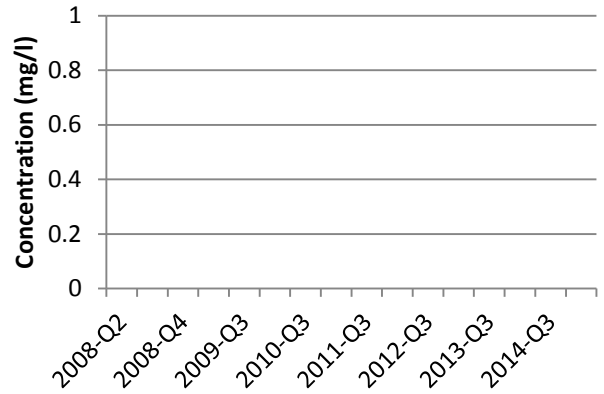
TMS monitoring - E2D



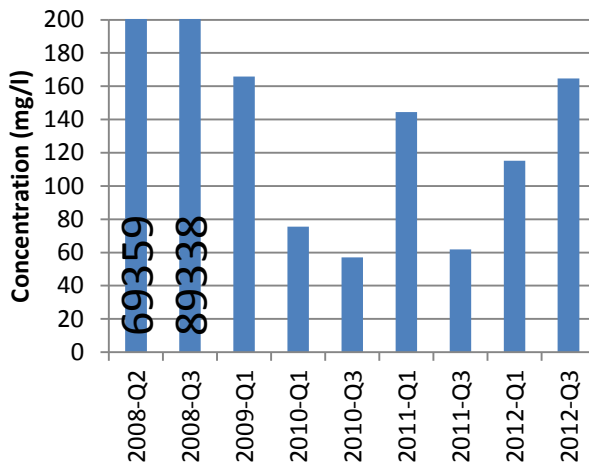
TMS monitoring - E4S



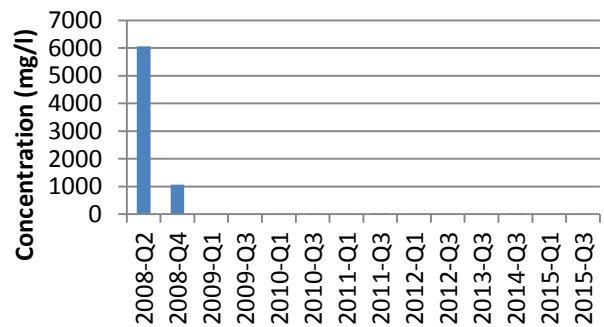
TMS monitoring - E4D



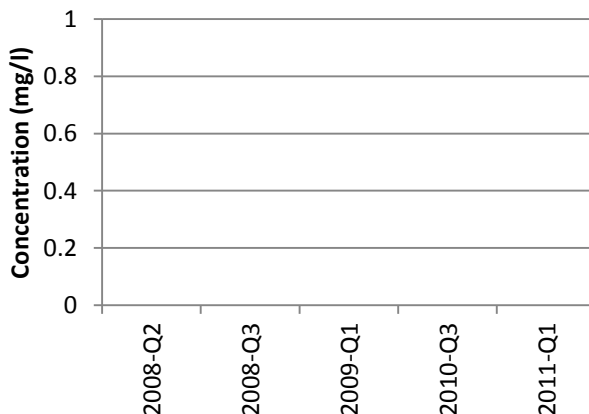
TMS monitoring - LF1



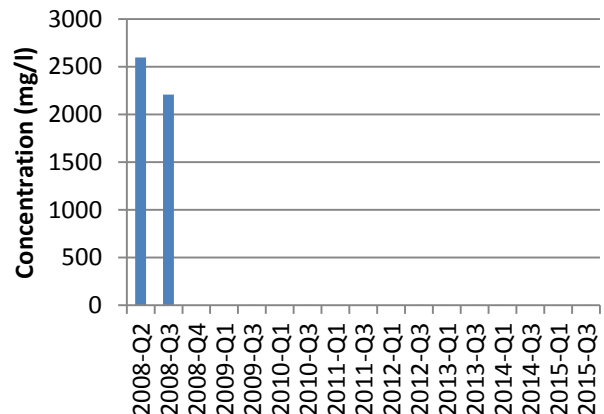
TMS monitoring - LF4



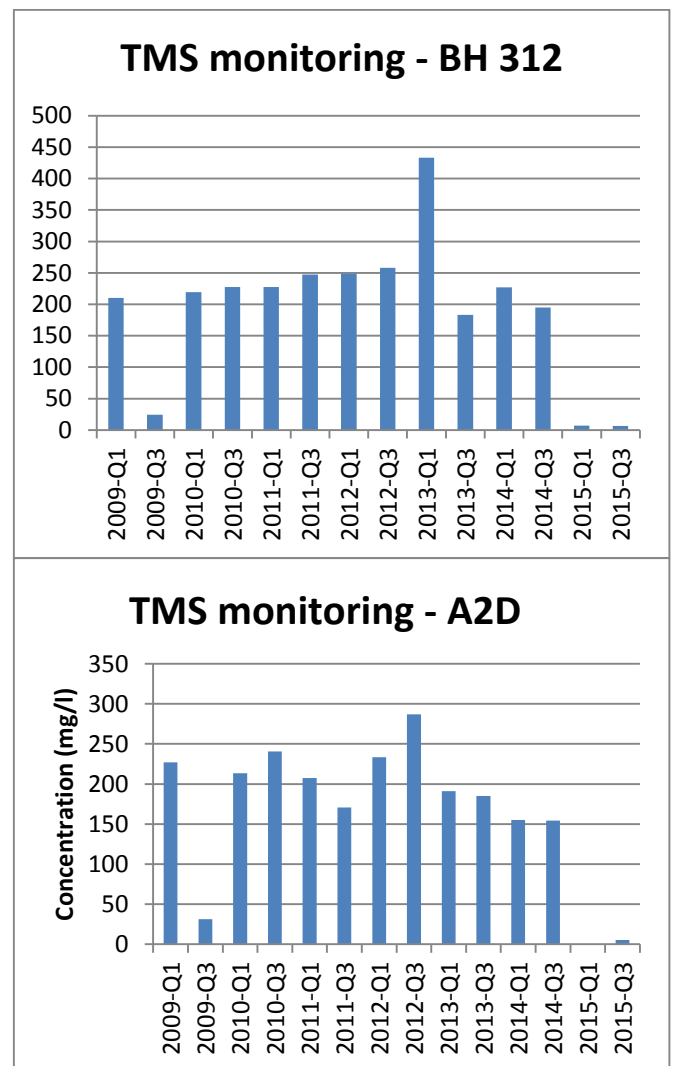
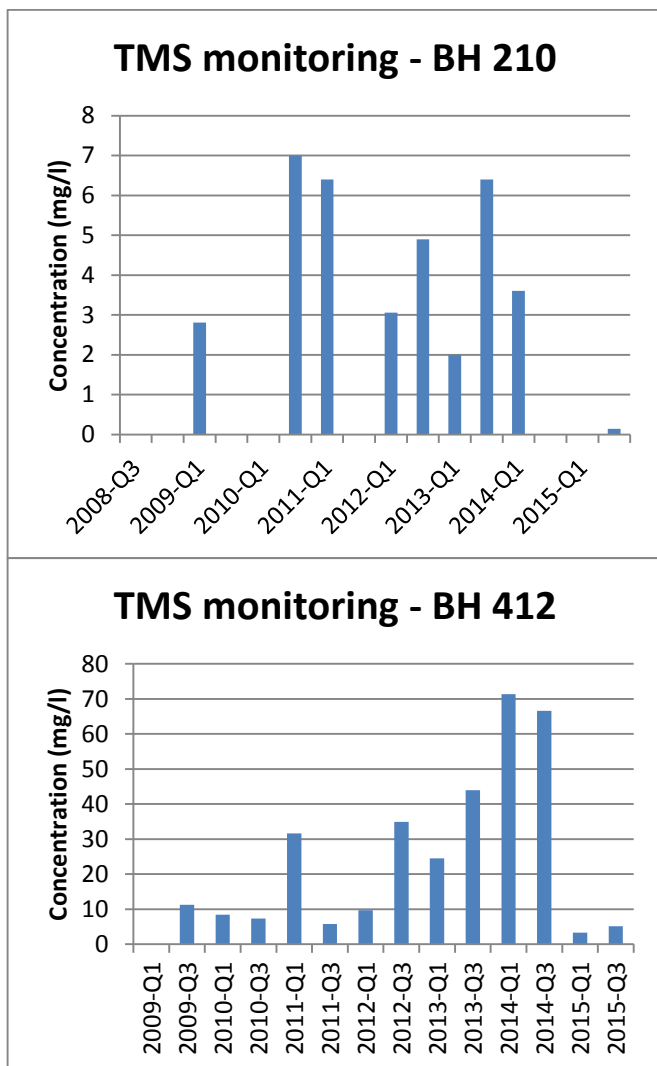
TMS monitoring - LF6



TMS monitoring - LF7



	Q3 Landfill Groundwater Sampling Results 2015 Dow Corning Ltd Barry	Quarter 3 2015
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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.