

Chlorinated Solvents – Controlled Water and Human Health Risk Assessments

## **The SoBRA 2014 Summer Workshop – A short summary**





## Format

- The workshop followed the now established format of a series of expert presentation in the morning, followed by 4 breakout groups discussing, then feeding back, on the key issues.
- Sheffield University provided rapporteurs for the breakout sessions and they have now all reported back and the Report of the event is currently in editorial stage for publication soon (probably early next year).
- 83 delegates, speakers, rapporteurs attended the meeting.
- The report will be available to members to download from the SoBRA web site in the not too distant future.
- So, what did we get up to?



## Venue - Sheffield Cathedral Conference Centre



- Sheffield was my Home Town (albeit that I moved away in the early 1970's).
- SoBRA always tries find a venue away from London with at least “reasonable” transport links for the Summer Workshops



## Topics of the Presentations

- Background and scene setting by **Mike Rivett** (Birmingham University)
  - Analysis of Chlorinated Solvents by **Hazel Davison** (Derwentside Environmental Testing Services Ltd)
  - Site Investigation and Sampling, Conceptual Site Model and Data Quality – **Mike Loxley** (AWE) and **Chris Gilbert** (Golder Associates)
  - Review of Toxicology and options for HHRA by **Kerry Foxall** (Public Health England)
  - Controlled Waters Risk Assessment by **Phil Morgan** (The Sirius Group and Visiting Professor at Sheffield University)
  - Groundwater Vapour Risk by **Naomi Earl** (Independent Consultant).
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- The whole of which was expertly chaired by **Steve Thornton** (Sheffield University)



## Workshop discussion topics

- Site Investigation and Sampling
- Toxicology
- Groundwater Risk Assessment
- Assessment of Vapour Risk



## Site Investigation and Sampling - conclusions

- Minimise volatile losses from samples by keeping them cold, minimising headspace in the vial and using the appropriate equipment and methods. Overall, try to reduce the uncertainty around the sampling process.
- Understand the CSM in particular the geology and flow paths within the aquifer and borehole. It is crucial that the site investigation does not generate any additional flow paths for the contaminant.
- Health and safety considerations should be an integral part of the site investigation process.
- Consider the stratification of contaminants when applying long screen boreholes. The target zone for the borehole will depend on the type of contaminants present on site.



## Toxicology

- Disparate sources of information
- Dealing with Uncertainty
- Values and Guidance Change regularly – if your value is more than 2 years old, then use with significant caution.
- There was an identified need to ensure that new Tox values should be altered through the key Institutions with perhaps a central repository (suggested that SoBRA could host this.....)



## Groundwater Risk

- Dealing with the situation where there was DNAPL present was always going to be problematic to meet any of the legislative based criteria.
- Daughter products / degradation products often missing in the modelling process and could be a serious flaw if this is not recognised and dealt with properly.
- Environment Agency developing further guidance on significant pollution of controlled waters.



## Vapour Risk

- Discussions centred around:
  - Monitoring vapour risk
  - Modelling
  - Vapour groundwater GAC - GAC/SSAC when below LOD



## Work in progress

- Reporting is in progress
- Executive Committee will be considering topics for the next Summer Workshop shortly.
  
- My thanks to Theresa Cory (Environment Agency) who assisted with the organisation of the event, and the rest of the SoBRA Executive Committee for their assistance and support in bringing the event to fruition.
  
- Thank you