



Yorkshire Contaminated Land Forum Meeting

Protecting Controlled Waters from Land Contamination

held on 30/09/14

Yorkshire Contaminated Land Forum held its second event of 2014 in York with around 80 people attending the meeting which had a controlled waters protection and treatment theme.

The first presentation was given by Steve Moreby on Gloucester City Council's experience of assessing the affect of land contamination following two extreme flooding events in 2007 and 2014. The flooding events were caused by prolonged heavy rainfall and caused rivers to burst banks and groundwater to rise such that it could potentially have an impact on land contamination in the area. The Council recognised the potential for the flood waters to cause contamination from oil water separators, mobilisation of contamination through rising groundwaters, cause damage to building structures and landfill leachate and gas management systems and delayed remediation works on some sites. The inspection process undertaken by the Council was described and high risks sites identified and inspected using a public health and environment checklist created by the Council. The Council did not identify any significant risks following the inspection process although it was deemed a huge success in terms of public reassurance. More details regarding this and the other presentations given on the day can be found on the YCLF website at www.yclf.org.uk

Ruth Buckley from the Environment Agency gave the second presentation on the methodology for classifying Source Protection Zones (SPZs) in the Yorkshire region. Ruth highlighted how SPZs have been prioritised in relation to the protection of groundwater intended for human consumption and defined how each of the SPZs were categorised. SPZs are always under review by the Agency are a best estimate and are always open to challenge. The link between SPZs and the Waste Framework Directive was highlighted as it requires groundwater and surface water to be protected from the risk of pollution. Compliance is monitored through both operational and defensive monitoring.

The benefits of undertaking feasibility pilot studies in order to select the most sustainable remediation technique was the topic of the third presentation by Felipe Couto of Remedx. A case study demonstrated that pilot tests using a soil vapour extraction technique enabled a significant recoverable mass of benzene from the unsaturated zone over a deep sandstone aquifer. This would provide significant sustainable benefits due to reduce energy consumption compared with the initial recommendation which suggested using Dual Phase Extraction. The pilot enabled a full scale Soil Vapour Extraction (SVE) solution to be adopted at the site which recovered over 6000kg of VOCs over 32 months reducing benzene concentrations significantly. A sustainability assessment showed that the benefits resulting from the method chosen had partly resulted from the ability to prove the technology in the pilot study.

The final Presentation described a case study where Enhanced Monitored Natural Attenuation had been utilised to remediate an active Dry Cleaning Facility. The presentation was delivered by George Flower of Hyder and Gareth Leonard of Regenesis. The case study site was operational so there were a number of surface constraints to remediating the site. The underlying geology which comprised inter-bedded glacial clays and fine sand lenses over mudstones also presented a challenge with respect to treating the contamination. Through a process of enhanced degradation it was possible to achieve the remedial target (equivalent to 1% solubility of the principal contaminant tetrachloroethene (PCE) (<2mg/l)) using in-situ methods. The in-situ remediation was undertaken using 'Hydrogen Release Compound' a product developed by Regenesis. Through the use of low purge groundwater monitoring it was possible to demonstrate that the PCE was reduced to 'non-detect' after 18 months.

The technical meeting was followed by an informal networking session supported by Regenesis

YCLF CONTACT DETAILS:

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Notes for editors:

The attached photograph shows from left to right: Felipe Couto (RemedX), Ruth Buckley (Environment Agency), Eleanor Walker (YCLF & Worley Parsons), George Flower (Hyder), Steve Moreby (NHBC), Gareth Leonard (Regenesis), Orna O'Toole (YCLF & NHBC) and Lucy Hankinson (City of York Council).

