CASE STUDY

REMEDIATION OF A FORMER GAS MANUFACTURING PLANT

RSK is carrying out the remediation of a former gas manufacturing plant in Lier, Belgium. The plant was in continuous production from 1905 to 1920 and operated occasionally thereafter. Waste from the former gasworks left contaminants including tar, cyanide and heavy metals in the soil and the groundwater.

When the project started eight years ago, the contaminant concentrations were relatively low for a gas site. The peak cyanide concentration recorded was 46,000 mg/kg at one location, but the average concentration on the site is 252 mg/kg. Since then, the groundwater composition has changed, so RSK has implemented a resampling protocol to collect up-to-date groundwater data and determine if and where the groundwater contamination has spread. Extra monitoring wells were drilled in the site at different depths, taking into account the physical variations in the depth of the groundwater level from 1–3 m below the surface. We used software that was developed in Flanders to assess the human toxicology levels and define safe levels to be achieved in remediation.

Tar is not visible on the site but some hot spots of polycyclic aromatic hydrocarbon concentrations were found. This means that after removing the hot spots through excavation, the tar content is expected to be within the safe guidelines for former gas sites, as outlined by the Belgian government. Groundwater remediation will be necessary with regards to the cyanide near active gas pipes. Taking into account that the groundwater level has to be lowered for the building project, pump and treat is considered to be the best option for the groundwater remediation.

The Lier gas works remediation project is ongoing, and RSK has executed a remediation project in coordination with the new building project. Shortly after the removal of the contaminated soil, the site will be released for the building project. This will enable construction of apartment blocks with parking space below to commence, which is expected in August 2014.

For further information, please contact:

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