

Chemical Fixation of Contaminated Soil from Gasworks Site

A former gas works site located at Mead St, Birkenhead in South Australia, contained around 2,000 tonnes of PAH-contaminated soils that required off-site treatment and disposal.

Ziltek's product RemBind was used to immobilise the PAH contaminants to allow for safe disposal.

McMahon Services provided specialist soil mixing equipment and the treatment was conducted at a purpose built treatment shed located at the Integrated Waste Services landfill site in Dublin, South Australia.

The treatment process involved adding RemBind and a solidification agent at 5% by weight. A single pass reduced the leachability of the PAHs and BaP to below the landfill criteria for Low level Contaminated Waste (LLCW) to allow the safe disposal of the treated soil.

Soil Treatment Results

Leachability (mg/L TCLP)	Before Treatment	After Treatment (5% w/w)
B(a)P	0.0083	0.0013
Total PAH	4.435	0.0351

In addition, the treated soil passed the Multiple Extraction Procedure (MEP) which is recognised as one of the world's most stringent soil leachability test. The test simulates the worst case leaching scenario - 100 years of acid rain in an unlined sanitary landfill.

Overall, the project took out a prestigious National prize at the Civil Contractors Federation (CCF) Earth Awards in 2011. The award recognised Ziltek and project partners McMahon Services and Integrated Waste Services for expert management of high-level contaminated soils.



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