

CERAMAH TEKNIK TECHNICAL TALK

Remediation of contaminated groundwater using innovative technologies

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The talk on Remediation of Contaminated Groundwater using Innovative Technologies was presented by Sdr Ed Fahnlne (Geosyntec) on 4th Sept, 2013 at the Department of Geology, University of Malaya, Kuala Lumpur.

Sdr Ed gave a general overview of various remediation methods for cleaning up contaminated groundwater or contaminated sites. These include chemical treatment/injection, bioremediation involving the introduction of bugs/bacteria, etc. He then presented some case studies, mostly from overseas, to illustrate the various remediation works that have been successfully implemented in the past. Unfortunately, only one case study from Malaysia was presented, perhaps indicating the scarcity of such works in this country. More details of the talk are covered in the abstract attached below.

A lively discussion followed the presentation.

Tan Boon Kong,
Chairman, W/G on Engineering Geology, Hydrogeology & Environmental Geology

Abstract: Groundwater plays a growing and critical role and its protection is vital for Malaysia's prosperity and water security. The efficiency and cost effectiveness of contaminated groundwater investigation and remediation has significantly increased over the last two decades. A great number of techniques now exist but selecting and implementing the optimal approach is still a difficult task because of the unique characteristics of every site.

The purpose of this presentation is to share information on innovative methods to detect and address polluted groundwater. The presentation covers (i) overview of groundwater contamination investigation techniques; (ii) methodology for developing a remedial clean-up strategy for contaminated groundwater; (iii) examples of innovative groundwater remediation technologies including enhanced in-situ bioremediation; in-situ chemical oxidation and chemical reduction; thermal remediation; and electrokinetic enhanced in-situ remediation; and (iv) optimization of existing poor performing groundwater extraction and treatment systems.