Geo-environmental sampling: how good is a good practice?

B.E. ABDEL-RAHIM, W.Z.W. YAACOB, ABDUL RAHIM SAMSUDDIN AND ABDUL GHANI RAFEK

Geology Program, School of Environmental Science and Natural Resources
Faculty of Science and Technology, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor
E-mail: bahaa_wali@yahoo.com

Sampling procedures and strategies should be designed to meet the objectives of each specific investigation upon which an effective risk assessment has to be made to the impacts of waste disposal sites on the local environment. In this respect, extensive and comprehensive information has been extracted from the literature, which we hypothesize it can improve the quality and representativeness of geo-environmental samples, which are collected for chemical analysis. The main interference problems, which are encountered during sampling activities, are pointed out. Sampling procedures for soil, groundwater, surface water, and leachate are discussed in detail. It is found that the variations in procedures of sample preservation, storage and handling are attributed relatively to the media of sampling and parameters required for intended analysis.