Application of geophysical method to delineate contamination in waste disposal site of Ampar Tenang, Dengkil, Selangor D.E.

ABDUL RAHIM SAMSUDIN, UMAR HAMZAH, WAN ZUHAIRI WAN YAACOB, BAHAA-ELDIN ELWALI ABDEL RAHIM AND LOH YEAN SZE

School of Environment and Natural Resource Science, Faculty of Science & Technology
Universiti Kebangsaan Malaysia, Bangi, 43600, Selangor D.E.

A geophysical survey was conducted to investigate contamination in a domestic waste-disposal site, at Ampar Tenang, Dengkil, Selangor. The objectives of the survey were to delineate and identify pathways for contaminant migration. Surface geophysical method employing 2-D DC resistivity imaging technique was used to locate potential leachate plumes. A total of six lines of 2-D resistivity images were established with three of them located on the waste pile while the other three situated outside the boundary of the dumping site. The objectives were successfully met, including delineation of buried waste and identification of the positions of contaminated subsurface soil and groundwater. In general the result of the survey shows that the resistivity value of the decomposed waste material is relatively low compared to those of the uncontaminated

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soil outside the dumping site. The electrically conductive anomaly on the dumping site was interpreted as leachate plumes which appears to have seeped at depth as far as 20 m below surface. Near surface low resistivity layer observed on the area east of the dumping site is interpreted to be associated with leachate runoff.