

## **Study of the burial site of Akouédo landfill (Abidjan) using electrical resistivity method: implication on the risk of the Continental Terminal aquifer contamination**

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Located in east of Abidjan district (South of Côte d'Ivoire), Akouédo landfill was subject to a geophysical study coupled with a drilling cuts analysis to determine a possible stratigraphic model of Akouédo area and estimate the solid waste buried volume in this landfill. The results show a lithostratigraphic model which reveals the presence of moderately resistant surface formation, clay sand, followed by clay lenses and sandy clay with reduced thickness. This lithological ensemble surmounts very thick sandy formation, which constitutes Continental Terminal aquifer. All these formations are finally based on granite and schistosed basement whose roof is estimated at 80 m depth. The clay, which is the only impermeable layer that can hinder liquid pollutants migration from landfill to Abidjan aquifer, has lenticular and especially discontinuous shape with varying thicknesses (sometimes 1 m to 6 m). This poor distribution of clay formations on Akouédo landfill site implies probable mobility of liquid pollutants towards the Continental Terminal aquifer. Overall volume of solid waste is estimated at 32854800 m<sup>3</sup> from the entire Akouédo landfill.

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