

This study is a contribution to the assessment of actual impact on the quality of groundwater of buried demolition debris from the city of Boumerdes, in the North of Algeria 5 years after the May 21st 2003 earthquake hit the region. Leachate analysis indicated organic matter with relatively high COD (1136 mg/L O₂) and BOD₅ (200 mg/L O₂); whereas the pH yielded 7.65 thus indicating fermentation phase of the landfill. Heavy metal contents are beyond national standard limits except for Pb with 0.51 mg/L which is slightly higher than limit value of 0.5 mg/L. More than 5 years after the creation of this landfill and despite its predominant C and D nature, these results showed that it is following a typical urban wastes decomposition scheme. Same analysis carried on water samples drawn from the piezometers yielded following results: acidic pH (6.88), acceptable values of target heavy metals concentrations except for Zn with 0.779 mg/L. Additionally bacteriological cross analysis (membrane filter and multi-tube methods) showed groundwater contamination by total coliforms (1100/100 mL), fecal coliforms (11/100mL) and fecal streptococci (1100/100 mL)