

INFLUENCE OF LANDFILLS ON THE PHYSICAL AND BIOLOGICAL PROPERTIES OF NEARBY WELLS

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ABSTRACT

Groundwater samples from twenty shallow wells were investigated for possible contamination. The wells were located close by landfill sites which could be the source of pollution due to the leachates produced from the latter. The results show only four samples to be clear in appearance, while others appeared cloudy. Temperature ranged between 26.2°C and 26.9°C for all the twenty samples and pH was satisfactory for all samples except S₃, S₁₅ and S₁₉ which were slightly acidic at pH 5.57, 5.19 and 6.12 respectively. However, only sample S₃ was objectionable due to its odor. Color ranged between 4.1 and 13.2 Hazen for all the samples, while only samples S₅, S₁₆ and S₁₉ fell within the standard of 5 Hazen. Total dissolved solids (TDS) for all the samples ranged between 216 and 1012mg/L and samples S₅, S₁₀, S₁₁, S₁₆ and S₁₉ were not satisfactory. Only samples S₅ and S₇ were satisfactory for all the three parameters tested for biological properties, although they had failed the examination for physical properties. The groundwater quality of the shallow wells examined in the present study were found to be contaminated

KEYWORDS: Groundwater, Landfills, Leach Ate, Wells