

CHEMICAL ANALYSIS OF WASTEWATER-CONTAMINATED GROUND SOIL IN ARAR, SAUDIA ARABIA

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ABSTRACT

Wastewater-contaminated soil and groundwater is generally noticed in many residential and industrial districts in various countries in the world. In Arar's city, underground permeable septic tanks have been used to collect domestic wastewater from about 90% of residential buildings. Wastewater, natural soil and polluted soil samples were taken from five districts. A series of chemical analysis was carried out for the obtained samples. Organic, chemical and elemental compositions of wastewater and soil samples were identified and analyzed. Results showed that wastewater contains many injurious organic and chemical compositions. Also, the results indicated the wastewater seepage into ground has negative effects on the chemical compositions of polluted soil and dangerous effects on groundwater. Alerting the key persons, engineers and others about the dangerous effects on environmental and general health must be known and announced.

KEYWORDS: Contamination, Ground Soil, Groundwater, Organic Matter, Wastewater