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## Radiological Risk Assessment of Radium and its Decay Products From Oil and Gas Waste in Nigeria

The radiological risks associated with oil and gas wastes generated from oil and gas exploration in Nigeria were assessed. Soil samples were collected from settlements near oil and gas production sites. Radium content CRa in the sample was determined by high-resolution  $\gamma$ -spectroscopy. While Uranium and Thorium are not soluble in water, their radioactive decay product, radium and some its decay products are soluble and they find their way into groundwater, farmlands, dwellings, food crops and into human system at large. Radionuclide concentration in the samples ranged from low to high levels. The average concentration of radium in the study area was estimated to be 30.57Bq/g. The radium equivalent activity (Raeq) values for all samples were lower than the maximum permissible limit (32Bq kg-1)

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