

Radon as 3D natural tracer for Non-Aqueous Phase Liquid (NAPL) soil contaminations

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Scientific community and society at large have been progressively involved in the protection of natural resources. Technological progress has increased the human capacity to impact environment. Water and soil contamination induced by NAPL spills is a long-term issue due to apolar nature of these pollutants. Slightly solubility in water of these compounds allows them to reside in soil, becoming a scarcely removable residue and a second source of pollution. Radon is found to be a useful tool to monitor NAPLs disperse in environment (*De Miguel et al., 2020 and references therein*). The weak points of the Rn deficit technique are connected to estimation of Rn background level, contaminant alteration induced by aging and steady-state condition required in order to value NAPL saturation index (Briganti et al., 2020). During a two years study on a recent diesel contamination in Rome, Italy, a modelling of the 3D NAPL dispersion in vadose and saturated soil level is proposed to map vertically and horizontally Rn background.

References

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