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Report

Study of Doses of Radiation from about 1m on the Ground to Underground Measured by Radio-Isotope Cone Penetrometer

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Summary

When wet density ρ_t of the ground is measured by using Radio-Isotope cone penetration test (RI-CPT), natural doses of radiation (The background: It is called BG) are measured in the state that the radiation source is not installed. Next, doses of radiation in the state to install an artificial radiation source are measured. There was a good correlation between air dose rate E (μSv/h) and number of counts N (cps) (It is called the counting rate at the following) measured by BG measurement. Then, we compared the air dose rate converted by using the counting rate with the published date of the environmental radiation monitoring system. As a result, it was revealed that both showed a good correlation. It became clear that RI-CPT is effective as the technique to measure the influence of natural dose of radiation from the ground level to underground.

Key Words: Radio-Isotope cone penetration test, Natural doses of radiation, Background: BG, Dose rate