PARTICULAR PROBLEMS OF RADIATION CONTROL IN THE COURSE OF CONSTRUCTION OPERATIONS

The authors consider several problems of radiation control in the process of construction operations. The authors describe sampling of radon, a radioactive gas which can be often found in the environment, and therefore, it may be the reason for cancer diseases. Residential houses represent the main source of ionizing radiation, given the fact that the time spent at home accounts for about 60% of the overall radiation exposure. Safe radon content values for residential and office buildings are provided in the article. Maximal acceptable doses of radiation, emitted by natural sources, in respect of office personnel (below 5 mSv per year) and residents (below 1 mSv per year) are identified. Maximal acceptable doses are regulated by the Russian Standard of Radiation Safety.

Difficulties accompanying radiation control in the course of construction operations are described in the article. Field measurements of radon emissions from the soil surface have been taken in Russia for over 10 years; no other country has taken any measurements of this kind.

The highest efficiency of radon protection is achieved at the stage of design of buildings. If regulatory requirements are honoured at the design stage, radiation protection turns a lot cheaper than elimination of high concentrations of radon inside existing buildings.

Key words: radiation control, construction, safety, radon, radon protection.

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About the authors: Kulieva Gul'nara Aleksandrovna — Candidate of Biological Sciences, Associate Professor, Associate Professor, Department of Forensic Ecology, Faculty of Ecology, Peoples' Friendship University of Russia (RUDN), 8/5 Podolskoe Shosse, Moscow, 113093, Russian Federation; vgkulieva@mail.ru; +7 (495) 952-70-28.

Glebov Viktor Vasil'evich — Candidate of Psychological Sciences, doctoral student, Associate Professor, Associate Professor, Department of Human Ecology, Faculty of Ecology, Peoples' Friendship University of Russia (RUDN), 8/5 Podolskoe Shosse, Moscow, 113093, Russian Federation; vg44@mail.ru; +7(495) 952-70-28.