ASSESSMENT OF RISKS OF IONIZED RADIATION EXPOSURE TO GEOPHYSICS EXPEDITION EMPLOYEES

Kazimov M
Azerbaijan Medical University, Baku, Azerbaijan

Key words: ionizing radiation, occupational exposure

In accordance with high increase of oil production in Azerbaijan probability of adverse influence of ionized radiation in geophysics expedition employees during nuclear-geophysics researches in technologies of oil prospecting and producing increases. In connection with it the purpose of the study was to measure and assess hygienic levels of ionized emanation dose staff is exposed to while applying traditional and new methods of nucleargeophysics. The annual emanation dose exposure experienced by expedition employees is defined by radiometric, individual dissymmetric and calculation methods. During study it was determined that, while calibration of research equipment by traditional methods the equivalent emanation dose exposure by loggers working with radioactive ray resources is 1,75 times higher than annual dose experienced by personnel during the same operations carried out with new nucleargeophysics methods. During nuclear logging of boreholes, the highest doses exposed to by personals while carrying out researches with traditional and new methods are $3{,}074.10^{-2}$ mSv and 108.10^{-2} mSv, respectively. The allowable level of annual emanation doses are 1.63 and 463 times lower. Thus, considering the use of progressive and safe new nuclearlogging method, it is possible to estimate that personnel would be exposed to a low dose level of emanation. The influence of such emanation is stochastic and may cause increasing of common illness velocity.