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INFLUENCE OF REFILL SOIL AND BUILDING MATERIAL EQUIVALENT DOSE RATE ON NEW NUCLEAR POWER PLANT SITES

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Abstract

Lithuania is planning to construct a new nuclear power plant nearby the closed one. The possible radioactive pollution can be one of the main problems in its surroundings. Results of investigations of the gamma radiation equivalent dose rate (EDR) at new nuclear power plant sites are presented. Main factors influencing the level of the EDR are identified and evaluated, and geological structure of alternative sites is discussed. The gamma spectrometry data showed that the dominant influence on non-uniform spatial distribution of EDR was caused by natural radioactivity in the refill soil and building materials. The noticeable man-made radioactive contamination was not found at the sites.

Key words: building material, contamination, equivalent dose rate, radionuclides

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