

Correlation of Cs-137 and Sr-90 in Contaminated Concrete

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Activity profile of Cs-137 and Sr-90 radionuclides were examined in contaminated concrete surfaces originated from nuclear power plant and result are presented in the paper. There were several incidents in the NPP where concrete surface was in contact with liquid media which caused that contamination diffused from concrete surface to deeper layers. According to recommendation relating to scaling factors it is proposed to link difficult to measure radionuclide Sr-90 to Cs-137 as a key radionuclide. In the paper it was examined that the recommendation is valid for deep layers as well. Activity profile was assumed to be exponential and it was verified by experimental works. The activity distribution is characterized by relaxation length, which seems to be the same for both radionuclides. The geometrical mean of relaxation length was determined to be $L_r = 0.3$ cm.

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