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RADIONUCLIDE CONTENT OF AND ^{222}Rn EMANATION FROM BUILDING MATERIALS MADE FROM PHOSPHATE INDUSTRY WASTE PRODUCTS

C. H. Paredes, W. V. Kessler, R. R. Landolt, P. L. Ziemer and D. J. Paustenbach
School of Health Sciences, Purdue University, West Lafayette, IN 47907

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***Abstract*—The radionuclide content and ^{222}Rn emanation coefficients of selected construction materials were determined. The materials were analyzed for ^{226}Ra, ^{228}Ra and ^{40}K by γ-ray spectrometry. Mineral wool insulation, which is made from Tennessee phosphate slag, and commonly used insulation, which is made from blast furnace slag, had similar concentrations of these radionuclides. Concrete blocks made with phosphate slag had enhanced ^{226}Ra and ^{228}Ra contents when compared to ordinary concrete block. The mineral wool insulation materials which were examined had emanation coefficients that were a few (2–6) times 10^{-3}. All other materials had emanation coefficients that ranged from 6×10^{-4} to 4×10^{-2}.**