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Further results in search of transuranium isotopes in effluents discharged to air from nuclear power plants

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In this work we present data on transuranium isotopes in effluents (quarterly, since 2006 half-yearly determined activity concentrations of ^{238}Pu , $^{239,240}\text{Pu}$, ^{241}Am , ^{242}Cm and ^{244}Cm in discharged effluents, annual discharged activities of individual radionuclides) discharged to air from 7 stacks in 2004-2009. In the effluents discharged to air from one stack low-level activities of transuranium isotopes were present throughout the studied period. Transuranium isotopes had been discharged to air from this stack also in previous years since 1996 when defect in the cladding of a fuel element and consequent contamination of the primary circuit occurred. In the effluents discharged to air from another stack transuranium isotopes were present only in some monitoring periods of studied years. We could not prove transuranium isotopes in the effluents of the other stacks up to 2006. The transuranium isotopes in discharged effluents were registered in the second half-year of 2006. In further years (2007-8), especially low-level ^{241}Am was found in these effluents.

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