

^{237}Np and Pu isotope ratios in soil, riverbed and reservoir sediments after the Fukushima accident

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In this study, we report ^{237}Np and Pu isotopes in soil, riverbed and reservoir sediments after the Fukushima Dai-ichi Nuclear Power Station (FDNPS) accident. ^{237}Np activities in these samples were $(0.013 \pm 0.02) \sim (5.7 \pm 1)$ mBq/kg-dry and were one to three orders of magnitudes low compared to these previous reports before the FDNPS accident even considering radiation decay. ^{237}Np activities were generally three orders of magnitude lower than those of $^{239+240}\text{Pu}$ activities. We will also report ^{237}Np and Pu isotopes activity and atomic ratio and what we learn from them and relationship between these transuranic elements and Cs isotopes.

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