BNFL Sellafield was plotted in Fig. 3, together with those for ^{137}Cs, ^{241}Am and ^{237}Np to compare sedimentation behaviors (or mobility) of these nuclides.

If sedimentation behaviors of these nuclides are similar to $^{239,240}Pu$, inventory ratios are expected to be constant independent of the distance from Sellafield. As known from Fig. 3, $^{99}Tc/^{239,240}Pu$ inventory ratio increases steeply with the increase of shore-line distance from Sellafield indicating that mobility of ^{99}Tc is higher than that of $^{239,240}Pu$. This may be explained that chemical form of ^{99}Tc in marine environment is $Tc_2O_7^-$, which is considered to be stable in sea water.

According to the slope of the lines, mobility is considered to be decreasing as follows : $^{99}Tc > ^{137}Cs > ^{237}Np > ^{239,240}Pu \geqq ^{241}Am$.

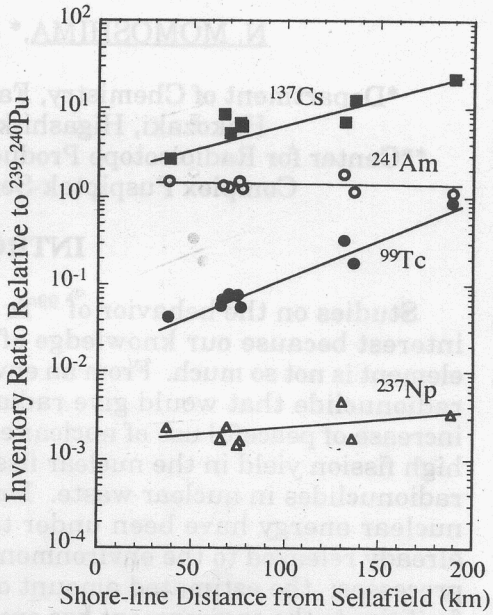

Fig. 3 Inventory ratios of ^{99}Tc, ^{137}Cs, ^{241}Am and ^{237}Np relative to $^{239,240}Pu$

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