

Keys for assuring the safety of HLW geological disposal: In relation to earthquake effects

Katsuhiko Ishibashi[1], Yo Fujimura[2]

[1] RCUSS, Kobe Univ., [2] Chem., Sci., Kyoto Univ.

Essential knowledge is still lacking for assuring the safety of HLW geological disposal at any selected site in relation to effects of earthquakes. First, we don't have any theory nor technique to guarantee that a selected site is free from an earthquake rupture for over 100 thousand years. Second, although the JNC's Report claims that the maximum dose is almost the same as natural level for the case of faulting in the repository, it is not sure whether this safety assessment is adequate or not. Third, despite that at almost all places in Japan characteristics of multibarrier system presumably fluctuate due to effects of rather frequent large earthquakes nearby, the cumulative effect on migration of radionuclides has not been investigated yet.