



DEPOSITION OF Cs-137 IN FOREST SOIL OF THAILAND

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Abstract:

Incident of Cs-137 radioactive source missing from a stream power plant in Prachin Buri and later found contaminated in steel melting plant on March 2023 frighten people on danger of Cs-137 dispersion. Cs-137 is a radionuclide produced by fission and activation reactions which occurring in nuclear reactor and nuclear explosion. Following the peak of atmospheric nuclear test in 1960s and Chernobyl accident in 1986, large amount of Cs-137 fallout dispersed throughout the globe. Forests are important receptors of atmospheric fallout, the deposition of fallout Cs-137 in forest soil has been found in area of temperate forest zone particularly in Europe after Chernobyl accident. However, examination of Cs-137 deposition in forest soil of Thailand has not been investigated, therefore only few evidences were published. This study aimed to collect the data of Cs-137 deposition in area of forest soil in Thailand. Those depositions are expected to be generated by nuclear-test during 1960s. Initial depositions were calculated for comparison between forest sites. It is concluded that Cs-137 fallout generated from nuclear-test delivered into area of Thailand and could be found in surface forest soil. Establishment of database of Cs-137 deposition is recommended to avoid misinterpretation of Cs-137 source particularly after incident of industrial factory or hospital in the future.