Contribution ID: **560** Type: **Poster**

Impact of Phosphate Fertilizers on the Uranium and Thorium of Cultivated Soils Profiles, Kamphaeng Phet, Thailand

Tuesday 22 May 2018 15:45 (15 minutes)

Phosphate fertilizers contain uranium and thorium isotopes due to impurities in the phosphate rock used for fertilizer manufacture. Long term application can significantly accumulate and reach undesirable concentrations in agricultural soils. The presented study determined the 238U and 232Th in the four cultivated fields, one forest reference site and five phosphate fertilizers collected from Kanu Woraksaburi district, Kamphaeng Phet province. The uranium and thorium isotopes were measured by using radiochemical analysis and alpha spectrometry. The radionuclides in four arable soils revealed that the in more clayey soils were higher than in more sandy soils and dramatically decreased along the depth of both soil profiles. The cultivated soils were significantly higher than the reference site where no fertilizers were applied. The values were compared with available reported data from other countries in literature.

Authors: Ms PORNTEPKASEMSAN, Boonsom (Thailand Institute of Nuclear Technology (Public Organization)); Mr KULSAWAT, Wutthikrai (Thailand Institute of Nuclear Technology (Public Organization)); Ms NOCHIT, Phatchada (Thailand Institute of Nuclear Technology (Public Organization))

Presenter: Ms PORNTEPKASEMSAN, Boonsom (Thailand Institute of Nuclear Technology (Public Organization))

Session Classification: A014: Environment (Poster)

Track Classification: Environmental Physics, Atmospheric Physics, Geophysics and Renewable Energy