

International Conference on the Management of Naturally Occurring Radioactive Materials (NORM) in Industry

VIRTUAL EVENT

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Assessment of radioactivity concentrations of NORM-related industries operating in Thailand

The naturally occurring radioactive materials (NORMs) distributed in products, by-products and waste produced in some mineral industries in Thailand were investigated to acquire the data regarding NORM characteristics, such as the occurrence and distribution of NORM, in these industries. The two principal NORM isotopes: Ra-226 and Ra-228 in the samples were analyzed by gamma spectrometry technique. Enhancement of NORMs, also known as TENORMs were found, occur during the treatment process of certain minerals. The highest activity of Ra-226 (7×10^7 Bqkg⁻¹) found in the scale precipitated in the piping of tantalum processing. The radium concentration in the discarded byproduct material from metal ore dressing was also enriched by 3–10 times. Phosphogypsum, a waste produced from the production of phosphate fertilizers, contained 700 times the level of Ra-226 concentration found in phosphate ore. Hence, these TENORMs necessarily consider to be controlled and regulated by law because they might be sources of exposure to workers and the public.

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