

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

VIRTUAL EVENT

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Authorization of NORM-related industries operating within Lithuania

IAEA Safety standard and EU Directive 2013/59/Euratom were transposed into national legal acts of The Republic of Lithuania in 2018. Exemption levels were set in Hygiene Standard HN 73:2018 “Basic Standard of Radiation Protection” and these values correspond to values set in IAEA General Safety Requirements Part 3 Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards. Values for exemption for naturally occurring radionuclides of uranium decay chain and thorium decay chain in secular equilibrium with their progeny are 1 Bq/g. Before the entering into force this standard, the value for Ra-226 with its decay products in secular equilibrium was 10 times higher (10 Bq/g) in former national legislation. This gave opportunity to look at NORM industrial sectors in Lithuania and to assess need of authorization of practices that never been authorized before.

Radiation protection issues were inspected at company that is processing phosphates (wet process) and producing of phosphate fertilizers in 2019 and relevant secondary processes –sea stevedoring companies in 2020. Gamma spectrometry analysis of raw materials from phosphate fertilizers company showed that Ra-226 activity concentration is higher than exempted value, this company informs radiation protection regulatory body Radiation Protection Centre about the practices in 2019. Dose assessment for workers and the public showed that the doses are lower 1 mSv per year and practices did not need to be authorized.

The secondary process –transshipment of raw material from sea ships to railways loads was also evaluated. Due to usage only technical means for works the doses to workers were negligible. The raw material needs to be kept in dry position so there is no leakage and waste production. These practices due to low doses don't need to be informed.

The first standard on radiation protection from natural sources was approved in 1994. IAEA Basic safety standard (1994) was adopted to national legislation in 1998.

Radiation Protection Centre is planning to reassess all NORM related practices in country to make sure that the radiation protection measures in place are sufficient for protection of workers and the public.

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