

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

VIRTUAL EVENT

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Measurement of Naturally Occurring Radioactive Materials (NORM) in produced water, in some Iranian oil fields using gamma spectroscopy

In this research, the concentration of natural radioactive materials (NORM) in produced water was measured using gamma spectroscopy method by HPGe detector. Samples from desalination plants were prepared in accordance with the principles of sampling. Measurements on collected samples were performed to evaluate Ra-226, Th-232 and K-40 concentrations. Specific activity of Ra-226, Th-232 and K-40 were in the range of 7.92 ± 0.74 to 68.12 ± 0.087 Bq/L, from background level to 30.73 ± 2.9 Bq/L and from background level to 34.65 ± 1.36 respectively. Ra-226 activity in all the stations was above Derived Release Limit of Canada and EPA standard. According to the results, Environmental effects must be taken into consideration when releasing the produced water.

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