

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



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Radiological Aspects of Petroleum Exploration and Production in Libya

The purpose of this study was to evaluate the naturally occurring radioactive materials (NORM) activity concentration and gamma dose rate from the waste streams of large scale onshore petroleum operations. Types of activities covered included; sludge recovery from separation tanks, sludge forming, NORM storage, scaling in oil tubulars, scaling in gas production and sedimentation in produced water evaporation ponds. Field work was conducted in many places terrain of an operation oil exploration and production in Libya.

The main radionuclides found were Ra-226 and Pb-210 (U-238 –series), Ra-228 and Th-232 (Th-232 –series) and K-40. All activity concentrations were higher than the ambient soil level and varied over several orders of magnitude.

The management of NORM is still in infancy in Libya; however, significant progress has been made towards establishing a meaningful framework for NORM management and regulation.

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