VIRTUAL EVENT
International Conference on
Management of Naturally Occurring Radioactive Material (NORM) in Industry
19–30 October 2020 #NORM2020

Contribution ID: **143** Type: **Poster**

An Evaluation of NORM Concentration &Hazard Indices for Occupational Workers in Myanma' Oil Refineries

The assessment of Naturally Occurring Radioactive Materials is initiated as the environmental radioactivity became a cause of concern regarding health effects. In this study, the assessment consisted of the activity concentration of U, Th and K and radionuclide contents in Soil, Produced Water, Sludge, Scale and Sediment samples from the No.1 Thanlynn Oil Refinery and No-3 Mann (Than Bayar Kan) Oil Refinery in Myanmar. The detection and measurement of radionuclides in the samples were carried out by gamma spectrometry system using portable high purity germanium detector (HPGe).The average activity concentration in the Soil sample was highest among the collected samples. Detectable radionuclides in Sludge,Scale,Sediment, Water and Soil samples were as follow: Sc-46, Bi-211, Cd-109, K-40, Bi-212, Pb-214, Bi-214, Th-231, Pb-212, Ac-228, Ra-226,and U-235 The activity concentration of NORM in samples did not show any evidence of enhancement due to the operating activities around the sample collection area. The results from samples were compared with UNSCEAR-2000 and less than the international recommended values. The quantities of health effect such as Radium Equivalent Dose (Raeq), absorbed dose rate (D), annual effective dose (E), and external hazard index (Hex) from the activity concentrations of 226-Ra, 232-Th and 40-K were calculated respectively and still below the permissible values.

Primary author: Ms NYEIN, Thunandar (Department of Atomic Energy)

Presenter: Ms NYEIN, Thunandar (Department of Atomic Energy)

Session Classification: Session IV - Characterization in Industrial Facilities and in the Environment

Track Classification: NORM Characterization, Measurement, Decontamination