Contribution ID: **19** Type: **Oral**

Assessment of radium and radon activity concentrations in water sources near selected former uranium mines in the West-Rand area of Johannesburg.

Tuesday, 19 March 2019 12:05 (15 minutes)

Abstract:
Radioactivity has existed since the beginning of time and is part of our planet Earth. Several studies have been well documented to monitor natural radioactivity as a source of radiation exposure to the environment and to human beings. In order to determine the effects of natural radioactivity in around areas of former uranium mines in the West-Rand area, an investigation of radiation exposure through ingestion of contaminated water will be carried out. In the present work, focus will be on Uranium daughter radionuclides; Ra-226 and Rn-222. Measurements will include the use of Alpha and Gamma spectroscopy to identify radionuclides concentrations, as well as Inductively Coupled Plasma Mass Spectrometer (ICP-MS) and Radiochemical Neutron Activation Analysis (RNAA) to analyze the isotopes of interest.

Primary author: Ms TSEWU, Ayabulela (Witwatersrand)

Co-authors: Dr USMAN, Iyabo (Witwatersrand); Prof. PETR, Ivo (Witwatersrand)

Presenter: Ms TSEWU, Ayabulela (Witwatersrand)

Session Classification: Environmental Measurements

Track Classification: Environmental Measurements