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Modern Universal Standardized Trends in Worker and Public Exposure Monitoring and Control in 21st Century by Sohrabi URPS-based Hypothesis

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The Universal Radiation Protection System (URPS) has been hypothesized by Sohrabi in order to address the many deficiencies existing in current worker and public exposure monitoring and control[1-3]. This paper while briefly presents the philosophy, concepts, and methodologies of the URPS hypothesis, it emphasizes and proposes a standardized global worker and public exposure monitoring system. A worker is committed lifetime since birth to non-occupational exposures in particular from unfractionated natural background (NBG) radiation as a member of public. According to URPS, a “worker” is a member of public committed to also to non-occupational exposure lifetime plus occupational exposure from radiation work”[1,2]. Accordingly, a worker and public currently suffer from lacking standardized trends on; (a) risk estimates and accepted risk model, (b) dose limit, (c) correct personal dosimetry, (d) occupational fractionated exposures, and (e) integrated dose system. The URPS hypothesizes equal human health-effect risks per unit radiation dose either from natural or man-made sources; integrates all individual doses; considers worker as member of public; conserves cause and effects for risk estimation; uses fractionation weighting factors; proposes a “URPS Model” for bridging “linear no-threshold and hormesis models, formulates an example dose limit for worker and public, and provides new exposure definitions[1-9]. By considering these concepts and methodologies and in order to standardize workers and public exposure towards integration of doses, individual exposure monitoring and control philosophy, concepts and methodologies are proposed and formulated compared to those of ICRP[10]. The proposed standardized methods resolve current individual exposure monitoring and control deficiencies to better protect human beings in 21st century worldwide, independent of sources of radiation and country of origin.

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Classification de Session: Novel Radiation Protection Philosophy and Concepts,