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The derivation of preliminary reference levels for radioactivity in drinking water surrounding authorised sites.

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The National Nuclear Regulator's (NNR) mandate is to protect the people, property and environment from radiological damage. NNR is currently involved in projects to establish the radioactivity of drinking water in the vicinity of authorised sites. It is important that before this, preliminary reference levels which will be used to assess the radioactivity levels in collected samples are established. These reference levels will inform whether the water resource from which the samples were collected poses a radiological threat to human health if ingested. The study seeks to derive preliminary reference levels based on international best practices. Annual Limit on Intake (ALI) was calculated making use of the principles of the World Health Organisation (WHO) which is considered to be international best practice. The calculations factored in different age groups and made use of dose conversion factors provided by the International Atomic Energy Agency (IAEA) in the General Safety Regulations (GSR Part 3). Calculated ALI values for infant, child and adult age groups are presented. The results suggest an insignificant (orders of magnitude) difference in calculated ALI values across ages. Therefore it is recommended that the NNR use calculated ALI for adults as preliminary reference levels. These can be used in assessing the radioactivity status of baseline data that is currently being collected.

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Apply to be considered for a student ; award (Yes / No)?

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N/A

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