13.1 CRITICAL GROUP VS. REPRESENTATIVE PERSON: DOSE CALCULATIONS DUE TO PREDICTED RELEASES FROM USEXA

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ABSTRACT

The critical group of Centro Experimental Aramar (CEA) site was previously defined based on the effluents releases to the environment resulting from the facilities already operational at CEA. In this work, effective doses are calculated to members of the critical group considering the predicted potential uranium releases from the Uranium Hexafluoride Production Plant (USEXA). Basically, this work studies the behavior of the resulting doses related to the type of habit data used in the analysis and two distinct situations are considered: (i) the utilization of average values obtained from official institutions (IBGE, IEA-SP, CNEN, IAEA) and from the literature; and (ii) the utilization of the 95th percentile of the values derived from distributions fit to the obtained habit data. The first option corresponds to the way that data was used for the definition of the critical group of CEA done in former assessments, while the second one corresponds to the use of data in deterministic assessments, as recommended by ICRP to estimate doses to the so-called “representative person”.

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