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Approaches for ERICA Assessment of LFBG and Beaverlodge Scenarios

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Litle Forest Burial Ground Scenario

- Model used – ERICA Tool
- ERICA was applied for each Zone separately
- CR value approach – ERICA default CR values were used for all organisms
- Scenario analysis was done according to further assumptions
- Effect of ionising radiation and radionuclide transfer:
 - to grass, earthworm and insects was accounted just in Zone 2 due the 100 % occupancy of this organisms in Zone 2
 - to Pencil Yam was accounted just in Zone 3 due to 100 % occupancy of yam in this Zone

→ to goanna, raven, fox and wallaby was accounted just in Zone 2 as the Zone 4 represent background values of 0.0 which are negligible

→ to echidna was accounted just in Zone 3 as the Zone 4 represent background values of 0.0 which are negligible

→ to accacia was accounted in Zone 1 and 2 due to 25 and 75 % occupancy, respectively (results of each zone were summed)

- ERICA default CR values
 - grass&herbs for grass and yam
 - tree for accacia
 - soil invertebrate for eartworm
 - detritivorous invertebrate for insects
 - reptile for goanna
 - bird for raven
 - mammal – rat for echidna
 - mammal deer for fox and wallaby

Beaverlodge scenario

- Model used – ERICA Tool
- CR value approach - ERICA default CR values and provided water CR values were used for biota estimation concentration
- ERICA was run for each location separately
- Every times all inputs (water, sediment and biota) were used for every ERICA run where appropriate
- ERICA run on all inputs resulted in only total dose rates calculation
- Internal and external dose rates were not calculated due to lack of time

- Hazard coefficient was calculated as a ratio between estimated total dose rate per organisms and screening dose rate (10 $\mu\text{Gy/h}$)

Thank you for your attention!