

ERICA Tool Tier 1 – practical

- a. *Assess the risk of impact from radioactive discharges to the marine environment from a nuclear power plant. Use the ERICA screening level and the UNSCEAR/IAEA screening values and discuss the implications of the different screening levels*

Radionuclide	Seawater (Bq/l)	Sediment (Bq/kg) DW
Sb-125		3
Cs-134	0.3	0.7
Cs-137	0.3	81
Pu-238		6.6
Pu-239		18
Pu-240		18

Record your results

Radionuclide	RQ ERICA	RQ IAEA	Limiting organism ERICA	Limiting organism IAEA
Sb-125				
Cs-134				
Cs-137				
Pu-238				
Pu-239				
Pu-240				
Summed RQ				

- b. *Assess the risk of impact from radioactive discharges to the freshwater environment from a nuclear power plant. Use the ERICA screening level*

Radionuclide	Freshwater (Bq/l)
H-3	4
S-35	1.3
Co-60	0.3
Cs-137	0.3
Pu-239	0.04

Record your results

Radionuclide	RQ	Limiting organism
H-3		
S-35		
Co-60		
Cs-137		
Pu-239		
Summed RQ		

- c. *Assess the risk of impact from radioactive discharges to the terrestrial environment from a nuclear power plant. Use the ERICA screening level.*

Radionuclide	Soil (Bq/kg) DW
Ag-110m	0.1
Cs-137	10
Am-241	0.3
Pu-239 (analogue for gross alpha)	170
Co-60	0.1
Sr-90	1.3
Nb-95	0.4

Record your results

Radionuclide	RQ	Limiting organism
Ag-110m		
Cs-137		
Am-241		
Pu-239 (analogue for gross alpha)		
Co-60		
Sr-90		
Nb-95		
Summed RQ		