

Table F-13. Predicted Maximum Concentrations of Various Constituents at the Radioactive Waste Burial Grounds^{a,b}

Constituent	Applicable standard ^d	PATHRAE-modeled maximum groundwater concentration without remedial action ^c					
		No action		No waste removal and closure		Waste removal and closure	
		1-m well	100-m well	1-m well	100-m well	1-m well	100-m well
Cesium-134	7.4×10^1	2.3×10^2 (1957)	(e)	2.3×10^2 (1957)	(e)	2.3×10^2 (1957)	(e)
Cesium-137	1.1×10^2	9.4×10^2 (1957)	2.9×10^2 (1962)	9.4×10^2 (1957)	2.9×10^2 (1962)	9.4×10^2 (1957)	2.9×10^2 (1962)
Cobalt-60	2.1×10^2	2.5×10^3 (1957)	4.7×10^2 (1961)	2.5×10^3 (1957)	4.7×10^2 (1961)	2.5×10^3 (1957)	4.7×10^2 (1961)
Neptunium-237	1.4×10^{-1}	1.5×10^0 (2420)	4.0×10^{-1} (2778)	(f)	(f)	(f)	(f)
Nickel-63	1.0×10^4	4.4×10^5 (1957)	1.5×10^5 (1963)	4.4×10^5 (1957)	1.5×10^5 (1963)	4.4×10^5 (1957)	1.5×10^5 (1963)
Plutonium-238	1.4×10^1	6.7×10^2 (1957)	2.2×10^2 (1963)	6.7×10^2 (1957)	2.2×10^2 (1963)	6.7×10^2 (1957)	2.2×10^2 (1963)
Plutonium-239	1.3×10^1	8.3×10^1 (1957)	2.9×10^1 (1963)	8.3×10^1 (1957)	2.9×10^1 (1963)	8.3×10^1 (1957)	2.9×10^1 (1963)
Strontium-90 ^g	4.2×10^1	1.0×10^3 (1957)	3.1×10^2 (1962)	1.0×10^3 (1957)	3.1×10^2 (1962)	1.0×10^3 (1957)	3.1×10^2 (1962)
Technetium-99	4.2×10^3	1.3×10^4 (1957)	4.6×10^3 (1963)	1.3×10^4 (1957)	4.6×10^3 (1963)	1.3×10^4 (1957)	4.6×10^3 (1963)
Tritium	8.7×10^4	2.1×10^9 (1957)	5.6×10^8 (1962)	2.1×10^9 (1957)	5.6×10^8 (1962)	2.1×10^9 (1957)	5.6×10^8 (1962)
Uranium-238	2.4×10^1	4.1×10^1 (1957)	(e)	4.1×10^1 (1957)	(e)	4.1×10^1 (1957)	(e)
Yttrium-90	5.5×10^2	1.0×10^3 (1957)	(e)	1.0×10^3 (1957)	(e)	1.0×10^3 (1957)	(e)

TC

Footnotes on last page of table.

Table F-13. Predicted Maximum Concentrations of Various Constituents at the Radioactive Waste Burial Grounds^{a,b} (continued)

Constituent	Applicable standard ^d	PATHRAE-modeled maximum groundwater concentration without remedial action ^c						TC	
		No action		No waste removal and closure		Waste removal and closure			
		1-m well	100-m well	1-m well	100-m well	1-m well	100-m well		
Cadmium	1.0×10^{-2}	3.7×10^{-2} (2235)	(e)	(e)	(e)	(e)	(e)		
Lead	5.0×10^{-2}	1.9×10^0 (1957)	6.8×10^{-1} (1963)	1.9×10^0 (1957)	6.8×10^{-1} (1963)	1.9×10^0 (1957)	6.8×10^{-1} (1963)		
Mercury	2.0×10^{-3}	6.5×10^{-3} (1957)	2.3×10^{-3} (1963)	6.5×10^{-3} (1957)	2.3×10^{-3} (1963)	6.5×10^{-3} (1957)	2.3×10^{-3} (1963)		
Xylene	6.2×10^{-1}	7.0×10^{-1} (2056)	7.0×10^{-1} (2057)	(e)	(e)	(e)	(e)		

^aSource: Jaegge et al., 1987.

^bConcentrations are in milligrams per liter for chemicals and picocuries per liter for radionuclides.

^cNumber in parentheses represents year in which concentration was reached or is expected to be reached.

^dEPA 1985b, except where noted; ICRP Publication 30 (ICRP, 1979) methodology was used to calculate radionuclide concentrations that yield an annual effective whole-body dose of 4 millirem; xylene standard from EPA, 1981b.

eBelow applicable standard.

fNot reported.

gAn additional above standard peak for the mobile fraction of strontium-90 exists at the 1-meter well for no action. The predicted concentration of this peak is 3.5×10^2 picocuries per liter at year 2185.