

Table F-16. Predicted Maximum Concentrations of Various Constituents at the H-Area Seepage Basins^a

Constituent	Applicable standard	Monitoring data maximum mean concentration ^b	PATHRAE-modeled maximum concentration without remedial action ^{b,c}								
			No action			No waste removal and closure			Waste removal and closure		
			1-m well	100-m well	Four Mile Creek	1-m well	100-m well	Four Mile Creek	1-m well	100-m well	Four Mile Creek
Chromium	0.05	0.136 (well HSB 68)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Lead	0.05	0.055 (well HSB 67)	0.065 (2105)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Mercury	0.002	0.0033 (well HSB 67)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Nickel	0.013	0.037 (well HSB 69)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)
Nitrate	10	65 (well HSB 69)	480 (1985)	480 (1986)	18 (1992)	480 (1985)	370 (1995)	14 (2000)	480 (1985)	370 (1995)	14 (2000)
Gross alpha	10-20	497 (well HSB 68)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)
Gross beta	40-60	10598 (well HSB 68)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)
Radium	6	34 (well HSB 68)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)
Tritium	87,000	3.7×10^7 (well H6)	1.9×10^7 (1956)	1.0×10^7 (1965)	1.7×10^5 (1979)	1.9×10^7 (1956)	1.0×10^7 (1965)	1.7×10^5 (1979)	1.9×10^7 (1956)	1.0×10^7 (1965)	1.7×10^5 (1979)
Plutonium-238	14	(g)	31 (2105)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Iodine-129	20	(g)	220 (1986)	210 (1990)	(e)	130 (2008)	130 (2008)	(e)	130 (2008)	130 (2008)	(e)

Footnotes on last page of table.

Table F-16. Predicted Maximum Concentrations of Various Constituents at the H-Area
Seepage Basins (continued)^a

Constituent	Applicable standard ^d	Monitoring data maximum mean concentration ^b	PATHRAE-modeled maximum concentration without remedial action ^{b,c}								
			No action			No waste removal and closure			Waste removal and closure		
			1-m well	100-m well	Four Mile Creek	1-m well	100-m well	Four Mile Creek	1-m well	100-m well	Four Mile Creek
Americium-241	2.5	(g)	21 (2105)	(g)	(g)	(e)	(g)	(g)	(e)	(g)	(g)
Uranium-234	21	(g)	46 (2033)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Uranium-238	24	(g)	40 (2033)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Neptunium-237	0.14	(g)	19 (1997)	1.3 (2375)	(g)	0.90 (2735)	0.82 (2925)	(g)	0.86 (2735)	0.78 (2925)	(g)
Strontium-90	42	1,800	1,800 (1975)	(e)	(e)	1,800 (1975)	(e)	(e)	1,800 (1975)	(e)	(e)
Yttrium-90	550	(g)	1,800 (1975)	(e)	(e)	1,800 (1975)	(e)	(e)	1,800 (1975)	(e)	(e)

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

^bFrom Killian et al., 1987b. Tritium value is four-year mean (1982 through 1985). Strontium-90 value is maximum for groundwater.

^cYear of occurrence in parentheses.

^dEPA, 1985b, except where noted. Health-based standard for nickel from EPA, 1986. ICRP Publication 30 (ICRP, 1979) methodology was used to calculate radionuclide concentrations that yield annual effective whole-body dose of 4 millirem.

^eBelow applicable standard.

^fNot modeled; gross alpha and beta were modeled by estimating specific radionuclide inventory.

^gNot reported.