

Table F-14. Predicted Maximum Concentrations of Various Constituents at the F-Area Seepage Basins <sup>a,b</sup>

Constituent	Applicable standard <sup>c</sup>	Monitoring data maximum mean concentration <sup>d</sup>	PATHRAE-modeled maximum concentrations without remedial action <sup>c</sup>								
			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
Cadmium	0.01	0.023 (well FSB77)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Lead	0.05	0.198 (well FSB 78)	0.051 (2545)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Nickel	0.013	0.086 (well FSB 78)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	
Nitrate	10	309.1 (well FSB 78)	1000 (1987)	1000 (1987)	(e)	1000 (1987)	1000 (1987)	(e)	1000 (1987)	1000 (1987)	(e)
Tritium	$8.7 \times 10^4$	$3.8 \times 10^7$ (well FSB 78)	$4.5 \times 10^7$ (1957)	$2.7 \times 10^7$ (1964)	(e)	$4.5 \times 10^7$ (1957)	$2.7 \times 10^7$ (1964)	(e)	$4.5 \times 10^7$ (1957)	$2.7 \times 10^7$ (1964)	(e)
Americium-241	2.5	(h)	11 (2545)	(f)	(f)	(e)	(f)	(f)	(e)	(f)	(f)
Iodine-129	20	(h)	230 (1988)	220 (1990)	(e)	88 (2036)	88 (2037)	(e)	88 (2036)	88 (2037)	(e)
Strontium-90	42	340000	1400 (2009)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Yttrium-90	550	(h)	1400 (2009)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)

Footnotes on last page of table.

Table F-14. Predicted Maximum Concentrations of Various Constituents at the F-Area Seepage Basins<sup>a,d</sup> (continued)

Constituent	Applicable standard <sup>c</sup>	Monitoring data maximum mean concentration <sup>d</sup>	PATHRAE-modeled maximum concentrations without remedial action <sup>c</sup>								
			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
Uranium-238	24	(h)	2000 (2215)	52 (2985)	(e)	48 (2985)	(e)	(e)	(e)	(e)	(e)
Radium	6	63.00 (well FSB 78)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)
Gross alpha	10-20	3129 (well FSB 78)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)
Gross beta	40-60	4035 (well FSB 78)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)

<sup>a</sup>Source: Adapted from Killian et al., 1987a.

<sup>b</sup>Concentrations in milligrams per liter for chemicals and picocuries per liter for radionuclides.

<sup>c</sup>EPA, 1985b. ICRP Publication 30 (ICRP, 1979) methodology was used to determine radionuclide concentrations that yield annual effective whole-body dose of 4 millirem.

<sup>d</sup>Data are for FSB water-table monitoring wells. The concentration level provided for each constituent is the maximum single-well mean from FSB wells. Time series data are not reported for tritium or strontium-90 in Killian et al., 1987a. Tritium concentration that is provided was detected in well FSB 78 on April 9, 1985. Strontium-90 data are maximum concentration data for the groundwater.

<sup>e</sup>Below applicable standards.

<sup>f</sup>Not reported or not modeled.

<sup>g</sup>Constituent was not explicitly modeled with PATHRAE; gross alpha and beta were modeled by estimating specific radionuclide inventory.