

Table F-8. Predicted Maximum Concentrations of Various Constituents at the M-Area Settling Basin^{a,b}

Constituent	Applicable standard ^d	Monitoring data maximum mean concentration ^e	PATHRAE-modeled maximum 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	
Barium	1.0	(f)	16 (2231)	3.7 (2261)	1.8 (2532)	1.5 (2545)	3.0 (2252)	(f)	
Cadmium	0.01	(f)	0.15 (2279)	0.031 (2318)	0.018 (2570)	0.014 (2597)	0.016 (2301)	(f)	
Lead	0.05	(f)	0.076 (1991)	0.074 (1990)	(f)	(f)	0.065 (1995)	0.064 (1994)	TC
Nitrate	10.0	132 (Well MSB 3A)	9300 (1991)	9200 (1990)	2900 (2052)	2900 (2052)	7900 (1995)	7800 (1994)	
Tetrachloroethylene	0.0007 ^g	15.6 ^h	170 (2021)	170 (2020)	91 (2072)	91 (2072)	170 (2018)	170 (2020)	
Trichloroethylene	0.005	32.2 ^h	63 (1991)	62 (1991)	18 (2058)	18 (2059)	53 (1996)	52 (1994)	
1,1,1-trichloroethane	0.20	(f)	4.2 (1991)	4.1 (1990)	1.2 (2058)	1.2 (2057)	3.5 (1995)	3.5 (1996)	TC
Gross alpha	10-20	21.4 (Well MSB 3A)	(i)	(i)	(i)	(i)	(i)	(i)	
Gross beta	40-60	86.2 (Well MSB 3A)	(i)	(i)	(i)	(i)	(i)	(i)	
Radium	6.0	22.3 (Well MSB 4A)	(i)	(i)	(i)	(i)	(i)	(i)	

^aSource: Adapted from Pickett, Colven, and Bledsoe, 1987.

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

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

^dEPA, 1985b. Nickel from EPA, 1986. ICRP Publication 30 (ICRP, 1978) methodology was used to calculate radionuclide concentrations that yield annual effective whole-body dose of 4 millirem.

^eMonitoring data are for MSB water-table wells (Pickett, Colven, and Bledsoe, 1987). Concentrations shown represent maximum single-well means.

^fBelow applicable standard.

^gEPA, 1985a, EPA, 1987.

^hMonitoring data for chlorocarbons reported in construction permit application (DOE, 1984).

ⁱConstituent is not explicitly included in PATHRAE simulation; gross alpha and beta were included by engineering specific radionuclide inventory.

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TC