Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Copper Group							Thallium Group									C
Years from Present	*Copper*	Barium	Antimony	Manganese	Mercury	*Uranium*	Zinc	*Thallium*	Cadmium	Silver	*Iron*	Lead	*Nickel*	Beryllium	Vanadium	*Arsenic*	*Chromium*
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
70	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
80	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
90	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
110	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
120	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
130	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
140	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
150	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
160	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
170	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
180	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
190	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
210	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
220	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
230	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
240	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
270	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
280	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
290	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
310	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
320	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
330	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
340	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
350	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
360	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
370	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
380	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
390	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
410	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
420	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
430	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
440	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
450	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
460	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
470	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
480	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
490	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
510	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
520	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
530	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	hromium Group		2-Butanone Group	Benzene Group						Vinyl Chloride Group						
Years from Present	*Selenium*	Molybdenum	*2-Butanone*	*Benzene*	Ethylbenzene	Xylene	m-Xylene	p-Xylene	o-Xylene	*Vinyl chloride*	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	Chloroform	1,1-DCE	1,2-DCE
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	0.00E+00	0.00E+00	6.29E-08	7.58E-13	3.26E-14	3.36E-14	3.21E-14	2.93E-14	3.13E-14	1.00E-12	7.05E-13	1.20E-12	1.64E-12	1.13E-12	2.74E-13	8.27E-14
30	0.00E+00	0.00E+00	3.04E-07	5.76E-11	2.47E-12	2.55E-12	2.44E-12	2.22E-12	2.37E-12	1.54E-10	1.08E-10	1.83E-10	2.52E-10	1.73E-10	4.19E-11	1.27E-11
40	0.00E+00	0.00E+00	1.18E-07	5.01E-11	2.15E-12	2.22E-12	2.12E-12	1.93E-12	2.07E-12	9.61E-10	6.75E-10	1.15E-09	1.57E-09	1.08E-09	2.62E-10	7.92E-11
50	0.00E+00	0.00E+00	1.80E-08	1.55E-11	6.66E-13	6.87E-13	6.55E-13	5.98E-13	6.39E-13	2.19E-09	1.54E-09	2.61E-09	3.59E-09	2.47E-09	5.97E-10	1.80E-10
60	0.00E+00	0.00E+00	1.74E-09	4.51E-12	1.94E-13	2.00E-13	1.91E-13	1.74E-13	1.86E-13	3.09E-09	2.17E-09	3.69E-09	5.06E-09	3.48E-09	8.43E-10	2.55E-10
70	0.00E+00	0.00E+00	9.98E-10	2.26E-12	9.73E-14	1.00E-13	9.58E-14	8.74E-14	9.34E-14	6.41E-08	4.50E-08	7.65E-08	1.05E-07	7.22E-08	1.75E-08	5.28E-09
80	0.00E+00	0.00E+00	1.49E-09	2.15E-11	9.23E-13	9.52E-13	9.09E-13	8.29E-13	8.85E-13	3.30E-07	2.32E-07	3.94E-07	5.41E-07	3.72E-07	9.01E-08	2.72E-08
90	0.00E+00	0.00E+00	4.73E-10	2.84E-11	1.22E-12	1.26E-12	1.20E-12	1.10E-12	1.17E-12	5.26E-07	3.69E-07	6.28E-07	8.62E-07	5.93E-07	1.44E-07	4.33E-08
100	0.00E+00	0.00E+00	1.49E-10	2.54E-11	1.09E-12	1.13E-12	1.08E-12	9.81E-13	1.05E-12	7.16E-07	5.03E-07	8.54E-07	1.17E-06	8.06E-07	1.95E-07	5.90E-08
110	0.00E+00	0.00E+00	5.14E-11	1.77E-11	7.62E-13	7.86E-13	7.50E-13	6.85E-13	7.31E-13	1.12E-06	7.83E-07	1.33E-06	1.83E-06	1.26E-06	3.04E-07	9.19E-08
120	0.00E+00	0.00E+00	2.52E-11	1.91E-11	8.22E-13	8.48E-13	8.09E-13	7.38E-13	7.88E-13	2.63E-06	1.84E-06	3.13E-06	4.30E-06	2.96E-06	7.16E-07	2.16E-07
130	0.00E+00	0.00E+00	1.10E-11	1.56E-11	6.70E-13	6.92E-13	6.60E-13	6.02E-13	6.43E-13	5.08E-06	3.57E-06	6.06E-06	8.32E-06	5.72E-06	1.39E-06	4.19E-07
140	0.00E+00	0.00E+00	4.33E-12	9.61E-12	4.13E-13	4.26E-13	4.07E-13	3.71E-13	3.96E-13	8.67E-06	6.09E-06	1.03E-05	1.42E-05	9.76E-06	2.36E-06	7.14E-07
150	0.00E+00	0.00E+00	1.61E-12	4.78E-12	2.05E-13	2.12E-13	2.02E-13	1.84E-13	1.97E-13	1.36E-05	9.52E-06	1.62E-05	2.22E-05	1.53E-05	3.70E-06	1.12E-06
160	0.00E+00	0.00E+00	6.17E-13	2.28E-12	9.78E-14	1.01E-13	9.63E-14	8.78E-14	9.38E-14	2.07E-05	1.45E-05	2.47E-05	3.39E-05	2.33E-05	5.64E-06	1.70E-06
170	0.00E+00	0.00E+00	2.17E-13	9.60E-13	4.13E-14	4.26E-14	4.06E-14	3.71E-14	3.96E-14	2.64E-05	1.85E-05	3.14E-05	4.32E-05	2.97E-05	7.19E-06	2.17E-06
180	0.00E+00	0.00E+00	7.02E-14	3.59E-13	1.54E-14	1.59E-14	1.52E-14	1.39E-14	1.48E-14	2.80E-05	1.96E-05	3.34E-05	4.58E-05	3.15E-05	7.63E-06	2.30E-06
190	0.00E+00	0.00E+00	2.10E-14	1.22E-13	5.23E-15	5.40E-15	5.15E-15	4.70E-15	5.02E-15	2.52E-05	1.77E-05	3.00E-05	4.12E-05	2.83E-05	6.86E-06	2.07E-06
200	0.00E+00	0.00E+00	5.58E-15	3.60E-14	1.55E-15	1.60E-15	1.52E-15	1.39E-15	1.48E-15	1.85E-05	1.30E-05	2.20E-05	3.02E-05	2.08E-05	5.03E-06	1.52E-06
210	0.00E+00	0.00E+00	1.43E-15	9.97E-15	4.28E-16	4.42E-16	4.22E-16	3.85E-16	4.11E-16	1.24E-05	8.68E-06	1.47E-05	2.02E-05	1.39E-05	3.37E-06	1.02E-06
220	0.00E+00	0.00E+00	3.59E-16	2.67E-15	1.15E-16	1.18E-16	1.13E-16	1.03E-16	1.10E-16	7.75E-06	5.44E-06	9.24E-06	1.27E-05	8.73E-06	2.11E-06	6.38E-07
230	0.00E+00	0.00E+00	8.71E-17	7.01E-16	3.01E-17	3.11E-17	2.97E-17	2.71E-17	2.89E-17	4.55E-06	3.19E-06	5.43E-06	7.45E-06	5.12E-06	1.24E-06	3.75E-07
240	0.00E+00	0.00E+00	2.01E-17	1.73E-16	7.44E-18	7.68E-18	7.32E-18	6.68E-18	7.13E-18	2.47E-06	1.74E-06	2.95E-06	4.05E-06	2.78E-06	6.74E-07	2.04E-07
250	0.00E+00	0.00E+00	4.56E-18	4.19E-17	1.80E-18	1.86E-18	1.77E-18	1.62E-18	1.73E-18	1.30E-06	9.16E-07	1.56E-06	2.14E-06	1.47E-06	3.56E-07	1.07E-07
260	0.00E+00	0.00E+00	1.03E-18	9.95E-18	4.27E-19	4.41E-19	4.21E-19	3.84E-19	4.10E-19	6.69E-07	4.69E-07	7.97E-07	1.10E-06	7.53E-07	1.82E-07	5.51E-08
270	0.00E+00	0.00E+00	2.27E-19	2.34E-18	1.01E-19	1.04E-19	9.90E-20	9.03E-20	9.64E-20	3.36E-07	2.36E-07	4.00E-07	5.50E-07	3.78E-07	9.15E-08	2.76E-08
280	0.00E+00	0.00E+00	4.95E-20	5.41E-19	2.32E-20	2.40E-20	2.29E-20	2.09E-20	2.23E-20	1.65E-07	1.16E-07	1.97E-07	2.70E-07	1.86E-07	4.49E-08	1.36E-08
290	0.00E+00	0.00E+00	1.07E-20	1.24E-19	5.33E-21	5.50E-21	5.24E-21	4.78E-21	5.11E-21	8.04E-08	5.65E-08	9.59E-08	1.32E-07	9.06E-08	2.19E-08	6.62E-09
300	4.73E-29	0.00E+00	2.32E-21	2.81E-20	1.21E-21	1.25E-21	1.19E-21	1.08E-21	1.16E-21	3.87E-08	2.72E-08	4.62E-08	6.34E-08	4.36E-08	1.06E-08	3.19E-09
310	4.73E-29	0.00E+00	4.99E-22	6.33E-21	2.72E-22	2.81E-22	2.68E-22	2.45E-22	2.61E-22	1.85E-08	1.30E-08	2.20E-08	3.02E-08	2.08E-08	5.03E-09	1.52E-09
320	4.73E-29	0.00E+00	1.06E-22	1.42E-21	6.11E-23	6.30E-23	6.01E-23	5.48E-23	5.86E-23	8.76E-09	6.15E-09	1.04E-08	1.43E-08	9.86E-09	2.39E-09	7.21E-10
330	4.73E-29	0.00E+00	2.27E-23	3.15E-22	1.35E-23	1.40E-23	1.33E-23	1.22E-23	1.30E-23	4.10E-09	2.88E-09	4.89E-09	6.72E-09	4.62E-09	1.12E-09	3.38E-10
340	4.73E-29	0.00E+00	4.80E-24	6.98E-23	3.00E-24	3.09E-24	2.95E-24	2.69E-24	2.88E-24	1.92E-09	1.35E-09	2.29E-09	3.15E-09	2.17E-09	5.24E-10	1.58E-10
350	4.73E-29	0.00E+00	1.01E-24	1.54E-23	6.61E-25	6.82E-25	6.51E-25	5.94E-25	6.34E-25	9.01E-10	6.33E-10	1.07E-09	1.48E-09	1.02E-09	2.46E-10	7.42E-11
360	4.73E-29	0.00E+00	2.14E-25	3.37E-24	1.45E-25	1.49E-25	1.42E-25	1.30E-25	1.39E-25	4.20E-10	2.95E-10	5.01E-10	6.87E-10	4.73E-10	1.14E-10	3.46E-11
370	4.73E-29	0.00E+00	4.50E-26	7.37E-25	3.17E-26	3.27E-26	3.12E-26	2.85E-26	3.04E-26	1.95E-10	1.37E-10	2.32E-10	3.19E-10	2.19E-10	5.31E-11	1.60E-11
380	4.73E-29	0.00E+00	9.44E-27	1.60E-25	6.89E-27	7.11E-27	6.78E-27	6.19E-27	6.61E-27	9.01E-11	6.33E-11	1.07E-10	1.48E-10	1.02E-10	2.46E-11	7.42E-12
390	4.73E-29	0.00E+00	1.98E-27	3.47E-26	1.49E-27	1.54E-27	1.47E-27	1.34E-27	1.43E-27	4.16E-11	2.92E-11	4.97E-11	6.82E-11	4.69E-11	1.14E-11	3.43E-12
400	9.82E-09	0.00E+00	4.14E-28	7.51E-27	3.23E-28	3.33E-28	3.18E-28	2.90E-28	3.10E-28	1.92E-11	1.35E-11	2.29E-11	3.15E-11	2.17E-11	5.24E-12	1.58E-12
410	9.82E-09	0.00E+00	8.65E-29	1.62E-27	6.98E-29	7.20E-29	6.87E-29	6.27E-29	6.69E-29	8.93E-12	6.27E-12	1.06E-11	1.46E-11	1.01E-11	2.43E-12	7.35E-13
420	9.82E-09	0.00E+00	1.80E-29	3.48E-28	1.50E-29	1.54E-29	1.47E-29	1.34E-29	1.44E-29	4.10E-12	2.88E-12	4.89E-12	6.72E-12	4.62E-12	1.12E-12	3.38E-13
430	9.82E-09	0.00E+00	3.76E-30	7.48E-29	3.21E-30	3.32E-30	3.16E-30	2.89E-30	3.08E-30	1.89E-12	1.33E-12	2.25E-12	3.09E-12	2.13E-12	5.15E-13	1.56E-13
440	9.82E-09	0.00E+00	7.80E-31	1.60E-29	6.89E-31	7.11E-31	6.78E-31	6.19E-31	6.61E-31	8.67E-13	6.09E-13	1.03E-12	1.42E-12	9.76E-13	2.36E-13	7.14E-14
450	9.82E-09	0.00E+00	1.62E-31	3.44E-30	1.48E-31	1.53E-31	1.46E-31	1.33E-31	1.42E-31	4.01E-13	2.81E-13	4.78E-13	6.57E-13	4.51E-13	1.09E-13	3.30E-14
460	9.82E-09	0.00E+00	3.39E-32	7.35E-31	3.16E-32	3.26E-32	3.11E-32	2.84E-32	3.03E-32	1.84E-13	1.29E-13	2.19E-13	3.01E-13	2.07E-13	5.01E-14	1.51E-14
470	9.82E-09	0.00E+00	7.02E-33	1.57E-31	6.75E-33	6.96E-33	6.64E-33	6.06E-33	6.47E-33	8.45E-14	5.94E-14	1.01E-13	1.38E-13	9.52E-14	2.31E-14	6.96E-15
480	9.82E-09	0.00E+00	1.46E-33	3.33E-32	1.43E-33	1.48E-33	1.41E-33	1.29E-33	1.37E-33	3.89E-14	2.73E-14	4.64E-14	6.37E-14	4.38E-14	1.06E-14	3.20E-15
490	9.82E-09	0.00E+00	3.04E-34	7.08E-33	3.04E-34	3.14E-34	3.00E-34	2.73E-34	2.92E-34	1.79E-14	1.26E-14	2.14E-14	2.94E-14	2.02E-14	4.89E-15	1.48E-15
500	1.85E-05	0.00E+00	6.29E-35	1.51E-33	6.47E-35	6.68E-35	6.37E-35	5.81E-35	6.21E-35	8.21E-15	5.76E-15	9.79E-15	1.34E-14	9.24E-15	2.24E-15	6.76E-16
510	1.85E-05	0.00E+00	1.31E-35	3.22E-34	1.38E-35	1.43E-35	1.36E-35	1.24E-35	1.33E-35	3.76E-15	2.64E-15	4.48E-15	6.16E-15	4.23E-15	1.03E-15	3.10E-16
520	1.85E-05	0.00E+00	2.72E-36	6.79E-35	2.92E-36	3.01E-36	2.87E-36	2.62E-36	2.80E-36	1.73E-15	1.22E-15	2.07E-15	2.84E-15	1.95E-15	4.73E-16	1.43E-16
530	1.85E-05	0.00E+00	5.48E-37	1.44E-35	6.20E-37	6.40E-37	6.10E-37	5.57E-37	5.94E-37	7.95E-16	5.58E-16	9.48E-16	1.30E-15	8.95E-16	2.17E-16	6.55E-17

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Trichloroethene Group			Chlorobenzene Group			2-Methylphenol Group					
Years from Present	*Trichloroethene*	Carbon tetrachloride	Tetrachloroethene	*Chlorobenzene*	1,4-Dichlorobenzene	Hexachlorobenzene	*2-Methylphenol*	Pyridine	4-Methylphenol	3-Methylphenol	2,4-DNT	Nitrobenzene
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	9.24E-13	4.84E-13	8.82E-14	0.00E+00	0.00E+00	0.00E+00	3.42E-10	3.69E-08	2.21E-10	1.36E-10	1.21E-12	8.13E-12
30	2.44E-09	1.28E-09	2.33E-10	6.95E-17	7.22E-18	4.26E-19	3.90E-09	4.21E-07	2.52E-09	1.56E-09	1.38E-11	9.28E-11
40	1.79E-08	9.36E-09	1.71E-09	1.70E-15	1.77E-16	1.04E-17	2.42E-09	2.62E-07	1.57E-09	9.67E-10	8.59E-12	5.77E-11
50	2.69E-08	1.41E-08	2.57E-09	1.24E-15	1.28E-16	7.58E-18	7.12E-10	7.69E-08	4.60E-10	2.84E-10	2.52E-12	1.69E-11
60	2.16E-08	1.13E-08	2.06E-09	6.01E-16	6.24E-17	3.68E-18	1.38E-10	1.49E-08	8.91E-11	5.50E-11	4.89E-13	3.28E-12
70	1.35E-08	7.07E-09	1.29E-09	2.56E-16	2.66E-17	1.57E-18	1.76E-10	1.91E-08	1.14E-10	7.04E-11	6.26E-13	4.20E-12
80	1.30E-07	6.81E-08	1.24E-08	2.23E-15	2.31E-16	1.36E-17	5.82E-10	6.29E-08	3.76E-10	2.32E-10	2.06E-12	1.39E-11
90	1.49E-07	7.77E-08	1.42E-08	1.89E-14	1.97E-15	1.16E-16	5.65E-10	6.11E-08	3.66E-10	2.26E-10	2.00E-12	1.35E-11
100	1.03E-07	5.38E-08	9.82E-09	3.17E-14	3.30E-15	1.94E-16	4.50E-10	4.86E-08	2.91E-10	1.79E-10	1.59E-12	1.07E-11
110	7.05E-08	3.69E-08	6.74E-09	2.98E-14	3.10E-15	1.83E-16	3.37E-10	3.64E-08	2.18E-10	1.35E-10	1.20E-12	8.02E-12
120	6.90E-08	3.61E-08	6.59E-09	2.16E-14	2.24E-15	1.32E-16	3.57E-10	3.86E-08	2.31E-10	1.43E-10	1.27E-12	8.51E-12
130	7.20E-08	3.77E-08	6.88E-09	2.36E-14	2.46E-15	1.45E-16	2.70E-10	2.91E-08	1.74E-10	1.08E-10	9.56E-13	6.42E-12
140	6.36E-08	3.33E-08	6.07E-09	2.00E-14	2.08E-15	1.22E-16	1.54E-10	1.66E-08	9.93E-11	6.13E-11	5.45E-13	3.66E-12
150	4.81E-08	2.52E-08	4.59E-09	1.25E-14	1.30E-15	7.65E-17	7.20E-11	7.78E-09	4.65E-11	2.87E-11	2.55E-13	1.71E-12
160	3.51E-08	1.84E-08	3.35E-09	6.20E-15	6.44E-16	3.80E-17	3.27E-11	3.53E-09	2.11E-11	1.30E-11	1.16E-13	7.77E-13
170	2.42E-08	1.27E-08	2.31E-09	2.90E-15	3.02E-16	1.78E-17	1.27E-11	1.38E-09	8.23E-12	5.08E-12	4.51E-14	3.03E-13
180	1.51E-08	7.90E-09	1.44E-09	1.20E-15	1.24E-16	7.34E-18	4.34E-12	4.69E-10	2.80E-12	1.73E-12	1.54E-14	1.03E-13
190	8.74E-09	4.58E-09	8.35E-10	4.28E-16	4.45E-17	2.62E-18	1.33E-12	1.44E-10	8.63E-13	5.32E-13	4.73E-15	3.18E-14
200	4.56E-09	2.39E-09	4.36E-10	1.37E-16	1.42E-17	8.37E-19	3.56E-13	3.84E-11	2.30E-13	1.42E-13	1.26E-15	8.46E-15
210	2.18E-09	1.14E-09	2.08E-10	3.75E-17	3.90E-18	2.30E-19	8.96E-14	9.67E-12	5.79E-14	3.57E-14	3.18E-16	2.13E-15
220	1.01E-09	5.28E-10	9.63E-11	9.38E-18	9.75E-19	5.75E-20	2.20E-14	2.37E-12	1.42E-14	8.76E-15	7.78E-17	5.22E-16
230	4.55E-10	2.38E-10	4.35E-11	2.23E-18	2.32E-19	1.37E-20	5.21E-15	5.62E-13	3.37E-15	2.08E-15	1.85E-17	1.24E-16
240	1.96E-10	1.02E-10	1.87E-11	5.10E-19	5.30E-20	3.13E-21	1.17E-15	1.26E-13	7.55E-16	4.66E-16	4.14E-18	2.78E-17
250	8.10E-11	4.24E-11	7.73E-12	1.11E-19	1.16E-20	6.83E-22	2.57E-16	2.78E-14	1.66E-16	1.03E-16	9.12E-19	6.12E-18
260	3.29E-11	1.72E-11	3.14E-12	2.34E-20	2.44E-21	1.44E-22	5.62E-17	6.07E-15	3.63E-17	2.24E-17	1.99E-19	1.34E-18
270	1.32E-11	6.89E-12	1.26E-12	4.83E-21	5.02E-22	2.96E-23	1.21E-17	1.31E-15	7.83E-18	4.83E-18	4.30E-20	2.88E-19
280	5.22E-12	2.73E-12	4.98E-13	9.85E-22	1.02E-22	6.04E-24	2.60E-18	2.81E-16	1.68E-18	1.04E-18	9.21E-21	6.19E-20
290	2.02E-12	1.06E-12	1.93E-13	1.98E-22	2.06E-23	1.22E-24	5.52E-19	5.97E-17	3.57E-19	2.20E-19	1.96E-21	1.31E-20
300	7.80E-13	4.08E-13	7.45E-14	3.93E-23	4.08E-24	2.41E-25	1.17E-19	1.26E-17	7.55E-20	4.66E-20	4.14E-22	2.78E-21
310	2.99E-13	1.57E-13	2.86E-14	7.81E-24	8.12E-25	4.79E-26	2.47E-20	2.66E-18	1.60E-20	9.84E-21	8.75E-23	5.87E-22
320	1.14E-13	5.95E-14	1.09E-14	1.53E-24	1.59E-25	9.38E-27	5.19E-21	5.60E-19	3.35E-21	2.07E-21	1.84E-23	1.24E-22
330	4.28E-14	2.24E-14	4.09E-15	2.98E-25	3.10E-26	1.83E-27	1.09E-21	1.18E-19	7.04E-22	4.34E-22	3.86E-24	2.59E-23
340	1.60E-14	8.40E-15	1.53E-15	5.81E-26	6.04E-27	3.56E-28	2.28E-22	2.47E-20	1.48E-22	9.11E-23	8.09E-25	5.43E-24
350	6.01E-15	3.15E-15	5.74E-16	1.12E-26	1.17E-27	6.88E-29	4.76E-23	5.14E-21	3.08E-23	1.90E-23	1.69E-25	1.13E-24
360	2.24E-15	1.17E-15	2.14E-16	2.16E-27	2.24E-28	1.32E-29	9.92E-24	1.07E-21	6.41E-24	3.96E-24	3.52E-26	2.36E-25
370	8.30E-16	4.34E-16	7.92E-17	4.16E-28	4.32E-29	2.55E-30	2.07E-24	2.24E-22	1.34E-24	8.27E-25	7.35E-27	4.93E-26
380	3.07E-16	1.61E-16	2.93E-17	7.97E-29	8.28E-30	4.88E-31	4.32E-25	4.67E-23	2.79E-25	1.72E-25	1.53E-27	1.03E-26
390	1.13E-16	5.93E-17	1.08E-17	1.52E-29	1.58E-30	9.34E-32	8.96E-26	9.67E-24	5.79E-26	3.57E-26	3.18E-28	2.13E-27
400	4.17E-17	2.18E-17	3.98E-18	2.91E-30	3.03E-31	1.79E-32	1.88E-26	2.03E-24	1.21E-26	7.50E-27	6.66E-29	4.47E-28
410	1.53E-17	8.03E-18	1.47E-18	5.53E-31	5.75E-32	3.39E-33	3.90E-27	4.21E-25	2.52E-27	1.56E-27	1.38E-29	9.28E-29
420	5.61E-18	2.94E-18	5.36E-19	1.06E-31	1.10E-32	6.47E-34	8.11E-28	8.76E-26	5.25E-28	3.24E-28	2.88E-30	1.93E-29
430	2.06E-18	1.08E-18	1.97E-19	2.01E-32	2.08E-33	1.23E-34	1.69E-28	1.82E-26	1.09E-28	6.73E-29	5.98E-31	4.01E-30
440	7.50E-19	3.93E-19	7.16E-20	3.81E-33	3.96E-34	2.33E-35	3.51E-29	3.79E-27	2.27E-29	1.40E-29	1.25E-31	8.36E-31
450	2.75E-19	1.44E-19	2.62E-20	7.18E-34	7.46E-35	4.40E-36	7.29E-30	7.87E-28	4.71E-30	2.91E-30	2.58E-32	1.73E-31
460	1.00E-19	5.25E-20	9.58E-21	1.36E-34	1.42E-35	8.35E-37	1.51E-30	1.63E-28	9.76E-31	6.02E-31	5.35E-33	3.59E-32
470	3.66E-20	1.92E-20	3.50E-21	2.58E-35	2.68E-36	1.58E-37	3.15E-31	3.40E-29	2.04E-31	1.26E-31	1.12E-33	7.50E-33
480	1.33E-20	6.97E-21	1.27E-21	4.87E-36	5.06E-37	2.98E-38	6.54E-32	7.07E-30	4.23E-32	2.61E-32	2.32E-34	1.56E-33
490	4.85E-21	2.54E-21	4.63E-22	9.19E-37	9.54E-38	5.63E-39	1.36E-32	1.47E-30	8.80E-33	5.43E-33	4.82E-35	3.24E-34
500	1.76E-21	9.23E-22	1.68E-22	1.73E-37	1.80E-38	1.06E-39	2.83E-33	3.05E-31	1.83E-33	1.13E-33	1.00E-35	6.73E-35
510	6.41E-22	3.35E-22	6.12E-23	3.25E-38	3.38E-39	1.99E-40	5.87E-34	6.34E-32	3.79E-34	2.34E-34	2.08E-36	1.40E-35
520	2.33E-22	1.22E-22	2.22E-23	5.89E-39	6.12E-40	3.61E-41	1.22E-34	1.32E-32	7.89E-35	4.87E-35	4.33E-37	2.90E-36
530	8.44E-23	4.42E-23	8.06E-24	1.13E-39	1.17E-40	6.93E-42	2.54E-35	2.74E-33	1.64E-35	1.01E-35	9.00E-38	6.04E-37

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

				gamma-Chlordane Group								
Years from Present	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	Acrylonitrile	*gamma-Chlordane*	alpha-Chlordane	Methoxychlor	Heptachlor epoxide	Toxaphene	*Pentachlorophenol*	Naphthalene	Hexachloroethane	Acenaphthene
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	1.10E-12	1.63E-12	1.26E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30	1.25E-11	1.86E-11	1.44E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40	7.78E-12	1.16E-11	8.97E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-21	1.21E-22	1.87E-22	1.44E-23
50	2.29E-12	3.41E-12	2.63E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-16	1.80E-18	2.77E-18	2.13E-19
60	4.43E-13	6.59E-13	5.10E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-14	2.00E-16	3.08E-16	2.37E-17
70	5.67E-13	8.44E-13	6.53E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-13	1.95E-15	3.01E-15	2.31E-16
80	1.87E-12	2.78E-12	2.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-13	5.01E-15	7.72E-15	5.94E-16
90	1.82E-12	2.70E-12	2.09E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-13	6.25E-15	9.64E-15	7.41E-16
100	1.44E-12	2.15E-12	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-12	1.99E-14	3.07E-14	2.36E-15
110	1.08E-12	1.61E-12	1.25E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-11	2.64E-13	4.08E-13	3.13E-14
120	1.15E-12	1.71E-12	1.32E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E-11	6.22E-13	9.60E-13	7.38E-14
130	8.66E-13	1.29E-12	9.97E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.86E-11	7.93E-13	1.22E-12	9.40E-14
140	4.93E-13	7.35E-13	5.69E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.89E-11	9.33E-13	1.44E-12	1.11E-13
150	2.31E-13	3.44E-13	2.66E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-10	1.51E-12	2.33E-12	1.79E-13
160	1.05E-13	1.56E-13	1.21E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-10	2.70E-12	4.16E-12	3.20E-13
170	4.09E-14	6.09E-14	4.71E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-10	3.73E-12	5.76E-12	4.43E-13
180	1.39E-14	2.07E-14	1.60E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-10	4.06E-12	6.26E-12	4.81E-13
190	4.29E-15	6.38E-15	4.94E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-10	3.85E-12	5.94E-12	4.56E-13
200	1.14E-15	1.70E-15	1.32E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-10	3.34E-12	5.15E-12	3.95E-13
210	2.88E-16	4.28E-16	3.31E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-10	2.53E-12	3.90E-12	3.00E-13
220	7.05E-17	1.05E-16	8.12E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-10	1.68E-12	2.59E-12	1.99E-13
230	1.67E-17	2.49E-17	1.93E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.30E-11	9.88E-13	1.52E-12	1.17E-13
240	3.75E-18	5.59E-18	4.32E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-11	5.09E-13	7.86E-13	6.04E-14
250	8.26E-19	1.23E-18	9.52E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-11	2.44E-13	3.77E-13	2.89E-14
260	1.80E-19	2.69E-19	2.08E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-12	1.12E-13	1.73E-13	1.33E-14
270	3.89E-20	5.80E-20	4.48E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-12	4.95E-14	7.64E-14	5.87E-15
280	8.35E-21	1.24E-20	9.62E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-12	2.08E-14	3.21E-14	2.47E-15
290	1.77E-21	2.64E-21	2.04E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.26E-13	8.48E-15	1.31E-14	1.00E-15
300	3.75E-22	5.59E-22	4.32E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-13	3.42E-15	5.28E-15	4.06E-16
310	7.92E-23	1.18E-22	9.13E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-13	1.36E-15	2.10E-15	1.61E-16
320	1.67E-23	2.48E-23	1.92E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-14	5.34E-16	8.23E-16	6.32E-17
330	3.50E-24	5.21E-24	4.03E-19	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-14	2.08E-16	3.20E-16	2.46E-17
340	7.33E-25	1.09E-24	8.45E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.92E-15	8.01E-17	1.24E-16	9.50E-18
350	1.53E-25	2.28E-25	1.76E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-15	3.10E-17	4.77E-17	3.67E-18
360	3.19E-26	4.75E-26	3.67E-21	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.73E-16	1.18E-17	1.82E-17	1.40E-18
370	6.65E-27	9.91E-27	7.67E-22	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-16	4.51E-18	6.96E-18	5.35E-19
380	1.39E-27	2.07E-27	1.60E-22	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-16	1.72E-18	2.65E-18	2.04E-19
390	2.88E-28	4.28E-28	3.31E-23	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-17	6.51E-19	1.00E-18	7.72E-20
400	6.03E-29	8.99E-29	6.95E-24	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-17	2.46E-19	3.79E-19	2.91E-20
410	1.25E-29	1.86E-29	1.44E-24	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.84E-18	9.26E-20	1.43E-19	1.10E-20
420	2.61E-30	3.88E-30	3.00E-25	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-18	3.48E-20	5.37E-20	4.13E-21
430	5.41E-31	8.06E-31	6.24E-26	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.71E-19	1.31E-20	2.03E-20	1.56E-21
440	1.13E-31	1.68E-31	1.30E-26	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.65E-19	4.94E-21	7.62E-21	5.85E-22
450	2.34E-32	3.49E-32	2.70E-27	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-19	1.84E-21	2.84E-21	2.18E-22
460	4.85E-33	7.22E-33	5.59E-28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-20	6.91E-22	1.07E-21	8.19E-23
470	1.01E-33	1.51E-33	1.17E-28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-20	2.58E-22	3.98E-22	3.06E-23
480	2.10E-34	3.13E-34	2.42E-29	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-21	9.64E-23	1.49E-22	1.14E-23
490	4.37E-35	6.51E-35	5.04E-30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-21	3.59E-23	5.53E-23	4.25E-24
500	9.08E-36	1.35E-35	1.05E-30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.88E-22	1.34E-23	2.06E-23	1.59E-24
510	1.88E-36	2.81E-36	2.17E-31	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-22	4.98E-24	7.68E-24	5.90E-25
520	3.92E-37	5.84E-37	4.52E-32	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-22	1.85E-24	2.85E-24	2.19E-25
530	8.15E-38	1.21E-37	9.39E-33	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E-23	6.88E-25	1.06E-24	8.15E-26

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Pentachlorophenol Group							Benzo(a)pyrene Group		PCB Group	Tc-99 Group				
Years from Present	Acenaphthylene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Hexachlorobutadiene	Pyrene	*Benzo(a)pyrene*	Dioxin/Furan	*PCB*	*Tc-99*	*Np-237*	*U-238*	U-234	U-235
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.58E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40	5.35E-23	6.61E-24	3.98E-24	1.43E-25	6.69E-25	1.07E-23	4.39E-25	0.00E+00	0.00E+00	0.00E+00	3.27E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	7.92E-19	9.79E-20	5.89E-20	2.11E-21	9.91E-21	1.58E-19	6.50E-21	0.00E+00	0.00E+00	0.00E+00	2.16E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60	8.82E-17	1.09E-17	6.55E-18	2.35E-19	1.10E-18	1.76E-17	7.23E-19	0.00E+00	0.00E+00	0.00E+00	2.40E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00
70	8.61E-16	1.06E-16	6.40E-17	2.29E-18	1.08E-17	1.71E-16	7.06E-18	0.00E+00	0.00E+00	0.00E+00	1.13E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00
80	2.21E-15	2.73E-16	1.64E-16	5.89E-18	2.76E-17	4.40E-16	1.81E-17	0.00E+00	0.00E+00	0.00E+00	1.21E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
90	2.76E-15	3.41E-16	2.05E-16	7.35E-18	3.45E-17	5.49E-16	2.26E-17	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
100	8.78E-15	1.08E-15	6.53E-16	2.34E-17	1.10E-16	1.75E-15	7.20E-17	0.00E+00	0.00E+00	0.00E+00	9.99E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
110	1.17E-13	1.44E-14	8.67E-15	3.11E-16	1.46E-15	2.32E-14	9.57E-16	0.00E+00	0.00E+00	0.00E+00	4.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
120	2.74E-13	3.39E-14	2.04E-14	7.31E-16	3.43E-15	5.46E-14	2.25E-15	0.00E+00	0.00E+00	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
130	3.50E-13	4.32E-14	2.60E-14	9.32E-16	4.38E-15	6.97E-14	2.87E-15	0.00E+00	0.00E+00	0.00E+00	9.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
140	4.12E-13	5.09E-14	3.06E-14	1.10E-15	5.15E-15	8.19E-14	3.38E-15	0.00E+00	0.00E+00	0.00E+00	4.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
150	6.66E-13	8.22E-14	4.95E-14	1.77E-15	8.32E-15	1.32E-13	5.46E-15	0.00E+00	0.00E+00	0.00E+00	1.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
160	1.19E-12	1.47E-13	8.85E-14	3.17E-15	1.49E-14	2.37E-13	9.76E-15	0.00E+00	0.00E+00	0.00E+00	4.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
170	1.65E-12	2.03E-13	1.22E-13	4.39E-15	2.06E-14	3.28E-13	1.35E-14	0.00E+00	0.00E+00	0.00E+00	1.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
180	1.79E-12	2.21E-13	1.33E-13	4.77E-15	2.24E-14	3.56E-13	1.47E-14	0.00E+00	0.00E+00	0.00E+00	3.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
190	1.70E-12	2.10E-13	1.26E-13	4.53E-15	2.12E-14	3.38E-13	1.39E-14	0.00E+00	0.00E+00	0.00E+00	7.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
200	1.47E-12	1.82E-13	1.09E-13	3.92E-15	1.84E-14	2.93E-13	1.21E-14	0.00E+00	0.00E+00	0.00E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
210	1.11E-12	1.38E-13	8.28E-14	2.97E-15	1.39E-14	2.22E-13	9.15E-15	0.00E+00	0.00E+00	0.00E+00	3.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
220	7.41E-13	9.15E-14	5.51E-14	1.97E-15	9.27E-15	1.48E-13	6.08E-15	0.00E+00	0.00E+00	0.00E+00	5.54E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
230	4.36E-13	5.38E-14	3.24E-14	1.16E-15	5.45E-15	8.67E-14	3.57E-15	0.00E+00	0.00E+00	0.00E+00	8.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
240	2.25E-13	2.78E-14	1.67E-14	5.99E-16	2.81E-15	4.47E-14	1.84E-15	0.00E+00	0.00E+00	0.00E+00	1.31E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
250	1.08E-13	1.33E-14	8.00E-15	2.87E-16	1.35E-15	2.14E-14	8.84E-16	0.00E+00	0.00E+00	0.00E+00	1.82E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
260	4.94E-14	6.10E-15	3.67E-15	1.32E-16	6.18E-16	9.83E-15	4.05E-16	0.00E+00	0.00E+00	0.00E+00	2.35E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
270	2.19E-14	2.70E-15	1.62E-15	5.82E-17	2.73E-16	4.35E-15	1.79E-16	0.00E+00	0.00E+00	0.00E+00	2.93E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
280	9.19E-15	1.14E-15	6.83E-16	2.45E-17	1.15E-16	1.83E-15	7.54E-17	0.00E+00	0.00E+00	0.00E+00	3.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
290	3.74E-15	4.62E-16	2.78E-16	9.96E-18	4.68E-17	7.44E-16	3.07E-17	0.00E+00	0.00E+00	0.00E+00	4.19E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
300	1.51E-15	1.86E-16	1.12E-16	4.02E-18	1.89E-17	3.00E-16	1.24E-17	0.00E+00	0.00E+00	0.00E+00	4.79E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
310	6.00E-16	7.42E-17	4.46E-17	1.60E-18	7.51E-18	1.20E-16	4.92E-18	0.00E+00	0.00E+00	0.00E+00	5.39E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
320	2.35E-16	2.91E-17	1.75E-17	6.27E-19	2.94E-18	4.68E-17	1.93E-18	0.00E+00	0.00E+00	0.00E+00	6.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
330	9.16E-17	1.13E-17	6.81E-18	2.44E-19	1.15E-18	1.82E-17	7.51E-19	0.00E+00	0.00E+00	0.00E+00	6.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
340	3.53E-17	4.37E-18	2.63E-18	9.42E-20	4.42E-19	7.03E-18	2.90E-19	0.00E+00	0.00E+00	0.00E+00	7.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
350	1.37E-17	1.69E-18	1.01E-18	3.64E-20	1.71E-19	2.72E-18	1.12E-19	0.00E+00	0.00E+00	0.00E+00	7.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
360	5.21E-18	6.44E-19	3.87E-19	1.39E-20	6.52E-20	1.04E-18	4.28E-20	0.00E+00	0.00E+00	0.00E+00	8.06E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
370	1.99E-18	2.46E-19	1.48E-19	5.30E-21	2.49E-20	3.96E-19	1.63E-20	0.00E+00	0.00E+00	0.00E+00	8.49E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
380	7.58E-19	9.37E-20	5.63E-20	2.02E-21	9.48E-21	1.51E-19	6.22E-21	0.00E+00	0.00E+00	0.00E+00	8.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
390	2.87E-19	3.55E-20	2.13E-20	7.65E-22	3.59E-21	5.72E-20	2.36E-21	0.00E+00	0.00E+00	0.00E+00	9.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
400	1.08E-19	1.34E-20	8.06E-21	2.89E-22	1.36E-21	2.16E-20	8.89E-22	0.00E+00	0.00E+00	0.00E+00	9.64E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
410	4.08E-20	5.04E-21	3.03E-21	1.09E-22	5.10E-22	8.13E-21	3.35E-22	0.00E+00	0.00E+00	0.00E+00	9.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
420	1.54E-20	1.90E-21	1.14E-21	4.10E-23	1.92E-22	3.06E-21	1.26E-22	0.00E+00	0.00E+00	0.00E+00	1.02E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
430	5.80E-21	7.16E-22	4.31E-22	1.55E-23	7.25E-23	1.15E-21	4.76E-23	0.00E+00	0.00E+00	0.00E+00	1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
440	2.18E-21	2.69E-22	1.62E-22	5.81E-24	2.72E-23	4.34E-22	1.79E-23	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
450	8.13E-22	1.00E-22	6.04E-23	2.17E-24	1.02E-23	1.62E-22	6.67E-24	0.00E+00	0.00E+00	0.00E+00	1.09E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
460	3.05E-22	3.76E-23	2.26E-23	8.12E-25	3.81E-24	6.06E-23	2.50E-24	0.00E+00	0.00E+00	0.00E+00	1.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
470	1.14E-22	1.41E-23	8.46E-24	3.04E-25	1.42E-24	2.27E-23	9.34E-25	0.00E+00	0.00E+00	0.00E+00	1.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
480	4.25E-23	5.26E-24	3.16E-24	1.13E-25	5.32E-25	8.47E-24	3.49E-25	0.00E+00	0.00E+00	0.00E+00	1.13E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
490	1.58E-23	1.95E-24	1.18E-24	4.21E-26	1.98E-25	3.15E-24	1.30E-25	0.00E+00	0.00E+00	0.00E+00	1.14E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
500	5.90E-24	7.29E-25	4.38E-25	1.57E-26	7.38E-26	1.17E-24	4.84E-26	0.00E+00	0.00E+00	0.00E+00	1.15E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
510	2.20E-24	2.71E-25	1.63E-25	5.85E-27	2.75E-26	4.37E-25	1.80E-26	0.00E+00	0.00E+00	0.00E+00	1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
520	8.16E-25	1.01E-25	6.07E-26	2.18E-27	1.02E-26	1.63E-25	6.70E-27	0.00E+00	0.00E+00	0.00E+00	1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
530	3.03E-25	3.75E-26	2.25E-26	8.08E-28	3.79E-27	6.04E-26	2.49E-27	0.00E+00	0.00E+00	0.00E+00	1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	U-238 Group					
Years from Present	Ra-226	Pu-238	Pu-239	Pu-240	Th-230	Th-232
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
70	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
80	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
90	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
110	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
120	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
130	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
140	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
150	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
160	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
170	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
180	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
190	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
210	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
220	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
230	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
240	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
270	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
280	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
290	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
310	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
320	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
330	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
340	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
350	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
360	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
370	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
380	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
390	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
410	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
420	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
430	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
440	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
450	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
460	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
470	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
480	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
490	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
510	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
520	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
530	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Copper Group							Thallium Group									C
Years from Present	*Copper*	Barium	Antimony	Manganese	Mercury	*Uranium*	Zinc	*Thallium*	Cadmium	Silver	*Iron*	Lead	*Nickel*	Beryllium	Vanadium	*Arsenic*	*Chromium*
540	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
550	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
560	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
570	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
580	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
590	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
610	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
620	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
630	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
640	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
650	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
660	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
670	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
680	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
690	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
710	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
720	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
730	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
740	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
750	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
760	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
770	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
780	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
790	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
810	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
820	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
830	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
840	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
850	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
860	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
870	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
880	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
890	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
910	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
920	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
930	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
940	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
950	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
960	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
970	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
980	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
990	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-12
1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-09
1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-07
1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-06
1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.10E-05
1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.17E-04
1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-03

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	hromium Group		2-Butanone Group	Benzene Group						Vinyl Chloride Group						
Years from Present	*Selenium*	Molybdenum	*2-Butanone*	*Benzene*	Ethylbenzene	Xylene	m-Xylene	p-Xylene	o-Xylene	*Vinyl chloride*	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	Chloroform	1,1-DCE	1,2-DCE
540	1.85E-05	0.00E+00	1.10E-37	3.10E-36	1.33E-37	1.37E-37	1.31E-37	1.20E-37	1.28E-37	3.64E-16	2.55E-16	4.34E-16	5.96E-16	4.10E-16	9.93E-17	3.00E-17
550	1.85E-05	0.00E+00	0.00E+00	6.09E-37	2.62E-38	2.70E-38	2.58E-38	2.35E-38	2.51E-38	1.67E-16	1.17E-16	2.00E-16	2.74E-16	1.89E-16	4.57E-17	1.38E-17
560	1.85E-05	0.00E+00	0.00E+00	1.01E-37	4.36E-39	4.50E-39	4.29E-39	3.92E-39	4.18E-39	7.68E-17	5.39E-17	9.16E-17	1.26E-16	8.65E-17	2.10E-17	6.33E-18
570	1.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-17	2.47E-17	4.20E-17	5.76E-17	3.96E-17	9.60E-18	2.90E-18
580	1.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-17	1.14E-17	1.93E-17	2.66E-17	1.83E-17	4.42E-18	1.34E-18
590	1.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-18	5.22E-18	8.87E-18	1.22E-17	8.37E-18	2.03E-18	6.12E-19
600	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E-18	2.40E-18	4.07E-18	5.60E-18	3.85E-18	9.32E-19	2.81E-19
610	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-18	1.10E-18	1.86E-18	2.56E-18	1.76E-18	4.26E-19	1.29E-19
620	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.18E-19	5.04E-19	8.56E-19	1.18E-18	8.08E-19	1.96E-19	5.91E-20
630	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-19	2.31E-19	3.93E-19	5.40E-19	3.71E-19	8.99E-20	2.71E-20
640	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-19	1.06E-19	1.80E-19	2.47E-19	1.70E-19	4.12E-20	1.24E-20
650	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.94E-20	4.87E-20	8.27E-20	1.14E-19	7.81E-20	1.89E-20	5.71E-21
660	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-20	2.24E-20	3.80E-20	5.22E-20	3.59E-20	8.69E-21	2.62E-21
670	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-20	1.03E-20	1.75E-20	2.40E-20	1.65E-20	4.00E-21	1.21E-21
680	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.70E-21	4.71E-21	8.00E-21	1.10E-20	7.55E-21	1.83E-21	5.52E-22
690	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-21	2.16E-21	3.66E-21	5.03E-21	3.46E-21	8.38E-22	2.53E-22
700	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-21	9.94E-22	1.69E-21	2.32E-21	1.60E-21	3.86E-22	1.17E-22
710	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-22	4.54E-22	7.72E-22	1.06E-21	7.29E-22	1.77E-22	5.33E-23
720	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-22	2.08E-22	3.54E-22	4.86E-22	3.34E-22	8.10E-23	2.45E-23
730	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-22	9.58E-23	1.63E-22	2.24E-22	1.54E-22	3.72E-23	1.12E-23
740	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.26E-23	4.39E-23	7.46E-23	1.02E-22	7.05E-23	1.71E-23	5.15E-24
750	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-23	2.01E-23	3.42E-23	4.70E-23	3.23E-23	7.82E-24	2.36E-24
760	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-23	9.28E-24	1.58E-23	2.17E-23	1.49E-23	3.61E-24	1.09E-24
770	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.04E-24	4.24E-24	7.21E-24	9.90E-24	6.81E-24	1.65E-24	4.98E-25
780	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-24	1.95E-24	3.31E-24	4.54E-24	3.12E-24	7.56E-25	2.28E-25
790	2.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-24	8.92E-25	1.52E-24	2.08E-24	1.43E-24	3.46E-25	1.05E-25
800	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.83E-25	4.09E-25	6.95E-25	9.55E-25	6.56E-25	1.59E-25	4.80E-26
810	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-25	1.88E-25	3.19E-25	4.39E-25	3.02E-25	7.30E-26	2.21E-26
820	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-25	8.68E-26	1.47E-25	2.02E-25	1.39E-25	3.37E-26	1.02E-26
830	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.64E-26	3.96E-26	6.73E-26	9.24E-26	6.35E-26	1.54E-26	4.64E-27
840	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-26	1.82E-26	3.09E-26	4.25E-26	2.92E-26	7.07E-27	2.14E-27
850	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-26	8.32E-27	1.41E-26	1.94E-26	1.33E-26	3.23E-27	9.76E-28
860	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-27	3.82E-27	6.49E-27	8.91E-27	6.13E-27	1.48E-27	4.48E-28
870	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-27	1.75E-27	2.97E-27	4.08E-27	2.80E-27	6.79E-28	2.05E-28
880	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-27	8.01E-28	1.36E-27	1.87E-27	1.29E-27	3.11E-28	9.40E-29
890	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-28	3.69E-28	6.28E-28	8.62E-28	5.93E-28	1.44E-28	4.33E-29
900	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-28	1.69E-28	2.88E-28	3.95E-28	2.72E-28	6.58E-29	1.99E-29
910	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-28	7.77E-29	1.32E-28	1.81E-28	1.25E-28	3.02E-29	9.12E-30
920	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-29	3.57E-29	6.07E-29	8.34E-29	5.73E-29	1.39E-29	4.19E-30
930	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-29	1.64E-29	2.78E-29	3.82E-29	2.63E-29	6.37E-30	1.92E-30
940	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-29	7.53E-30	1.28E-29	1.76E-29	1.21E-29	2.93E-30	8.84E-31
950	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E-30	3.44E-30	5.85E-30	8.03E-30	5.52E-30	1.34E-30	4.04E-31
960	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-30	1.58E-30	2.68E-30	3.68E-30	2.53E-30	6.13E-31	1.85E-31
970	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-30	7.23E-31	1.23E-30	1.69E-30	1.16E-30	2.81E-31	8.48E-32
980	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E-31	3.33E-31	5.66E-31	7.77E-31	5.35E-31	1.29E-31	3.91E-32
990	1.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-31	1.53E-31	2.60E-31	3.57E-31	2.46E-31	5.95E-32	1.80E-32
1000	2.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.96E-32	6.99E-32	1.19E-31	1.63E-31	1.12E-31	2.72E-32	8.20E-33
1100	2.65E-02	8.31E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1200	3.25E-02	4.39E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1300	3.79E-02	3.09E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1400	4.26E-02	8.98E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1500	4.68E-02	1.36E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1600	5.00E-02	1.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1700	5.30E-02	6.81E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Trichloroethene Group			Chlorobenzene Group			2-Methylphenol Group					
Years from Present	*Trichloroethene*	Carbon tetrachloride	Tetrachloroethene	*Chlorobenzene*	1,4-Dichlorobenzene	Hexachlorobenzene	*2-Methylphenol*	Pyridine	4-Methylphenol	3-Methylphenol	2,4-DNT	Nitrobenzene
540	3.07E-23	1.61E-23	2.94E-24	0.00E+00	0.00E+00	0.00E+00	5.26E-36	5.68E-34	3.40E-36	2.10E-36	1.86E-38	1.25E-37
550	1.11E-23	5.82E-24	1.06E-24	0.00E+00	0.00E+00	0.00E+00	1.09E-36	1.18E-34	7.04E-37	4.34E-37	3.86E-39	2.59E-38
560	4.04E-24	2.11E-24	3.86E-25	0.00E+00	0.00E+00	0.00E+00	2.27E-37	2.46E-35	1.47E-37	9.07E-38	8.06E-40	5.41E-39
570	1.47E-24	7.67E-25	1.40E-25	0.00E+00	0.00E+00	0.00E+00	4.89E-38	5.28E-36	3.16E-38	1.95E-38	1.73E-40	1.16E-39
580	1.93E-25	1.01E-25	1.84E-26	0.00E+00	0.00E+00	0.00E+00	7.33E-39	7.92E-37	4.74E-39	2.93E-39	2.60E-41	1.75E-40
590	6.95E-26	3.64E-26	6.64E-27	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
600	2.52E-26	1.32E-26	2.41E-27	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
610	9.14E-27	4.78E-27	8.73E-28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
620	3.31E-27	1.73E-27	3.16E-28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
630	1.20E-27	6.29E-28	1.15E-28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
640	4.34E-28	2.27E-28	4.15E-29	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
650	1.57E-28	8.24E-29	1.50E-29	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
660	5.71E-29	2.99E-29	5.46E-30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
670	2.07E-29	1.08E-29	1.97E-30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
680	7.50E-30	3.93E-30	7.16E-31	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
690	2.70E-30	1.41E-30	2.58E-31	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
700	9.79E-31	5.12E-31	9.34E-32	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
710	3.54E-31	1.85E-31	3.38E-32	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
720	1.28E-31	6.71E-32	1.22E-32	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
730	4.64E-32	2.43E-32	4.43E-33	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
740	1.67E-32	8.76E-33	1.60E-33	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
750	6.06E-33	3.17E-33	5.79E-34	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
760	2.20E-33	1.15E-33	2.10E-34	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
770	2.20E-33	1.15E-33	2.10E-34	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
780	7.95E-34	4.16E-34	7.59E-35	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
790	2.87E-34	1.50E-34	2.74E-35	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
800	1.04E-34	5.43E-35	9.91E-36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
810	3.76E-35	1.97E-35	3.59E-36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
820	1.36E-35	7.12E-36	1.30E-36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
830	4.93E-36	2.58E-36	4.71E-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
840	1.78E-36	9.33E-37	1.70E-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
850	6.46E-37	3.38E-37	6.17E-38	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
860	2.30E-37	1.21E-37	2.20E-38	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
870	8.49E-38	4.45E-38	8.11E-39	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
880	2.97E-38	1.55E-38	2.84E-39	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
890	9.54E-39	4.99E-39	9.11E-40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
910	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
920	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
930	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
940	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
950	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
960	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
970	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
980	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
990	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

				gamma-Chlordane Group								
Years from Present	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	Acrylonitrile	*gamma-Chlordane*	alpha-Chlordane	Methoxychlor	Heptachlor epoxide	Toxaphene	*Pentachlorophenol*	Naphthalene	Hexachloroethane	Acenaphthene
540	1.69E-38	2.52E-38	1.95E-33	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-23	2.55E-25	3.93E-25	3.02E-26
550	3.50E-39	5.21E-39	4.03E-34	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.95E-24	9.41E-26	1.45E-25	1.12E-26
560	7.30E-40	1.09E-39	8.41E-35	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-24	3.50E-26	5.40E-26	4.15E-27
570	1.57E-40	2.34E-40	1.81E-35	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.60E-25	1.30E-26	2.00E-26	1.54E-27
580	2.35E-41	3.51E-41	2.71E-36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-25	4.81E-27	7.41E-27	5.70E-28
590	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-25	1.77E-27	2.73E-27	2.10E-28
600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-26	6.56E-28	1.01E-27	7.78E-29
610	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-26	2.43E-28	3.74E-28	2.88E-29
620	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.61E-27	8.94E-29	1.38E-28	1.06E-29
630	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-27	3.30E-29	5.09E-29	3.91E-30
640	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.02E-28	1.22E-29	1.88E-29	1.45E-30
650	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E-28	4.50E-30	6.93E-30	5.33E-31
660	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-28	1.66E-30	2.55E-30	1.96E-31
670	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.52E-29	6.11E-31	9.43E-31	7.25E-32
680	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-29	2.25E-31	3.47E-31	2.66E-32
690	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E-30	8.24E-32	1.27E-31	9.77E-33
700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-30	3.05E-32	4.70E-32	3.61E-33
710	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-31	1.12E-32	1.73E-32	1.33E-33
720	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E-31	4.13E-33	6.37E-33	4.90E-34
730	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-31	1.52E-33	2.34E-33	1.80E-34
740	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-32	5.58E-34	8.61E-34	6.62E-35
750	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-32	2.05E-34	3.17E-34	2.43E-35
760	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E-33	7.54E-35	1.16E-34	8.93E-36
770	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-33	2.77E-35	4.27E-35	3.28E-36
780	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.53E-34	1.02E-35	1.57E-35	1.21E-36
790	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-34	3.74E-36	5.77E-36	4.43E-37
800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-34	1.37E-36	2.11E-36	1.62E-37
810	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E-35	5.04E-37	7.77E-37	5.97E-38
820	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-35	1.85E-37	2.85E-37	2.19E-38
830	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-36	6.78E-38	1.05E-37	8.04E-39
840	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-36	2.49E-38	3.84E-38	2.95E-39
850	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.78E-37	9.18E-39	1.42E-38	1.09E-39
860	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E-37	3.35E-39	5.17E-39	3.97E-40
870	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.08E-38	1.23E-39	1.90E-39	1.46E-40
880	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-38	4.47E-40	6.90E-40	5.30E-41
890	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-38	1.42E-40	2.20E-40	1.69E-41
900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
910	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
920	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
930	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
940	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
950	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
960	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
970	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
980	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
990	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Pentachlorophenol Group							Benzo(a)pyrene Group		PCB Group	Tc-99 Group				
Years from Present	Acenaphthylene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Hexachlorobutadiene	Pyrene	*Benzo(a)pyrene*	Dioxin/Furan	*PCB*	*Tc-99*	*Np-237*	*U-238*	U-234	U-235
540	1.13E-25	1.39E-26	8.36E-27	3.00E-28	1.41E-27	2.24E-26	9.23E-28	0.00E+00	0.00E+00	0.00E+00	1.17E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
550	4.15E-26	5.13E-27	3.08E-27	1.11E-28	5.19E-28	8.26E-27	3.40E-28	0.00E+00	0.00E+00	0.00E+00	1.17E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
560	1.54E-26	1.91E-27	1.15E-27	4.11E-29	1.93E-28	3.07E-27	1.27E-28	0.00E+00	0.00E+00	0.00E+00	1.17E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
570	5.73E-27	7.08E-28	4.26E-28	1.53E-29	7.16E-29	1.14E-27	4.70E-29	0.00E+00	0.00E+00	0.00E+00	1.17E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
580	2.12E-27	2.62E-28	1.58E-28	5.65E-30	2.65E-29	4.22E-28	1.74E-29	0.00E+00	0.00E+00	0.00E+00	1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
590	7.82E-28	9.66E-29	5.81E-29	2.08E-30	9.78E-30	1.56E-28	6.42E-30	0.00E+00	0.00E+00	0.00E+00	1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
600	2.90E-28	3.58E-29	2.15E-29	7.72E-31	3.62E-30	5.76E-29	2.38E-30	0.00E+00	0.00E+00	0.00E+00	1.15E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
610	1.07E-28	1.32E-29	7.95E-30	2.85E-31	1.34E-30	2.13E-29	8.78E-31	0.00E+00	0.00E+00	0.00E+00	1.15E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
620	3.95E-29	4.87E-30	2.93E-30	1.05E-31	4.93E-31	7.85E-30	3.24E-31	0.00E+00	0.00E+00	0.00E+00	1.14E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
630	1.45E-29	1.80E-30	1.08E-30	3.88E-32	1.82E-31	2.90E-30	1.19E-31	0.00E+00	0.00E+00	0.00E+00	1.14E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
640	5.39E-30	6.65E-31	4.00E-31	1.44E-32	6.73E-32	1.07E-30	4.42E-32	0.00E+00	0.00E+00	0.00E+00	1.13E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
650	1.98E-30	2.45E-31	1.47E-31	5.28E-33	2.48E-32	3.95E-31	1.63E-32	0.00E+00	0.00E+00	0.00E+00	1.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
660	7.31E-31	9.03E-32	5.43E-32	1.95E-33	9.14E-33	1.45E-31	5.99E-33	0.00E+00	0.00E+00	0.00E+00	1.11E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
670	2.70E-31	3.33E-32	2.00E-32	7.19E-34	3.37E-33	5.37E-32	2.21E-33	0.00E+00	0.00E+00	0.00E+00	1.11E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
680	9.91E-32	1.22E-32	7.37E-33	2.64E-34	1.24E-33	1.97E-32	8.13E-34	0.00E+00	0.00E+00	0.00E+00	1.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
690	3.64E-32	4.49E-33	2.70E-33	9.69E-35	4.55E-34	7.24E-33	2.98E-34	0.00E+00	0.00E+00	0.00E+00	1.09E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
700	1.34E-32	1.66E-33	9.99E-34	3.58E-35	1.68E-34	2.68E-33	1.10E-34	0.00E+00	0.00E+00	0.00E+00	1.08E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
710	4.94E-33	6.10E-34	3.67E-34	1.32E-35	6.18E-35	9.83E-34	4.05E-35	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
720	1.82E-33	2.25E-34	1.35E-34	4.85E-36	2.28E-35	3.63E-34	1.49E-35	0.00E+00	0.00E+00	0.00E+00	1.06E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
730	6.69E-34	8.26E-35	4.97E-35	1.78E-36	8.36E-36	1.33E-34	5.49E-36	0.00E+00	0.00E+00	0.00E+00	1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
740	2.46E-34	3.04E-35	1.83E-35	6.56E-37	3.08E-36	4.90E-35	2.02E-36	0.00E+00	0.00E+00	0.00E+00	1.04E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
750	9.06E-35	1.12E-35	6.73E-36	2.41E-37	1.13E-36	1.80E-35	7.43E-37	0.00E+00	0.00E+00	0.00E+00	1.02E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
760	3.32E-35	4.11E-36	2.47E-36	8.86E-38	4.16E-37	6.62E-36	2.73E-37	0.00E+00	0.00E+00	0.00E+00	1.01E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
770	1.22E-35	1.51E-36	9.07E-37	3.25E-38	1.53E-37	2.43E-36	1.00E-37	0.00E+00	0.00E+00	0.00E+00	1.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
780	4.49E-36	5.55E-37	3.34E-37	1.20E-38	5.62E-38	8.95E-37	3.69E-38	0.00E+00	0.00E+00	0.00E+00	9.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
790	1.65E-36	2.04E-37	1.23E-37	4.40E-39	2.06E-38	3.28E-37	1.35E-38	0.00E+00	0.00E+00	0.00E+00	9.81E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
800	6.04E-37	7.46E-38	4.49E-38	1.61E-39	7.55E-39	1.20E-37	4.95E-39	0.00E+00	0.00E+00	0.00E+00	9.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
810	2.22E-37	2.75E-38	1.65E-38	5.92E-40	2.78E-39	4.43E-38	1.82E-39	0.00E+00	0.00E+00	0.00E+00	9.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
820	8.16E-38	1.01E-38	6.07E-39	2.18E-40	1.02E-39	1.63E-38	6.70E-40	0.00E+00	0.00E+00	0.00E+00	9.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
830	2.99E-38	3.70E-39	2.22E-39	7.97E-41	3.74E-40	5.96E-39	2.45E-40	0.00E+00	0.00E+00	0.00E+00	9.33E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
840	1.10E-38	1.36E-39	8.16E-40	2.93E-41	1.37E-40	2.19E-39	9.00E-41	0.00E+00	0.00E+00	0.00E+00	9.21E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
850	4.05E-39	5.00E-40	3.01E-40	1.08E-41	5.06E-41	8.06E-40	3.32E-41	0.00E+00	0.00E+00	0.00E+00	9.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
860	1.48E-39	1.83E-40	1.10E-40	3.94E-42	1.85E-41	2.94E-40	1.21E-41	0.00E+00	0.00E+00	0.00E+00	8.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
870	5.42E-40	6.70E-41	4.03E-41	1.44E-42	6.78E-42	1.08E-40	4.45E-42	0.00E+00	0.00E+00	0.00E+00	8.87E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
880	1.97E-40	2.44E-41	1.47E-41	5.26E-43	2.47E-42	3.93E-41	1.62E-42	0.00E+00	0.00E+00	0.00E+00	8.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
890	6.28E-41	7.76E-42	4.67E-42	1.67E-43	7.85E-43	1.25E-41	5.15E-43	0.00E+00	0.00E+00	0.00E+00	8.64E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
910	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.38E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
920	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
930	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.18E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
940	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.06E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
950	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.95E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
960	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
970	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
980	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
990	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.49E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.07E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	U-238 Group					
Years from Present	Ra-226	Pu-238	Pu-239	Pu-240	Th-230	Th-232
540	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
550	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
560	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
570	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
580	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
590	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
610	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
620	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
630	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
640	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
650	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
660	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
670	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
680	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
690	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
710	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
720	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
730	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
740	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
750	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
760	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
770	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
780	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
790	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
810	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
820	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
830	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
840	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
850	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
860	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
870	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
880	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
890	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
910	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
920	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
930	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
940	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
950	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
960	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
970	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
980	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
990	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Copper Group							Thallium Group									C
Years from Present	*Copper*	Barium	Antimony	Manganese	Mercury	*Uranium*	Zinc	*Thallium*	Cadmium	Silver	*Iron*	Lead	*Nickel*	Beryllium	Vanadium	*Arsenic*	*Chromium*
1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-02
1900	6.50E-40	1.21E-39	6.58E-42	4.07E-40	2.51E-43	0.00E+00	5.25E-39	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.48E-02
2000	2.24E-15	4.19E-15	2.27E-17	1.40E-15	8.64E-19	0.00E+00	1.81E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-01
2100	1.55E-13	2.89E-13	1.57E-15	9.70E-14	5.97E-17	0.00E+00	1.25E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-01
2200	3.88E-12	7.25E-12	3.93E-14	2.43E-12	1.50E-15	0.00E+00	3.13E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-01
2300	5.24E-11	9.79E-11	5.30E-13	3.28E-11	2.02E-14	0.00E+00	4.23E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-01
2400	4.94E-10	9.23E-10	5.00E-12	3.10E-10	1.91E-13	0.00E+00	3.99E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.37E-01
2500	3.52E-09	6.57E-09	3.56E-11	2.20E-09	1.36E-12	0.00E+00	2.84E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.29E-01
2600	1.99E-08	3.72E-08	2.02E-10	1.25E-08	7.69E-12	0.00E+00	1.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E+00
2700	9.19E-08	1.72E-07	9.30E-10	5.76E-08	3.54E-11	0.00E+00	7.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E+00
2800	3.55E-07	6.63E-07	3.59E-09	2.22E-07	1.37E-10	0.00E+00	2.87E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E+00
2900	1.18E-06	2.20E-06	1.19E-08	7.38E-07	4.54E-10	0.00E+00	9.51E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E+00
3000	3.42E-06	6.38E-06	3.46E-08	2.14E-06	1.32E-09	0.00E+00	2.76E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+00
3100	8.76E-06	1.64E-05	8.86E-08	5.49E-06	3.38E-09	0.00E+00	7.07E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E+00
3200	2.04E-05	3.80E-05	2.06E-07	1.28E-05	7.85E-09	0.00E+00	1.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E+00
3300	4.31E-05	8.05E-05	4.36E-07	2.70E-05	1.66E-08	0.00E+00	3.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E+00
3400	8.46E-05	1.58E-04	8.56E-07	5.30E-05	3.26E-08	0.00E+00	6.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E+00
3500	1.55E-04	2.89E-04	1.56E-06	9.68E-05	5.96E-08	0.00E+00	1.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E+00
3600	2.66E-04	4.96E-04	2.69E-06	1.66E-04	1.02E-07	4.02E-43	2.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E+00
3700	4.35E-04	8.12E-04	4.40E-06	2.72E-04	1.68E-07	2.78E-17	3.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E+00
3800	6.73E-04	1.26E-03	6.81E-06	4.22E-04	2.60E-07	1.10E-15	5.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E+00
3900	1.01E-03	1.88E-03	1.02E-05	6.32E-04	3.89E-07	1.36E-14	8.14E-03	5.80E-19	3.20E-18	3.62E-17	0.00E+00	1.21E-16	0.00E+00	1.28E-17	4.20E-17	0.00E+00	3.09E+00
4000	1.45E-03	2.71E-03	1.47E-05	9.08E-04	5.59E-07	9.26E-14	1.17E-02	3.44E-17	1.90E-16	2.15E-15	0.00E+00	7.18E-15	0.00E+00	7.59E-16	2.49E-15	0.00E+00	3.19E+00
4100	2.02E-03	3.77E-03	2.04E-05	1.27E-03	7.79E-07	4.72E-13	1.63E-02	6.67E-16	3.68E-15	4.16E-14	0.00E+00	1.39E-13	0.00E+00	1.47E-14	4.83E-14	0.00E+00	3.27E+00
4200	2.74E-03	5.12E-03	2.77E-05	1.72E-03	1.06E-06	2.01E-12	2.21E-02	5.13E-15	2.83E-14	3.20E-13	0.00E+00	1.07E-12	0.00E+00	1.13E-13	3.72E-13	0.00E+00	3.35E+00
4300	3.62E-03	6.75E-03	3.66E-05	2.26E-03	1.39E-06	7.48E-12	2.92E-02	2.69E-14	1.48E-13	1.68E-12	0.00E+00	5.60E-12	0.00E+00	5.92E-13	1.95E-12	0.00E+00	3.41E+00
4400	4.68E-03	8.74E-03	4.73E-05	2.93E-03	1.80E-06	2.54E-11	3.78E-02	1.15E-13	6.33E-13	7.16E-12	0.00E+00	2.39E-11	0.00E+00	2.53E-12	8.30E-12	0.00E+00	3.48E+00
4500	5.94E-03	1.11E-02	6.01E-05	3.72E-03	2.29E-06	7.87E-11	4.79E-02	4.24E-13	2.34E-12	2.65E-11	0.00E+00	8.84E-11	0.00E+00	9.35E-12	3.07E-11	0.00E+00	3.53E+00
4600	7.40E-03	1.38E-02	7.49E-05	4.63E-03	2.85E-06	2.27E-10	5.97E-02	1.42E-12	7.81E-12	8.84E-11	0.00E+00	2.95E-10	0.00E+00	3.12E-11	1.02E-10	0.00E+00	3.57E+00
4700	9.06E-03	1.69E-02	9.16E-05	5.67E-03	3.49E-06	6.09E-10	7.31E-02	4.33E-12	2.39E-11	2.71E-10	0.00E+00	9.03E-10	0.00E+00	9.54E-11	3.14E-10	0.00E+00	3.61E+00
4800	1.09E-02	2.04E-02	1.11E-04	6.86E-03	4.22E-06	1.53E-09	8.84E-02	1.24E-11	6.83E-11	7.73E-10	0.00E+00	2.58E-09	0.00E+00	2.73E-10	8.96E-10	0.00E+00	3.64E+00
4900	1.31E-02	2.44E-02	1.32E-04	8.19E-03	5.04E-06	3.63E-09	1.06E-01	3.29E-11	1.81E-10	2.05E-09	0.00E+00	6.85E-09	0.00E+00	7.24E-10	2.38E-09	0.00E+00	3.66E+00
5000	1.54E-02	2.88E-02	1.56E-04	9.66E-03	5.95E-06	8.17E-09	1.25E-01	8.27E-11	4.56E-10	5.16E-09	0.00E+00	1.72E-08	0.00E+00	1.82E-09	5.99E-09	0.00E+00	3.69E+00
5100	1.80E-02	3.36E-02	1.82E-04	1.13E-02	6.93E-06	1.74E-08	1.45E-01	1.96E-10	1.08E-09	1.22E-08	0.00E+00	4.08E-08	0.00E+00	4.31E-09	1.42E-08	0.00E+00	3.70E+00
5200	2.08E-02	3.88E-02	2.10E-04	1.30E-02	8.02E-06	3.54E-08	1.68E-01	4.40E-10	2.43E-09	2.75E-08	0.00E+00	9.17E-08	0.00E+00	9.69E-09	3.19E-08	0.00E+00	3.71E+00
5300	2.38E-02	4.45E-02	2.41E-04	1.49E-02	9.18E-06	6.88E-08	1.92E-01	9.42E-10	5.20E-09	5.88E-08	0.00E+00	1.96E-07	0.00E+00	2.08E-08	6.82E-08	0.00E+00	3.71E+00
5400	2.71E-02	5.06E-02	2.74E-04	1.70E-02	1.04E-05	1.29E-07	2.19E-01	1.92E-09	1.06E-08	1.20E-07	0.00E+00	4.01E-07	0.00E+00	4.24E-08	1.39E-07	0.00E+00	3.72E+00
5500	3.06E-02	5.71E-02	3.09E-04	1.91E-02	1.18E-05	2.31E-07	2.47E-01	3.78E-09	2.08E-08	2.36E-07	0.00E+00	7.87E-07	0.00E+00	8.32E-08	2.74E-07	0.00E+00	3.71E+00
5600	3.42E-02	6.38E-02	3.46E-04	2.14E-02	1.32E-05	4.00E-07	2.76E-01	7.09E-09	3.91E-08	4.43E-07	0.00E+00	1.48E-06	0.00E+00	1.56E-07	5.13E-07	0.00E+00	3.70E+00
5700	3.82E-02	7.13E-02	3.86E-04	2.39E-02	1.47E-05	6.68E-07	3.08E-01	1.28E-08	7.09E-08	8.02E-07	0.00E+00	2.68E-06	0.00E+00	2.83E-07	9.30E-07	0.00E+00	3.69E+00
5800	4.21E-02	7.87E-02	4.26E-04	2.64E-02	1.62E-05	1.08E-06	3.40E-01	2.24E-08	1.24E-07	1.40E-06	0.00E+00	4.68E-06	0.00E+00	4.94E-07	1.62E-06	0.00E+00	3.68E+00
5900	4.64E-02	8.67E-02	4.70E-04	2.91E-02	1.79E-05	1.71E-06	3.75E-01	3.80E-08	2.10E-07	2.37E-06	0.00E+00	7.92E-06	0.00E+00	8.37E-07	2.75E-06	0.00E+00	3.67E+00
6000	5.11E-02	9.54E-02	5.17E-04	3.20E-02	1.97E-05	2.62E-06	4.12E-01	6.22E-08	3.43E-07	3.88E-06	0.00E+00	1.30E-05	0.00E+00	1.37E-06	4.50E-06	0.00E+00	3.65E+00
6100	5.57E-02	1.04E-01	5.64E-04	3.49E-02	2.15E-05	3.91E-06	4.50E-01	9.91E-08	5.47E-07	6.19E-06	0.00E+00	2.07E-05	0.00E+00	2.18E-06	7.18E-06	0.00E+00	3.62E+00
6200	6.07E-02	1.13E-01	6.14E-04	3.80E-02	2.34E-05	5.69E-06	4.90E-01	1.54E-07	8.47E-07	9.59E-06	0.00E+00	3.20E-05	0.00E+00	3.38E-06	1.11E-05	0.00E+00	3.61E+00
6300	6.57E-02	1.23E-01	6.65E-04	4.11E-02	2.53E-05	8.12E-06	5.30E-01	2.31E-07	1.28E-06	1.44E-05	0.00E+00	4.82E-05	0.00E+00	5.09E-06	1.67E-05	0.00E+00	3.58E+00
6400	7.07E-02	1.32E-01	7.15E-04	4.43E-02	2.72E-05	1.13E-05	5.70E-01	3.42E-07	1.89E-06	2.14E-05	0.00E+00	7.13E-05	0.00E+00	7.54E-06	2.48E-05	0.00E+00	3.55E+00
6500	7.60E-02	1.42E-01	7.69E-04	4.76E-02	2.93E-05	1.55E-05	6.13E-01	4.93E-07	2.72E-06	3.08E-05	0.00E+00	1.03E-04	0.00E+00	1.09E-05	3.57E-05	0.00E+00	3.52E+00
6600	8.16E-02	1.52E-01	8.26E-04	5.11E-02	3.15E-05	2.08E-05	6.59E-01	6.96E-07	3.84E-06	4.34E-05	0.00E+00	1.45E-04	0.00E+00	1.53E-05	5.04E-05	0.00E+00	3.49E+00
6700	8.69E-02	1.62E-01	8.79E-04	5.44E-02	3.35E-05	2.75E-05	7.02E-01	9.62E-07	5.31E-06	6.01E-05	0.00E+00	2.00E-04	0.00E+00	2.12E-05	6.97E-05	0.00E+00	3.46E+00
6800	9.29E-02	1.73E-01	9.40E-04	5.82E-02	3.58E-05	3.56E-05	7.50E-01	1.31E-06	7.21E-06	8.16E-05	0.00E+00	2.72E-04	0.00E+00	2.88E-05	9.46E-05	0.00E+00	3.43E+00
6900	9.85E-02	1.84E-01	9.97E-04	6.17E-02	3.80E-05	4.56E-05	7.95E-01	1.74E-06	9.62E-06	1.09E-04	0.00E+00	3.63E-04	0.00E+00	3.84E-05	1.26E-04	0.00E+00	3.40E+00
7000	1.05E-01	1.95E-01	1.06E-03	6.55E-02	4.03E-05	5.74E-05	8.44E-01	2.29E-06	1.26E-05	1.43E-04	0.00E+00	4.77E-04	0.00E+00	5.04E-05	1.66E-04	0.00E+00	3.36E+00
7100	1.10E-01	2.06E-01	1.12E-03	6.92E-02	4.26E-05	7.18E-05	8.92E-01	2.96E-06	1.63E-05	1.84E-04	0.00E+00	6.16E-04	0.00E+00	6.51E-05	2.14E-04	0.00E+00	3.32E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	hromium Group		2-Butanone Group	Benzene Group						Vinyl Chloride Group						
Years from Present	*Selenium*	Molybdenum	*2-Butanone*	*Benzene*	Ethylbenzene	Xylene	m-Xylene	p-Xylene	o-Xylene	*Vinyl chloride*	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	Chloroform	1,1-DCE	1,2-DCE
1800	5.53E-02	2.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1900	5.71E-02	7.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2000	5.86E-02	1.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2100	5.98E-02	3.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2200	6.07E-02	5.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2300	6.12E-02	7.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2400	6.18E-02	1.07E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2500	6.24E-02	1.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2600	6.27E-02	1.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2700	6.27E-02	2.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2800	6.27E-02	2.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2900	6.27E-02	2.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3000	6.27E-02	3.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3100	6.24E-02	3.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3200	6.24E-02	3.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3300	6.21E-02	3.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3400	6.18E-02	4.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3500	6.15E-02	4.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3600	6.15E-02	4.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3700	6.10E-02	4.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3800	6.07E-02	5.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3900	6.04E-02	5.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4000	6.01E-02	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4100	5.98E-02	5.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4200	5.92E-02	5.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4300	5.89E-02	5.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4400	5.86E-02	5.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4500	5.80E-02	5.93E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4600	5.77E-02	6.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4700	5.71E-02	6.07E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4800	5.68E-02	6.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4900	5.65E-02	6.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5000	5.59E-02	6.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5100	5.56E-02	6.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5200	5.50E-02	6.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5300	5.47E-02	6.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5400	5.41E-02	6.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5500	5.39E-02	6.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5600	5.33E-02	6.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5700	5.27E-02	6.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5800	5.21E-02	6.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5900	5.18E-02	6.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6000	5.12E-02	6.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6100	5.09E-02	6.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6200	5.03E-02	6.07E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6300	5.00E-02	6.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6400	4.94E-02	5.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6500	4.91E-02	5.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6600	4.85E-02	5.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6700	4.79E-02	5.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6800	4.73E-02	5.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6900	4.70E-02	5.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7000	4.65E-02	5.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7100	4.62E-02	5.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Trichloroethene Group			Chlorobenzene Group			2-Methylphenol Group					
Years from Present	*Trichloroethene*	Carbon tetrachloride	Tetrachloroethene	*Chlorobenzene*	1,4-Dichlorobenzene	Hexachlorobenzene	*2-Methylphenol*	Pyridine	4-Methylphenol	3-Methylphenol	2,4-DNT	Nitrobenzene
1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

				gamma-Chlordane Group								
Years from Present	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	Acrylonitrile	*gamma-Chlordane*	alpha-Chlordane	Methoxychlor	Heptachlor epoxide	Toxaphene	*Pentachlorophenol*	Naphthalene	Hexachloroethane	Acenaphthene
1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Pentachlorophenol Group							Benzo(a)pyrene Group		PCB Group	Tc-99 Group				
Years from Present	Acenaphthylene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Hexachlorobutadiene	Pyrene	*Benzo(a)pyrene*	Dioxin/Furan	*PCB*	*Tc-99*	*Np-237*	*U-238*	U-234	U-235
1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.62E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+00	0.00E+00	2.55E-14	3.14E-14	3.10E-14
3800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E-01	2.11E-34	8.76E-13	1.08E-12	1.07E-12
3900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E-01	1.73E-10	1.02E-11	1.25E-11	1.24E-11
4000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-01	3.00E-09	6.71E-11	8.27E-11	8.16E-11
4100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-01	2.27E-08	3.32E-10	4.09E-10	4.03E-10
4200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-01	1.14E-07	1.38E-09	1.70E-09	1.68E-09
4300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-01	4.61E-07	5.06E-09	6.23E-09	6.15E-09
4400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-01	1.64E-06	1.69E-08	2.08E-08	2.05E-08
4500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-01	5.29E-06	5.15E-08	6.35E-08	6.26E-08
4600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-01	1.56E-05	1.46E-07	1.80E-07	1.77E-07
4700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-01	4.27E-05	3.85E-07	4.74E-07	4.68E-07
4800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	1.09E-04	9.53E-07	1.17E-06	1.16E-06
4900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-01	2.59E-04	2.22E-06	2.73E-06	2.70E-06
5000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-01	5.84E-04	4.91E-06	6.05E-06	5.97E-06
5100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-01	1.24E-03	1.03E-05	1.27E-05	1.25E-05
5200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-02	2.50E-03	2.05E-05	2.53E-05	2.50E-05
5300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-02	4.78E-03	3.92E-05	4.83E-05	4.77E-05
5400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.13E-02	8.77E-03	7.20E-05	8.88E-05	8.76E-05
5500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-02	1.54E-02	1.27E-04	1.56E-04	1.54E-04
5600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E-02	2.58E-02	2.16E-04	2.67E-04	2.63E-04
5700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.71E-02	4.20E-02	3.54E-04	4.36E-04	4.30E-04
5800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-02	6.52E-02	5.63E-04	6.93E-04	6.84E-04
5900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-02	9.83E-02	8.71E-04	1.07E-03	1.06E-03
6000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-02	1.44E-01	1.31E-03	1.61E-03	1.59E-03
6100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-02	2.04E-01	1.91E-03	2.35E-03	2.32E-03
6200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-02	2.81E-01	2.73E-03	3.37E-03	3.32E-03
6300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	3.76E-01	3.83E-03	4.72E-03	4.66E-03
6400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	4.92E-01	5.24E-03	6.46E-03	6.37E-03
6500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.70E-03	6.28E-01	7.04E-03	8.67E-03	8.56E-03
6600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.19E-03	7.89E-01	9.29E-03	1.15E-02	1.13E-02
6700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.93E-03	9.66E-01	1.20E-02	1.48E-02	1.46E-02
6800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.86E-03	1.16E+00	1.54E-02	1.90E-02	1.87E-02
6900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-03	1.37E+00	1.94E-02	2.39E-02	2.36E-02
7000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-03	1.60E+00	2.40E-02	2.96E-02	2.92E-02
7100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-03	1.83E+00	2.95E-02	3.64E-02	3.59E-02

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	U-238 Group					
Years from Present	Ra-226	Pu-238	Pu-239	Pu-240	Th-230	Th-232
1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3700	1.34E-15	1.68E-14	1.65E-14	1.65E-14	1.28E-15	1.55E-15
3800	4.61E-14	5.79E-13	5.66E-13	5.66E-13	4.39E-14	5.32E-14
3900	5.36E-13	6.72E-12	6.57E-12	6.57E-12	5.09E-13	6.18E-13
4000	3.53E-12	4.43E-11	4.34E-11	4.34E-11	3.36E-12	4.07E-12
4100	1.75E-11	2.19E-10	2.14E-10	2.14E-10	1.66E-11	2.01E-11
4200	7.27E-11	9.11E-10	8.92E-10	8.92E-10	6.91E-11	8.38E-11
4300	2.66E-10	3.34E-09	3.27E-09	3.27E-09	2.53E-10	3.07E-10
4400	8.88E-10	1.11E-08	1.09E-08	1.09E-08	8.44E-10	1.02E-09
4500	2.71E-09	3.40E-08	3.33E-08	3.33E-08	2.58E-09	3.13E-09
4600	7.67E-09	9.62E-08	9.42E-08	9.42E-08	7.30E-09	8.85E-09
4700	2.03E-08	2.54E-07	2.49E-07	2.49E-07	1.93E-08	2.34E-08
4800	5.02E-08	6.29E-07	6.16E-07	6.16E-07	4.77E-08	5.79E-08
4900	1.17E-07	1.46E-06	1.43E-06	1.43E-06	1.11E-07	1.35E-07
5000	2.59E-07	3.24E-06	3.17E-06	3.17E-06	2.46E-07	2.98E-07
5100	5.42E-07	6.79E-06	6.64E-06	6.64E-06	5.15E-07	6.24E-07
5200	1.08E-06	1.36E-05	1.33E-05	1.33E-05	1.03E-06	1.25E-06
5300	2.07E-06	2.59E-05	2.53E-05	2.53E-05	1.96E-06	2.38E-06
5400	3.79E-06	4.76E-05	4.65E-05	4.65E-05	3.61E-06	4.37E-06
5500	6.68E-06	8.38E-05	8.20E-05	8.20E-05	6.35E-06	7.70E-06
5600	1.14E-05	1.43E-04	1.40E-04	1.40E-04	1.08E-05	1.31E-05
5700	1.86E-05	2.34E-04	2.29E-04	2.29E-04	1.77E-05	2.15E-05
5800	2.96E-05	3.72E-04	3.64E-04	3.64E-04	2.82E-05	3.42E-05
5900	4.59E-05	5.75E-04	5.63E-04	5.63E-04	4.36E-05	5.29E-05
6000	6.88E-05	8.63E-04	8.45E-04	8.45E-04	6.54E-05	7.93E-05
6100	1.00E-04	1.26E-03	1.23E-03	1.23E-03	9.55E-05	1.16E-04
6200	1.44E-04	1.80E-03	1.76E-03	1.76E-03	1.37E-04	1.66E-04
6300	2.02E-04	2.53E-03	2.48E-03	2.48E-03	1.92E-04	2.33E-04
6400	2.76E-04	3.46E-03	3.39E-03	3.39E-03	2.63E-04	3.18E-04
6500	3.71E-04	4.65E-03	4.55E-03	4.55E-03	3.52E-04	4.27E-04
6600	4.89E-04	6.14E-03	6.01E-03	6.01E-03	4.65E-04	5.64E-04
6700	6.34E-04	7.95E-03	7.78E-03	7.78E-03	6.03E-04	7.31E-04
6800	8.10E-04	1.02E-02	9.94E-03	9.94E-03	7.70E-04	9.34E-04
6900	1.02E-03	1.28E-02	1.26E-02	1.26E-02	9.73E-04	1.18E-03
7000	1.26E-03	1.59E-02	1.55E-02	1.55E-02	1.20E-03	1.46E-03
7100	1.55E-03	1.95E-02	1.91E-02	1.91E-02	1.48E-03	1.79E-03

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Copper Group							Thallium Group									C
Years from Present	*Copper*	Barium	Antimony	Manganese	Mercury	*Uranium*	Zinc	*Thallium*	Cadmium	Silver	*Iron*	Lead	*Nickel*	Beryllium	Vanadium	*Arsenic*	*Chromium*
7200	1.16E-01	2.17E-01	1.18E-03	7.29E-02	4.49E-05	8.81E-05	9.40E-01	3.78E-06	2.08E-05	2.36E-04	0.00E+00	7.87E-04	0.00E+00	8.32E-05	2.74E-04	0.00E+00	3.28E+00
7300	1.23E-01	2.29E-01	1.24E-03	7.69E-02	4.73E-05	1.07E-04	9.91E-01	4.76E-06	2.62E-05	2.97E-04	0.00E+00	9.91E-04	0.00E+00	1.05E-04	3.44E-04	0.00E+00	3.25E+00
7400	1.29E-01	2.41E-01	1.31E-03	8.08E-02	4.97E-05	1.29E-04	1.04E+00	5.91E-06	3.26E-05	3.69E-04	0.00E+00	1.23E-03	0.00E+00	1.30E-04	4.28E-04	0.00E+00	3.21E+00
7500	1.35E-01	2.53E-01	1.37E-03	8.48E-02	5.22E-05	1.54E-04	1.09E+00	7.24E-06	4.00E-05	4.52E-04	0.00E+00	1.51E-03	0.00E+00	1.60E-04	5.24E-04	0.00E+00	3.17E+00
7600	1.42E-01	2.65E-01	1.43E-03	8.87E-02	5.46E-05	1.82E-04	1.14E+00	8.82E-06	4.87E-05	5.51E-04	0.00E+00	1.84E-03	0.00E+00	1.94E-04	6.39E-04	0.00E+00	3.14E+00
7700	1.48E-01	2.76E-01	1.50E-03	9.27E-02	5.70E-05	2.13E-04	1.19E+00	1.06E-05	5.85E-05	6.62E-04	0.00E+00	2.21E-03	0.00E+00	2.33E-04	7.67E-04	0.00E+00	3.10E+00
7800	1.55E-01	2.89E-01	1.56E-03	9.68E-02	5.96E-05	2.47E-04	1.25E+00	1.26E-05	6.96E-05	7.88E-04	0.00E+00	2.63E-03	0.00E+00	2.78E-04	9.14E-04	0.00E+00	3.06E+00
7900	1.61E-01	3.01E-01	1.63E-03	1.01E-01	6.20E-05	2.85E-04	1.30E+00	1.49E-05	8.23E-05	9.31E-04	0.00E+00	3.11E-03	0.00E+00	3.28E-04	1.08E-03	0.00E+00	3.02E+00
8000	1.68E-01	3.13E-01	1.70E-03	1.05E-01	6.46E-05	3.26E-04	1.35E+00	1.75E-05	9.65E-05	1.09E-03	0.00E+00	3.64E-03	0.00E+00	3.85E-04	1.27E-03	0.00E+00	2.98E+00
8100	1.74E-01	3.25E-01	1.76E-03	1.09E-01	6.71E-05	3.70E-04	1.41E+00	2.03E-05	1.12E-04	1.27E-03	0.00E+00	4.23E-03	0.00E+00	4.47E-04	1.47E-03	0.00E+00	2.94E+00
8200	1.81E-01	3.38E-01	1.83E-03	1.13E-01	6.97E-05	4.18E-04	1.46E+00	2.36E-05	1.30E-04	1.47E-03	0.00E+00	4.91E-03	0.00E+00	5.19E-04	1.71E-03	0.00E+00	2.90E+00
8300	1.87E-01	3.50E-01	1.90E-03	1.17E-01	7.23E-05	4.70E-04	1.51E+00	2.69E-05	1.48E-04	1.68E-03	0.00E+00	5.60E-03	0.00E+00	5.92E-04	1.95E-03	0.00E+00	2.86E+00
8400	1.94E-01	3.62E-01	1.96E-03	1.22E-01	7.48E-05	5.25E-04	1.57E+00	3.07E-05	1.69E-04	1.91E-03	0.00E+00	6.39E-03	0.00E+00	6.75E-04	2.22E-03	0.00E+00	2.83E+00
8500	2.01E-01	3.75E-01	2.03E-03	1.26E-01	7.74E-05	5.84E-04	1.62E+00	3.47E-05	1.91E-04	2.16E-03	0.00E+00	7.22E-03	0.00E+00	7.64E-04	2.51E-03	0.00E+00	2.78E+00
8600	2.07E-01	3.87E-01	2.10E-03	1.30E-01	7.99E-05	6.44E-04	1.67E+00	3.91E-05	2.16E-04	2.44E-03	0.00E+00	8.15E-03	0.00E+00	8.61E-04	2.83E-03	0.00E+00	2.75E+00
8700	2.14E-01	4.00E-01	2.17E-03	1.34E-01	8.25E-05	7.13E-04	1.73E+00	4.38E-05	2.42E-04	2.73E-03	0.00E+00	9.12E-03	0.00E+00	9.64E-04	3.17E-03	0.00E+00	2.71E+00
8800	2.21E-01	4.12E-01	2.23E-03	1.38E-01	8.50E-05	7.77E-04	1.78E+00	4.89E-05	2.70E-04	3.05E-03	0.00E+00	1.02E-02	0.00E+00	1.08E-03	3.54E-03	0.00E+00	2.67E+00
8900	2.27E-01	4.24E-01	2.30E-03	1.42E-01	8.76E-05	8.52E-04	1.83E+00	5.44E-05	3.00E-04	3.40E-03	0.00E+00	1.13E-02	0.00E+00	1.20E-03	3.94E-03	0.00E+00	2.63E+00
9000	2.34E-01	4.37E-01	2.37E-03	1.46E-01	9.02E-05	9.26E-04	1.89E+00	6.02E-05	3.32E-04	3.76E-03	0.00E+00	1.25E-02	0.00E+00	1.33E-03	4.36E-03	0.00E+00	2.60E+00
9100	2.41E-01	4.49E-01	2.43E-03	1.51E-01	9.27E-05	1.01E-03	1.94E+00	6.62E-05	3.65E-04	4.13E-03	0.00E+00	1.38E-02	0.00E+00	1.46E-03	4.79E-03	0.00E+00	2.56E+00
9200	2.47E-01	4.62E-01	2.50E-03	1.55E-01	9.53E-05	1.08E-03	2.00E+00	7.27E-05	4.01E-04	4.54E-03	0.00E+00	1.51E-02	0.00E+00	1.60E-03	5.26E-03	0.00E+00	2.52E+00
9300	2.54E-01	4.74E-01	2.57E-03	1.59E-01	9.78E-05	1.17E-03	2.05E+00	7.96E-05	4.39E-04	4.97E-03	0.00E+00	1.66E-02	0.00E+00	1.75E-03	5.76E-03	0.00E+00	2.49E+00
9400	2.60E-01	4.86E-01	2.63E-03	1.63E-01	1.00E-04	1.25E-03	2.10E+00	8.67E-05	4.78E-04	5.41E-03	0.00E+00	1.81E-02	0.00E+00	1.91E-03	6.27E-03	0.00E+00	2.45E+00
9500	2.67E-01	4.99E-01	2.70E-03	1.67E-01	1.03E-04	1.34E-03	2.16E+00	9.42E-05	5.20E-04	5.88E-03	0.00E+00	1.96E-02	0.00E+00	2.08E-03	6.82E-03	0.00E+00	2.41E+00
9600	2.74E-01	5.11E-01	2.77E-03	1.71E-01	1.06E-04	1.43E-03	2.21E+00	1.02E-04	5.64E-04	6.38E-03	0.00E+00	2.13E-02	0.00E+00	2.25E-03	7.40E-03	0.00E+00	2.37E+00
9700	2.80E-01	5.24E-01	2.84E-03	1.76E-01	1.08E-04	1.52E-03	2.26E+00	1.10E-04	6.09E-04	6.89E-03	0.00E+00	2.30E-02	0.00E+00	2.43E-03	8.00E-03	0.00E+00	2.34E+00
9800	2.87E-01	5.35E-01	2.90E-03	1.80E-01	1.10E-04	1.62E-03	2.31E+00	1.19E-04	6.57E-04	7.44E-03	0.00E+00	2.48E-02	0.00E+00	2.62E-03	8.62E-03	0.00E+00	2.31E+00
9900	2.93E-01	5.48E-01	2.97E-03	1.84E-01	1.13E-04	1.72E-03	2.37E+00	1.28E-04	7.06E-04	7.99E-03	0.00E+00	2.67E-02	0.00E+00	2.82E-03	9.27E-03	0.00E+00	2.27E+00
10000	3.00E-01	5.60E-01	3.03E-03	1.88E-01	1.16E-04	1.82E-03	2.42E+00	1.37E-04	7.58E-04	8.57E-03	0.00E+00	2.86E-02	0.00E+00	3.02E-03	9.94E-03	0.00E+00	2.24E+00
Maximum Concentration	3.00E-01	5.60E-01	3.03E-03	1.88E-01	1.16E-04	1.82E-03	2.42E+00	1.37E-04	7.58E-04	8.57E-03	0.00E+00	2.86E-02	0.00E+00	3.02E-03	9.94E-03	0.00E+00	3.72E+00

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	hromium Group		2-Butanone Group	Benzene Group						Vinyl Chloride Group						
Years from Present	*Selenium*	Molybdenum	*2-Butanone*	*Benzene*	Ethylbenzene	Xylene	m-Xylene	p-Xylene	o-Xylene	*Vinyl chloride*	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	Chloroform	1,1-DCE	1,2-DCE
7200	4.56E-02	5.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7300	4.53E-02	5.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7400	4.47E-02	5.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7500	4.41E-02	5.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7600	4.35E-02	5.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7700	4.32E-02	5.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7800	4.26E-02	5.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7900	4.23E-02	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8000	4.17E-02	5.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8100	4.14E-02	4.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8200	4.08E-02	4.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8300	4.02E-02	4.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8400	3.99E-02	4.76E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8500	3.94E-02	4.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8600	3.91E-02	4.62E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8700	3.85E-02	4.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8800	3.82E-02	4.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8900	3.76E-02	4.43E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9000	3.73E-02	4.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9100	3.67E-02	4.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9200	3.64E-02	4.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9300	3.61E-02	4.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9400	3.55E-02	4.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9500	3.52E-02	4.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9600	3.46E-02	4.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9700	3.43E-02	3.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9800	3.37E-02	3.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9900	3.34E-02	3.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10000	3.31E-02	3.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Maximum Concentration	6.27E-02	6.26E-02	3.04E-07	5.76E-11	2.47E-12	2.55E-12	2.44E-12	2.22E-12	2.37E-12	2.80E-05	1.96E-05	3.34E-05	4.58E-05	3.15E-05	7.63E-06	2.30E-06

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Trichloroethene Group			Chlorobenzene Group			2-Methylphenol Group					
Years from Present	*Trichloroethene*	Carbon tetrachloride	Tetrachloroethene	*Chlorobenzene*	1,4-Dichlorobenzene	Hexachlorobenzene	*2-Methylphenol*	Pyridine	4-Methylphenol	3-Methylphenol	2,4-DNT	Nitrobenzene
7200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Maximum Concentration	1.49E-07	7.77E-08	1.42E-08	3.17E-14	3.30E-15	1.94E-16	3.90E-09	4.21E-07	2.52E-09	1.56E-09	1.38E-11	9.28E-11

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

				gamma-Chlordane Group								
Years from Present	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	Acrylonitrile	*gamma-Chlordane*	alpha-Chlordane	Methoxychlor	Heptachlor epoxide	Toxaphene	*Pentachlorophenol*	Naphthalene	Hexachloroethane	Acenaphthene
7200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Maximum Concentration	1.25E-11	1.86E-11	1.44E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-10	4.06E-12	6.26E-12	4.81E-13

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Pentachlorophenol Group							Benzo(a)pyrene Group		PCB Group	Tc-99 Group				
Years from Present	Acenaphthylene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Hexachlorobutadiene	Pyrene	*Benzo(a)pyrene*	Dioxin/Furan	*PCB*	*Tc-99*	*Np-237*	*U-238*	U-234	U-235
7200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-03	2.07E+00	3.57E-02	4.40E-02	4.35E-02
7300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-03	2.30E+00	4.29E-02	5.29E-02	5.21E-02
7400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-03	2.53E+00	5.10E-02	6.28E-02	6.19E-02
7500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-03	2.76E+00	5.99E-02	7.39E-02	7.29E-02
7600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-03	2.98E+00	7.00E-02	8.63E-02	8.51E-02
7700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03	3.19E+00	8.10E-02	9.98E-02	9.85E-02
7800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-03	3.38E+00	9.33E-02	1.15E-01	1.13E-01
7900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.28E-04	3.55E+00	1.06E-01	1.31E-01	1.29E-01
8000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-04	3.72E+00	1.21E-01	1.49E-01	1.47E-01
8100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-04	3.86E+00	1.36E-01	1.68E-01	1.66E-01
8200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.61E-04	3.99E+00	1.53E-01	1.88E-01	1.86E-01
8300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E-04	4.13E+00	1.71E-01	2.10E-01	2.07E-01
8400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-04	4.23E+00	1.89E-01	2.33E-01	2.30E-01
8500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-04	4.30E+00	2.09E-01	2.58E-01	2.54E-01
8600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-04	4.40E+00	2.31E-01	2.85E-01	2.81E-01
8700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-04	4.47E+00	2.53E-01	3.12E-01	3.08E-01
8800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-04	4.51E+00	2.77E-01	3.41E-01	3.36E-01
8900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-04	4.57E+00	3.02E-01	3.73E-01	3.68E-01
9000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-04	4.61E+00	3.28E-01	4.04E-01	3.99E-01
9100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-04	4.64E+00	3.56E-01	4.38E-01	4.32E-01
9200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-04	4.64E+00	3.83E-01	4.72E-01	4.66E-01
9300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-05	4.68E+00	4.14E-01	5.10E-01	5.04E-01
9400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.49E-05	4.68E+00	4.44E-01	5.47E-01	5.39E-01
9500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.33E-05	4.71E+00	4.77E-01	5.87E-01	5.79E-01
9600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E-05	4.71E+00	5.10E-01	6.28E-01	6.19E-01
9700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.53E-05	4.71E+00	5.42E-01	6.69E-01	6.60E-01
9800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E-05	4.71E+00	5.77E-01	7.12E-01	7.02E-01
9900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.24E-05	4.71E+00	6.14E-01	7.57E-01	7.46E-01
10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-05	4.71E+00	6.52E-01	8.04E-01	7.93E-01
Maximum Concentration	1.79E-12	2.21E-13	1.33E-13	4.77E-15	2.24E-14	3.56E-13	1.47E-14	0.00E+00	0.00E+00	0.00E+00	1.17E+02	4.71E+00	6.52E-01	8.04E-01	7.93E-01

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	U-238 Group					
Years from Present	Ra-226	Pu-238	Pu-239	Pu-240	Th-230	Th-232
7200	1.88E-03	2.36E-02	2.31E-02	2.31E-02	1.79E-03	2.17E-03
7300	2.26E-03	2.83E-02	2.77E-02	2.77E-02	2.15E-03	2.60E-03
7400	2.68E-03	3.37E-02	3.29E-02	3.29E-02	2.55E-03	3.09E-03
7500	3.16E-03	3.96E-02	3.87E-02	3.87E-02	3.00E-03	3.64E-03
7600	3.69E-03	4.62E-02	4.52E-02	4.52E-02	3.51E-03	4.25E-03
7700	4.27E-03	5.35E-02	5.24E-02	5.24E-02	4.06E-03	4.92E-03
7800	4.91E-03	6.16E-02	6.03E-02	6.03E-02	4.67E-03	5.66E-03
7900	5.61E-03	7.03E-02	6.88E-02	6.88E-02	5.33E-03	6.47E-03
8000	6.36E-03	7.98E-02	7.81E-02	7.81E-02	6.05E-03	7.33E-03
8100	7.18E-03	9.01E-02	8.81E-02	8.81E-02	6.83E-03	8.28E-03
8200	8.05E-03	1.01E-01	9.88E-02	9.88E-02	7.66E-03	9.28E-03
8300	8.99E-03	1.13E-01	1.10E-01	1.10E-01	8.55E-03	1.04E-02
8400	9.94E-03	1.25E-01	1.22E-01	1.22E-01	9.45E-03	1.15E-02
8500	1.10E-02	1.38E-01	1.35E-01	1.35E-01	1.05E-02	1.27E-02
8600	1.22E-02	1.53E-01	1.49E-01	1.49E-01	1.16E-02	1.40E-02
8700	1.33E-02	1.67E-01	1.63E-01	1.63E-01	1.27E-02	1.54E-02
8800	1.46E-02	1.83E-01	1.79E-01	1.79E-01	1.39E-02	1.68E-02
8900	1.59E-02	2.00E-01	1.95E-01	1.95E-01	1.51E-02	1.84E-02
9000	1.73E-02	2.17E-01	2.12E-01	2.12E-01	1.64E-02	1.99E-02
9100	1.87E-02	2.35E-01	2.30E-01	2.30E-01	1.78E-02	2.16E-02
9200	2.02E-02	2.53E-01	2.48E-01	2.48E-01	1.92E-02	2.33E-02
9300	2.18E-02	2.74E-01	2.68E-01	2.68E-01	2.07E-02	2.51E-02
9400	2.34E-02	2.93E-01	2.87E-01	2.87E-01	2.22E-02	2.69E-02
9500	2.51E-02	3.15E-01	3.08E-01	3.08E-01	2.39E-02	2.89E-02
9600	2.68E-02	3.37E-01	3.29E-01	3.29E-01	2.55E-02	3.09E-02
9700	2.86E-02	3.58E-01	3.51E-01	3.51E-01	2.72E-02	3.29E-02
9800	3.04E-02	3.81E-01	3.73E-01	3.73E-01	2.89E-02	3.51E-02
9900	3.23E-02	4.05E-01	3.97E-01	3.97E-01	3.08E-02	3.73E-02
10000	3.44E-02	4.31E-01	4.22E-01	4.22E-01	3.27E-02	3.96E-02
Maximum Concentration	3.44E-02	4.31E-01	4.22E-01	4.22E-01	3.27E-02	3.96E-02

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Copper Group							Thallium Group									C
Years from Present	*Copper*	Barium	Antimony	Manganese	Mercury	*Uranium*	Zinc	*Thallium*	Cadmium	Silver	*Iron*	Lead	*Nickel*	Beryllium	Vanadium	*Arsenic*	*Chromium*
Screening Values																	
Child Resident Hazard	5.57E-02	1.04E-01	5.64E-04	3.50E-02	4.44E-04	9.06E-04	4.50E-01	1.20E-04	6.61E-04	7.50E-03	4.49E-01	0.00E+00	3.01E-02	2.64E-03	9.25E-03	4.52E-04	1.76E+00
Adult Resident Hazard	1.34E-01	2.49E-01	1.34E-03	8.38E-02	1.07E-03	2.19E-03	1.09E+00	2.89E-04	1.54E-03	1.81E-02	1.08E+00	0.00E+00	7.25E-02	6.18E-03	2.16E-02	1.09E-03	4.02E+00
Resident Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-05	0.00E+00
Child Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adult Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Child Recreational Hazard	4.33E+00	1.91E+00	3.12E-03	3.74E-01	8.19E-03	1.99E-01	2.34E+01	6.24E-03	1.95E-03	3.51E-01	1.75E+01	0.00E+00	2.10E+00	7.80E-03	2.73E-02	4.79E-02	2.92E+00
Teen Recreational Hazard	6.47E+00	2.86E+00	4.66E-03	8.31E-01	1.22E-02	2.97E-01	3.50E+01	9.32E-03	2.91E-03	5.24E-01	2.62E+01	0.00E+00	3.15E+00	1.17E-02	4.08E-02	7.71E-02	4.37E+00
Adult Recreational Hazard	2.26E+01	9.96E+00	1.63E-02	1.95E+00	4.27E-02	1.04E+00	1.22E+02	3.25E-02	1.02E-02	1.83E+00	9.14E+01	0.00E+00	1.10E+01	4.06E-02	1.42E-01	2.50E-01	1.52E+01
Recreational Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-03	0.00E+00
Maximum Hazard and Risk																	
Child Resident Hazard	5.38E-01	5.39E-01	5.38E-01	5.37E-01	2.60E-02	2.01E-01	5.38E-01	1.14E-01	1.15E-01	1.14E-01	0.00E+00	NA	0.00E+00	1.15E-01	1.07E-01	0.00E+00	2.11E-01
Adult Resident Hazard	2.24E-01	2.25E-01	2.26E-01	2.24E-01	1.08E-02	8.30E-02	2.22E-01	4.75E-02	4.92E-02	4.74E-02	0.00E+00	NA	0.00E+00	4.89E-02	4.60E-02	0.00E+00	9.25E-02
Resident Cancer	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	NA
Child Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Adult Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Child Recreational Hazard	6.93E-03	2.93E-02	9.73E-02	5.02E-02	1.41E-03	9.13E-04	1.03E-02	2.20E-03	3.89E-02	2.44E-03	0.00E+00	NA	0.00E+00	3.88E-02	3.64E-02	0.00E+00	1.27E-01
Teen Recreational Hazard	4.64E-03	1.96E-02	6.51E-02	2.26E-02	9.48E-04	6.12E-04	6.92E-03	1.47E-03	2.60E-02	1.64E-03	0.00E+00	NA	0.00E+00	2.59E-02	2.44E-02	0.00E+00	8.51E-02
Adult Recreational Hazard	1.33E-03	5.62E-03	1.86E-02	9.63E-03	2.71E-04	1.75E-04	1.98E-03	4.23E-04	7.43E-03	4.68E-04	0.00E+00	NA	0.00E+00	7.45E-03	7.00E-03	0.00E+00	2.45E-02
Recreational Cancer	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	NA

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	hromium Group		2-Butanone Group	Benzene Group						Vinyl Chloride Group						
Years from Present	*Selenium*	Molybdenum	*2-Butanone*	*Benzene*	Ethylbenzene	Xylene	m-Xylene	p-Xylene	o-Xylene	*Vinyl chloride*	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	Chloroform	1,1-DCE	1,2-DCE
Screening Values																
Child Resident Hazard	7.54E-03	7.53E-03	8.68E-02	5.04E-04	5.63E-02	6.53E-02	4.39E-01	4.39E-01	4.39E-01	3.06E-03	2.73E-03	5.48E-03	4.65E-04	2.87E-05	2.46E-03	2.47E-03
Adult Resident Hazard	1.82E-02	1.82E-02	3.82E-01	2.18E-03	1.89E-01	3.07E-01	1.80E+00	1.80E+00	1.80E+00	8.76E-03	1.11E-02	2.24E-02	2.22E-03	1.38E-04	1.00E-02	1.01E-02
Resident Cancer	0.00E+00	0.00E+00	0.00E+00	3.85E-04	4.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-05	0.00E+00	0.00E+00	1.47E-04	2.17E-04	4.70E-05	0.00E+00
Child Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adult Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Child Recreational Hazard	8.58E-01	7.41E-01	1.70E+02	5.40E-02	5.11E-01	7.55E+00	7.80E+00	7.80E+00	7.80E+00	1.60E-01	3.90E-01	7.09E+00	2.21E+00	8.76E-02	3.94E-01	2.55E+00
Teen Recreational Hazard	1.28E+00	1.11E+00	2.54E+02	8.07E-02	7.64E-01	1.13E+01	1.17E+01	1.17E+01	1.17E+01	2.39E-01	5.83E-01	1.06E+01	3.30E+00	1.31E-01	5.89E-01	3.81E+00
Adult Recreational Hazard	4.47E+00	3.86E+00	8.87E+02	2.82E-01	2.66E+00	3.94E+01	4.06E+01	4.06E+01	4.06E+01	8.35E-01	2.03E+00	3.69E+01	1.15E+01	4.57E-01	2.05E+00	1.33E+01
Recreational Cancer	0.00E+00	0.00E+00	0.00E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	0.00E+00	0.00E+00	3.10E-02	5.51E-02	2.80E-03	0.00E+00
Maximum Hazard and Risk																
Child Resident Hazard	8.32E-01	8.31E-01	3.51E-07	1.14E-08	4.40E-12	3.91E-12	5.55E-13	5.06E-13	5.41E-13	9.14E-04	7.20E-04	6.09E-04	9.86E-03	1.10E-01	3.10E-04	9.33E-05
Adult Resident Hazard	3.45E-01	3.44E-01	7.97E-08	2.64E-09	1.31E-12	8.32E-13	1.35E-13	1.23E-13	1.32E-13	3.19E-04	1.77E-04	1.49E-04	2.06E-03	2.28E-02	7.63E-05	2.28E-05
Resident Cancer	NA	NA	NA	1.50E-13	5.29E-16	NA	NA	NA	NA	8.00E-07	NA	NA	3.12E-07	1.45E-07	1.62E-07	NA
Child Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Adult Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Child Recreational Hazard	7.31E-03	8.44E-03	1.79E-10	1.07E-10	4.84E-13	3.38E-14	3.12E-14	2.85E-14	3.04E-14	1.75E-05	5.04E-06	4.71E-07	2.07E-06	3.60E-05	1.94E-06	9.04E-08
Teen Recreational Hazard	4.90E-03	5.64E-03	1.20E-10	7.14E-11	3.24E-13	2.26E-14	2.08E-14	1.90E-14	2.03E-14	1.17E-05	3.37E-06	3.15E-07	1.39E-06	2.41E-05	1.30E-06	6.05E-08
Adult Recreational Hazard	1.40E-03	1.62E-03	3.43E-11	2.04E-11	9.30E-14	6.48E-15	6.00E-15	5.47E-15	5.85E-15	3.35E-06	9.68E-07	9.04E-08	3.99E-07	6.90E-06	3.72E-07	1.73E-08
Recreational Cancer	NA	NA	NA	4.57E-15	NA	NA	NA	NA	NA	1.92E-08	NA	NA	1.48E-09	5.72E-10	2.73E-09	NA

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Trichloroethene Group			Chlorobenzene Group			2-Methylphenol Group					
Years from Present	***Trichloroethene***	Carbon tetrachloride	Tetrachloroethene	***Chlorobenzene***	1,4-Dichlorobenzene	Hexachlorobenzene	***2-Methylphenol***	Pyridine	4-Methylphenol	3-Methylphenol	2,4-DNT	Nitrobenzene
Screening Values												
Child Resident Hazard	1.60E-03	1.90E-04	8.42E-03	4.66E-03	8.10E-03	7.54E-04	7.23E-02	1.49E-03	7.27E-03	7.25E-02	3.00E-03	1.53E-04
Adult Resident Hazard	6.34E-03	7.69E-04	2.02E-02	1.88E-02	3.24E-02	1.66E-03	7.72E-01	3.58E-03	1.74E-02	1.73E-01	7.24E-03	6.12E-04
Resident Cancer	1.73E-03	1.81E-04	5.82E-04	0.00E+00	5.78E-04	1.92E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.69E-05	0.00E+00
Child Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adult Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Child Recreational Hazard	2.19E-02	8.06E-03	1.05E-02	5.89E-02	1.70E-01	7.42E-04	6.09E-01	3.68E-02	7.04E-02	6.50E-01	1.74E-01	2.74E-02
Teen Recreational Hazard	3.28E-02	1.21E-02	1.57E-02	8.81E-02	2.54E-01	1.11E-03	9.10E-01	5.50E-02	1.05E-01	9.71E-01	2.61E-01	4.10E-02
Adult Recreational Hazard	1.14E-01	4.20E-02	5.49E-02	3.07E-01	8.85E-01	3.87E-03	3.18E+00	1.92E-01	3.67E-01	3.39E+00	9.09E-01	1.43E-01
Recreational Cancer	1.27E-02	3.40E-03	7.77E-04	0.00E+00	9.04E-03	2.23E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.92E-03	0.00E+00
Maximum Hazard and Risk												
Child Resident Hazard	9.28E-06	4.09E-05	1.68E-07	6.81E-13	4.07E-14	2.58E-14	5.39E-09	2.83E-05	3.47E-08	2.15E-09	4.61E-10	6.06E-08
Adult Resident Hazard	2.34E-06	1.01E-05	7.02E-08	1.69E-13	1.02E-14	1.17E-14	5.05E-10	1.18E-05	1.45E-08	8.99E-10	1.91E-10	1.52E-08
Resident Cancer	8.59E-11	4.30E-10	2.44E-11	NA	5.70E-18	1.01E-17	NA	NA	NA	NA	1.80E-13	NA
Child Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Adult Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Child Recreational Hazard	6.78E-07	9.65E-07	1.35E-07	5.38E-14	1.94E-15	2.62E-14	6.40E-10	1.14E-06	3.58E-09	2.39E-10	7.94E-12	3.39E-10
Teen Recreational Hazard	4.53E-07	6.43E-07	9.03E-08	3.60E-14	1.30E-15	1.75E-14	4.28E-10	7.66E-07	2.40E-09	1.60E-10	5.30E-12	2.26E-10
Adult Recreational Hazard	1.30E-07	1.85E-07	2.58E-08	1.03E-14	3.72E-16	5.02E-15	1.23E-10	2.19E-07	6.87E-10	4.59E-11	1.52E-12	6.49E-11
Recreational Cancer	1.17E-11	2.29E-11	1.83E-11	NA	3.65E-19	8.72E-18	NA	NA	NA	NA	2.81E-15	NA

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

				gamma-Chlordane Group								
Years from Present	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	Acrylonitrile	***gamma-Chlordane***	alpha-Chlordane	Methoxychlor	Heptachlor epoxide	Toxaphene	***Pentachlorophenol***	Naphthalene	Hexachloroethane	Acenaphthene
Screening Values												
Child Resident Hazard	0.00E+00	1.29E-01	1.70E-04	6.58E-04	6.58E-04	7.15E-03	1.77E-05	0.00E+00	2.34E-02	2.85E-04	1.35E-03	1.36E-02
Adult Resident Hazard	0.00E+00	3.01E-01	7.39E-04	1.54E-03	1.54E-03	1.70E-02	4.17E-05	0.00E+00	5.02E-02	1.36E-03	3.17E-03	4.63E-02
Resident Cancer	3.99E-03	0.00E+00	4.26E-05	1.28E-04	1.28E-04	0.00E+00	5.12E-06	4.56E-05	2.08E-04	0.00E+00	3.29E-03	0.00E+00
Child Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adult Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Child Recreational Hazard	0.00E+00	3.30E-01	2.23E-01	1.87E-03	1.87E-03	4.87E-02	6.63E-05	0.00E+00	1.80E-02	9.04E-02	4.64E-03	2.90E-02
Teen Recreational Hazard	0.00E+00	4.94E-01	3.33E-01	2.80E-03	2.80E-03	7.28E-02	9.92E-05	0.00E+00	2.69E-02	1.35E-01	6.94E-03	4.34E-02
Adult Recreational Hazard	0.00E+00	1.72E+00	1.16E+00	9.77E-03	9.77E-03	2.54E-01	3.46E-04	0.00E+00	9.38E-02	4.71E-01	2.42E-02	1.51E-01
Recreational Cancer	1.15E-02	0.00E+00	1.58E-02	4.11E-04	4.11E-04	0.00E+00	2.15E-05	4.53E-04	1.92E-04	0.00E+00	1.27E-02	0.00E+00
Maximum Hazard and Risk												
Child Resident Hazard	NA	1.45E-11	8.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.28E-09	1.42E-09	4.64E-10	3.54E-12
Adult Resident Hazard	NA	6.20E-12	1.95E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	5.97E-10	2.99E-10	1.98E-10	1.04E-12
Resident Cancer	3.14E-15	NA	3.39E-08	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.44E-12	NA	1.90E-15	NA
Child Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Adult Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Child Recreational Hazard	NA	5.65E-12	6.47E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.67E-09	4.49E-12	1.35E-10	1.66E-12
Teen Recreational Hazard	NA	3.77E-12	4.33E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.11E-09	3.01E-12	9.02E-11	1.11E-12
Adult Recreational Hazard	NA	1.08E-12	1.24E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.20E-10	8.62E-13	2.59E-11	3.19E-13
Recreational Cancer	1.09E-15	NA	9.13E-11	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.56E-12	NA	4.93E-16	NA

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	Pentachlorophenol Group							Benzo(a)pyrene Group		PCB Group	Tc-99 Group				
Years from Present	Acenaphthylene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Hexachlorobutadiene	Pyrene	*Benzo(a)pyrene*	Dioxin/Furan	*PCB*	*Tc-99*	*Np-237*	*U-238*	U-234	U-235
Screening Values															
Child Resident Hazard	1.36E-02	9.72E-03	2.26E-02	7.66E-02	2.26E-02	2.25E-04	1.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adult Resident Hazard	4.63E-02	3.51E-02	4.70E-02	2.90E-01	4.70E-02	5.08E-04	3.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resident Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-04	0.00E+00	9.51E-07	6.09E-11	7.93E-05	1.40E+01	5.73E-01	4.43E-01	5.46E-01	5.38E-01
Child Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E+03	6.44E-01	1.06E+01	1.01E+01	1.07E+01
Adult Resident Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.78E+02	3.22E-01	5.31E+00	5.05E+00	5.35E+00
Child Recreational Hazard	2.90E-02	3.12E-02	1.34E-02	4.04E-01	1.34E-02	3.25E-04	1.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Teen Recreational Hazard	4.34E-02	4.66E-02	2.01E-02	6.04E-01	2.01E-02	4.86E-04	1.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adult Recreational Hazard	1.51E-01	1.63E-01	7.00E-02	2.11E+00	7.00E-02	1.69E-03	5.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.99E-04	0.00E+00	5.29E-07	3.56E-11	9.61E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Maximum Hazard and Risk															
Child Resident Hazard	1.32E-11	2.28E-12	5.89E-13	6.23E-15	9.91E-14	1.58E-10	8.07E-14	NA	NA	NA	NA	NA	NA	NA	NA
Adult Resident Hazard	3.87E-12	6.30E-13	2.83E-13	1.65E-15	4.76E-14	7.02E-11	3.86E-14	NA	NA	NA	NA	NA	NA	NA	NA
Resident Cancer	NA	NA	NA	NA	NA	7.43E-16	NA	0.00E+00	0.00E+00	0.00E+00	8.34E-06	8.22E-06	1.47E-06	1.47E-06	1.47E-06
Child Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.96E-02	7.32E+00	6.16E-02	7.96E-02	7.41E-02
Adult Resident Dose	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.19E-01	1.46E+01	1.23E-01	1.59E-01	1.48E-01
Child Recreational Hazard	6.17E-12	7.09E-13	9.93E-13	1.18E-15	1.67E-13	1.10E-10	1.30E-13	NA	NA	NA	NA	NA	NA	NA	NA
Teen Recreational Hazard	4.13E-12	4.75E-13	6.62E-13	7.90E-16	1.11E-13	7.33E-11	8.69E-14	NA	NA	NA	NA	NA	NA	NA	NA
Adult Recreational Hazard	1.19E-12	1.36E-13	1.90E-13	2.26E-16	3.20E-14	2.11E-11	2.49E-14	NA	NA	NA	NA	NA	NA	NA	NA
Recreational Cancer	NA	NA	NA	NA	NA	4.46E-16	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA

Table C.1.7. Groundwater concentrations in the RGA for the Ohio River point of exposure calculated using CERCLA-derived waste disposal criteria as the source term for the C-746-U Landfill

	U-238 Group					
Years from Present	Ra-226	Pu-238	Pu-239	Pu-240	Th-230	Th-232
Screening Values						
Child Resident Hazard	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adult Resident Hazard	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resident Cancer	2.33E-02	2.95E-01	2.86E-01	2.86E-01	2.21E-02	2.68E-02
Child Resident Dose	3.32E-01	8.93E-01	8.07E-01	8.07E-01	3.27E-01	5.74E-01
Adult Resident Dose	1.66E-01	4.46E-01	4.04E-01	4.04E-01	1.60E-01	2.87E-01
Child Recreational Hazard	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Teen Recreational Hazard	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adult Recreational Hazard	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Maximum Hazard and Risk						
Child Resident Hazard	NA	NA	NA	NA	NA	NA
Adult Resident Hazard	NA	NA	NA	NA	NA	NA
Resident Cancer	1.47E-06	1.46E-06	1.47E-06	1.47E-06	1.48E-06	1.48E-06
Child Resident Dose	1.04E-01	4.83E-01	5.23E-01	5.23E-01	9.99E-02	6.90E-02
Adult Resident Dose	2.07E-01	9.66E-01	1.04E+00	1.04E+00	2.04E-01	1.38E-01
Child Recreational Hazard	NA	NA	NA	NA	NA	NA
Teen Recreational Hazard	NA	NA	NA	NA	NA	NA
Adult Recreational Hazard	NA	NA	NA	NA	NA	NA
Recreational Cancer	NA	NA	NA	NA	NA	NA

APPENDIX C.2

ECOLOGICAL RISK SUPPORT TABLES

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APPENDIX C.2
ECOLOGICAL RISK SUPPORT TABLES

This appendix contains supporting material used to complete the screening ecological risk assessment (i.e., ecological performance assessment) presented in Sect. 5.2 of the main report. The material in this appendix is as follows:

Table C.2.1 NOAEL Derivation for mammals
Table C.2.2 NOAEL Derivation for birds
Table C.2.3 Exposure factors for mammals and birds ingesting radionuclides
Table C.2.4 Radionuclide benchmarks for drinking water for small mammals
Table C.2.5 Radionuclide benchmarks for drinking water for birds

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Table C.2.1. Derivation of NOAELs for Mammals

Analyte	Test species	Test species body weight (kg) BWt	Benchmark (mg/kg/d)	Test duration	Endpoint	Effect	Source	Duration conversion factor	Endpoint conversion factor	NOAEL (mg/kg/d) benchmark × DCF × ECF
						Inorganics				
Antimony	Mouse	3.00E-02	1.25E-00	chronic	LOAEL	Longevity	Schroeder et al. (1968b) in [1]	1.0	0.1	1.25E-01
Arsenic	Mouse	3.00E-02	1.26E-00	chronic	LOAEL	Reproduction	Schroeder and Mitchner (1971) in [1]	1.0	0.1	1.26E-01
Barium	Mouse	3.00E-02	1.93E+01	chronic	LOAEL	Reproduction	Ondreicka et al. (1966) in [1]	1.0	0.1	1.93E+00
Beryllium	Rat	3.50E-01	6.60E-01	chronic	NOAEL	Longevity	Schroeder and Mitchner (1975) in [1]	1.0	1.0	6.60E-01
Cadmium	Rat	3.03E-01	1.00E-00	chronic	NOAEL	Reproduction	Sutou et al. (1980b) in [1]	1.0	1.0	1.00E-00
Chromium	Rat	3.50E-01	2.74E+03	chronic	NOAEL	Reproduction	Ivankovic and Preussmann (1975) in [1]	1.0	1.0	2.74E+03
Copper	Mink	1.00E-00	1.17E+01	chronic	NOAEL	Reproduction	Aulerich et al. (1982) in [1]	1.0	1.0	1.17E+01
Iron	none	none	none	none	none	none	none	none	none	No NOAEL
Lead	Rat	3.50E-01	8.00E-00	chronic	NOAEL	Reproduction	Azar et al. (1973) in [1]	1.0	1.0	8.00E-00
Manganese	Rat	3.50E-01	8.80E+01	chronic	NOAEL	Reproduction	Laskey et al. (1982) in [1]	1.0	1.0	8.80E+01
Mercury	Mink	1.00E-00	1.01E-00	chronic	NOAEL	Reproduction	Aulerich et al. (1974) in [1]	1.0	1.0	1.01E-00
Molybdenum	Mouse	3.00E-02	2.58E-00	chronic	LOAEL	Reproduction	Schroeder and Mitchner (1971) in [1]	1.0	0.1	2.58E-01
Nickel	Rat	3.50E-01	4.00E+01	chronic	NOAEL	Reproduction	Ambrose et al. (1976) in [1]	1.0	1.0	4.00E+01
Selenium	Rat	3.50E-01	2.00E-01	chronic	NOAEL	Reproduction	Rosenfeld and Beath (1954) in [1]	1.0	1.0	2.00E-01
Silver	Rat	3.50E-01	1.01E+02	chronic	NOAEL	none	Walker (1971) in [4]	1.0	1.0	1.01E+02
Thallium	Rat	3.65E-01	7.40E-01	subchronic	LOAEL	Reproduction	Formigli et al. (1986) in [1]	0.1	0.1	7.40E-03
Uranium	Mouse	2.80E-02	3.07E-00	chronic	NOAEL	Reproduction	Paternain et al. (1989) in [1]	1.0	1.0	3.07E-00
Vanadium	Rat	2.60E-01	2.10E-00	chronic	LOAEL	Reproduction	Domingo et al. (1986) in [1]	1.0	0.1	2.10E-01
Zinc	Rat	3.50E-01	1.60E+02	chronic	NOAEL	Reproduction	Schlicker and Cox (1968) in [1]	1.0	1.0	1.60E+02
						VOCs				
Benzene	Mouse	3.00E-02	2.64E+02	chronic	LOAEL	Reproduction	Nawrot and Staples (1979) in [1]	1.0	0.1	2.64E+01
2-Butanone	Rat	3.50E-01	1.77E+03	chronic	NOAEL	Reproduction	Cox et al. (1975) in [1]	1.0	1.0	1.77E+03
Carbon Tetrachloride	Rat	3.50E-01	1.60E+01	chronic	NOAEL	Reproduction	Alumot et al. 1976a in [1]	1.0	1.0	1.60E+01
Chlorobenzene	Rat	3.50E-01	5.00E+01	chronic	NOAEL	Increase liver/kidney	Knapp et al., 1971 (IRIS)	1.0	1.0	5.00E+01
Chloroform	Rat	3.50E-01	1.50E+02	subchronic	NOAEL	Gonad atrophy	Palmer et al. (1979) in [1]	0.1	1.0	1.50E+01
1,4-Dichlorobenzene	none	none	none	none	none	none	none	none	none	No NOAEL
1,2-Dichloroethane	Mouse	3.50E-02	5.00E+01	chronic	NOAEL	Reproduction	Lane et al. (1982) in [1]	1.0	1.0	5.00E+01
1,1-Dichloroethene	Rat	3.50E-01	3.00E+01	chronic	NOAEL	Mortality	Quast et al. (1983) in [1]	1.0	1.0	3.00E+01
1,2-Dichloroethene	Mouse	3.00E-02	4.52E+02	subchronic	NOAEL	Blood chemistry	Palmer et al. (1979) in [1]	0.1	1.0	4.52E+01
2,4-Dinitrotoluene	Mouse	3.00E-02	1.35E+01	chronic	NOAEL	Reproduction	Ellis et al. (1979)	1.0	1.0	1.35E+01
Ethylbenzene	Rat	3.50E-01	9.71E+01	none	NOAEL	none	Wolfe et al. (1956) in [2]	0.1	1.0	9.71E-00
Hexachlorobenzene	Rat	3.50E-01	8.00E-02	chronic	NOAEL	Liver effects	IRIS [3]	1.0	1.0	8.00E-02
Hexachlorobutadiene	none	none	none	none	none	none	none	none	none	No NOAEL
Hexachloroethane	Rat	3.50E-01	1.00E+00	chronic	NOAEL	Atrophy and degeneration	IRIS [3]	1.0	1.0	1.00E+00
2-Methylphenol	Rat	3.50E-01	5.00E+01	chronic	NOAEL	Neurotoxicity	IRIS [3]	1.0	1.0	5.00E+01
3-Methylphenol	Rat	3.50E-01	5.00E+01	chronic	NOAEL	Neurotoxicity	IRIS [3]	1.0	1.0	5.00E+01
4-Methylphenol	none	none	none	none	none	none	none	none	none	No NOAEL

Table C.2.1. Derivation of NOAELs for Mammals (continued)

Analyte	Test species	Test species body weight (kg) BWt	Benchmark (mg/kg/d)	Test duration	Endpoint	Effect	Source	Duration conversion factor	Endpoint conversion factor	NOAEL (mg/kg/d) benchmark × DCF × ECF
Nitrobenzene	none	none	none	none	none	none	none	none	none	No NOAEL
Pyridine	Rat	3.50E-01	1.00E+00	chronic	NOAEL	Increased Liver Weight	IRIS [3]	1.0	1.0	1.00E+00
Tetrachloroethene	Mouse	3.00E-02	1.40E+01	subchronic	NOAEL	Hepatotoxicity	Buben and O'Flaherty (1985) in [1]	0.1	1.0	1.40E-00
2,4,5-Trichlorophenol	Rat	3.50E-01	1.00E+02	chronic	NOAEL	Liver and kidney pathology	IRIS [3]	1.0	1.0	1.00E+02
2,4,6-Trichlorophenol	none	none	none	none	none	none	none	none	none	No NOAEL
Trichloroethene	Mouse	3.00E-02	7.00E+01	subchronic	LOAEL	Hepatotoxicity	Buben and O'Flaherty (1985) in [1]	0.1	0.1	7.00E-01
Vinyl chloride	Rat	3.50E-01	1.70E-00	chronic	LOAEL	Mortality	Feron et al. (1981) in [1]	1.0	0.1	1.70E-01
Xylene, Total	Mouse	3.00E-02	2.06E-00	chronic	NOAEL	Reproduction	Marks et al. (1982) in [1]	1.0	1.0	2.06E-00
Xylene, m-	none	none	none	none	none	none	none	none	none	No NOAEL
Xylene, o-	none	none	none	none	none	none	none	none	none	No NOAEL
Xylene, p-	none	none	none	none	none	none	none	none	none	No NOAEL
Semivolatile Organic Carbons										
Acenaphthene	Mouse	3.00E-02	1.75E+02	chronic	NOAEL	none	ASTDR (1997) in [3]	1.0	1.0	1.75E+02
Acenaphthylene	Mouse	3.00E-02	1.00E+01	chronic	NOAEL	none	Neal and Rigdon (1967) in [3]	1.0	1.0	1.00E+01
Acrylonitrile	none	none	none	none	none	none	none	none	none	No NOAEL
Anthracene	Mouse	3.00E-02	1.00E+03	chronic	LOAEL	none	ASTDR (1997) in [3]	1.0	0.1	1.00E+02
Dioxins/furans total	none	none	none	none	none	none	none	none	none	No NOAEL
Fluoranthene	Mouse	3.00E-02	5.00E+02	chronic	LOAEL	none	ASTDR (1997) in [3]	1.0	0.1	5.00E+01
Fluorene	Mouse	3.00E-02	1.25E+02	none	none	none	US EPA (1989) in [2]	0.1	0.1	1.25E-00
Naphthalene	Rat	3.50E-01	5.00E+01	chronic	LOAEL	none	ASTDR (1997) in [3]	1.0	0.1	5.00E-00
Phenanthrene	Mouse	3.00E-02	1.00E+01	chronic	LOAEL	Reproduction	Opresko (1995) in [3]	1.0	0.1	1.00E-00
Polyaromatic hydrocarbons	none	none	none	none	none	none	none	none	none	No NOAEL
Pyrene	Mouse	3.00E-02	1.00E+01	chronic	LOAEL	Reproduction	Opresko (1995) in [3]	1.0	0.1	1.00E-00
Pesticides and Polychlorinated Biphenyls										
alpha-Chlordane	Mouse	3.00E-02	4.58E+00	chronic	NOAEL	Reproduction	[Chlordane surrogate]	1.0	1.0	4.58E+00
gamma-Chlordane	Mouse	3.00E-02	4.58E+00	chronic	NOAEL	Reproduction	[Chlordane surrogate]	1.0	1.0	4.58E+00
Heptachlor epoxide	Mink	1.00E+00	1.00E+00	chronic	LOAEL	Reproduction	[Heptachlor surrogate]	1.0	0.1	1.00E-01
Methoxychlor	Rat	3.50E-01	4.00E+00	chronic	NOAEL	Reproduction	Gray et al. (1988) in [1]	1.0	1.0	4.00E+00
Pentachlorophenol	Rat	3.50E-01	2.40E-01	chronic	NOAEL	Reproduction	Schwetz et al. (1978) in [1]	1.0	1.0	2.40E-01
Toxaphene	Rat	3.50E-01	8.00E+00	chronic	NOAEL	Reproduction	Kennedy et al. 1973	1.0	1.0	8.00E+00

DCF = Duration conversion factor; 1 if chronic, 0.1 if subchronic (Sample et al. 1996)
ECF = Endpoint conversion factor; 1 if NOAEL, 0.1 if LOAEL (Sample et al. 1996)
NOAEL = No observed adverse effect level
LOAEL = Lowest observed adverse effect level
[1] = Sample et al. (1996)
[2] = Clayton and Clayton (1981)
[3] = IRIS (1997)
[4] = QST (1997); all values assumed to be chronic

Table C.2.2. Derivation of NOAELs for Birds

Analyte	Test species	Test species body weight (kg) BWt	Benchmark (mg/kg/d)	Test duration	Endpoint	Effect	Source	Duration conversion factor	Endpoint conversion factor	NOAEL (mg/kg/d) benchmark × DCF × ECF
Antimony	Composite Bird	8.50E-01	3.57E-01	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	3.57E-01
Arsenic	Mallard duck	1.00E-00	5.14E-00	chronic	NOAEL	Mortality	USFWS (1979) in [2]	1.0	1.0	5.14E+00
Barium	Chick (1 day old)	1.21E-01	2.08E+02	subchronic	NOAEL	Mortality	Johnson et al. (1960) in [1]	0.1	1.0	2.08E+01
Beryllium	Composite Bird	8.50E-01	1.67E-00	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	1.67E+00
Cadmium	Mallard duck	1.15E-00	1.45E-00	chronic	NOAEL	Reproduction	White and Finley (1978) in [2]	1.0	1.0	1.45E+00
Chromium	Black duck	1.25E-00	1.00E-00	chronic	NOAEL	Reproduction	Haseltine et al. (unpubl.) in [2]	1.0	1.0	1.00E+00
Copper	Chick (5 week old)	5.34E-01	4.70E+01	chronic	NOAEL	Mortality	Mehring et al. (1960) in [2]	1.0	1.0	4.70E+01
Iron	none	none	none	none	none	none	none	none	none	No NOAEL
Lead	Quail	1.50E-01	1.13E-00	chronic	NOAEL	Reproduction	Edens et al. (1976) in [2]	1.0	1.0	1.13E+00
Manganese	Quail	7.20E-02	9.77E+02	chronic	NOAEL	Growth	Laskey and Edens (1985) in [2]	1.0	1.0	9.77E+02
Mercury	Quail	1.50E-01	4.50E-01	chronic	NOAEL	Reproduction	Hill and Schaffner (1976) in [2]	1.0	1.0	4.50E-01
Molybdenum	Chicken	1.50E-00	3.53E+01	chronic	LOAEL	Reproduction	Lepore and Miller (1965) in [2]	1.0	0.1	3.53E+00
Nickel	Mallard duckling	7.82E-01	7.74E+01	chronic	NOAEL	Growth	Cain and Pafford (1981) in [2]	1.0	1.0	7.74E+01
Selenium	Mallard duck	1.00E-00	5.00E-01	chronic	NOAEL	Reproduction	Heinz et al. (1989) in [2]	1.0	1.0	5.00E-01
Silver	Composite Bird	8.50E-01	5.79E+01	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	5.79E+01
Thallium	none	none	none	none	none	none	none	none	none	No NOAEL
Uranium	Black duck	1.25E-00	1.60E+02	subchronic	NOAEL	Mortality	Haseltine and Sileo (1983) in [2]	0.1	1.0	1.60E+01
Vanadium	Mallard duck	1.17E-00	1.14E+01	chronic	NOAEL	Mortality	White and Dieter (1978) in [2]	1.0	1.0	1.14E+01
Zinc	Leghorn chicken	1.94E-00	1.45E+01	chronic	NOAEL	Reproduction	Stahl et al. (1990) in [2]	1.0	1.0	1.45E+01
Volatile Organic Compounds										
Benzene	none	none	none	none	none	none	none	none	none	No NOAEL
2-Butanone	none	none	none	none	none	none	none	none	none	No NOAEL
Carbon tetrachloride	none	none	none	none	none	none	none	none	none	No NOAEL
Chlorobenzene	none	none	none	none	none	none	none	none	none	No NOAEL
Chloroform	none	none	none	none	none	none	none	none	none	No NOAEL
1,4-dichlorobenzene	none	none	none	none	none	none	none	none	none	No NOAEL
1,2-Dichloroethane	Chicken	1.60E+00	1.72E+01	chronic	NOAEL	Reproduction	Alumot et al. (1976b) in [1]	1.0	1.0	1.72E+01
1,1-Dichloroethene	none	none	none	none	none	none	none	none	none	No NOAEL
1,2-Dichloroethene	none	none	none	none	none	none	none	none	none	No NOAEL
2,4-Dinitrotoluene	none	none	none	none	none	none	none	none	none	No NOAEL
Ethylbenzene	none	none	none	none	none	none	none	none	none	No NOAEL

Table C.2.2. Derivation of NOAELs for Birds (continued)

Analyte	Test species	Test species body weight (kg) BWt	Benchmark (mg/kg/d)	Test duration	Endpoint	Effect	Source	Duration conversion factor	Endpoint conversion factor	NOAEL (mg/kg/d) benchmark × DCF × ECF
Hexachlorobenzene	none	none	none	none	none	none	none	none	none	No NOAEL
Hexachlorobutadiene	none	none	none	none	none	none	none	none	none	No NOAEL
Hexachloroethane	none	none	none	none	none	none	none	none	none	No NOAEL
2-Methylphenol	none	none	none	none	none	none	none	none	none	No NOAEL
3-Methylphenol	none	none	none	none	none	none	none	none	none	No NOAEL
4-Methylphenol	none	none	none	none	none	none	none	none	none	No NOAEL
Nitrobenzene	none	none	none	none	none	none	none	none	none	No NOAEL
Pyridine	none	none	none	none	none	none	none	none	none	No NOAEL
Tetrachloroethene	none	none	none	none	none	none	none	none	none	No NOAEL
2,4,5-Trichlorophenol	none	none	none	none	none	none	none	none	none	No NOAEL
2,4,6-Trichlorophenol	none	none	none	none	none	none	none	none	none	No NOAEL
Trichloroethene	none	none	none	none	none	none	none	none	none	No NOAEL
Vinyl chloride	none	none	none	none	none	none	none	none	none	No NOAEL
Xylene, Total	none	none	none	none	none	none	none	none	none	No NOAEL
Xylene, m-	none	none	none	none	none	none	none	none	none	No NOAEL
Xylene, o-	none	none	none	none	none	none	none	none	none	No NOAEL
Xylene, p-	none	none	none	none	none	none	none	none	none	No NOAEL
Semivolatile Organic Compounds										
Acenaphthene	Composite Bird	8.50E-01	8.78E+01	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	8.78E+01
Acenaphthylene	Composite Bird	8.50E-01	9.97E-00	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	9.97E-00
Acrylonitrile	none	none	none	none	none	none	none	none	none	No NOAEL
Anthracene	Composite Bird	8.50E-01	3.30E+02	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	3.30E+02
Dioxins/furans total	none	none	none	none	none	none	none	none	none	No NOAEL
Fluoranthene	Composite Bird	8.50E-01	1.95E+02	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	1.95E+02
Fluorene	Composite Bird	8.50E-01	6.80E+01	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	6.80E+01
Naphthalene	Composite Bird	8.50E-01	3.39E+01	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	3.39E+01
Phenanthrene	Composite Bird	8.50E-01	9.97E-00	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	9.97E-00

Table C.2.2. Derivation of NOAELs for Birds (continued)

Analyte	Test species	Test species body weight (kg) BWt	Benchmark (mg/kg/d)	Test duration	Endpoint	Effect	Source	Duration conversion factor	Endpoint conversion factor	NOAEL (mg/kg/d) benchmark × DCF × ECF
Polyaromatic hydrocarbons	none	none	none	none	none	none	none	none	none	No NOAEL
Pyrene	Composite Bird	8.50E-01	9.97E-00	chronic	NOAEL	none	Shortelle et al. (1997) in [1]	1.0	1.0	9.97E-00
Pesticides and Polychlorinated Biphenyls										
alpha-Chlordane	none	none	none	none	none	none	none	none	none	No NOAEL
gamma-Chlordane	none	none	none	none	none	none	none	none	none	No NOAEL
Heptachlor epoxide	none	none	none	none	none	none	none	none	none	No NOAEL
Methoxychlor	none	none	none	none	none	none	none	none	none	No NOAEL
Pentachlorophenol	none	none	none	none	none	none	none	none	none	No NOAEL
Toxaphene	none	none	none	none	none	none	none	none	none	No NOAEL

DCF = Duration conversion factor; 1 if chronic, 0.1 if subchronic (Sample et al. 1996)
ECF = Endpoint conversion factor; 1 if NOAEL, 0.1 if LOAEL (Sample et al. 1996)
NOAEL = No observed adverse effect level
LOAEL = Lowest observed adverse effect level
[1] = QST 1997. *Draft Remedial Investigation/Baseline Risk Assessment for the Surplus OU, Fort Sheridan, Illinois*, prepared for the U.S. Army Environmental Center, Aberdeen Proving Ground, MD.
[2] = Sample, B.E., D.M. Opresko, and G.W. Suter II 1996. *Toxicological Benchmarks for Wildlife*, 1996 Revision, ES/ER/TM-86/R3.

Table C.2.3. Exposure Factors for Mammals and Birds Exposed to Ingested Radionuclides in Water

Radionuclide	Water ingestion rate (L/d)[a]		Ba[b] (pCi/kg tissue /pCi ingested/d)	Ingestion factor[c] (pCi/g tissue per pCi/L)	
	Shrew	Robin		Shrew	Robin
Technetium-99	3.35E-03	1.19E-02	8.50E-03	2.84E-08	1.01E-07
Plutonium-239	3.35E-03	1.19E-02	5.00E-07	1.67E-12	5.95E-12
Plutonium-240	3.35E-03	1.19E-02	5.00E-07	1.67E-12	5.95E-12
Thorium-232	3.35E-03	1.19E-02	6.00E-06	2.01E-11	7.14E-11
Neptunium-237	3.35E-03	1.19E-02	5.50E-05	1.84E-10	6.55E-10
Uranium-238	3.35E-03	1.19E-02	2.00E-04	6.69E-10	2.38E-09
Uranium-234	3.35E-03	1.19E-02	2.00E-04	6.69E-10	2.38E-09
Thorium-230	3.35E-03	1.19E-02	6.00E-06	2.01E-11	7.14E-11
Radium-226	3.35E-03	1.19E-02	2.50E-04	8.36E-10	2.98E-09
Uranium-235	3.35E-03	1.19E-02	2.00E-04	6.69E-10	2.38E-09
Plutonium-238	3.35E-03	1.19E-02	5.00E-07	1.67E-12	5.95E-12

[a]EPA 1993. *Wildlife Exposure Factors Handbook, Volume I of II*, EPA/600/R-93/187a, U.S. Environmental Protection Agency, Office of Research and Development, Washington D.C.

[b]Beef uptake factor (Baes, C.F. III, R.D. Sharp, A.L. Sjoren, and R.W. Shor 1984. A review and analysis of parameters for assessing transport of environmentally released radionuclides through agriculture, ORNL-5786, Oak Ridge National Laboratory, Oak Ridge, Tennessee.)

[c]Ingestion exposure factor = Water ingestion rate × Beef uptake factor × 0.001 kg/g

Table C.2.4. Drinking Water Benchmarks for Exposure of Small Mammals to Radionuclides

Radionuclide	Alpha energy	Beta energy	Gamma energy	Gamma absorption	Ingestion factor	Ingestion exposure	Benchmark (pCi/L)
Technetium-99	4.87E-00	1.16E-01	9.60E-02	1.35E-02	2.84E-08	1.42E-10	7.05E+07
Plutonium-239	5.23E-00	6.65E-03	7.96E-04	1.00E-00	1.67E-12	8.94E-15	1.12E+12
Plutonium-240	5.24E-00	1.06E-02	1.73E-03	9.40E-01	1.67E-12	8.96E-15	1.12E+12
Thorium-232	4.07E-00	1.25E-02	1.33E-03	9.40E-01	2.01E-11	8.35E-14	1.20E+11
Neptunium-237	4.84E-00	6.85E-02	3.43E-02	3.00E-01	1.84E-10	9.11E-13	1.10E+10
Uranium-238	4.26E-00	1.00E-02	1.36E-03	9.40E-01	6.69E-10	2.91E-12	3.43E+09
Uranium-234	4.84E-00	1.32E-02	1.73E-03	9.40E-01	6.69E-10	3.31E-12	3.02E+09
Thorium-230	4.74E-00	1.46E-02	1.55E-03	9.40E-01	2.01E-11	9.72E-14	1.03E+11
Radium-226	4.86E-00	3.59E-03	6.74E-03	9.40E-01	8.36E-10	4.15E-12	2.41E+09
Uranium-235	4.47E-00	4.80E-02	1.54E-01	1.00E-01	6.69E-10	3.06E-12	3.27E+09
Plutonium-238	5.58E-00	1.06E-02	1.81E-03	9.40E-01	1.67E-12	9.54E-15	1.05E+12

Table C.2.5. Drinking Water Benchmarks for Exposure of Birds to Radionuclides

Radionuclide	Alpha energy	Beta energy	Gamma energy	Gamma absorption	Ingestion factor	Ingestion exposure	Benchmark (pCi/L)
Technetium-99	4.87E-00	1.16E-01	9.60E-02	1.35E-02	1.01E-07	5.04E-10	1.98E+07
Plutonium-239	5.23E-00	6.65E-03	7.96E-04	1.00E-00	5.95E-12	3.18E-14	3.14E+11
Plutonium-240	5.24E-00	1.06E-02	1.73E-03	9.40E-01	5.95E-12	3.19E-14	3.14E+11
Thorium-232	4.07E-00	1.25E-02	1.33E-03	9.40E-01	7.14E-11	2.97E-13	3.37E+10
Neptunium-237	4.84E-00	6.85E-02	3.43E-02	3.00E-01	6.55E-10	3.24E-12	3.09E+09
Uranium-238	4.26E-00	1.00E-02	1.36E-03	9.40E-01	2.38E-09	1.04E-11	9.65E+08
Uranium-234	4.84E-00	1.32E-02	1.73E-03	9.40E-01	2.38E-09	1.18E-11	8.49E+08
Thorium-230	4.74E-00	1.46E-02	1.55E-03	9.40E-01	7.14E-11	3.46E-13	2.89E+10
Radium-226	4.86E-00	3.59E-03	6.74E-03	9.40E-01	2.98E-09	1.48E-11	6.77E+08
Uranium-235	4.47E-00	4.80E-02	1.54E-01	1.00E-01	2.38E-09	1.09E-11	9.19E+08
Plutonium-238	5.58E-00	1.06E-02	1.81E-03	9.40E-01	5.95E-12	3.39E-14	2.95E+11

APPENDIX C.3

FATE AND TRANSPORT MODELING

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FATE AND TRANSPORT

1. HELP Output Lists

   List 1. Operational Period
   List 2. Institutional Control Period
   List 3. Post Institutional Control Period

2. Figures C.3.1 through C.3.78 – Gradual Failure Scenario (Groundwater Concentration of Contaminants over Time)

3. Figures C.3.79 through C.3.87 – Immediate Failure Scenario (Groundwater Concentration of Contaminants over the Time)

   Table C.3.1 – Chemical and physical properties of different classes of chemicals identified as COPCs for the C-746-U Landfill, PGDP, Paducah

   Table C.3.2 – Maximum concentrations for all chemicals at receptor locations based on risk-based disposal criteria for representative chemical [concentrations are not revised for unity and solubility (e.g., the disposal inventory is greater than the capacity of the landfill)]

   Table C.3.3 – Maximum concentrations for all chemicals at receptor locations based on risk-based disposal criteria for representative chemical (disposal criteria are revised if they exceed unity and solubility)

4. Attachment – RESRAD Modeling

List 1. HELP output for operational period

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******************************************************************************
******************************************************************************
**                                                                          **
**                                                                          **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE               **
**               HELP MODEL VERSION 3.01    (14 OCTOBER 1994)               **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                   **
**                    USAE WATERWAYS EXPERIMENT STATION                     **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY              **
**                                                                          **
**                                                                          **
******************************************************************************
******************************************************************************


 PRECIPITATION DATA FILE:      C:\HELP3\PGDPUOP.D4
 TEMPERATURE DATA FILE:        C:\HELP3\PGDPUOP.D7
 SOLAR RADIATION DATA FILE:    C:\HELP3\PGDPUOP.D13
 EVAPOTRANSPIRATION DATA:      C:\HELP3\PGDPUOP.D11
 SOIL AND DESIGN DATA FILE:    C:\HELP3\PUOP8.D10
 OUTPUT DATA FILE:             C:\HELP3\PUOP8.OUT


 TIME:  16:52      DATE:  11/ 7/2001


******************************************************************************

      TITLE:  PGDP U-LANDFILL, OPERATIONAL PERIOD
******************************************************************************


      NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
               COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                   LAYER  1
                                   --------

                     TYPE 1 - VERTICAL PERCOLATION LAYER
                         MATERIAL TEXTURE NUMBER   0
           THICKNESS                  =      6.00   INCHES
           POROSITY                   =      0.3000 VOL/VOL
           FIELD CAPACITY             =      0.1400 VOL/VOL
           WILTING POINT              =      0.1300 VOL/VOL
           INITIAL SOIL WATER CONTENT =      0.1128 VOL/VOL
           EFFECTIVE SAT. HYD. COND.  =  0.249999994000E-04 CM/SEC
           NOTE:  50.00 PERCENT OF THE DRAINAGE COLLECTED FROM LAYER # 5
                  IS RECIRCULATED INTO THIS LAYER.
```

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                    LAYER  2
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER  19
THICKNESS                    =    456.00   INCHES
POROSITY                     =      0.1680 VOL/VOL
FIELD CAPACITY               =      0.0730 VOL/VOL
WILTING POINT                =      0.0190 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0721 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.100000005000E-02 CM/SEC


                    LAYER  3
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER   0
THICKNESS                    =     12.00   INCHES
POROSITY                     =      0.3000 VOL/VOL
FIELD CAPACITY               =      0.1400 VOL/VOL
WILTING POINT                =      0.1300 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.1400 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.499999987000E-04 CM/SEC


                    LAYER  4
                    --------

            TYPE 2 - LATERAL DRAINAGE LAYER
              MATERIAL TEXTURE NUMBER  20
THICKNESS                    =      0.24   INCHES
POROSITY                     =      0.8500 VOL/VOL
FIELD CAPACITY               =      0.0100 VOL/VOL
WILTING POINT                =      0.0050 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.1225 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =   10.0000000000     CM/SEC


                    LAYER  5
                    --------

            TYPE 2 - LATERAL DRAINAGE LAYER
              MATERIAL TEXTURE NUMBER  21
THICKNESS                    =     12.00   INCHES
POROSITY                     =      0.3970 VOL/VOL
FIELD CAPACITY               =      0.0320 VOL/VOL
WILTING POINT                =      0.0130 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0964 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.300000012000     CM/SEC
SLOPE                        =      1.50   PERCENT
DRAINAGE LENGTH              =    800.0    FEET
NOTE:  50.00 PERCENT OF THE DRAINAGE COLLECTED FROM THIS
       LAYER IS RECIRCULATED INTO LAYER # 1.
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                    LAYER  6
                    --------

          TYPE 4 - FLEXIBLE MEMBRANE LINER
            MATERIAL TEXTURE NUMBER  35
THICKNESS                    =      0.08    INCHES
POROSITY                     =      0.0000 VOL/VOL
FIELD CAPACITY               =      0.0000 VOL/VOL
WILTING POINT                =      0.0000 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0000 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.199999996000E-12 CM/SEC
FML PINHOLE DENSITY          =      1.00    HOLES/ACRE
FML INSTALLATION DEFECTS     =      1.00    HOLES/ACRE
FML PLACEMENT QUALITY        =  3 - GOOD


                    LAYER  7
                    --------

            TYPE 3 - BARRIER SOIL LINER
            MATERIAL TEXTURE NUMBER  16
THICKNESS                    =     36.00    INCHES
POROSITY                     =      0.4270 VOL/VOL
FIELD CAPACITY               =      0.4180 VOL/VOL
WILTING POINT                =      0.3670 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.4270 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.100000001000E-06 CM/SEC


                    LAYER  8
                    --------

         TYPE 1 - VERTICAL PERCOLATION LAYER
            MATERIAL TEXTURE NUMBER   0
THICKNESS                    =     78.00    INCHES
POROSITY                     =      0.4510 VOL/VOL
FIELD CAPACITY               =      0.4190 VOL/VOL
WILTING POINT                =      0.3320 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.4184 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.926000030000E-05 CM/SEC


                    LAYER  9
                    --------

         TYPE 1 - VERTICAL PERCOLATION LAYER
            MATERIAL TEXTURE NUMBER   0
THICKNESS                    =    162.00    INCHES
POROSITY                     =      0.4750 VOL/VOL
FIELD CAPACITY               =      0.3780 VOL/VOL
WILTING POINT                =      0.2650 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.3781 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.379999989000E-06 CM/SEC
```

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT SOIL DATA BASE USING SOIL TEXTURE #14 WITH BARE GROUND CONDITIONS, A SURFACE SLOPE OF 1.% AND A SLOPE LENGTH OF 650 FT.

SCS RUNOFF CURVE NUMBER	=	96.20	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	19.400	ACRES
EVAPORATIVE ZONE DEPTH	=	26.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.724	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	5.160	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.160	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	145.679	INCHES
TOTAL INITIAL WATER	=	145.679	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
PADUCAH KENTUCKY

MAXIMUM LEAF AREA INDEX	=	1.00	
START OF GROWING SEASON (JULIAN DATE)	=	105	
END OF GROWING SEASON (JULIAN DATE)	=	300	
AVERAGE ANNUAL WIND SPEED	=	8.20	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	70.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	67.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	72.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	54.00	%

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR EVANSVILLE INDIANA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
3.27	3.90	4.92	5.01	4.94	4.05
4.19	3.34	3.69	3.00	4.32	4.68

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR EVANSVILLE INDIANA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
32.60	36.90	47.50	57.90	66.70	75.20
78.80	76.80	70.20	58.70	47.90	37.30

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR EVANSVILLE INDIANA

STATION LATITUDE = 38.03 DEGREES

****

AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 100

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	3.40	3.94	5.14	4.89	4.89	4.25
	4.41	3.21	3.55	2.86	4.56	4.98
STD. DEVIATIONS	1.63	2.02	2.27	2.11	2.25	2.07
	2.27	2.18	2.49	2.01	2.27	2.71
RUNOFF						
TOTALS	1.312	2.000	2.030	1.569	1.695	1.395
	1.373	1.108	1.433	0.915	1.723	1.837
STD. DEVIATIONS	1.089	1.466	1.435	1.102	1.220	1.098
	1.095	1.175	1.456	1.090	1.352	1.523
EVAPOTRANSPIRATION						
TOTALS	1.138	1.512	2.683	3.182	3.188	2.957
	3.053	2.079	1.837	1.769	1.780	1.589
STD. DEVIATIONS	0.249	0.323	0.466	0.729	0.954	0.959
	1.063	0.940	0.788	0.808	0.499	0.327
LATERAL DRAINAGE RECIRCULATED INTO LAYER 1						
TOTALS	0.7742	0.6195	0.8655	0.7453	0.4623	0.2142
	0.0906	0.0474	0.0900	0.1431	0.2654	0.5989
STD. DEVIATIONS	0.4894	0.4576	0.3797	0.3184	0.2795	0.1821
	0.1183	0.0907	0.1181	0.1983	0.2247	0.3596

LATERAL DRAINAGE COLLECTED FROM LAYER 5

TOTALS	0.7742	0.6195	0.8655	0.7453	0.4623	0.2142
	0.0906	0.0474	0.0900	0.1431	0.2654	0.5989
STD. DEVIATIONS	0.4894	0.4576	0.3797	0.3184	0.2795	0.1821
	0.1183	0.0907	0.1181	0.1983	0.2247	0.3596

LATERAL DRAINAGE RECIRCULATED FROM LAYER 5

TOTALS	0.7742	0.6195	0.8655	0.7453	0.4623	0.2142
	0.0906	0.0474	0.0900	0.1431	0.2654	0.5989
STD. DEVIATIONS	0.4894	0.4576	0.3797	0.3184	0.2795	0.1821
	0.1183	0.0907	0.1181	0.1983	0.2247	0.3596

PERCOLATION/LEAKAGE THROUGH LAYER 7

TOTALS	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 9

TOTALS	0.0015	0.0014	0.0015	0.0015	0.0015	0.0015
	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
STD. DEVIATIONS	0.0003	0.0002	0.0003	0.0003	0.0003	0.0004
	0.0004	0.0004	0.0004	0.0004	0.0003	0.0003

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ACROSS LAYER 7

AVERAGES	2.3381	2.0916	2.6240	2.1761	1.1373	0.4822
	0.1886	0.0984	0.1979	0.3177	0.6420	1.6425
STD. DEVIATIONS	1.9639	1.9488	1.5904	1.3429	0.9025	0.4948
	0.2604	0.1950	0.2771	0.4774	0.6573	1.3310

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 100

	INCHES		CUBIC FT	PERCENT
PRECIPITATION	50.09	(8.140)	3527296.5	100.00
RUNOFF	18.391	(4.6387)	1295096.87	36.716
EVAPOTRANSPIRATION	26.768	(3.0779)	1885057.50	53.442
DRAINAGE RECIRCULATED INTO LAYER 1	239.02217	(147.60928)	16832418.000	477.20453
LATERAL DRAINAGE COLLECTED FROM LAYER 5	4.91626	(1.70395)	346212.781	9.81524
DRAINAGE RECIRCULATED FROM LAYER 5	4.91626	(1.70395)	346212.781	9.81524
PERCOLATION/LEAKAGE THROUGH FROM LAYER 7	0.00040	(0.00017)	27.989	0.00079
AVERAGE HEAD ACROSS TOP OF LAYER 7	1.161	(0.552)		
PERCOLATION/LEAKAGE THROUGH FROM LAYER 9	0.01806	(0.00320)	1271.849	0.03606
CHANGE IN WATER STORAGE	-0.006	(1.8889)	-413.08	-0.012

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PEAK DAILY VALUES FOR YEARS 1 THROUGH 100

	(INCHES)	(CUBIC FT.)
PRECIPITATION	5.38	378870.375
RUNOFF	5.709	402067.4690
DRAINAGE RECIRCULATED INTO LAYER 1	0.00000	0.00000
DRAINAGE COLLECTED FROM LAYER 5	0.07720	5436.34180
PERCOLATION/LEAKAGE THROUGH LAYER 7	0.000008	0.57961
AVERAGE HEAD ACROSS LAYER 7	9.855	
PERCOLATION/LEAKAGE THROUGH LAYER 9	0.000138	9.68545
SNOW WATER	7.04	495877.0940
MAXIMUM VEG. SOIL WATER (VOL/VOL)		0.1477
MINIMUM VEG. SOIL WATER (VOL/VOL)		0.0341

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FINAL WATER STORAGE AT END OF YEAR 100

LAYER	(INCHES)	(VOL/VOL)
1	1.0827	0.1805
2	32.8907	0.0721
3	1.6800	0.1400
4	0.0197	0.0822
5	2.0091	0.1674
6	0.0000	0.0000
7	15.3720	0.4270
8	32.1311	0.4119
9	59.9922	0.3703
SNOW WATER	0.000	

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List 2. HELP output for institutional control period

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**                                                                          **
**                                                                          **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE               **
**               HELP MODEL VERSION 3.01   (14 OCTOBER 1994)                **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                   **
**                    USAE WATERWAYS EXPERIMENT STATION                     **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY              **
**                                                                          **
**                                                                          **
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 PRECIPITATION DATA FILE:      C:\HELP3\PGDPUICP.D4
 TEMPERATURE DATA FILE:        C:\HELP3\PGDPUICP.D7
 SOLAR RADIATION DATA FILE:    C:\HELP3\PGDPUICP.D13
 EVAPOTRANSPIRATION DATA:      C:\HELP3\PGDPUICP.D11
 SOIL AND DESIGN DATA FILE:    C:\HELP3\PUICP7.D10
 OUTPUT DATA FILE:             C:\HELP3\PUICP7.OUT


 TIME:  17: 0     DATE:  11/ 7/2001


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      TITLE:  PGDP U-LANDFILL, INSTITUTIONAL CONTROL PERIOD

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      NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
               COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                     TYPE 1 - VERTICAL PERCOLATION LAYER
                         MATERIAL TEXTURE NUMBER   0
          THICKNESS                    =     13.00   INCHES
          POROSITY                     =      0.4520 VOL/VOL
          FIELD CAPACITY               =      0.4110 VOL/VOL
          WILTING POINT                =      0.3110 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.3865 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.537999995000E-05 CM/SEC
```

LAYER 2

TYPE 1 - VERTICAL PERCOLATION LAYER
MATERIAL TEXTURE NUMBER 28

THICKNESS	=	23.00	INCHES
POROSITY	=	0.4520	VOL/VOL
FIELD CAPACITY	=	0.4110	VOL/VOL
WILTING POINT	=	0.3110	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3577	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.120000004000E-05	CM/SEC

LAYER 3

TYPE 1 - VERTICAL PERCOLATION LAYER
MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.24	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.8084	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC

LAYER 4

TYPE 4 - FLEXIBLE MEMBRANE LINER
MATERIAL TEXTURE NUMBER 36

THICKNESS	=	0.04	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.399999993000E-12	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	1.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3 - GOOD	

LAYER 5

TYPE 3 - BARRIER SOIL LINER
MATERIAL TEXTURE NUMBER 16

THICKNESS	=	6.00	INCHES
POROSITY	=	0.4270	VOL/VOL
FIELD CAPACITY	=	0.4180	VOL/VOL
WILTING POINT	=	0.3670	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.4270	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000001000E-06	CM/SEC

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                    LAYER  6
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER   0
THICKNESS                    =      6.00   INCHES
POROSITY                     =      0.3000 VOL/VOL
FIELD CAPACITY               =      0.1400 VOL/VOL
WILTING POINT                =      0.1300 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.1400 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.120000004000E-05 CM/SEC


                    LAYER  7
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER   2
THICKNESS                    =     12.00   INCHES
POROSITY                     =      0.4370 VOL/VOL
FIELD CAPACITY               =      0.0620 VOL/VOL
WILTING POINT                =      0.0240 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0620 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.579999993000E-02 CM/SEC


                    LAYER  8
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER  19
THICKNESS                    =    456.00   INCHES
POROSITY                     =      0.1680 VOL/VOL
FIELD CAPACITY               =      0.0730 VOL/VOL
WILTING POINT                =      0.0190 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0730 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.100000005000E-02 CM/SEC


                    LAYER  9
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER   0
THICKNESS                    =     12.00   INCHES
POROSITY                     =      0.3000 VOL/VOL
FIELD CAPACITY               =      0.1400 VOL/VOL
WILTING POINT                =      0.1300 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.1400 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.499999987000E-04 CM/SEC
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                    LAYER 10
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          TYPE 2 - LATERAL DRAINAGE LAYER
            MATERIAL TEXTURE NUMBER  20
THICKNESS                    =      0.24    INCHES
POROSITY                     =      0.8500 VOL/VOL
FIELD CAPACITY               =      0.0100 VOL/VOL
WILTING POINT                =      0.0050 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0100 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =   10.0000000000      CM/SEC


                    LAYER 11
                    --------

          TYPE 2 - LATERAL DRAINAGE LAYER
            MATERIAL TEXTURE NUMBER  21
THICKNESS                    =     12.00    INCHES
POROSITY                     =      0.3970 VOL/VOL
FIELD CAPACITY               =      0.0320 VOL/VOL
WILTING POINT                =      0.0130 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0320 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.300000012000      CM/SEC
SLOPE                        =      0.00    PERCENT
DRAINAGE LENGTH              =      0.0     FEET


                    LAYER 12
                    --------

          TYPE 4 - FLEXIBLE MEMBRANE LINER
            MATERIAL TEXTURE NUMBER  35
THICKNESS                    =      0.07    INCHES
POROSITY                     =      0.0000 VOL/VOL
FIELD CAPACITY               =      0.0000 VOL/VOL
WILTING POINT                =      0.0000 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0000 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.199999996000E-12 CM/SEC
FML PINHOLE DENSITY          =      1.00    HOLES/ACRE
FML INSTALLATION DEFECTS     =      1.00    HOLES/ACRE
FML PLACEMENT QUALITY        =  3 - GOOD


                    LAYER 13
                    --------

            TYPE 3 - BARRIER SOIL LINER
            MATERIAL TEXTURE NUMBER  16
THICKNESS                    =     36.00    INCHES
POROSITY                     =      0.4270 VOL/VOL
FIELD CAPACITY               =      0.4180 VOL/VOL
WILTING POINT                =      0.3670 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.4270 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.100000001000E-06 CM/SEC
```

LAYER 14

TYPE 1 - VERTICAL PERCOLATION LAYER
MATERIAL TEXTURE NUMBER 0

THICKNESS	=	78.00	INCHES
POROSITY	=	0.4510	VOL/VOL
FIELD CAPACITY	=	0.4190	VOL/VOL
WILTING POINT	=	0.2650	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.4144	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.926000030000E-05	CM/SEC

LAYER 15

TYPE 1 - VERTICAL PERCOLATION LAYER
MATERIAL TEXTURE NUMBER 0

THICKNESS	=	162.00	INCHES
POROSITY	=	0.4750	VOL/VOL
FIELD CAPACITY	=	0.3780	VOL/VOL
WILTING POINT	=	0.2650	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3800	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.379999989000E-06	CM/SEC

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT SOIL DATA BASE USING SOIL TEXTURE #14 WITH A FAIR STAND OF GRASS, A SURFACE SLOPE OF 18.% AND A SLOPE LENGTH OF 650 FT.

SCS RUNOFF CURVE NUMBER	=	89.80	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	19.400	ACRES
EVAPORATIVE ZONE DEPTH	=	26.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	9.141	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	11.752	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	8.086	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	162.205	INCHES
TOTAL INITIAL WATER	=	162.205	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
PADUCAH KENTUCKY

MAXIMUM LEAF AREA INDEX	=	3.00
START OF GROWING SEASON (JULIAN DATE)	=	105
END OF GROWING SEASON (JULIAN DATE)	=	300
AVERAGE ANNUAL WIND SPEED	=	8.20 MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	70.00 %
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	67.00 %
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	72.00 %
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	54.00 %

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR EVANSVILLE INDIANA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
3.27	3.90	4.92	5.01	4.94	4.05
4.19	3.34	3.69	3.00	4.32	4.68

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR EVANSVILLE INDIANA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
32.60	36.90	47.50	57.90	66.70	75.20
78.80	76.80	70.20	58.70	47.90	37.30

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR EVANSVILLE INDIANA

STATION LATITUDE = 38.03 DEGREES

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 100

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	3.40	3.94	5.14	4.89	4.89	4.25
	4.41	3.21	3.55	2.86	4.56	4.98
STD. DEVIATIONS	1.63	2.02	2.27	2.11	2.25	2.07
	2.27	2.18	2.49	2.01	2.27	2.71
RUNOFF						
TOTALS	2.129	2.903	3.256	2.653	2.751	2.285
	2.269	1.815	2.227	1.573	2.883	3.105
STD. DEVIATIONS	1.416	1.805	1.898	1.550	1.624	1.474
	1.529	1.616	1.962	1.535	1.884	2.178
EVAPOTRANSPIRATION						
TOTALS	0.749	1.070	2.253	3.251	2.973	2.015
	2.140	1.326	1.366	1.213	0.945	0.910
STD. DEVIATIONS	0.133	0.236	0.320	0.554	1.066	0.780
	0.810	0.651	0.580	0.612	0.259	0.205
PERCOLATION/LEAKAGE THROUGH LAYER 5						
TOTALS	0.0004	0.0004	0.0006	0.0005	0.0004	0.0004
	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
STD. DEVIATIONS	0.0002	0.0002	0.0003	0.0002	0.0001	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LATERAL DRAINAGE COLLECTED FROM LAYER 11						
TOTALS	0.0004	0.0003	0.0003	0.0003	0.0004	0.0004
	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
STD. DEVIATIONS	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001
	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
PERCOLATION/LEAKAGE THROUGH LAYER 13						
TOTALS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 15

TOTALS	0.0027	0.0024	0.0027	0.0026	0.0027	0.0026
	0.0027	0.0027	0.0026	0.0027	0.0026	0.0027
STD. DEVIATIONS	0.0013	0.0011	0.0012	0.0012	0.0012	0.0012
	0.0013	0.0013	0.0013	0.0013	0.0012	0.0013

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ACROSS LAYER 5

AVERAGES	11.1131	12.6678	14.8643	14.2669	11.1007	10.0419
	10.0314	10.0268	10.0219	10.0189	10.0123	10.0057
STD. DEVIATIONS	4.1418	6.0388	7.0949	5.3351	2.3533	1.3602
	1.3552	1.3546	1.3539	1.3534	1.3525	1.3516

DAILY AVERAGE HEAD ACROSS LAYER 13

AVERAGES	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 100

	INCHES		CUBIC FT	PERCENT
PRECIPITATION	50.09	(8.140)	3527296.5	100.00
RUNOFF	29.849	(6.2384)	2102038.75	59.593
EVAPOTRANSPIRATION	20.211	(2.4099)	1423332.62	40.352
PERCOLATION/LEAKAGE THROUGH FROM LAYER 5	0.00482	(0.00098)	339.460	0.00962
AVERAGE HEAD ACROSS TOP OF LAYER 5	11.181	(2.202)		
LATERAL DRAINAGE COLLECTED FROM LAYER 11	0.00452	(0.00103)	317.992	0.00902

PERCOLATION/LEAKAGE THROUGH FROM LAYER 13	0.00000	(0.00000)	0.000	0.00000
AVERAGE HEAD ACROSS TOP OF LAYER 13	0.000	(0.000)		
PERCOLATION/LEAKAGE THROUGH FROM LAYER 15	0.03189	(0.01460)	2245.803	0.06367
CHANGE IN WATER STORAGE	-0.010	(1.4771)	-697.64	-0.020

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PEAK DAILY VALUES FOR YEARS 1 THROUGH 100

	(INCHES)	(CUBIC FT.)
PRECIPITATION	5.38	378870.375
RUNOFF	6.126	431383.5940
PERCOLATION/LEAKAGE THROUGH LAYER 5	0.000046	3.25213
AVERAGE HEAD ACROSS LAYER 5	36.240	
DRAINAGE COLLECTED FROM LAYER 11	0.00003	2.23229
PERCOLATION/LEAKAGE THROUGH LAYER 13	0.000000	0.00000
AVERAGE HEAD ACROSS LAYER 13	0.000	
PERCOLATION/LEAKAGE THROUGH LAYER 15	0.000258	18.20300
SNOW WATER	7.04	495877.0940

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.4520
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.3048

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FINAL WATER STORAGE AT END OF YEAR 100

LAYER	(INCHES)	(VOL/VOL)
1	5.2502	0.4039
2	10.2439	0.4454
3	0.2040	0.8500
4	0.0000	0.0000
5	2.5620	0.4270
6	0.8400	0.1400
7	0.7745	0.0645
8	33.2880	0.0730
9	1.6800	0.1400
10	0.0024	0.0100
11	0.3840	0.0320
12	0.0000	0.0000
13	15.3720	0.4270
14	29.8712	0.3830
15	60.8266	0.3755
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE               **
**              HELP MODEL VERSION 3.01    (14 OCTOBER 1994)                **
**                 DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                   USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY              **
**                                                                          **
**                                                                          **
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 PRECIPITATION DATA FILE:      C:\HELP3\PGDPPICP.D4
 TEMPERATURE DATA FILE:        C:\HELP3\PGDPPICP.D7
 SOLAR RADIATION DATA FILE:    C:\HELP3\PGDPPICP.D13
 EVAPOTRANSPIRATION DATA:      C:\HELP3\PGDPPICP.D11
 SOIL AND DESIGN DATA FILE:    C:\HELP3\POPICP4.D10
 OUTPUT DATA FILE:             C:\HELP3\POPICP4.OUT


 TIME:  17: 8     DATE:  11/ 7/2001


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      TITLE:  PGDP U-LANDFILL, POST-INSTITUTIONAL CONTROL PERIOD

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      NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
               COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                     TYPE 1 - VERTICAL PERCOLATION LAYER
                         MATERIAL TEXTURE NUMBER   0
            THICKNESS                    =     13.00   INCHES
            POROSITY                     =      0.3000 VOL/VOL
            FIELD CAPACITY               =      0.1400 VOL/VOL
            WILTING POINT                =      0.1300 VOL/VOL
            INITIAL SOIL WATER CONTENT   =      0.1300 VOL/VOL
            EFFECTIVE SAT. HYD. COND.    =  0.537999995000E-05 CM/SEC
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                    LAYER  2
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER   0
THICKNESS                    =     23.00   INCHES
POROSITY                     =      0.3000 VOL/VOL
FIELD CAPACITY               =      0.1400 VOL/VOL
WILTING POINT                =      0.1300 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.1343 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.120000004000E-05 CM/SEC


                    LAYER  3
                    --------

              TYPE 3 - BARRIER SOIL LINER
              MATERIAL TEXTURE NUMBER   0
THICKNESS                    =      7.00   INCHES
POROSITY                     =      0.4270 VOL/VOL
FIELD CAPACITY               =      0.4180 VOL/VOL
WILTING POINT                =      0.3670 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.4270 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.999999997000E-06 CM/SEC


                    LAYER  4
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER   0
THICKNESS                    =      6.00   INCHES
POROSITY                     =      0.3000 VOL/VOL
FIELD CAPACITY               =      0.1400 VOL/VOL
WILTING POINT                =      0.1300 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.1400 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.120000004000E-05 CM/SEC


                    LAYER  5
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER   2
THICKNESS                    =     12.00   INCHES
POROSITY                     =      0.4370 VOL/VOL
FIELD CAPACITY               =      0.0620 VOL/VOL
WILTING POINT                =      0.0240 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.1432 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.579999993000E-02 CM/SEC
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                    LAYER  6
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          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER  19
THICKNESS                    =    456.00   INCHES
POROSITY                     =      0.1680 VOL/VOL
FIELD CAPACITY               =      0.0730 VOL/VOL
WILTING POINT                =      0.0190 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0730 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.100000005000E-02 CM/SEC


                    LAYER  7
                    --------

          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER   0
THICKNESS                    =     12.00   INCHES
POROSITY                     =      0.3000 VOL/VOL
FIELD CAPACITY               =      0.1400 VOL/VOL
WILTING POINT                =      0.1300 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.1400 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.499999987000E-04 CM/SEC


                    LAYER  8
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          TYPE 1 - VERTICAL PERCOLATION LAYER
              MATERIAL TEXTURE NUMBER   0
THICKNESS                    =     12.24   INCHES
POROSITY                     =      0.3970 VOL/VOL
FIELD CAPACITY               =      0.0320 VOL/VOL
WILTING POINT                =      0.0130 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.0329 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.299999993000E-01 CM/SEC


                    LAYER  9
                    --------

              TYPE 3 - BARRIER SOIL LINER
              MATERIAL TEXTURE NUMBER   0
THICKNESS                    =     36.07   INCHES
POROSITY                     =      0.4270 VOL/VOL
FIELD CAPACITY               =      0.4180 VOL/VOL
WILTING POINT                =      0.3670 VOL/VOL
INITIAL SOIL WATER CONTENT   =      0.4270 VOL/VOL
EFFECTIVE SAT. HYD. COND.    =  0.999999997000E-06 CM/SEC
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LAYER 10

TYPE 1 - VERTICAL PERCOLATION LAYER
MATERIAL TEXTURE NUMBER 0

THICKNESS	=	78.00	INCHES
POROSITY	=	0.4510	VOL/VOL
FIELD CAPACITY	=	0.4190	VOL/VOL
WILTING POINT	=	0.2652	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.4200	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.926000030000E-05	CM/SEC

LAYER 11

TYPE 1 - VERTICAL PERCOLATION LAYER
MATERIAL TEXTURE NUMBER 0

THICKNESS	=	162.00	INCHES
POROSITY	=	0.4750	VOL/VOL
FIELD CAPACITY	=	0.3780	VOL/VOL
WILTING POINT	=	0.2650	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3973	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.379999989000E-06	CM/SEC

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT SOIL DATA BASE USING SOIL TEXTURE #14 WITH A GOOD STAND OF GRASS, A SURFACE SLOPE OF 15.% AND A SLOPE LENGTH OF 650 FT.

SCS RUNOFF CURVE NUMBER	=	86.10	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	19.400	ACRES
EVAPORATIVE ZONE DEPTH	=	26.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	3.380	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	7.800	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	3.380	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	158.219	INCHES
TOTAL INITIAL WATER	=	158.219	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
PADUCAH KENTUCKY

MAXIMUM LEAF AREA INDEX	=	4.00
START OF GROWING SEASON (JULIAN DATE)	=	105
END OF GROWING SEASON (JULIAN DATE)	=	300
AVERAGE ANNUAL WIND SPEED	=	8.20 MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	70.00 %
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	67.00 %
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	72.00 %
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	54.00 %

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR EVANSVILLE INDIANA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
3.27	3.90	4.92	5.01	4.94	4.05
4.19	3.34	3.69	3.00	4.32	4.68

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR EVANSVILLE INDIANA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
32.60	36.90	47.50	57.90	66.70	75.20
78.80	76.80	70.20	58.70	47.90	37.30

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR EVANSVILLE INDIANA

STATION LATITUDE = 38.03 DEGREES

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 100

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	3.40	3.94	5.14	4.89	4.89	4.25
	4.41	3.21	3.55	2.86	4.56	4.98
STD. DEVIATIONS	1.63	2.02	2.27	2.11	2.25	2.07
	2.27	2.18	2.49	2.01	2.27	2.71
RUNOFF						
TOTALS	2.094	2.837	3.108	2.558	2.684	2.229
	2.183	1.773	2.182	1.525	2.792	2.958
STD. DEVIATIONS	1.432	1.792	1.829	1.510	1.616	1.475
	1.487	1.607	1.932	1.509	1.853	2.101
EVAPOTRANSPIRATION						
TOTALS	0.859	0.950	1.810	1.959	1.942	1.773
	1.976	1.256	1.187	1.093	1.245	1.182
STD. DEVIATIONS	0.276	0.367	0.530	0.619	0.766	0.727
	0.828	0.625	0.576	0.597	0.423	0.363
PERCOLATION/LEAKAGE THROUGH LAYER 3						
TOTALS	0.4833	0.3037	0.4542	0.3592	0.2863	0.2516
	0.2671	0.1853	0.2006	0.1837	0.3979	0.5613
STD. DEVIATIONS	0.3150	0.2513	0.1795	0.1077	0.0976	0.0882
	0.1077	0.0870	0.1003	0.1008	0.1715	0.2211
PERCOLATION/LEAKAGE THROUGH LAYER 9						
TOTALS	0.5795	0.3459	0.3905	0.3814	0.3292	0.2733
	0.2647	0.2376	0.2101	0.1962	0.2432	0.4811
STD. DEVIATIONS	0.2409	0.2280	0.2310	0.1279	0.0892	0.0822
	0.0738	0.0737	0.0647	0.0717	0.1102	0.2036
PERCOLATION/LEAKAGE THROUGH LAYER 11						
TOTALS	0.3074	0.2494	0.2888	0.3005	0.3101	0.3067
	0.3296	0.3408	0.3374	0.3559	0.3444	0.3463
STD. DEVIATIONS	0.0778	0.0840	0.0928	0.0809	0.0800	0.0781
	0.0790	0.0750	0.0713	0.0679	0.0615	0.0609

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ACROSS LAYER 3

AVERAGES	0.0886	0.0541	0.0577	0.0308	0.0190	0.0165
	0.0164	0.0111	0.0134	0.0113	0.0434	0.0822
STD. DEVIATIONS	0.0954	0.0838	0.0836	0.0200	0.0101	0.0090
	0.0087	0.0068	0.0096	0.0085	0.0514	0.0786

DAILY AVERAGE HEAD ACROSS LAYER 9

AVERAGES	0.0187	0.0145	0.0099	0.0067	0.0039	0.0033
	0.0029	0.0026	0.0024	0.0021	0.0036	0.0115
STD. DEVIATIONS	0.0212	0.0304	0.0173	0.0123	0.0020	0.0017
	0.0011	0.0010	0.0010	0.0007	0.0032	0.0110

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 100

	INCHES		CUBIC FT	PERCENT
PRECIPITATION	50.09	(8.140)	3527296.5	100.00
RUNOFF	28.922	(6.0995)	2036733.87	57.742
EVAPOTRANSPIRATION	17.232	(2.3231)	1213521.00	34.404
PERCOLATION/LEAKAGE THROUGH FROM LAYER 3	3.93433	(0.67923)	277063.344	7.85484
AVERAGE HEAD ACROSS TOP OF LAYER 3	0.037	(0.018)		
PERCOLATION/LEAKAGE THROUGH FROM LAYER 9	3.93281	(0.67170)	276956.656	7.85181
AVERAGE HEAD ACROSS TOP OF LAYER 9	0.007	(0.005)		
PERCOLATION/LEAKAGE THROUGH FROM LAYER 11	3.81731	(0.79542)	268822.281	7.62120
CHANGE IN WATER STORAGE	0.116	(1.5300)	8160.42	0.231

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PEAK DAILY VALUES FOR YEARS 1 THROUGH 100

	(INCHES)	(CUBIC FT.)
PRECIPITATION	5.38	378870.375
RUNOFF	6.053	426282.5310
PERCOLATION/LEAKAGE THROUGH LAYER 3	0.038780	2730.93115
AVERAGE HEAD ACROSS LAYER 3	0.980	
PERCOLATION/LEAKAGE THROUGH LAYER 9	0.034417	2423.73437
AVERAGE HEAD ACROSS LAYER 9	0.426	
PERCOLATION/LEAKAGE THROUGH LAYER 11	0.012926	910.25903
SNOW WATER	7.04	495877.0940
MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2071	
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.1272	

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FINAL WATER STORAGE AT END OF YEAR 100

LAYER	(INCHES)	(VOL/VOL)
1	1.6714	0.1286
2	3.0788	0.1339
3	2.9890	0.4270
4	0.8400	0.1400
5	1.8206	0.1517
6	33.2880	0.0730
7	1.6800	0.1400
8	0.4524	0.0370
9	15.4019	0.4270
10	33.2126	0.4258
11	75.4574	0.4658
SNOW WATER	0.000	

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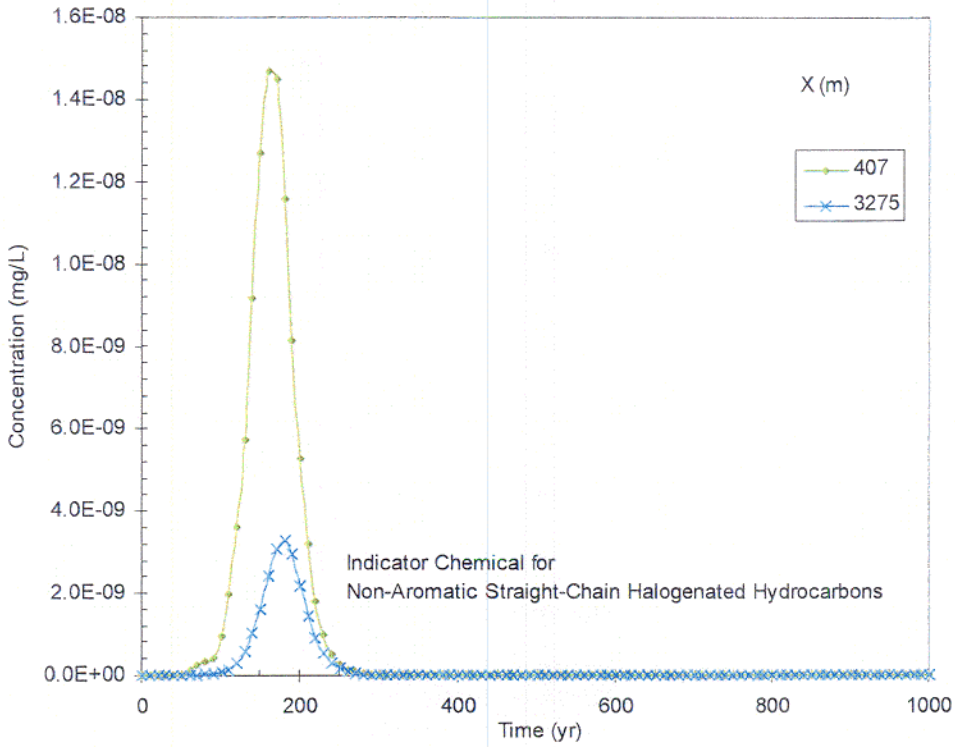

Fig. C.3.1. Predicted groundwater concentration of vinyl chloride based on leaching from the C-746-U Landfill waste (gradual failure).

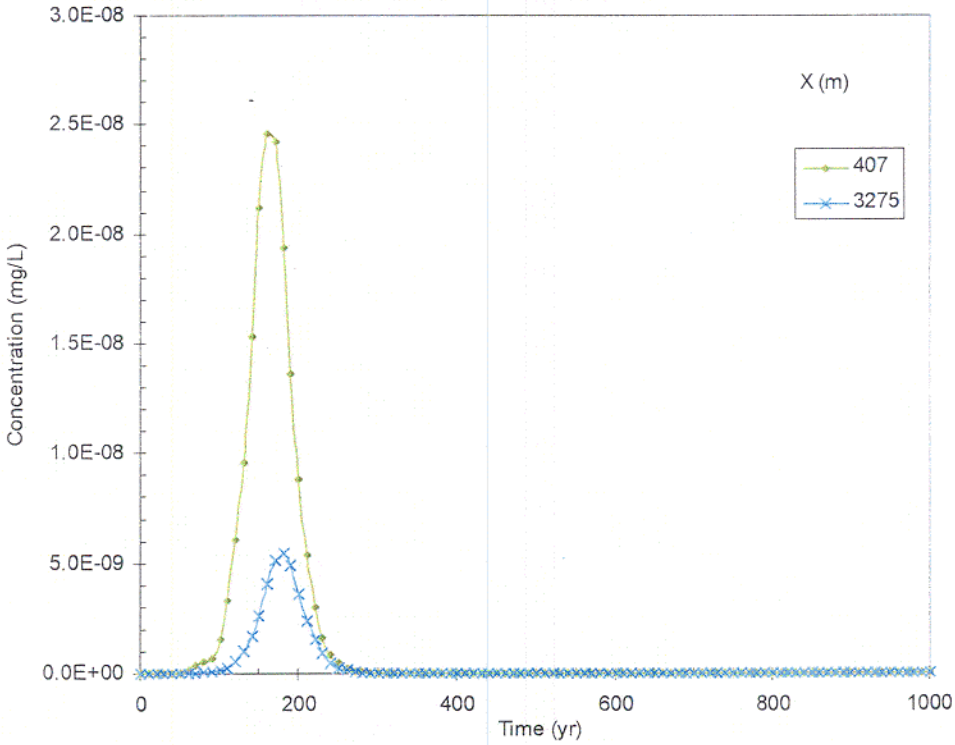

Fig. C.3.2. Predicted groundwater concentration of cis-1,2-dichloroethene based on leaching from the C-746-U Landfill waste (gradual failure).

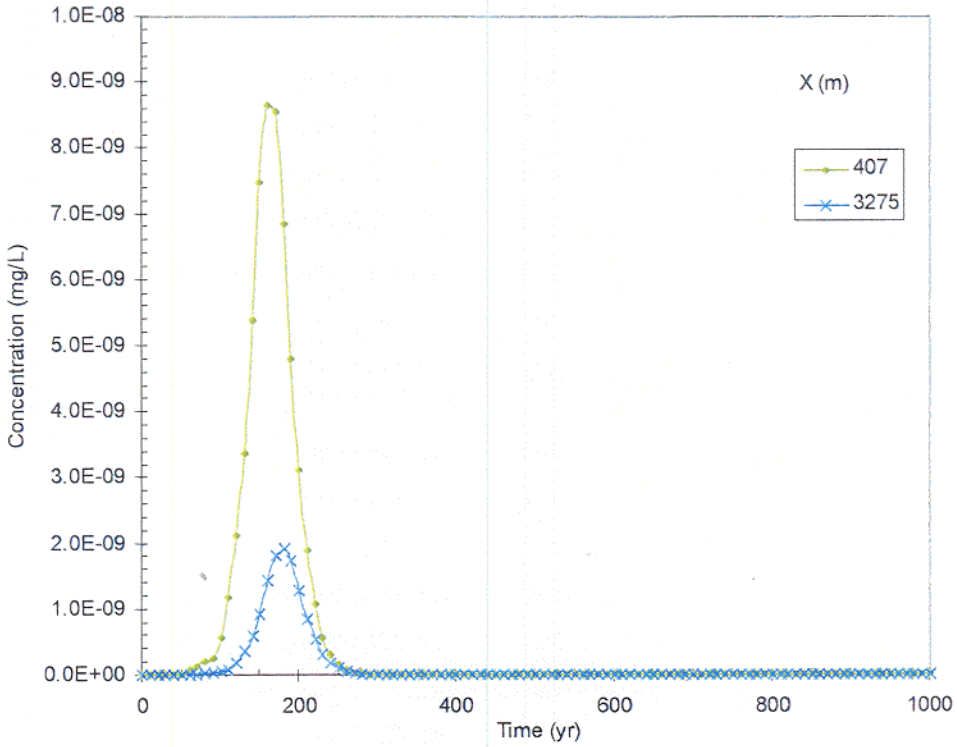

Fig. C.3.3. Predicted groundwater concentration of trans-1,2-dichloroethene based on leaching from the C-746-U Landfill waste (gradual failure).

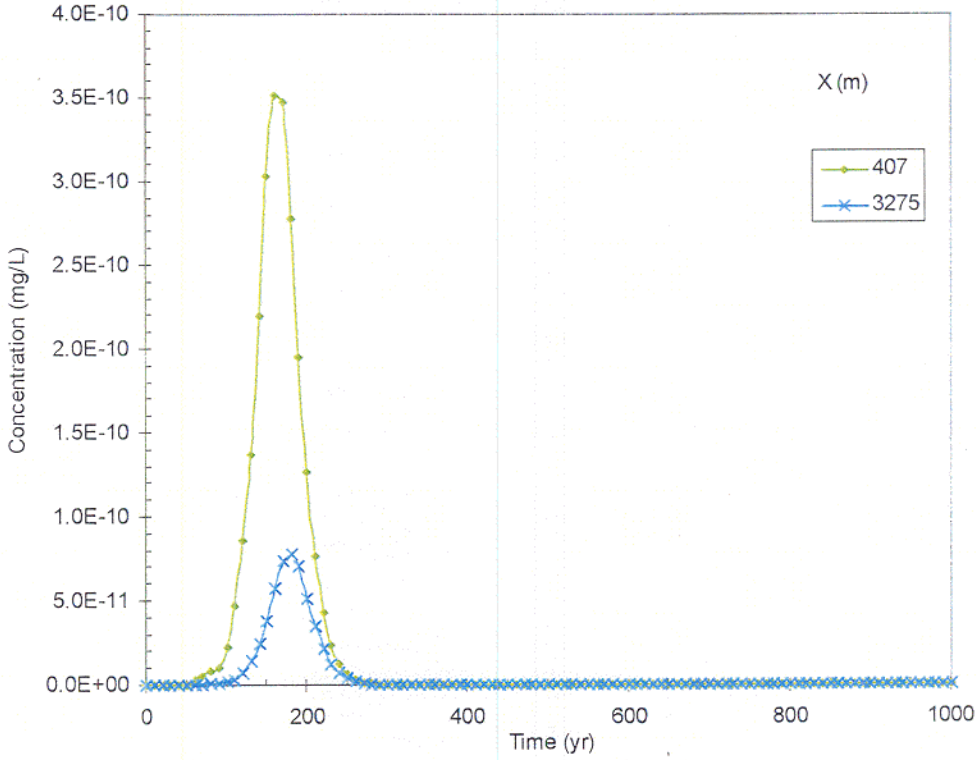

Fig. C.3.4. Predicted groundwater concentration of 1,2-dichloroethane based on leaching from the C-746-U Landfill waste (gradual failure).

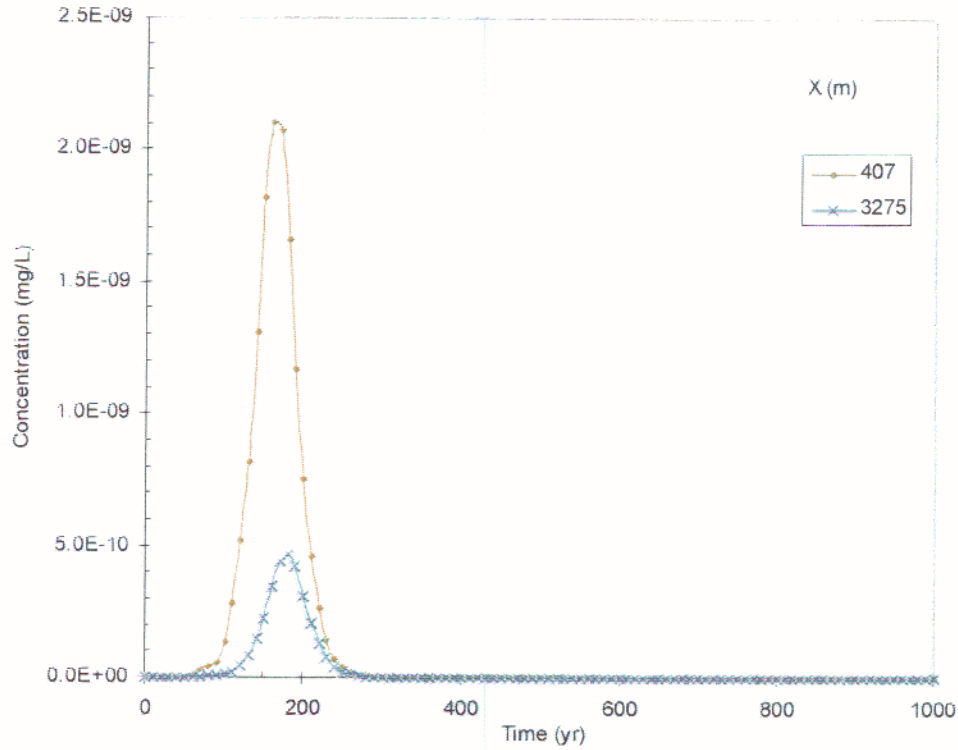

Fig. C.3.5. Predicted groundwater concentration of chloroform based on leaching from the C-746-U Landfill waste (gradual failure).

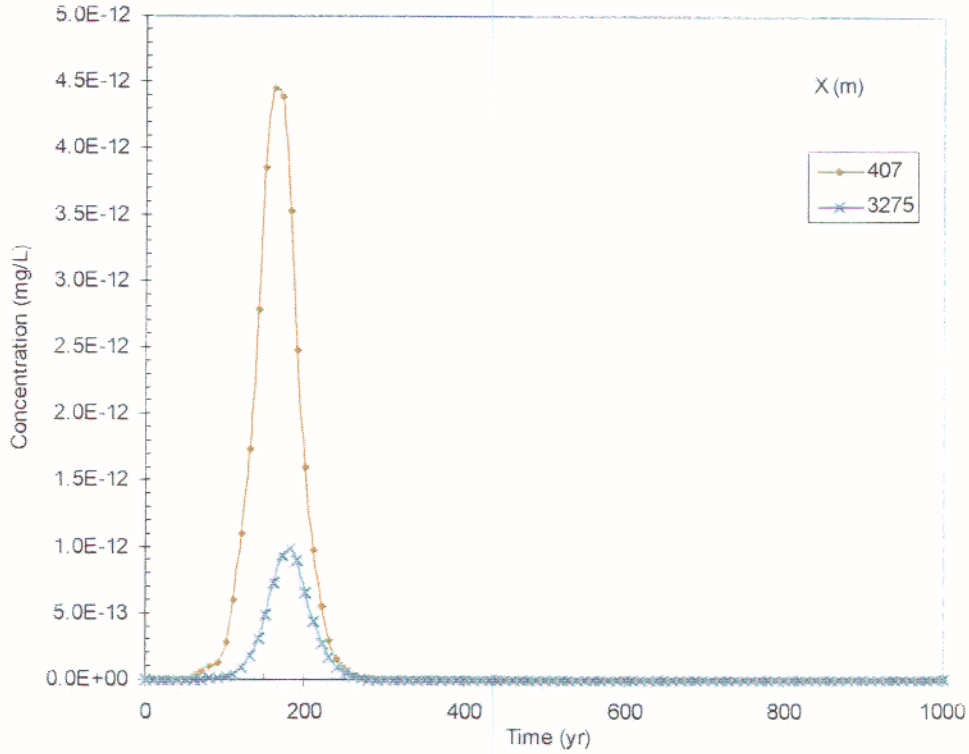

Fig. C.3.6. Predicted groundwater concentration of 1,1-dichloroethene based on leaching from the C-746-U Landfill waste (gradual failure).

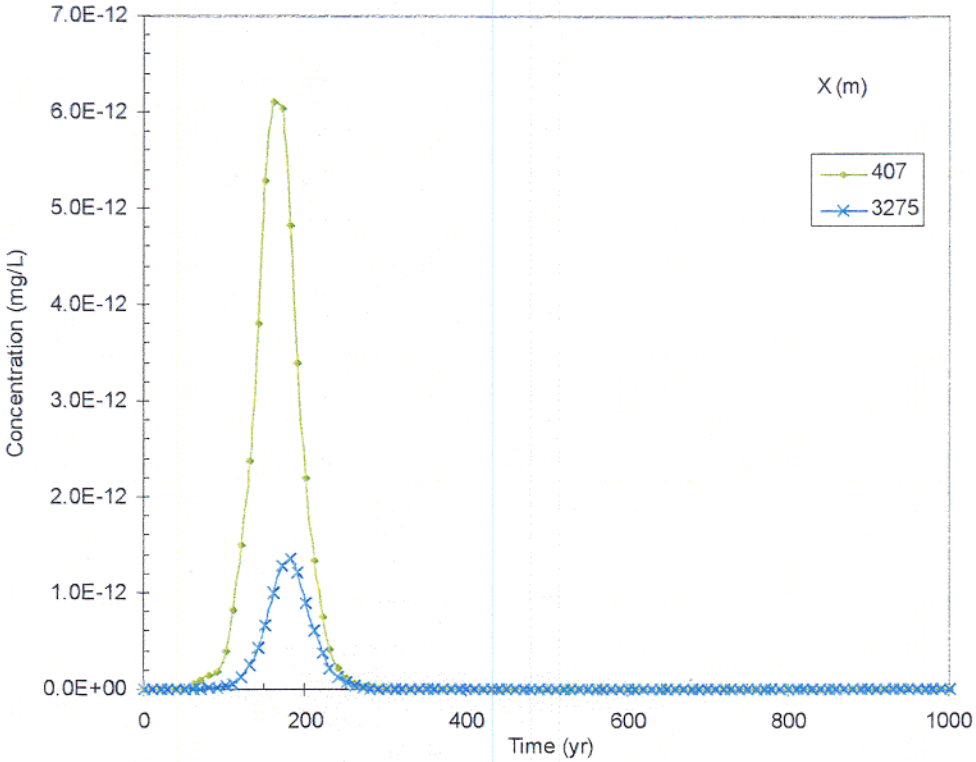

Fig. C.3.7. Predicted groundwater concentration of 1,2-dichloroethene based on leaching from the C-746-U Landfill waste (gradual failure).

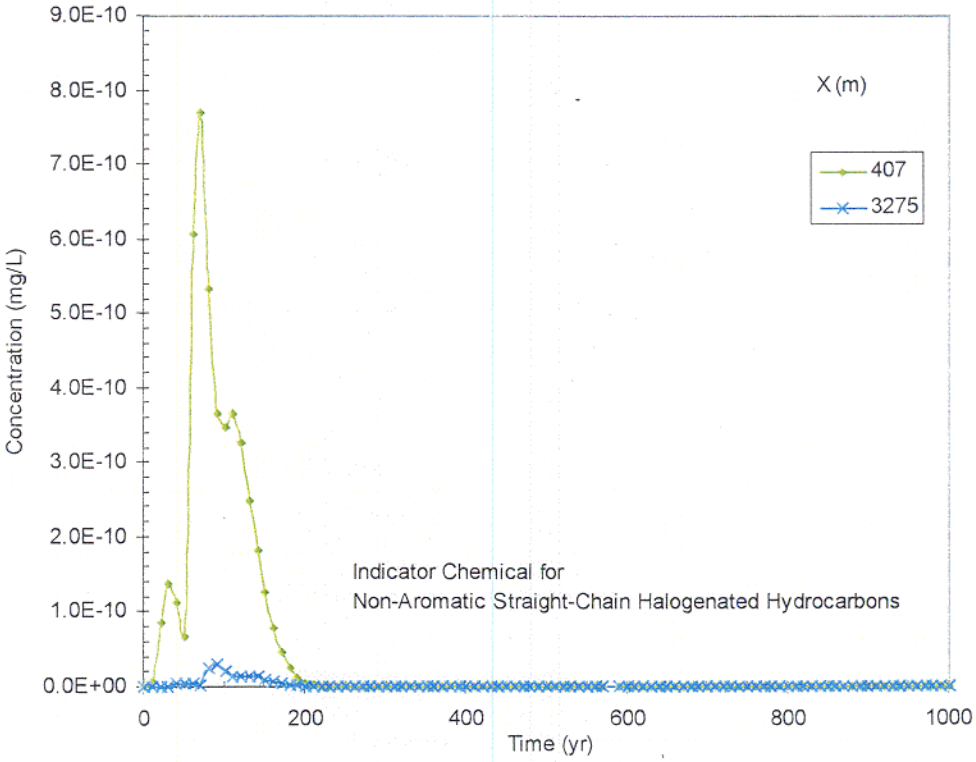

Fig. C.3.8. Predicted groundwater concentration of trichloroethene based on leaching from the C-746-U Landfill waste (gradual failure).

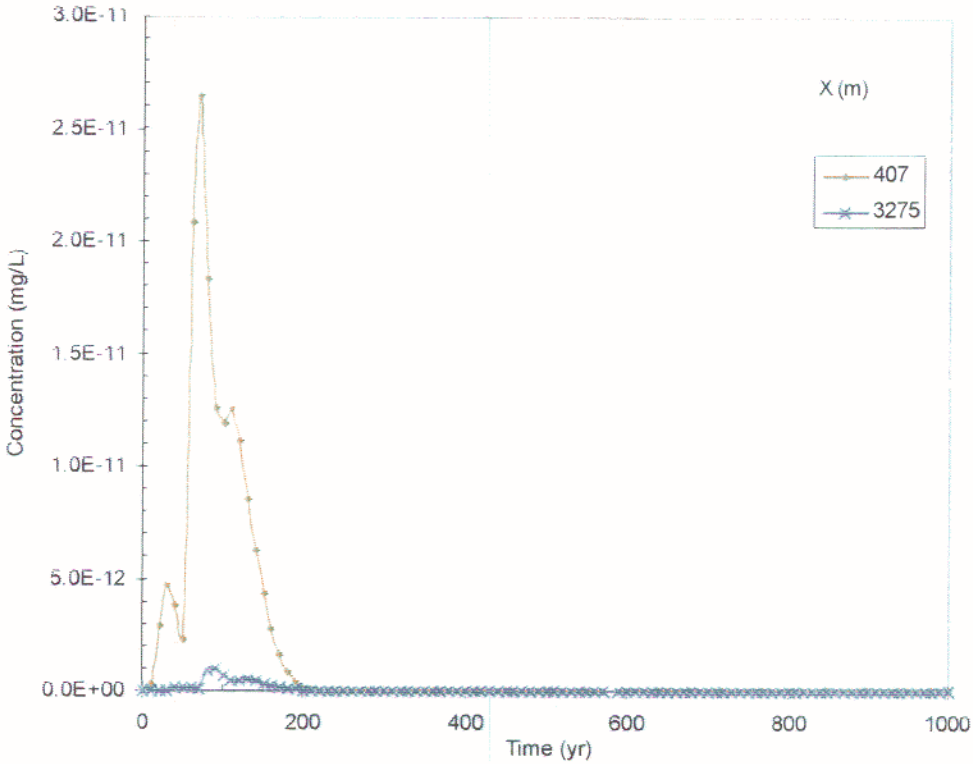

Fig. C.3.9. Predicted groundwater concentration of carbon tetrachloride based on leaching from the C-746-U Landfill waste (gradual failure).

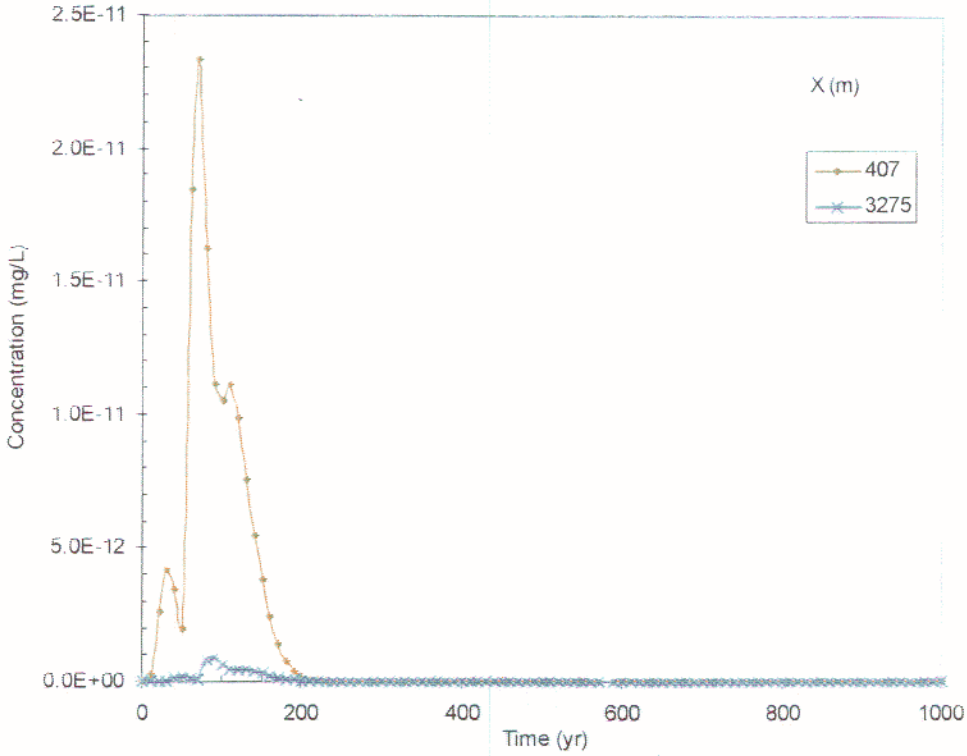

Fig. C.3.10. Predicted groundwater concentration of tetrachloroethene based on leaching from the C-746-U Landfill waste (gradual failure).

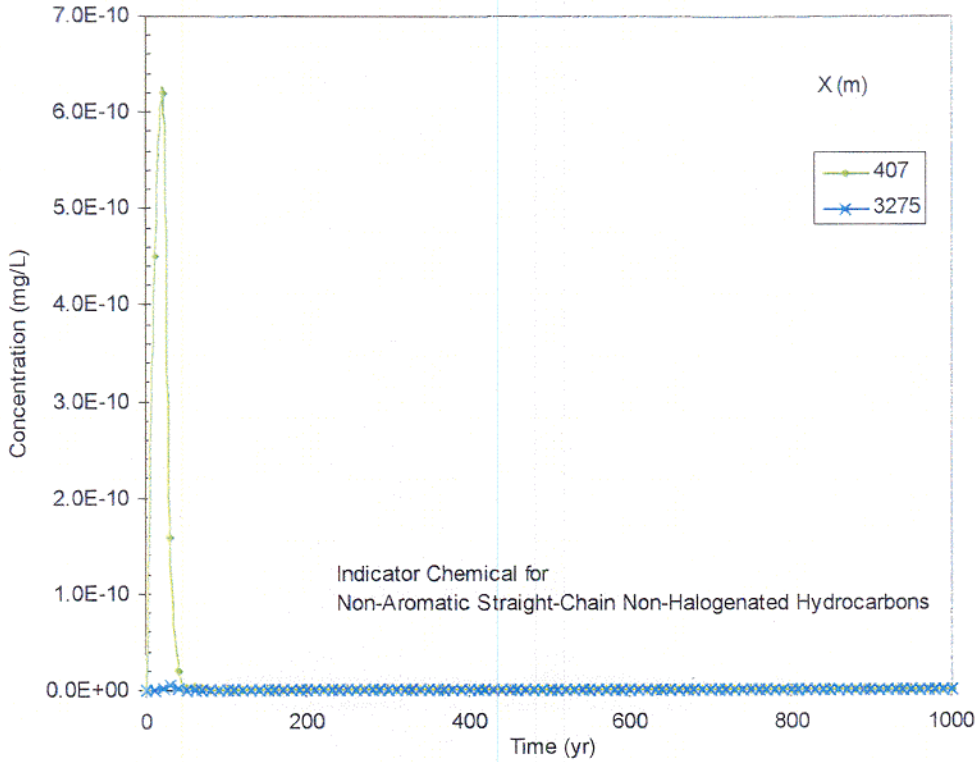

Fig. C.3.11. Predicted groundwater concentration of 2-butanone based on leaching from the C-746-U Landfill waste (gradual failure).

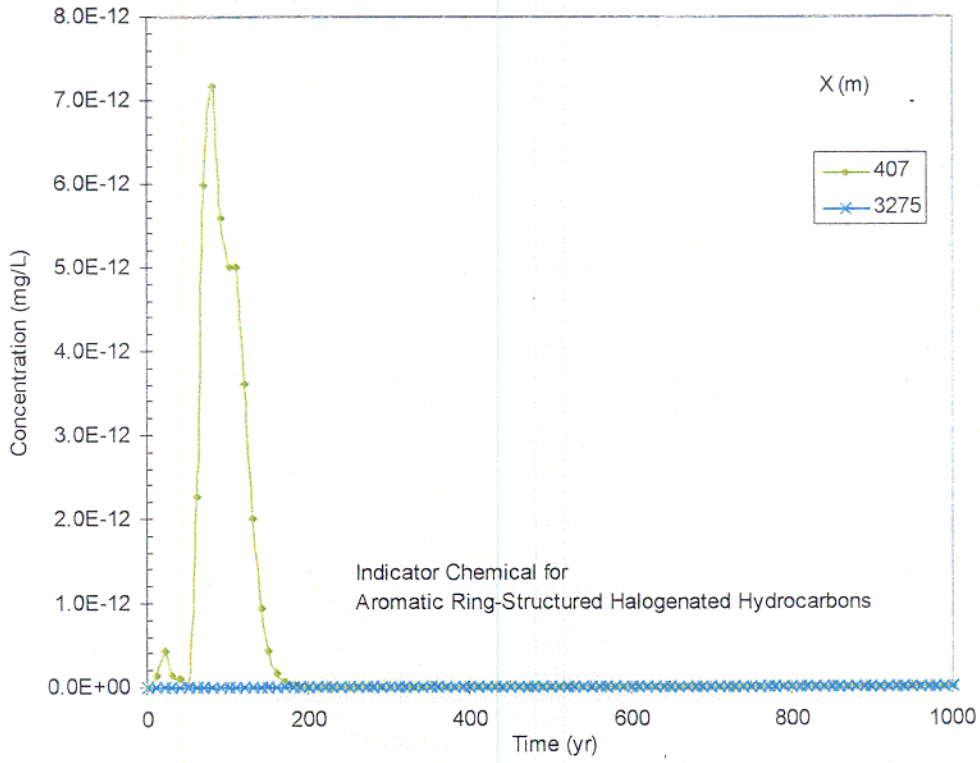

Fig. C.3.12. Predicted groundwater concentration of chlorobenzene based on leaching from the C-746-U Landfill waste (gradual failure).

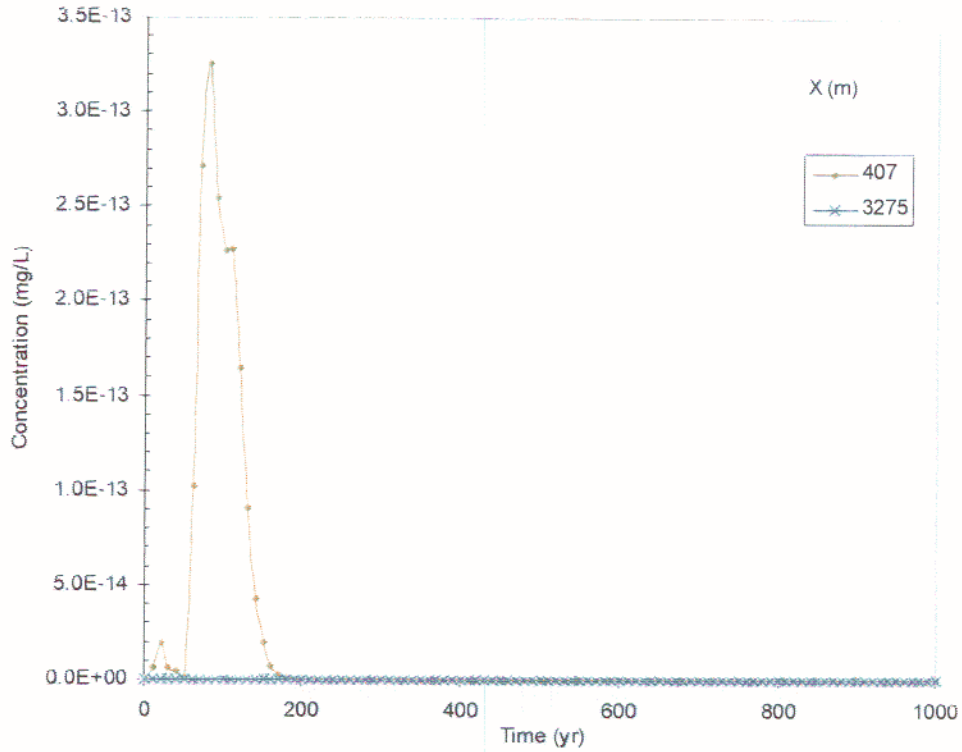

Fig. C.3.13. Predicted groundwater concentration of 1,4-dichlorobenzene based on leaching from the C-746-U Landfill waste (gradual failure).

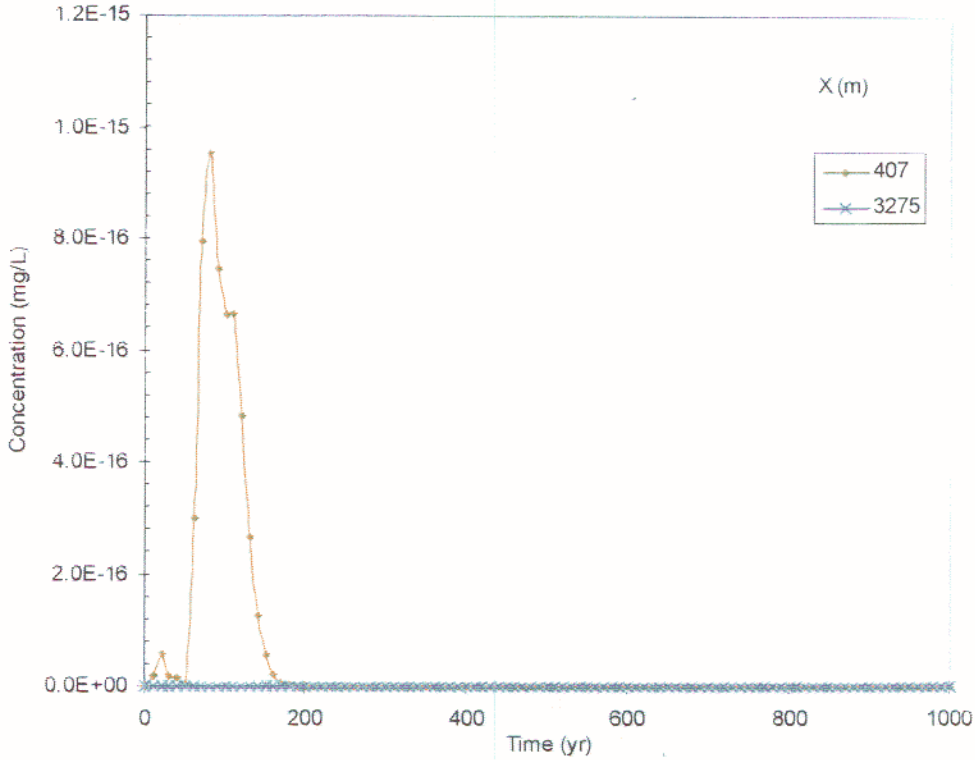

Fig. C.3.14. Predicted groundwater concentration of hexachlorobenzene based on leaching from the C-746-U Landfill waste (gradual failure).

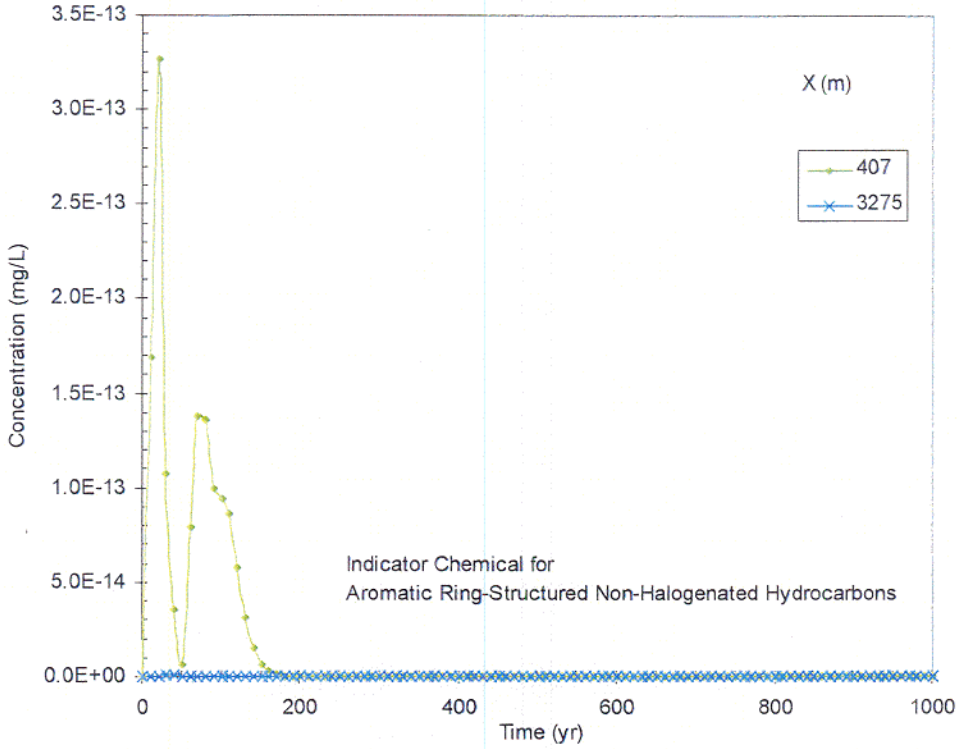

Fig. C.3.15. Predicted groundwater concentration of benzene based on leaching from the C-746-U Landfill waste (gradual failure).

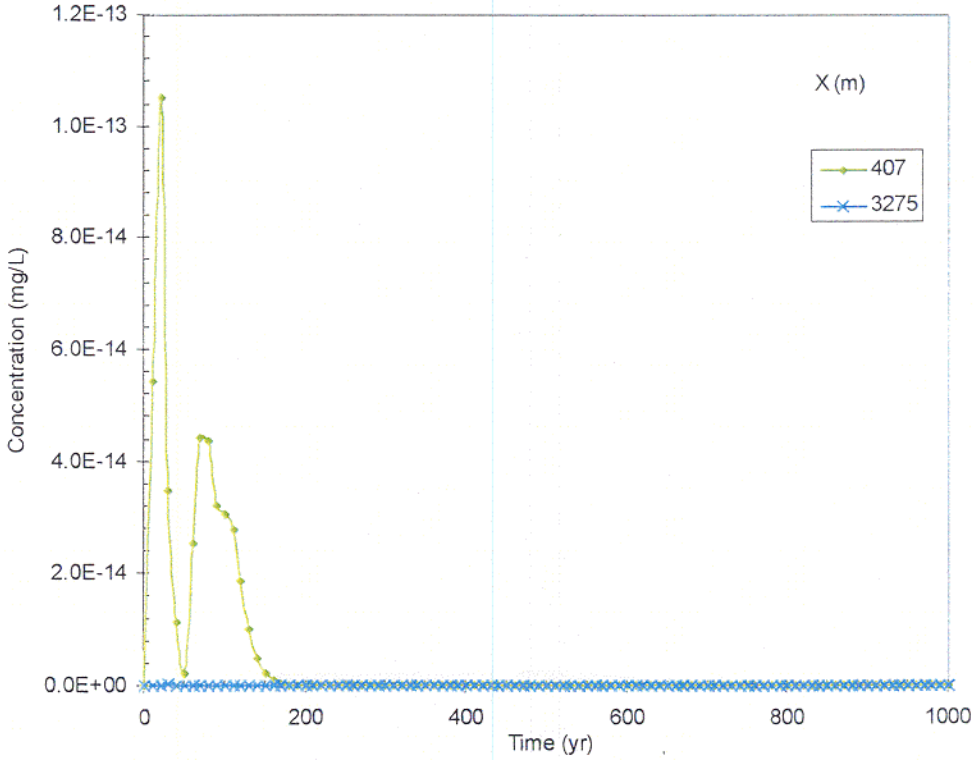

Fig. C.3.16. Predicted groundwater concentration of ethylbenzene based on leaching from the C-746-U Landfill waste (gradual failure).

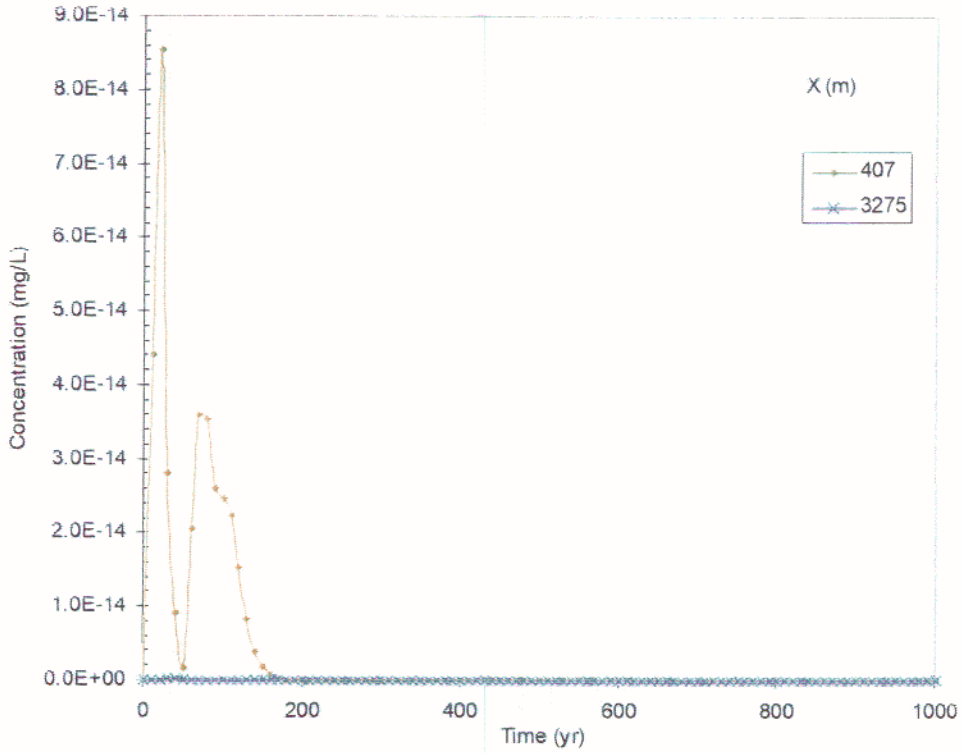

Fig. C.3.17. Predicted groundwater concentration of xylene based on leaching from the C-746-U Landfill waste (gradual failure).

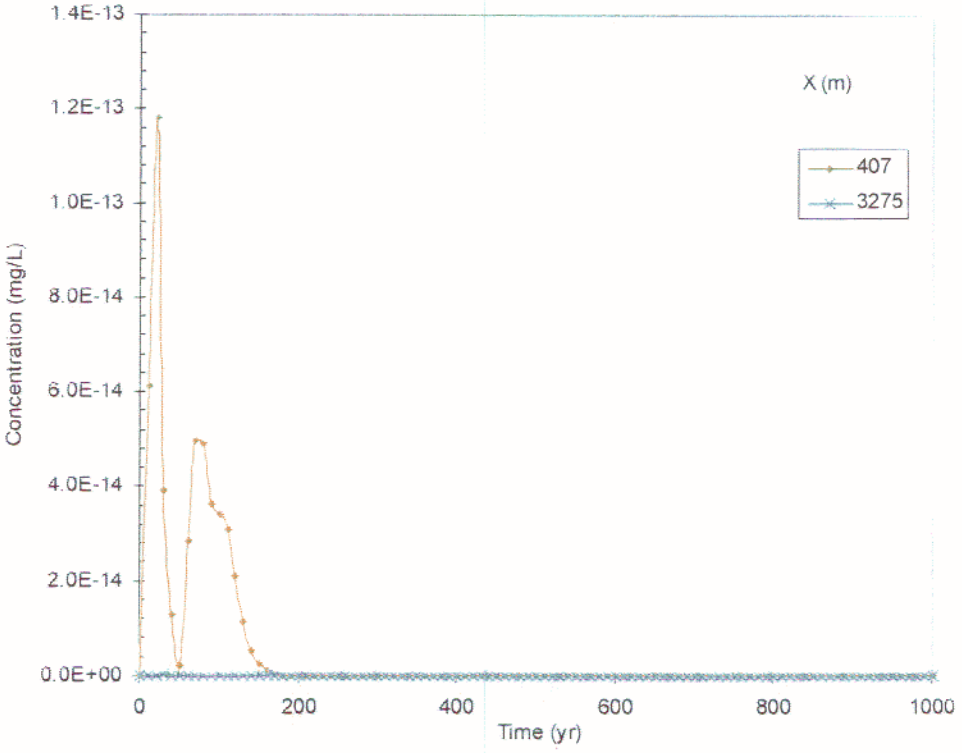

Fig. C.3.18. Predicted groundwater concentration of m-xylene based on leaching from the C-746-U Landfill waste (gradual failure).

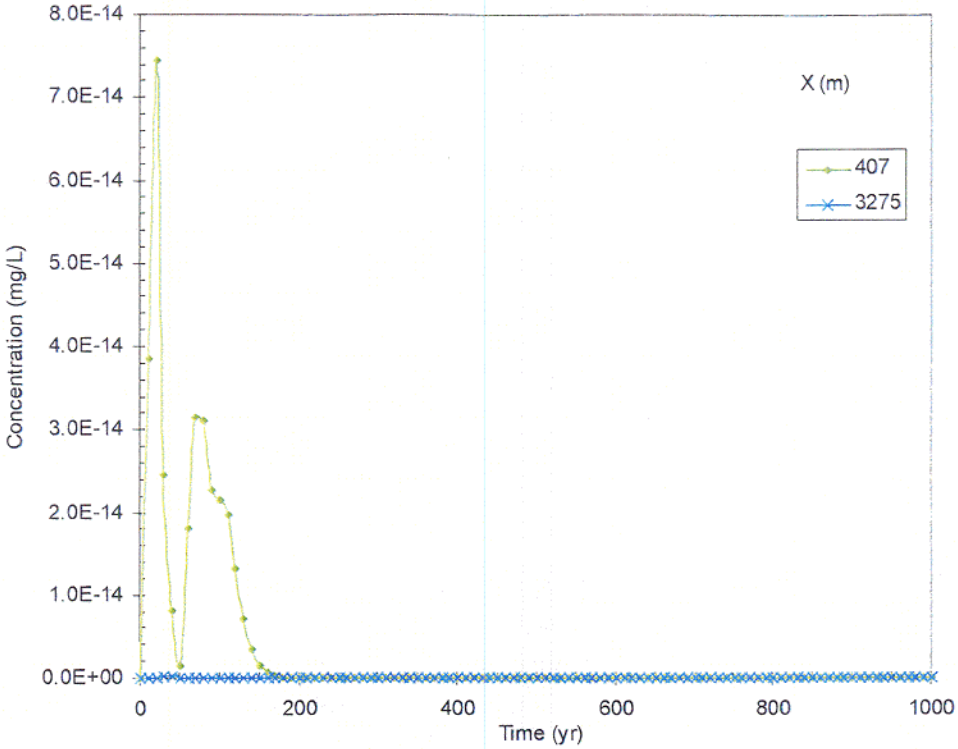

Fig. C.3.19. Predicted groundwater concentration of p-xylene based on leaching from the C-746-U Landfill waste (gradual failure).

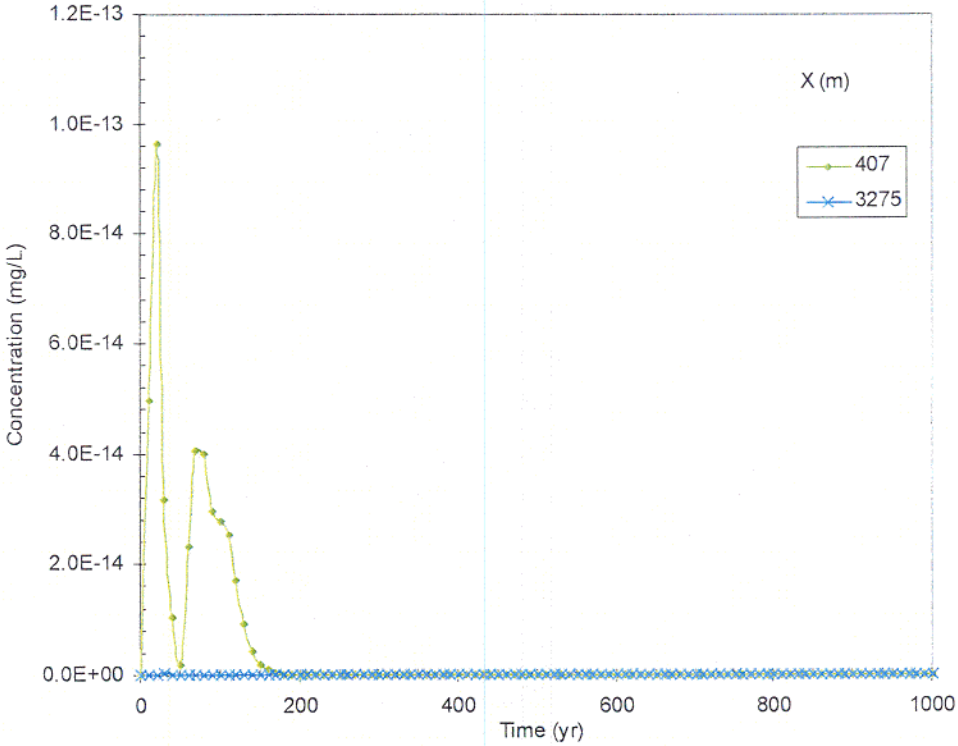

Fig. C.3.20. Predicted groundwater concentration of o-xylene based on leaching from the C-746-U Landfill waste (gradual failure).

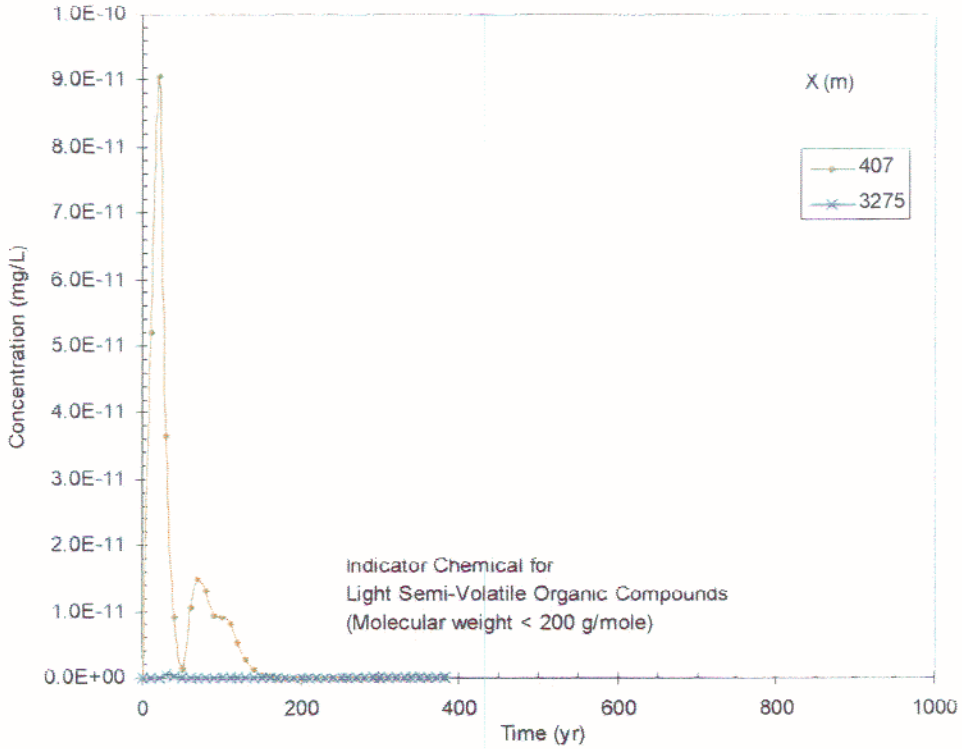

Fig. C.3.21. Predicted groundwater concentration of 2-methylphenol based on leaching from the C-746-U Landfill waste (gradual failure).

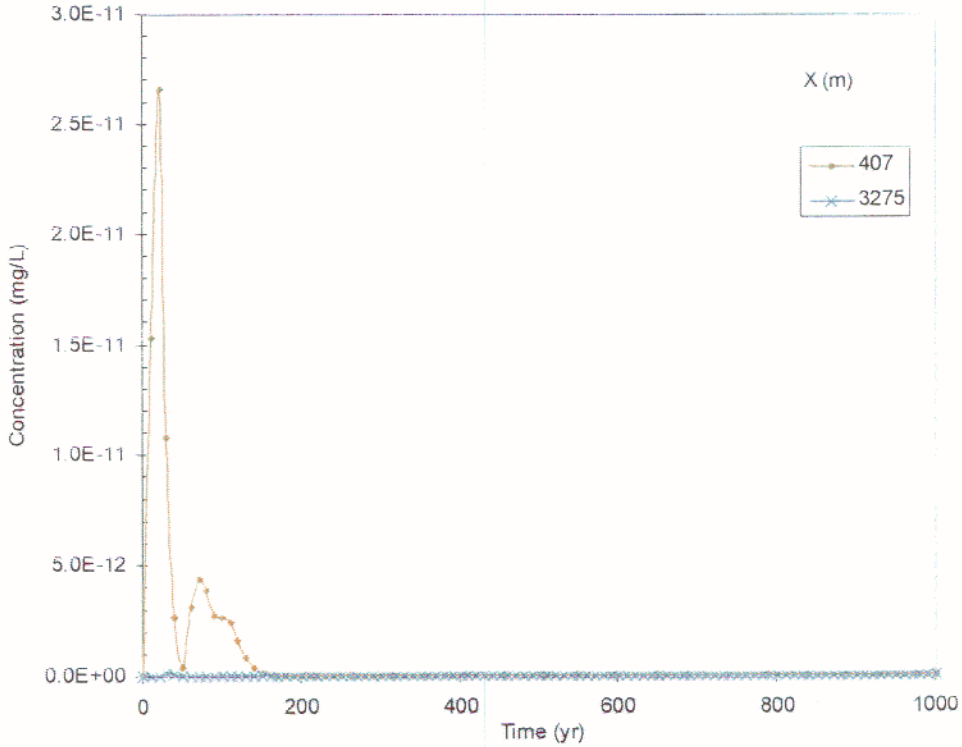

Fig. C.3.22. Predicted groundwater concentration of pyridine based on leaching from the C-746-U Landfill waste (gradual failure).

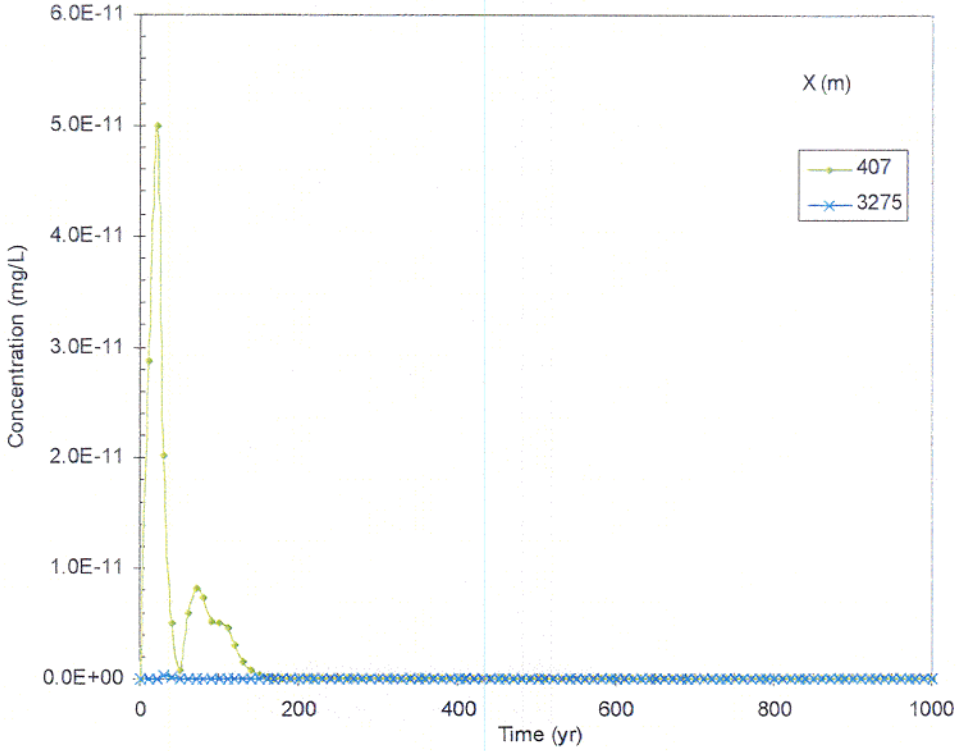

Fig. C.3.23. Predicted groundwater concentration of 4-methylphenol based on leaching from the C-746-U Landfill waste (gradual failure).

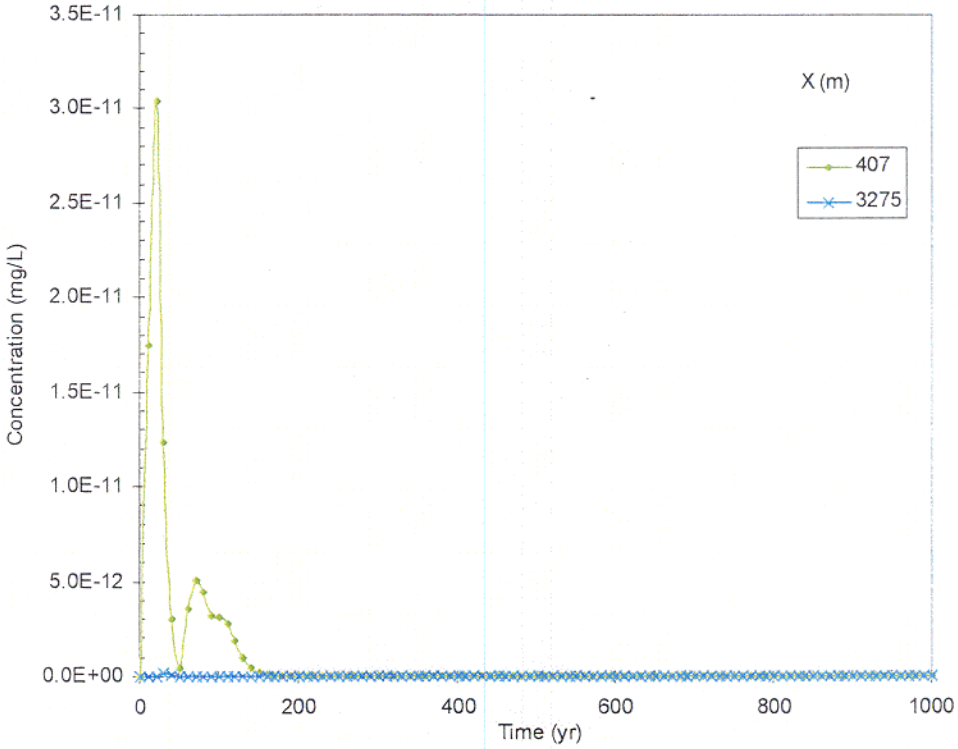

Fig. C.3.24. Predicted groundwater concentration of 3-methylphenol based on leaching from the C-746-U Landfill waste (gradual failure).

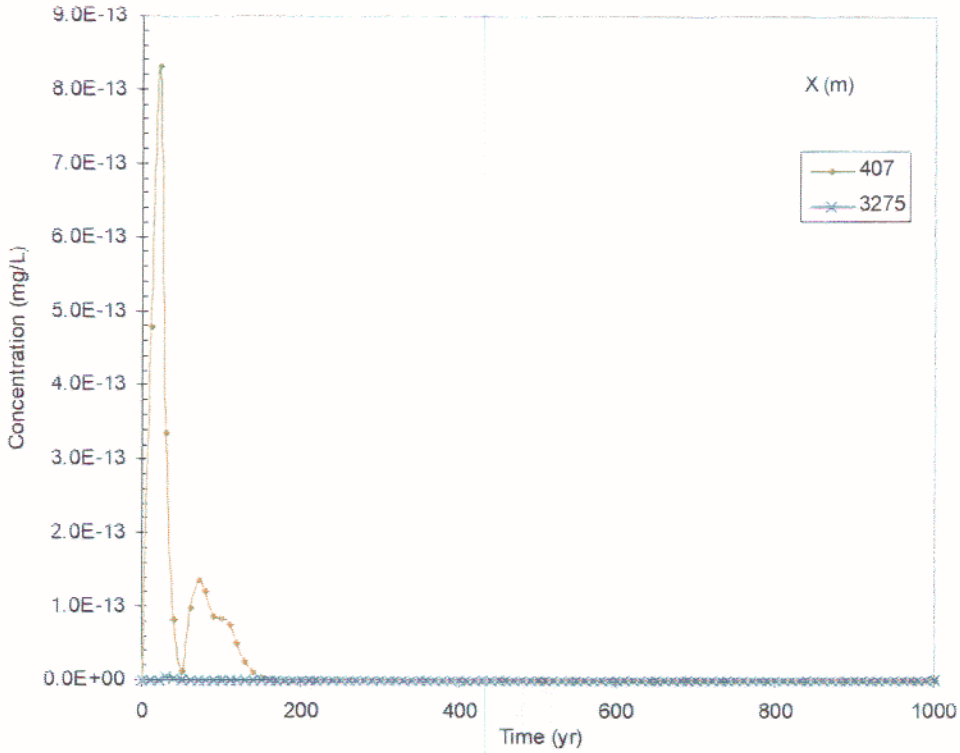

Fig. C.3.25. Predicted groundwater concentration of 2,4-dinitrotoluene based on leaching from the C-746-U Landfill waste (gradual failure).

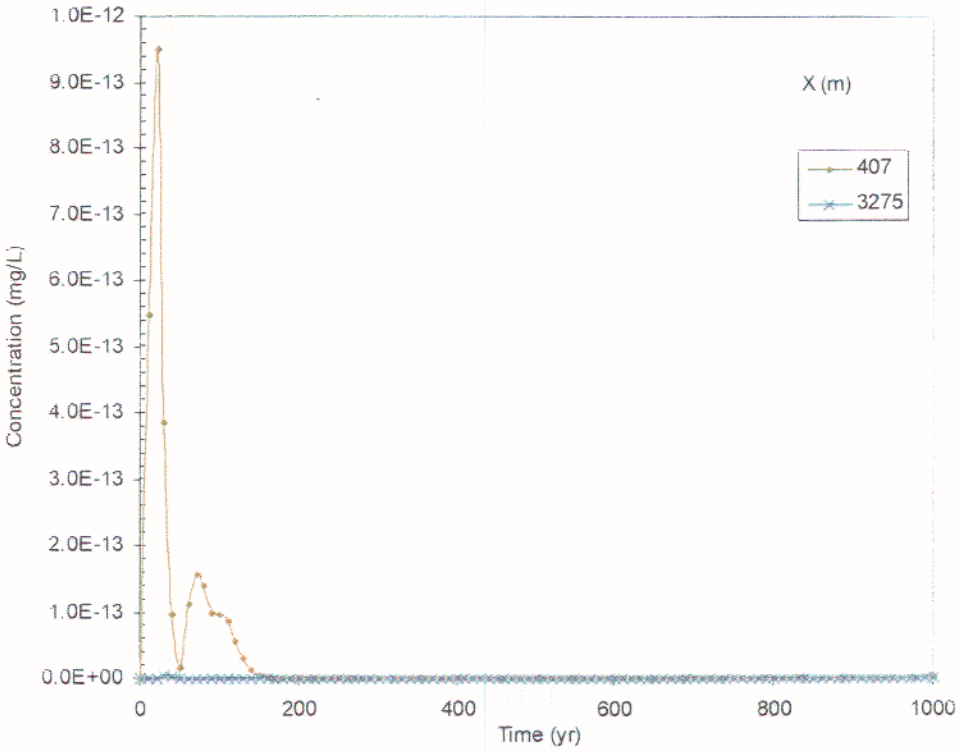

Fig. C.3.26. Predicted groundwater concentration of nitrobenzene based on leaching from the C-746-U Landfill waste (gradual failure).

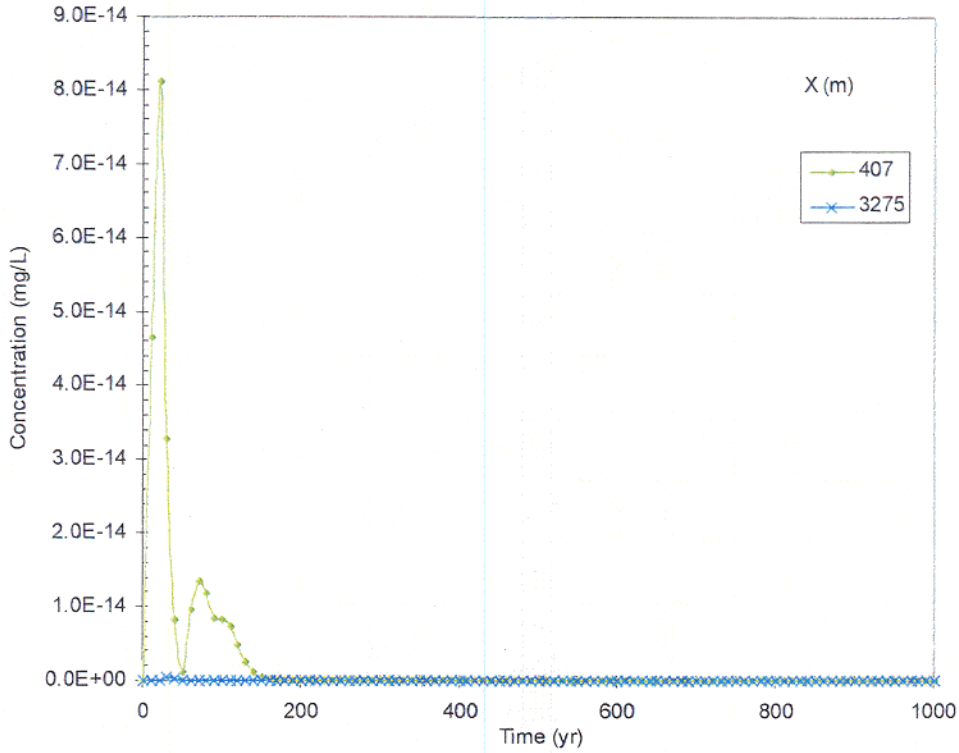

Fig. C.3.27. Predicted groundwater concentration of 2,4,6-trichlorophenol based on leaching from the C-746-U Landfill waste (gradual failure).

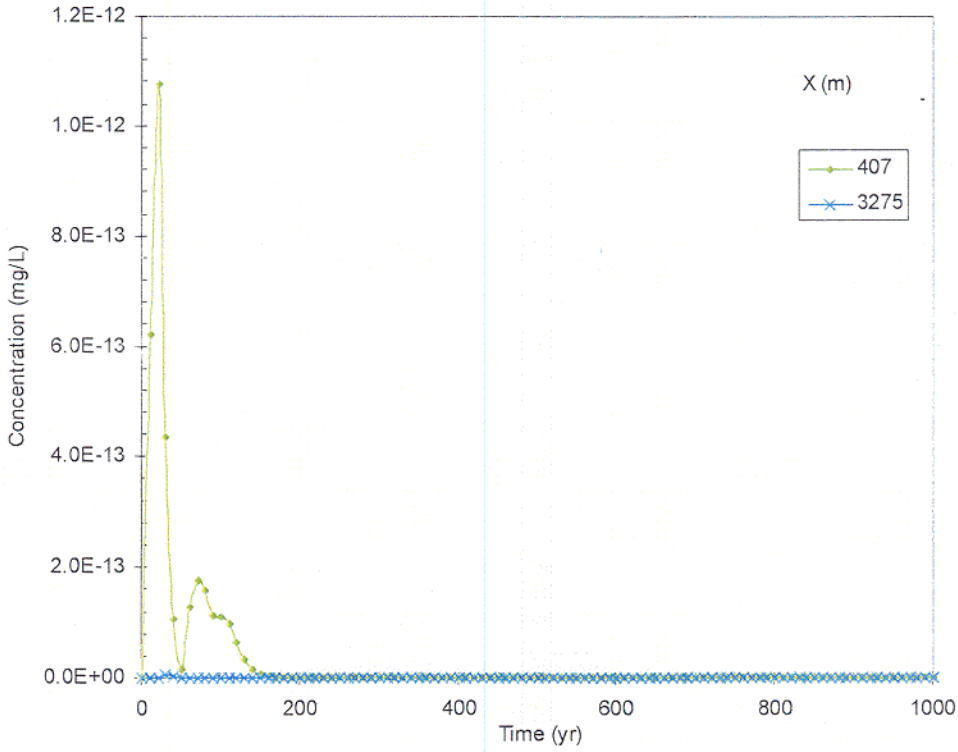

Fig. C.3.28. Predicted groundwater concentration of 2,4,5-trichlorophenol based on leaching from the C-746-U Landfill waste (gradual failure).

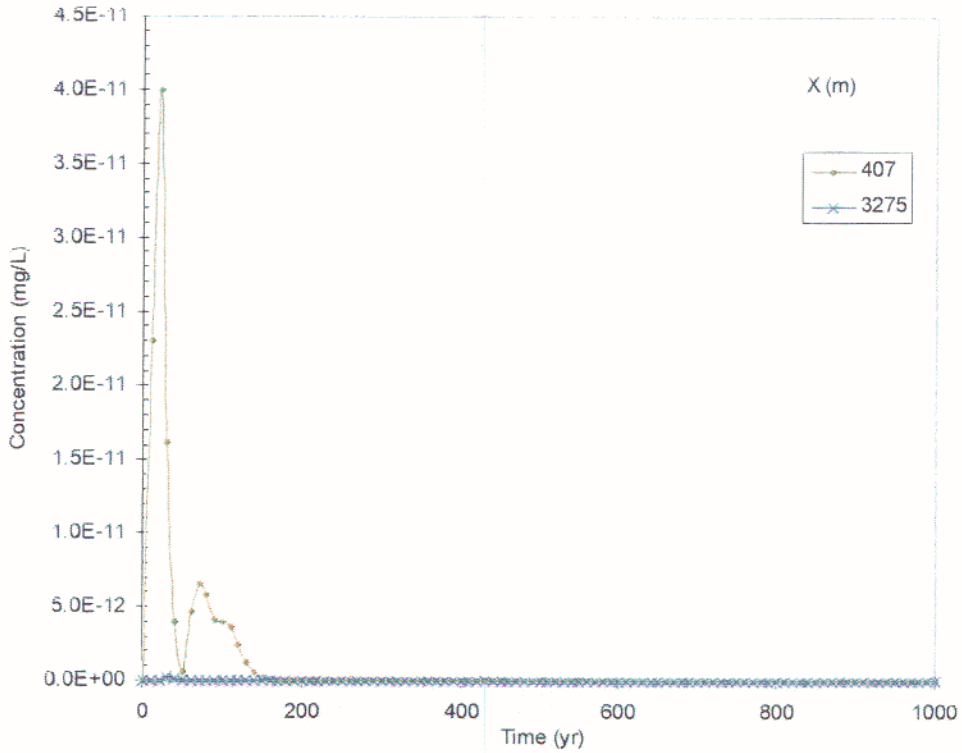

Fig. C.3.29. Predicted groundwater concentration of acrylonitrile based on leaching from the C-746-U Landfill waste (gradual failure).

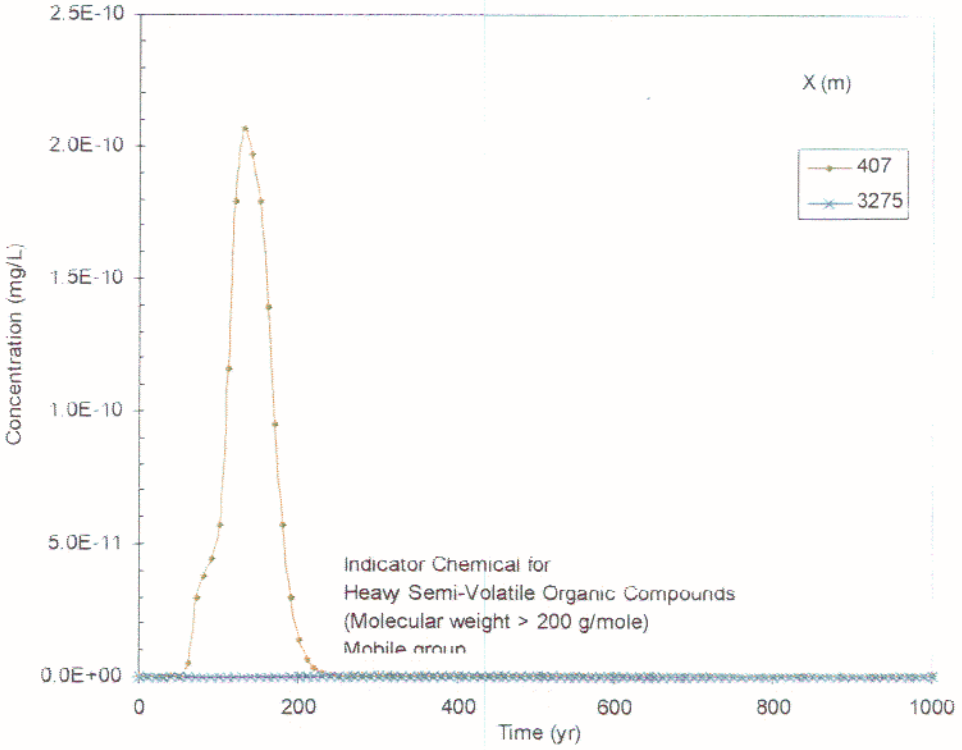

Fig. C.3.30. Predicted groundwater concentration of pentachlorophenol based on leaching from the C-746-U Landfill waste (gradual failure).

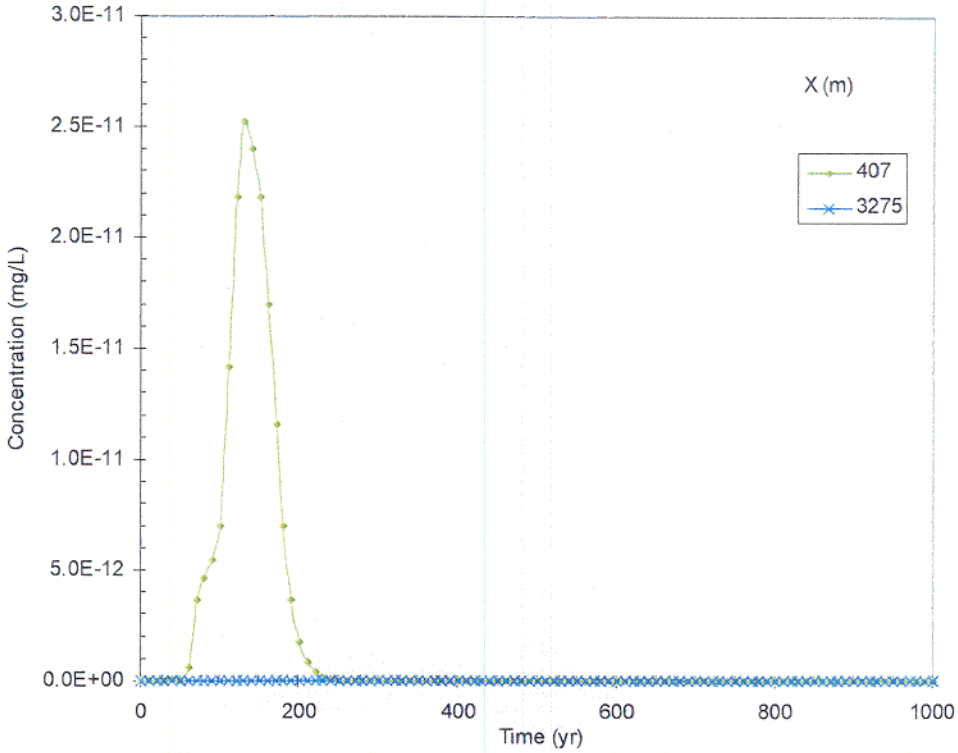

Fig. C.3.31. Predicted groundwater concentration of naphthalene based on leaching from the C-746-U Landfill waste (gradual failure).

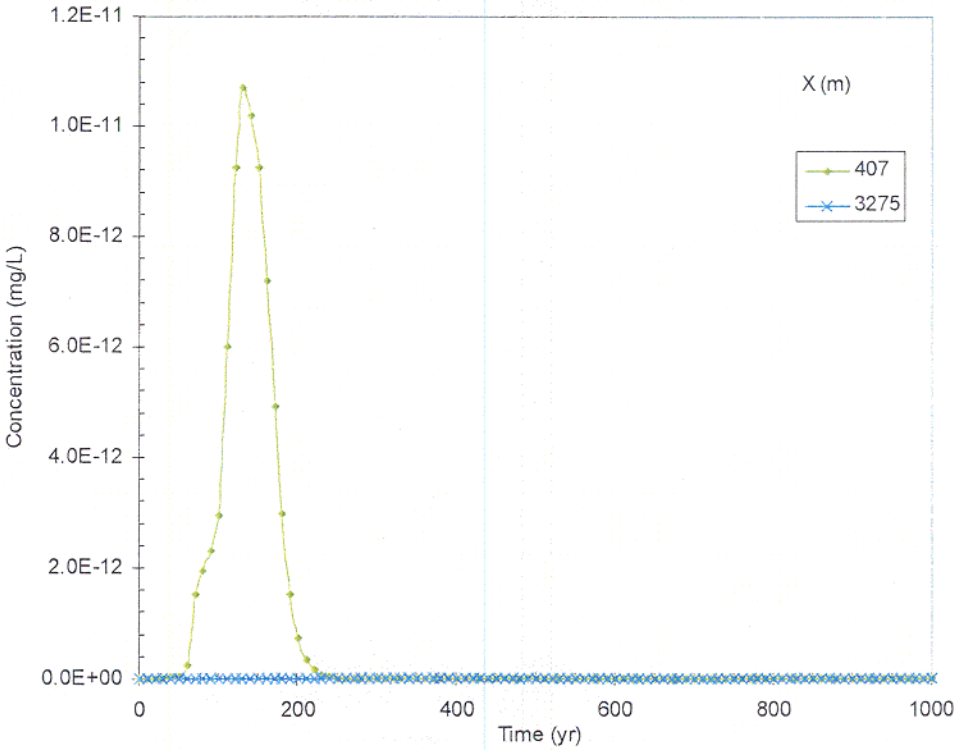

Fig. C.3.32. Predicted groundwater concentration of hexachloroethane based on leaching from the C-746-U Landfill waste (gradual failure).

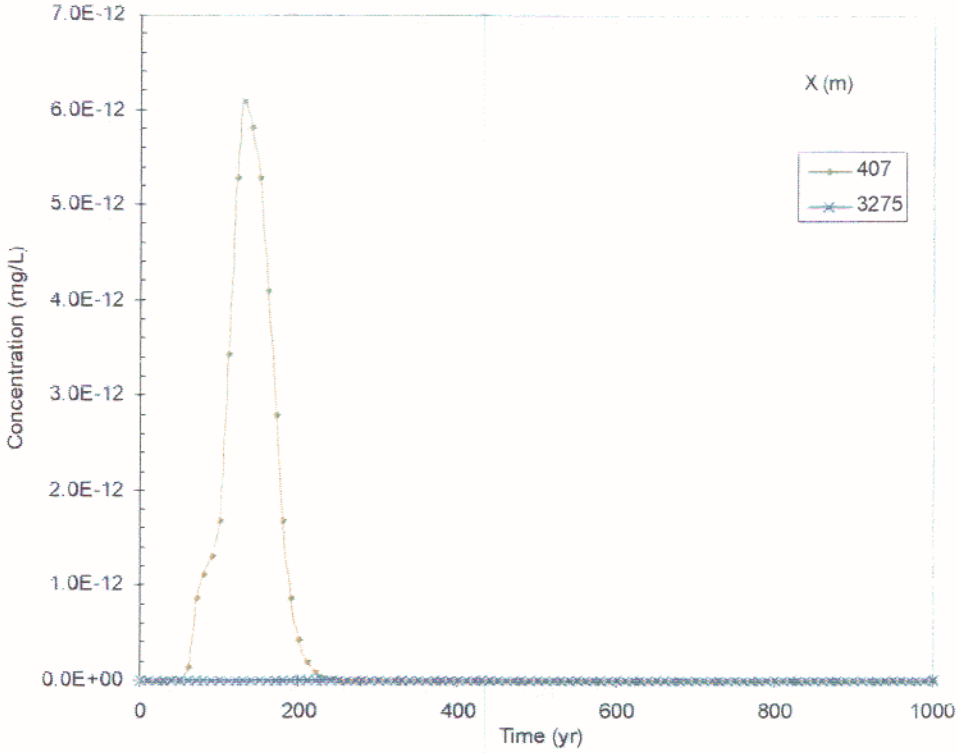

Fig. C.3.33. Predicted groundwater concentration of acenaphthene based on leaching from the C-746-U Landfill waste (gradual failure).

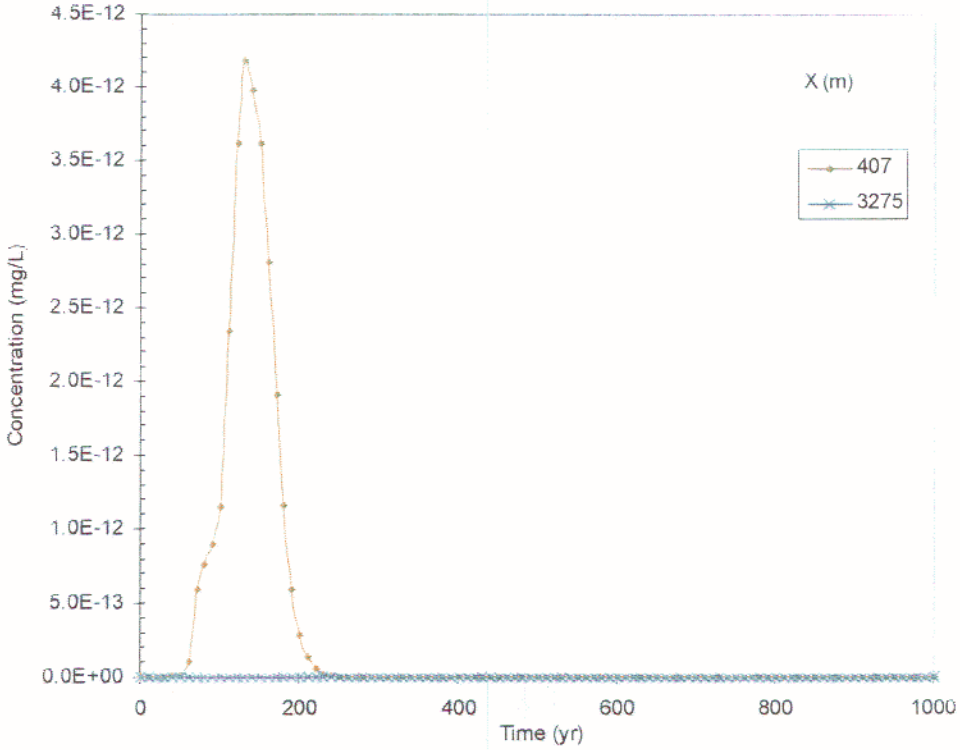

Fig. C.3.34. Predicted groundwater concentration of acenaphthylene based on leaching from the C-746-U Landfill waste (gradual failure).

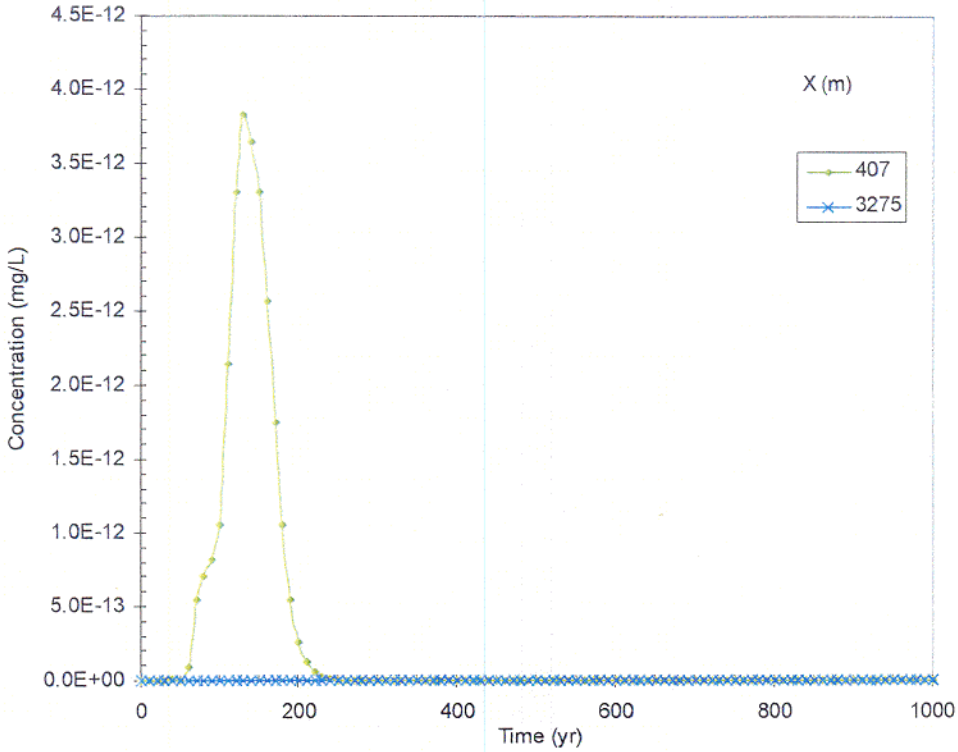

Fig. C.3.35. Predicted groundwater concentration of fluorene based on leaching from the C-746-U Landfill waste (gradual failure).

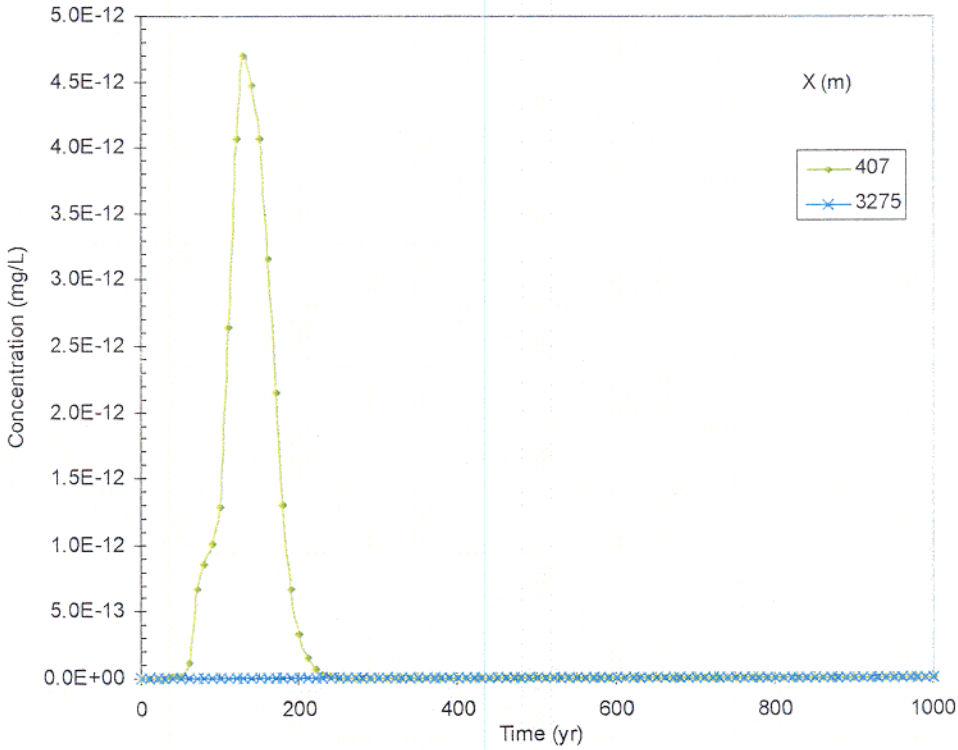

Fig. C.3.36. Predicted groundwater concentration of phenanthrene based on leaching from the C-746-U Landfill waste (gradual failure).

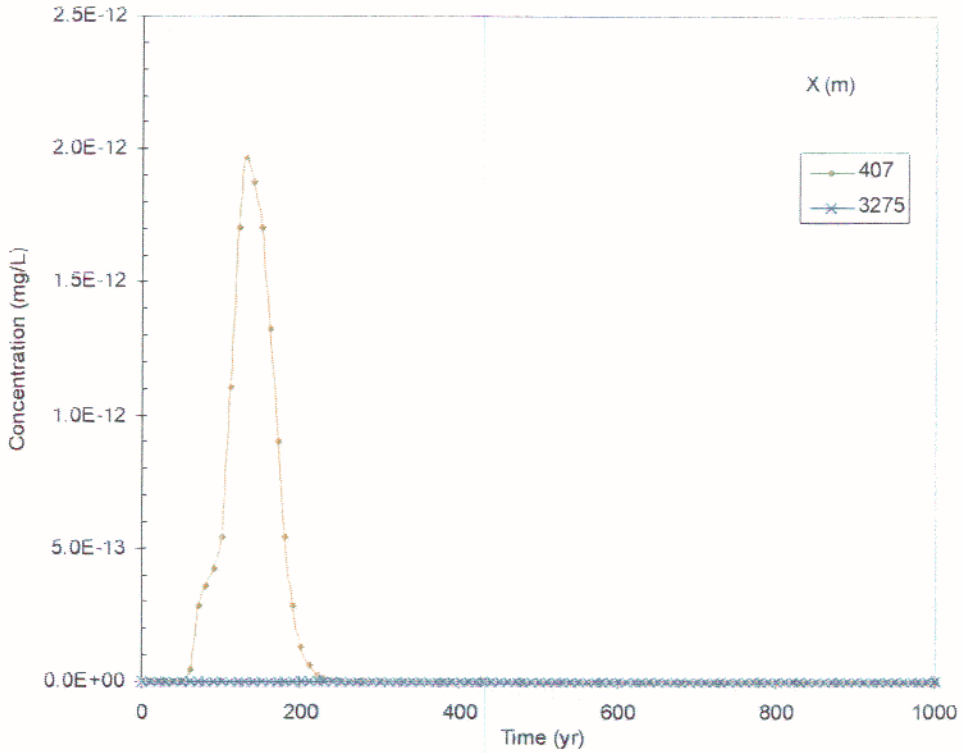

Fig. C.3.37. Predicted groundwater concentration of anthracene based on leaching from the C-746-U Landfill waste (gradual failure).

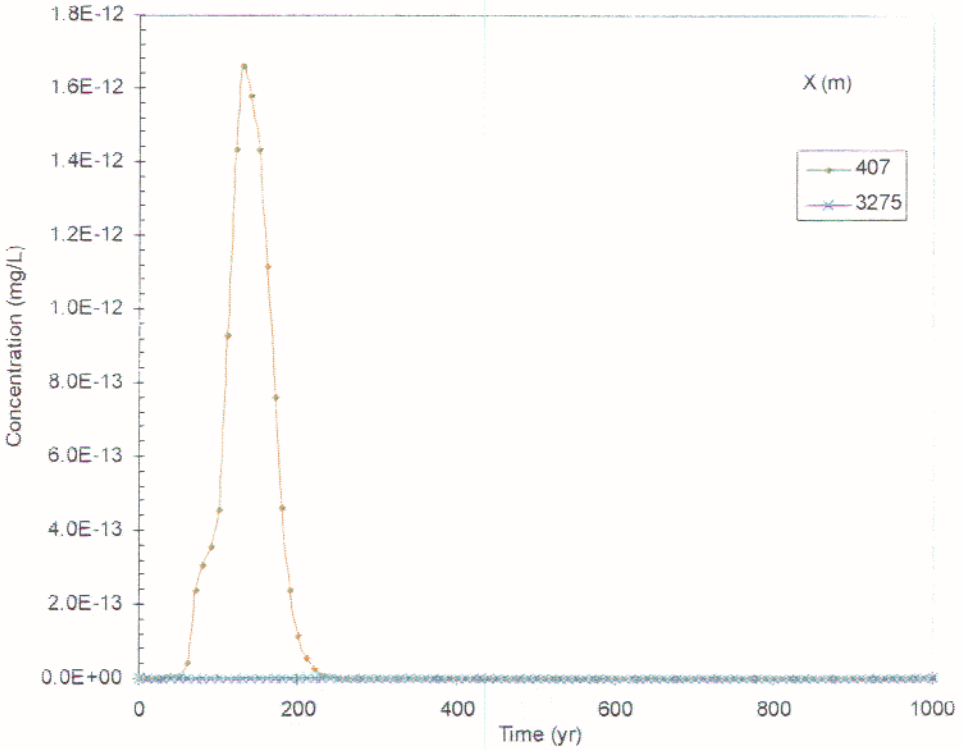

Fig. C.3.38. Predicted groundwater concentration of fluoranthene based on leaching from the C-746-U Landfill waste (gradual failure).

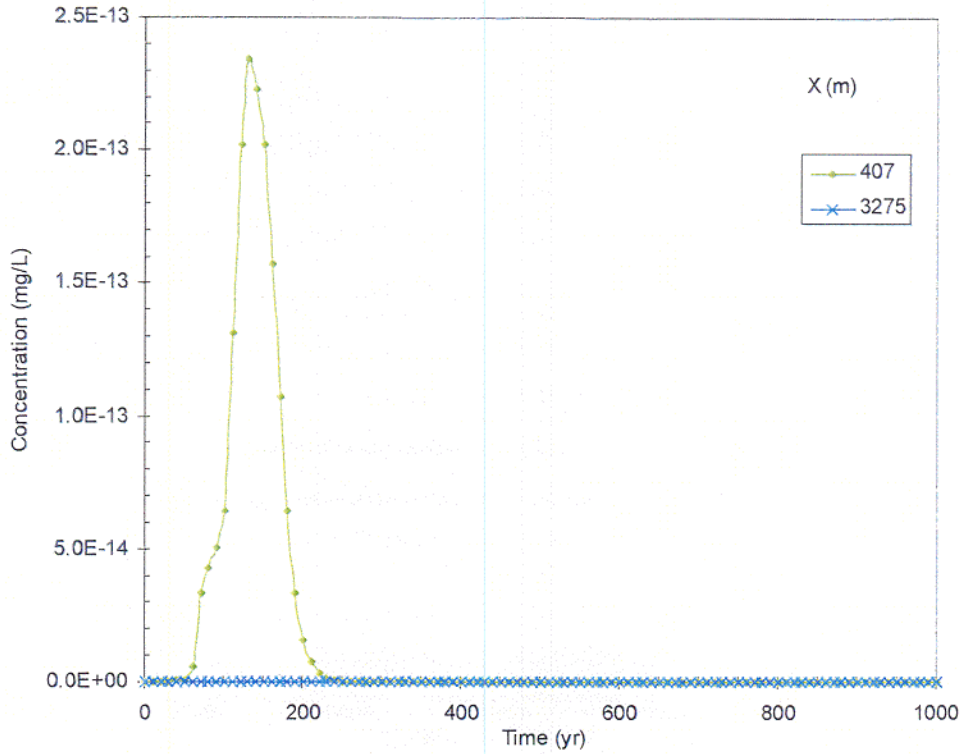

Fig. C.3.39. Predicted groundwater concentration of hexachlorobutadine based on leaching from the C-746-U Landfill waste (gradual failure).

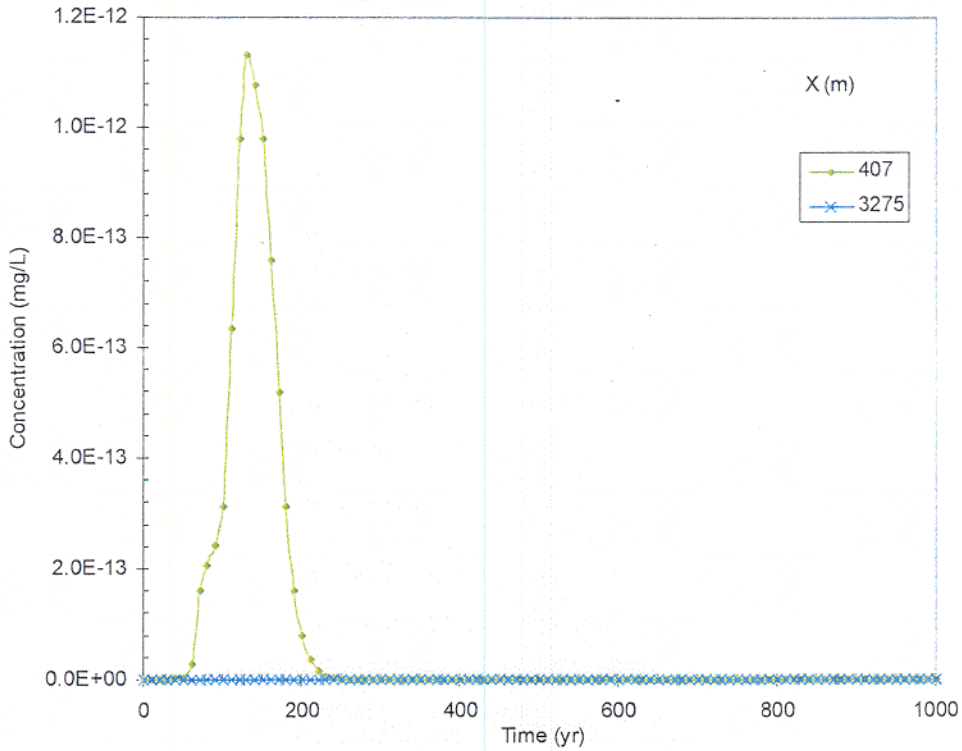

Fig. C.3.40. Predicted groundwater concentration of pyrene based on leaching from the C-746-U Landfill waste (gradual failure).

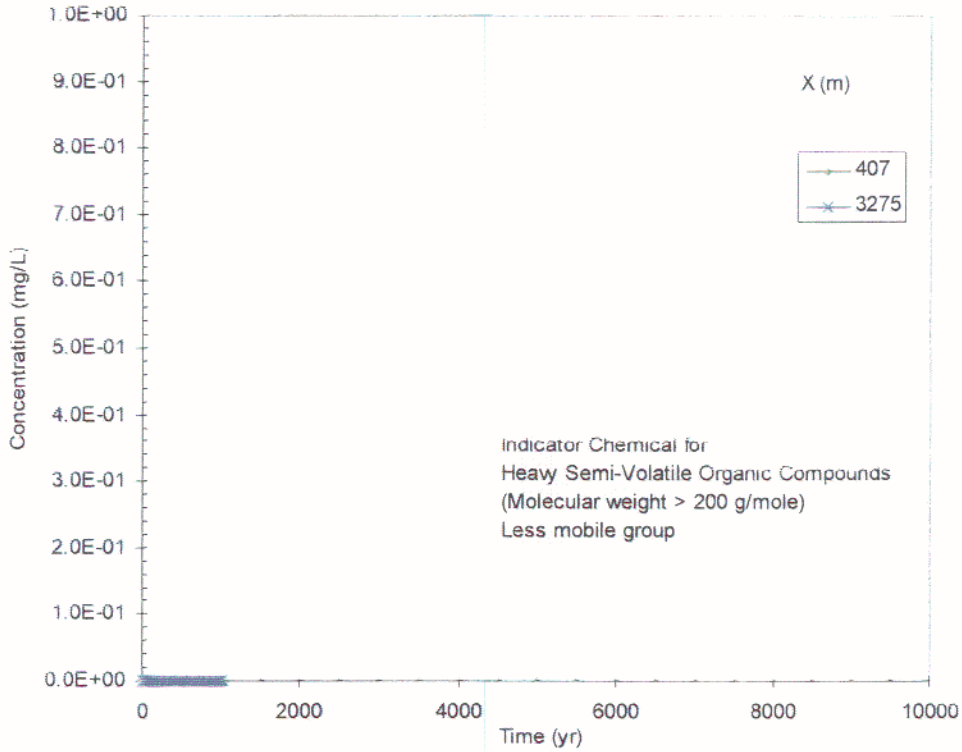

Fig. C.3.41. Predicted groundwater concentration of benzo(a)pyrene based on leaching from the C-746-U Landfill waste (gradual failure).

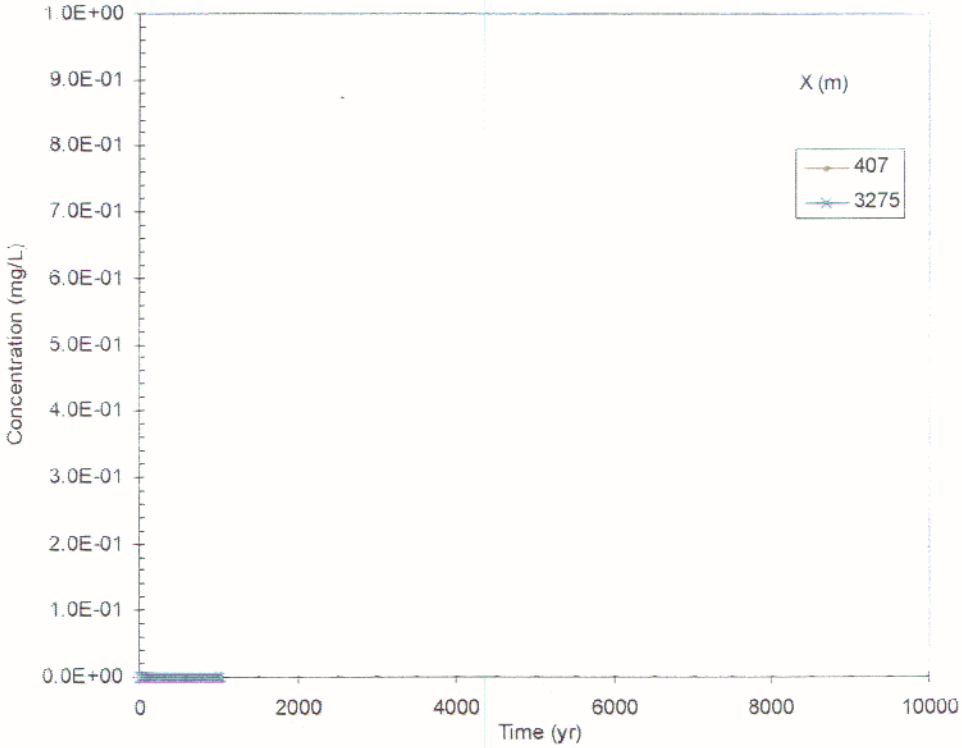

Fig. C.3.42. Predicted groundwater concentration of dioxin/furane based on leaching from the C-746-U Landfill waste (gradual failure).

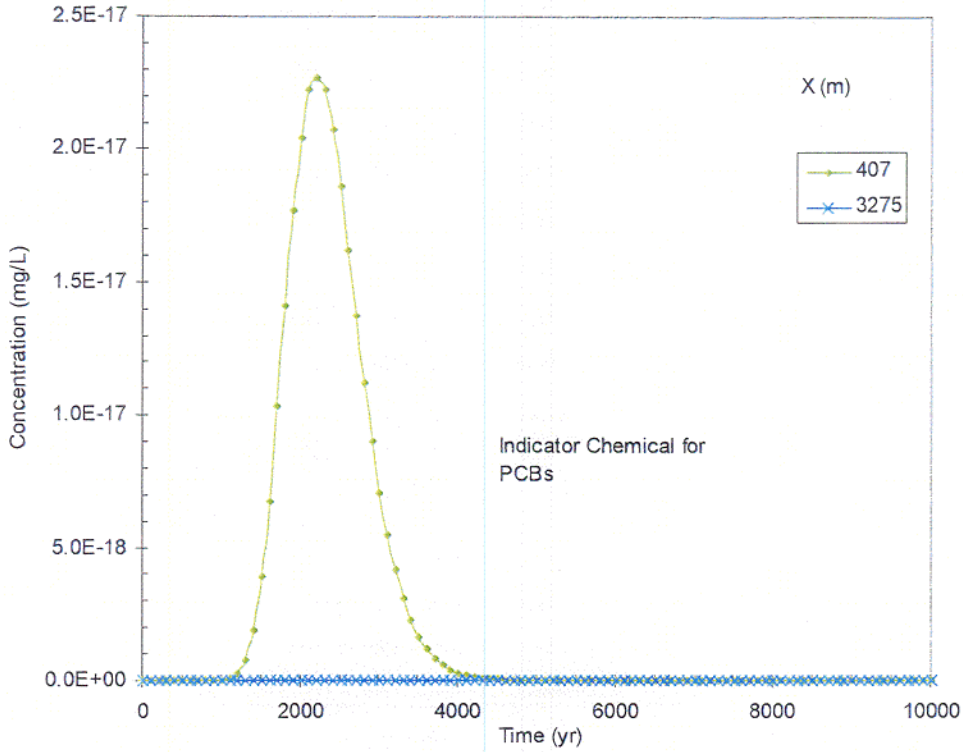

Fig. C.3.43. Predicted groundwater concentration of PCBs based on leaching from the C-746-U Landfill waste (gradual failure).

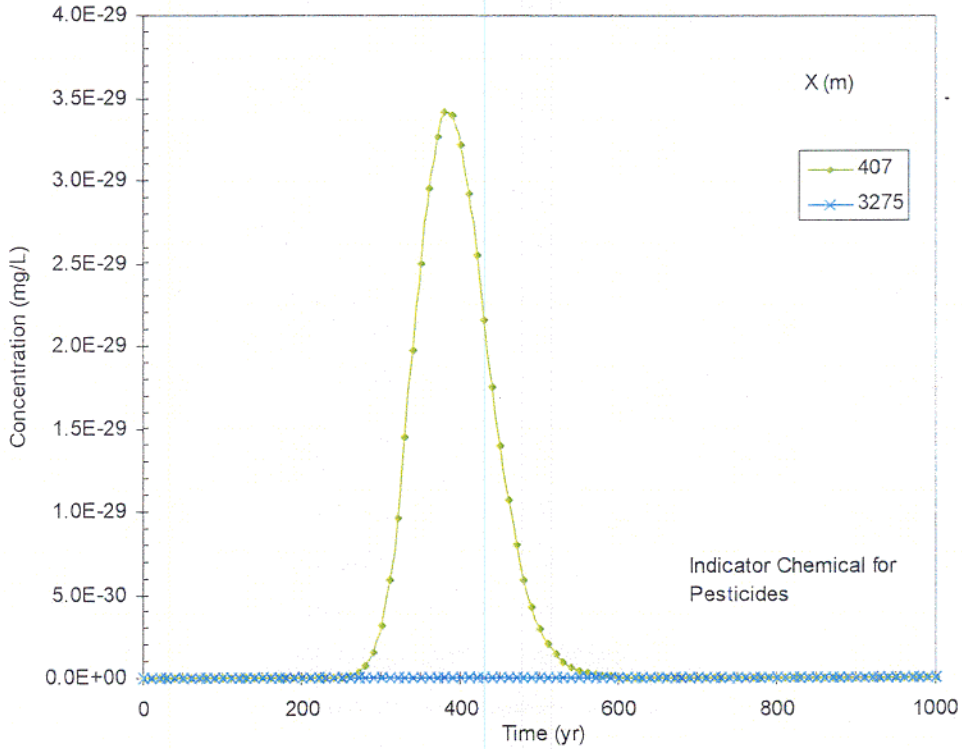

Fig. C.3.44. Predicted groundwater concentration of gamma-chlordane based on leaching from the C-746-U Landfill waste (gradual failure).

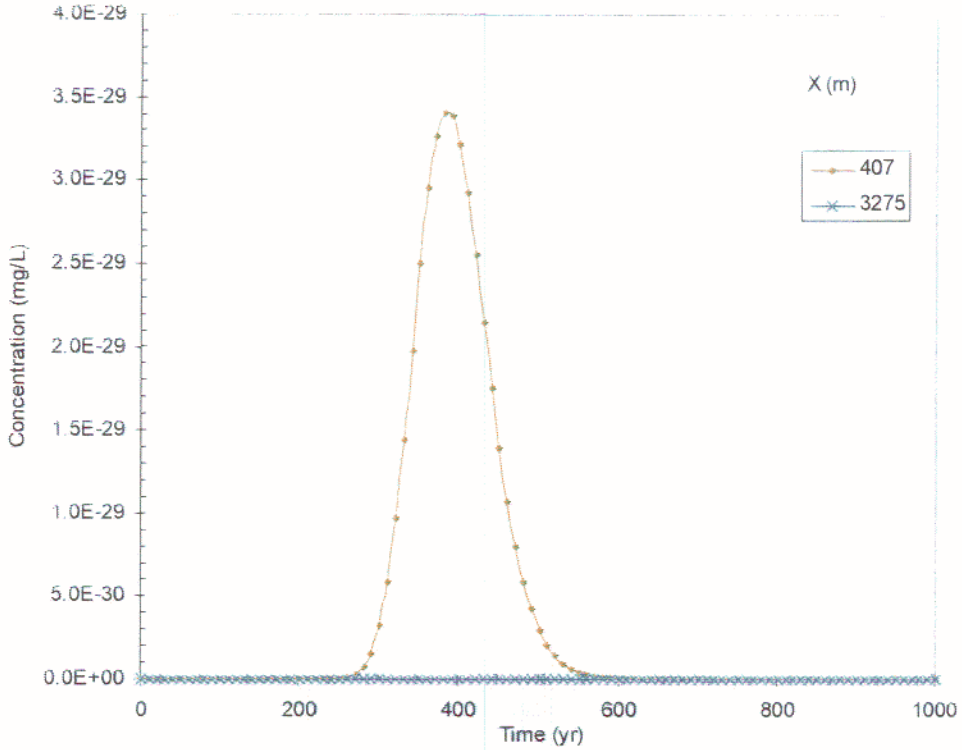

Fig. C.3.45. Predicted groundwater concentration of alpha-chlordane based on leaching from the C-746-U Landfill waste (gradual failure).

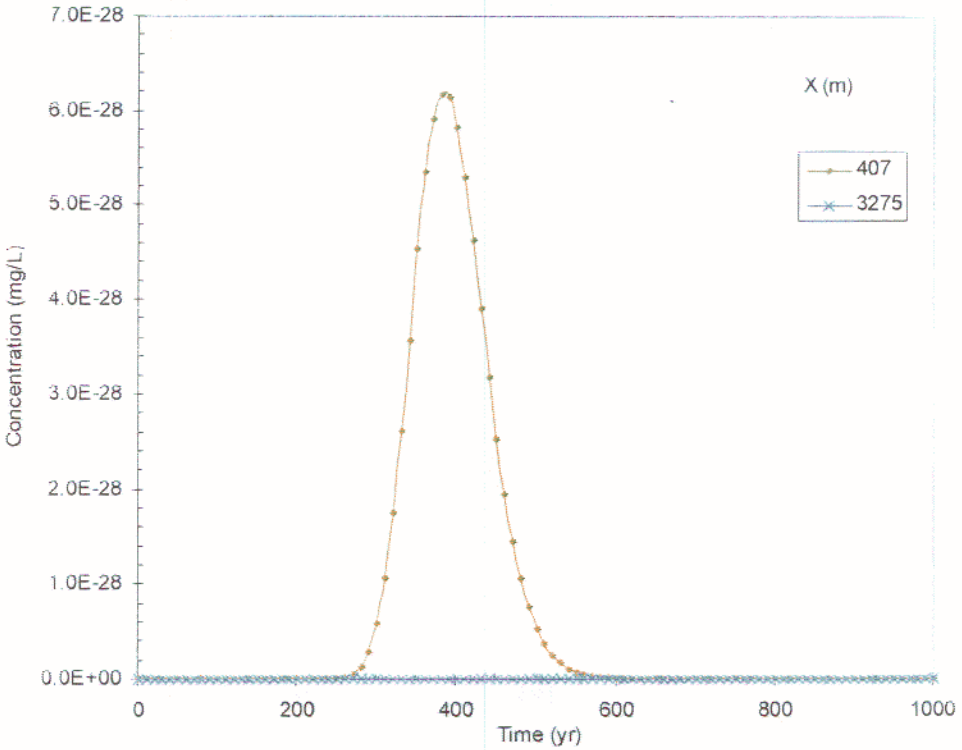

Fig. C.3.46. Predicted groundwater concentration of methoxychlor based on leaching from the C-746-U Landfill waste (gradual failure).

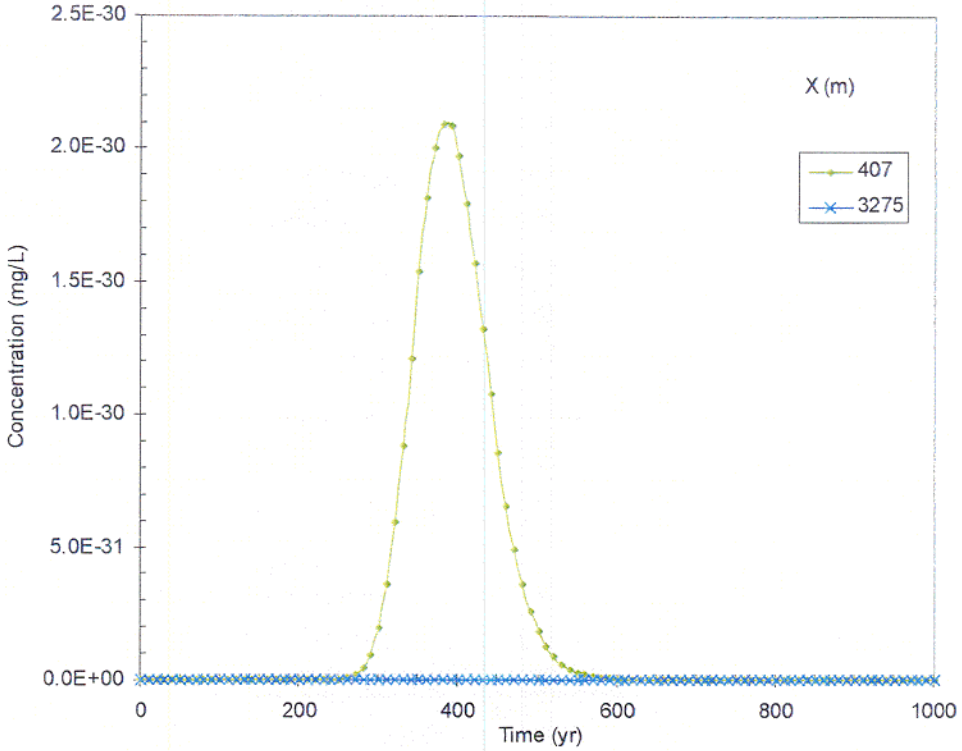

Fig. C.3.47. Predicted groundwater concentration of heptachlor epoxide based on leaching from the C-746-U Landfill waste (gradual failure).

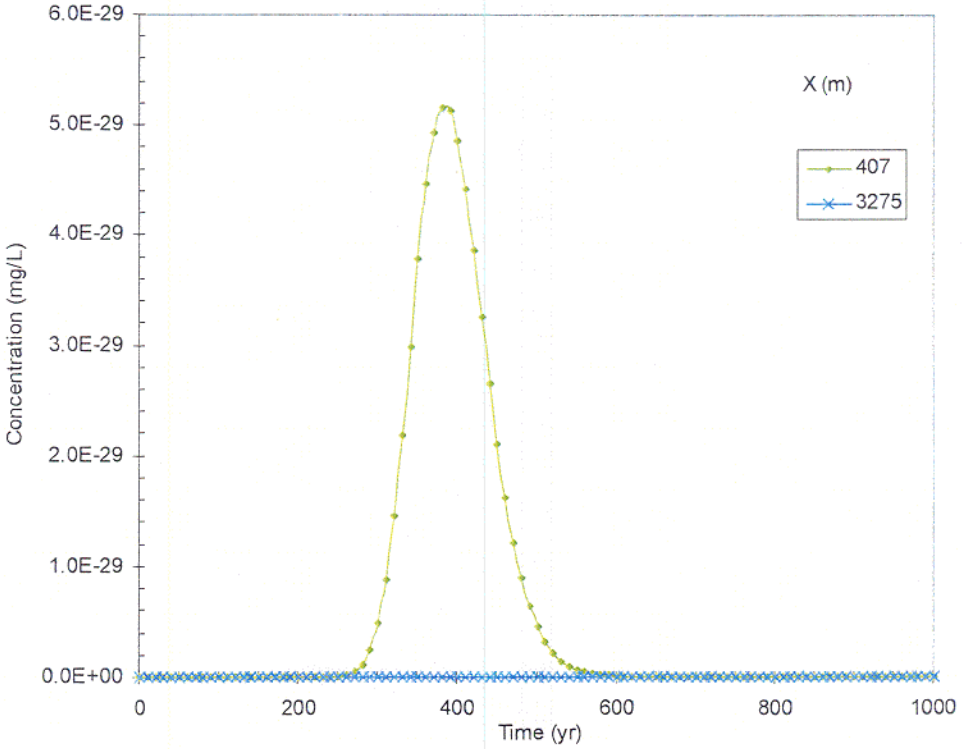

Fig. C.3.48. Predicted groundwater concentration of toxaphene based on leaching from the C-746-U Landfill waste (gradual failure).

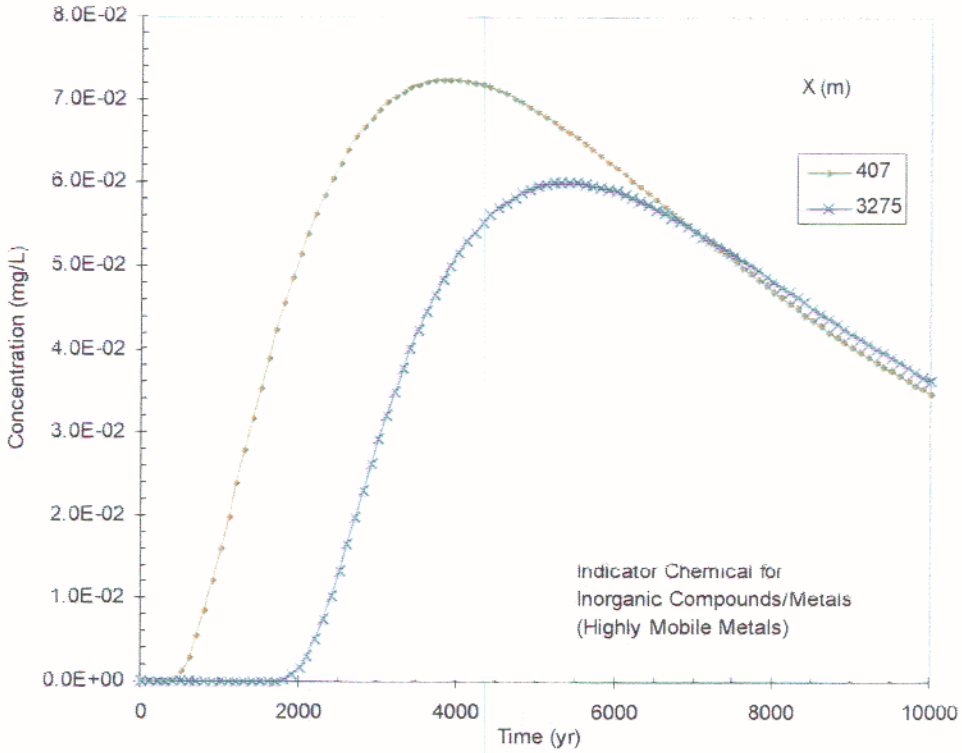

Fig. C.3.49. Predicted groundwater concentration of chromium based on leaching from the C-746-U Landfill waste (gradual failure).

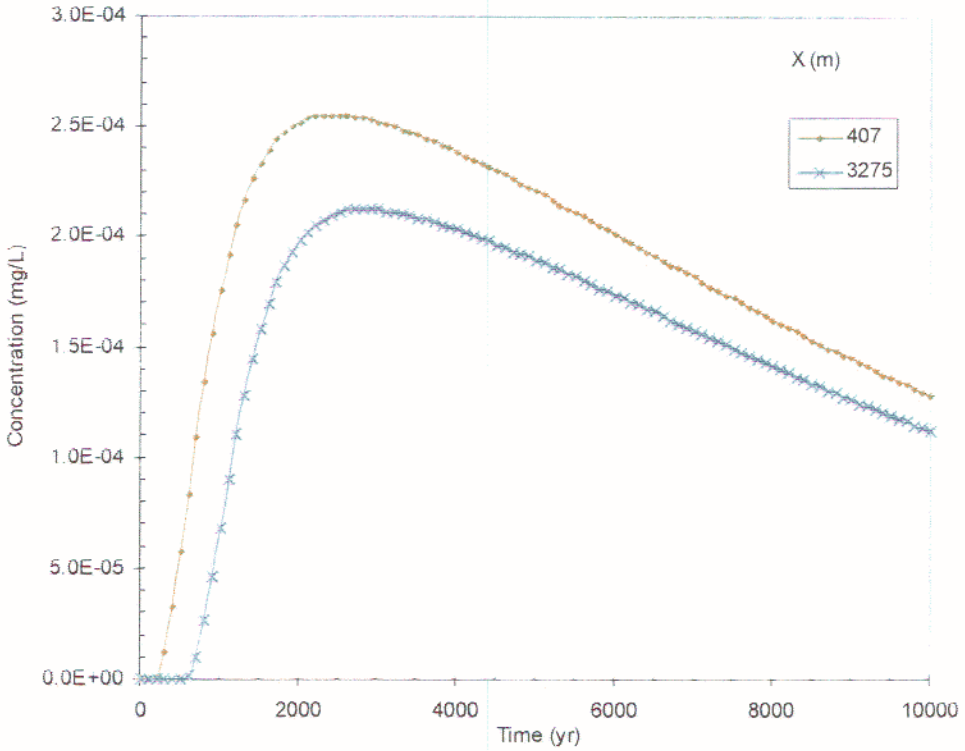

Fig. C.3.50. Predicted groundwater concentration of selenium based on leaching from the C-746-U Landfill waste (gradual failure).

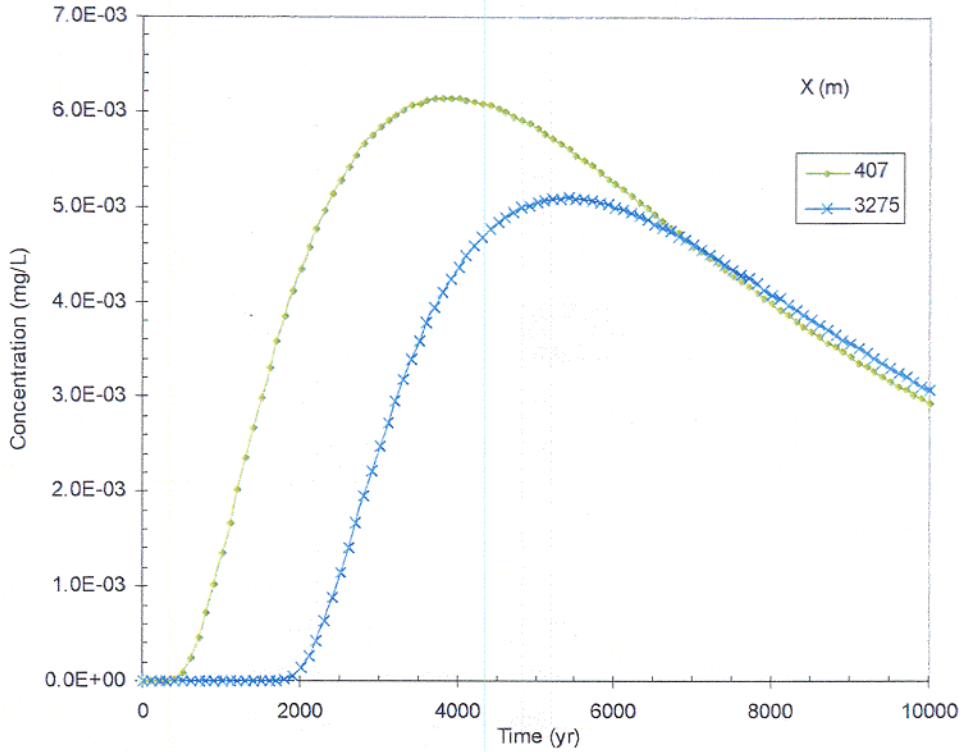

Fig. C.3.51. Predicted groundwater concentration of molybdenum based on leaching from the C-746-U Landfill waste (gradual failure).

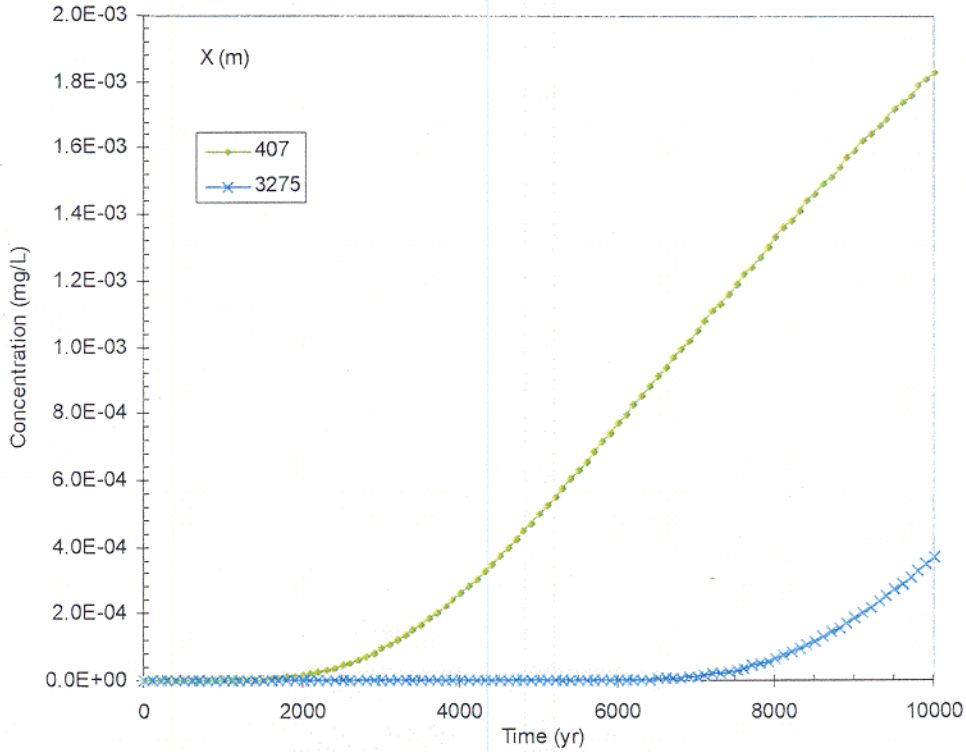

Fig. C.3.52. Predicted groundwater concentration of uranium based on leaching from the C-746-U Landfill waste (gradual failure).

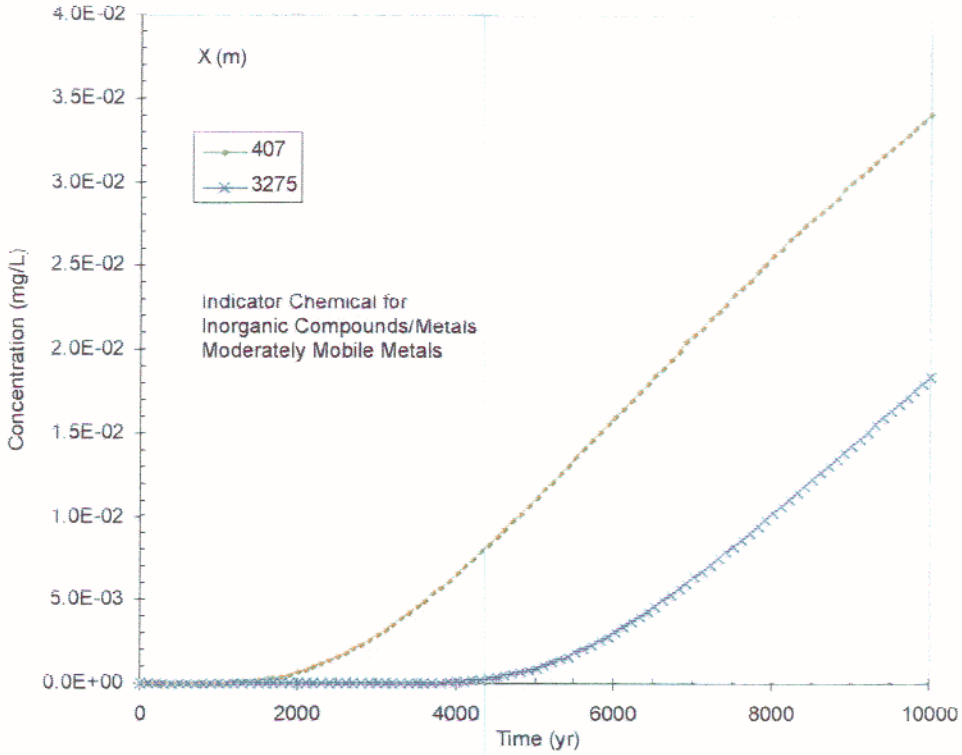

Fig. C.3.53. Predicted groundwater concentration of copper based on leaching from the C-746-U Landfill waste (gradual failure).

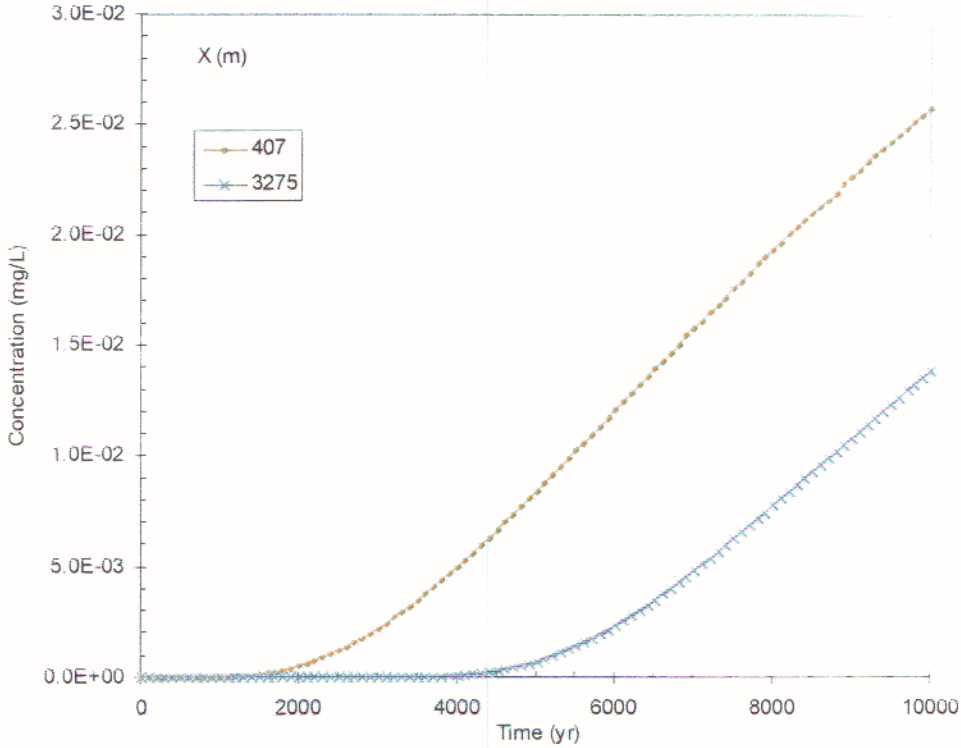

Fig. C.3.54. Predicted groundwater concentration of barium based on leaching from the C-746-U Landfill waste (gradual failure).

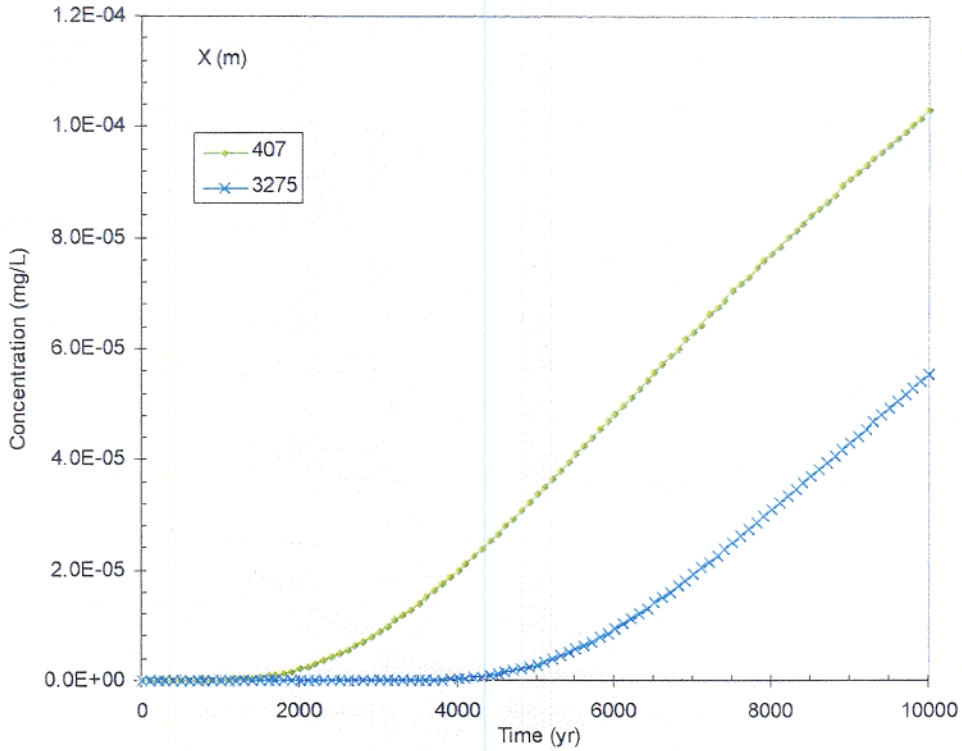

Fig. C.3.55. Predicted groundwater concentration of antimony based on leaching from the C-746-U Landfill waste (gradual failure).

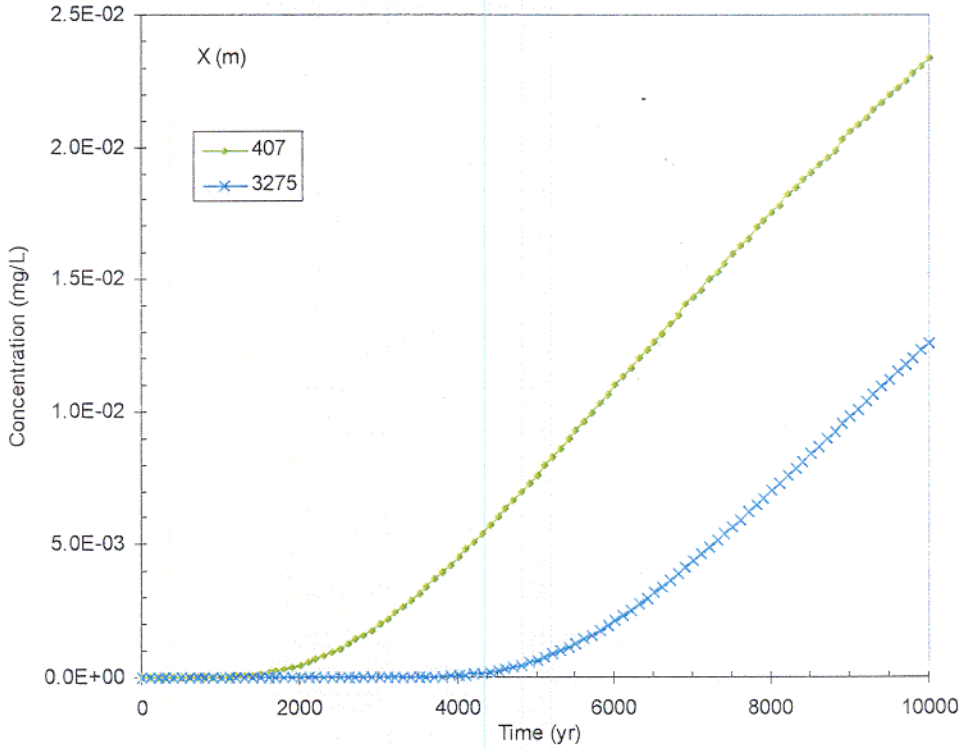

Fig. C.3.56. Predicted groundwater concentration of manganese based on leaching from the C-746-U Landfill waste (gradual failure).

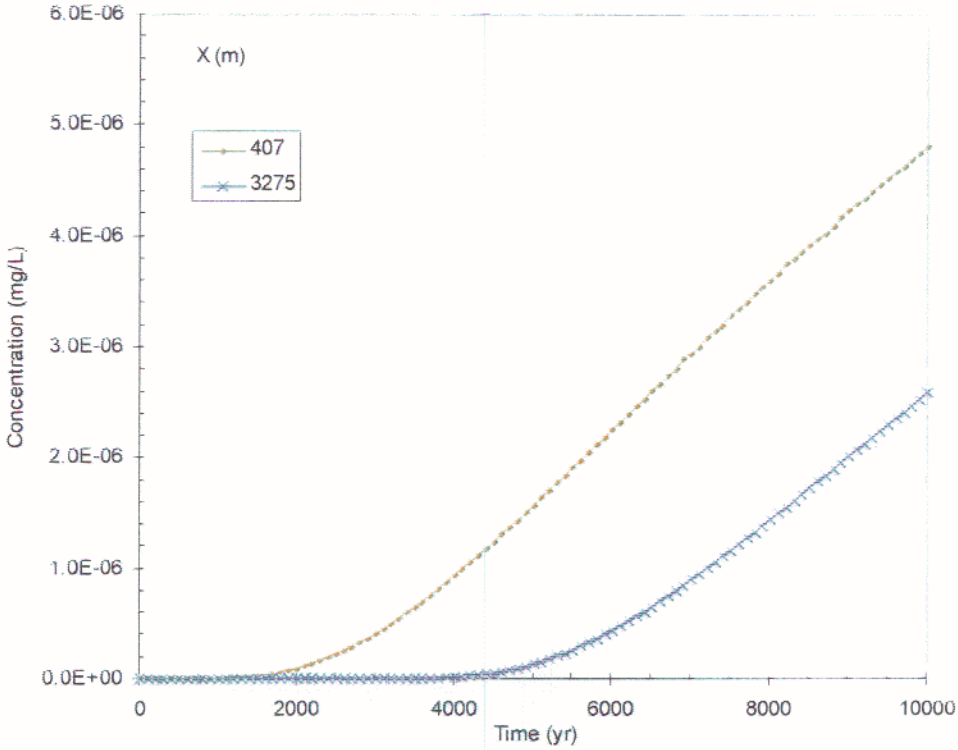

Fig. C.3.57. Predicted groundwater concentration of mercury based on leaching from the C-746-U Landfill waste (gradual failure).

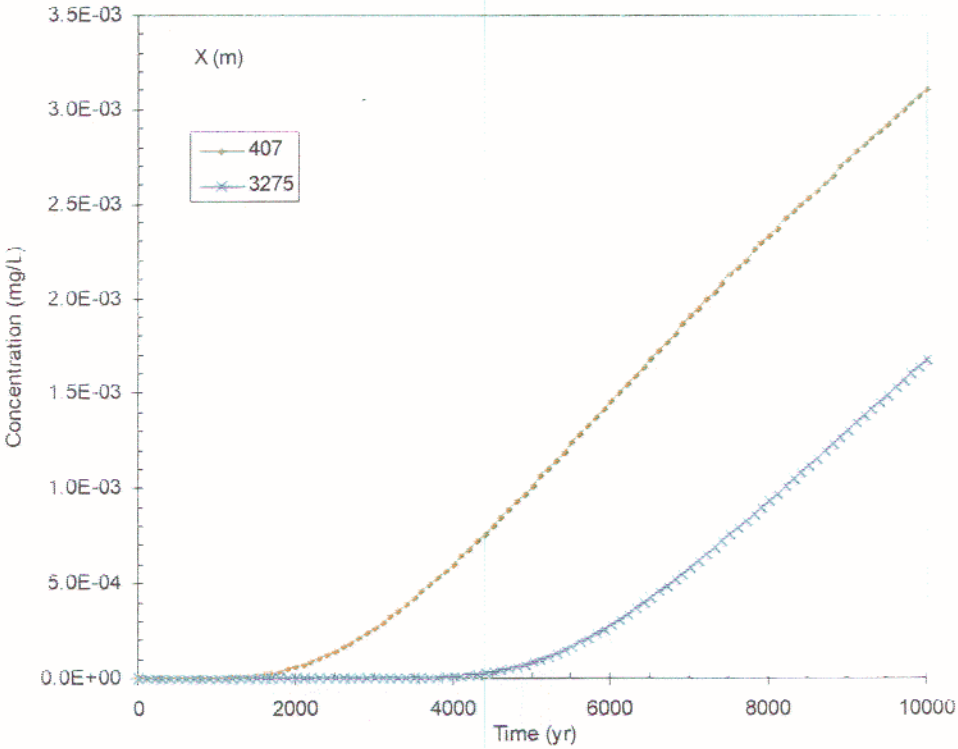

Fig. C.3.58. Predicted groundwater concentration of zinc based on leaching from the C-746-U Landfill waste (gradual failure).

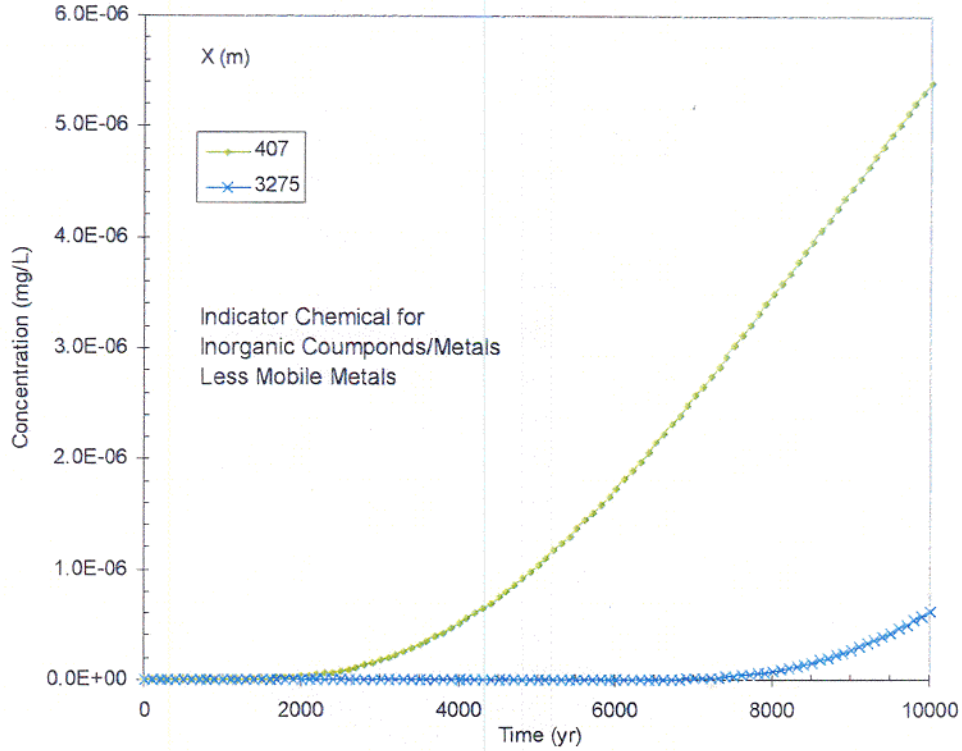

Fig. C.3.59. Predicted groundwater concentration of thallium based on leaching from the C-746-U Landfill waste (gradual failure).

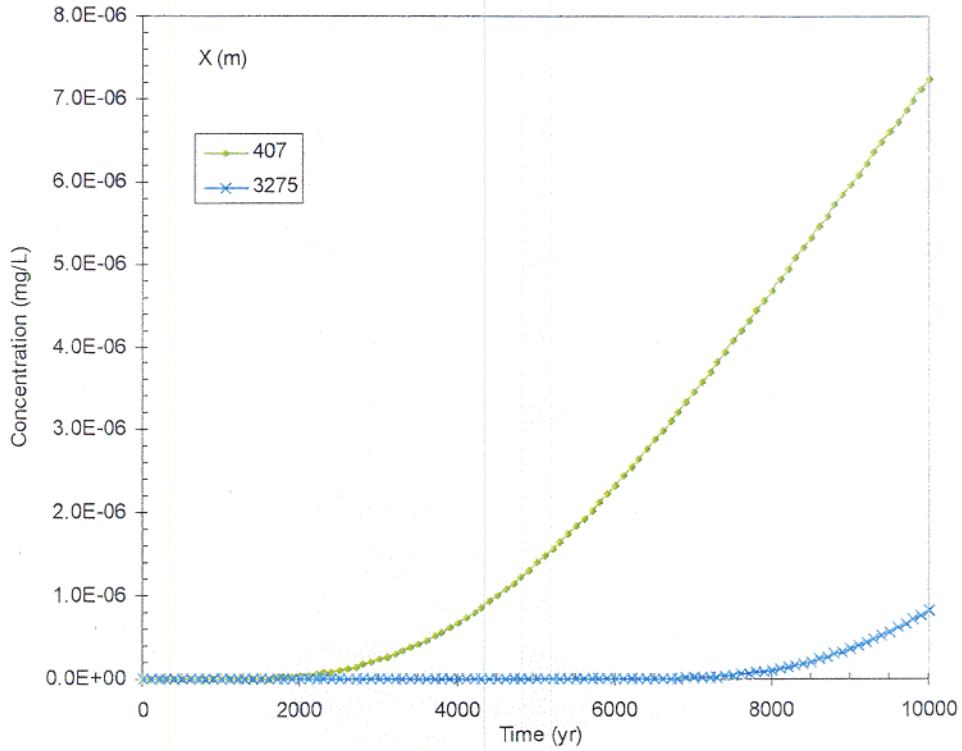

Fig. C.3.60. Predicted groundwater concentration of cadmium based on leaching from the C-746-U Landfill waste (gradual failure).

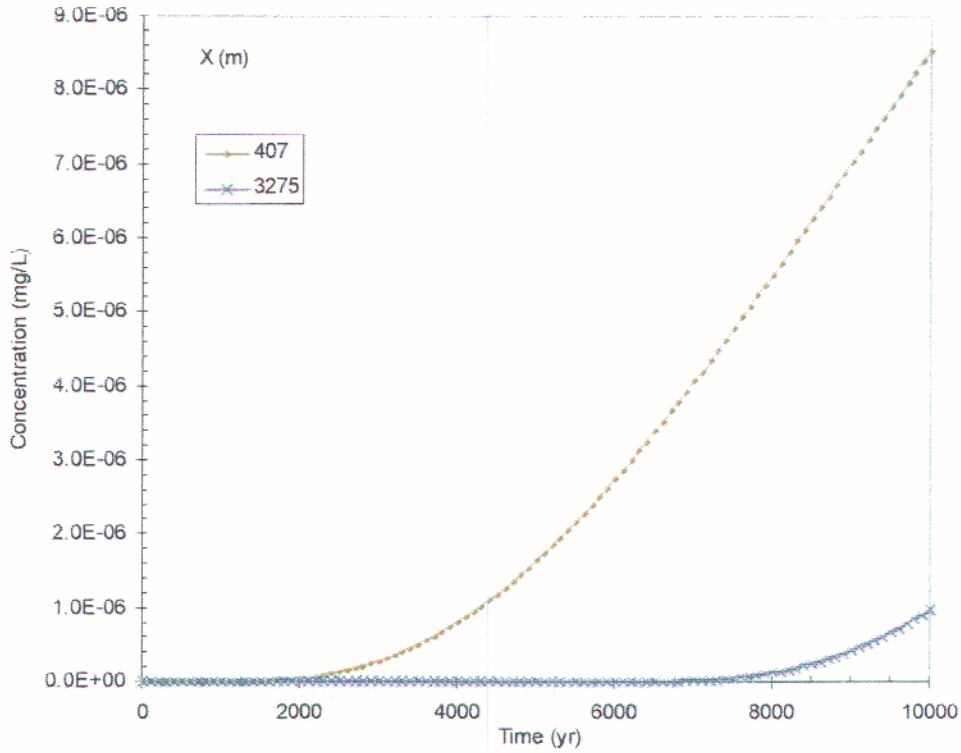

Fig. C.3.61. Predicted groundwater concentration of silver based on leaching from the C-746-U Landfill waste (gradual failure).

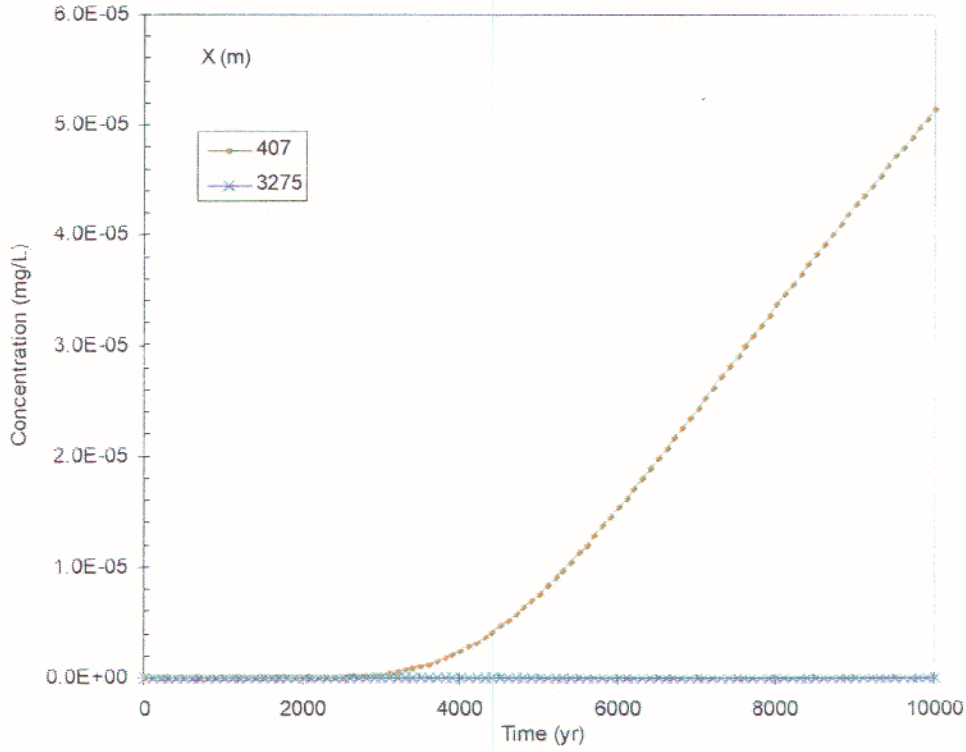

Fig. C.3.62. Predicted groundwater concentration of arsenic based on leaching from the C-746-U Landfill waste (gradual failure).

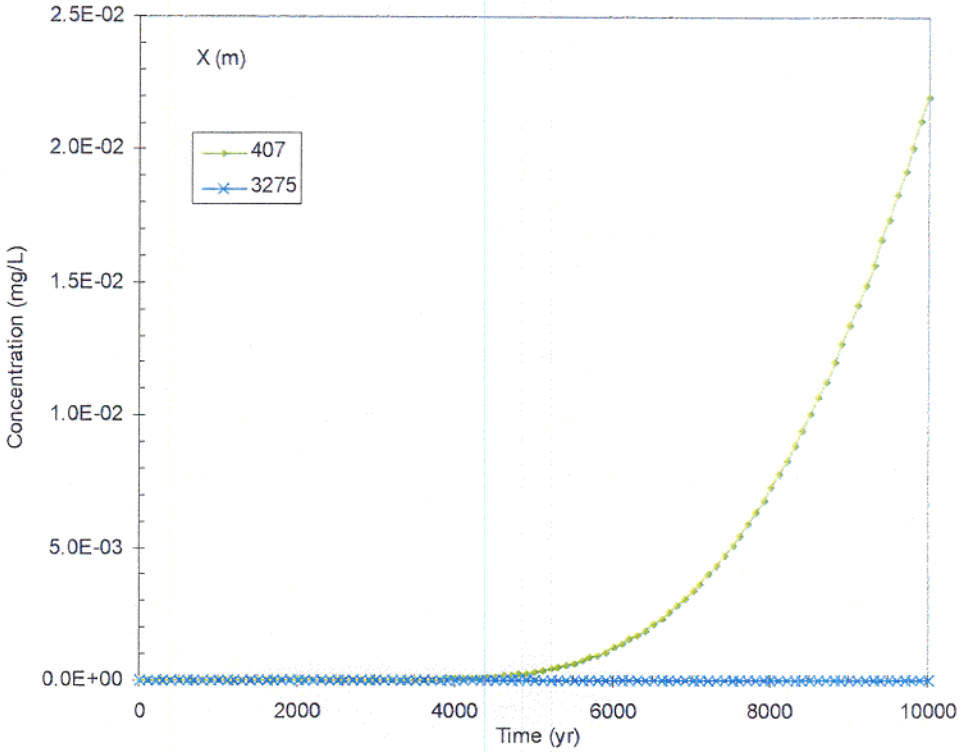

Fig. C.3.63. Predicted groundwater concentration of iron based on leaching from the C-746-U Landfill waste (gradual failure).

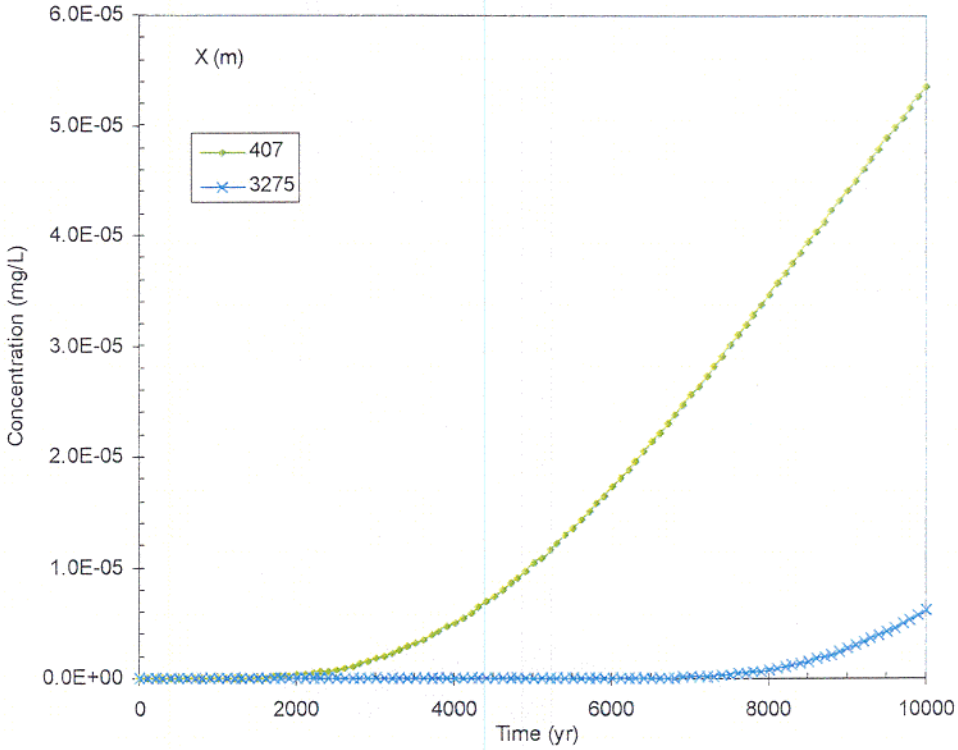

Fig. C.3.64. Predicted groundwater concentration of lead based on leaching from the C-746-U Landfill waste (gradual failure).

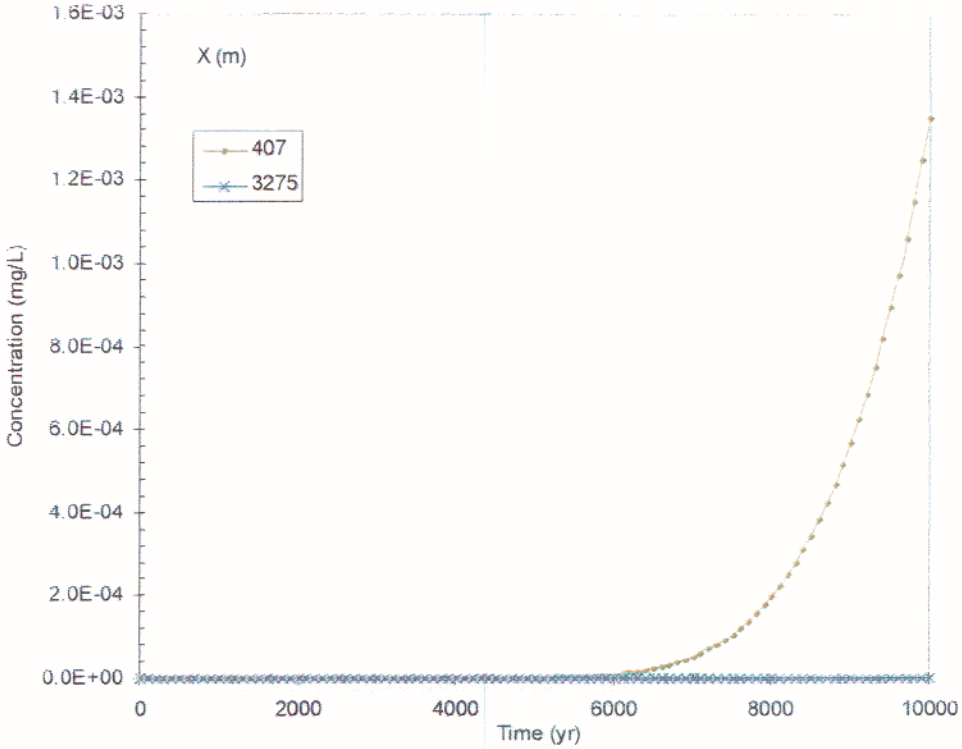

Fig. C.3.65. Predicted groundwater concentration of nickel based on leaching from the C-746-U Landfill waste (gradual failure).

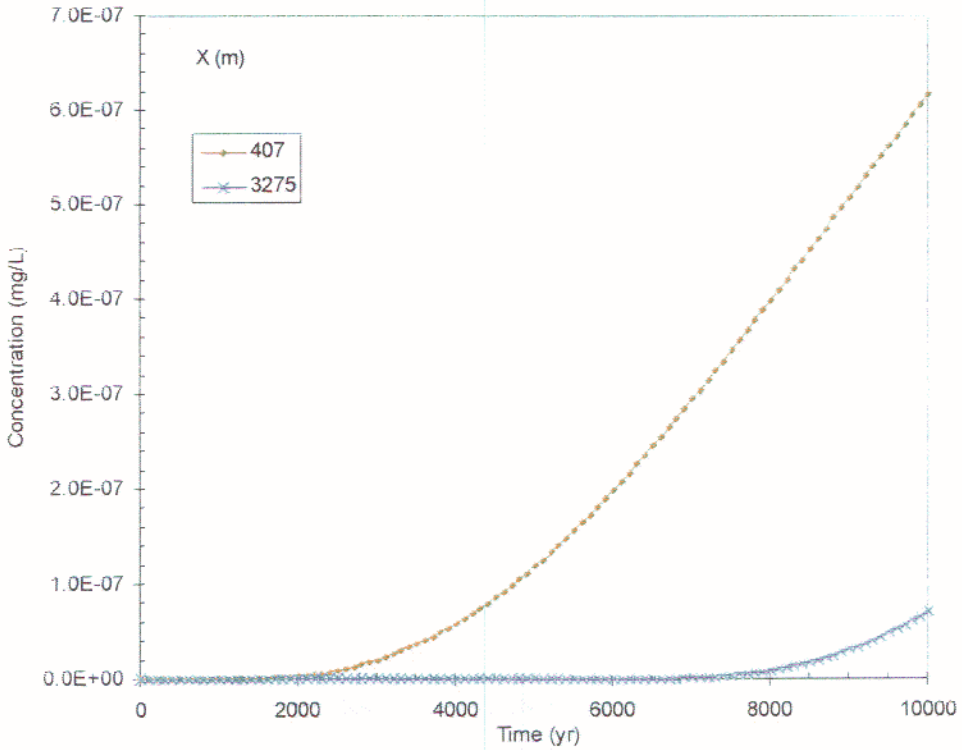

Fig. C.3.66. Predicted groundwater concentration of beryllium based on leaching from the C-746-U Landfill waste (gradual failure).

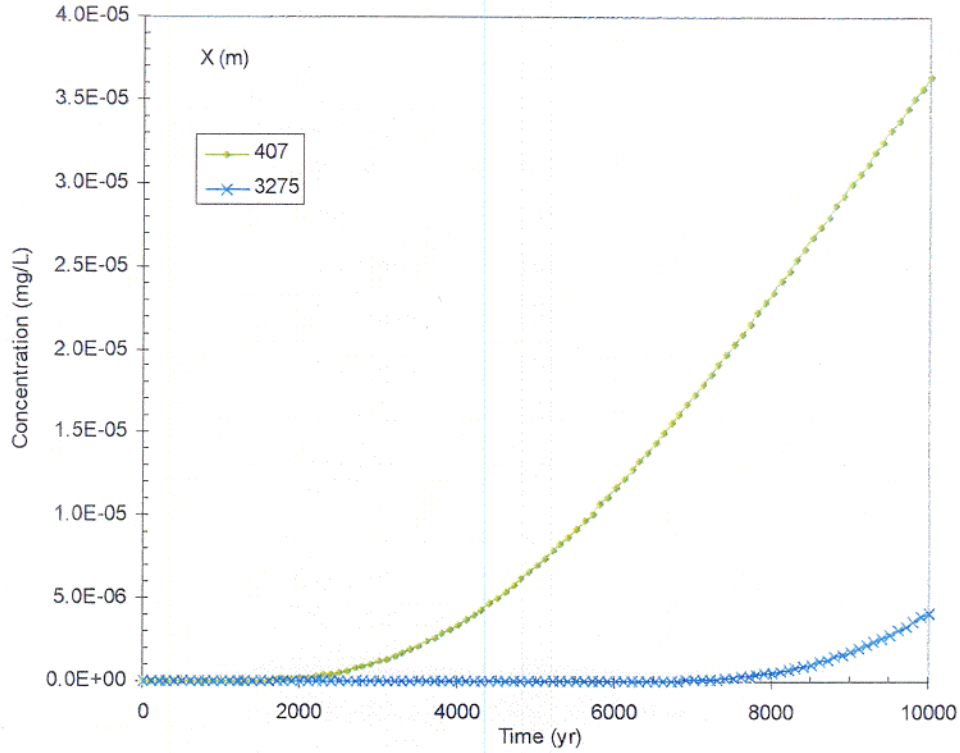

Fig. C.3.67. Predicted groundwater concentration of vanadium based on leaching from the C-746-U Landfill waste (gradual failure).

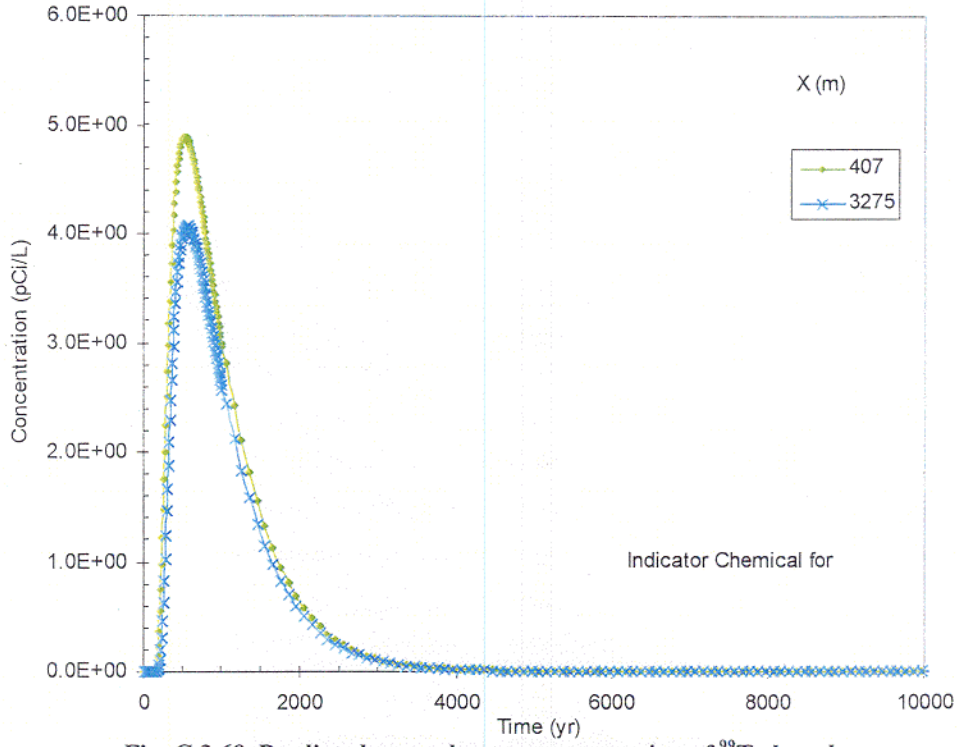

Fig. C.3.68. Predicted groundwater concentration of ^{99}Tc based on leaching from the C-746-U Landfill waste (gradual failure).

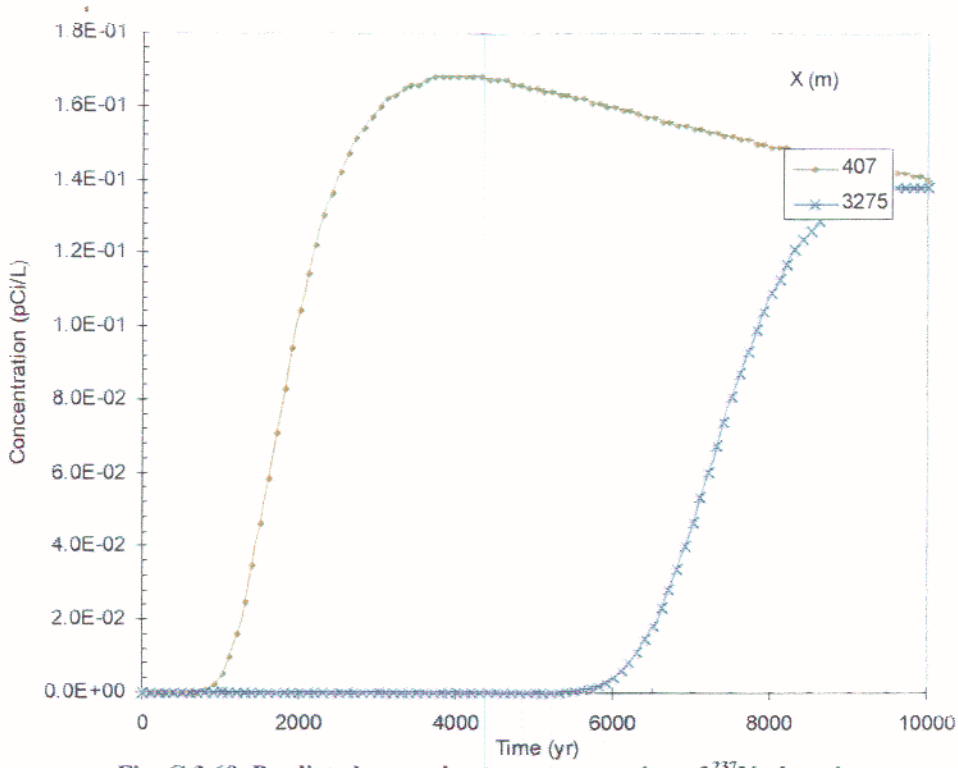

Fig. C.3.69. Predicted groundwater concentration of ^{237}Np based on leaching from the C-746-U Landfill waste (gradual failure).

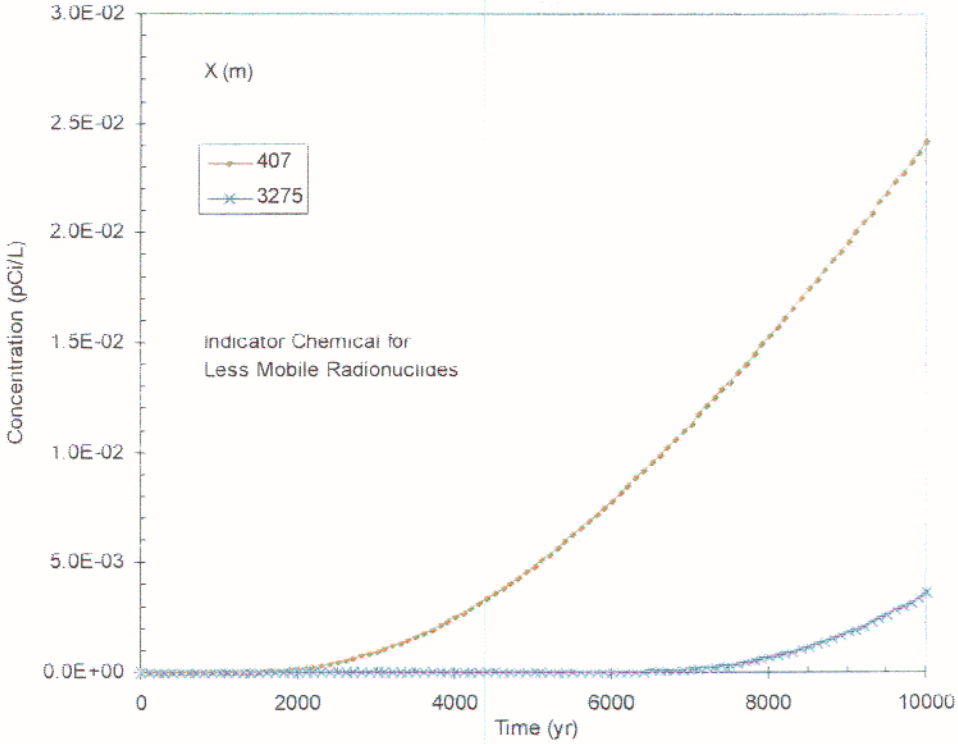

Fig. C.3.70. Predicted groundwater concentration of ^{238}U based on leaching from the C-746-U Landfill waste (gradual failure).

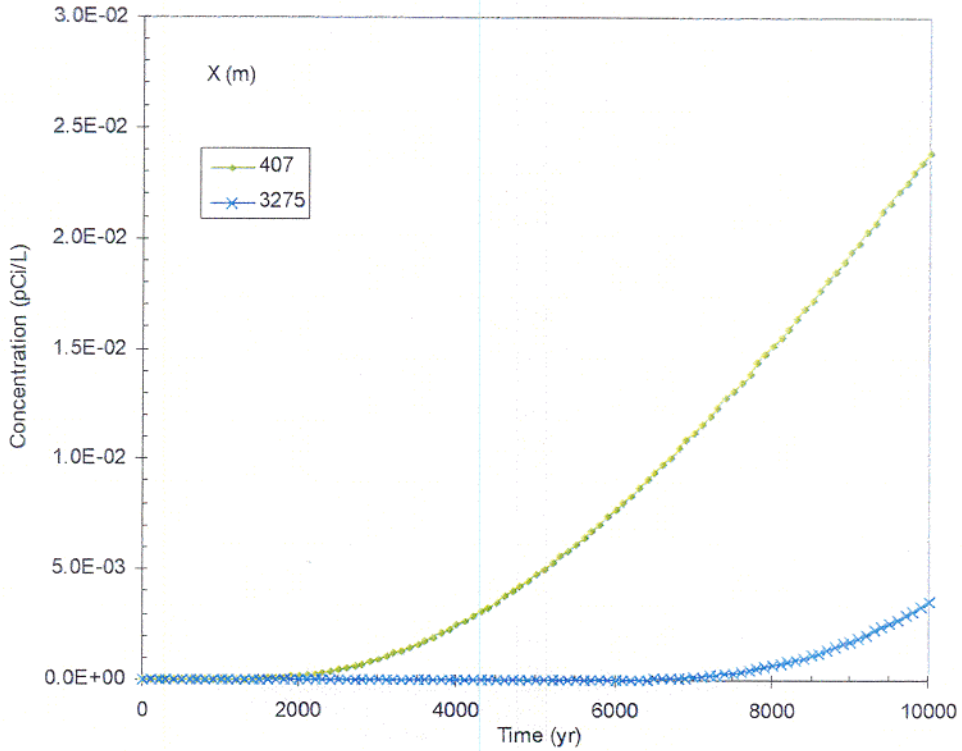

Fig. C.3.71. Predicted groundwater concentration of ^{234}U based on leaching from the C-746-U Landfill waste (gradual failure).

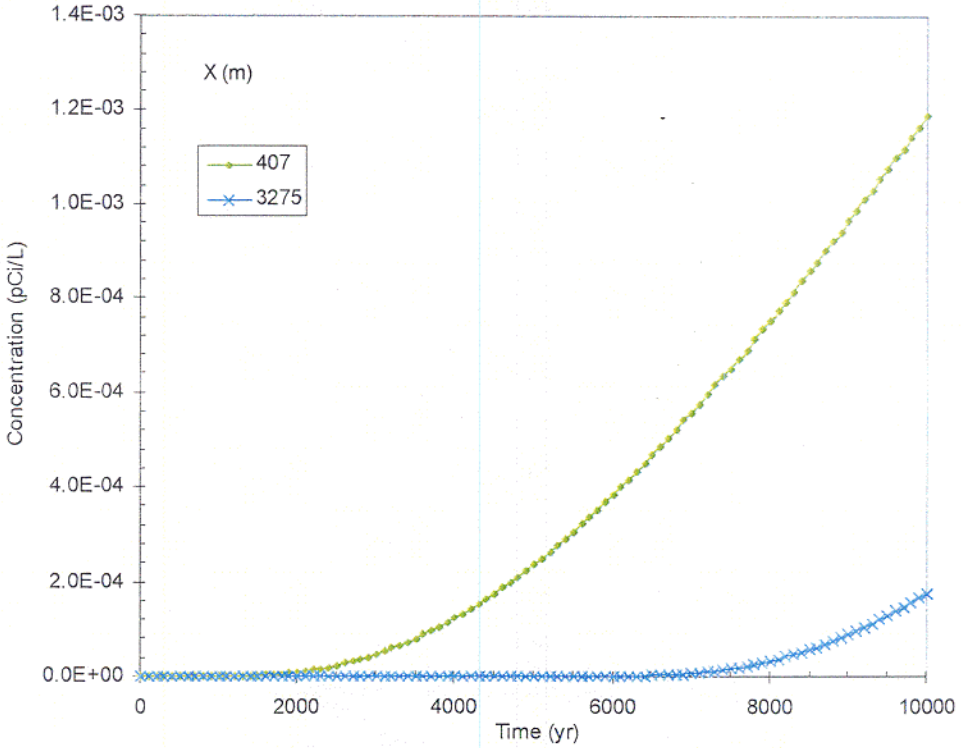

Fig. C.3.72. Predicted groundwater concentration of ^{235}U based on leaching from the C-746-U Landfill waste (gradual failure).

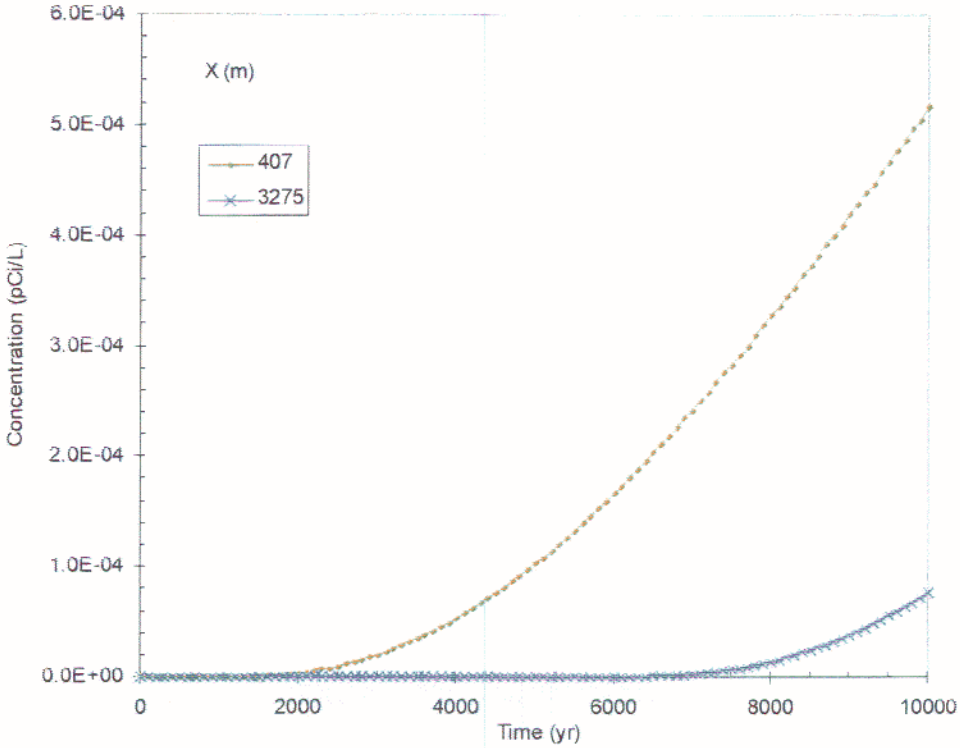

Fig. C.3.73. Predicted groundwater concentration of ^{226}Ra based on leaching from the C-746-U Landfill waste (gradual failure).

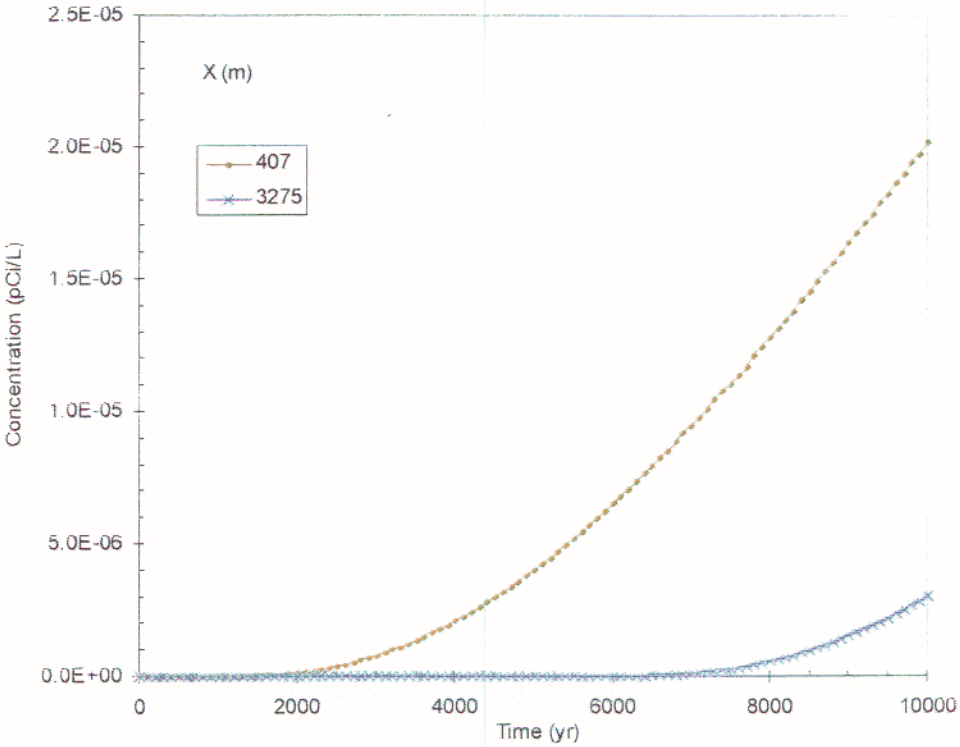

Fig. C.3.74. Predicted groundwater concentration of ^{238}Pu based on leaching from the C-746-U Landfill waste (gradual failure).

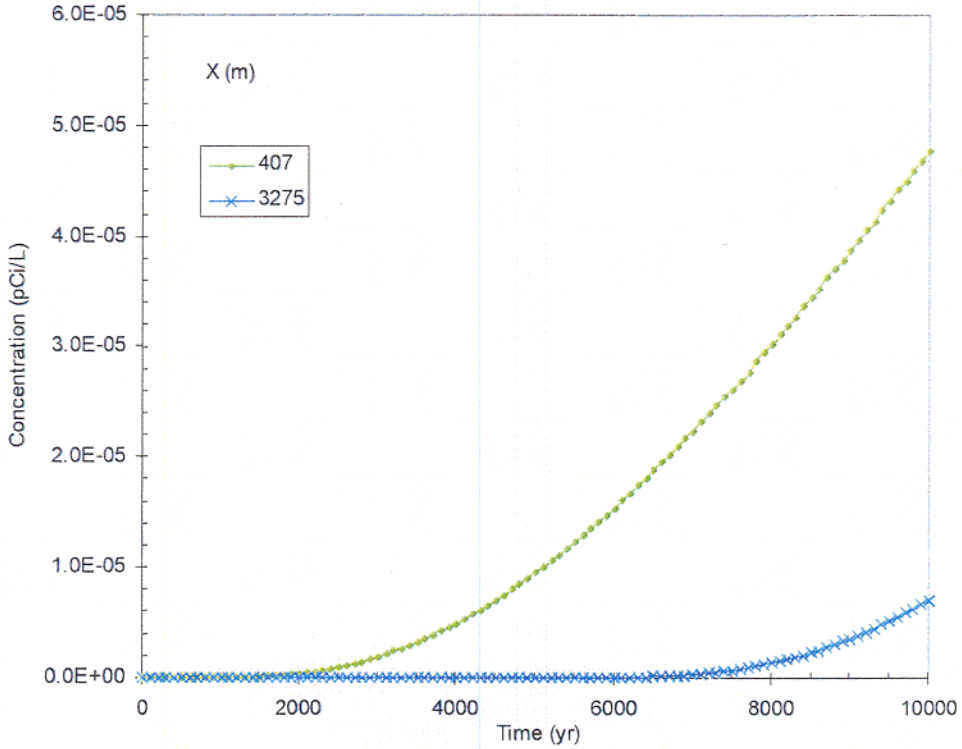

Fig. C.3.75. Predicted groundwater concentration of ^{239}Pu based on leaching from the C-746-U Landfill waste (gradual failure).

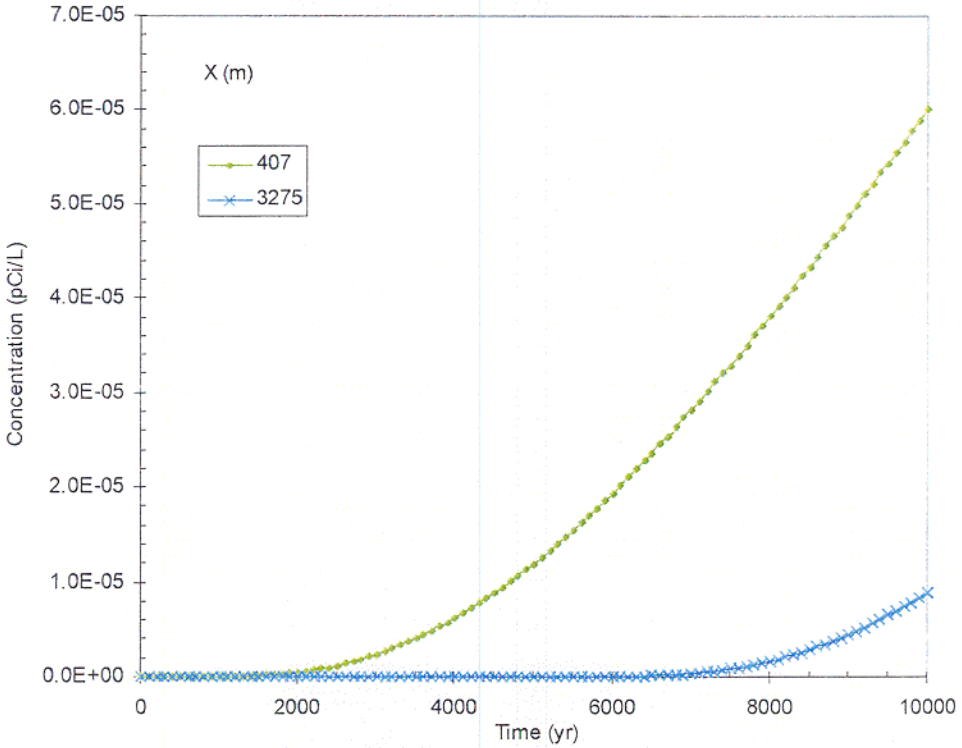

Fig. C.3.76. Predicted groundwater concentration of ^{240}Pu based on leaching from the C-746-U Landfill waste (gradual failure).

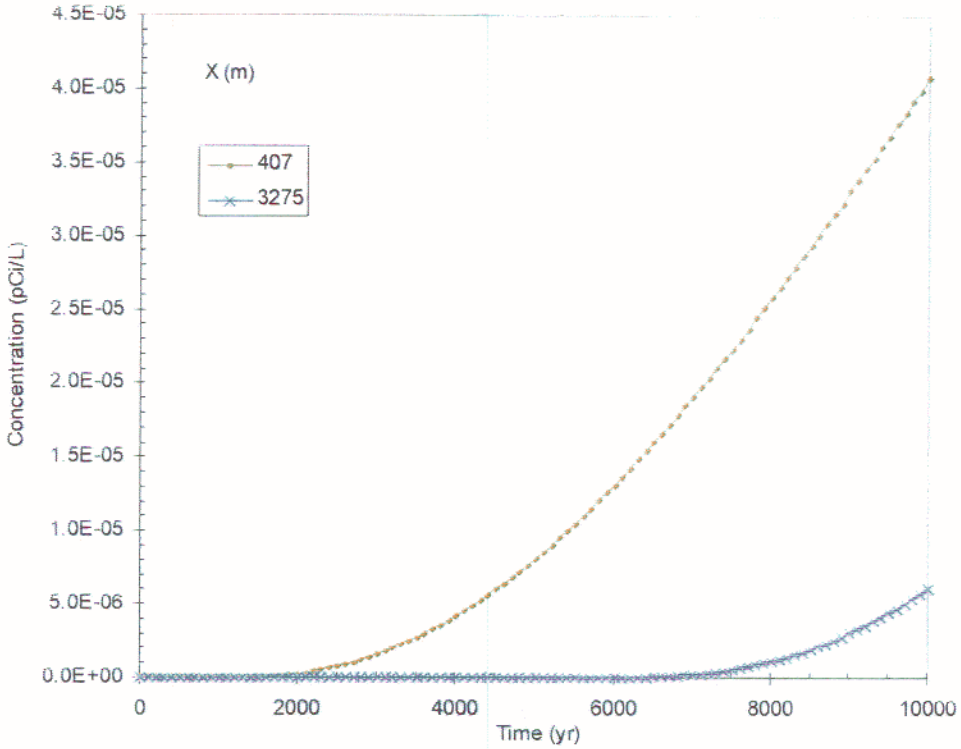

Fig. C.3.77. Predicted groundwater concentration of ^{230}Th based on leaching from the C-746-U Landfill waste (gradual failure).

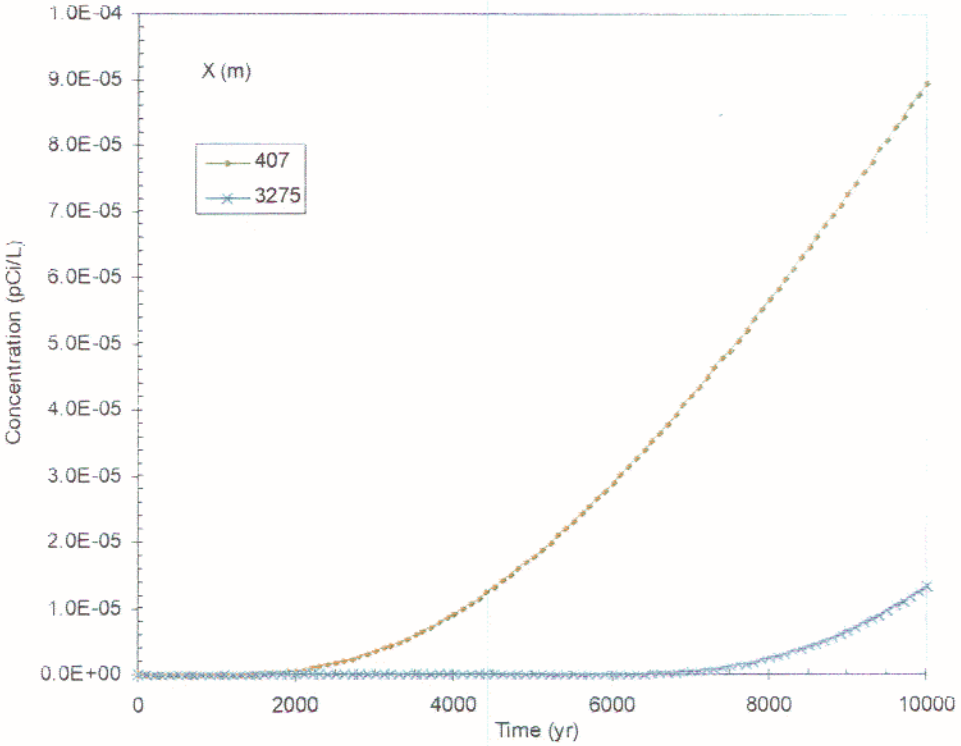

Fig. C.3.78. Predicted groundwater concentration of ^{232}Th based on leaching from the C-746-U Landfill waste (gradual failure).

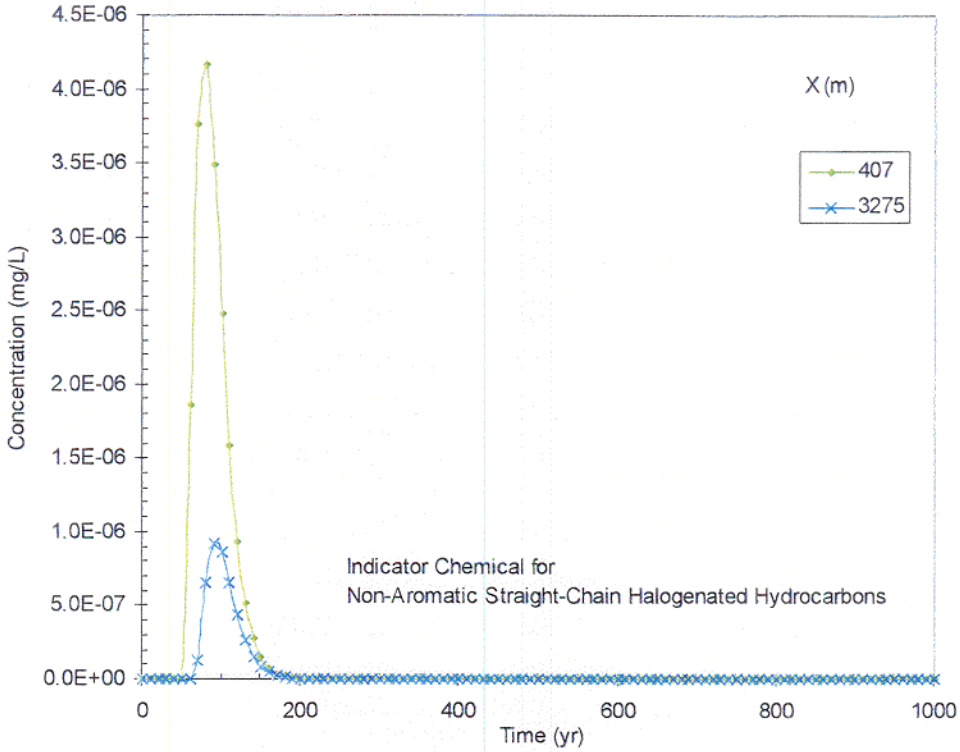

Fig. C.3.79. Predicted groundwater concentration of vinyl chloride based on leaching from the C-746-U Landfill waste (immediate failure).

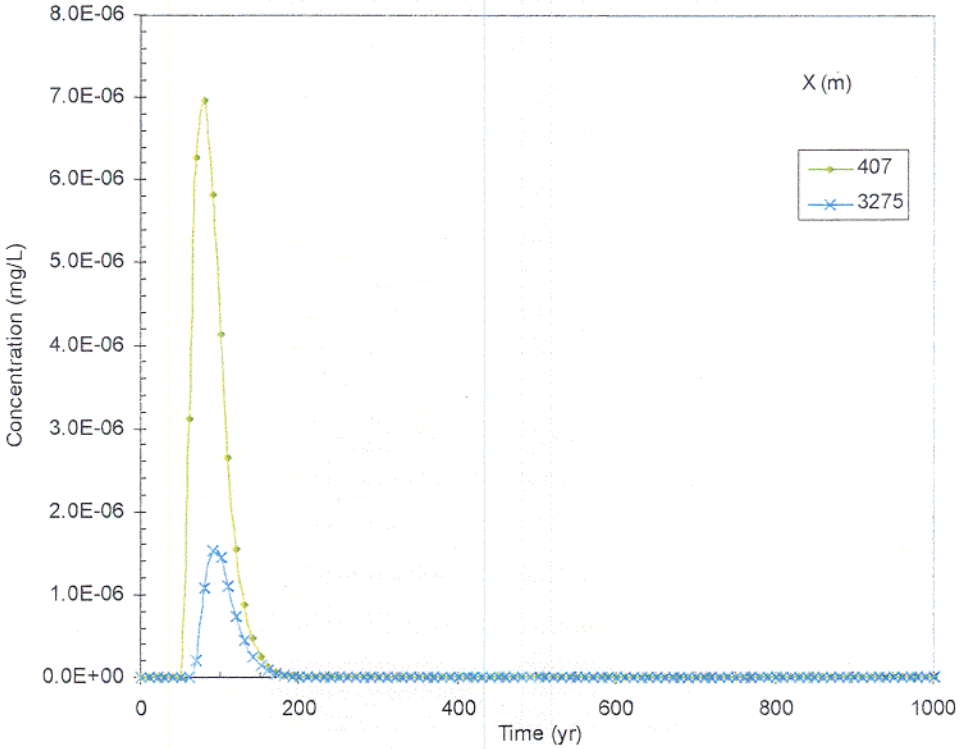

Fig. C.3.80. Predicted groundwater concentration of cis-1,2-dichloroethene based on leaching from the C-746-U Landfill waste (immediate failure).

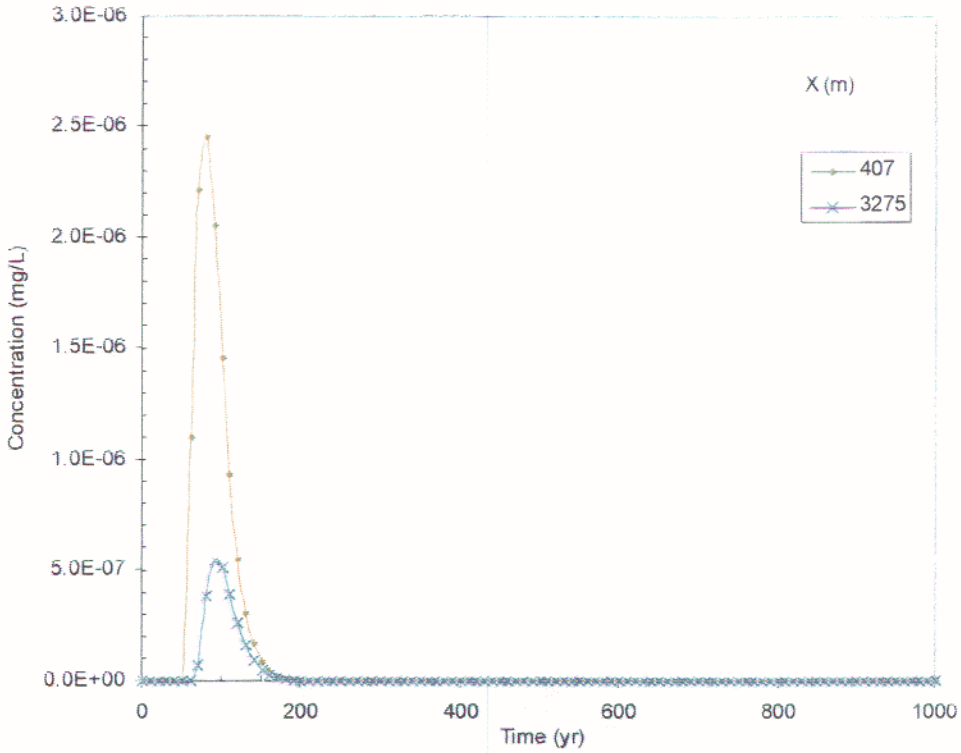

Fig. C.3.81. Predicted groundwater concentration of trans-1,2-dichloroethene based on leaching from the C-746-U Landfill waste (immediate failure).

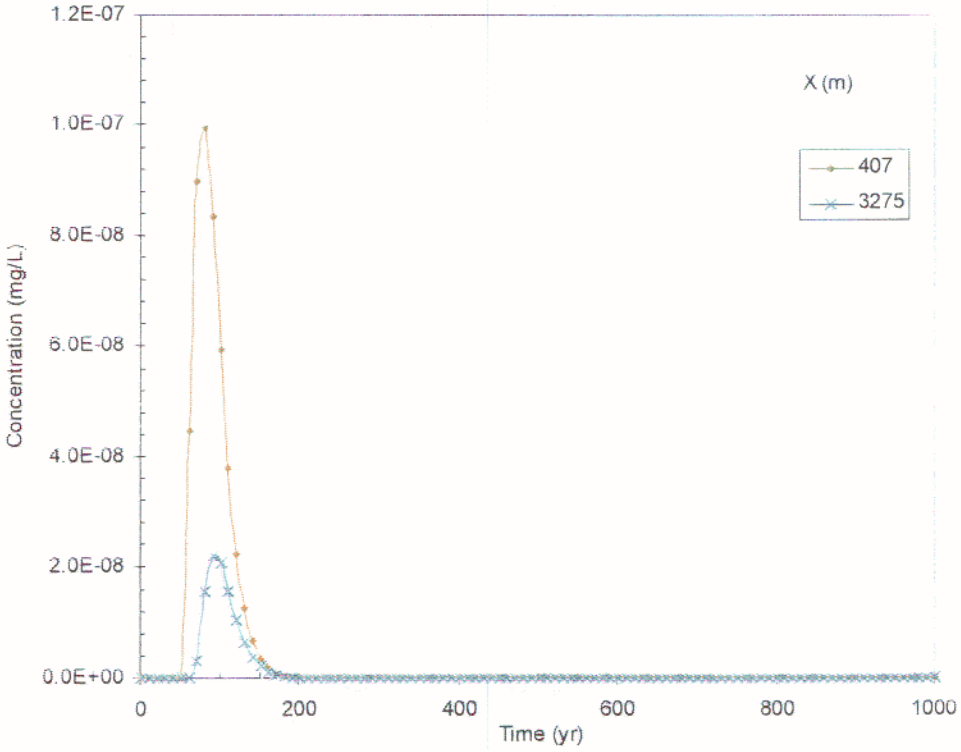

Fig. C.3.82. Predicted groundwater concentration of 1,2-dichloroethane based on leaching from the C-746-U Landfill waste (immediate failure).

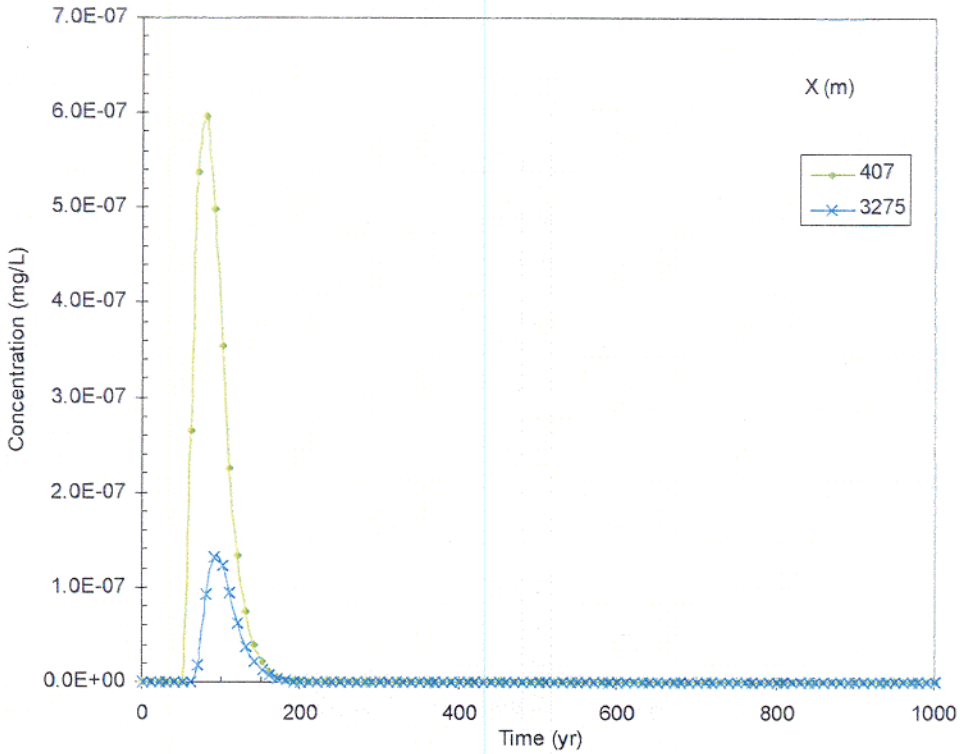

Fig. C.3.83. Predicted groundwater concentration of chloroform based on leaching from the C-746-U Landfill waste (immediate failure).

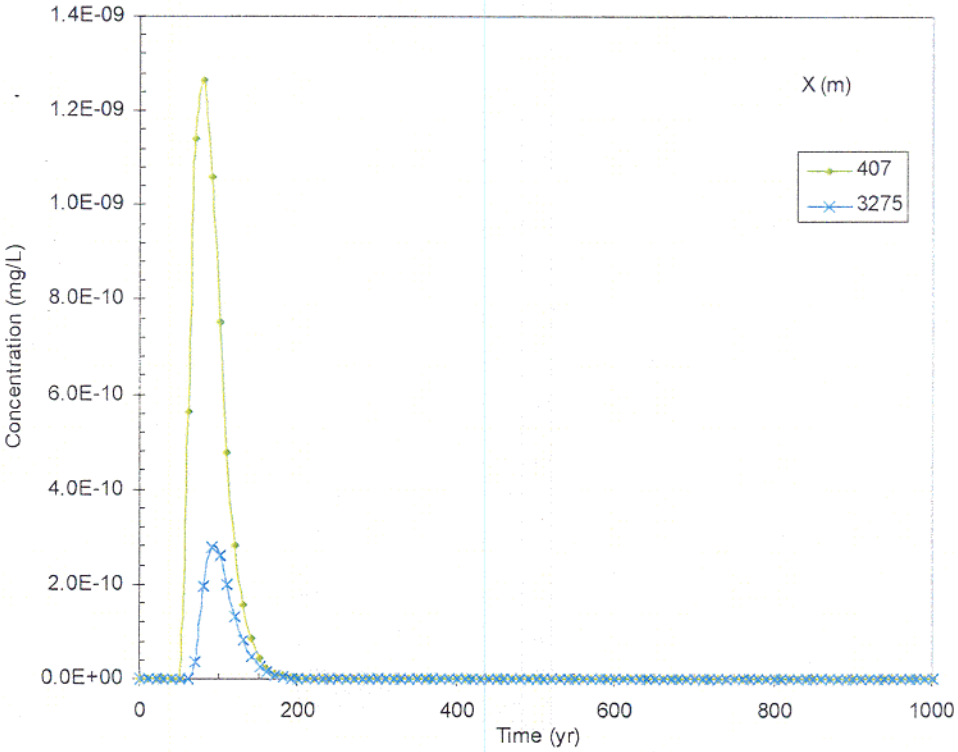

Fig. C.3.84. Predicted groundwater concentration of 1,1-dichloroethene based on leaching from the C-746-U Landfill waste (immediate failure).

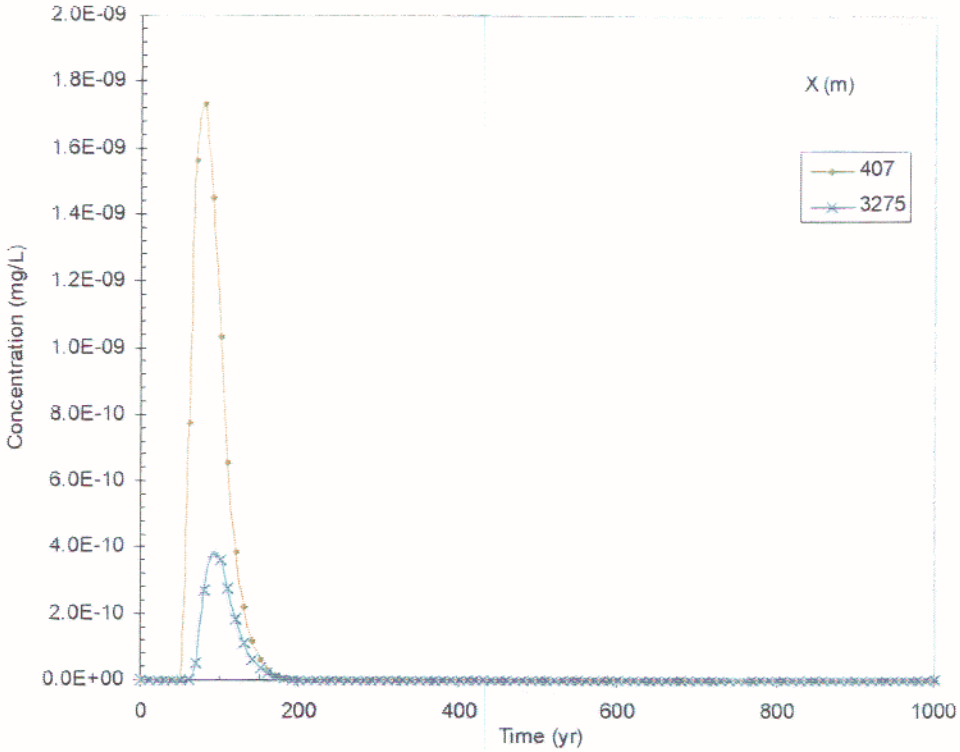

Fig. C.3.85. Predicted groundwater concentration of 1,2-dichloroethene based on leaching from the C-746-U Landfill waste (immediate failure).

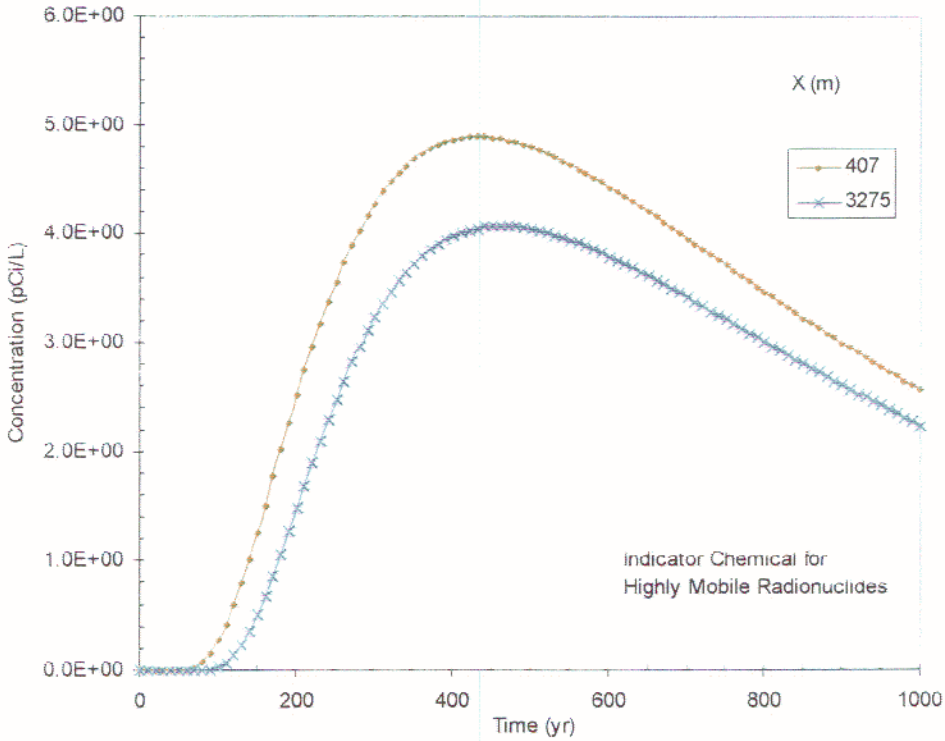

Fig. C.3.86. Predicted groundwater concentration of ^{99}Tc based on leaching from the C-746-U Landfill waste (immediate failure).

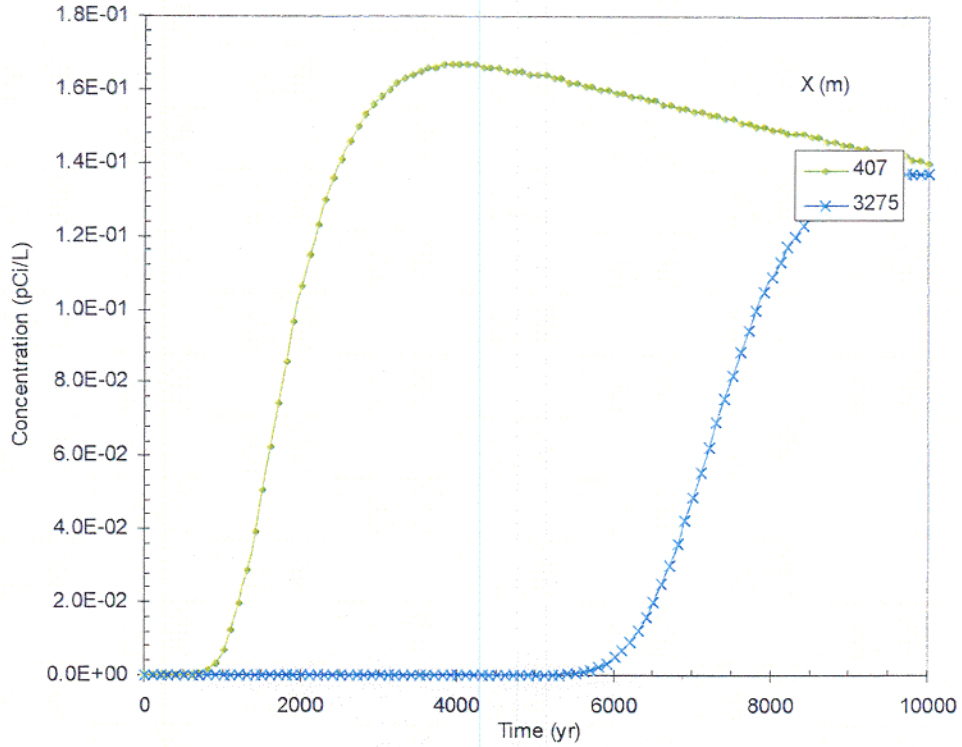

Fig. C.3.87. Predicted groundwater concentration of ^{237}Np based on leaching from the C-746-U Landfill waste (immediate failure).

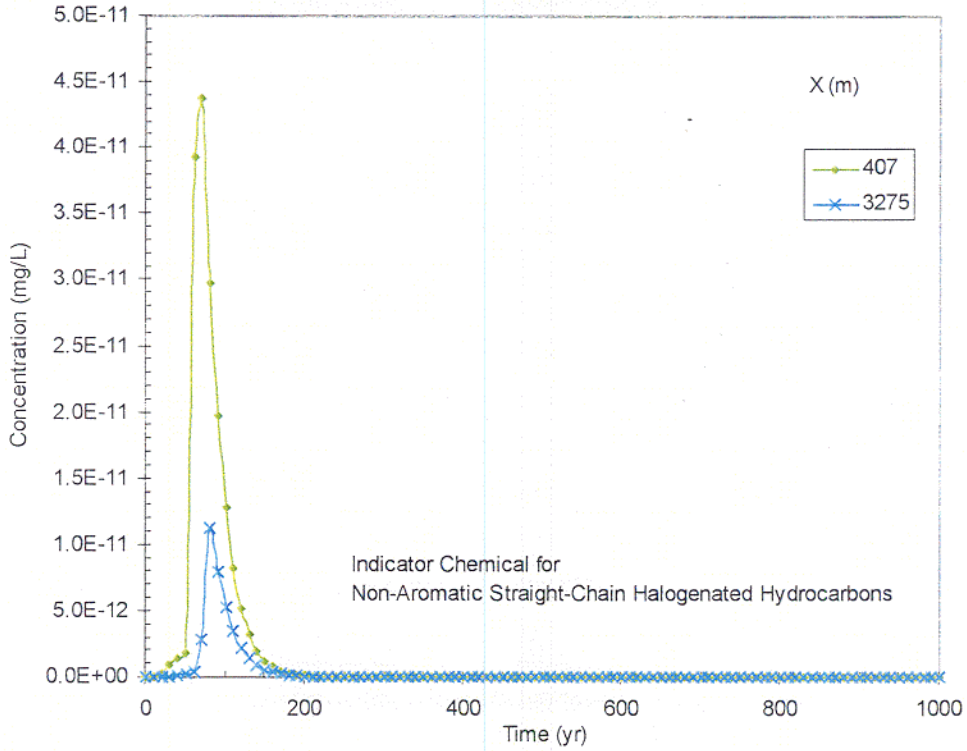

Fig. C.3.88. Predicted groundwater concentration of vinyl chloride based on leaching from the C-746-U Landfill waste (no failure).

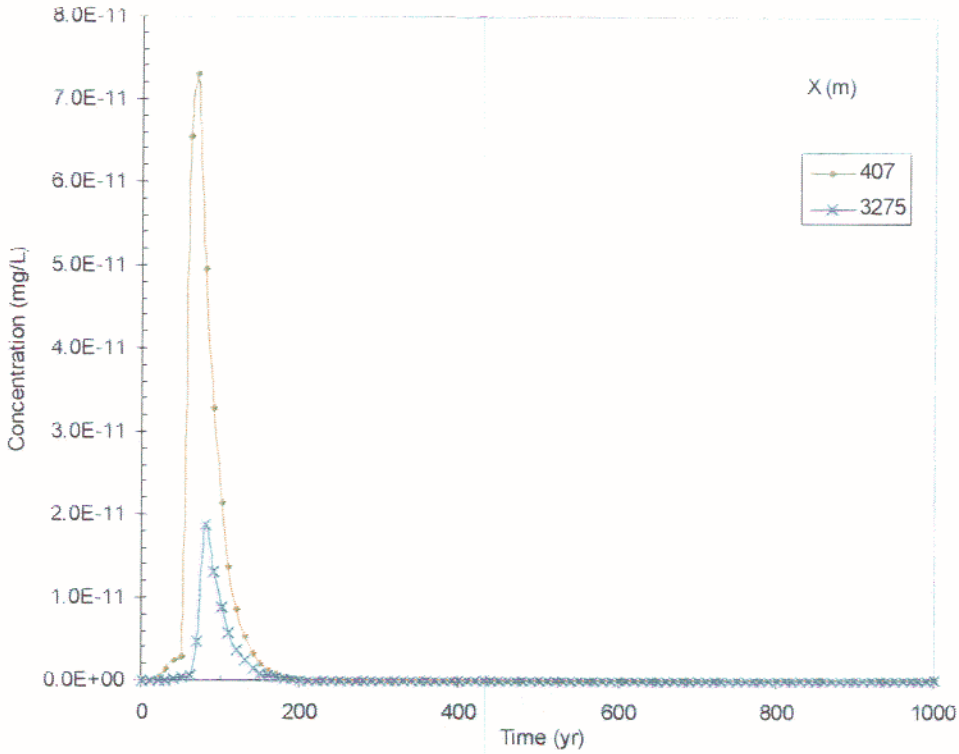

Fig. C.3.89. Predicted groundwater concentration of cis-1,2-dichloroethene based on leaching from the C-746-U Landfill waste (no failure).

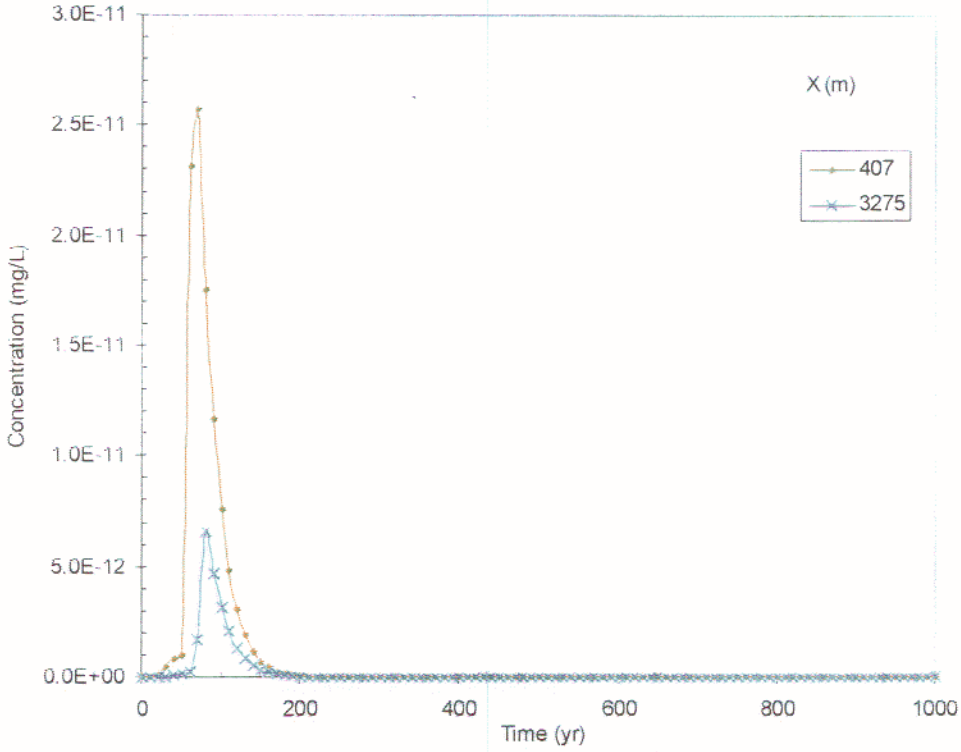

Fig. C.3.90. Predicted groundwater concentration of trans-1,2-dichloroethene based on leaching from the C-746-U Landfill waste (no failure).

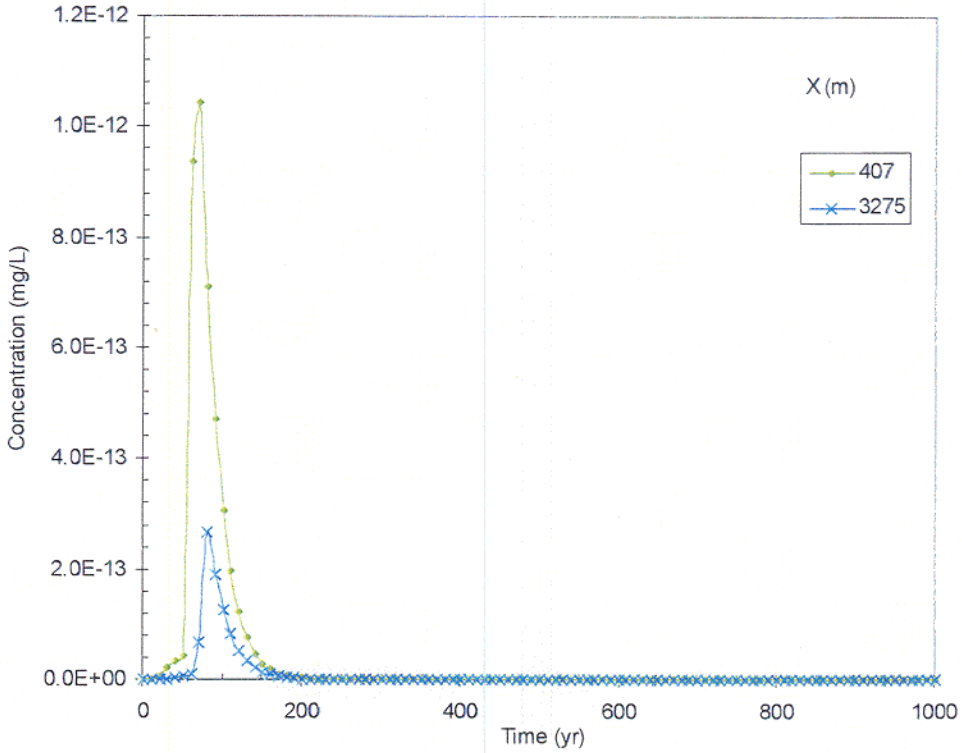

Fig. C.3.91. Predicted groundwater concentration of 1,2-dichloroethane based on leaching from the C-746-U Landfill waste (no failure).

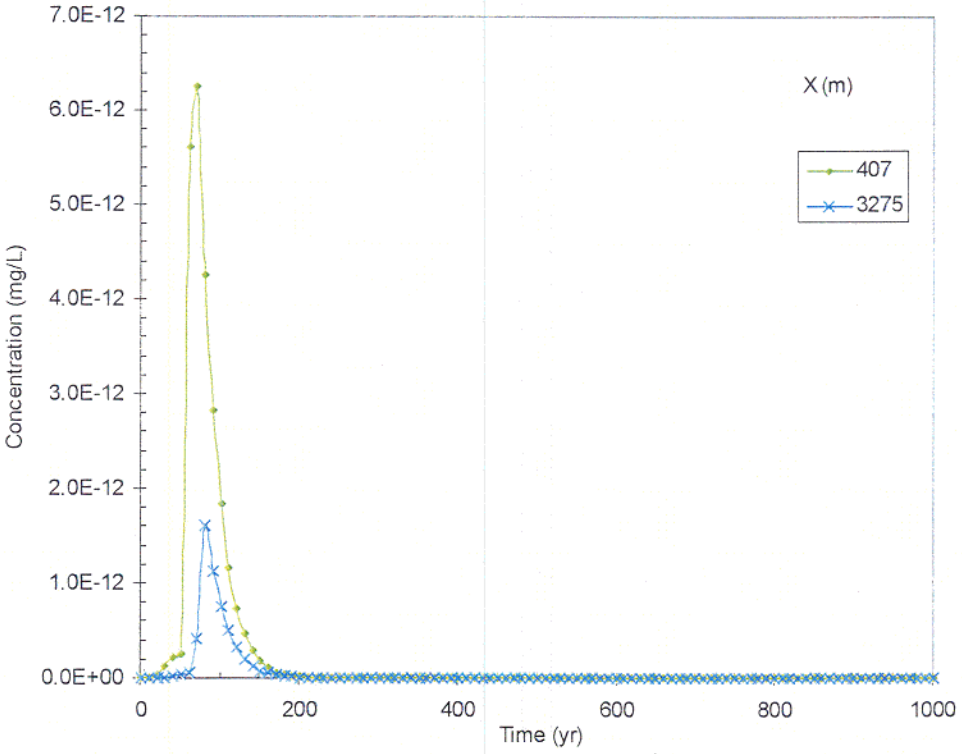

Fig. C.3.92. Predicted groundwater concentration of chloroform based on leaching from the C-746-U Landfill waste (no failure).

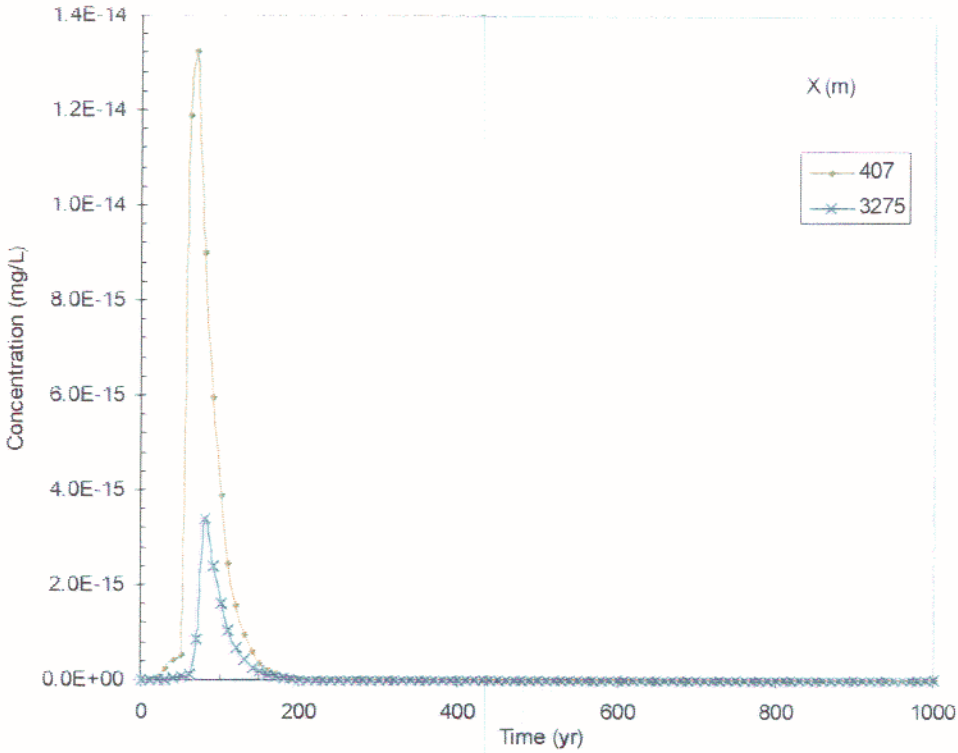

Fig. C.3.93. Predicted groundwater concentration of 1,1-dichloroethene based on leaching from the C-746-U Landfill waste (no failure).

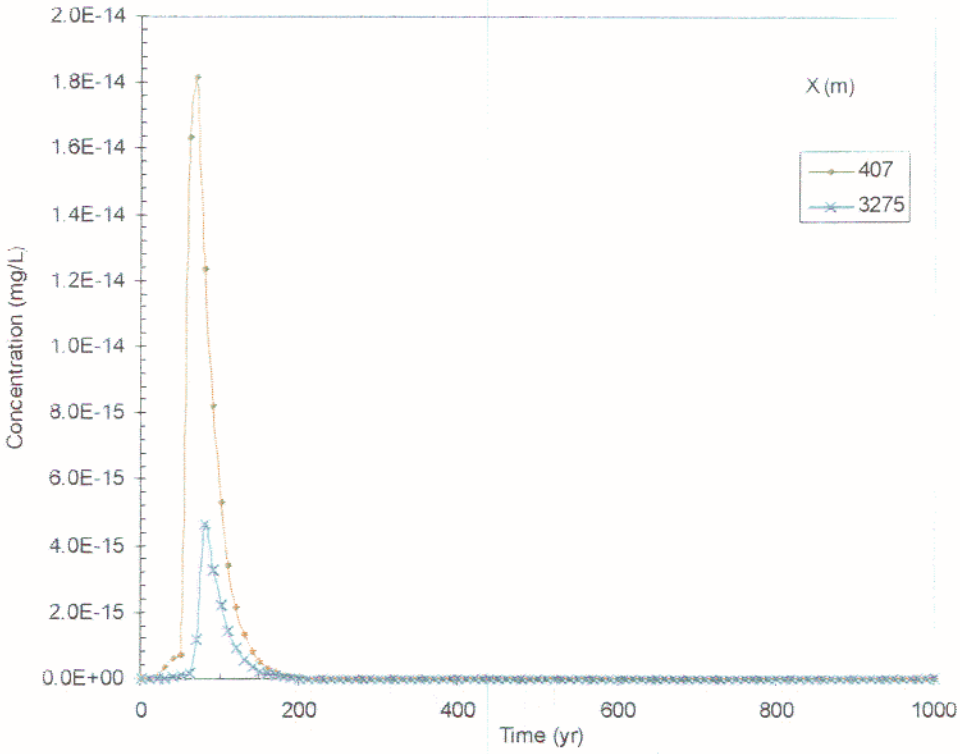

Fig. C.3.94. Predicted groundwater concentration of 1,2-dichloroethene based on leaching from the C-746-U Landfill waste (no failure).

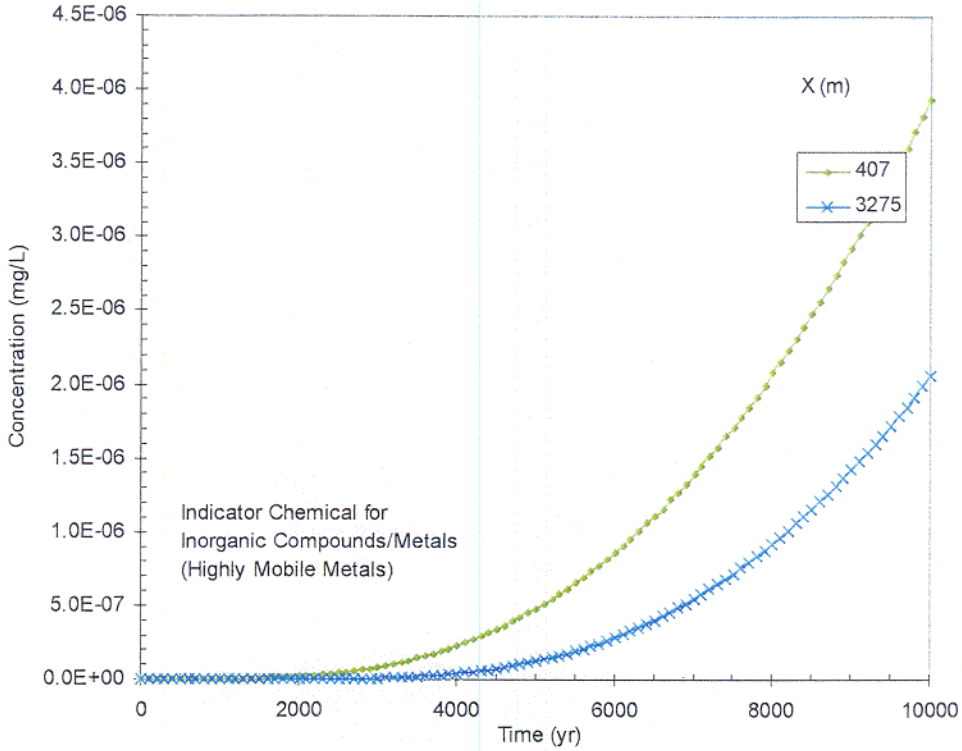

Fig. C.3.95. Predicted groundwater concentration of chromium based on leaching from the C-746-U Landfill waste (no failure).

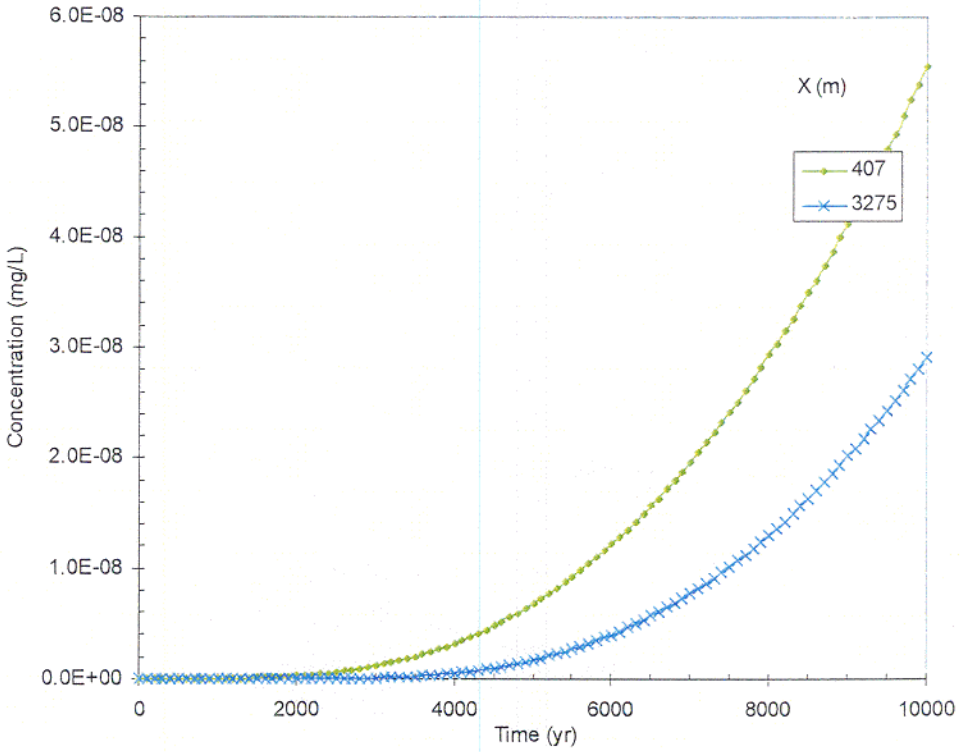

Fig. C.3.96. Predicted groundwater concentration of selenium based on leaching from the C-746-U Landfill waste (no failure).

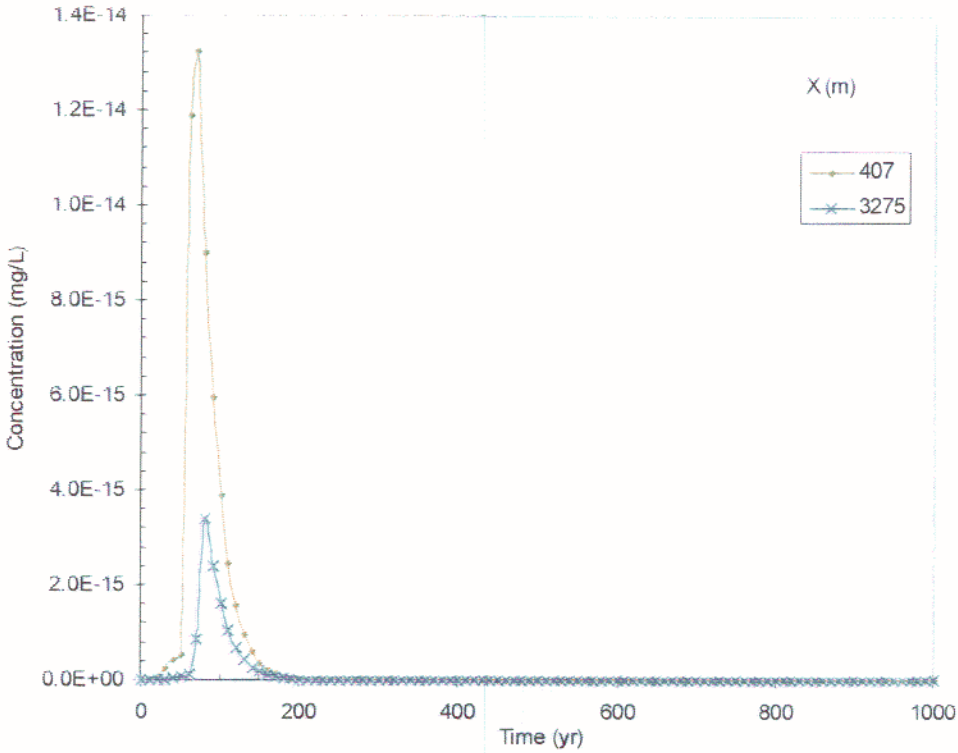

Fig. C.3.93. Predicted groundwater concentration of 1,1-dichloroethene based on leaching from the C-746-U Landfill waste (no failure).

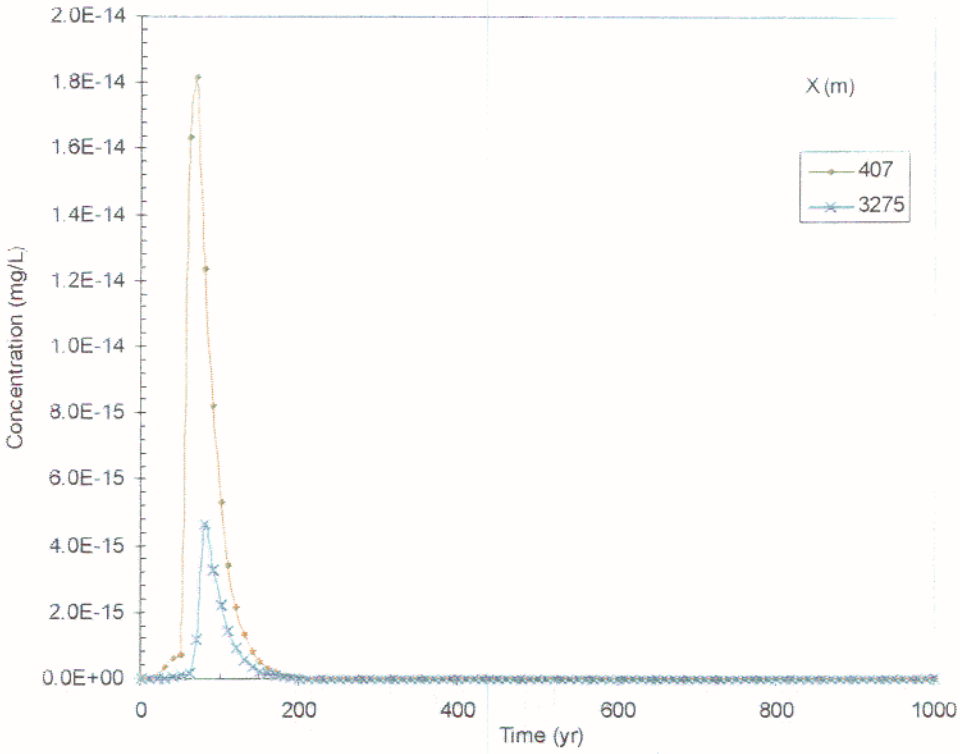

Fig. C.3.94. Predicted groundwater concentration of 1,2-dichloroethene based on leaching from the C-746-U Landfill waste (no failure).

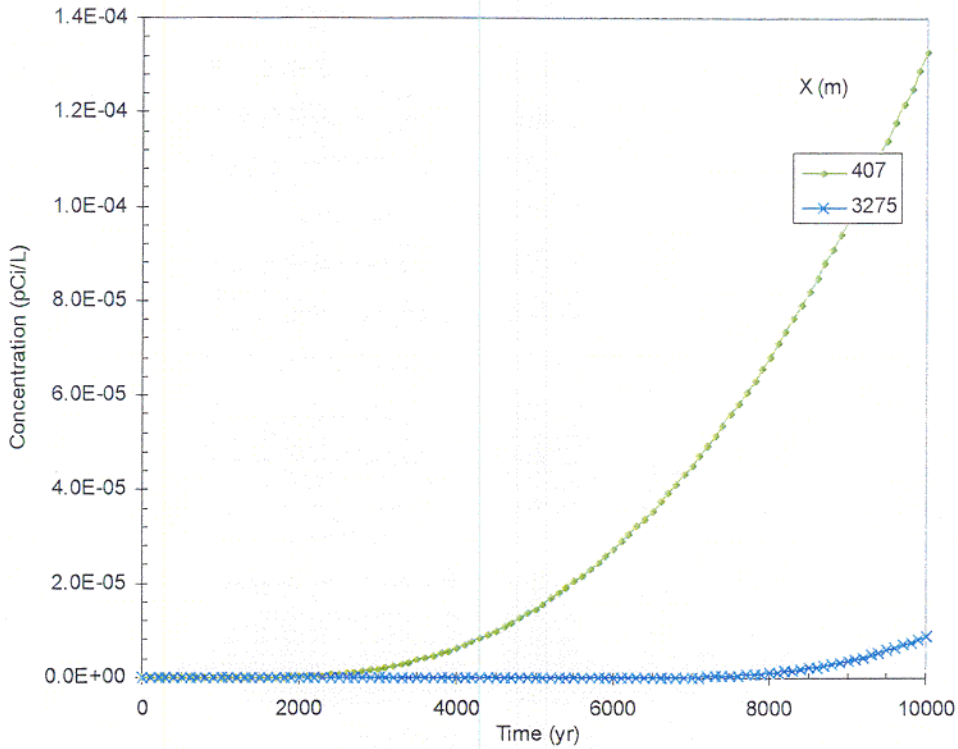

Fig. C.3.99. Predicted groundwater concentration of ^{237}Np based on leaching from the C-746-U Landfill waste (no failure).

Table C.3.1. Chemical and physical properties of different classes of chemicals identified as COPCs for the C-746-U Landfill, PGDP, Paducah

Chemical Groups	CAS number	Molecular weight (g/mol)	Molecular formula	Henry's law constant (atm•m^3/mol)	K_{oc} (L/kg)	K_d (L/kg)	Solubility (mg/L)	Vapor pressure (mm Hg)
Volatile Organic Compounds (Halogenated Hydrocarbons)								
Non Aromatic Straight-chain Halogenated Hydrocarbons (contains fluorine, chlorine, bromine, iodine)								
Vinyl chloride	*75-01-4*	*62.50*	*C2H3Cl*	*2.70E-02*	*1.86E+01*	*1.49E-02*	*2.76E+03*	*3.00E+03*
cis-1,2-Dichloroethene	156-59-2	96.95	C2H2Cl2	4.08E-03	3.55E+01	2.84E-02	3.50E+03	2.00E+02
1,1-Dichloroethene	75-35-4	96.95	C2H2Cl2	2.61E-02	6.50E+01	5.20E-02	2.25E+03	6.00E+02
trans-1,2-Dichloroethene	156-60-5	96.95	C2H2Cl2	9.38E-03	3.80E+01	3.04E-02	6.30E+03	3.30E+02
1,2-Dichloroethane	107-06-2	98.97	C2H4Cl2	9.79E-04	3.80E+01	3.04E-02	8.52E+03	7.90E+01
Chloroform	67-66-3	119.40	CH3Cl	3.67E-03	5.30E+01	4.24E-02	7.92E+03	5.60E+00
1,2-Dichloroethene (mixed isomers)	540-59-0	96.90	C2H2Cl2	6.60E-03	7.75E+01	6.20E-02	8.00E+02	2.00E+02
Trichloroethene	79-01-6	131.40	C2HCl3	1.03E-02	9.40E+01	7.52E-02	1.10E+03	5.78E+01
Carbon Tetrachloride	56-23-5	153.80	CCl4	3.04E-02	1.52E+02	1.22E-01	7.93E+02	1.13E+02
Tetrachloroethene	127-18-4	165.80	C2Cl4	1.84E-02	2.65E+02	2.12E-01	2.00E+02	1.90E+01
Aromatic Ring-structured Halogenated Hydrocarbons (contains fluorine, chlorine, bromine, iodine)								
Chlorobenzene	*108-90-7*	*112.56*	*C6H5Cl (1)*	*3.70E-03*	*2.24E+02*	*1.79E-01*	*4.72E+02*	*1.18E+01*
1,4-Dichlorobenzene	106-46-7	147.00	C6H4Cl2	2.43E-03	6.16E+02	4.93E-01	7.38E+01	1.80E+00
Hexachlorobenzene	118-74-1	284.80	C6Cl6	1.32E-03	8.00E+04	6.40E+01	6.20E+00	1.00E+00
Volatile Organic Compounds (Nonhalogenated Hydrocarbons)								
Non Aromatic Straight-chain Nonhalogenated Hydrocarbons								
2-Butanone	*78-93-3*	*72.10*	*C4H8O*	*6.61E-07*	*1.15E+00*	*9.20E-04*	*2.75E+05*	*1.00E+02*
Aromatic Ring-structured Nonhalogenated Hydrocarbons								
Benzene	*71-43-2*	*78.11*	*C6H6 (1)*	*5.55E-03*	*6.20E+01*	*4.96E-02*	*1.75E+03*	*9.50E+01*
Ethylbenzene	100-41-4	106.20	C8H10	7.88E-03	2.04E+02	1.63E-01	1.69E+02	1.00E+01
Xylene,m	108-38-3	106.20	C8H12	5.25E-03	1.96E+02	1.57E-01	2.00E+02	5.00E+00
Xylene,o	95-47-6	106.20	C8H12	5.25E-03	1.96E+02	1.57E-01	2.00E+02	5.00E+00
Xylene,p	106-42-3	106.20	C8H12	5.25E-03	1.96E+02	1.57E-01	2.00E+02	5.00E+00
Xylene, mixture	1330-20-7	106.20	C8H12	5.25E-03	1.96E+02	1.57E-01	2.00E+02	5.00E+00
Semivolatile Organic Compounds								
Light semi-volatile organic compounds (molecular weight < 200 g/mole)								
2-Methylphenol	*95-48-7*	*108.03*	*C7H8O (1)*	*1.60E-06*	*2.00E+01*	*1.60E-02*	*2.00E+04*	*1.10E-01*
Pyridine	110-86-1	79.10	C5H5N	NF	4.36E+00	3.49E-03	miscible	1.10E-01
4-Methylphenol (p-Cresol)	106-44-5	108.03	C7H8O (1)	7.90E-07	9.25E+01	7.40E-02	2.20E+04	1.10E-01
3-Methylphenol	109-39-4	108.03	C7H8O	1.60E-06	2.00E+01	1.60E-02	2.00E+04	1.10E-01
2,4-Dinitrotoluene	121-14-2	182.10	C7H6N2O4	9.26E-08	9.55E+01	7.64E-02	2.70E+02	0.0013
Nitrobenzene	98-95-3	123.10	C6H5NO2	2.40E-05	1.19E+02	9.52E-02	2.09E+03	NF
2,4,6-Trichlorophenol	88-06-2	197.50	C6H3Cl3O	7.79E-06	3.09E+03	2.47E+00	8.00E+02	1

Table C.3.1. Chemical and physical properties of different classes of chemicals identified as COPCs for the C-746-U Landfill, PGDP, Paducah (continued)

Chemical Groups	CAS number	Molecular weight (g/mol)	Molecular formula	Henry's law constant (atm•m^3/mol)	K_{oc} (L/kg)	K_d (L/kg)	Solubility (mg/L)	Vapor pressure (mm Hg)
2,4,5-Trichlorophenol	95-95-4	197.50	C6H3Cl3O	4.33E-06	3.31E+03	2.65E+00	1.20E+03	400
Acrylonitrile	107-13-1	53.06	C3H3N	8.80E-05	2.24E-01	1.79E-04	7.35E+04	1.37E+02
Heavy semi-volatile organic compounds (molecular weight > 200 g/mole)								
Mobile								
Pentachlorophenol	*87-86-5*	*266.31*	*C6HCl5O (1)*	*2.44E-08*	*5.92E+02*	*4.74E-01*	*1.95E+03*	*3.20E-05*
Naphthalene	91-20-3	128.20	C10H8	4.83E-04	1.19E+03	9.52E-01	3.10E+01	8.20E-02
Hexachloroethane	67-72-1	236.70	C2Cl6	3.89E-03	1.78E+03	1.42E+00	5.00E+01	4.00E-01
Acenaphthene	83-32-9	154.21	C12H10 (2)	1.60E-04	4.90E+03	3.92E+00	4.24E+00	5.00E-03
Acenaphthylene	208-96-8	152.20	C12H8	1.14E-04	7.40E+03	5.92E+00	3.93E+00	NF
Fluorene	86-73-7	166.20	C13H10 (2)	6.40E-05	7.71E+03	6.17E+00	1.98E+00	6.30E-04
Phenanthrene	85-01-8	178.20	C14H10 (3)	2.30E-05	1.40E+04	1.12E+01	1.20E+00	1.10E-04
Anthracene	120-12-7	178.20	C14H10 (3)	6.50E-05	2.35E+04	1.88E+01	4.34E-02	2.70E-06
Fluoranthene	206-44-0	202.26	C16H10 (3)	1.60E-05	4.91E+04	3.93E+01	2.06E-01	7.80E-06
Hexachlorobutadiene	87-68-3	260.70	C4Cl6	8.15E-03	5.37E+04	4.30E+01	3.23E+00	2.20E-01
Pyrene	129-00-0	202.30	C16H10 (4)	1.10E-05	6.80E+04	5.44E+01	1.35E-01	4.60E-06
Heavy semi-volatile organic compounds (molecular weight > 200 g/mole)								
Less mobile								
Benzo (a) pyrene [Total PAH]	50-32-8	252.30	C20H12 (5)	1.13E-06	9.69E+05	7.75E+02	1.62E-03	5.50E-09
Dioxin/Furane						2.64E+03	1.00E-02	
PCBs								
PCB	*11096-82-5*	*375.70*	*C12H4Cl6 (2)*	*4.60E-03*	*3.09E+05*	*2.47E+02*	*7.00E-01*	*4.05E-05*
Pesticides								
gamma-chlordane	*5103-71-2*	*409.80*	*C10H6Cl8*	*4.79E-05*	*5.89E+04*	*4.71E+01*	*5.60E+02*	*NF*
alpha-chlordane	5103-71-9	409.80	C10H6Cl8	4.79E-05	5.89E+04	4.71E+01	5.60E+02	NF
Methoxychlor	72-43-5	345.70	C16H15Cl3O2	1.58E-05	8.00E+04	6.40E+01	4.50E-02	NF
Heptachlor epoxide	1024-57-3	389.20	C10H5Cl7O	9.50E-06	8.32E+04	6.66E+01	2.00E-01	NF
Toxaphene	8001-35-1	414.00	C10H10Cl8	6.00E-06	9.58E+04	7.66E+01	7.40E-01	4.00E-01
			Inorganic Compounds/Metals					
Highly Mobile Metals								
Chromium	*18540-29-9*	*52.00*	*Cr*	*NA*	*NA*	*1.90E+01*	*1.20E+04*	*NA*
Selenium	7782-49-2	78.96	Se	NA	NA	5.00E+00	1.30E+04	NA
Molybdenum		95.90	Mo	NA	NA	1.00E+01	2.92E+06	NA

Table C.3.1. Chemical and physical properties of different classes of chemicals identified as COPCs for the C-746-U Landfill, PGDP, Paducah (continued)

Chemical Groups	CAS number	Molecular weight (g/mol)	Molecular formula	Henry's law constant (atm•m^3/mol)	K_{oc} (L/kg)	K_d (L/kg)	Solubility (mg/L)	Vapor pressure (mm Hg)
Moderately Mobile Metals								
Copper	*7440-50-8*	*63.55*	*Cu*	*NA*	*NA*	*3.50E+01*	*2.44E+04*	*NA*
Barium	7440-39-3	137.33	Ba	NA	NA	4.10E+01	4.10E+04	NA
Antimony		121.70	Sb	NA	NA	4.50E+01	3.85E+04	NA
Manganese	7439-96-5	54.94	Mn	NA	NA	5.00E+01	4.26E+04	NA
Mercury	7439-97-6	200.59	Hg	1.14E-02	NA	5.20E+01	6.00E-02	1.20E-03
Uranium		238.03	U	NA	NA	6.68E+01	1.86E+04	NA
Zinc	7440-66--	65.37	Zn	NA	NA	6.20E+02	4.32E+04	NA
Less Mobile Metals								
Thallium		*204.37*	*Tl*	*NA*	*NA*	*7.10E+01*	*5.00E+04*	*NA*
Cadmium	7440-43-9	112.41	Cd	NA	NA	7.50E+01	2.98E+04	NA
Silver	7440-22-4	107.87	Ag	NA	NA	9.00E+01	5.57E+04	NA
Arsenic	7440-38-2	74.92	As	NA	NA	2.00E+02	3.02E+04	NA
Iron	7439-89-6	55.86	Fe	NA	NA	2.20E+02	1.60E+04	NA
Lead	7439-92-1	207.20	Pb	NA	NA	2.70E+02	5.00E+04	NA
Nickel	7440-02-0	58.71	Ni	NA	NA	4.00E+02	2.54E+04	NA
Beryllium	7440-41-7	9.01	Be	NA	NA	7.90E+02	5.67E+04	NA
Vanadium	7440-62-2	50.94	V	NA	NA	1.00E+03	1.00E+04	NA
				Radionuclides				
Highly Mobile Radionuclides								
Technitium-99		*99.00*	*Tc*	*NA*	*NA*	*2.00E-01*	*NA*	*NA*
Neptunium-237		237.00	Np	NA	NA	7.00E+01	NA	NA
Less Mobile Radionuclides								
Uranium-238		*238.00*	*U*	*NA*	*NA*	*6.68E+01*	*NA*	*NA*
Uranium-234		234.00	U	NA	NA	6.68E+01	NA	NA
Uranium-235		235.00	U	NA	NA	6.68E+01	NA	NA
Radium-226		226.02	Ra	NA	NA	5.00E+02	NA	NA
Plutonium-238		238.00	Pu	NA	NA	5.50E+02	NA	NA
Plutonium-239		239.00	Pu	NA	NA	5.50E+02	*NA*	NA
Plutonium-240		240.00	Pu	NA	NA	5.50E+02	NA	NA
Thorium-230		230.00	Th	NA	NA	3.20E+03	NA	NA
Thorium-232		232.00	Th	NA	NA	3.20E+03	NA	NA

NA = Not applicable. The noted properties are not applicable for inorganics. For organics, the K_d value is dependent on f_{oc} (0.0008).
NF = Not found.
[a] The number in parentheses represents the number of 6-membered rings contained in the chemical.
[b] Unless otherwise noted, the values were obtained from the U.S. EPA (1996b) Superfund Chemical Data Matrix (SCDM).

Table C.3.1. Chemical and physical properties of different classes of chemicals identified as COPCs for the C-746-U Landfill, PGDP, Paducah (continued)

[c] Unless otherwise noted, the values were obtained from the Soil Screening Guidance: Technical Background Document (SSLs; EPA 1996a).
[d] The noted K_{oc} values were calculated using Equation 71 [$\log K_{oc} = 0.0784 + (0.7919 * \log K_{ow})$] in the SSLs document (EPA 1996a) and the noted $\log K_{ow}$ values.
[e] The noted values were obtained from HSDB, 1998.
[f] The noted K_{oc} values were calculated using Equation 70 [$\log K_{oc} = 0.00028 + (0.983 * \log K_{ow})$] in the SSLs document (EPA 1996a) and the noted $\log K_{ow}$ values.
[g] The noted values are based on the mixed isomers value for 1,3-dichloropropene.
[h] The noted value was developed using the MINTEQ (1991) geospeciation model.
[i] The noted values were obtained from Baes and Sharp 1984.
[j] The noted values were obtained from Baes and Sharp, 1984.

Table C.3.2. Predicted maximum concentrations for the COPCs at receptor locations based on risk-based disposal criteria for representative chemical [concentrations are not revised for unity and solubility (e.g., disposal inventory may be greater than the capacity of the landfill)]

Surrogate Groups	Contaminant Inventory Limits (kg or Ci)	CERCLA-derived waste disposal criteria (mg/kg pCi/g)	Leachate Concentration		Predicted Maximum Concentration at X(m)	
			Seep	Above Water Table	DOE Property Boundary, 407 (mg/L or pCi/L)	Ohio River, 3275 (mg/L or pCi/L)
			Volatile Organic Compounds			
Non Aromatic Straight-chain Halogenated Hydrocarbons (contains fluorine, chlorine, bromine, iodine)						
Vinyl chloride[a]	***2.978E+06***	***1.66E+03***	***2.31E-01***	***4.86E-03***	***3.50E-04***	***7.76E-05***
cis-1,2-Dichloroethene	4.427E+08	2.47E+05	1.80E+01	3.79E-01	2.73E-02	6.05E-03
1,1-Dichloroethene	1.395E+08	7.80E+04	3.10E+00	6.52E-02	4.70E-03	1.04E-03
trans-1,2-Dichloroethene	9.512E+08	5.32E+05	3.61E+01	7.60E-01	5.48E-02	1.22E-02
1,2-Dichloroethane	2.551E+07	1.43E+04	9.69E-01	2.04E-02	1.47E-03	3.26E-04
Chloroform	6.948E+06	3.88E+03	1.89E-01	3.98E-03	2.87E-04	6.36E-05
1,2-Dichloroethene (mixed isomers)	8.744E+08	4.89E+05	1.63E+01	3.43E-01	2.47E-02	5.48E-03
Trichloroethene[a]	***2.278E+09***	***1.27E+06***	***7.43E+03***	***2.02E-01***	***1.60E-02***	***6.22E-04***
Carbon Tetrachloride	4.167E+08	2.33E+05	8.40E+02	2.29E-02	1.81E-03	7.04E-05
Tetrachloroethene	2.336E+09	1.31E+06	2.70E+03	7.36E-02	5.82E-03	2.26E-04
Non Aromatic Straight-chain Non-halogenated Hydrocarbons						
2-Butanone	***2.290E+12***	***1.28E+09***	***8.08E+06***	***1.64E+01***	***8.68E-01***	***7.04E-03***
Aromatic Ring-structured Halogenated Hydrocarbons (contains fluorine, chlorine, bromine, iodine)						
Chlorobenzene	***5.319E+12***	***2.97E+09***	***5.51E+05***	***1.01E+00***	***4.66E-02***	***5.26E-07***
1,4-Dichlorobenzene	1.814E+12	1.01E+09	6.83E+04	1.25E-01	5.78E-03	6.52E-08
Hexachlorobenzene	7.827E+12	4.37E+09	2.27E+03	4.16E-03	1.92E-04	2.17E-09
Aromatic Ring-structured Non-Halogenated Hydrocarbons (does not contain fluorine, chlorine, bromine, iodine)						
Benzene	***8.552E+10***	***4.78E+07***	***6.76E+04***	***6.45E-02***	***3.85E-03***	***6.35E-06***
Ethylbenzene	3.416E+12	1.91E+09	8.22E+05	7.84E-01	4.68E-02	7.71E-05
xylene mixture	6.346E+13	3.55E+10	1.15E+07	1.09E+01	6.53E-01	1.08E-03
m-xylene	3.087E+14	1.73E+11	7.71E+07	7.36E+01	4.39E+00	7.24E-03
p-xylene	4.895E+14	2.74E+11	7.71E+07	7.36E+01	4.39E+00	7.24E-03
o-xylene	3.794E+14	2.12E+11	7.71E+07	7.36E+01	4.39E+00	7.24E-03

Table C.3.2. Predicted maximum concentrations for the COPCs at receptor locations based on risk-based disposal criteria for representative chemical [concentrations are not revised for unity and solubility (e.g., disposal inventory may be greater than the capacity of the landfill)] (continued)

Surrogate Groups	Contaminant Inventory Limits (kg or Ci)	CERCLA-derived waste disposal criteria (mg/kg pCi/g)	Leachate Concentration		Predicted Maximum Concentration at X(m)	
			Seep	Above Water Table	DOE Property Boundary, 407 (mg/L or pCi/L)	Ohio River, 3275 (mg/L or pCi/L)
		Semivolatile Organic Compounds				
Light semi-volatile organic compounds (molecular weight < 200 g/mole)						
2-Methylphenol	***7.031E+12***	***3.93E+09***	***1.69E+07***	***1.20E+01***	***7.23E-01***	***3.55E-03***
Pyridine	3.157E+10	1.76E+07	3.47E+05	2.47E-01	1.49E-02	7.31E-05
4-Methylphenol	1.273E+12	7.11E+08	1.69E+06	1.20E+00	7.27E-02	3.57E-04
3-Methylphenol	2.009E+13	1.12E+10	1.69E+07	1.20E+01	7.25E-01	3.56E-03
2,4-Dinitrotoluene	3.571E+10	2.00E+07	1.79E+04	1.27E-02	7.69E-04	3.77E-06
Nitrobenzene	8.852E+10	4.95E+07	3.57E+04	2.54E-02	1.53E-03	7.51E-06
2,4,6-Trichlorophenol	5.995E+13	3.35E+10	9.30E+05	6.61E-01	3.99E-02	1.96E-04
2,4,5-Trichlorophenol	2.076E+15	1.16E+12	3.01E+07	2.14E+01	1.29E+00	6.33E-03
Acrylonitrile	4.634E+07	2.59E+04	9.93E+03	7.06E-03	4.26E-04	2.09E-06
Heavy semi-volatile organic compounds (molecular weight > 200 g/mole)						
More mobile group						
Pentachlorophenol[b]	***4.099E+09***	***2.29E+06***	***3.39E+02***	***4.18E-02***	***2.08E-03***	***5.25E-07***
Naphthalene	1.129E+10	6.31E+06	4.64E+02	5.73E-02	2.85E-03	7.19E-07
Hexachloroethane	7.999E+10	4.47E+07	2.20E+03	2.71E-01	1.35E-02	3.40E-06
Acenaphthene	2.218E+12	1.24E+09	2.21E+04	2.73E+00	1.36E-01	3.43E-05
Acenaphthylene	3.350E+12	1.87E+09	2.21E+04	2.73E+00	1.36E-01	3.43E-05
Fluorene	2.495E+12	1.39E+09	1.58E+04	1.95E+00	9.72E-02	2.45E-05
Phenanthrene	1.053E+13	5.89E+09	3.68E+04	4.54E+00	2.26E-01	5.70E-05
Anthracene	5.992E+13	3.35E+10	1.25E+05	1.54E+01	7.66E-01	1.93E-04
Fluoranthene	3.696E+13	2.07E+10	3.68E+04	4.54E+00	2.26E-01	5.70E-05
Hexachlorobutadine	4.022E+11	2.25E+08	3.66E+02	4.52E-02	2.25E-03	5.67E-07
Pyrene	4.120E+13	2.30E+10	2.96E+04	3.66E+00	1.82E-01	4.59E-05
Heavy semi-volatile organic compounds (molecular weight > 200 g/mole)						
Less mobile group						
Total PAH [Benzo (a) pyrene][b]	***Infinite***	***Infinite***	***>4.22e-10***	***>2.1e-17***	***>1.1e-17***	***0***
Dioxins/Furane	Infinite	Infinite	>1.2e-10	>5.98e-18	>3.14e-18	0

Table C.3.2. Predicted maximum concentrations for the COPCs at receptor locations based on risk-based disposal criteria for representative chemical [concentrations are not revised for unity and solubility (e.g., disposal inventory may be greater than the capacity of the landfill)] (continued)

Surrogate Groups	Contaminant Inventory Limits (kg or Ci)	CERCLA-derived waste disposal criteria (mg/kg pCi/g)	Leachate Concentration		Predicted Maximum Concentration at X(m)	
			Seep	Above Water Table	DOE Property Boundary, 407 (mg/L or pCi/L)	Ohio River, 3275 (mg/L or pCi/L)
PCBs						
PCB	***5.168E+16***	***2.89E+13***	***8.00E+06***	***1.75E+03***	***7.93E-04***	***0***
Pesticides						
gamma-Chlordane	***1.276E+26***	***7.13E+22***	***1.86E+13***	***4.69E+08***	***1.28E-03***	***0***
alpha-Chlordane	1.276E+26	7.13E+22	1.86E+13	4.69E+08	1.28E-03	0
Methoxychlor	9.685E+27	5.41E+24	1.04E+15	2.62E+10	7.15E-02	0
Heptachlor epoxide	7.213E+24	4.03E+21	7.45E+11	1.88E+07	5.12E-05	0
Toxaphene	7.396E+25	4.13E+22	6.63E+12	1.67E+08	4.56E-04	0
		Inorganic Compounds/Metals				
Highly Mobile Metals						
Chromium[c]	***3.073E+07***	***1.72E+04***	***3.72E+02***	***1.73E+02***	***1.76E+01***	***1.46E+01***
Selenium	*1.389E+05*	*7.77E+01*	*2.39E+00*	*5.71E-01*	*7.54E-02*	*6.27E-02*
Molybdenum	6.920E+04	3.87E+01	1.59E+00	7.39E-01	7.53E-02	6.25E-02
Moderately Mobile Metals						
Copper[c]	***9.333E+06***	***5.22E+03***	***2.29E+01***	***7.76E-01***	***5.57E-01***	***3.00E-01***
Barium	2.041E+07	1.14E+04	4.27E+01	1.45E+00	1.04E+00	5.60E-01
Antimony	1.215E+05	6.79E+01	2.32E-01	7.86E-03	5.64E-03	3.03E-03
Manganese	8.378E+06	4.68E+03	1.44E+01	4.88E-01	3.50E-01	1.88E-01
Mercury	1.105E+05	6.18E+01	1.82E-01	6.18E-03	4.44E-03	2.39E-03
Uranium	*1.394E+06*	*7.79E+02*	*4.39E-01*	*6.19E-03*	*9.06E-03*	*1.82E-03*
Zinc	1.336E+08	7.47E+04	1.85E+02	6.27E+00	4.50E+00	2.42E+00
Less Mobile Metals						
Thallium[c]	***1.754E+05***	***9.80E+01***	***6.22E-02***	***1.76E-03***	***1.20E-03***	***1.37E-04***
Cadmium	1.020E+06	5.70E+02	3.43E-01	9.67E-03	6.61E-03	7.56E-04
Silver	1.389E+07	7.77E+03	3.89E+00	1.10E-01	7.50E-02	8.58E-03
Arsenic	*5.144E+04*	*2.88E+01*	*1.67E-02*	*3.36E-03*	*3.50E-04*	*0.00E+00*
Iron	*7.002E+10*	*3.91E+07*	*7.76E+02*	*7.41E+01*	*4.49E+00*	*0.00E+00*
Lead	1.389E+08	7.77E+04	1.30E+01	3.66E-01	2.50E-01	2.86E-02

Table C.3.2. Predicted maximum concentrations for the COPCs at receptor locations based on risk-based disposal criteria for representative chemical [concentrations are not revised for unity and solubility (e.g., disposal inventory may be greater than the capacity of the landfill)] (continued)

Surrogate Groups	Contaminant Inventory Limits (kg or Ci)	CERCLA-derived waste disposal criteria (mg/kg pCi/g)	Leachate Concentration		Predicted Maximum Concentration at X(m)	
			Seep	Above Water Table	DOE Property Boundary, 407 (mg/L or pCi/L)	Ohio River, 3275 (mg/L or pCi/L)
Nickel	*6.235E+10*	*3.49E+07*	*1.62E+03*	*2.40E+01*	*6.82E-01*	*0.00E+00*
Beryllium	4.293E+07	2.40E+04	1.37E+00	3.86E-02	2.64E-02	3.02E-03
Vanadium	2.696E+08	1.51E+05	6.79E+00	1.92E-01	1.31E-01	1.50E-02
		Radionuclides				
Highly Mobile Radionuclides						
Technetium-99	***3.606E+01***	***2.02E+01***	***2.69E+03***	***1.41E+03***	***1.40E+02***	***1.17E+02***
Neptunium-237	4.040E+01	2.26E+01	1.11E+02	5.76E+01	5.73E+00	4.71E+00
Less Mobile Radionuclides						
Uranium-238	***1.846E+03***	***1.03E+03***	***2.46E+02***	***2.81E+01***	***4.43E+00***	***6.54E-01***
Uranium-234	2.275E+03	1.27E+03	3.04E+02	3.47E+01	5.46E+00	8.07E-01
Uranium-235	2.242E+03	1.25E+03	2.99E+02	3.42E+01	5.38E+00	7.95E-01
Ra-226	7.268E+02	4.06E+02	1.30E+01	1.48E+00	2.33E-01	3.44E-02
Pu-238	1.012E+04	5.66E+03	1.64E+02	1.87E+01	2.95E+00	4.36E-01
Pu-239	9.813E+03	5.49E+03	1.59E+02	1.82E+01	2.86E+00	4.22E-01
Pu-240	9.813E+03	5.49E+03	1.59E+02	1.82E+01	2.86E+00	4.22E-01
Th-230	4.412E+03	2.47E+03	1.23E+01	1.40E+00	2.21E-01	3.26E-02
Th-232	5.350E+03	2.99E+03	1.49E+01	1.70E+00	2.68E-01	3.96E-02

Results of chemicals/radionuclides listed in bold, italic font are for the indicator chemical/radionuclide of the surrogate group

Results of chemicals/radionuclide listed in italic font in shaded cells are for chemicals/radionuclide that received chemical-specific modeling. These constituents were modeled independent of their surrogate group after initial results were evaluated.

The remaining results are for chemicals/radionuclides that have their results based upon those for indicator chemicals/radionuclides.

[a]Vinyl chloride is the indicator chemical for the more mobile of these chemicals. Chemicals in the more mobile group have a K_d less than 0.075 L/kg. Trichloroethene is the indicator chemical for the less mobile of these chemicals. Chemicals in the less mobile group have a K_d greater than 0.075 L/kg.

[b]Pentachlorophenol is the indicator chemical for the more mobile of these chemicals. Chemicals in the more mobile group have a K_d less than 100 L/kg. Benzo(a)pyrene is the indicator chemical for the less mobile of these chemicals. Chemicals in the less mobile group have a K_d greater than 100 L/kg.

[c]Chromium is the indicator chemical for the more mobile metals. Chemicals in the more mobile metals group have a K_d less than 35 L/kg. Copper is the indicator chemical for the moderately mobile metal group. Chemicals in the moderately mobile metals group have a K_d between 35 and 75 L/kg. Thallium is the indicator chemical for the less mobile metal group. Chemicals in the less mobile metals group have a K_d greater than 75 L/kg.

[d]Technetium-99 is the indicator chemical for the highly mobile radionuclides. Chemicals in the highly mobile radionuclides group have a K_d less than 50 L/kg. Uranium -238 is the indicator chemical for the less mobile radionuclides group. Chemicals in the less mobile radionuclides group have a K_d greater than 50 L/kg.

Table C.3.3. Predicted maximum concentrations for all the COPCs at receptor locations based on risk-based disposal criteria for representative chemical (disposal criteria are revised if they exceed unity and solubility)

Surrogate Groups	Contaminant Inventory Limits (kg or Ci)	CERCLA-derived waste disposal criteria (mg/kg pCi/g)		Leachate Concentration: Seep (mg/L or pCi/L)	Leachate Concentration: Above Water Table (mg/L or pCi/L)	Predicted Maximum Concentration at X(m): Prop. Boundary, 407 (mg/L or pCi/L)	Predicted Maximum Concentration at X(m): Ohio River, 3275 (mg/L or pCi/L)
Volatile Organic Compounds							
Non Aromatic Straight-chain Halogenated Hydrocarbons (contains fluorine, chlorine, bromine, iodine)							
Vinyl chloride	***1.073E+06***	***6.00E+02***	***X***	***8.31E-02***	***1.75E-03***	***1.26E-04***	***2.80E-05***
cis-1,2-Dichloroethene	1.432E+06	8.01E+02	X	5.82E-02	1.23E-03	8.83E-05	1.96E-05
1,1-Dichloroethene	1.024E+06	5.72E+02	X	2.27E-02	4.78E-04	3.45E-05	7.65E-06
trans-1,2-Dichloroethene	2.606E+06	1.46E+03	X	9.90E-02	2.08E-03	1.50E-04	3.33E-05
1,2-Dichloroethane	3.583E+06	2.00E+03		1.36E-01	2.87E-03	2.06E-04	4.58E-05
Chloroform	3.439E+06	1.92E+03	X	9.36E-02	1.97E-03	1.42E-04	3.15E-05
1,2-Dichloroethene (mixed isomers)	3.758E+05	2.10E+02		7.00E-03	1.47E-04	1.06E-05	2.35E-06
Trichloroethene	***5.433E+05***	***3.04E+02***	***X***	***1.77E+00***	***4.82E-05***	***3.82E-06***	***1.48E-07***
Carbon Tetrachloride	4.600E+05	2.57E+02	X	9.28E-01	2.53E-05	2.00E-06	7.77E-08
Tetrachloroethene	1.480E+05	8.27E+01	X	1.71E-01	4.66E-06	3.69E-07	1.43E-08
Non Aromatic Straight-chain Non-halogenated Hydrocarbons							
2-Butanone	***9.885E+07***	***5.53E+04***	***X***	***3.49E+02***	***7.07E-04***	***3.75E-05***	***3.04E-07***
Aromatic Ring-structured Halogenated Hydrocarbons (contains fluorine, chlorine, bromine, iodine)							
Chlorobenzene	***3.205E+05***	***1.79E+02***	***X***	***3.32E-02***	***6.08E-08***	***2.81E-09***	***3.17E-14***
1,4-Dichlorobenzene	9.150E+04	5.11E+01	X	3.44E-03	6.31E-09	2.92E-10	3.29E-15
Hexachlorobenzene	7.121E+05	3.98E+02	X	2.06E-04	3.78E-10	1.75E-11	1.97E-16
Aromatic Ring-structured Non-Halogenated Hydrocarbons (does not contain fluorine, chlorine, bromine, iodine)							
Benzene	***7.830E+05***	***4.38E+02***	***X***	***6.19E-01***	***5.91E-07***	***3.52E-08***	***5.81E-11***
Ethylbenzene	1.100E+05	6.15E+01	X	2.64E-02	2.52E-08	1.51E-09	2.48E-12
xylene mixture	1.494E+05	8.35E+01	X	2.70E-02	2.58E-08	1.54E-09	2.53E-12
m-xylene	1.030E+05	5.76E+01	X	2.57E-02	2.46E-08	1.47E-09	2.41E-12
p-xylene	1.488E+05	8.32E+01	X	2.34E-02	2.24E-08	1.33E-09	2.20E-12
o-xylene	1.232E+05	6.89E+01	X	2.50E-02	2.39E-08	1.43E-09	2.35E-12
Semivolatile Organic Compounds							
Light semi-volatile organic compounds (molecular weight < 200 g/mole)							
2-Methylphenol	***7.729E+06***	***4.32E+03***	***X***	***1.85E+01***	***1.32E-05***	***7.95E-07***	***3.90E-09***
Pyridine	3.640E+08	2.03E+05	X	4.01E+03	2.85E-03	1.72E-04	8.43E-07
4-Methylphenol	9.005E+06	5.03E+03	X	1.20E+01	8.53E-06	5.14E-07	2.52E-09
3-Methylphenol	8.788E+06	4.91E+03	X	7.39E+00	5.26E-06	3.17E-07	1.56E-09
2,4-Dinitrotoluene	1.335E+05	7.46E+01	X	6.70E-02	4.77E-08	2.88E-09	1.41E-11
Nitrobenzene	1.104E+06	6.17E+02	X	4.45E-01	3.16E-07	1.91E-08	9.36E-11
2,4,6-Trichlorophenol	3.824E+06	2.14E+03	X	5.93E-02	4.22E-08	2.55E-09	1.25E-11
2,4,5-Trichlorophenol	6.114E+06	3.42E+03	X	8.86E-02	6.30E-08	3.80E-09	1.86E-11
Acrylonitrile	2.632E+07	1.47E+04	X	5.64E+03	4.01E-03	2.42E-04	1.19E-06
Heavy semi-volatile organic compounds (molecular weight > 200 g/mole)							
Mobile group							
Pentachlorophenol	***2.350E+06***	***1.31E+03***	***X***	***1.94E-01***	***2.40E-05***	***1.19E-06***	***3.01E-10***
Naphthalene	6.389E+04	3.57E+01	X	2.63E-03	3.24E-07	1.61E-08	4.07E-12
Hexachloroethane	1.453E+05	8.12E+01	X	3.99E-03	4.93E-07	2.45E-08	6.18E-12
Acenaphthene	3.125E+04	1.75E+01	X	3.12E-04	3.85E-08	1.92E-09	4.83E-13
Acenaphthylene	1.763E+05	9.85E+01	X	1.17E-03	1.44E-07	7.16E-09	1.80E-12
Fluorene	2.256E+04	1.26E+01	X	1.43E-04	1.77E-08	8.79E-10	2.22E-13
Phenanthrene	2.447E+04	1.37E+01	X	8.55E-05	1.06E-08	5.25E-10	1.32E-13
Anthracene	1.475E+03	8.25E-01	X	3.07E-06	3.79E-10	1.89E-11	4.76E-15
Fluoranthene	1.456E+04	8.14E+00	X	1.45E-05	1.79E-09	8.90E-11	2.24E-14

Table C.3.3. Predicted maximum concentrations for all the COPCs at receptor locations based on risk-based disposal criteria for representative chemical (disposal criteria are revised if they exceed unity and solubility) (continued)

Surrogate Groups	Contaminant Inventory Limits (kg or Ci)	CERCLA-derived waste disposal criteria (mg/kg pCi/g)		Leachate Concentration: Seep (mg/L or pCi/L)	Leachate Concentration: Above Water Table (mg/L or pCi/L)	Predicted Maximum Concentration at X(m): Prop. Boundary, 407 (mg/L or pCi/L)	Predicted Maximum Concentration at X(m): Ohio River, 3275 (mg/L or pCi/L)
Hexachlorobutadine	2.494E+05	1.39E+02	X	2.27E-04	2.80E-08	1.40E-09	3.52E-13
Pyrene	1.319E+04	7.37E+00	X	9.48E-06	1.17E-09	5.83E-11	1.47E-14
Heavy semi-volatile organic compounds (molecular weight > 200 g/mole)							
Less mobile group							
Total PAH [Benzo(a)pyrene]	***1.387E+04***	***7.75E+00***	***X***	***3.27E-15***	***1.63E-22***	***8.54E-23***	***0***
Dioxins/Furane	4.723E+04	2.64E+01	X	3.17E-15	1.58E-22	8.29E-23	0
PCBs							
PCB	***3.098E+05***	***1.73E+02***	***X***	***4.80E-05***	***1.05E-08***	***4.75E-15***	***0***
Pesticides							
gamma-Chlordane	***4.739E+03***	***2.65E+00***	***X***	***6.91E-10***	***1.74E-14***	***4.75E-26***	***0***
alpha-Chlordane	4.740E+03	2.65E+00	X	6.91E-10	1.74E-14	4.75E-26	0
Methoxychlor	5.169E+03	2.89E+00	X	5.55E-10	1.40E-14	3.82E-26	0
Heptachlor epoxide	2.389E+04	1.34E+01	X	2.47E-09	6.22E-14	1.70E-25	0
Toxaphene	1.017E+05	5.69E+01	X	9.12E-09	2.30E-13	6.27E-25	0
Inorganic Compounds/Metals							
Highly Mobile Metals							
Chromium	***3.073E+07***	***1.72E+04***		***3.72E+02***	***1.73E+02***	***1.76E+01***	***1.46E+01***
Selenium	*1.389E+05*	*7.77E+01*		*2.39E+00*	*5.71E-01*	*7.54E-02*	*6.27E-02*
Molybdenum	6.920E+04	3.87E+01		1.59E+00	7.39E-01	7.53E-02	6.25E-02
Moderately Mobile Metals							
Copper	***9.333E+06***	***5.22E+03***		***2.29E+01***	***7.76E-01***	***5.57E-01***	***3.00E-01***
Barium	2.041E+07	1.14E+04		4.27E+01	1.45E+00	1.04E+00	5.60E-01
Antimony	1.215E+05	6.79E+01		2.32E-01	7.86E-03	5.64E-03	3.03E-03
Manganese	8.378E+06	4.68E+03		1.44E+01	4.88E-01	3.50E-01	1.88E-01
Mercury	5.603E+03	3.13E+00		9.25E-03	3.14E-04	2.25E-04	1.21E-04
Uranium	***1.394E+06***	***7.79E+02***		***4.39E-01***	***6.19E-03***	***9.06E-03***	***1.82E-03***
Zinc	1.336E+08	7.47E+04		1.85E+02	6.27E+00	4.50E+00	2.42E+00
Less Mobile Metals							
Thallium	***1.754E+05***	***9.80E+01***		***6.22E-02***	***1.76E-03***	***1.20E-03***	***1.37E-04***
Cadmium	1.020E+06	5.70E+02		3.43E-01	9.67E-03	6.61E-03	7.56E-04
Silver	1.389E+07	7.77E+03		3.89E+00	1.10E-01	7.50E-02	8.58E-03
Arsenic	*5.144E+04*	*2.88E+01*		*1.67E-02*	*3.36E-03*	*3.50E-04*	*0.00E+00*
Iron	*1.789E+09*	*1.00E+06*	*Y*	*6.98E+01*	*6.67E+00*	*4.04E-01*	*0.00E+00*
Lead	1.389E+08	7.77E+04		1.30E+01	3.66E-01	2.50E-01	2.86E-02
Nickel	*1.789E+09*	*1.00E+06*	*Y*	*4.72E+02*	*7.00E+00*	*1.99E-01*	*0.00E+00*
Beryllium	4.293E+07	2.40E+04		1.37E+00	3.86E-02	2.64E-02	3.02E-03
Vanadium	2.696E+08	1.51E+05		6.79E+00	1.92E-01	1.31E-01	1.50E-02
Radionuclides							
Highly Mobile Radionuclides							
Technetium-99	***3.606E+01***	***2.02E+01***		***2.69E+03***	***1.41E+03***	***1.40E+02***	***1.17E+02***
Neptunium-237	*4.040E+01*	*2.26E+01*		*1.11E+02*	*5.76E+01*	*5.73E+00*	*4.71E+00*

Table C.3.3. Predicted maximum concentrations for all the COPCs at receptor locations based on risk-based disposal criteria for representative chemical (disposal criteria are revised if they exceed unity and solubility) (continued)

Surrogate Groups	Contaminant Inventory Limits (kg or Ci)	CERCLA-derived waste disposal criteria (mg/kg pCi/g)	Leachate Concentration		Predicted Maximum Concentration at X(m)	
			Seep (mg/L or pCi/L)	Above Water Table (mg/L or pCi/L)	Prop. Boundary, 407 (mg/L or pCi/L)	Ohio River, 3275 (mg/L or pCi/L)
Less Mobile Radionuclides						
Uranium-238	***1.846E+03***	***1.03E+03***	***2.46E+02***	***2.81E+01***	***4.43E+00***	***6.54E-01***
Uranium-234	2.275E+03	1.27E+03	3.04E+02	3.47E+01	5.46E+00	8.07E-01
Uranium-235	2.242E+03	1.25E+03	2.99E+02	3.42E+01	5.38E+00	7.95E-01
Ra-226	7.268E+02	4.06E+02	1.30E+01	1.48E+00	2.33E-01	3.44E-02
Pu-238	1.012E+04	5.66E+03	1.64E+02	1.87E+01	2.95E+00	4.36E-01
Pu-239	9.813E+03	5.49E+03	1.59E+02	1.82E+01	2.86E+00	4.22E-01
Pu-240	9.813E+03	5.49E+03	1.59E+02	1.82E+01	2.86E+00	4.22E-01
Th-230	4.412E+03	2.47E+03	1.23E+01	1.40E+00	2.21E-01	3.26E-02
Th-232	5.350E+03	2.99E+03	1.49E+01	1.70E+00	2.68E-01	3.96E-02

Notes:
1. Results of chemicals/radionuclides listed in bold, italic font are for the indicator chemical/radionuclide of the surrogate group
2. Results of chemicals/radionuclide listed in italic font in shaded cells are for chemicals/radionuclide that received chemical-specific modeling. These constituents were modeled independent of their surrogate group after initial results were evaluated.
3. The remaining results are for chemicals/radionuclides that have their results based upon those for indicator chemicals/radionuclides.
4. X = Disposal criteria is based on solubility limit, Y = disposal criteria is based on volume of the landfill

ATTACHMENT 1 TO APPENDIX C.3
RESRAD MODELING

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RESRAD MODELING

The RESRAD model is an industry standard model accepted by the regulators (EPA and State agencies) and stakeholders. RESRAD (Yu et al. 1993) was developed by Argonne National Laboratories and is widely used by DOE and other government agencies to estimate doses from residual radioactive material and to set site-specific cleanup levels for radioactive contaminants. The user interfaces of the program are flexible modeling platforms. RESRAD is primarily used as a secondary screening-tool for estimating doses arising from occupancy of land contaminated by radioactive material. RESRAD can model decay chains of many isotopes; its libraries include properties of a large number of isotopes together with their decay chain.

RESRAD simulates the removal of radioactivity from the contaminated zone by leaching, transporting it vertically into groundwater, and by runoff into streams or ponds. RESRAD was not used as the primary model for the development of the CERCLA-derived waste disposal criteria and contaminant inventory limits because it cannot account for the complexity of contaminant matrix within the landfill, and it cannot account for the gradual release of contaminants from the source. However, because the primary model used in criteria and limit derivation (i.e., DUST and AT123D) cannot model radionuclide decay, the RESRAD model was used to evaluate the uncertainty in results for selected radionuclides under the gradual failure scenario.

The four radionuclides that were used for uncertainty analysis by RESRAD were ^{241}Am, ^{226}Ra, ^{232}Th and ^{238}U. Key parameters used in RESRAD include the following:

- Concentrations of radionuclides (presented in Table 3.4 of the main text of this report).
- Distribution coefficient (K_d)—values presented in Table Att.1.
- Soil characteristics for unsaturated zone—number of layers (limited to a maximum of five layers) in the unsaturated zone and thickness, density, total porosity, effective porosity, field capacity, hydraulic conductivity, and soil-specific exponential parameter (b) for each layer; values presented in Table Att.2.
- Soil characteristic of contaminated zone—values presented in Table Att.3.
- Soil characteristics for saturated zone—density, total porosity, effective porosity, field capacity, hydraulic conductivity, hydraulic gradient, and parameter (b) of the zone; values presented in Table Att.4.
- Climatic parameter—same as used in HELP modeling (represented in Table Att.5).
- Contamination pathway—some of the major pathways shown in Table Att.6.

The RESRAD modeling results are plotted as concentration of radionuclides in drinking water over time as shown in Figs. Att.1 through Att.12. As can be seen from these figures, in general, RESRAD predicted peak radionuclide concentrations that are lower than those predicted by DUST and AT123D models. However, this general result is not true for ^{237}Np a decay product of ^{241}Am. This contrary result is due to RESRAD's use of a default K_d of 1 L/kg for ^{237}Np. [RESRAD does not allow the use of a site-specific K_d (i.e., 70 L/kg in sand and 144 L/kg in clay at the PGDP).] Therefore, the results for ^{237}Np predicted by RESRAD using an unrealistic default K_d produced a higher peak than what is predicted by DUST and AT123D modeling.

Table Att.1. Distribution coefficient of radionuclides and their daughter products in different zones

Radionuclide	^{241}Am	$^{237}Np^{a}$ (D/ ^{241}Am)	^{226}Ra	^{210}Pb (D/ ^{226}Ra, ^{232}Th, and ^{238}U)	^{232}Th	^{228}Th (D/ ^{232}Th and ^{238}U)	^{228}Ra (D/ ^{232}Th and ^{238}U)	^{238}U	^{234}U (D/ ^{238}U)	^{230}Th (D/ ^{238}U)
Contaminated zone (13.4 m)	1900		500	270	3200	3200	500	66.8	66.8	3200
Unsaturated zone 1	1900		500	270	3200	3200	500	66.8	66.8	3200
Unsaturated zone 2	1900		500	270	3200	3200	500	66.8	66.8	3200
Unsaturated zone 3	8400		9100	550	5800	5800	9100	3640	3640	5800
Unsaturated zone 4	1900		500	270	3200	3200	500	66.8	66.8	3200
Unsaturated zone 5	8400		9100	550	5800	5800	9100	3640	3640	5800
Saturated zone	1900		500	270	3200	3200	500	66.8	66.8	3200

[a]RESRAD does not allow the K_d value to be replaced by any other value than the default value when ^{237}Np is being modeled as a decay product of ^{241}Am.
D/ indicates "decay product of" the original radionuclide.

Table Att.2. Properties of unsaturated zone

	Unsaturated zone 1	Unsaturated zone 2	Unsaturated zone 3	Unsaturated zone 4	Unsaturated zone 5
Thickness (m)	0.3	0.3	0.9	2.0	8.4
Density (g/cm^3)	1.2	1.5	1.8	1.5	1.76
Total porosity	0.4	0.45	0.43	0.4	0.45
Effective porosity	0.2	0.2	0.6	0.2	0.6
Field capacity	0.2	0.25	0.35	0.2	0.3
Hydraulic conductivity (m/yr)	9.46E+04	1.58E+02	3.2E-01	3.0E+00	1.2E-01

Table Att.3. Contaminated zone properties

Area of contaminated zone (m^2)	8.900E+04
Thickness of contaminated zone (m)	1.340E+01
Density of contaminated zone (g/cm^3)	1.400E+00
Contaminated zone erosion rate (m/yr)	6.000E-04
Contaminated zone total porosity	4.000E-01
Contaminated zone field capacity	2.000E-01
Cont. zone hydraulic conductivity (m/yr)	3.150E+02
Length parallel to aquifer flow (m)	3.000E+02

Table Att.4. Saturated zone properties

Density of saturated zone (g/cm^3)	1.670E+00
Saturated zone total porosity	3.400E-01
Saturated zone effective porosity	3.000E-01
Saturated zone field capacity	4.000E-02
Saturated zone hydraulic conductivity (m/yr)	5.563E+04
Saturated zone hydraulic gradient	1.100E-03
Water table drop rate (m/yr)	1.000E-03
Well pump intake depth (m)	1.000E+01
Well pumping rate (m^3/yr)	2.500E+02

Table Att.5. Climatic data

Density of cover material (g/cm^3)	1.500E+00
Cover depth erosion rate (m/yr)	6.000E-04
Average annual wind speed (m/sec)	2.000E+00
Humidity in air (g/m^3)	8.000E+00
Evapotranspiration coefficient	5.000E-01
Precipitation (m/yr)	1.280E+00
Runoff coefficient	2.000E-01
Watershed area for stream (m^2)	1.000E+07
Cover depth (m)	1.500E

Table Att.6. Parameters for contamination pathway

Fruits, vegetables and grain consumption (kg/yr)	1.600E+02
Leafy vegetable consumption (kg/yr)	1.400E+01
Milk consumption (L/yr)	9.200E+01
Meat and poultry consumption (kg/yr)	6.300E+01
Fish consumption (kg/yr)	5.400E+00
Other seafood consumption (kg/yr)	9.000E-01
Soil ingestion rate (g/yr)	3.650E+01
Drinking water intake (L/yr)	7.000E+02
Livestock fodder intake for meat (kg/day)	6.800E+01
Livestock fodder intake for milk (kg/day)	5.500E+01
Livestock water intake for meat (L/day)	5.000E+01
Livestock water intake for milk (L/day)	1.600E+02

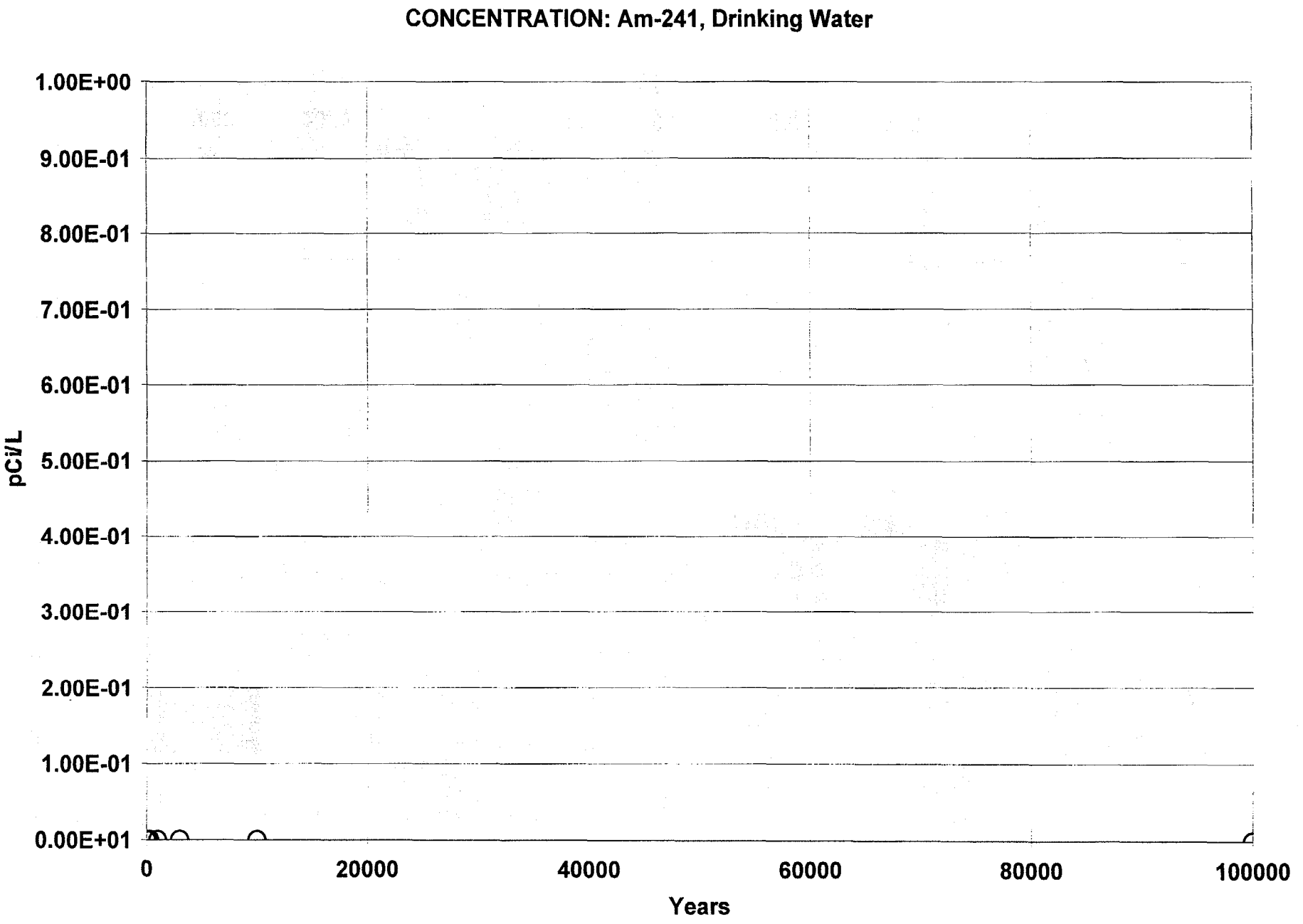

Fig. Att.1. Concentration profile for ^{241}Am in drinking water.

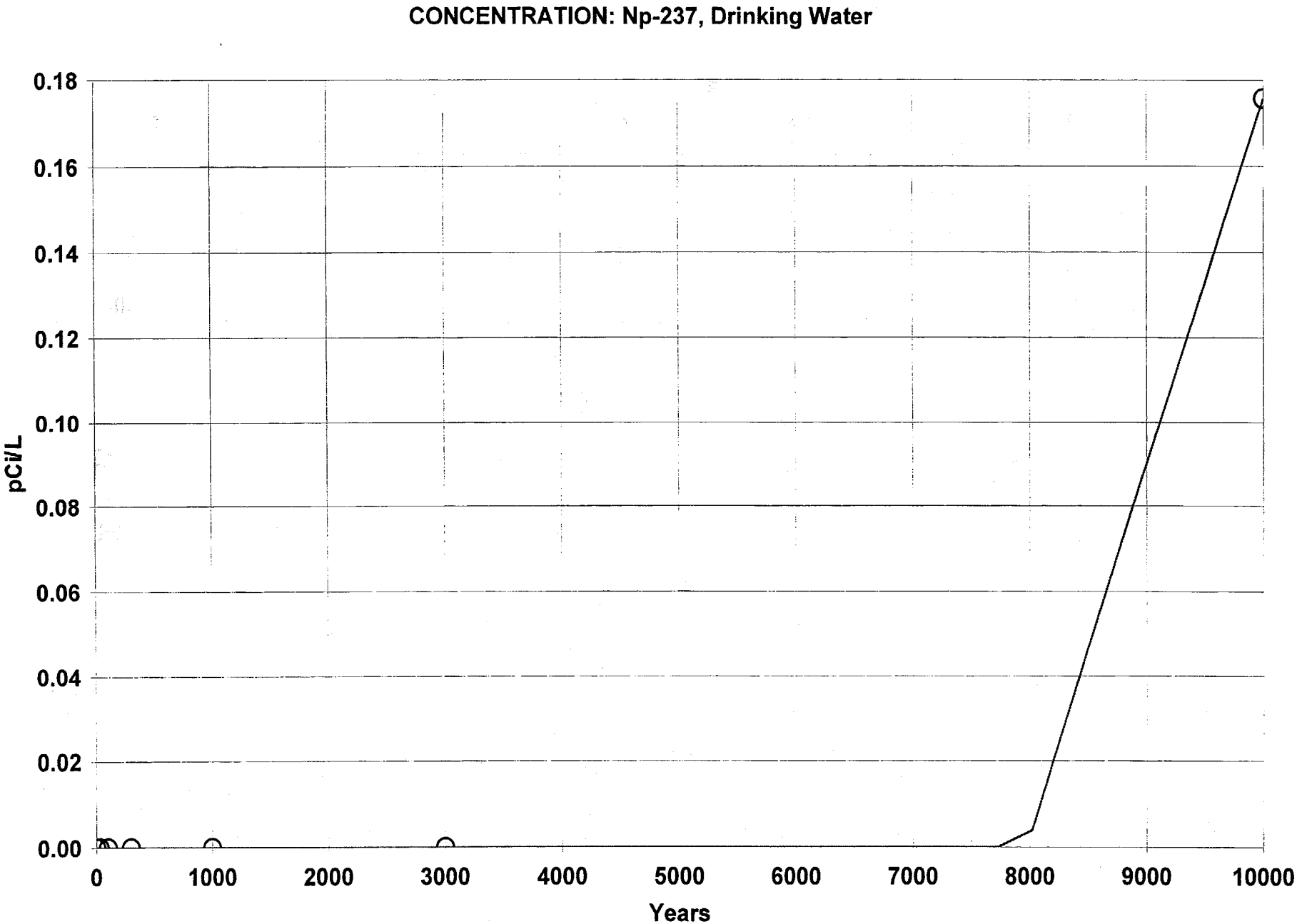

Fig. Att.2. Concentration profile for ^{237}Np (daughter of ^{241}Am) in drinking water.

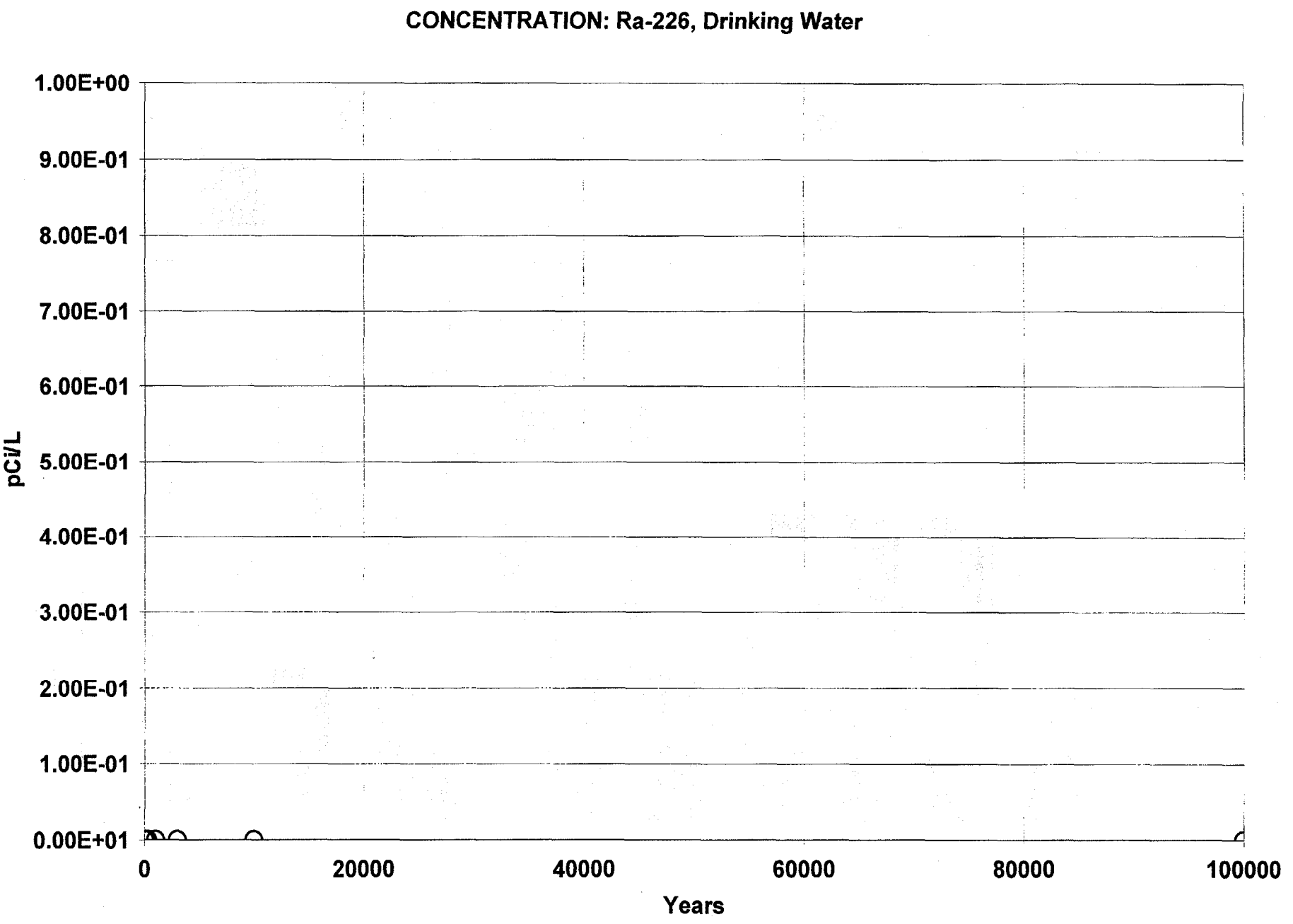

Fig. Att.3. Concentration profile ^{226}Ra in drinking water.

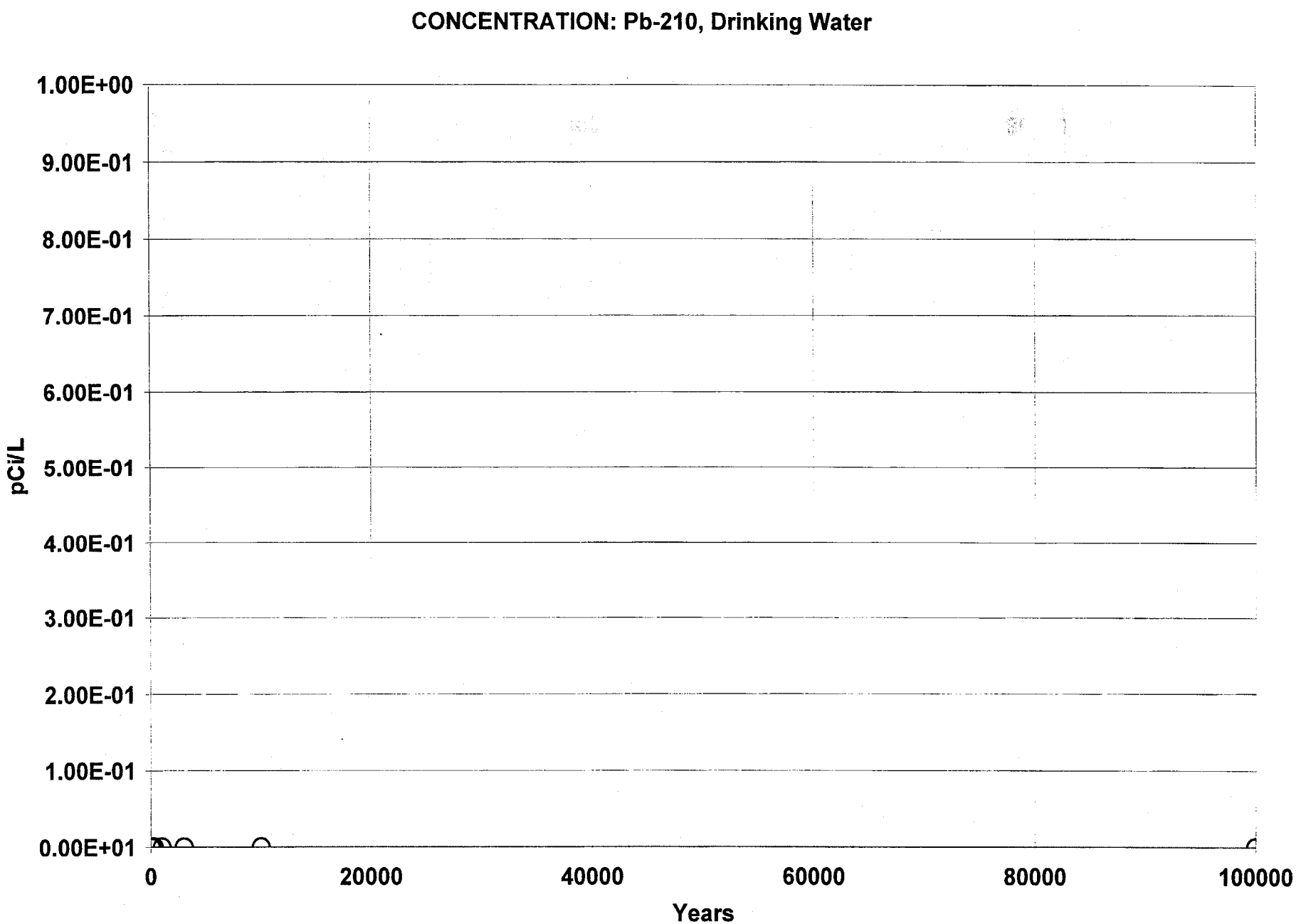

Fig. Att.4. Concentration profile for ^{210}Pb (daughter of ^{226}Ra) in drinking water.

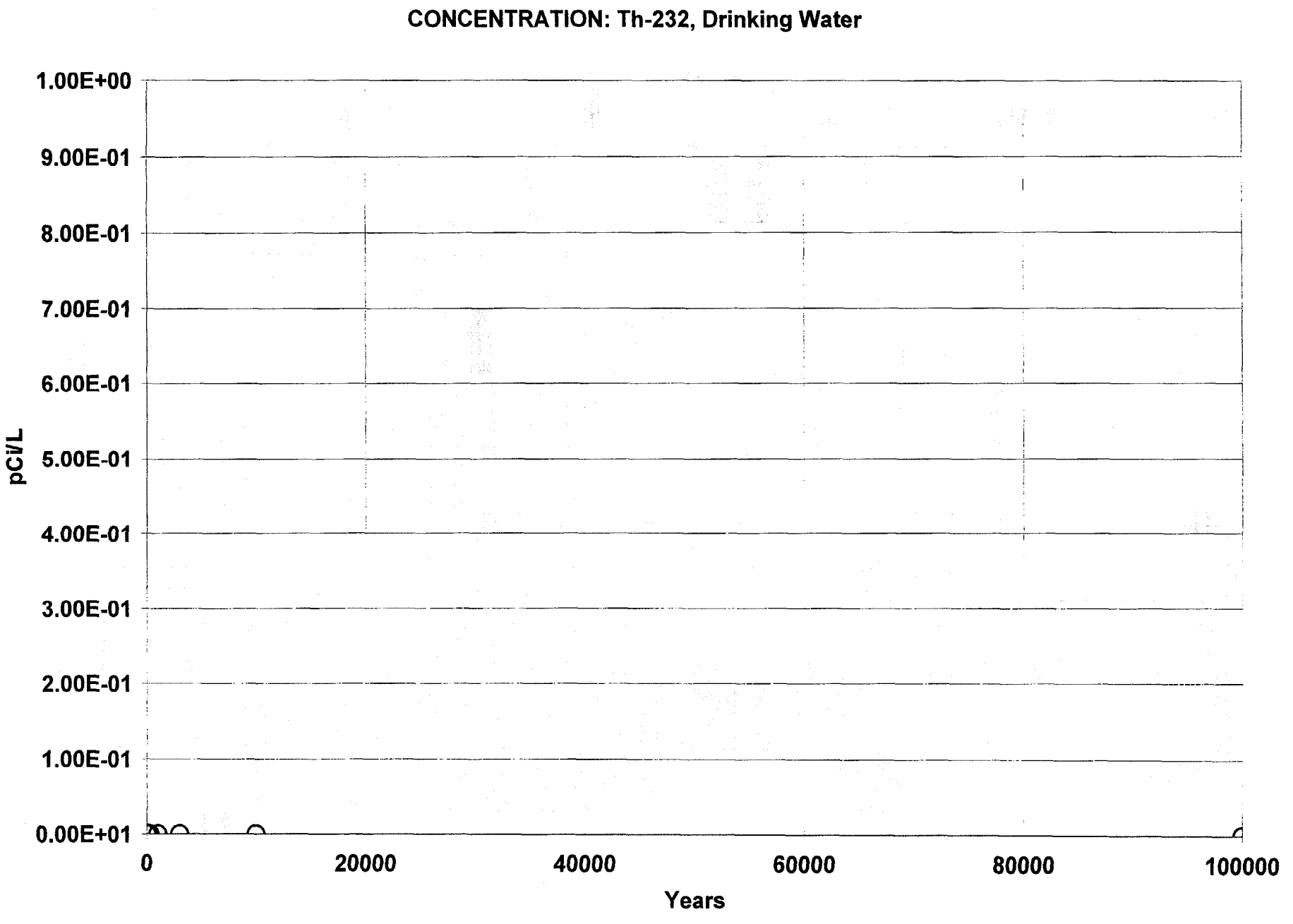

Fig. Att.5. Concentration profile for ^{232}Th in drinking water.

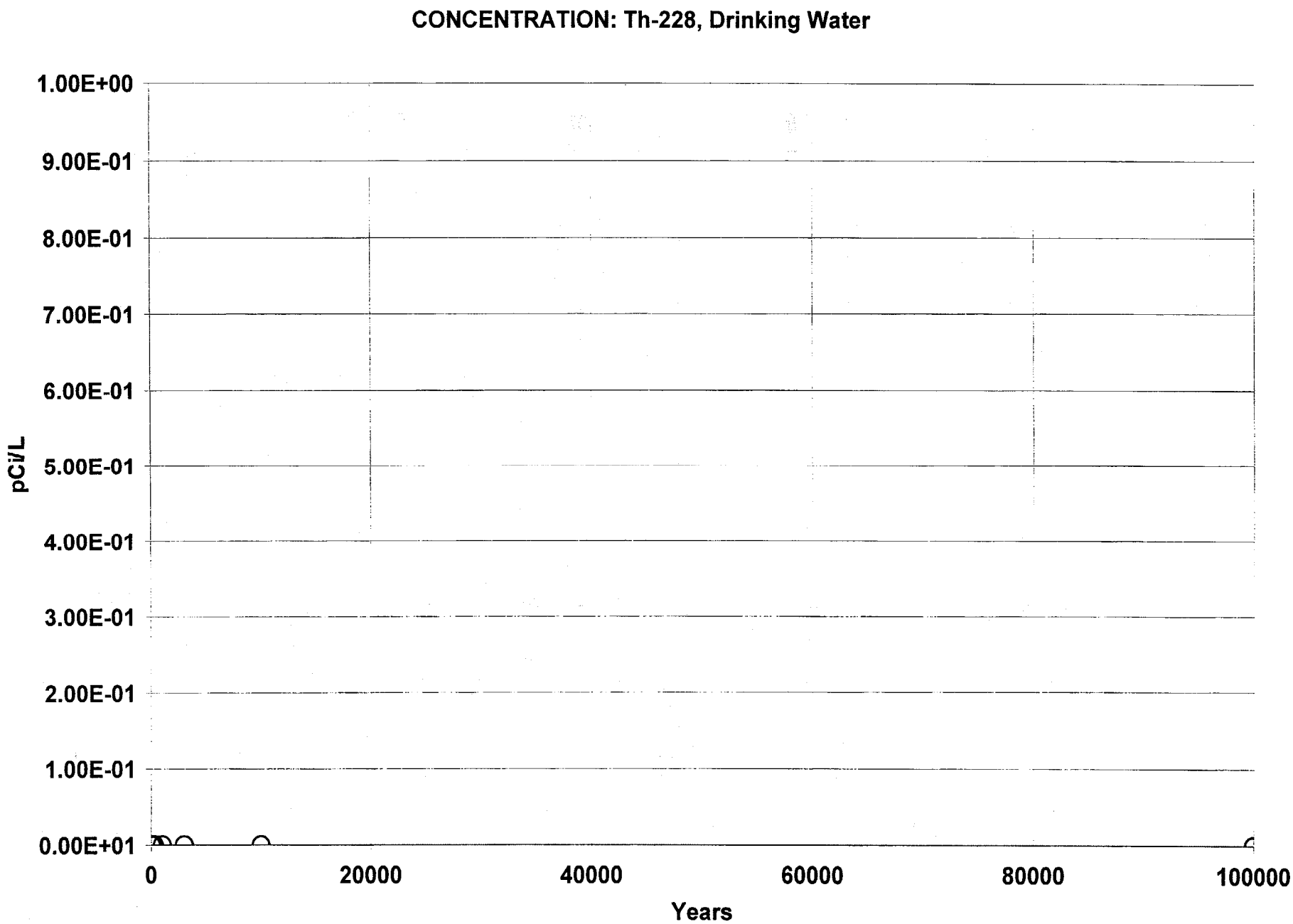

Fig. Att.6. Concentration profile for ^{228}Th (daughters of ^{232}Th) in drinking water.

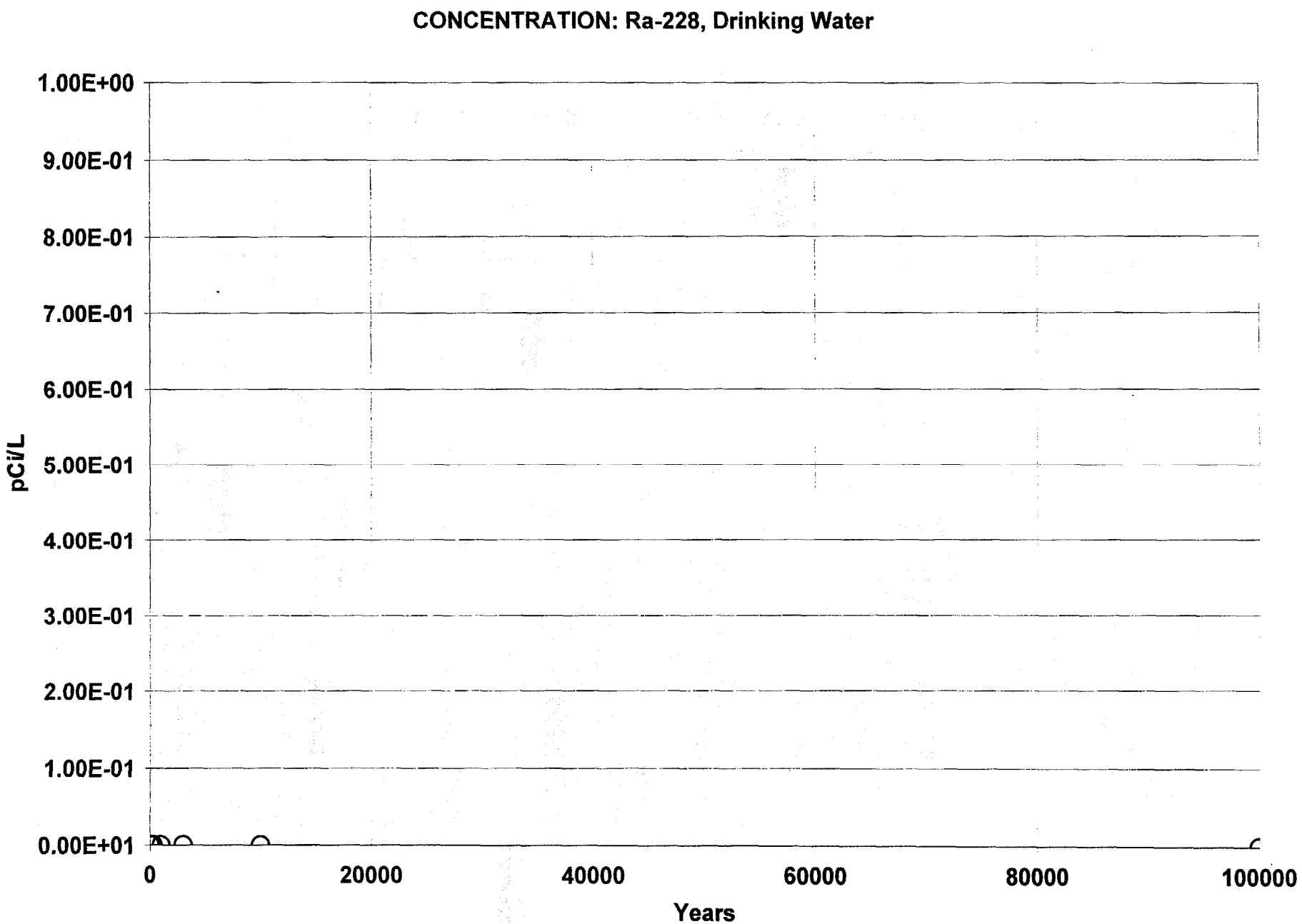

Fig. Att.7. Concentration profile for ^{228}Ra (daughter of ^{232}Th) in drinking water.

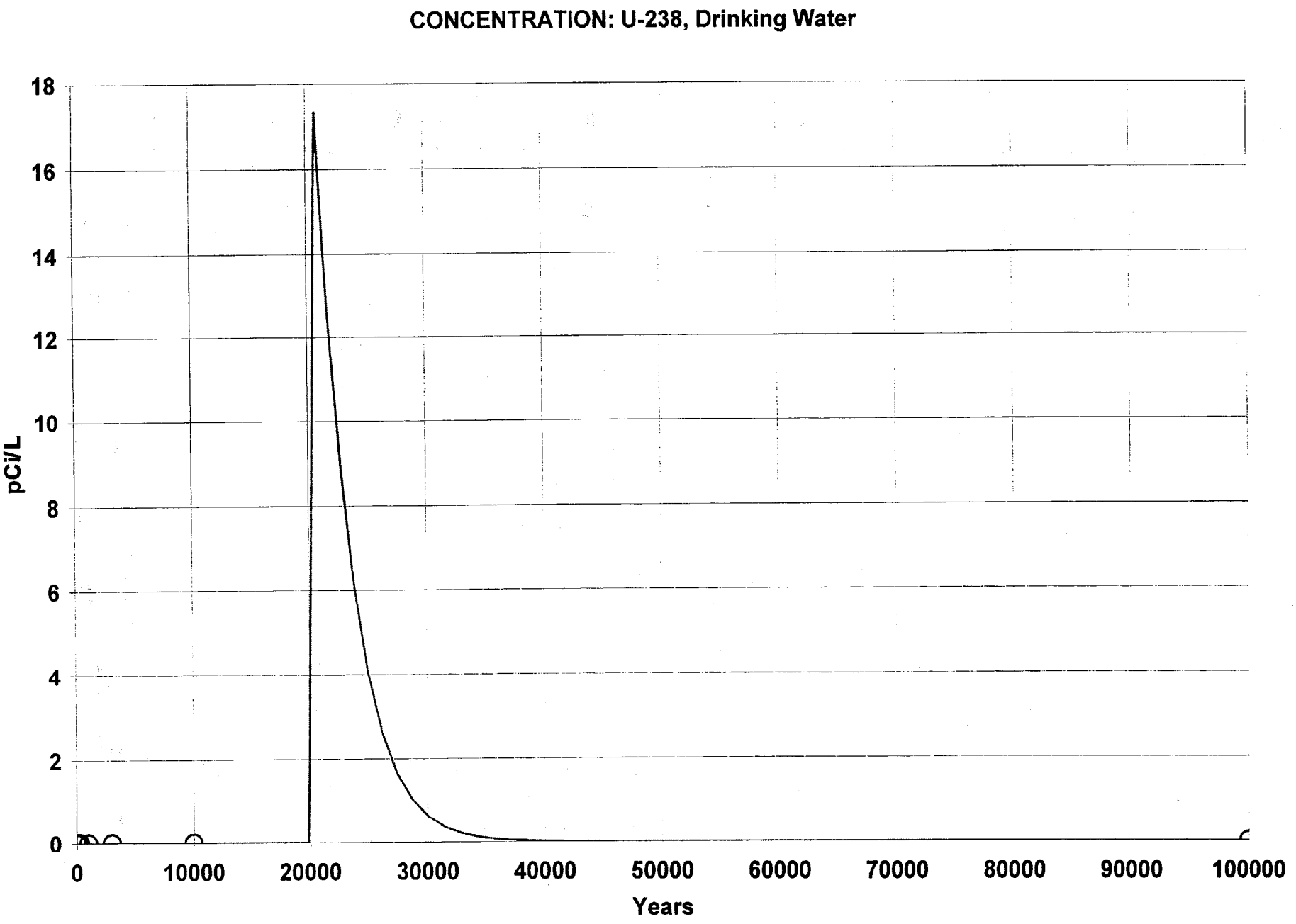

Fig. Att.8. Concentration profile for ^{238}U in drinking water.

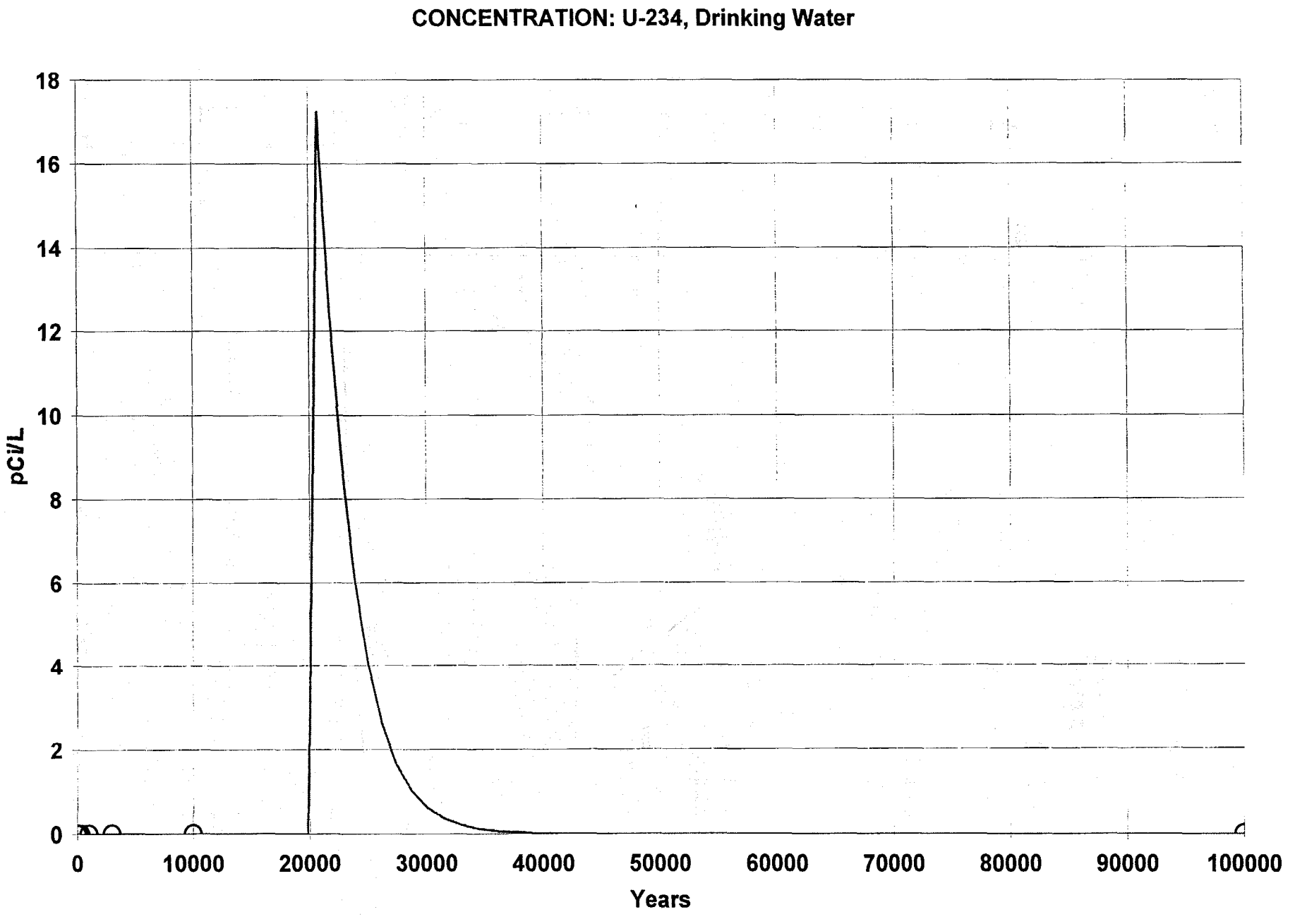

Fig. Att.9. Concentration profile for ^{234}U (daughter of ^{238}U) in drinking water.

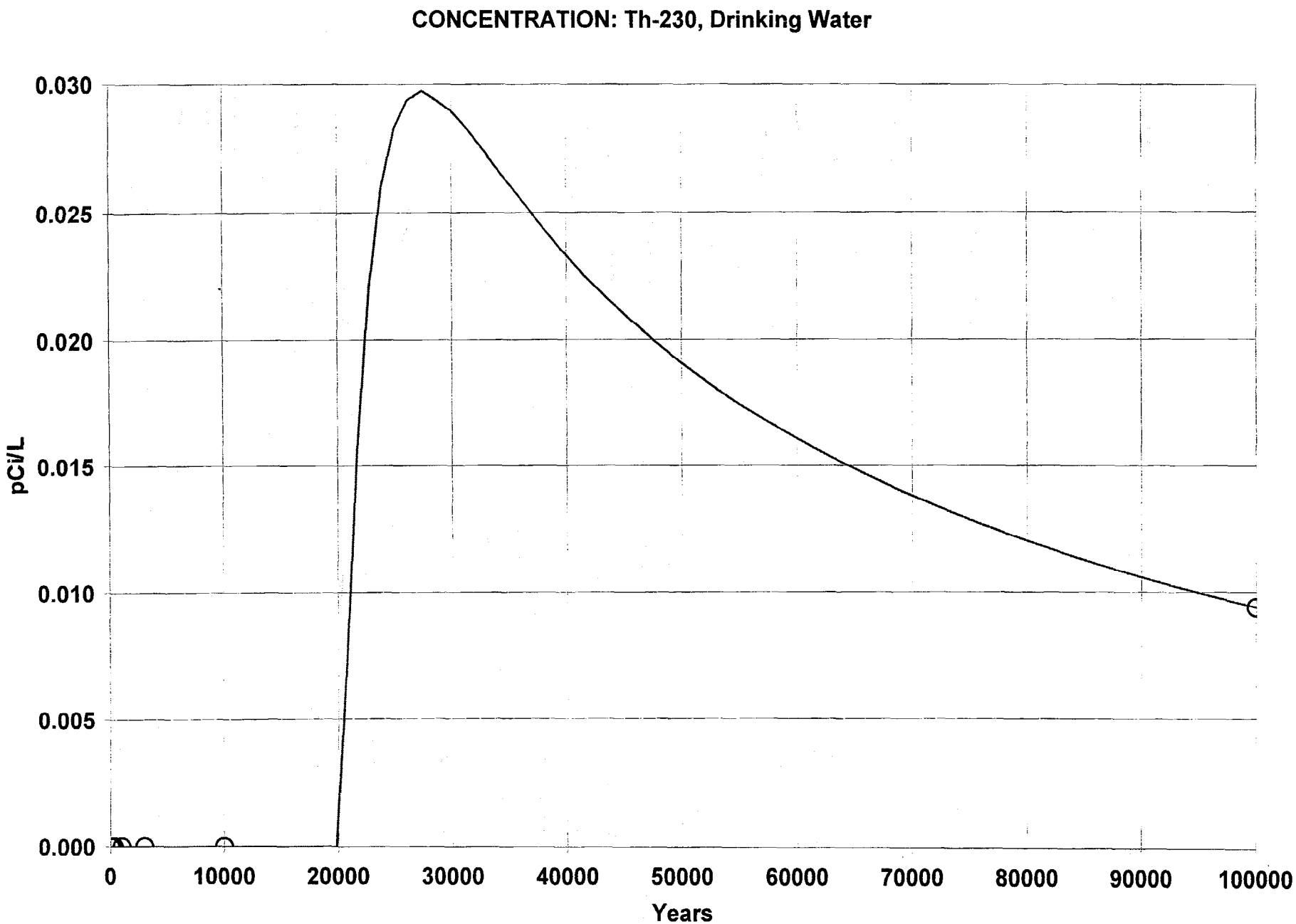

Fig. Att.10. Concentration profile for ^{230}Th (daughter of ^{238}U) in drinking water.

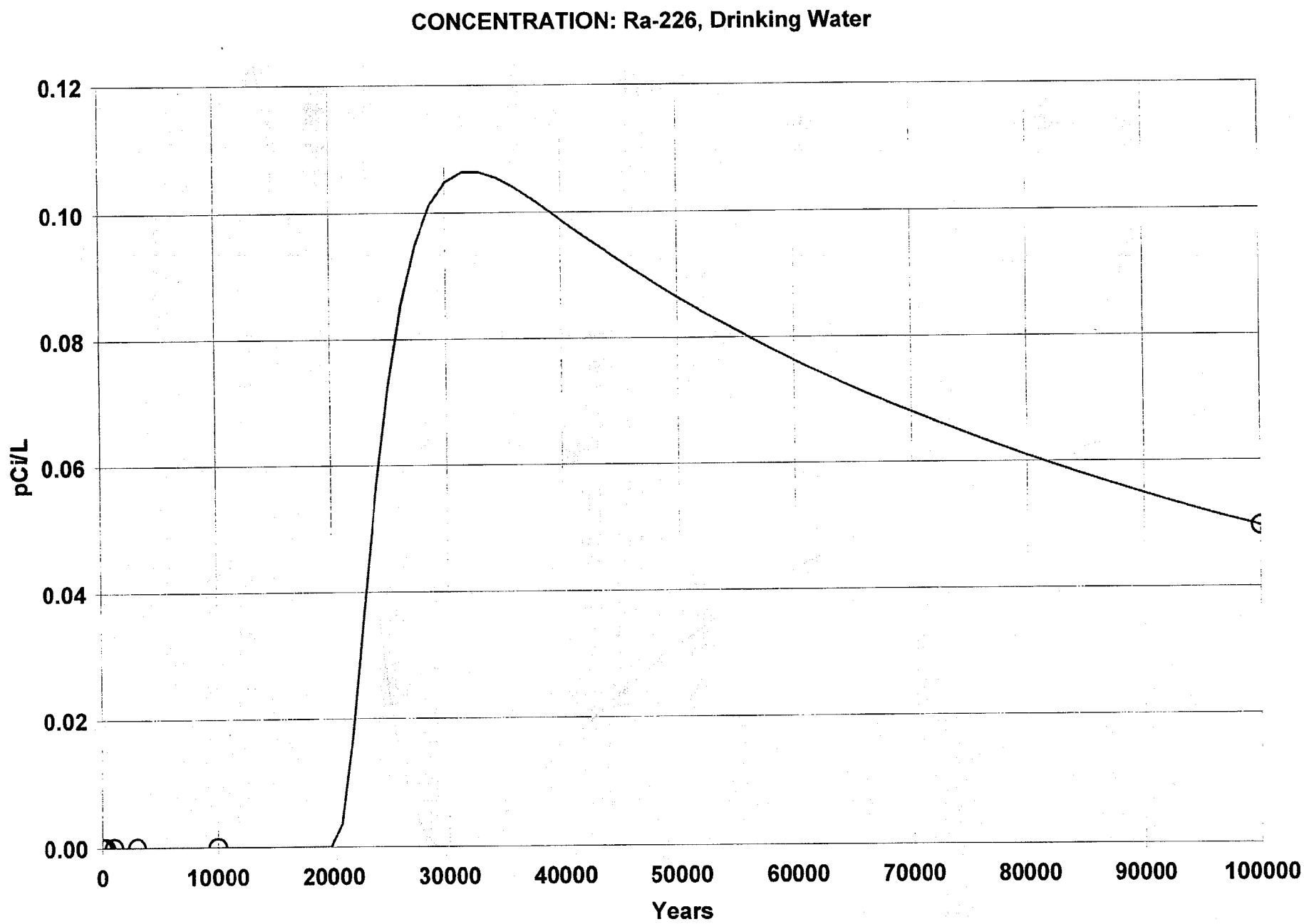

Fig. Att.11. Concentration profile for ^{226}Ra (daughter of ^{238}U) in drinking water.

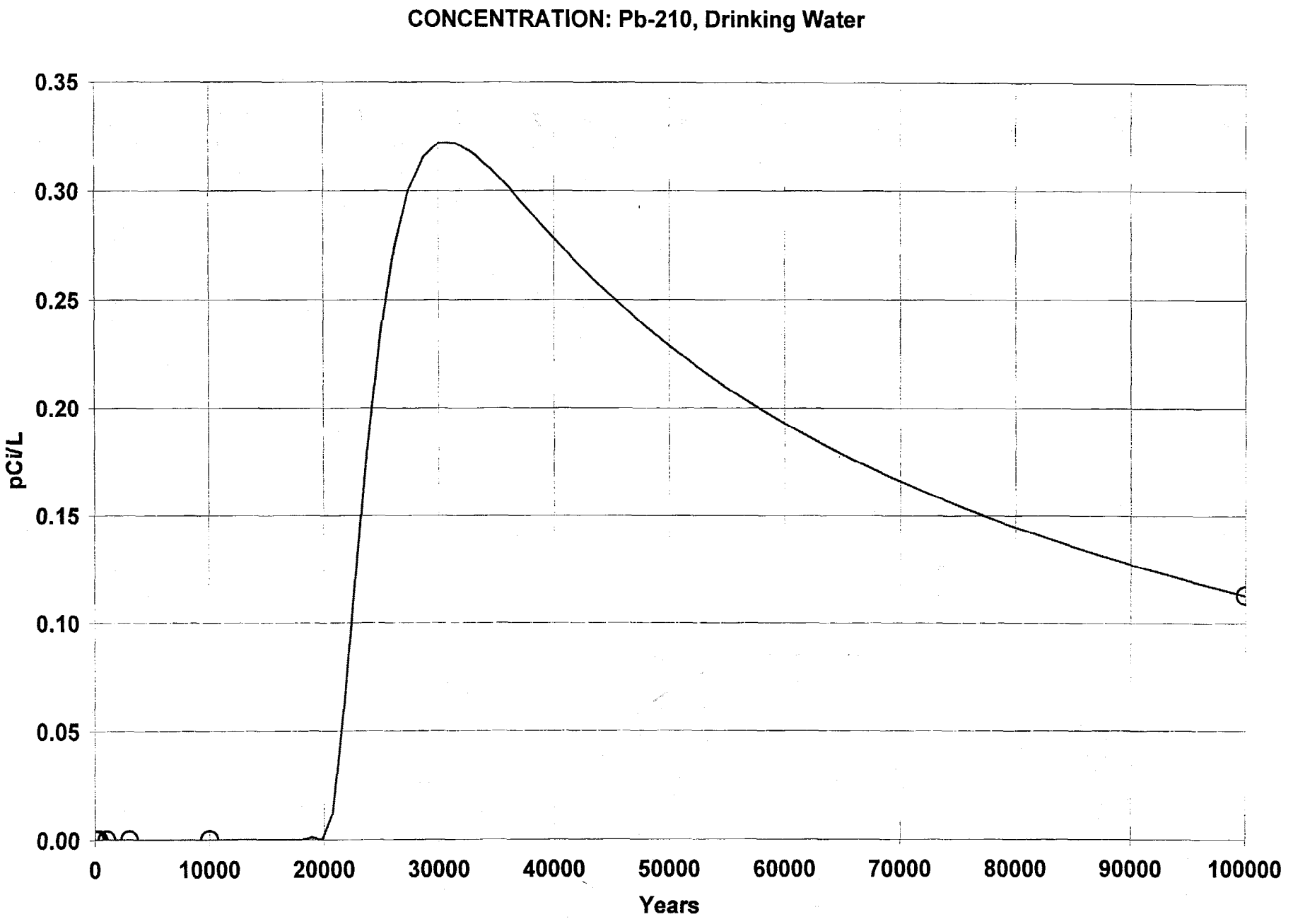

Fig. Att.12. Concentration profile for ^{210}Pb (daughter of ^{238}U) in drinking water.

APPENDIX C.4

WASTE INVENTORY FOR THE C-746-U LANDFILL AND DETERMINING VOLUME AND CHARACTER OF CERCLA-DERIVED WASTE

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WASTE INVENTORY FOR THE C-746-U LANDFILL

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WASTE INVENTORY FOR THE C-746-U LANDFILL

This appendix contains information regarding the current disposal inventory for the C-746-U Landfill and the projected waste inventory used in fate and transport modeling. Information included in this appendix includes:

- the current C-746-U Landfill waste stream (WS) list,
- a summary table that provides an analysis of the WS list and develops a waste inventory by waste form, and
- an attachment that explains the methods and provides the information used to derive the projected waste inventory.

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C-746-U waste stream (WS) list

WS #	Waste stream	Start date	Completed	Contact person/weight summary
U-001	Cooling Tower Redwood (DOE) RFD-54852	2/7/97	4/17/97	Kevin White (821.93 tons) - (173 loads) (4325 cy)
U-002	UST Soils (DOE) RFDs- 32755-32756	2/11/97	2/18/97	Mark Shanks (254.99 tons) - (16 loads) (320 cy)
U-003	Redwood (USEC) RFD-56851	5/6/97	5/21/97	Laurie Bebout (469.84 tons) - (277 loads) (4155 cy)
U-004	Munter's Fill (Asbestos) (DOE) RFDs- 06702-03 & 07	5/6/97	6/5/97	Dickie/Jerome (165.37 tons) - (38 loads) (300 cy)
U-005	Miscellaneous C-746-U Landfill Trash (DOE) RFD-55685	5/21/97	Ongoing	Kerry/Sharolyn (15 tons) - (40 cy)
U-006	Roofing Material/Respirator Facility (USEC) RFDs 58102-03 & 04	6/24/97	10/3/97	Laurie Bebout (1,385.61 tons) - (148 loads) (2960 cy)
U-007	Firing Range Material (DOE) RFD-38552	7/25/97	7/25/97	Weldon Stokes//Martin Bodell (24.96 Tons) - (40 cy)
U-008	Redwood Cleanup (USEC) RFD-201357	8/1/97	8/1/97	Laurie Bebout (1.85 tons) - (15 cy)
U-009	Ditch 001 (Soil/Plastic) (DOE) RFD-55686	10/6/97	12/5/97	Dickie/Mark (115.09 tons) - (334 drums) (91.5 cy)
U-010	Ditch 17 (soil) RFD-51453	10/10/97	11/25/97	Dickie/Mark (315.33 tons) (267 cy) 974 drums
U-011	746-H4- Fire Brick (DOE) RFD-51454	10/14/97	10/14/97	Dickie/Mark (17.75 tons) - (68 drums) (19 cy)
U-012	Piezometer (Well Abandonment) (DOE) Construction Material RFD-55404	10/27/97	10/27/97	Tracey Fitzgerald (14.61 tons) - (20 cy)
U-013	Crane Repair Project (USEC) RFD 58026	5/14/98	5/14/98	Laurie Bebout (28.74 tons) - (2 loads) (40 cy)
U-014	C-745-G Cylinder Yard Project (DOE) RFD 51891	12/1/97	12/1/97	Wes Bass (11.14 tons) - (100 cy)
U-015	C-745-T Cylinder Yard Project (DOE) RFD-51893	12/2/97	12/2/97	Wes Bass (20.92 tons) - (40 cy)
U-016	C-745-S Cylinder Yard Project (DOE) RFD-51892	12/2/97	12/2/97	Wes Bass (41.79 tons) - (60 cy)
U-017	Ditch 010 Soil & Plastic (DOE) RFD-51455	12/5/97	12/12/97	Dickie/Mark (171.86 tons) - (537 drums) (150 cy)
U-018	Ditch 012 Soil & Plastic (DOE) RFD-51457	12/12/97	12/17/97	Dickie/Mark (164.05 tons) - (571 drums) (156 cy)
U-019	Ditch 008 Soil & Plastic (DOE) RFD-51456	12/17/97	12/30/97	Dickie/Mark (147.80 tons) - (414 drums) (114 cy)

C-746-U waste stream (WS) list (continued)

WS #	Waste stream	Start date	Completed	Contact person/weight summary
U-020	C-745-T Cylinder Yard (ASPHALT) (DOE) RFD-51894	12/31/97	2/3/98	Wes Bass (1,590.95 tons) - (102 loads) (1530 cy)
U-021	Ditch 015 Soil & Plastic (DOE) RFD-60751	12/30/97	12/31/97	Dickie/Mark (288 drums) - (97.25 tons) (80 cy) *Should be 289 drums, they cannot locate 06691-01*
U-022	Ditch 009 Soil & Plastic (DOE) RFD-50521	12/31/97	1/2/98	Dickie/Mark (80.43 tons) - (213 drums) (60 cy)
U-023	Ditch 002 Soil & Plastic (DOE) RFD-51460	1/8/98	1/23/98	Dickie/Mark (466.36 tons) - (1,500 drums) (411 cy)
U-024	Ditch 013 Soil & Plastic (DOE) RFD-51459	1/8/98	1/8/98	Dickie/Mark (26.90 tons) - (71 drums) (20 cy)
U-025	C-745-G Construction Demolition Debris (DOE) (CONCRETE) Cylinder Yard - RFD-51890	1/28/98	1/30/98	Wes Bass (939.47 tons) - (975 cy)
U-026	C-745-T Yard Construction Demolition Debris (DOE) (CONCRETE) RFD-51895	2/18/98	2/25/98	Wes Bass (1,222.25 tons) - (93 loads) (1,395 cy)
U-027	Clean Trash and Debris (outside the fence) (DOE) RFD-50522	4/6/98	4-6-98	John Hodges (3.78 tons) - (40 cy)
U-028	Ditch 018 Soil & Plastic (DOE) RFD-51461	1/30/98	2/6/98	Dickie/Mark (218.55 tons) - (666 drums) (182 cy)
U-029	Waste Cardboard from Light Bulb Disposal (DOE) (RFD-43438)	4/6/98	4/6/98	Greg Shaia (1.59 tons) - (40 cy)
U-030	Cylinder Sandblast Grit and Associate PPE (DOE) (Refurbishment Waste) RFD-101076	4/22/98	4/28/98	Andy Balding/Dickie (107.84 tons) - (53 cy) 195 drums
U-031	Ditch 003 Soil & Plastic (DOE) RFD-51462	2/16/98	2/20/98	Dickie Kuehn (244.65 tons) - (744 drums) (204 cy)
U-032	Clean Batteries Outside Security Fence (DOE)	package has been deleted		Craig Jones
U-033	ER Phase II Site Investigation Waste (DOE) RFD-51463	7/8/98	8-13-98	R. G. Kuehn (231.17 tons) (766 drums) - (210 cy)
U-034	Well Abandonment (Off-site Project) (DOE) RFD-101426	7/21/98	7/21/98	Ross Miller (7.98 tons) - (20 cy)
U-035	LMUS Roofing (C-100/101) (USEC) RFD-59926	7/15/98	10-1-98	Laurie Bebout (348.51 tons) - (940 cy)
U-036	LMUS Black Beauty/Sandblast Grit (USEC) RFD-59929	9/16/98	9/17/98	Laurie Bebout (48.69 tons) - (135 drums) (37 cy)

C-746-U waste stream (WS) list (continued)

WS #	Waste stream	Start date	Completed	Contact person/weight summary
U-037	Ditch -015 Outfall (Outside fence) (DOE) RFD101427 – Corrugated Steel pipe	8/27/98	8/27/98	John Hodges (0.65 tons) - (20 cy)
U-038	WAG 27 Remedial Investigation RFD-100731	7/1/99	7/1/99	Chris Marshall (5.15 tons – 10 cy) 23 drums
U-039	C-600 Asbestos Removal Project (insulation) (DOE) RFD-59927	8-11-98	8-19-98	Laurie Bebout (DOE WASTE) (11.89 tons) - (252 drums) (70 cy)
U-040	Grouted Metal Waste (DOE) RFD-102435	8/27/98	8/27/98	Tom Shadoan (11.68 tons) - (30 cy) 39 drums
U-041	Lasagna Soil & Plastic (DOE) RFD-100951	11-11-98	11-11-98	Fraser Johnston (62.82 tons) - (60 cy)
U-042	Asbestos Insulation from C-600/601 (DOE) RFD-102578	12-2-98	12-2-98	Lloyd Drake (DOE WASTE) (12 tons) - (29.36 cy)
U-043	Asbestos Insulation & PPE from C-100/101(DOE) Cafeteria (DOE) - RFD-102579	12-2-98	12-2-98	Lloyd Drake (DOE WASTE) (0.37 tons) - (1.91 cy)
U-044	C-745-M Cylinder Yard Debris (EF) (DOE) RFD-100928	12-15-98	12-15-98	Wes Bass (3.63 tons) - (3 cy)
U-045	Miscellaneous Asbestos (DOE) RFD#102653	1-27-99	1-2799	L. Drake (9.84 tons) - (48 cy)
U-046	FSAR Seismic Project (DOE) RFD#101190	2-18-99	3/3/99	Tony Davis (88.14 tons) - (114 cy)
U-047	USEC Sight Glasess (Metal, Asbestos, and Glass) RFD-			L. Drake
U-048	C-360Crane Debris Soils and Concrete Debris USEC RFD- 102652	7-21-99	7-21-99	L. Drake (50.16 tons – 40 cy)
U-049	C-537 Transformer 69 Cleanup (Soil) USEC RFD-#102582	1-27-99	1-27-99	L. Drake (14.65 tons – 20 cy)
U-050	Cable Trays (Asbestos) (DOE) RFD-#102581	1-27-99	1-27-99	L. Drake (DOE WASTE) (1.07 tons – 7 cy)
U-051	C-611 (Asbestos Insulation) (DOE) RFD-102580	4-1-99	4-1-99	L. Drake (DOE WASTE) (.33 tons - 3.29 cy)
U-052	Transformer 3PH6B Cleanup (USEC) RFD-102654	4-19-99	4-19-99	L. Drake (25.24 tons – 20 cy)
U-053	C-300 Soil (USEC) RFD-102656	7-1-99	7-1-99	L. Drake (12.21 tons – 20 cy)
U-054	C-400Concrete Rubble (USEC)			L. Drake
U-055	Wag 6 PPE & Plastic (DOE) RFD-101954	3-11-99	3-11-99	Bryan Clayton (4.63 tons – 20 cy)
U-056	C-750 Underground Storage Tank Soils (DOE) RFD-102348	3-18-99	3-18-99	Chris Marshall (244 tons – 220 cy)
U-057	C-600 Asbestos RFD-102661	4-19-99	4-19-99	L. Drake (DOE WASTE) (.85 tons – 4.11 cy)
U-058	C-757 Soil & Concrete Debris RFD-102659	4-19-99	4-19-99	L. Drake (83.86 tons – 100 cy)
U-059	C-631 Redwood (Storm Damage) RFD-102662	4-19-99	4-19-99	L. Drake (3.92 tons – 40 cy)
U-060	C-600 Asbestos RFD-102664	6-2-99	8-23-99	L. Drake (24.25 tons /165.24 cy/603 drums)

C-746-U waste stream (WS) list (continued)

WS #	Waste stream	Start date	Completed	Contact person/weight summary
U-061	C-400 Roofing, RFD-102658	9-8-99	9-14-99	L. Drake 79.26 tons/180 cy
U-062	Metal Flashing/Roofing Waste RFD-102660	6-8-99	6-10-99	L. Drake (1.31 tons – 40 cy)
U-063	USEC Roofing – C100, C-200, C-720 RFD-102667	6-2-99	7-1-99	L. Drake (128.25 – 380 cy)
U-064	C-745 L Cylinder Yard RFD-100929	6-1-99	11/11/99	Wes Bass (3826.61 tons – 3790 cy)
U-065	C-400 Bobs RFD-102663			L. Drake
U-066	WAG 6 RFD-103001	8-10-99	9-8-99	T. Davis 97.51 tons/109cy/400 drums
U-067	Beaver Ditch			Weldon Stokes
U-068	C-301 Soil (solid waste disposal project/Ditch 13) RFD-100733	7-14-99	7-14-99	Jerome Ellington (60.28 tons – 61.64 cy)
U-069	DMSA (empty 55 gal drums)			Pam Dawson
U-070	WAG 27 Soils RFD-103076	9-22-99	9-28-99	Jerome Ellington 219.62 tons/201.71 cy/736 drums
U-071	ER Phase IV Soils (Northwest Plume Invest)			Jerome Ellington
U-072	LASAGNA SOILS			Chris Marshall
U-073	NWPPT Operations			Ron Webb
U-074	Concrete Rubble (Cylinder Yard)			Ron Webb
U-075	Concrete Culverts (Northwest Plume)			Ron Webb
U-076	C-333A/337A USEC Roofing	8-16-99	8-23-99	L.Drake 86.84 tons/220 cy
U-077	C-720 Asbestos RFD – 102668			L. Drake (DOE)
U-078	C-745 G Yard Paint Chips			Craig Dowdy
U-079	Asbestos (635 pump house/635 cooling tower) RFD-102672			L. Drake (DOE)
U-080	Soil from SMU 194			L. Drake
U-081	Post 43 Road Repair			L.Drake
U-082	Wag's 3,8,& 28 (soil & ppe) RFD# 103169			Bob Pratt
U-083	Wooden Chocks from Cylinder Yard			Ron Webb
U-084	Soils from Mega Wag (4 rolloff boxes)			Bob Pratt
U-085	Soil from Wag 3, 8, & 28 and Data Gap			Bob Pratt
U-086	745A Cylinder Yard (concrete, rock, asphalt, & soil)			L. Drake
U-087	PTZ Project (2 roll-off bins of soil)			Bob Pratt
U-088	C-745L South Cylinder Yard Project concrete, soil, & rock	6-13-01	6-25-01	Ron Webb (2948.84 tons) - (3000 cy)
U-089	Soil from PTZ Project (1 roll-off bin drill cutting)			Jim Ballard

Table C.4.1. Current disposed inventory for C-746-U Landfill

Activity	WS #	Waste stream	RFD	Date	Total Volume	Estimated Volume by Waste Form (cubic yards)						
						Asbestos	Concrete	General	Other Dry	Scrap Metal	Soil	Other SW
ER	U-002	UST Soils (DOE)	RFDs- 32755-32756	1997	320	0	0	0	0	0	320	0
ER	U-012	Piezometer (Well Abandonment) (DOE) Construction Material	RFD-55404	1997	20	0	0	20	0	0	0	0
Maintenance	U-001	Cooling Tower Redwood (DOE)	RFD-54852	1997	4325	0	0	4325	0	0	0	0
Maintenance	U-003	Redwood (USEC)	RFD-56851	1997	4155	0	0	4155	0	0	0	0
Maintenance	U-004	Munter's Fill (Asbestos) (DOE)	RFDs- 06702-03 & 07	1997	300	300	0	0	0	0	0	0
Maintenance	U-006	Roofing Material/Respirator Facility (USEC)	RFDs 58102-03 & 04	1997	2960	0	0	2960	0	0	0	0
Maintenance	U-007	Firing Range Material (DOE)	RFD-38552	1997	40	0	0	40	0	0	0	0
Maintenance	U-008	Redwood Cleanup (USEC)	RFD-201357	1997	15	0	0	15	0	0	0	0
Maintenance	U-009	Ditch 001 (Soil/Plastic) (DOE)	RFD-55686	1997	91.5	0	0	0	4.575	0	86.925	0
Maintenance	U-010	Ditch 17 (soil)	RFD – 51453	1997	267	0	0	0	0	0	267	0
Maintenance	U-011	746-H4- Fire Brick (DOE)	RFD-51454	1997	19	0	0	19	0	0	0	0
Maintenance	U-014	C-745-G Cylinder Yard Project (DOE)	RFD 51891	1997	100	0	100	0	0	0	0	0
Maintenance	U-015	C-745-T Cylinder Yard Project (DOE)	RFD-51893	1997	40	0	40	0	0	0	0	0
Maintenance	U-016	C-745-S Cylinder Yard Project (DOE)	RFD-51892	1997	60	0	60	0	0	0	0	0
Maintenance	U-017	Ditch 010 Soil & Plastic (DOE)	RFD-51455	1997	150	0	0	0	7.5	0	142.5	0
Maintenance	U-018	Ditch 012 Soil & Plastic (DOE)	RFD-51457	1997	156	0	0	0	7.8	0	148.2	0
Maintenance	U-019	Ditch 008 Soil & Plastic (DOE)	RFD-51456	1997	114	0	0	0	5.7	0	108.3	0
Maintenance	U-021	Ditch 015 Soil & Plastic (DOE)	RFD-60751	1997	80	0	0	0	4	0	76	0
ER	U-033	ER Phase II Site Investigation Waste (DOE)	RFD-51463	1998	210	0	0	0	0	0	210	0
ER	U-034	Well Abandonment (Off-site Project) (DOE)	RFD-101426	1998	20	0	0	20	0	0	0	0
ER	U-041	Lasagna Soil & Plastic (DOE)	RFD-100951	1998	60	0	0	0	3	0	57	0
Maintenance	U-005	Miscellaneous C-746-U Landfill Trash (DOE)	RFD-55685	1998	40	0	0	0	0	0	0	40
Maintenance	U-013	Crane Repair Project (USEC)	RFD 58026	1998	40	0	0	40	0	0	0	0
Maintenance	U-020	C-745-T Cylinder Yard (ASPHALT) (DOE)	RFD-51894	1998	1530	0	0	1530	0	0	0	0
Maintenance	U-022	Ditch 009 Soil & Plastic (DOE)	RFD-50521	1998	60	0	0	0	3	0	57	0
Maintenance	U-023	Ditch 002 Soil & Plastic (DOE)	RFD-51460	1998	411	0	0	0	20.55	0	390.45	0
Maintenance	U-024	Ditch 013 Soil & Plastic (DOE)	RFD-51459	1998	20	0	0	0	1	0	19	0
Maintenance	U-025	C-745-G Construction Demolition Debris (DOE) (CONCRETE) Cylinder Yard -	RFD-51890	1998	975	0	975	0	0	0	0	0
Maintenance	U-026	C-745-T Yard Construction Demolition Debris (DOE) (CONCRETE)	RFD-51895	1998	1395	0	1395	0	0	0	0	0
Maintenance	U-027	Clean Trash and Debris (outside the fence) (DOE)	RFD-50522	1998	40	0	0	40	0	0	0	0
Maintenance	U-028	Ditch 018 Soil & Plastic (DOE)	RFD-51461	1998	182	0	0	0	9.1	0	172.9	0
Maintenance	U-029	Waste Cardboard from Light Bulb Disposal (DOE)	RFD-43438	1998	40	0	0	0	0	0	0	40
Maintenance	U-030	Cylinder Sandblast Grit and Associate PPE (DOE) (Refurbishment Waste)	RFD-101076	1998	53	0	0	0	53	0	0	0
Maintenance	U-031	Ditch 003 Soil & Plastic (DOE)	RFD-51462	1998	204	0	0	0	10.2	0	193.8	0
Maintenance	U-035	LMUS Roofing (C-100/101) (USEC)	RFD-59926	1998	940	0	0	940	0	0	0	0
Maintenance	U-036	LMUS Black Beauty/Sandblast Grit (USEC)	RFD-59929	1998	37	0	0	37	0	0	0	0
Maintenance	U-037	Ditch -015 Outfall (Outside fence) (DOE) – Corrugated Steel pipe	RFD101427	1998	20	0	0	0	0	20	0	0
Maintenance	U-039	C-600 Asbestos Removal Project (insulation) (DOE)	RFD-59927	1998	70	70	0	0	0	0	0	0
Maintenance	U-040	Grouted Metal Waste (DOE)	RFD-102435	1998	30	0	0	0	0	30	0	0
Maintenance	U-042	Asbestos Insulation from C-600/601 (DOE)	RFD-102578	1998	29.36	29.36	0	0	0	0	0	0

Table C.4.1. Current disposed inventory for C-746-U Landfill (continued)

Activity	WS #	Waste stream	RFD	Date	Total Volume	Estimated Volume by Waste Form (cubic yards)						
						Asbestos	Concrete	General	Other Dry	Scrap Metal	Soil	Other SW
Maintenance	U-043	Asbestos Insulation & PPE from C-100/101 (DOE) Cafeteria (DOE)	RFD-102579	1998	1.91	1.91	0	0	0	0	0	0
Maintenance	U-044	C-745-M Cylinder Yard Debris (EF) (DOE)	RFD-100928	1998	3	0	0	3	0	0	0	0
ER	U-038	WAG 27 Remedial Investigation	RFD-100731	1999	10	0	0	0	0	0	10	0
ER	U-055	Wag 6 PPE & Plastic (DOE)	RFD-101954	1999	20	0	0	0	20	0	0	0
ER	U-056	C-750 Underground Storage Tank Soils (DOE)	RFD-102348	1999	220	0	0	0	0	0	220	0
Maintenance	U-057	C-600 Asbestos	RFD-102661	1999	4.11	4.11	0	0	0	0	0	0
ER	U-066	WAG 6	RFD-103001	1999	109	0	0	0	0	0	109	0
ER	U-070	WAG 27 Soils	RFD-103076	1999	201.71	0	0	0	0	0	201.71	0
Maintenance	U-045	Miscellaneous Asbestos (DOE)	RFD-102653	1999	48	48	0	0	0	0	0	0
Maintenance	U-046	FSAR Seismic Project (DOE)	RFD-101190	1999	114	0	0	0	0	0	114	0
Maintenance	U-047	USEC Sight Glasses (Metal, Asbestos, and Glass)	RFD-	1999	0	0	0	0	0	0	0	0
Maintenance	U-048	C-360Crane Debris Soils and Concrete Debris USEC	RFD- 102652	1999	40	0	20	0	0	0	20	0
Maintenance	U-049	C-537 Transformer 69 Cleanup (Soil) USEC	RFD-102582	1999	20	0	0	0	0	0	20	0
Maintenance	U-050	Cable Trays (Asbestos) (DOE)	RFD-102581	1999	7	7	0	0	0	0	0	0
Maintenance	U-051	C-611 (Asbestos Insulation) (DOE)	RFD-102580	1999	3.29	3.29	0	0	0	0	0	0
Maintenance	U-052	Transformer 3PH6B Cleanup (USEC)	RFD-102654	1999	20	0	0	0	0	0	20	0
Maintenance	U-053	C-300 Soil (USEC)	RFD-102656	1999	20	0	0	0	0	0	20	0
Maintenance	U-054	C-400Concrete Rubble (USEC)		1999	0	0	0	0	0	0	0	0
Maintenance	U-058	C-757 Soil & Concrete Debris	RFD-102659	1999	100	0	50	0	0	0	50	0
Maintenance	U-059	C-631 Redwood (Storm Damage)	RFD-102662	1999	40	0	0	40	0	0	0	0
Maintenance	U-060	C-600 Asbestos	RFD-102664	1999	165.24	165.24	0	0	0	0	0	0
Maintenance	U-061	C-400 Roofing,	RFD-102658	1999	180	0	0	180	0	0	0	0
Maintenance	U-062	Metal Flashing/Roofing Waste	RFD-102660	1999	40	0	0	30	0	10	0	0
Maintenance	U-063	USEC Roofing – C100, C-200, C-720	RFD-102667	1999	380	0	0	380	0	0	0	0
Maintenance	U-064	C-745 L Cylinder Yard	RFD-100929	1999	3790	0	3790	0	0	0	0	0
Maintenance	U-068	C-301 Soil (solid waste disposal project/Ditch 13)	RFD-100733	1999	61.64	0	0	0	0	0	61.64	0
Maintenance	U-076	C-333A/337A USEC Roofing		1999	220	0	0	220	0	0	0	0
ER	U-088	C-745L South Cylinder Yard Project concrete, soil, & rock		2001	3000	0	2250	0	0	0	750	0
Total					28437.8	628.91	8680	14994	149.425	60	3845.4	80

DETERMINING VOLUME AND CHARACTER OF CERCLA-DERIVED WASTE

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DETERMINING VOLUME AND CHARACTER OF CERCLA-DERIVED WASTE

Determining Volume

In order to estimate waste volume to support the Risk and Performance Evaluation, candidate waste streams were identified and inventoried. The inventory process included estimating the volume of waste and categorizing the waste by form (i.e., medium type) and regulatory classification. Additionally, a waste generation schedule was developed to capture the changes in waste generation over time.

The waste inventory was based primarily on information contained in the FY 2001 *Oak Ridge Operations Environmental Program Life Cycle Baseline* (LCB). The LCB includes information concerning environmental restoration projects being performed at PGDP under CERCLA. Pertinent information contained in the LCB includes projected waste volumes, waste categories, and activity schedules. For sites with insufficient detail in the LCB, other sources consulted when developing waste inventory estimates included historical documents, subject matter experts interviews, and site visits. When information from these supplemental sources was insufficient, materials were augmented with calculations and assumptions based upon professional judgement.

When completing the evaluation, the following general rules and assumptions were used to develop waste volume and characteristic projections.

- Exclude wastes that are not from CERCLA projects (e.g., operations' waste), are from DOE projects located outside PGDP, are in a form prohibited from shallow land disposal (e.g., liquids), and are prohibited by regulations (e.g., TRU wastes).

- Assume that soil will swell by a factor of 30% upon excavation (i.e., post-excavation volume calculations include a 30% swell factor.)

- Assume that as-generated waste volumes and contaminant profiles are equivalent to as-disposed waste volumes and contaminant profiles (i.e., post-generation processes to stabilize waste are assumed to not significantly change volume or analytical character).

- Assume that buildings and facilities will not be reused in any reindustrialization program.

- Assume that buildings and facilities will be decontaminated and decommissioned (D&D) under CERCLA.

- Assume building foundations, underground utilities, and associated soils will be excavated for disposal during the D&D process and include these wastes in the inventory. (D&D volumes were calculated by multiplying the gross square footage of each facility by a conversion factor. The conversion factors were based on the results of similar D&D projects in the Oak Ridge complex, facility height, and the density of equipment and infrastructure within the facility.)

- Assume that D&D of the existing buildings and facilities will begin in 2010 per the current waste generation schedules.

- Assume that the contents of burial grounds will be addressed as CERCLA waste (i.e., these wastes are included in the waste inventory.)

After developing the waste inventory, waste volumes were sorted by work activity using the LCB Work Breakdown Structure (WBS). In general, WBS Level 6 was used to define projects. Using this method, 24 discrete projects were identified. These 24 projects are listed Table C.4.2. This list includes not only the wastes that will be generated as a result future assessments, clean-ups, and D&D but also includes waste already generated and residing in storage (i.e., the waste management inventory and the DOE Material Storage Area inventory).

Waste volumes were further categorized by form and type. Waste forms were identified by medium and included asbestos, concrete, general construction debris, other dry solids, scrap metal, and soil. The other dry solids waste form included personal protective equipment (PPE), plastic, and packing material. Soils included sediment and sludge. Additionally waste types were identified by regulatory classification categories and included LLW, RCRA, TSCA, LLW/RCRA, LLW/TSCA, LLW/RCRA/TSCA, and Other. (Only waste in the "Other category" was included in the subset of the CERCLA-derived waste that was available for disposal in the C-746-U Landfill.) Combined, the categories captured all potential PGDP CERCLA waste. Table C.4.3 lists the total waste volume by generation date. Additionally, this table lists the anticipated C-746-U Landfill waste subset volume by year of generation.

WASTE CHARACTERIZATION

After the waste volume was estimated, an analytical profile for soils, including a list of chemicals of potential concern (COPCs) in the C-746-U eligible waste was developed. As discussed in Chapt. 3, historical analytical data collected on soils formed the basis of the analytical profile for other waste forms because there is a large population of analytical data associated with this medium in the Oak Ridge Environmental Information System (OREIS). Additionally, soil data, much more than all other solid media types combined were found to populate the OREIS database. (See Chapt. 3 for additional discussion of the method used to develop the analytical profile for waste forms other than soil.)

Extracting Data from OREIS

Data were extracted from the OREIS database using the following steps:

1. Set Media filter to = soil

2. Set Analytical Results filter to less than or equal to the following:

   a. Uranium ≤ 30pCi/g (i.e., minimal "rad-added")

   b. PCB ≤ 50mg/kg (i.e., non-TSCA)

   c. Nonhazardous only (i.e., would not fail TCLP. Estimated by determining if volumetric analytical result exceeded 20 times its corresponding Toxicity Characteristic Leachate Procedure value. If so, then the result was assumed to represent that from a hazardous waste.)

3. Depth ≤16 ft below ground surface. (The depth filter was applied because it is assumed that very little waste soil will be generated from below 16 ft. This is also believed to be the maximum depth of buried utilities at PGDP. Note that excavation below this depth quickly becomes technically impractical when compared to other remediation methods.)

Assigning Extracted Data to Source Location

After extracting and filtering analytical data, data were assigned to one of the 24 projects listed in Table C.4.2 using the X-Y coordinates in the database. For example, if an analytical result was associated with a sample taken in a "BGOU SWMU", then the result was assigned to the "BGOU" projects. Results were then summarized to create analytical profiles for soil originating from each project. [Note that results from projects that were determined to generate waste from the same location, such as from the BGOU-cleanup and BGOU-assessment projects, were combined. Also, note that the waste streams for the LASAGNA and Litigation projects were combined and labeled "Other" because the individual total waste stream volumes from these projects were determined to be small relative to other projects. Finally, note that the projected BGOU waste stream was subdivided and evaluated at a more detailed level (i.e., SWMU level) because these individual waste streams were large relative to other projects.] The result of the assignment of data to the 24 projects was the development of a waste characterization profile for 12 source areas. Table C.4.4 depicts how the 24 projects listed in Table C.4.2 were consolidated or divided to arrive at the 12 source areas. The average concentration of each analyte from the 12 source areas is shown in Table C.4.5.

In order to develop the final analytical profile for all soil that may be placed in the C-746-U Landfill, average concentrations for the 12 source areas were volume-weighted. Volume-weighting was used to ensure that the very high or very low contaminant concentrations found in a particular source area did not unduly affect the overall average contaminant concentration. These volume-weighted averages were calculated by multiplying the average analytical concentrations from each source area by the volume of the source area. These products were then summed and divided by the total volume across all source areas. The volume-weighted averages used as the analytical soil profile for wastes candidate for disposal in the C-746-U Landfill are shown in Table C.4.5.

Development of Final List of COPCs

To determine which COPCs may be important contributors to risk, the following screening steps were used.

1. From the soil data set, eliminate non-contaminant analytical parameters such as Geotechnical Parameters, "Other Organics," Physical Parameters, Wet Chemistry, gross alpha, gross beta, and direct Toxicity Characteristic Leaching Procedure (TCLP) results, because these parameters are not used to derive contaminant concentrations.

2. In the soil data set, for any analyte not detected in a given sample, assign to that analyte [per guidance in *Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE/OR/07-1506&D2, December 2001):

   a. 1 × detection level [practical quantitation limit or minimum detectable activity (MDA)] if the analyte is on the PGDP list of primary COPCs (uranium, ^{99}Tc, or TCE); and

   b. 1/2 detection level (practical quantitation limit or MDA) if the analyte is not on the PGDP list of primary COPCs.

3. In the soil data set, for any analyte not analyzed in a given sample, assign to that sample:

   a. 0 (zero) for an organic analyte;

   b. Average background concentration (surface or subsurface soil, respectively) for inorganic analyte or radionuclide; and

c. Blank, if no average background concentration exists. (Average background concentrations for soil used in this step are presented in Tables C.4.6 and C.4.7.)

4. Apply the following "binning" logic resulting from comparisons between weighted average concentrations and screening benchmarks.

   a. If weighted average > average subsurface background OR if no background exists then if weighted average > practical quantitation limit or > MDA = YES.

   b. If weighted average > soil screening level (SSL) [dilution attenuation factor (DAF) of 20] OR if no SSL exists = YES. [The SSLs used were no-action levels taken from Appendix A of DOE (2001d) calculated using a dilution attenuation factor (DAF) of 20.]

   c. If weighted average > industrial risk-based concentration (RBC) OR if no RBC exists = YES. The industrial RBCs are no-action levels taken from Appendix A of *Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*.

   Therefore, where:

   Background + SSL = RBC Logic
   YES + YES + YES = Retain contaminant as COPC
   YES + YES + NO = Retain contaminant as COPC
   YES + NO + YES = Retain contaminant as COPC
   YES + NO + NO = Eliminate
   NO + YES + YES = Eliminate
   NO + YES + NO = Eliminate

Table C.4.8 displays the results of this process; analytes are labeled either "Keep" or "Drop." Those labeled "Keep" were retained as important COPCs in the Risk and Performance Evaluation, and these COPCs were added to those found on the PGDP list of significant COPCs. (Please see Chap. 3. Table 3.4 in the main text lists all COPCs along with their analytical concentrations within and across all waste forms.)

Table C.4.2. Projected waste-generating activities and corresponding WBS codes and descriptions

Activity title	WBS element code	WBS element description	Origin of Waste
BGOU-assessment	1.12.04.01.01.02	Burial Grounds Assessment	WAG 4 and 24 RI
BGOU-cleanup	1.12.04.01.02.02	Burial Grounds Cleanup	SWMUs 2, 3, 4, 5, 6, 7, 12, 13, 14, 15, 30, and 145
D&D-340-eval/infra	1.12.04.01.02.07	Paducah D&D C-340 Metals Complex, Infrastructure	C-340 Metals Complex
D&D-340-slab/soil	1.12.04.01.02.07	Paducah D&D C-340 Metals Complex, Slabs and Soils	C-340 Metals Complex
D&D-340-struct/shell	1.12.04.01.02.07	Paducah D&D C-340 Metals Complex, Structures	C-340 Metals Complex
D&D-410-eval/infra	1.12.04.01.02.09	Paducah D&D C-410 Feed Plant Complex, Infrastructure	C-410 Metals Complex
D&D-410-slab/soil	1.12.04.01.02.09	Paducah D&D C-410 Feed Plant Complex, Slabs and Soils	C-410 Metals Complex
D&D-410-struct/shell	1.12.04.01.02.09	Paducah D&D C-410 Feed Plant Complex, Structures	C-410 Metals Complex
D&D-GDP-structure[a]	1.12.23.02.01	Paducah D&D of Building Structures	All Active PGDP Facilities
D&D-GDP-buried utilities[b]	1.12.23.02.01	Paducah D&D of Buried Utilities	All Active PGDP Facilities
D&D-GDP-slab/soil[a]	1.12.23.02.01	Paducah D&D of Building Slabs and Soils	All Active PGDP Facilities
D&D-inactive[b]	1.12.60	D&D of Inactive DOE Facilities	Sixteen Inactive facilities at PGDP
DMSA	1.12.04.01.02.11	DOE Material Storage Areas	160 DMSA across the PGDP site
GWOU-assessment	1.12.04.01.01.03	Paducah Groundwater Operable Unit Assessments	C-746-S&T Landfill; PTZ, 6-Phase and C-Sparge demos at C-400, GWOU RI
GWOU-cleanup	1.12.04.01.02.03	Groundwater Operable Unit Cleanup	Actions at SWMUs 1 and 99, along the north security fenceline, at C-400, and on the offsite plumes
LASAGNA	1.12.04.01.02.05	Paducah Lasagna Project	SWMU 91
Litigation	1.12.04.03.02.01	BJC Support of DOE Investigation and Litigation	SWMU 145
S&M-routine	1.12.04.02.01.02	Routine Surveillance and Maintenance	All DOE operated facilities at PGDP
SOU-assessment	1.12.03.04.05.06	Paducah Soils Assessment	73 SOU SWMUs plus PCB and Radiological Contaminated areas
SOU-cleanup	1.12.04.01.02.01	Paducah Soils Cleanup	73 SOU SWMUs plus PCB and Radiological Contaminated areas
SWOU-assessment	1.12.04.01.01.04	Paducah Surface Water Assessments	Sedimentation Basins
SWOU-cleanup[c]	1.12.04.01.02.04	Paducah Surface Water Cleanup	Storm Sewer Replacement, Scrap Metal Removal Projects, SWMU 58 & 59 (NSDD), Ditches inside and outside of the PGDP security fence
UST	1.12.04.01.01.05	Paducah UST Closures	C-746-A (SWMU 139 and 140)
WM- storage	1.12.04.03	Paducah Waste Management Storage	Waste Storage Facilities

[a]The Life Cycle Baseline (LCB) waste volumes estimates for these activities were reported at WBS level 5.
[b]The LCB does not address this activity; an independent estimate was made based on the Paducah D&D WBS element.
[c]Scrap metal removal from the scrap yards is included in this WBS Element.

BGOU = burial ground operable unit
BJC = Bechtel Jacobs Company LLC
D&D = decontamination and decommissioning
DOE = U.S. Department of Energy
GDP = gaseous diffusion plant
GWOU = groundwater operable unit
S&M = surveillance and maintenance
SOU = soils operable unit
SWOU = solid waste operable unit
UST = underground storage tank
WBS = work breakdown structure

Table C.4.3. Volumes (yd^3) of CERCLA waste generated by year

Year	All CERCLA	C-746-U Subset	Remainder	Cumulative C-746-U Subset	Cumulative Remainder
2001	28,527	14,369	14,158	14,369	14,158
2002	59,914	29,100	30,814	43,469	44,972
2003	44,174	23,126	21,048	66,595	66,020
2004	38,557	19,283	19,274	85,878	85,294
2005	115,765	42,502	73,263	128,380	158,557
2006	147,467	52,902	94,565	181,282	253,122
2007	139,540	51,026	88,514	232,308	341,636
2008	139,938	51,387	88,551	283,695	430,187
2009	90,366	42,166	48,200	325,861	478,387
2010	233,171	106,635	126,536	432,496	604,923
2011	208,187	89,173	119,014	521,669	723,937
2012	206,785	88,291	118,494	609,960	842,431
2013	191,364	78,589	112,775	688,549	955,206
2014	191,364	78,589	112,775	767,138	1,067,981
2015	191,364	78,589	112,775	845,727	1,180,756
2016	191,364	78,589	112,775	924,316	1,293,531
2017	191,364	78,589	112,775	1,002,905	1,406,306
2018	191,364	78,589	112,775	1,081,494	1,519,081
2019	191,364	78,589	112,775	1,160,083	1,631,856
2020	191,364	78,589	112,775	1,238,672	1,744,631
2021	182,497	75,219	107,278	1,313,891	1,851,909
2022	84,963	38,162	46,801	1,352,053	1,898,710
2023	14,161	6,361	7,800	1,358,414	1,906,510
Total	3,264,924	1,358,414	1,906,510		

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980.
Remainder = Wastes with characteristics that will not allow placement into the C-746-U Landfill.

Table C.4.4. Projected waste-generating source areas

Activity title	Source Area
BGOU-assessment	BGOU – SWMUs 2, 3, 4, 5, 6
BGOU-cleanup	
D&D-340-eval/infra	D&D-340
D&D-340-slab/soil	
D&D-340-struct/shell	
D&D-410-eval/infra	D&D-410
D&D-410-slab/soil	
D&D-410-struct/shell	
D&D-GDP-structure	D&D-General
D&D-GDP-buried utilities	
D&D-GDP-slab/soil	
D&D-inactive	N/A[1]
DMSA	N/A[2]
GWOU-assessment	GWOU
GWOU-cleanup	
LASAGNA	Other
Litigation	
S&M-routine	
SOU-assessment	SOU
SOU-cleanup	
SWOU-assessment	SWOU
SWOU-cleanup	
UST	Other
WM-storage	N/A[3]

[1] Not Applicable because no soils are expected to be generated on this project
[2] Not Applicable because no soils are expected to be generated on this project
[3] Not Applicable because no soils in storage were not included in the soil characterization activities

Table C.4.5. Average Soil Analyte Concentrations

Chemical	Units	Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
		yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
Anion														
Chloride	mg/kg							3.75	2.85					**3.57**
Fluoride	mg/kg							121	8.87					**99.2**
Nitrate/Nitrite	mg/kg								4.05					**4.05**
Sulfate	mg/kg						37.4	4.4	51.2			500		**357**
Dioxins and Furans														
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	mg/kg						1.89E-06		1.69E-06	8.89E-06				**2.04E-06**
1,2,3,4,6,7,8-Heptachlorodibenzofuran	mg/kg						3.25E-07		2.77E-07	1.62E-06				**3.50E-07**
1,2,3,4,7,8,9-Heptachlorodibenzofuran	mg/kg						3.06E-07		2.77E-07	1.97E-07				**2.96E-07**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	mg/kg						3.04E-07		2.77E-07	1.63E-07				**2.94E-07**
1,2,3,4,7,8-Hexachlorodibenzofuran	mg/kg						3.11E-07		2.77E-07	3.67E-07				**3.05E-07**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	mg/kg						3.04E-07		2.77E-07	1.61E-06				**3.34E-07**
1,2,3,6,7,8-Hexachlorodibenzofuran	mg/kg						3.05E-07		2.77E-07	1.80E-07				**2.95E-07**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	mg/kg						3.04E-07		2.77E-07	5.17E-07				**3.04E-07**
1,2,3,7,8,9-Hexachlorodibenzofuran	mg/kg						3.02E-07		2.77E-07	2.11E-08				**2.89E-07**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	mg/kg						3.02E-07		2.77E-07	4.57E-08				**2.89E-07**
1,2,3,7,8-Pentachlorodibenzofuran	mg/kg						3.04E-07		2.77E-07	6.70E-08				**2.91E-07**
2,3,4,6,7,8-Hexachlorodibenzofuran	mg/kg						3.06E-07		2.77E-07	1.93E-07				**2.96E-07**
2,3,4,7,8-Pentachlorodibenzofuran	mg/kg						3.06E-07		2.77E-07	2.79E-07				**2.98E-07**
2,3,7,8-Tetrachlorodibenzo-p-dioxin	mg/kg	2.16E-07		4.76E-06		4.84E-06	2.54E-06		1.51E-06	5.12E-06	1.92E-07	1.19E-07		**6.19E-07**
2,3,7,8-Tetrachlorodibenzofuran	mg/kg	4.31E-07		2.38E-06		3.23E-06	9.77E-07		5.81E-07	2.57E-06	1.92E-07	1.09E-07		**3.40E-07**
Heptachloro-dibenzo[b,e][1,4]dioxin	mg/kg	4.31E-07		4.76E-06		9.19E-05	4.68E-05		3.79E-06	2.37E-06	7.66E-07	3.64E-05		**3.56E-05**
Heptachlorodibenzofuran	mg/kg	2.16E-07		2.38E-06		4.68E-05	1.52E-05		1.18E-06	3.44E-06	1.92E-07	1.26E-05		**1.26E-05**
Hexachloro-dibenzo[b,e][1,4]dioxin	mg/kg	4.31E-07		2.38E-06		4.84E-06	6.13E-06		1.08E-06	1.15E-05	1.92E-07	4.08E-06		**4.05E-06**
Hexachlorodibenzofuran	mg/kg	2.16E-07		2.38E-06		1.13E-05	6.90E-06		1.02E-06	1.75E-05	1.92E-07	3.82E-06		**4.13E-06**
Octachloro-dibenzo[b,e][1,4]dioxin	mg/kg	1.42E-05		3.90E-04		8.42E-04	2.13E-04		3.44E-05	3.70E-04	8.43E-06	1.56E-04		**1.68E-04**
Octachlorodibenzofuran	mg/kg	2.16E-07		2.38E-06		8.23E-05	1.36E-05		1.83E-06	9.95E-06	1.92E-07	1.02E-05		**1.15E-05**
Pentachloro-dibenzo[b,e][1,4]dioxin	mg/kg	6.47E-07		7.14E-06		3.23E-06	1.67E-05		1.26E-06	8.25E-05	7.66E-07	2.07E-06		**4.16E-06**
Pentachlorodibenzofuran	mg/kg	4.31E-07		4.76E-06		3.23E-06	2.27E-05		1.13E-06	1.16E-04	3.83E-07	1.96E-06		**4.94E-06**
Tetrachloro-dibenzo[b,e][1,4]dioxin	mg/kg	2.16E-07		4.76E-06		4.84E-06	2.91E-05		6.04E-06	1.23E-04	1.92E-07	2.50E-06		**6.38E-06**
Tetrachlorodibenzofuran	mg/kg	4.31E-07		2.38E-06		3.23E-06	1.40E-05		1.13E-06	6.94E-05	1.92E-07	1.52E-06		**3.32E-06**
					Metals									
Aluminum	mg/kg	5710	6150	5190	5900	4700	6380	6800	6180	6280	6910	6540		**6480**
Antimony	mg/kg	3.43	3.25	3.27	6.32	4.18	3.45	3.88	3.8	3.12	3.9	3.23		**3.4**
Arsenic	mg/kg	3.49	3.56	2.21	2.32	3.05	3.34	3.47	3.19	3.38	3.5	3.45		**3.42**
Barium	mg/kg	58.6	60.3	70.9	48.4	50.3	62.9	62.9	60.9	60.9	62.8	64.3		**63.3**
Beryllium	mg/kg	0.498	0.501	0.492	0.601	0.458	0.498	0.532	0.488	0.473	0.497	0.507		**0.507**
Bismuth	mg/kg						2.13	3.91						**3.14**
Boron	mg/kg						50.9	50	51	50		50		**50.1**

Table C.4.5. Average Soil Analyte Concentrations (continued)

		Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
Chemical	Units	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
Cadmium	mg/kg	0.794	0.797	0.591	0.856	1.76	0.88	1	0.888	0.876	0.706	0.784		**0.85**
Calcium	mg/kg	1810	1950	2310	993	944	5020	3980	5010	7590	10700	5290		**4930**
Chromium	mg/kg	11.6	12	8.79	10.8	22.2	12.6	17	12.3	12	12.5	12.3		**13.1**
Chromium, hexavalent	mg/kg						0.49		0.25			1.73		**1.5**
Cobalt	mg/kg	5.15	5.18	4.87	4.5	4.17	5.33	5.82	5.11	5.27	5.47	5.3		**5.34**
Copper	mg/kg	7.93	8.3	8.14	6.69	7.06	8.54	10.1	8.21	8.64	25.7	8.32		**8.78**
Iron	mg/kg	12900	13200	9280	13700	11100	12900	14100	12700	12800	12900	13100		**13100**
Lead	mg/kg	9.81	10.2	7.96	9.21	9.92	10.3	11.6	9.97	11.4	10.4	10.2		**10.4**
Lithium	mg/kg						8.38	6.68	6.85	6.31		7.11		**7.18**
Magnesium	mg/kg	377	461	688	276	84.7	677	914	607	747	957	750		**734**
Manganese	mg/kg	211	210	155	152	121	228	251	215	221	222	226		**227**
Mercury	mg/kg	0.102	0.101	0.0906	0.1	0.0913	0.0951	0.102	0.0959	0.0998	0.0772	0.092		**0.094**
Molybdenum	mg/kg	15	18				1.14	1.94	12.3					**4.31**
Nickel	mg/kg	9.77	10.1	11.4	6.27	11.3	9.96	11.2	11.2	10.3	17	10.9		**10.9**
Niobium	mg/kg						1.26	1.27						**1.26**
Phosphorous	mg/kg							547						**547**
Potassium	mg/kg	322	331	250	263	238	340	381	329	363	400	342		**345**
Ruthenium	mg/kg						16.1	18.3						**17.3**
Selenium	mg/kg	0.302	0.314	0.263	0.363	0.281	0.334	0.321	0.339	0.309	0.256	0.302		**0.308**
Silicon	mg/kg						512	571						**545**
Silver	mg/kg	1.16	1.1	0.783	1.29	2.41	1.23	1.52	1.2	1.23	0.943	1.11		**1.21**
Sodium	mg/kg	140	140	190	213	151	160	135	157	129	184	170		**163**
Strontium	mg/kg						86.5	73	79.1	137		78.7		**79**
Tantalum	mg/kg						14.6	39.3						**28.6**
Thallium	mg/kg	0.273	0.285	0.605	2.53	0.495	0.864	1.33	0.832	0.521	0.249	0.424		**0.603**
Thorium	mg/kg						9.41	8.15						**8.7**
Tin	mg/kg	6.05	15				13.2	4.03	15.3					**8.56**
Titanium	mg/kg						467	203						**318**
Tungsten	mg/kg						14.1	50.9						**34.9**
Uranium	mg/kg	12.2	5.79			12.4	4.25	13.6	5.65			40.1		**29.7**
Vanadium	mg/kg	18.6	19.1	15.7	20.8	15.9	19.5	21.3	19.1	19.2	19.2	19.5		**19.6**
Zinc	mg/kg	25.4	27.2	25.5	20.4	19.1	29	35.6	29.7	30	32.4	28.9		**29.6**
Zirconium	mg/kg						17.4	8.55						**12.4**
					PCBs									
PCB-1016	mg/kg	2.37E-04	9.44E-04	0.00238	2.8	0.00161	0.00759	0.00831	0.00437	0.0263	0.00214	0.01		**0.00876**
PCB-1221	mg/kg	4.29E-04	0.00226	0.00238	0.017	0.00161	0.0111	0.0044	0.00458	0.0421	0.00247	0.00976		**0.00849**
PCB-1232	mg/kg	3.03E-04	0.00215	0.00238	0.017	0.00161	0.0109	0.00401	0.00454	0.0421	0.00247	0.00967		**0.00835**
PCB-1242	mg/kg	2.72E-04	9.74E-04	0.00238	0.017	0.00161	0.00952	0.0119	0.00646	0.0297	0.00222	0.0129		**0.0114**
PCB-1248	mg/kg	0.0195	5.56E-04	0.0143	0.017	0.00161	0.0129	0.0817	0.0123	0.0285	0.00216	0.0128		**0.0222**
PCB-1254	mg/kg	4.48E-04	5.56E-04	0.00952	0.017	0.00161	0.0294	0.0743	0.0115	0.0859	0.0334	0.0335		**0.0362**
PCB-1260	mg/kg	0.00131	0.0074	0.00238	0.017	0.00161	0.053	0.107	0.0172	0.471	0.0223	0.0684		**0.0673**

Table C.4.5. Average Soil Analyte Concentrations (continued)

Chemical	Units	Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
		yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
PCB-1262	mg/kg		1.51E-04				3.37E-04		2.65E-04		0.00192	3.34E-04		**3.60E-04**
PCB-1268	mg/kg		1.51E-04	0.00238		0.00161	0.00177	0.00082	0.00157	4.93E-04	0.00192	5.43E-04		**7.97E-04**
Polychlorinated biphenyl	mg/kg	0.0203	0.0207	0.0238		0.00161	0.172	6.91	0.0504	0.519	0.135	0.183		**1.09**
Polychlorinated biphenyls 132	mg/kg											4.61E-04		**4.61E-04**
Polychlorinated biphenyls 153	mg/kg											0.00131		**0.00131**
Polychlorinated biphenyls 170	mg/kg											4.02E-04		**4.02E-04**
Polychlorinated biphenyls 171	mg/kg											2.53E-04		**2.53E-04**
Polychlorinated biphenyls 174	mg/kg											3.03E-04		**3.03E-04**
Polychlorinated biphenyls 180	mg/kg											4.71E-04		**4.71E-04**
Polychlorinated biphenyls 31	mg/kg											2.33E-04		**2.33E-04**
Polychlorinated biphenyls 99	mg/kg											4.46E-04		**4.46E-04**
Pesticides														
2,2',3,3',5,6'-Hexachlorobiphenyl	mg/kg											2.08E-04		**2.08E-04**
2,2',3,4',5',6-Hexachloro-1,1'-biphenyl	mg/kg											4.96E-04		**4.96E-04**
2,2',3,4-Tetrachlorobiphenyl	mg/kg											8.78E-04		**8.78E-04**
4,4'-DDD	mg/kg	3.45E-04	6.58E-04				4.02E-04	8.40E-04	4.10E-04	2.96E-04	5.13E-05	0.00101		**8.60E-04**
4,4'-DDE	mg/kg	3.02E-04	4.76E-04				3.58E-04	8.26E-04	3.89E-04	1.05E-04	1.86E-05	0.00101		**8.48E-04**
4,4'-DDT	mg/kg	2.16E-04	4.67E-04				4.06E-04	8.01E-04	3.72E-04	3.13E-04	5.52E-05	0.00101		**8.50E-04**
Aldrin	mg/kg	2.38E-04	4.09E-04				1.90E-04	7.80E-04	2.22E-04	1.05E-04	1.86E-05	5.06E-04		**4.82E-04**
Chlordene	mg/kg						6.04E-05	8.85E-04				1.98E-05		**1.58E-04**
Dieldrin	mg/kg	4.10E-04	6.13E-04				3.46E-04	8.61E-04	4.19E-04	5.10E-05	8.81E-06	0.00101		**8.56E-04**
Endosulfan I	mg/kg	2.20E-05	9.73E-05				2.02E-04	7.14E-04	1.60E-04	1.56E-04	2.80E-05	5.07E-04		**4.65E-04**
Endosulfan II	mg/kg	4.38E-05	6.62E-05				3.58E-04	7.42E-04	3.13E-04	1.05E-04	1.86E-05	0.0025		**0.00181**
Endosulfan sulfate	mg/kg	4.41E-05	1.94E-04				4.06E-04	7.48E-04	3.22E-04	3.13E-04	5.52E-05	0.00101		**8.34E-04**
Endrin	mg/kg	4.35E-05	9.72E-05				3.70E-04	7.48E-04	3.15E-04	1.56E-04	2.80E-05	0.00101		**8.27E-04**
Endrin aldehyde	mg/kg	6.47E-07	1.03E-06				2.24E-05	7.10E-04	1.25E-07			1.35E-05		**1.13E-04**
Endrin ketone	mg/kg	4.35E-05	2.97E-04				4.00E-04	5.42E-05	3.26E-04	3.13E-04	5.52E-05	0.00101		**7.35E-04**
Heptachlor	mg/kg	1.73E-04	2.89E-04				1.84E-04	7.60E-04	2.01E-04	7.89E-05	1.38E-05	5.06E-04		**4.75E-04**
Heptachlor epoxide	mg/kg	2.18E-05	9.69E-05				2.02E-04	7.11E-04	1.60E-04	1.56E-04	2.80E-05	5.07E-04		**4.64E-04**
Lindane	mg/kg	1.94E-04	3.40E-04				1.90E-04	7.67E-04	2.09E-04	1.05E-04	1.86E-05	5.06E-04		**4.78E-04**
Methoxychlor	mg/kg	3.03E-04	5.30E-04				1.81E-03	1.04E-03	1.59E-03	6.25E-04	1.11E-04	0.00505		**0.00375**
Toxaphene	mg/kg	4.87E-04	1.71E-03				4.82E-03	5.68E-03	3.21E-03	2.63E-03	4.66E-04	0.0107		**0.00854**
alpha-BHC	mg/kg	1.94E-04	3.23E-04				1.84E-04	7.67E-04	2.08E-04	7.89E-05	1.38E-05	5.06E-04		**4.77E-04**
alpha-Chlordane	mg/kg	2.19E-04	7.98E-05				1.59E-03	1.81E-04	1.54E-03	1.30E-04	2.28E-05	0.00498		**0.00355**
beta-BHC	mg/kg	3.67E-04	6.45E-04				2.02E-04	8.19E-04	2.62E-04	1.56E-04	2.80E-05	5.07E-04		**4.96E-04**
delta-BHC	mg/kg	4.10E-04	8.02E-04				2.02E-04	8.34E-04	2.78E-04	1.56E-04	2.80E-05	5.07E-04		**0.0005**
gamma-Chlordane	mg/kg	2.33E-04	7.99E-05				1.59E-03	1.81E-04	1.54E-03	1.30E-04	2.28E-05	0.00498		**0.00355**
Radionuclides														
Actinium-228	pCi/g					0.596	0.911	0.377	0.911					**0.642**
Alpha activity	pCi/g	21.1	17.2	17.7	14.9	21.7	11.6	30.5	13.4	39.6	14.6	12		**15.2**
Americium-241	pCi/g	0.211	0.323	0.152	6.18	4.47	1.16	1.66	1.02	6.94	0.0734	1.87		**1.73**

Table C.4.5. Average Soil Analyte Concentrations (continued)

		Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
Chemical	**Units**	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
Americium-243	pCi/g						0.204		0.204					**0.204**
Antimony-124	pCi/g					0	0.0078	8.55E-04	0.0078					**0.00402**
Antimony-125	pCi/g					0	0.018	0.00662	0.018					**0.0114**
Barium-133	pCi/g					0.0184	0.00669	0.00328	0.00669					**0.00599**
Barium-140	pCi/g					0	0.00207	0.0193	0.00207					**0.00983**
Beta activity	pCi/g	52.2	49.9	68.4	16	34.3	19.7	62.9	27	59.5	24.8	37.9		**39.4**
Beta/Gamma Activity	pCi/g							85						**85**
Bismuth-211	pCi/g					2.07	2.28	1.44	2.28					**1.88**
Bismuth-212	pCi/g					0.584	0.81	0.342	0.81					**0.577**
Bismuth-214	pCi/g					0.738	0.831	0.53	0.831					**0.686**
Cerium-139	pCi/g					0	0.00282	2.37E-04	0.00282					**0.00142**
Cerium-141	pCi/g					0.00652	0.0223	0.0458	0.0223					**0.032**
Cerium-144	pCi/g					0.0165	0	0.0198	0					**0.0103**
Cesium-134	pCi/g					0	0.00392	0.00666	0.00392					**0.00489**
Cesium-136	pCi/g					0.012	0.016	0.00493	0.016					**0.0106**
Cesium-137	pCi/g	0.274	0.792		0.426	0.0922	0.124	0.145	0.156	0.174	0.0852	0.143		**0.145**
Chromium-51	pCi/g					0	0	0.0424	0					**0.0195**
Cobalt-56	pCi/g					0.00273	0.00968	0.00192	0.00968					**0.00559**
Cobalt-57	pCi/g					0.0025	0.00391	2.57E-04	0.00391					**0.00212**
Cobalt-58	pCi/g					0.00579	0	0	0					**4.30E-04**
Cobalt-60	pCi/g				1.28	0.833	0.526	0.423	0.537	1.01	0.00293	1.2		**0.966**
Europium-152	pCi/g					0	0.00321	0	0.00321					**0.00149**
Europium-154	pCi/g					0.0112	0	0	0					**8.31E-04**
Europium-155	pCi/g					0.0656	0.0881	0.066	0.0881					**0.0762**
Iridium-192	pCi/g					0.00156	0.00366	0.00141	0.00366					**0.00247**
Iron-59	pCi/g					0	0.015	0.00494	0.015					**0.00924**
Lead-210	pCi/g					0.0887	1.19	0.953	1.19					**0.999**
Lead-211	pCi/g					2.07	2.28	1.44	2.28					**1.88**
Lead-212	pCi/g					0.568	0.752	0.348	0.752					**0.552**
Lead-214	pCi/g					0.79	0.848	0.546	0.848					**0.705**
Manganese-54	pCi/g					0.0161	0.0308	0.0163	0.0308					**0.023**
Mercury-203	pCi/g					0	0.00286	0.00661	0.00286					**0.00437**
Neodymium-147	pCi/g					0.203	0.738	0.4	0.738					**0.543**
Neptunium-237	pCi/g	0.00768	0.0108	0.125		0.128	0.033	0.0382	0.027	0.00792	0.0181	0.0306		**0.0328**
Neptunium-239	pCi/g					0.028	0.0675	0	0.0675					**0.0335**
Niobium-94	pCi/g					0.00606	0.00544	0.00417	0.00544					**0.0049**
Niobium-95	pCi/g					0	0.0877	0.0249	0.0877					**0.0523**
Plutonium-238	pCi/g					0.00243	7.84E-04	9.64E-04	5.11E-04					**9.59E-04**
Plutonium-239	pCi/g	0.0553	0.224	0.00405		0.256	0.0139	0.0213	0.0209	0.00564	0.00894	0.0155		**0.023**
Plutonium-239/240	pCi/g			0.00717		0.00809	0.295	0.062	0.247	0.0314	0.0023	0.0963		**0.115**
Plutonium-242	pCi/g						0.02	0.0602						**0.0427**
Potassium-40	pCi/g					10.9	9.42	6.49	8.31					**8.06**
Promethium-146	pCi/g					0	0.00419	0.013	0.00419					**0.00793**

Table C.4.5. Average Soil Analyte Concentrations (continued)

Chemical	Units	Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
		yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
Protactinium-231	pCi/g					0.406	0.619	0.431	0.619					**0.517**
Protactinium-233	pCi/g					0.0118	5.41E-04	0.0709	5.41E-04					**0.0338**
Protactinium-234	pCi/g	0.18	0.0125						0.152					**0.167**
Protactinium-234m	pCi/g				248	110	99.4	182	95.5	255		216		**192**
Radium-223	pCi/g					0.32	0.135	0.175	0.135					**0.168**
Radium-226	pCi/g			0.996		1.04	1.1	0.667	1.11					**0.899**
Radium-228	pCi/g					0.939	0.988	0.459	0.988					**0.741**
Radon-219	pCi/g					0.208	0.144	0.298	0.144					**0.22**
Radon-222	pCi/g							0.737						**0.737**
Ruthenium-106	pCi/g					0.0904	0	0.00879	0					**0.0108**
Silver-110m	pCi/g					0	0.00198	1.98E-04	0.00198					**0.00101**
Sodium-22	pCi/g					0	0	0.00472	0					**0.00217**
Strontium-90	pCi/g					0	0	0	0					**0**
Technetium-99	pCi/g	0.37	0.567	1.42	0.27	10.5	1.33	4.54	1.4	0.419	0.799	2.23		**2.51**
Thallium-208	pCi/g					0.342	0.24	0.161	0.24					**0.211**
Thorium-227	pCi/g					0	0.0564	0.0279	0.0564					**0.0391**
Thorium-228	pCi/g					1.07	1.13	1.21	1.13					**1.16**
Thorium-229	pCi/g					0.0932	0.0127	0.00424	0.0127					**0.0148**
Thorium-230	pCi/g	1.17	1.29	1.12		8.15	1.29	3.6	1.18	0.622	1.13	1.11		**1.63**
Thorium-232	pCi/g					1	1.06	0.937	1.06					**1**
Thorium-234	pCi/g			4.47	18.7	10.8	13.8	12.3	12.7	79.3		14.9		**14.5**
Tin-113	pCi/g					0.00262	0	0	0					**1.94E-04**
Uranium	pCi/g	3.84	1.15	2.58	5.87	7.38	4.71	4.2	4.32	10.2	3.54	3.61		**3.95**
Uranium Total (calculated)	pCi/g	1.95	1.23	1.94		2.97	2.01	2.22	2	2.42	2.01	1.93		**2.01**
Uranium-234	pCi/g	0.918	0.603	0.897		1.26	0.951	1.02	0.944	0.624	0.971	0.926		**0.948**
Uranium-235	pCi/g	0.0392	0.0358	0.0461	1.89	0.417	0.164	0.152	0.137	0.384	0.0579	0.241		**0.212**
Uranium-235/236	pCi/g	0.102	0.1						0.183					**0.14**
Uranium-238	pCi/g	1.03	0.625	1.04		1.71	1.06	1.2	1.05	1.79	1.04	1		**1.06**
Yttrium-88	pCi/g					0.00971	0.0139	0.00199	0.0139					**0.00811**
Zinc-65	pCi/g					0	0.00941	0.0107	0.00941					**0.00932**
Zirconium-95	pCi/g					0	0.0835	0.0242	0.0835					**0.05**
Semivolatile Organics														
1,2,4,5-Tetrachlorobenzene	mg/kg	1.72E-04	2.74E-04					5.28E-05	5.09E-05					**7.37E-05**
1,2,4-Trichlorobenzene	mg/kg	0.00539	0.0255	0.0112	0.0513		0.07	0.0225	0.0494	0.0213	0.0445	0.0923		**0.0744**
1,2-Dichlorobenzene	mg/kg	0.00537	0.0255	0.0112	0.0513		0.0715	0.0221	0.0507	0.0213	0.0445	0.0922		**0.0744**
1,2-Diphenylhydrazine	mg/kg	1.51E-04	0.00818				0.00698	4.62E-05	0.00519	0.00738	0.00228	1.98E-04		**0.00114**
1,3-Dichlorobenzene	mg/kg	0.00539	0.0255	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0445	0.0922		**0.0742**
1,4-Dichlorobenzene	mg/kg	0.00537	0.0255	0.0112	0.0513		0.07	0.0229	0.0493	0.0213	0.0445	0.0943		**0.0758**
1-Chloronaphtalene	mg/kg	2.16E-04	3.42E-04					6.56E-05	6.36E-05					**9.19E-05**
1-Naphthalenamine	mg/kg	8.19E-04	0.0013					2.51E-04	2.42E-04					**3.50E-04**
2,3,3-Trimethylhexane	mg/kg										6.51E-04			**6.51E-04**
2,3,4,6-Tetrachlorophenol	mg/kg	2.59E-04	4.11E-04					7.87E-05	7.64E-05					**1.10E-04**

Table C.4.5. Average Soil Analyte Concentrations (continued)

Chemical	Units	Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
		yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
2,3,4-Trimethylhexane	mg/kg						3.02E-04		2.77E-04					**2.96E-04**
2,3-Dimethylheptane	mg/kg											6.55E-04		**6.55E-04**
2,4,5-Trichlorophenol	mg/kg	0.0261	0.0566	0.0112	0.0513		0.0908	0.0453	0.0642	0.0498	0.0533	0.115		**0.0964**
2,4,6-Tribromophenol	mg/kg		0.0113				0.0105		0.0079		0.0194	0.0312		**0.0273**
2,4,6-Trichlorophenol	mg/kg	0.00539	0.0255	0.0112	0.0513		0.0715	0.0229	0.0507	0.0213	0.0445	0.0943		**0.076**
2,4-Dichlorophenol	mg/kg	0.00537	0.0255	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0445	0.0922		**0.0742**
2,4-Dimethylheptane	mg/kg											3.37E-04		**3.37E-04**
2,4-Dimethylphenol	mg/kg	0.00569	0.026	0.0112	0.0513		0.07	0.0222	0.0494	0.0213	0.0445	0.0922		**0.0743**
2,4-Dinitrophenol	mg/kg	0.0269	0.0822	0.0112	0.025		0.236	0.0849	0.153	0.0383	0.144	0.278		**0.23**
2,4-Dinitrotoluene	mg/kg	0.0055	0.0263	0.0112	0.0513		0.0715	0.023	0.0508	0.0213	0.0445	0.0943		**0.076**
2,5-Hexanedione	mg/kg											9.92E-05		**9.92E-05**
2,6-Dichlorophenol	mg/kg	2.16E-04	3.42E-04				0.00479	6.56E-05	0.00445					**0.00214**
2,6-Dimethylheptane	mg/kg											4.37E-04		**4.37E-04**
2,6-Dinitrotoluene	mg/kg	0.00534	0.0255	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0445	0.0922		**0.0742**
2,7,10-Trimethyldodecane	mg/kg											1.69E-04		**1.69E-04**
2-Chloronaphthalene	mg/kg	0.00526	0.0253	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0445	0.0922		**0.0742**
2-Chlorophenol	mg/kg	0.00541	0.0256	0.0112	0.0513		0.07	0.0221	0.0494	0.0213	0.0445	0.0922		**0.0742**
2-Fluoro-1,1'-biphenyl	mg/kg		0.0113				0.0105		0.0079		0.0194	0.0312		**0.0273**
2-Fluorophenol	mg/kg		0.0113				0.0105		0.0079		0.0194	0.0312		**0.0273**
2-Methyl-4,6-dinitrophenol	mg/kg	0.027	0.0822	0.0112	0.0513		0.227	0.0598	0.144	0.0399	0.144	0.277		**0.224**
2-Methylnaphthalene	mg/kg	0.00682	0.0346	0.0112	0.0513		0.068	0.0219	0.0481	0.0215	0.0445	0.0905		**0.0728**
2-Methyloctane	mg/kg											2.98E-04		**2.98E-04**
2-Methylphenol	mg/kg	0.00534	0.0255	0.0112	0.0513		0.071	0.0229	0.0506	0.0213	0.0445	0.0937		**0.0755**
2-Methylpyridine	mg/kg	0.00147	0.00233					4.36E-04	4.31E-04					**6.18E-04**
2-Naphthalenamine	mg/kg	0.00142	0.00226					4.33E-04	4.20E-04					**6.07E-04**
2-Nitrobenzenamine	mg/kg	0.0261	0.0808	0.0112	0.0513		0.228	0.0568	0.144	0.0498	0.144	0.28		**0.226**
2-Nitrophenol	mg/kg	0.00537	0.0255	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0445	0.0922		**0.0742**
3,3'-Dichlorobenzidine	mg/kg	0.0109	0.0401	0.0112	0.0513		0.102	0.023	0.0675	0.019	0.0689	0.133		**0.106**
3,5-Dimethyl-Octane	mg/kg											4.91E-04		**4.91E-04**
3- and 4- Methylphenol	mg/kg						0.0029	0.009	0.00266			3.57E-04		**0.00202**
3-Methylcholanthrene	mg/kg	4.31E-04	6.85E-04					1.33E-04	1.27E-04					**1.85E-04**
3-Methylene-heptane	mg/kg											9.92E-05		**9.92E-05**
3-Nitrobenzenamine	mg/kg	0.0264	0.0813	0.0112	0.0513		0.228	0.0569	0.144	0.0498	0.144	0.28		**0.226**
4-Aminobiphenyl	mg/kg	0.00125	0.00199					3.70E-04	3.67E-04					**5.26E-04**
4-Bromophenyl phenyl ether	mg/kg	0.00534	0.0255	0.0112	0.0513		0.0692	0.0221	0.0492	0.0114	0.0445	0.0882		**0.0715**
4-Chloro-3-methylphenol	mg/kg	0.00539	0.0312	0.0112	0.0513		0.0954	0.0245	0.0641	0.0213	0.0665	0.131		**0.104**
4-Chlorobenzenamine	mg/kg	0.00621	0.0325	0.0112	0.0513		0.0954	0.0247	0.0643	0.0213	0.0665	0.131		**0.104**
4-Chlorophenyl phenyl ether	mg/kg	0.00532	0.0254	0.0112	0.0513		0.0692	0.0221	0.0492	0.0114	0.0445	0.0883		**0.0716**
4-Methylphenol	mg/kg	0.00552	0.0255	0.0112	0.0513		0.0594	0.0139	0.0399	0.0213	0.0445	0.0869		**0.0681**
4-Nitrobenzenamine	mg/kg	0.0273	0.0827	0.0112	0.0513		0.229	0.0572	0.146	0.0498	0.144	0.28		**0.226**
4-Nitrophenol	mg/kg	0.0263	0.0812	0.0112	0.0513		0.23	0.0569	0.144	0.0498	0.144	0.28		**0.226**
4-alpha-Cumylphenol	mg/kg						0.00193		0.00177					**0.00189**
7,12-Dimethylbenz(a)anthracene	mg/kg	0.00185	0.00295					5.62E-04	5.45E-04					**7.89E-04**

Table C.4.5. Average Soil Analyte Concentrations (continued)

		Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
Chemical	**Units**	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
Acenaphthene	mg/kg	0.00534	0.0255	0.0112	0.0513		0.0698	0.0223	0.0501	0.0843	0.0534	0.0908		**0.0737**
Acenaphthylene	mg/kg	0.00534	0.0255	0.0112	0.0513		0.0701	0.0221	0.0502	0.023	0.0547	0.0945		**0.076**
Acetophenone	mg/kg	1.72E-04	2.74E-04					5.28E-05	5.09E-05					**7.37E-05**
Aniline	mg/kg	0.00112	0.0131				0.0105	3.34E-04	0.00823		0.0194	0.0312		**0.0225**
Anthracene	mg/kg	0.00537	0.0255	0.0112	0.0513		0.124	0.0226	0.0997	0.191	0.0569	0.139		**0.114**
Benz(a)anthracene	mg/kg	0.00534	0.027	0.0112	0.0513		0.118	0.0231	0.104	0.335	0.0863	0.166		**0.132**
Benzenemethanol	mg/kg	0.00539	0.0312				0.0868	0.0124	0.0605	0.00738	0.0665	0.12		**0.0935**
Benzidine	mg/kg	0.0069	0.0222				0.0105	0.00216	0.00995		0.0194	0.0312		**0.023**
Benzo(a)pyrene	mg/kg	0.00537	0.0271	0.0112	0.0513		0.119	0.023	0.1	0.422	0.0903	0.161		**0.129**
Benzo(b)fluoranthene	mg/kg	0.0058	0.0289	0.0112	0.0513		0.161	0.0238	0.129	0.697	0.111	0.188		**0.154**
Benzo(ghi)perylene	mg/kg	0.00558	0.0272	0.0112	0.0513		0.0712	0.0222	0.0539	0.147	0.07	0.0926		**0.0757**
Benzo(k)fluoranthene	mg/kg	0.00539	0.0255	0.0112	0.0513		0.136	0.023	0.122	0.276	0.0715	0.18		**0.143**
Benzoic acid	mg/kg	0.0264	0.0813				0.206	0.0204	0.143	0.0359	0.144	0.259		**0.205**
Bis(2-butoxyethyl) ether	mg/kg						4.11E-04		3.76E-04					**4.03E-04**
Bis(2-chloroethoxy)methane	mg/kg	0.00537	0.0255	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0445	0.0922		**0.0742**
Bis(2-chloroethyl) ether	mg/kg	0.00541	0.0256	0.0112	0.0513		0.0692	0.0221	0.0492	0.0114	0.0445	0.0883		**0.0716**
Bis(2-chloroisopropyl) ether	mg/kg	0.00638	0.0271	0.0112	0.0513		0.0692	0.0224	0.0495	0.0114	0.0445	0.0883		**0.0716**
Bis(2-ethylhexyl)phthalate	mg/kg	0.00763	0.0291	0.0112	0.0513		0.0729	0.0256	0.0561	0.0232	0.0419	0.0911		**0.0746**
Butyl benzyl phthalate	mg/kg	0.00793	0.0296	0.0112	0.025		0.0676	0.018	0.0484	0.00979	0.0445	0.0851		**0.0687**
Carbazole	mg/kg		0.0113	0.0112	0.0513		0.0248	0.0207	0.017	0.0139	0.0194	0.0431		**0.0364**
Chrysene	mg/kg	0.00569	0.0275	0.0112	0.0513		0.126	0.0234	0.11	0.379	0.0935	0.171		**0.137**
Cineole	mg/kg						1.45E-05		1.33E-05			1.19E-05		**1.23E-05**
Di-n-butyl phthalate	mg/kg	0.00323	0.0272	0.0438	0.0747		0.109	0.13	0.0804	0.0258	0.0541	0.103		**0.102**
Di-n-octylphthalate	mg/kg	0.00541	0.0256	0.0112	0.0513		0.0699	0.0221	0.0493	0.0213	0.0445	0.0922		**0.0742**
Dibenz(a,h)anthracene	mg/kg	0.00543	0.0256	0.0112	0.0513		0.069	0.0221	0.0581	0.293	0.0551	0.113		**0.0895**
Dibenzofuran	mg/kg	0.00561	0.0277	0.0112	0.0513		0.0668	0.0225	0.0468	0.0424	0.0445	0.0873		**0.0707**
Dibenzothiophene	mg/kg								4.59E-04					**4.59E-04**
Diethyl phthalate	mg/kg	0.00541	0.0256	0.0112	0.0513		0.0705	0.0221	0.0494	0.0213	0.0445	0.0991		**0.0789**
Dimethyl phthalate	mg/kg	0.00537	0.0255	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0445	0.0923		**0.0743**
Dioctyl hexanedioate	mg/kg											2.83E-04		**2.83E-04**
Diphenyldiazene	mg/kg		0.0113				0.0105		0.0079		0.0194	0.0312		**0.0273**
Docosane	mg/kg								2.49E-04			4.71E-04		**4.60E-04**
Dodecane	mg/kg								0.00188			0.00194		**0.00193**
Ethyl methanesulfonate	mg/kg	1.72E-04	2.74E-04					5.28E-05	5.09E-05					**7.37E-05**
Fluoranthene	mg/kg	0.00601	0.0298	0.0112	0.0513		0.213	0.0251	0.177	0.436	0.14	0.247		**0.2**
Fluorene	mg/kg	0.00537	0.0255	0.0112	0.0513		0.0658	0.0227	0.047	0.101	0.0532	0.0895		**0.0725**
Hexachlorobenzene	mg/kg	0.00532	0.0254	0.0112	0.0513		0.072	0.0229	0.0511	0.0213	0.0445	0.0943		**0.076**
Hexachlorobiphenyl	mg/kg											0.00158		**0.00158**
Hexachlorobutadiene	mg/kg	0.00534	0.0255	0.0112	0.0513		0.0715	0.0229	0.0507	0.0213	0.0445	0.0943		**0.076**
Hexachlorocyclopentadiene	mg/kg	0.0053	0.0254	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0445	0.0922		**0.0742**
Hexachloroethane	mg/kg	0.00537	0.0255	0.0112	0.0513		0.0715	0.0229	0.0507	0.0213	0.0445	0.0943		**0.076**
Hexacosane	mg/kg								2.49E-04			4.71E-04		**4.60E-04**
Hexadecane	mg/kg						1.09E-04		0.00202			0.00197		**0.00172**

Table C.4.5. Average Soil Analyte Concentrations (continued)

		Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
Chemical	**Units**	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
Indeno(1,2,3-cd)pyrene	mg/kg	0.00545	0.0256	0.0112	0.0513		0.129	0.0223	0.0674	0.535	0.0714	0.12		**0.102**
Isophorone	mg/kg	0.00537	0.0255	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0445	0.0922		**0.0742**
Methyl methanesulfonate	mg/kg	0.00147	0.00233					4.56E-04	4.33E-04					**6.31E-04**
N-Nitroso-di-n-propylamine	mg/kg	0.00543	0.0256	0.0112	0.0513		0.07	0.0221	0.0493	0.0213	0.0447	0.0925		**0.0744**
N-Nitrosodimethylamine	mg/kg	3.66E-04	0.0119				0.0153	0.00831	0.0124		0.0194	0.0312		**0.0243**
N-Nitrosodiphenylamine	mg/kg	0.00526	0.0253	0.0112	0.0513		0.0702	0.0549	0.0495	0.0213	0.0445	0.0925		**0.079**
N-Nitrosopiperidine	mg/kg	1.72E-04	2.74E-04					5.28E-05	5.09E-05					**7.37E-05**
Naphthalene	mg/kg	0.00606	0.0301	0.0112	0.0513		0.0677	0.0228	0.0456	0.0462	0.057	0.0915		**0.0738**
Nitrobenzene	mg/kg	0.00591	0.0263	0.0112	0.0513		0.0715	0.0231	0.0509	0.0213	0.0445	0.0943		**0.076**
Nitrobenzene-d5	mg/kg		0.0113				0.0105		0.0079		0.0194	0.0312		**0.0273**
Octane	mg/kg											9.42E-05		**9.42E-05**
Octathiocane	mg/kg								0.00144					**0.00144**
Pentachlorobenzene	mg/kg	1.94E-04	3.08E-04					5.95E-05	5.73E-05					**8.30E-05**
Pentachloronitrobenzene	mg/kg	2.80E-04	4.45E-04					8.52E-05	8.27E-05					**1.19E-04**
Pentachlorophenol	mg/kg	0.0261	0.0808	0.0112	0.0513		0.23	0.0607	0.146	0.0498	0.144	0.283		**0.229**
Phenacetin	mg/kg	3.02E-04	4.79E-04					9.18E-05	8.91E-05					**1.29E-04**
Phenanthrene	mg/kg	0.00655	0.033	0.0112	0.0513		0.169	0.0283	0.144	0.348	0.107	0.196		**0.16**
Phenol	mg/kg	0.00537	0.0255	0.0112	0.0513		0.0815	0.0221	0.0599	0.0213	0.0445	0.0922		**0.0758**
Phenol-d5	mg/kg		0.0113				0.0105		0.0079		0.0194	0.0312		**0.0273**
Polycyclic aromatic hydrocarbons (PAH)	mg/kg						0.0514		0.0178			0.0542		**0.0522**
Pronamide	mg/kg	2.59E-04	4.11E-04					7.87E-05	7.64E-05					**1.10E-04**
Pyrene	mg/kg	0.00621	0.0292	0.0112	0.0513		0.198	0.0253	0.164	0.454	0.148	0.232		**0.188**
Pyridine	mg/kg	0.00116	0.0131	0.0112	0.0118		0.0179	0.00936	0.015	7.57E-04	0.0194	0.0342		**0.0267**
Tetradecane	mg/kg								0.00123			0.00135		**0.00134**
Total Cresols	mg/kg						0.0261	0.0164	0.0239			0.0137		**0.0159**
a,a-Dimethylphenethylamine	mg/kg	2.80E-04	4.45E-04					8.52E-05	8.27E-05					**1.19E-04**
m,p-Cresol	mg/kg						0.0042		0.00385			0.0059		**0.00559**
n-Octacosane	mg/kg						2.11E-04		4.43E-04			4.71E-04		**4.35E-04**
n-Tetracosane	mg/kg								2.49E-04			4.71E-04		**4.60E-04**
p-Dimethylaminoazobenzene	mg/kg	4.31E-04	6.85E-04					1.33E-04	1.27E-04					**1.85E-04**
p-Terphenyl-d14	mg/kg		0.0113				0.0105		0.0079		0.0194	0.0312		**0.0273**
trans-Decahydronaphthalene	mg/kg											2.83E-04		**2.83E-04**
					Volatile Organics									
1,1,1,2-Tetrachloroethane	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	5.50E-04		**4.59E-04**
1,1,1-Trichloroethane	mg/kg	1.82E-05	1.73E-04	2.38E-04		3.23E-04	0.0038	0.0234	0.00299	0.00805	2.57E-04	0.00492		**0.00694**
1,1,2,2-Tetrachloroethane	mg/kg	1.78E-05	1.72E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	1.17E-03	0.00805	2.57E-04	0.0049		**0.00346**
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	3.75E-06	5.96E-06						9.63E-07					**2.43E-06**
1,1,2-Trichloroethane	mg/kg	1.78E-05	1.72E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	1.17E-03	0.00805	2.57E-04	0.0049		**0.00346**
1,1-Dichloroethane	mg/kg	1.89E-05	1.74E-04	2.38E-04		3.23E-04	0.00469	0.00344	0.00401	0.00805	2.57E-04	0.00562		**4.78E-03**
1,1-Dichloroethene	mg/kg	2.06E-05	9.08E-03	3.81E-04	0.0617	0.00976	0.0336	0.00245	0.0326	0.0118	0.0313	0.0517		**0.0391**
1,2,3-Trichloropropane	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	5.50E-04		**4.59E-04**
1,2-Dibromoethane	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	5.50E-04		**4.59E-04**

Table C.4.5. Average Soil Analyte Concentrations (continued)

		Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
Chemical	Units	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
1,2-Dichloroethane	mg/kg	1.84E-05	1.73E-04	2.38E-04		3.23E-04	0.00217	1.61E-04	0.0015	0.00805	2.57E-04	0.00579		**0.00409**
1,2-Dichloroethene	mg/kg	1.72E-05	1.23E-04				2.03E-04	1.20E-04	1.36E-04	5.92E-05	2.30E-05	1.17E-04		**1.22E-04**
1,2-Dichloropropane	mg/kg	1.92E-05	1.74E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	0.00117	0.00805	2.57E-04	0.0049		**0.00346**
1,2-Dimethylbenzene	mg/kg			2.38E-04		3.23E-04	0.00163	3.28E-05	0.00114	0.00799	7.66E-06	0.00427		**0.00313**
1-Methyl-2-propylcyclohexane	mg/kg											4.71E-04		**4.71E-04**
2,5-Dimethylheptane	mg/kg											0.00112		**0.00112**
2,5-Dimethylhexane	mg/kg										6.13E-04			**6.13E-04**
2-Butanone	mg/kg	4.01E-05	6.97E-04	2.38E-04		0.00806	0.0118	0.00188	0.00757	0.0104	0.00421	0.0182		**0.0138**
2-Chloro-1,3-butadiene	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	5.50E-04		**4.59E-04**
2-Chloroethyl vinyl ether	mg/kg		6.85E-05				2.36E-04	3.28E-05	5.53E-06		4.02E-04	0.00108		**7.81E-04**
2-Hexanone	mg/kg	3.40E-05	7.29E-04	2.38E-04		3.23E-04	0.00317	9.84E-04	0.00124	0.00811	0.00234	0.0104		**0.00729**
2-Methyl-2-heptene	mg/kg											9.42E-05		**9.42E-05**
2-Methyldecane	mg/kg											1.24E-04		**1.24E-04**
2-Propanol	mg/kg		6.07E-04				7.88E-04		4.11E-05		0.00226	0.0055		**0.0046**
3,4-Dimethylheptane	mg/kg											2.28E-04		**2.28E-04**
4-Heptanone	mg/kg							0.00305				3.52E-04		**8.25E-04**
4-Methyl-2-pentanone	mg/kg	3.48E-05	7.30E-04	2.38E-04		0.00806	0.0104	9.84E-04	0.0076	0.0105	0.0024	0.0113		**0.00903**
4-Methyl-3-penten-2-one	mg/kg						2.84E-04		2.60E-04			6.25E-04		**5.64E-04**
Acetone	mg/kg	4.78E-05	0.00186	2.38E-04		0.00806	0.0119	0.00188	0.00765	0.0105	0.00444	0.0174		**0.0133**
Acrolein	mg/kg		6.85E-04				0.00136		5.53E-05		0.00402	0.0106		**0.00882**
Acrylonitrile	mg/kg		6.85E-04				0.00136		5.53E-05		0.00402	0.0106		**0.00882**
Benzene	mg/kg	1.89E-05	1.74E-04	2.38E-04		3.23E-04	0.00225	2.54E-04	0.00377	0.00805	2.57E-04	0.0093		**0.00646**
Bromodichloromethane	mg/kg	1.84E-05	1.73E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	0.00117	0.00805	2.57E-04	0.0049		**0.00346**
Bromoform	mg/kg	1.81E-05	1.73E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	0.00117	0.00805	2.57E-04	0.0049		**0.00346**
Bromomethane	mg/kg	3.52E-05	3.20E-04	2.38E-04		6.45E-04	0.00201	2.62E-04	0.00121	0.00821	4.64E-04	5.55E-03		**0.00393**
Carbon disulfide	mg/kg	2.02E-05	1.76E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	0.00117	0.00805	2.57E-04	0.0049		**0.00346**
Carbon tetrachloride	mg/kg	1.99E-05	1.75E-04	2.38E-04		3.23E-04	0.00217	1.61E-04	0.0015	0.00805	2.57E-04	0.00579		**0.00409**
Chlorobenzene	mg/kg	1.88E-05	1.74E-04	2.38E-04		3.23E-04	0.00217	1.61E-04	0.0015	0.00805	2.57E-04	0.00579		**0.00409**
Chloroethane	mg/kg	3.61E-05	3.21E-04	2.38E-04		6.45E-04	0.00201	2.62E-04	0.00121	0.00821	4.64E-04	0.00555		**0.00393**
Chloroform	mg/kg	1.86E-05	1.73E-04	2.38E-04		3.23E-04	0.00217	1.61E-04	0.0015	0.00805	2.57E-04	0.00579		**0.00409**
Chloromethane	mg/kg	3.79E-05	3.24E-04	2.38E-04		6.45E-04	0.00201	2.62E-04	0.00121	0.0174	4.64E-04	0.00555		**0.00397**
Decane	mg/kg								3.16E-04			5.31E-04		**5.21E-04**
Dibromochloromethane	mg/kg	1.83E-05	1.73E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	0.00117	0.00805	2.57E-04	0.0049		**0.00346**
Dibromomethane	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	5.50E-04		**4.59E-04**
Dichlorodifluoromethane	mg/kg		4.79E-05			6.45E-04	7.82E-05		3.60E-06		2.26E-04	5.60E-04		**4.72E-04**
Dimethylbenzene	mg/kg	2.20E-05	1.79E-04				0.00127	1.28E-04	0.00322	5.92E-05	2.49E-04	0.00416		**0.00302**
Ethyl cyanide	mg/kg		6.85E-04				0.00136		5.53E-05		0.00402	0.0106		**0.00882**
Ethyl methacrylate	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	5.50E-04		**4.59E-04**
Ethylbenzene	mg/kg	1.99E-05	1.75E-04	2.38E-04		3.23E-04	0.00225	1.61E-04	0.00377	0.00805	2.57E-04	0.0084		**0.00586**
Iodomethane	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	7.24E-04		**6.00E-04**
Methacrylonitrile	mg/kg		2.26E-04				3.85E-04		1.77E-05		0.00116	0.00276		**0.0023**
Methyl Isobutyl Carbinol	mg/kg											1.19E-04		**1.19E-04**
Methyl methacrylate	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	5.50E-04		**4.59E-04**

Table C.4.5. Average Soil Analyte Concentrations (continued)

		Source Area												Volume Weighted Average
		BGOU SWMU 2	BGOU SWMU 3	BGOU SWMU 4	BGOU SWMU 6	BGOU SWMU 145	SSOU	SWOU	GWOU	DD-340	DD-410	DD-Active	Other	
		11,551	0	0	0	6945	33,084	43,063	10,419	1249	4414	202,462	0	313,187
Chemical	**Units**	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3	yd^3
Methylene chloride	mg/kg	5.60E-05	0.0012	2.38E-04		3.23E-04	0.00263	4.74E-04	0.00166	0.031	0.00104	0.00577		**0.00428**
Pentachloroethane	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	5.50E-04		**4.59E-04**
Styrene	mg/kg	1.84E-05	1.73E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	0.00117	0.00805	2.57E-04	0.0049		**0.00346**
Tetrachloroethene	mg/kg	1.96E-05	1.75E-04	2.38E-04		3.23E-04	0.00373	0.0232	0.00293	0.00805	2.57E-04	0.0058		**0.00748**
Toluene	mg/kg	2.05E-05	1.76E-04	2.38E-04		3.23E-04	0.00225	1.61E-04	0.00377	0.00805	2.57E-04	0.00841		**0.00587**
Trans-1,4-Dichloro-2-butene	mg/kg		4.79E-05				7.82E-05		3.60E-06		2.26E-04	5.50E-04		**4.59E-04**
Trichloroethene	mg/kg	0.00217	0.0183	5.33E-04	0.123	0.0195	0.103	0.0491	0.0799	0.0235	0.105	0.148		**0.118**
Trichlorofluoromethane	mg/kg		4.79E-05				8.58E-05	8.20E-06	3.60E-06		2.26E-04	5.53E-04		**3.96E-04**
Vinyl acetate	mg/kg	3.23E-05	7.26E-04				0.00134	4.59E-05	1.93E-04	1.18E-04	0.0022	0.00564		**0.00392**
Vinyl chloride	mg/kg	0.00165	0.0185	0.858	0.649	0.0192	0.328	0.00313	0.319	0.0508	0.063	0.314		**0.25**
cis-1,2-Dichloroethene	mg/kg	0.0124	0.0179	0.00905	0.129	0.0195	1.56	0.00269	1.44	0.0244	0.0626	0.138		**0.304**
cis-1,3-Dichloropropene	mg/kg	1.82E-05	1.73E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	0.00117	0.00805	2.57E-04	0.0049		**0.00346**
m,p-Xylene	mg/kg			4.76E-04		3.23E-04	0.00333	7.38E-05	0.00233	0.0164	7.66E-06	0.00865		**0.00634**
trans-1,2-Dichloroethene	mg/kg	0.0012	0.0179	0.00905	0.129	0.0195	0.122	0.00269	0.121	0.0244	0.0625	0.148		**0.115**
trans-1,3-Dichloropropene	mg/kg	1.79E-05	1.72E-04	2.38E-04		3.23E-04	0.00182	1.61E-04	0.00117	0.00805	2.57E-04	0.0049		**0.00346**

The average concentrations for each OU or SWMU are calculated using half the detection limit for non-detects (except for TCE, cis-1,2-DCE, trans-1,2-DCE, vinyl chloride and rads). Negative rad results were set to 0 before calculating the average.

All concentrations are rounded to 3 significant digits.

Table C.4.6. Average background concentrations for metals in soil at the PGDP

Analyte	Concentration	Analyte	Concentration	Analyte	Concentration
Metals (mg/kg) in Surface Soil (0-1 ft bgs)					
Aluminum	8022	Copper	11.9	Selenium	0.30
Antimony	0.35	Cyanide	0	Silver	1.51
Arsenic	5.31	Iron	14328	Sodium	70.8
Barium	90.9	Lead	17.5	Thallium[a]	0.18
Beryllium[a]	0.45	Magnesium	1326	Uranium[a]	3.837
Cadmium	0.98	Manganese	351	Vanadium	22.0
Calcium	4188	Mercury	0.10	Zinc	40.9
Chromium	12.4	Nickel	14.0		
Cobalt	6.62	Potassium	503		
Metals (mg/kg) in Subsurface Soil (>1 ft bgs)					
Aluminum	4866	Copper	6.17	Selenium	0.30
Antimony	4.62	Cyanide	0	Silver	0.96
Arsenic	1.99	Iron	11849	Sodium	166
Barium	38.9	Lead	6.89	Uranium[b]	3.62
Beryllium[a]	0.49	Magnesium	584	Thallium[b]	0.23
Cadmium	0.79	Manganese	125	Vanadium	17.1
Calcium	963	Mercury	0.10	Zinc	18.9
Chromium	11.0	Nickel	7.61		
Cobalt	4.39	Potassium	250		

All values except those with footnotes a or b are medians from *Background Concentrations and Human Health Risk-based Screening Criteria for Metals in Soil at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE/OR/07-1417&D2).

[a] Value is mean for A horizon soils in *Background Levels of Selected Radionuclides and Metals in Soils and Geologic Media at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE/OR/07-1586&D2).

[b] Value is mean for B horizon soils in *Background Levels of Selected Radionuclides and Metals in Soils and Geologic Media at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE/OR/07-1586&D2).

Table C.4.7. Average background concentrations for radionuclides in soil at the PGDP

Analyte	Concentration	Analyte	Concentration	Analyte	Concentration
Radionuclides (pCi/g) in Surface Soil (A Horizon Soil)					
^{137}Cs	0.248	^{90}Sr	0	^{234}U	0.926
^{237}Np	0.014	^{99}Tc	0.151	^{235}U	0.054
^{238}Pu	0.002	^{228}Th	1.147	^{238}U	0.965
^{239}Pu	0.009	^{230}Th	1.116		
^{226}Ra	1.088	^{232}Th	1.075		
Radionuclides (pCi/g) in Subsurface Soil (B Horizon Soil)					
^{137}Cs	0.037	^{90}Sr	0	^{234}U	0.879
^{237}Np	0	^{99}Tc	0.395	^{235}U	0.053
^{238}Pu	0	^{228}Th	1.152	^{238}U	0.911
^{239}Pu	0	^{230}Th	1.109		
^{226}Ra	1.125	^{232}Th	1.085		

All values are means from Table 3.3 in *Background Levels of Selected Radionuclides and Metals in Soils and Geologic Media at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE/OR/07-1586&D2).

Table C.4.8. Summary of soil COPC screening

Chemical	Units	Volume Weighted Average yd^3	Comparison Criteria: Average Subsurface Background	PQL or MDA	SSL (DAF=20)	No Action Industrial Worker	Keep or Drop
		Anion					
Chloride	mg/kg	3.57		1			Drop
Fluoride	mg/kg	99.2		1		1240	Keep
Nitrate/Nitrite	mg/kg	4.05		1		34100	Keep
Sulfate	mg/kg	357		1			Keep
		Dioxins and Furans					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	mg/kg	2.04E-06		0.001			Drop
1,2,3,4,6,7,8-Heptachlorodibenzofuran	mg/kg	3.50E-07		0.001			Drop
1,2,3,4,7,8,9-Heptachlorodibenzofuran	mg/kg	2.96E-07		0.001			Drop
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	mg/kg	2.94E-07		0.001			Drop
1,2,3,4,7,8-Hexachlorodibenzofuran	mg/kg	3.05E-07		0.001			Drop
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	mg/kg	3.34E-07		0.001			Drop
1,2,3,6,7,8-Hexachlorodibenzofuran	mg/kg	2.95E-07		0.001			Drop
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	mg/kg	3.04E-07		0.001	0.065	5.07E-05	Drop
1,2,3,7,8,9-Hexachlorodibenzofuran	mg/kg	2.89E-07		0.001			Drop
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	mg/kg	2.89E-07		0.001			Drop
1,2,3,7,8-Pentachlorodibenzofuran	mg/kg	2.91E-07		0.001		1.24E-05	Drop
2,3,4,6,7,8-Hexachlorodibenzofuran	mg/kg	2.96E-07		0.001			Drop
2,3,4,7,8-Pentachlorodibenzofuran	mg/kg	2.98E-07		0.001		1.24E-04	Drop
2,3,7,8-Tetrachlorodibenzo-p-dioxin	mg/kg	6.19E-07		0.001	5.60E-06	6.19E-06	Drop
2,3,7,8-Tetrachlorodibenzofuran	mg/kg	3.40E-07		0.001		6.19E-05	Drop
Heptachloro-dibenzo[b,e][1,4]dioxin	mg/kg	3.56E-05		0.001		6.19E-04	Drop
Heptachlorodibenzofuran	mg/kg	1.26E-05		0.001		6.19E-04	Drop
Hexachloro-dibenzo[b,e][1,4]dioxin	mg/kg	4.05E-06		0.005		6.19E-05	Drop
Hexachlorodibenzofuran	mg/kg	4.13E-06		0.005		6.19E-05	Drop
Octachloro-dibenzo[b,e][1,4]dioxin	mg/kg	1.68E-04		0.001		0.00619	Drop
Octachlorodibenzofuran	mg/kg	1.15E-05		0.001	0.0476	0.00619	Drop
Pentachloro-dibenzo[b,e][1,4]dioxin	mg/kg	4.16E-06		0.005		1.24E-05	Drop
Pentachlorodibenzofuran	mg/kg	4.94E-06		0.005			Drop
Tetrachloro-dibenzo[b,e][1,4]dioxin	mg/kg	6.38E-06		0.005			Drop
Tetrachlorodibenzofuran	mg/kg	3.32E-06		0.005			Drop
		Metals					
Aluminum	mg/kg	6480	4870	10		4640	Drop
Antimony	mg/kg	3.4	4.62	0.5	5.4	0.379	Drop
Arsenic	mg/kg	3.42	1.99	0.5	200	0.523	Keep
Barium	mg/kg	63.3	38.9	1	1600	229	Drop
Beryllium	mg/kg	0.507	0.49	0.1	63	0.948	Drop
Bismuth	mg/kg	3.14		1			Drop
Boron	mg/kg	50.1		20	210	1740	Drop
Cadmium	mg/kg	0.85	0.79	0.1	7.5	21.3	Drop
Calcium	mg/kg	4930	963	10			Drop
Chromium	mg/kg	13.1	11	0.5			Keep
Chromium, hexavalent	mg/kg	1.5		5	42	2.84	Drop
Cobalt	mg/kg	5.34	4.39	0.5	109	1920	Drop
Copper	mg/kg	8.78	6.17	0.5	11000	493	Drop
Iron	mg/kg	13100	11800	10		2070	Drop
Lead	mg/kg	10.4	6.89	0.3	81.1	50	Drop
Lithium	mg/kg	7.18		5	181	641	Drop
Magnesium	mg/kg	734	5.84	10			Drop
Manganese	mg/kg	227	125	1	2200	86.6	Keep
Mercury	mg/kg	0.094	0.1	0.1	2.1	0.982	Drop
Molybdenum	mg/kg	4.31		10	74	83	Drop
Nickel	mg/kg	10.9	7.61	1	950	242	Drop
Niobium	mg/kg	1.26		5	186000		Drop

Table C.4.8. Summary of soil COPC screening (continued)

Chemical	Units	Volume Weighted Average yd^3	Comparison Criteria: Average Subsurface Background	PQL or MDA	SSL (DAF=20)	No Action Industrial Worker	Keep or Drop
Phosphorous	mg/kg	547		10	0.054		Drop
Potassium	mg/kg	345	250	20			Drop
Ruthenium	mg/kg	17.3		5			Keep
Selenium	mg/kg	0.308	0.3	0.5	300	94.9	Drop
Silicon	mg/kg	545		10			Keep
Silver	mg/kg	1.21	0.96	0.5	31	41.1	Drop
Sodium	mg/kg	163	166	20			Drop
Strontium	mg/kg	79		5	15000	5450	Drop
Tantalum	mg/kg	28.6		5			Keep
Thallium	mg/kg	0.603	0.23	0.2	2.85		Keep
Thorium	mg/kg	8.7		5			Keep
Tin	mg/kg	8.56		10	2330	2790	Drop
Titanium	mg/kg	318		5			Drop
Tungsten	mg/kg	34.9		50			Drop
Uranium	mg/kg	29.7	3.62	5	3.19	101	Keep
Vanadium	mg/kg	19.6	17.1	1	5100	3.32	Keep
Zinc	mg/kg	29.6	18.9	1	14000	2730	Drop
Zirconium	mg/kg	12.4		5			Keep
PCBs							
PCB-1016	mg/kg	0.00876		0.033	0.056	0.199	Drop
PCB-1221	mg/kg	0.00849		0.033	0.0352	0.199	Drop
PCB-1232	mg/kg	0.00835		0.033	0.112	0.199	Drop
PCB-1242	mg/kg	0.0114		0.033	0.056	0.199	Drop
PCB-1248	mg/kg	0.0222		0.033	1.1	0.199	Drop
PCB-1254	mg/kg	0.0362		0.033	0.34	0.199	Drop
PCB-1260	mg/kg	0.0673		0.033	0.49	0.199	Drop
PCB-1262	mg/kg	3.60E-04		0.033			Drop
PCB-1268	mg/kg	7.97E-04		0.033			Drop
Polychlorinated biphenyl	mg/kg	1.09		0.033	6.2	0.199	Keep
Polychlorinated biphenyls 132	mg/kg	4.61E-04		0.033			Drop
Polychlorinated biphenyls 153	mg/kg	0.00131		0.033			Drop
Polychlorinated biphenyls 170	mg/kg	4.02E-04		0.033			Drop
Polychlorinated biphenyls 171	mg/kg	2.53E-04		0.033			Drop
Polychlorinated biphenyls 174	mg/kg	3.03E-04		0.033			Drop
Polychlorinated biphenyls 180	mg/kg	4.71E-04		0.033			Drop
Polychlorinated biphenyls 31	mg/kg	2.33E-04		0.033			Drop
Polychlorinated biphenyls 99	mg/kg	4.46E-04		0.033			Drop
Pesticides							
2,2',3,3',5,6'-Hexachlorobiphenyl	mg/kg	2.08E-04		0.002			Drop
2,2',3,4',5',6-Hexachloro-1,1'-biphenyl	mg/kg	4.96E-04		0.002			Drop
2,2',3,4-Tetrachlorobiphenyl	mg/kg	8.78E-04		0.002			Drop
4,4'-DDD	mg/kg	8.60E-04		0.002	14	5.09	Drop
4,4'-DDE	mg/kg	8.48E-04		0.002	45	3.59	Drop
4,4'-DDT	mg/kg	8.50E-04		0.002	26	3.59	Drop
Aldrin	mg/kg	4.82E-04		0.002	0.49	0.0185	Drop
Chlordene	mg/kg	1.58E-04		0.002			Drop
Dieldrin	mg/kg	8.56E-04		0.002	0.0046	0.0197	Drop
Endosulfan I	mg/kg	4.65E-04		0.002		67.4	Drop
Endosulfan II	mg/kg	0.00181		0.002		67.4	Drop
Endosulfan sulfate	mg/kg	8.34E-04		0.002		67.4	Drop
Endrin	mg/kg	8.27E-04		0.002	0.99	0.142	Drop
Endrin aldehyde	mg/kg	1.13E-04		0.002		0.142	Drop
Endrin ketone	mg/kg	7.35E-04		0.002		0.142	Drop
Heptachlor	mg/kg	4.75E-04		0.002	23	0.0983	Drop

Table C.4.8. Summary of soil COPC screening (continued)

Chemical	Units	Volume Weighted Average yd^3	Comparison Criteria: Average Subsurface Background	PQL or MDA	SSL (DAF=20)	No Action Industrial Worker	Keep or Drop
Heptachlor epoxide	mg/kg	4.64E-04		0.002	0.67	0.0486	Drop
Lindane	mg/kg	4.78E-04		0.002	0.0094	0.968	Drop
Methoxychlor	mg/kg	0.00375		0.017	160	56.2	Drop
Toxaphene	mg/kg	0.00854		0.17	31	0.286	Drop
alpha-BHC	mg/kg	4.77E-04		0.002	7.20E-04	0.2	Drop
alpha-Chlordane	mg/kg	0.00355		0.002		2.08	Keep
beta-BHC	mg/kg	4.96E-04		0.002	0.0026	0.665	Drop
delta-BHC	mg/kg	0.0005		0.002			Drop
gamma-Chlordane	mg/kg	0.00355		0.002		2.08	Keep
		Radionuclides					
Actinium-228	pCi/g	0.642		1	214	0.0668	Drop
Alpha activity	pCi/g	15.2					Drop
Americium-241	pCi/g	1.73		0.4	2.52	8.09	Drop
Americium-243	pCi/g	0.204		0.2	2.52	0.759	Drop
Antimony-124	pCi/g	0.00402		1	3.27	0.0298	Drop
Antimony-125	pCi/g	0.0114		0.2	11.8	0.163	Drop
Barium-133	pCi/g	0.00599		1	8.66	0.239	Drop
Barium-140	pCi/g	0.00983		1	1.98	0.365	Drop
Beta activity	pCi/g	39.4					Drop
Beta/Gamma Activity	pCi/g	85		1			Drop
Bismuth-211	pCi/g	1.88		1	4250	1.48	Drop
Bismuth-212	pCi/g	0.577		1	125	0.328	Drop
Bismuth-214	pCi/g	0.686		1	397	0.0364	Drop
Cerium-139	pCi/g	0.00142		1			Drop
Cerium-141	pCi/g	0.032		1	98.8	1.55	Drop
Cerium-144	pCi/g	0.0103		0.5	21.1	1.36	Drop
Cesium-134	pCi/g	0.00489		0.1	16.3	0.0372	Drop
Cesium-136	pCi/g	0.0106		1	28	0.0269	Drop
Cesium-137	pCi/g	0.145	0.037	0.1	40.8	0.105	Keep
Chromium-51	pCi/g	0.0195		1	108	2.15	Drop
Cobalt-56	pCi/g	0.00559		1			Drop
Cobalt-57	pCi/g	0.00212		0.01	6	1.06	Drop
Cobalt-58	pCi/g	4.30E-04		1	16.5	0.0587	Drop
Cobalt-60	pCi/g	0.966		0.1	0.6	0.0224	Keep
Europium-152	pCi/g	0.00149		0.5	33.1	0.0537	Drop
Europium-154	pCi/g	8.31E-04		0.2	20.2	0.0471	Drop
Europium-155	pCi/g	0.0762		0.2	115	3.6	Drop
Iridium-192	pCi/g	0.00247		1	18	0.0811	Drop
Iron-59	pCi/g	0.00924		1	29	0.0473	Drop
Lead-210	pCi/g	0.999		1	0.0067	3.16	Drop
Lead-211	pCi/g	1.88		1	616	1.18	Drop
Lead-212	pCi/g	0.552		1	11.6	0.727	Drop
Lead-214	pCi/g	0.705		1	708	0.309	Drop
Manganese-54	pCi/g	0.023		0.1	30.6	0.0672	Drop
Mercury-203	pCi/g	0.00437		1	15.3	0.349	Drop
Neodymium-147	pCi/g	0.543		1	85.4	0.679	Drop
Neptunium-237	pCi/g	0.0328	0	1	0.09	0.454	Drop
Neptunium-239	pCi/g	0.0335		1	0.956	0.904	Drop
Niobium-94	pCi/g	0.0049		1	17.9	0.036	Drop
Niobium-95	pCi/g	0.0523		1	55.1	0.0745	Drop
Plutonium-238	pCi/g	9.59E-04	0	0.5	1.56	10.8	Drop
Plutonium-239	pCi/g	0.023	0	0.2	1.56	10.1	Drop
Plutonium-239/240	pCi/g	0.115		0.5	1.56	10.1	Drop
Plutonium-242	pCi/g	0.0427		0.2	1.56	10.6	Drop
Potassium-40	pCi/g	8.06		1		0.358	Drop

Table C.4.8. Summary of soil COPC screening (continued)

Chemical	Units	Volume Weighted Average yd^3	Comparison Criteria: Average Subsurface Background	PQL or MDA	SSL (DAF=20)	No Action Industrial Worker	Keep or Drop
Promethium-146	pCi/g	0.00793		0.1			Drop
Protactinium-231	pCi/g	0.517		1	2.85	5.87	Drop
Protactinium-233	pCi/g	0.0338		1	90.6	0.482	Drop
Protactinium-234	pCi/g	0.167		0.2	80900	0.0332	Drop
Protactinium-234m	pCi/g	192		1	80900	5.41	Keep
Radium-223	pCi/g	0.168		1	1.65	0.842	Drop
Radium-226	pCi/g	0.899	1.13	1	0.32	0.0324	Drop
Radium-228	pCi/g	0.741		1	0.32	0.0664	Drop
Radon-219	pCi/g	0.22		1		1.27	Drop
Radon-222	pCi/g	0.737		0.2		33900000	Drop
Ruthenium-106	pCi/g	0.0108		0.8	3.12	0.288	Drop
Silver-110m	pCi/g	0.00101		1	5.22	0.0209	Drop
Sodium-22	pCi/g	0.00217		0.7	9.65	0.0268	Drop
Strontium-90	pCi/g	0	0	1	0.192	57.2	Drop
Technetium-99	pCi/g	2.51	0.395	5	3.73	2270	Drop
Thallium-208	pCi/g	0.211		1	3150	0.0151	Drop
Thorium-227	pCi/g	0.0391		1	57.4	1.24	Drop
Thorium-228	pCi/g	1.16	1.15	0.5	6.06	0.0352	Keep
Thorium-229	pCi/g	0.0148		1	6.06	0.276	Drop
Thorium-230	pCi/g	1.63	1.11	0.5	6.06	83.4	Drop
Thorium-232	pCi/g	1	1.09	0.5	6.06	96	Drop
Thorium-234	pCi/g	14.5		1	120	45.4	Drop
Tin-113	pCi/g	1.94E-04		1	27.1	68.1	Drop
Uranium	pCi/g	3.95		1	0.24		Keep
Uranium Total (calculated)	pCi/g	2.01		1	0.24		Keep
Uranium-234	pCi/g	0.948	0.879	0.5	0.24	71.3	Keep
Uranium-235	pCi/g	0.212	0.053	0.5	0.24	0.816	Drop
Uranium-235/236	pCi/g	0.14		1	0.24	0.816	Drop
Uranium-238	pCi/g	1.06	0.911	0.5	0.24	3.13	Keep
Yttrium-88	pCi/g	0.00811		0.1			Drop
Zinc-65	pCi/g	0.00932		0.2	1.8	0.0964	Drop
Zirconium-95	pCi/g	0.05		1	118	0.0779	Drop
		Semivolatile Organics					
1,2,4,5-Tetrachlorobenzene	mg/kg	7.37E-05		0.33	2	5.22	Drop
1,2,4-Trichlorobenzene	mg/kg	0.0744		0.33	5.3	82.8	Drop
1,2-Dichlorobenzene	mg/kg	0.0744		0.33	17	268	Drop
1,2-Diphenylhydrazine	mg/kg	0.00114		0.33	0.0032	0.393	Drop
1,3-Dichlorobenzene	mg/kg	0.0742		0.33	0.0155	6.6	Drop
1,4-Dichlorobenzene	mg/kg	0.0758		0.33	2.2	4.62	Drop
1-Chloronaphtalene	mg/kg	9.19E-05		0.33			Drop
1-Naphthalenamine	mg/kg	3.50E-04		0.33			Drop
2,3,3-Trimethylhexane	mg/kg	6.51E-04		0.33			Drop
2,3,4,6-Tetrachlorophenol	mg/kg	1.10E-04		0.33	2100	337	Drop
2,3,4-Trimethylhexane	mg/kg	2.96E-04		0.33			Drop
2,3-Dimethylheptane	mg/kg	6.55E-04		0.33			Drop
2,4,5-Trichlorophenol	mg/kg	0.0964		0.8	250	1120	Drop
2,4,6-Tribromophenol	mg/kg	0.0273		0.33			Drop
2,4,6-Trichlorophenol	mg/kg	0.076		0.33	0.15	28.6	Drop
2,4-Dichlorophenol	mg/kg	0.0742		0.33	1.1	53.4	Drop
2,4-Dimethylheptane	mg/kg	3.37E-04		0.33			Drop
2,4-Dimethylphenol	mg/kg	0.0743		0.33	9	225	Drop
2,4-Dinitrophenol	mg/kg	0.23		0.8	0.29	42.6	Drop
2,4-Dinitrotoluene	mg/kg	0.076		0.33	9.80E-04	0.757	Drop
2,5-Hexanedione	mg/kg	9.92E-05		0.33			Drop
2,6-Dichlorophenol	mg/kg	0.00214		0.33			Drop

Table C.4.8. Summary of soil COPC screening (continued)

Chemical	Units	Volume Weighted Average yd^3	Comparison Criteria: Average Subsurface Background	PQL or MDA	SSL (DAF=20)	No Action Industrial Worker	Keep or Drop
2,6-Dimethylheptane	mg/kg	4.37E-04		0.33			Drop
2,6-Dinitrotoluene	mg/kg	0.0742		0.33	8.50E-04	0.757	Drop
2,7,10-Trimethyldodecane	mg/kg	1.69E-04		0.33			Drop
2-Chloronaphthalene	mg/kg	0.0742		0.33	270	220	Drop
2-Chlorophenol	mg/kg	0.0742		0.33	3.6	18.1	Drop
2-Fluoro-1,1'-biphenyl	mg/kg	0.0273		0.33			Drop
2-Fluorophenol	mg/kg	0.0273		0.33			Drop
2-Methyl-4,6-dinitrophenol	mg/kg	0.224		0.8			Drop
2-Methylnaphthalene	mg/kg	0.0728		0.33			Drop
2-Methyloctane	mg/kg	2.98E-04		0.33			Drop
2-Methylphenol	mg/kg	0.0755		0.33	14	562	Drop
2-Methylpyridine	mg/kg	6.18E-04		0.33			Drop
2-Naphthalenamine	mg/kg	6.07E-04		0.33			Drop
2-Nitrobenzenamine	mg/kg	0.226		0.8	3.85E-04	0.642	Drop
2-Nitrophenol	mg/kg	0.0742		0.33			Drop
3,3'-Dichlorobenzidine	mg/kg	0.106		0.33	0.0062	0.699	Drop
3,5-Dimethyl-Octane	mg/kg	4.91E-04		0.33			Drop
3- and 4- Methylphenol	mg/kg	0.00202		0.33			Drop
3-Methylcholanthrene	mg/kg	1.85E-04		0.33			Drop
3-Methylene-heptane	mg/kg	9.92E-05		0.33			Drop
3-Nitrobenzenamine	mg/kg	0.226		0.8			Drop
4-Aminobiphenyl	mg/kg	5.26E-04		0.33			Drop
4-Bromophenyl phenyl ether	mg/kg	0.0715		0.33			Drop
4-Chloro-3-methylphenol	mg/kg	0.104		0.33			Drop
4-Chlorobenzenamine	mg/kg	0.104		0.33	0.97	44.9	Drop
4-Chlorophenyl phenyl ether	mg/kg	0.0716		0.33			Drop
4-Methylphenol	mg/kg	0.0681		0.33	1.3	71.8	Drop
4-Nitrobenzenamine	mg/kg	0.226		0.8			Drop
4-Nitrophenol	mg/kg	0.226		0.8	0.0725	170	Drop
4-alpha-Cumylphenol	mg/kg	0.00189		0.33			Drop
7,12-Dimethylbenz(a)anthracene	mg/kg	7.89E-04		0.33			Drop
Acenaphthene	mg/kg	0.0737		0.33	630	316	Drop
Acenaphthylene	mg/kg	0.076		0.33			Drop
Acetophenone	mg/kg	7.37E-05		0.33	18	0.167	Drop
Aniline	mg/kg	0.0225		0.33	0.068	55.2	Drop
Anthracene	mg/kg	0.114		0.33	13000	3790	Drop
Benz(a)anthracene	mg/kg	0.132		0.33	0.189	0.212	Drop
Benzenemethanol	mg/kg	0.0935		0.33	63	4370	Drop
Benzidine	mg/kg	0.023		0.33	3.80E-06	0.00212	Drop
Benzo(a)pyrene	mg/kg	0.129		0.33	8.2	0.0212	Drop
Benzo(b)fluoranthene	mg/kg	0.154		0.33	0.468	0.212	Drop
Benzo(ghi)perylene	mg/kg	0.0757		0.33			Drop
Benzo(k)fluoranthene	mg/kg	0.143		0.33	8.27	2.12	Drop
Benzoic acid	mg/kg	0.205		0.8	590	85200	Drop
Bis(2-butoxyethyl) ether	mg/kg	4.03E-04		0.33			Drop
Bis(2-chloroethoxy)methane	mg/kg	0.0742		0.33			Drop
Bis(2-chloroethyl) ether	mg/kg	0.0716		0.33	3.60E-04	0.0941	Drop
Bis(2-chloroisopropyl) ether	mg/kg	0.0716		0.33	0.0079	4.49	Drop
Bis(2-ethylhexyl)phthalate	mg/kg	0.0746		0.33	3600	8.84	Drop
Butyl benzyl phthalate	mg/kg	0.0687		0.33	17000	2710	Drop
Carbazole	mg/kg	0.0364		0.33	0.59	21.5	Drop
Chrysene	mg/kg	0.137		0.33	21.1	21.2	Drop
Cineole	mg/kg	1.23E-05		0.33			Drop
Di-n-butyl phthalate	mg/kg	0.102		0.33	5000	2130	Drop
Di-n-octylphthalate	mg/kg	0.0742		0.33	2400000	387	Drop
Dibenz(a,h)anthracene	mg/kg	0.0895		0.33	0.0326	0.0212	Drop

Table C.4.8. Summary of soil COPC screening (continued)

Chemical	Units	Volume Weighted Average yd^3	Comparison Criteria: Average Subsurface Background	PQL or MDA	SSL (DAF=20)	No Action Industrial Worker	Keep or Drop
Dibenzofuran	mg/kg	0.0707		0.33	48	18.6	Drop
Dibenzothiophene	mg/kg	4.59E-04		0.33			Drop
Diethyl phthalate	mg/kg	0.0789		0.33	450	15500	Drop
Dimethyl phthalate	mg/kg	0.0743		0.33	81.5	194000	Drop
Dioctyl hexanedioate	mg/kg	2.83E-04		0.33			Drop
Diphenyldiazene	mg/kg	0.0273		0.33	0.086	2.86	Drop
Docosane	mg/kg	4.60E-04		0.33			Drop
Dodecane	mg/kg	0.00193		0.33			Drop
Ethyl methanesulfonate	mg/kg	7.37E-05		0.33			Drop
Fluoranthene	mg/kg	0.2		0.33	6300	221	Drop
Fluorene	mg/kg	0.0725		0.33	810	339	Drop
Hexachlorobenzene	mg/kg	0.076		0.33	2.2	0.197	Drop
Hexachlorobiphenyl	mg/kg	0.00158		0.33			Drop
Hexachlorobutadiene	mg/kg	0.076		0.33	2.4	2.25	Drop
Hexachlorocyclopentadiene	mg/kg	0.0742		0.33	400	78.6	Drop
Hexachloroethane	mg/kg	0.076		0.33	0.46	11.2	Drop
Hexacosane	mg/kg	4.60E-04		0.33			Drop
Hexadecane	mg/kg	0.00172		0.33			Drop
Indeno(1,2,3-cd)pyrene	mg/kg	0.102		0.33	0.876	0.212	Drop
Isophorone	mg/kg	0.0742		0.33	0.53	331	Drop
Methyl methanesulfonate	mg/kg	6.31E-04		0.33			Drop
N-Nitroso-di-n-propylamine	mg/kg	0.0744		0.33	6.00E-05	0.0231	Drop
N-Nitrosodimethylamine	mg/kg	0.0243		0.33	7.20E-06	0.00617	Drop
N-Nitrosodiphenylamine	mg/kg	0.079		0.33	0.97	33	Drop
N-Nitrosopiperidine	mg/kg	7.37E-05		0.33			Drop
Naphthalene	mg/kg	0.0738		0.33	61	23.6	Drop
Nitrobenzene	mg/kg	0.076		0.33	0.12	3.33	Drop
Nitrobenzene-d5	mg/kg	0.0273		0.33			Drop
Octane	mg/kg	9.42E-05		0.33			Drop
Octathiocane	mg/kg	0.00144		0.33			Drop
Pentachlorobenzene	mg/kg	8.30E-05		0.33	74	13.9	Drop
Pentachloronitrobenzene	mg/kg	1.19E-04		0.33	0.47	1.87	Drop
Pentachlorophenol	mg/kg	0.229		0.8	0.028	2.12	Drop
Phenacetin	mg/kg	1.29E-04		0.33			Drop
Phenanthrene	mg/kg	0.16		0.33			Drop
Phenol	mg/kg	0.0758		0.33	110	11600	Drop
Phenol-d5	mg/kg	0.0273		0.33			Drop
Polycyclic aromatic hydrocarbons (PAH)	mg/kg	0.0522		0.33			Drop
Pronamide	mg/kg	1.10E-04		0.33	320	842	Drop
Pyrene	mg/kg	0.188		0.33	4600	165	Drop
Pyridine	mg/kg	0.0267		0.33	0.15	11.2	Drop
Tetradecane	mg/kg	0.00134		0.33			Drop
Total Cresols	mg/kg	0.0159		0.33		71.8	Drop
a,a-Dimethylphenethylamine	mg/kg	1.19E-04		0.33			Drop
m,p-Cresol	mg/kg	0.00559		0.33		71.8	Drop
n-Octacosane	mg/kg	4.35E-04		0.33			Drop
n-Tetracosane	mg/kg	4.60E-04		0.33			Drop
p-Dimethylaminoazobenzene	mg/kg	1.85E-04		0.33			Drop
p-Terphenyl-d14	mg/kg	0.0273		0.33			Drop
trans-Decahydronaphthalene	mg/kg	2.83E-04		0.33			Drop
		Volatile Organics					
1,1,1,2-Tetrachloroethane	mg/kg	4.59E-04		0.01	0.14	4.77	Drop
1,1,1-Trichloroethane	mg/kg	0.00694		0.005	1.9	156	Drop
1,1,2,2-Tetrachloroethane	mg/kg	0.00346		0.005	0.0033	0.489	Drop
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	2.43E-06		0.02	53000	8420	Drop

Table C.4.8. Summary of soil COPC screening (continued)

Chemical	Units	Volume Weighted Average yd^3	Comparison Criteria: Average Subsurface Background	PQL or MDA	SSL (DAF=20)	No Action Industrial Worker	Keep or Drop
1,1,2-Trichloroethane	mg/kg	0.00346		0.005	0.018	1.17	Drop
1,1-Dichloroethane	mg/kg	4.78E-03		0.005	21	155	Drop
1,1-Dichloroethene	mg/kg	0.0391		0.005	0.058	0.0938	Drop
1,2,3-Trichloropropane	mg/kg	4.59E-04		0.01	7.40E-05	0.0022	Drop
1,2-Dibromoethane	mg/kg	4.59E-04		0.005	5.80E-04	0.0024	Drop
1,2-Dichloroethane	mg/kg	0.00409		0.005	0.024	0.528	Drop
1,2-Dichloroethene	mg/kg	1.22E-04		0.005	0.0174	66	Drop
1,2-Dichloropropane	mg/kg	0.00346		0.005	0.03	0.621	Drop
1,2-Dimethylbenzene	mg/kg	0.00313		0.005	190	4530	Drop
1-Methyl-2-propylcyclohexane	mg/kg	4.71E-04		0.01			Drop
2,5-Dimethylheptane	mg/kg	0.00112		0.01			Drop
2,5-Dimethylhexane	mg/kg	6.13E-04		0.01			Drop
2-Butanone	mg/kg	0.0138		0.02	89	1030	Drop
2-Chloro-1,3-butadiene	mg/kg	4.59E-04		0.01	11	11.6	Drop
2-Chloroethyl vinyl ether	mg/kg	7.81E-04		0.01			Drop
2-Hexanone	mg/kg	0.00729		0.02			Drop
2-Methyl-2-heptene	mg/kg	9.42E-05		0.01			Drop
2-Methyldecane	mg/kg	1.24E-04		0.01			Drop
2-Propanol	mg/kg	0.0046		0.01			Drop
3,4-Dimethylheptane	mg/kg	2.28E-04		0.01			Drop
4-Heptanone	mg/kg	8.25E-04		0.01			Drop
4-Methyl-2-pentanone	mg/kg	0.00903		0.02	12	65.1	Drop
4-Methyl-3-penten-2-one	mg/kg	5.64E-04		0.01			Drop
Acetone	mg/kg	0.0133		0.02	15	358	Drop
Acrolein	mg/kg	0.00882		0.01	2.9	0.029	Drop
Acrylonitrile	mg/kg	0.00882		0.01	6.30E-04	0.215	Drop
Benzene	mg/kg	0.00646		0.005	0.034	1.13	Drop
Bromodichloromethane	mg/kg	0.00346		0.005	0.63	1.34	Drop
Bromoform	mg/kg	0.00346		0.005	0.75	47.2	Drop
Bromomethane	mg/kg	0.00393		0.005	0.25	1.25	Drop
Carbon disulfide	mg/kg	0.00346		0.005	29	106	Drop
Carbon tetrachloride	mg/kg	0.00409		0.005	0.066	0.405	Drop
Chlorobenzene	mg/kg	0.00409		0.005	1.3	28.9	Drop
Chloroethane	mg/kg	0.00393		0.005	0.0243	3.43	Drop
Chloroform	mg/kg	0.00409		0.005	0.59	0.123	Drop
Chloromethane	mg/kg	0.00397		0.005	0.04	3.06	Drop
Decane	mg/kg	5.21E-04		0.01			Drop
Dibromochloromethane	mg/kg	0.00346		0.005	0.39	1.1	Drop
Dibromomethane	mg/kg	4.59E-04		0.01	1.5	21.3	Drop
Dichlorodifluoromethane	mg/kg	4.72E-04		0.01	550	34.9	Drop
Dimethylbenzene	mg/kg	0.00302		0.01	1400	724	Drop
Ethyl cyanide	mg/kg	0.00882		0.01			Drop
Ethyl methacrylate	mg/kg	4.59E-04		0.01	16	660	Drop
Ethylbenzene	mg/kg	0.00586		0.005	13	21.2	Drop
Iodomethane	mg/kg	6.00E-04		0.01			Drop
Methacrylonitrile	mg/kg	0.0023		0.01	0.021	0.457	Drop
Methyl Isobutyl Carbinol	mg/kg	1.19E-04		0.01			Drop
Methyl methacrylate	mg/kg	4.59E-04		0.01	230	1060	Drop
Methylene chloride	mg/kg	0.00428		0.005	0.023	13.4	Drop
Pentachloroethane	mg/kg	4.59E-04		0.01			Drop
Styrene	mg/kg	0.00346		0.005	3.5	858	Drop
Tetrachloroethene	mg/kg	0.00748		0.005	0.058	3.9	Drop
Toluene	mg/kg	0.00587		0.002	12	211	Drop
Trans-1,4-Dichloro-2-butene	mg/kg	4.59E-04		0.01			Drop
Trichloroethene	mg/kg	0.118		0.005	0.057	2.51	Keep
Trichlorofluoromethane	mg/kg	3.96E-04		0.01	160	128	Drop

Table C.4.8. Summary of soil COPC screening (continued)

Chemical	Units	Volume Weighted Average yd^3	Comparison Criteria				Keep or Drop
			Average Subsurface Background	PQL or MDA	SSL (DAF=20)	No Action Industrial Worker	
Vinyl acetate	mg/kg	0.00392		0.01	160	144	Drop
Vinyl chloride	mg/kg	0.25		0.005	0.013	0.134	Keep
cis-1,2-Dichloroethene	mg/kg	0.304		0.005	0.4	13.4	Drop
cis-1,3-Dichloropropene	mg/kg	0.00346		0.005		0.831	Drop
m,p-Xylene	mg/kg	0.00634		0.005		4500	Drop
trans-1,2-Dichloroethene	mg/kg	0.115		0.005	0.68	22	Drop
trans-1,3-Dichloropropene	mg/kg	0.00346		0.005		0.831	Drop

The average concentrations for each OU or SWMU are calculated using half the detection limit for non-detects (except for TCE, cis-1,2-DCE, trans-1,2-DCE, vinyl chloride and rads). Negative rad results were set to 0 before calculating the average.

All concentrations are rounded to 3 significant digits.