Table G.7. Predicted Peak Concentrations of Key Constituents from Wastes Disposed of Before 2008 at a 1-km Line of Analysis, All Action Alternatives

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Pre-1970 LLW										
200 East Area										
C-14	2,000									
Tc-99	900	5.16E-01	1.44E+01	110	5.16E-01	1.44E+01	110	5.16E-01	1.44E+01	110
Grouted Tc-99	900									
I-129	1	1.24E-03	3.47E-02	110	1.24E-03	3.47E-02	110	1.24E-03	3.47E-02	110
Grouted I-129	1									
U-233	(a)	1.03E+01	3.20E-01	10,000	1.03E+01	3.20E-01	10,000	1.03E+01	3.20E-01	10,000
U-234	(a)	3.68E-01	1.14E-02	10,000	3.68E-01	1.14E-02	10,000	3.68E-01	1.14E-02	10,000
U-235	(a)	1.12E-02	3.48E-04	10,000	1.12E-02	3.48E-04	10,000	1.12E-02	3.48E-04	10,000
U-236	(a)	7.53E-03	2.34E-04	10,000	7.53E-03	2.34E-04	10,000	7.53E-03	2.34E-04	10,000
U-238	(a)	2.69E-01	8.35E-03	10,000	2.69E-01	8.35E-03	10,000	2.69E-01	8.35E-03	10,000
200 West Area	(a)									
C-14	2,000									
Tc-99	900	1.30E-01	2.71E+00	190	1.30E-01	2.71E+00	190	1.30E-01	2.71E+00	190
Grouted Tc-99	900		0.00E+00			0.00E+00			0.00E+00	
I-129	1	1.70E-04	3.54E-03	190	1.70E-04	3.54E-03	190	1.70E-04	3.54E-03	190
Grouted I-129	1									
U-233	(a)									
U-234	(a)	1.45E+00	0.00E+00	10,000	1.45E+00	0.00E+00	10,000	1.45E+00	0.00E+00	10,000
U-235	(a)	4.38E-02	0.00E+00	10,000	4.38E-02	0.00E+00	10,000	4.38E-02	0.00E+00	10,000
U-236	(a)	2.95E-02	0.00E+00	10,000	2.95E-02	0.00E+00	10,000	2.95E-02	0.00E+00	10,000
U-238	(a)	1.06E+00	0.00E+00	10,000	1.06E+00	0.00E+00	10,000	1.06E+00	0.00E+00	10,000
1970-1987 LLW										
200 East Area										
C-14	2,000	2.15E+02	5.41E+00	10,000	2.15E+02	5.41E+00	10,000	2.15E+02	5.41E+00	10,000
Tc-99	900									
Grouted Tc-99	900									
I-129	1	1.87E-02	5.23E-01	110	1.87E-02	5.23E-01	110	1.87E-02	5.23E-01	110
Grouted I-129	1									
U-233	(a)									
U-234	(a)	3.08E-02	1.89E-03	10,000	3.08E-02	1.89E-03	10,000	3.08E-02	1.89E-03	10,000
U-235	(a)	2.61E-03	1.60E-04	10,000	2.61E-03	1.60E-04	10,000	2.61E-03	1.60E-04	10,000
U-236	(a)									
U-238	(a)	6.28E-02	3.85E-03	10,000	6.28E-02	3.85E-03	10,000	6.28E-02	3.85E-03	10,000
200 West Area										
C-14	2,000	3.92E+02	0.00E+00	>10,000	3.92E+02	0.00E+00	>10,000	3.92E+02	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900									
I-129	1	1.77E-03	2.99E-02	290	1.77E-03	2.99E-02	290	1.77E-03	2.99E-02	290
Grouted I-129	1									
U-233	(a)									
U-234	(a)	3.94E+01	0.00E+00	>10,000	3.94E+01	0.00E+00	>10,000	3.94E+01	0.00E+00	>10,000
U-235	(a)	3.33E+00	0.00E+00	>10,000	3.33E+00	0.00E+00	>10,000	3.33E+00	0.00E+00	>10,000
U-236	(a)									
U-238	(a)	2.82E+01	0.00E+00	>10,000	2.82E+01	0.00E+00	>10,000	2.82E+01	0.00E+00	>10,000

Table G.7. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
1988-1995 LLW										
200 East Area										
C-14	2,000	5.11E+00	1.94E-02	10,000	5.11E+00	1.94E-02	10,000	5.11E+00	1.94E-02	10,000
Tc-99	900	1.39E-01	3.88E+00	110	1.39E-01	3.88E+00	110	1.39E-01	3.88E+00	110
Grouted Tc-99	900									
I-129	1	9.45E-05	2.64E-03	110	9.45E-05	2.64E-03	110	9.45E-05	2.64E-03	110
Grouted I-129	1									
U-233	(a)	2.09E-05	1.28E-06	10,000	2.09E-05	1.28E-06	10,000	2.09E-05	1.28E-06	10,000
U-234	(a)	1.85E-03	1.13E-04	10,000	1.85E-03	1.13E-04	10,000	1.85E-03	1.13E-04	10,000
U-235	(a)	4.29E-04	2.63E-05	10,000	4.29E-04	2.63E-05	10,000	4.29E-04	2.63E-05	10,000
U-236	(a)	1.85E-06	1.13E-07	10,000	1.85E-06	1.13E-07	10,000	1.85E-06	1.13E-07	10,000
U-238	(a)	1.93E-02	1.18E-03	10,000	1.93E-02	1.18E-03	10,000	1.93E-02	1.18E-03	10,000
200 West Area										
C-14	2,000	9.29E+00	0.00E+00	>10,000	9.29E+00	0.00E+00	>10,000	9.29E+00	0.00E+00	>10,000
Tc-99	900	4.71E-01	8.21E+00	210	4.71E-01	8.21E+00	210	4.71E-01	8.21E+00	210
Grouted Tc-99	900									
I-129	1	3.06E-02	5.34E-01	210	3.06E-02	5.34E-01	210	3.06E-02	5.34E-01	210
Grouted I-129	1									
U-233	(a)	6.54E-02	0.00E+00	>10,000	6.54E-02	0.00E+00	>10,000	6.54E-02	0.00E+00	>10,000
U-234	(a)	5.77E+00	0.00E+00	>10,000	5.77E+00	0.00E+00	>10,000	5.77E+00	0.00E+00	>10,000
U-235	(a)	1.34E+00	0.00E+00	>10,000	1.34E+00	0.00E+00	>10,000	1.34E+00	0.00E+00	>10,000
U-236	(a)	5.77E-03	0.00E+00	>10,000	5.77E-03	0.00E+00	>10,000	5.77E-03	0.00E+00	>10,000
U-238	(a)	6.03E+01	0.00E+00	>10,000	6.03E+01	0.00E+00	>10,000	6.03E+01	0.00E+00	>10,000
1996-2007 Cat 1 LLW (Alternative Groups A, C, D, and E)										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	3.33E+00	0.00E+00	>10,000	4.06E+00	0.00E+00	>10,000	5.21E+00	0.00E+00	>10,000
Tc-99	900	3.00E-01	3.00E+00	1,700	3.66E-01	3.66E+00	1,700	3.99E-01	3.99E+00	1,700
Grouted Tc-99	900									
I-129	1	2.62E-03	2.63E-02	1,700	3.20E-03	3.20E-02	1,700	3.20E-03	3.20E-02	1,700
Grouted I-129	1									
U-233	(a)	1.03E-01	0.00E+00	>10,000	1.25E-01	0.00E+00	>10,000	1.25E-01	0.00E+00	>10,000
U-234	(a)	1.70E-01	0.00E+00	>10,000	2.07E-01	0.00E+00	>10,000	9.01E-01	0.00E+00	>10,000
U-235	(a)	3.56E-02	0.00E+00	>10,000	4.34E-02	0.00E+00	>10,000	8.86E-02	0.00E+00	>10,000
U-236	(a)	4.03E-03	0.00E+00	>10,000	4.92E-03	0.00E+00	>10,000	4.92E-03	0.00E+00	>10,000
U-238	(a)	4.06E-01	0.00E+00	>10,000	4.95E-01	0.00E+00	>10,000	1.66E+00	0.00E+00	>10,000

Table G.7. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
1996-2007 Cat 3 LLW (Alternative Groups A, C, D, and E)										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	1.48E-01	0.00E+00	>10,000	1.54E-01	0.00E+00	>10,000	3.50E-01	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	7.20E+01	6.64E+00	1,230	7.20E+01	6.64E+00	1,230	7.20E+01	6.64E+00	1,230
I-129	1	3.39E-07	3.39E-06	1,700	3.53E-07	3.53E-06	1,700	3.53E-07	3.53E-06	1,700
Grouted I-129	1									
U-233	(a)	9.79E-02	0.00E+00	>10,000	1.02E-01	0.00E+00	>10,000	2.32E-01	0.00E+00	>10,000
U-234	(a)	1.24E+02	0.00E+00	>10,000	1.29E+02	0.00E+00	>10,000	2.94E+02	0.00E+00	>10,000
U-235	(a)	3.54E+00	0.00E+00	>10,000	3.69E+00	0.00E+00	>10,000	8.39E+00	0.00E+00	>10,000
U-236	(a)	1.60E+01	0.00E+00	>10,000	1.67E+01	0.00E+00	>10,000	3.80E+01	0.00E+00	>10,000
U-238	(a)	1.99E+02	0.00E+00	>10,000	2.07E+02	0.00E+00	>10,000	4.72E+02	0.00E+00	>10,000
1996-2007 Cat 1 LLW (Alternative Group B)										
200 East Area										
C-14	2,000	1.25E-01	9.91E-04	10,000	1.52E-01	1.21E-03	10,000	7.20E-01	5.73E-03	10,000
Tc-99	900	1.13E-02	9.36E-02	1,230	1.38E-02	1.14E-01	1,230	5.52E-02	4.56E-01	1,230
Grouted Tc-99	900									
I-129	1	9.84E-05	8.14E-04	1,230	1.20E-04	9.92E-04	1,230	4.42E-04	3.65E-03	1,230
Grouted I-129	1									
U-233	(a)	3.85E-03	2.08E-04	10,000	4.70E-03	2.43E-04	10,000	1.73E-02	1.20E-05	10,000
U-234	(a)	6.38E-03	3.44E-04	10,000	7.78E-03	4.02E-04	10,000	1.25E-01	8.68E-05	10,000
U-235	(a)	1.34E-03	7.20E-05	10,000	1.63E-03	8.42E-05	10,000	1.22E-02	8.47E-06	10,000
U-236	(a)	1.52E-04	8.17E-06	10,000	1.85E-04	9.55E-06	10,000	6.80E-04	4.72E-07	10,000
U-238	(a)	1.53E-02	8.21E-04	10,000	1.86E-02	9.60E-04	10,000	2.29E-01	1.59E-04	10,000
200 West Area	(a)									
C-14	2,000	3.21E+00	0.00E+00	>10,000	3.91E+00	0.00E+00	>10,000	4.49E+00	0.00E+00	>10,000
Tc-99	900	2.89E-01	2.89E+00	1,700	3.52E-01	3.52E+00	1,700	3.44E-01	3.44E+00	1,700
Grouted Tc-99	900									
I-129	1	2.53E-03	2.53E-02	1,700	3.08E-03	3.08E-02	1,700	2.76E-03	2.76E-02	1,700
Grouted I-129	1									
U-233	(a)	9.84E-02	0.00E+00	>10,000	1.20E-01	0.00E+00	>10,000	1.08E-01	0.00E+00	>10,000
U-234	(a)	1.63E-01	0.00E+00	>10,000	1.99E-01	0.00E+00	>10,000	7.77E-01	0.00E+00	>10,000
U-235	(a)	3.43E-02	0.00E+00	>10,000	4.18E-02	0.00E+00	>10,000	7.64E-02	0.00E+00	>10,000
U-236	(a)	3.88E-03	0.00E+00	>10,000	4.73E-03	0.00E+00	>10,000	4.24E-03	0.00E+00	>10,000
U-238	(a)	3.90E-01	0.00E+00	>10,000	4.76E-01	0.00E+00	>10,000	1.43E+00	0.00E+00	>10,000

Table G.7. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
1996-2007 Cat 3 LLW (Alternative Group B)										
200 East Area										
C-14	2,000		0.00E+00		5.79E-03	4.60E-05	10,000	1.32E-02	1.05E-04	10,000
Tc-99	900									
Grouted Tc-99	900	3.89E+01	1.63E+00	630	2.71E+00	1.14E-01	630	2.71E+00	1.14E-01	630
I-129	1				1.33E-08	1.10E-07	1,230	1.33E-08	1.10E-07	1,230
Grouted I-129	1									
U-233	(a)	8.49E-01	6.70E-07	10,000	3.83E-03	2.90E-09	10,000	8.70E-03	2.32E-08	10,000
U-234	(a)	4.60E-01	3.63E-07	10,000	4.85E+00	3.67E-06	10,000	1.11E+01	2.96E-05	10,000
U-235	(a)	1.90E-02	1.50E-08	10,000	1.39E-01	1.05E-07	10,000	3.15E-01	8.41E-07	10,000
U-236	(a)	1.70E-02	1.34E-08	10,000	6.27E-01	4.75E-07	10,000	1.43E+00	3.82E-06	10,000
U-238	(a)	4.10E-01	3.24E-07		7.78E+00	5.89E-06	10,000	1.77E+01	4.72E-05	10,000
200 West Area										
C-14	2,000	1.42E-01	0.00E+00	>10,000	1.48E-01	0.00E+00	>10,000	3.37E-01	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	6.93E+01	6.40E+00	1,230	6.93E+01	6.40E+00	1,230	6.93E+01	6.40E+00	1,230
I-129	1	3.26E-07	3.27E-06	1,700	3.40E-07	3.40E-06	1,700	3.40E-07	3.40E-06	1,700
Grouted I-129	1									
U-233	(a)	9.43E-02	0.00E+00	>10,000	9.82E-02	0.00E+00	>10,000	2.23E-01	0.00E+00	>10,000
U-234	(a)	1.19E+02	0.00E+00	>10,000	1.24E+02	0.00E+00	>10,000	2.83E+02	0.00E+00	>10,000
U-235	(a)	3.41E+00	0.00E+00	>10,000	3.55E+00	0.00E+00	>10,000	8.07E+00	0.00E+00	>10,000
U-236	(a)	1.55E+01	0.00E+00	>10,000	1.61E+01	0.00E+00	>10,000	3.66E+01	0.00E+00	>10,000
U-238	(a)	1.91E+02	0.00E+00	>10,000	1.99E+02	0.00E+00	>10,000	4.54E+02	0.00E+00	>10,000
1996-2007 MLLW (Alternative Groups A, C, D, and E)										
200 East Area										
C-14	2,000							2.50E-01	1.99E-03	10,000
Tc-99	900							1.43E+00	1.18E+01	1,230
Grouted Tc-99	900									
I-129	1							6.03E-03	4.99E-02	1,230
Grouted I-129	1									
U-233	(a)							8.23E-04	1.93E-05	10,000
U-234	(a)							9.32E-01	2.19E-02	10,000
U-235	(a)							1.49E-02	3.50E-04	10,000
U-236	(a)							1.74E-02	4.09E-04	10,000
U-238	(a)							2.33E-01	5.47E-03	10,000
200 West Area										
C-14	2,000	6.00E-01	0.00E+00	>10,000	6.01E-01	0.00E+00	>10,000	3.66E-01	0.00E+00	>10,000
Tc-99	900	3.43E+00	3.44E+01	1,700	3.44E+00	3.44E+01	1,700	2.09E+00	2.09E+01	1,700
Grouted Tc-99	900									
I-129	1	1.45E-02	1.45E-01	1,700	1.45E-02	1.45E-01	1,700	8.81E-03	8.82E-02	1,700
Grouted I-129	1									
U-233	(a)	1.96E-03	0.00E+00	>10,000	1.96E-03	0.00E+00	>10,000	1.18E-03	0.00E+00	>10,000
U-234	(a)	2.24E+00	0.00E+00	>10,000	2.24E+00	0.00E+00	>10,000	1.37E+00	0.00E+00	>10,000
U-235	(a)	3.58E-02	0.00E+00	>10,000	3.59E-02	0.00E+00	>10,000	2.18E-02	0.00E+00	>10,000
U-236	(a)	4.19E-02	0.00E+00	>10,000	4.20E-02	0.00E+00	>10,000	2.55E-02	0.00E+00	>10,000
U-238	(a)	5.60E-01	0.00E+00	>10,000	5.61E-01	0.00E+00	>10,000	3.41E-01	0.00E+00	>10,000

Table G.7. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
1996-2007 Grouted MLLW (Alternative Groups A, C, D, and E)										
200 East Area										
C-14	2,000							1.35E+00	1.07E-02	10,000
Tc-99	900									
Grouted Tc-99	900							1.23E+02	8.66E+00	680
I-129	1									
Grouted I-129	1							1.07E-02	2.38E-04	680
U-233	(a)							1.40E-03	4.27E-10	10,000
U-234	(a)							2.24E+02	6.83E-05	10,000
U-235	(a)							9.95E+00	3.03E-06	10,000
U-236	(a)							3.12E-02	9.52E-09	10,000
U-238	(a)							2.33E+02	7.11E-05	10,000
200 West Area										
C-14	2,000	8.58E-01	0.00E+00	>10,000	8.60E-01	0.00E+00	>10,000	7.64E-01	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	4.91E+00	3.50E-01	1,200	4.92E+00	3.51E-01	1,200	5.96E+01	4.25E+00	1,200
I-129	1									
Grouted I-129	1	2.06E-02	4.64E-04	1,200	2.06E-02	4.65E-04	1,200	8.03E-03	1.81E-04	1,200
U-233	(a)	2.67E-03	0.00E+00	>10,000	2.68E-03	0.00E+00	>10,000	1.04E-03	0.00E+00	>10,000
U-234	(a)	3.19E+00	0.00E+00	>10,000	3.20E+00	0.00E+00	>10,000	1.07E+02	0.00E+00	>10,000
U-235	(a)	5.08E-02	0.00E+00	>10,000	5.09E-02	0.00E+00	>10,000	4.76E+00	0.00E+00	>10,000
U-236	(a)	5.97E-02	0.00E+00	>10,000	5.98E-02	0.00E+00	>10,000	2.33E-02	0.00E+00	>10,000
U-238	(a)	7.93E-01	0.00E+00	>10,000	7.95E-01	0.00E+00	>10,000	1.11E+02	0.00E+00	>10,000
1996-2007 MLLW (Alternative Group B)										
200 East Area										
C-14	2,000							2.16E-02	2.06E-06	10,000
Tc-99	900							1.23E-01	1.71E-01	1,400
Grouted Tc-99	900									
I-129	1							5.16E-04	7.19E-04	1,400
Grouted I-129	1									
U-233	(a)							6.71E-05	2.37E-08	10,000
U-234	(a)							8.03E-02	2.84E-05	10,000
U-235	(a)							1.28E-03	4.53E-07	10,000
U-236	(a)							1.50E-03	5.31E-07	10,000
U-238	(a)							1.99E-02	7.04E-06	10,000
200 West Area										
C-14	2,000	3.50E-01	0.00E+00	>10,000	3.51E-01	0.00E+00	>10,000	1.52E-01	0.00E+00	>10,000
Tc-99	900	2.00E+00	1.76E+00	2,000	2.01E+00	1.76E+00	2,000	8.71E-01	7.64E-01	2,000
Grouted Tc-99	900									
I-129	1	8.43E-03	7.39E-03	2,000	8.46E-03	7.42E-03	2,000	3.65E-03	3.20E-03	2,000
Grouted I-129	1									
U-233	(a)	1.13E-03	0.00E+00	>10,000	1.13E-03	0.00E+00	>10,000	4.74E-04	0.00E+00	>10,000
U-234	(a)	1.30E+00	0.00E+00	>10,000	1.31E+00	0.00E+00	>10,000	5.68E-01	0.00E+00	>10,000
U-235	(a)	2.08E-02	0.00E+00	>10,000	2.09E-02	0.00E+00	>10,000	9.02E-03	0.00E+00	>10,000
U-236	(a)	2.44E-02	0.00E+00	>10,000	2.45E-02	0.00E+00	>10,000	1.06E-02	0.00E+00	>10,000
U-238	(a)	3.26E-01	0.00E+00	>10,000	3.27E-01	0.00E+00	>10,000	1.41E-01	0.00E+00	>10,000

Table G.7. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
1996-2007 Grouted MLLW (Alternative Group B)										
200 East Area										
C-14	2,000							1.12E+00	8.91E-03	10,000
Tc-99	900									
Grouted Tc-99	900							1.28E+02	9.02E+00	680
I-129	1									
Grouted I-129	1							4.18E-03	9.31E-05	680
U-233	(a)							5.43E-04	2.25E-10	10,000
U-234	(a)							2.35E+02	9.73E-05	10,000
U-235	(a)							1.05E+01	4.35E-06	10,000
U-236	(a)							1.21E-02	5.01E-09	10,000
U-238	(a)							2.45E+02	1.01E-04	10,000
200 West Area										
C-14	2,000	7.02E-01	0.00E+00	>10,000	7.05E-01	0.00E+00	>10,000	7.28E-01	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	4.01E+00	2.86E-01	1,200	4.03E+00	2.88E-01	1,200	7.40E+01	5.28E+00	1,200
I-129	1									
Grouted I-129	1	1.68E-02	3.80E-04	1,200	1.69E-02	3.81E-04	1,200	4.45E-03	1.00E-04	1,200
U-233	(a)	2.19E-03	0.00E+00	>10,000	2.20E-03	0.00E+00	>10,000	5.79E-04	0.00E+00	>10,000
U-234	(a)	2.62E+00	0.00E+00	>10,000	2.63E+00	0.00E+00	>10,000	1.35E+02	0.00E+00	>10,000
U-235	(a)	4.16E-02	0.00E+00	>10,000	4.18E-02	0.00E+00	>10,000	6.00E+00	0.00E+00	>10,000
U-236	(a)	4.89E-02	0.00E+00	>10,000	4.91E-02	0.00E+00	>10,000	1.29E-02	0.00E+00	>10,000
U-238	(a)	6.49E-01	0.00E+00	>10,000	6.52E-01	0.00E+00	>10,000	1.41E+02	0.00E+00	>10,000

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.8. Predicted Peak Concentrations of Key Constituents from Wastes Disposed of Before 2008 at a Line of Analysis Near the Columbia River, All Action Alternatives

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time
Pre-1970 LLW										
200 East Area										
C-14	2,000									
Tc-99	900	5.16E-01	1.29E+00	260	5.16E-01	1.29E+00	260	5.16E-01	1.29E+00	260
Grouted Tc-99	900									
I-129	1	1.24E-03	3.09E-03	260	1.24E-03	3.09E-03	260	1.24E-03	3.09E-03	260
Grouted I-129	1									
U-233	(a)	1.03E+01	1.92E-02	10,000	1.03E+01	1.92E-02	10,000	1.03E+01	1.92E-02	10,000
U-234	(a)	3.68E-01	6.87E-04	10,000	3.68E-01	6.87E-04	10,000	3.68E-01	6.87E-04	10,000
U-235	(a)	1.12E-02	2.09E-05	10,000	1.12E-02	2.09E-05	10,000	1.12E-02	2.09E-05	10,000
U-236	(a)	7.53E-03	1.41E-05	10,000	7.53E-03	1.41E-05	10,000	7.53E-03	1.41E-05	10,000
U-238	(a)	2.69E-01	5.02E-04	10,000	2.69E-01	5.02E-04	10,000	2.69E-01	5.02E-04	10,000
200 West Area	(a)									
C-14	2,000									
Tc-99	900	1.30E-01	1.69E-01	530	1.30E-01	1.69E-01	530	1.30E-01	1.69E-01	530
Grouted Tc-99	900									
I-129	1	1.70E-04	2.21E-04	530	1.70E-04	2.21E-04	530	1.70E-04	2.21E-04	530
Grouted I-129	1									
U-233	(a)									
U-234	(a)	1.45E+00	0.00E+00	10,000	1.45E+00	0.00E+00	10,000	1.45E+00	0.00E+00	10,000
U-235	(a)	4.38E-02	0.00E+00	10,000	4.38E-02	0.00E+00	10,000	4.38E-02	0.00E+00	10,000
U-236	(a)	2.95E-02	0.00E+00	10,000	2.95E-02	0.00E+00	10,000	2.95E-02	0.00E+00	10,000
U-238	(a)	1.06E+00	0.00E+00	10,000	1.06E+00	0.00E+00	10,000	1.06E+00	0.00E+00	10,000
1970-1987 LLW										
200 East Area										
C-14	2,000	2.15E+02	2.65E-01	10,000	2.15E+02	2.65E-01	10,000	2.15E+02	2.65E-01	10,000
Tc-99	900									
Grouted Tc-99	900									
I-129	1	1.87E-02	4.66E-02	260	1.87E-02	4.66E-02	260	1.87E-02	4.66E-02	260
Grouted I-129	1									
U-233	(a)									
U-234	(a)	3.08E-02	1.12E-04	10,000	3.08E-02	1.12E-04	10,000	3.08E-02	1.12E-04	10,000
U-235	(a)	2.61E-03	9.48E-06	10,000	2.61E-03	9.48E-06	10,000	2.61E-03	9.48E-06	10,000
U-236	(a)									
U-238	(a)	6.28E-02	2.28E-04	10,000	6.28E-02	2.28E-04	10,000	6.28E-02	2.28E-04	10,000
200 West Area										
C-14	2,000	3.92E+02	0.00E+00	10,000	3.92E+02	0.00E+00	10,000	3.92E+02	0.00E+00	10,000
Tc-99	900									
Grouted Tc-99	900									
I-129	1	1.77E-03	2.01E-03	610	1.77E-03	2.01E-03	610	1.77E-03	2.01E-03	610
Grouted I-129	1									
U-233	(a)									
U-234	(a)	3.94E+01	0.00E+00	10,000	3.94E+01	0.00E+00	10,000	3.94E+01	0.00E+00	10,000
U-235	(a)	3.33E+00	0.00E+00	10,000	3.33E+00	0.00E+00	10,000	3.33E+00	0.00E+00	10,000
U-236	(a)									
U-238	(a)	2.82E+01	0.00E+00	10,000	2.82E+01	0.00E+00	10,000	2.82E+01	0.00E+00	10,000

Table G.8. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time
1988-1995 LLW										
200 East Area										
C-14	2,000	5.11E+00	9.11E-04	10,000	5.11E+00	9.11E-04	10,000	5.11E+00	9.11E-04	10,000
Tc-99	900	1.39E-01	3.46E-01	260	1.39E-01	3.46E-01	260	1.39E-01	3.46E-01	260
Grouted Tc-99	900									
I-129	1	9.45E-05	2.35E-04	260	9.45E-05	2.35E-04	260	9.45E-05	2.35E-04	260
Grouted I-129	1									
U-233	(a)	2.09E-05	7.59E-08	10,000	2.09E-05	7.59E-08	10,000	2.09E-05	7.59E-08	10,000
U-234	(a)	1.85E-03	6.72E-06	10,000	1.85E-03	6.72E-06	10,000	1.85E-03	6.72E-06	10,000
U-235	(a)	4.29E-04	1.56E-06	10,000	4.29E-04	1.56E-06	10,000	4.29E-04	1.56E-06	10,000
U-236	(a)	1.85E-06	6.72E-09	10,000	1.85E-06	6.72E-09	10,000	1.85E-06	6.72E-09	10,000
U-238	(a)	1.93E-02	7.01E-05	10,000	1.93E-02	7.01E-05	10,000	1.93E-02	7.01E-05	10,000
200 West Area										
C-14	2,000	9.29E+00	0.00E+00	10,000	9.29E+00	0.00E+00	10,000	9.29E+00	0.00E+00	10,000
Tc-99	900	4.71E-01	3.45E-02	600	4.71E-01	3.45E-02	600	4.71E-01	3.45E-02	600
Grouted Tc-99	900									
I-129	1	3.06E-02	3.45E-02	600	3.06E-02	3.45E-02	600	3.06E-02	3.45E-02	600
Grouted I-129	1									
U-233	(a)	6.54E-02	0.00E+00	10,000	6.54E-02	0.00E+00	10,000	6.54E-02	0.00E+00	10,000
U-234	(a)	5.77E+00	0.00E+00	10,000	5.77E+00	0.00E+00	10,000	5.77E+00	0.00E+00	10,000
U-235	(a)	1.34E+00	0.00E+00	10,000	1.34E+00	0.00E+00	10,000	1.34E+00	0.00E+00	10,000
U-236	(a)	5.77E-03	0.00E+00	10,000	5.77E-03	0.00E+00	10,000	5.77E-03	0.00E+00	10,000
U-238	(a)	6.03E+01	0.00E+00	10,000	6.03E+01	0.00E+00	10,000	6.03E+01	0.00E+00	10,000
1996-2007 Cat 1 LLW (Alternative Groups A, C, D, and E)										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	3.33E+00	0.00E+00	>10,000	4.06E+00	0.00E+00	>10,000	5.21E+00	0.00E+00	>10,000
Tc-99	900	3.00E-01	2.63E-01	2,000	3.66E-01	3.21E-01	2,000	3.99E-01	3.50E-01	2,000
Grouted Tc-99	900									
I-129	1	2.62E-03	2.30E-03	2,000	3.20E-03	2.81E-03	2,000	3.20E-03	2.81E-03	2,000
Grouted I-129	1									
U-233	(a)	1.03E-01	0.00E+00	>10,000	1.25E-01	0.00E+00	>10,000	1.25E-01	0.00E+00	>10,000
U-234	(a)	1.70E-01	0.00E+00	>10,000	2.07E-01	0.00E+00	>10,000	9.01E-01	0.00E+00	>10,000
U-235	(a)	3.56E-02	0.00E+00	>10,000	4.34E-02	0.00E+00	>10,000	8.86E-02	0.00E+00	>10,000
U-236	(a)	4.03E-03	0.00E+00	>10,000	4.92E-03	0.00E+00	>10,000	4.92E-03	0.00E+00	>10,000
U-238	(a)	4.06E-01	0.00E+00	>10,000	4.95E-01	0.00E+00	>10,000	1.66E+00	0.00E+00	>10,000

Table G.8. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time
1996-2007 Cat 3 LLW (Alternative Groups A, C, D, and E)										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	1.48E-01	0.00E+00	>10,000	1.54E-01	0.00E+00	>10,000	3.50E-01	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	7.20E+01	4.62E-01	1,710	7.20E+01	4.62E-01	1,710	7.20E+01	4.62E-01	1,710
I-129	1	3.39E-07	2.97E-07	2,000	3.53E-07	3.09E-07	2,000	3.53E-07	3.09E-07	2,000
Grouted I-129	1									
U-233	(a)	9.79E-02	0.00E+00	>10,000	1.02E-01	0.00E+00	>10,000	2.32E-01	0.00E+00	>10,000
U-234	(a)	1.24E+02	0.00E+00	>10,000	1.29E+02	0.00E+00	>10,000	2.94E+02	0.00E+00	>10,000
U-235	(a)	3.54E+00	0.00E+00	>10,000	3.69E+00	0.00E+00	>10,000	8.39E+00	0.00E+00	>10,000
U-236	(a)	1.60E+01	0.00E+00	>10,000	1.67E+01	0.00E+00	>10,000	3.80E+01	0.00E+00	>10,000
U-238	(a)	1.99E+02	0.00E+00	>10,000	2.07E+02			4.72E+02	0.00E+00	>10,000
1996-2007 Cat 1 LLW (Alternative Group B)										
200 East Area										
C-14	2,000	1.25E-01	1.19E-05	10,000	1.52E-01	1.45E-05	10,000	7.20E-01	6.86E-05	10,000
Tc-99	900	1.13E-02	1.58E-02	1,400	1.38E-02	1.92E-02	1,400	5.52E-02	7.69E-02	1,400
Grouted Tc-99	900									
I-129	1	9.84E-05	1.37E-04	1,400	1.20E-04	1.67E-04	1,400	4.42E-04	6.16E-04	1,400
Grouted I-129	1									
U-233	(a)	3.85E-03	8.28E-06	10,000	4.70E-03	9.06E-06	10,000	1.73E-02	1.29E-07	10,000
U-234	(a)	6.38E-03	1.37E-05	10,000	7.78E-03	1.50E-05	10,000	1.25E-01	8.68E-05	10,000
U-235	(a)	1.34E-03	2.87E-06	10,000	1.63E-03	3.14E-06	10,000	1.22E-02	8.47E-06	10,000
U-236	(a)	1.52E-04	3.26E-07	10,000	1.85E-04	3.56E-07	10,000	6.80E-04	4.72E-07	10,000
U-238	(a)	1.53E-02	3.28E-05	10,000	1.86E-02	3.58E-05	10,000	2.29E-01	1.59E-04	10,000
200 West Area									0.00E+00	
C-14	2,000	3.21E+00	0.00E+00	>10,000	3.91E+00	0.00E+00	>10,000	4.49E+00	0.00E+00	>10,000
Tc-99	900	2.89E-01	2.53E-01	2,000	3.52E-01	3.09E-01	2,000	3.44E-01	3.02E-01	2,000
Grouted Tc-99	900									
I-129	1	2.53E-03	2.21E-03	2,000	3.08E-03	2.70E-03	2,000	2.76E-03	2.42E-03	2,000
Grouted I-129	1									
U-233	(a)	9.84E-02	0.00E+00	>10,000	1.20E-01	0.00E+00	>10,000	1.08E-01	0.00E+00	>10,000
U-234	(a)	1.63E-01	0.00E+00	>10,000	1.99E-01	0.00E+00	>10,000	7.77E-01	0.00E+00	>10,000
U-235	(a)	3.43E-02	0.00E+00	>10,000	4.18E-02	0.00E+00	>10,000	7.64E-02	0.00E+00	>10,000
U-236	(a)	3.88E-03	0.00E+00	>10,000	4.73E-03	0.00E+00	>10,000	4.24E-03	0.00E+00	>10,000
U-238	(a)	3.90E-01	0.00E+00	>10,000	4.76E-01	0.00E+00	>10,000	1.43E+00	0.00E+00	>10,000

Table G.8. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time
1996-2007 Cat 3 LLW (Alternative Group B)										
200 East Area										
C-14	2,000	5.56E-03		10,000	5.79E-03	5.52E-07	10,000	1.32E-02	1.26E-06	10,000
Tc-99	900									
Grouted Tc-99	900	2.71E+00	5.30E-07	860	2.71E+00	2.67E-02	860	2.71E+00	2.67E-02	860
I-129	1	1.28E-08		1,400	1.33E-08	1.85E-08	1,400	1.33E-08	1.85E-08	1,400
Grouted I-129	1		2.67E-02							
U-233	(a)	3.68E-03		10,000	3.83E-03	8.69E-11	10,000	8.70E-03	2.49E-10	10,000
U-234	(a)	4.66E+00		10,000	4.85E+00	1.10E-07	10,000	1.11E+01	3.17E-07	10,000
U-235	(a)	1.33E-01	8.69E-11	10,000	1.39E-01	3.15E-09	10,000	3.15E-01	9.00E-09	10,000
U-236	(a)	6.02E-01	1.10E-07	10,000	6.27E-01	1.42E-08	10,000	1.43E+00	4.09E-08	10,000
U-238	(a)	7.47E+00	3.15E-09	10,000	7.78E+00	1.77E-07	10,000	1.77E+01	5.06E-07	10,000
200 West Area										
C-14	2,000	1.42E-01	0.00E+00	>10,000	1.48E-01	0.00E+00	>10,000	3.37E-01	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	6.93E+01	4.45E-01	1,710	6.93E+01	4.45E-01	1,710	6.93E+01	4.45E-01	1,710
I-129	1	3.26E-07	2.86E-07	2,000	3.40E-07	2.98E-07	2,000	3.40E-07	2.98E-07	2,000
Grouted I-129	1									
U-233	(a)	9.43E-02	0.00E+00	>10,000	9.82E-02	0.00E+00	>10,000	2.23E-01	0.00E+00	>10,000
U-234	(a)	1.19E+02	0.00E+00	>10,000	1.24E+02	0.00E+00	>10,000	2.83E+02	0.00E+00	>10,000
U-235	(a)	3.41E+00	0.00E+00	>10,000	3.55E+00	0.00E+00	>10,000	8.07E+00	0.00E+00	>10,000
U-236	(a)	1.55E+01	0.00E+00	>10,000	1.61E+01	0.00E+00	>10,000	3.66E+01	0.00E+00	>10,000
U-238	(a)	1.91E+02	0.00E+00	>10,000	1.99E+02	0.00E+00	>10,000	4.54E+02	0.00E+00	>10,000
1996-2007 MLLW (Alternative Groups A, C, D, and E)										
200 East Area										
C-14	2,000							2.50E-01	1.84E-04	10,000
Tc-99	900							1.43E+00	1.99E+00	800
Grouted Tc-99	900									
I-129	1							6.03E-03	8.41E-03	800
Grouted I-129	1									
U-233	(a)							8.23E-04	4.12E-07	10,000
U-234	(a)							9.32E-01	4.67E-04	10,000
U-235	(a)							1.49E-02	7.46E-06	10,000
U-236	(a)							1.74E-02	8.71E-06	10,000
U-238	(a)							2.33E-01	1.17E-04	10,000
200 West Area										
C-14	2,000	6.00E-01	0.00E+00	>10,000	6.01E-01	0.00E+00	>10,000	3.66E-01	0.00E+00	>10,000
Tc-99	900	3.43E+00	3.01E+00	2,000	3.44E+00	3.02E+00	2,000	2.09E+00	1.83E+00	2,000
Grouted Tc-99	900	0.00E+00	3.36E-02	1,620	0.00E+00	1.27E-02	1,620	0.00E+00	0.00E+00	1,620
I-129	1	1.45E-02	1.27E-02	2,000	1.45E-02	3.08E-02	2,000	8.81E-03	7.72E-03	2,000
Grouted I-129	1	0.00E+00			0.00E+00			0.00E+00		
U-233	(a)	1.96E-03	0.00E+00	>10,000	1.96E-03	0.00E+00	>10,000	1.18E-03	0.00E+00	>10,000
U-234	(a)	2.24E+00	0.00E+00	>10,000	2.24E+00	0.00E+00	>10,000	1.37E+00	0.00E+00	>10,000
U-235	(a)	3.58E-02	0.00E+00	>10,000	3.59E-02	0.00E+00	>10,000	2.18E-02	0.00E+00	>10,000
U-236	(a)	4.19E-02	0.00E+00	>10,000	4.20E-02	0.00E+00	>10,000	2.55E-02	0.00E+00	>10,000
U-238	(a)	5.60E-01	0.00E+00	>10,000	5.61E-01	0.00E+00	>10,000	3.41E-01	0.00E+00	>10,000

Table G.8. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time
1996-2007 Grouted MLLW (Alternative Groups A, C, D, and E)										
200 East Area										
C-14	2,000							1.35E+00	9.95E-04	10,000
Tc-99	900									
Grouted Tc-99	900							1.23E+02	1.06E+00	940
I-129	1									
Grouted I-129	1							1.07E-02	2.93E-05	940
U-233	(a)							1.40E-03	1.88E-12	10,000
U-234	(a)							2.24E+02	3.01E-07	10,000
U-235	(a)							9.95E+00	1.34E-08	10,000
U-236	(a)							3.12E-02	4.20E-11	10,000
U-238	(a)							2.33E+02	3.13E-07	10,000
200 West Area										
C-14	2,000	8.58E-01	0.00E+00	>10,000	8.60E-01	0.00E+00	>10,000	7.64E-01	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	4.91E+00	3.36E-02	1,620	4.92E+00	3.37E-02	1,620	5.96E+01	4.08E-01	1,620
I-129	1									
Grouted I-129	1	2.06E-02	4.45E-05	1,620	2.06E-02	4.46E-05	1,620	8.03E-03	1.74E-05	1,620
U-233	(a)	2.67E-03	0.00E+00	>10,000	2.68E-03	0.00E+00	>10,000	1.04E-03	0.00E+00	>10,000
U-234	(a)	3.19E+00	0.00E+00	>10,000	3.20E+00	0.00E+00	>10,000	1.07E+02	0.00E+00	>10,000
U-235	(a)	5.08E-02	0.00E+00	>10,000	5.09E-02	0.00E+00	>10,000	4.76E+00	0.00E+00	>10,000
U-236	(a)	5.97E-02	0.00E+00	>10,000	5.98E-02	0.00E+00	>10,000	2.33E-02	0.00E+00	>10,000
U-238	(a)	7.93E-01	0.00E+00	>10,000	7.95E-01	0.00E+00	>10,000	1.11E+02	0.00E+00	>10,000
1996-2007 MLLW (Alternative Group B)										
200 East Area										
C-14	2,000							2.16E-02	2.06E-06	10,000
Tc-99	900							1.23E-01	1.71E-01	1,400
Grouted Tc-99	900									
I-129	1							5.16E-04	7.19E-04	1,400
Grouted I-129	1									
U-233	(a)							6.71E-05	2.37E-08	10,000
U-234	(a)							8.03E-02	2.84E-05	10,000
U-235	(a)							1.28E-03	4.53E-07	10,000
U-236	(a)							1.50E-03	5.31E-07	10,000
U-238	(a)							1.99E-02	7.04E-06	10,000
200 West Area										
C-14	2,000	3.50E-01	0.00E+00	>10,000	3.51E-01	0.00E+00	>10,000	1.52E-01	0.00E+00	>10,000
Tc-99	900	2.00E+00	1.76E+00	2,000	2.01E+00	1.76E+00	2,000	8.71E-01	7.64E-01	2,000
Grouted Tc-99	900									
I-129	1	8.43E-03	7.39E-03	2,000	8.46E-03	7.42E-03	2,000	3.65E-03	3.20E-03	2,000
Grouted I-129	1									
U-233	(a)	1.13E-03	0.00E+00	>10,000	1.13E-03	0.00E+00	>10,000	4.74E-04	0.00E+00	>10,000
U-234	(a)	1.30E+00	0.00E+00	>10,000	1.31E+00	0.00E+00	>10,000	5.68E-01	0.00E+00	>10,000
U-235	(a)	2.08E-02	0.00E+00	>10,000	2.09E-02	0.00E+00	>10,000	9.02E-03	0.00E+00	>10,000
U-236	(a)	2.44E-02	0.00E+00	>10,000	2.45E-02	0.00E+00	>10,000	1.06E-02	0.00E+00	>10,000
U-238	(a)	3.26E-01	0.00E+00	>10,000	3.27E-01	0.00E+00	>10,000	1.41E-01	0.00E+00	>10,000

Table G.8. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time
1996-2007 Grouted MLLW (Alternative Group B)										
200 East Area										
C-14	2,000							1.12E+00	1.07E-04	10,000
Tc-99	900									
Grouted Tc-99	900							1.28E+02	1.11E+00	940
I-129	1									
Grouted I-129	1							4.18E-03	1.14E-05	940
U-233	(a)							5.43E-04	1.20E-12	10,000
U-234	(a)							2.35E+02	5.21E-07	10,000
U-235	(a)							1.05E+01	2.33E-08	10,000
U-236	(a)							1.21E-02	2.68E-11	10,000
U-238	(a)							2.45E+02	5.43E-07	10,000
200 West Area										
C-14	2,000	7.02E-01	0.00E+00	>10,000	7.05E-01	0.00E+00	>10,000	7.28E-01	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	4.01E+00	2.75E-02	1,620	4.03E+00	2.76E-02	1,620	7.40E+01	5.06E-01	1,620
I-129	1									
Grouted I-129	1	1.68E-02	3.64E-05	1,620	1.69E-02	3.66E-05	1,620	4.45E-03	9.63E-06	1,620
U-233	(a)	2.19E-03	0.00E+00	>10,000	2.20E-03	0.00E+00	>10,000	5.79E-04	0.00E+00	>10,000
U-234	(a)	2.62E+00	0.00E+00	>10,000	2.63E+00	0.00E+00	>10,000	1.35E+02	0.00E+00	>10,000
U-235	(a)	4.16E-02	0.00E+00	>10,000	4.18E-02	0.00E+00	>10,000	6.00E+00	0.00E+00	>10,000
U-236	(a)	4.89E-02	0.00E+00	>10,000	4.91E-02	0.00E+00	>10,000	1.29E-02	0.00E+00	>10,000
U-238	(a)	6.49E-01	0.00E+00	>10,000	6.52E-01	0.00E+00	>10,000	1.41E+02	0.00E+00	>10,000

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.9. Predicted Peak River Flux of Key Constituents from Wastes Disposed of Before 2008 at a Line of Analysis Near the Columbia River, All Action Alternatives

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)
Pre-1970 LLW									
200 East Area									
C-14									
Tc-99	5.16E-01	9.81E-03	290	5.16E-01	9.81E-03	290	5.16E-01	9.81E-03	290
Grouted Tc-99									
I-129	1.24E-03	2.36E-05	290	1.24E-03	2.36E-05	290	1.24E-03	2.36E-05	290
Grouted I-129									
U-233	1.03E+01	1.29E-04	10,000	1.03E+01	1.29E-04	10,000	1.03E+01	1.29E-04	10,000
U-234	3.68E-01	4.61E-06	10,000	3.68E-01	4.61E-06	10,000	3.68E-01	4.61E-06	10,000
U-235	1.12E-02	1.40E-07	10,000	1.12E-02	1.40E-07	10,000	1.12E-02	1.40E-07	10,000
U-236	7.53E-03	9.43E-08	10,000	7.53E-03	9.43E-08	10,000	7.53E-03	9.43E-08	10,000
U-238	2.69E-01	3.37E-06	10,000	2.69E-01	3.37E-06	10,000	2.69E-01	3.37E-06	10,000
200 West Area									
C-14									
Tc-99	1.30E-01	1.68E-03	600	1.30E-01	1.68E-03	600	1.30E-01	1.68E-03	600
Grouted Tc-99									
I-129	1.70E-04	2.20E-06	600	1.70E-04	2.20E-06	600	1.70E-04	2.20E-06	600
Grouted I-129									
U-233									
U-234	1.45E+00	0.00E+00	10,000	1.45E+00	0.00E+00	10,000	1.45E+00	0.00E+00	10,000
U-235	4.38E-02	0.00E+00	10,000	4.38E-02	0.00E+00	10,000	4.38E-02	0.00E+00	10,000
U-236	2.95E-02	0.00E+00	10,000	2.95E-02	0.00E+00	10,000	2.95E-02	0.00E+00	10,000
U-238	1.06E+00	0.00E+00	10,000	1.06E+00	0.00E+00	10,000	1.06E+00	0.00E+00	10,000
1970-1987 LLW									
200 East Area									
C-14	2.15E+02	1.76E-03	10,000	2.15E+02	1.76E-03	10,000	2.15E+02	1.76E-03	10,000
Tc-99									
Grouted Tc-99									
I-129	1.87E-02	3.54E-04	290	1.87E-02	3.54E-04	290	1.87E-02	3.54E-04	290
Grouted I-129									
U-233									
U-234	3.08E-02	7.50E-07	10,000	3.08E-02	7.50E-07	10,000	3.08E-02	7.50E-07	10,000
U-235	2.61E-03	6.35E-08	10,000	2.61E-03	6.35E-08	10,000	2.61E-03	6.35E-08	10,000
U-236									
U-238	6.28E-02	1.53E-06	10,000	6.28E-02	1.53E-06	10,000	6.28E-02	1.53E-06	10,000
200 West Area									
C-14	3.92E+02	0.00E+00	10,000	3.92E+02	0.00E+00	10,000	3.92E+02	0.00E+00	10,000
Tc-99									
Grouted Tc-99									
I-129	1.77E-03	2.07E-05	690	1.77E-03	2.07E-05	690	1.77E-03	2.07E-05	690
Grouted I-129									
U-233									
U-234	3.94E+01	0.00E+00	10,000	3.94E+01	0.00E+00	10,000	3.94E+01	0.00E+00	10,000
U-235	3.33E+00	0.00E+00	10,000	3.33E+00	0.00E+00	10,000	3.33E+00	0.00E+00	10,000
U-236									
U-238	2.82E+01	0.00E+00	10,000	2.82E+01	0.00E+00	10,000	2.82E+01	0.00E+00	10,000

Table G.9. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)
1988-1995 LLW									
200 East Area									
C-14	5.11E+00	6.05E-06	10,000	5.11E+00	6.05E-06	10,000	5.11E+00	6.05E-06	10,000
Tc-99	1.39E-01	2.63E-03	290	1.39E-01	2.63E-03	290	1.39E-01	2.63E-03	290
Grouted Tc-99									
I-129	9.45E-05	1.79E-06	290	9.45E-05	1.79E-06	290	9.45E-05	1.79E-06	290
Grouted I-129									
U-233	2.09E-05	5.09E-10	10,000	2.09E-05	5.09E-10	10,000	2.09E-05	5.09E-10	10,000
U-234	1.85E-03	4.50E-08	10,000	1.85E-03	4.50E-08	10,000	1.85E-03	4.50E-08	10,000
U-235	4.29E-04	1.04E-08	10,000	4.29E-04	1.04E-08	10,000	4.29E-04	1.04E-08	10,000
U-236	1.85E-06	4.50E-11	10,000	1.85E-06	4.50E-11	10,000	1.85E-06	4.50E-11	10,000
U-238	1.93E-02	4.70E-07	10,000	1.93E-02	4.70E-07	10,000	1.93E-02	4.70E-07	10,000
200 West Area									
C-14	9.29E+00	0.00E+00	10,000	9.29E+00	0.00E+00	10,000	9.29E+00	0.00E+00	10,000
Tc-99	4.71E-01	0.00E+00	670	4.71E-01	0.00E+00	670	4.71E-01	0.00E+00	670
Grouted Tc-99									
I-129	3.06E-02	3.58E-04	670	3.06E-02	3.58E-04	670	3.06E-02	3.58E-04	670
Grouted I-129									
U-233	6.54E-02	0.00E+00	10,000	6.54E-02	0.00E+00	10,000	6.54E-02	0.00E+00	10,000
U-234	5.77E+00	0.00E+00	10,000	5.77E+00	0.00E+00	10,000	5.77E+00	0.00E+00	10,000
U-235	1.34E+00	0.00E+00	10,000	1.34E+00	0.00E+00	10,000	1.34E+00	0.00E+00	10,000
U-236	5.77E-03	0.00E+00	10,000	5.77E-03	0.00E+00	10,000	5.77E-03	0.00E+00	10,000
U-238	6.03E+01	0.00E+00	10,000	6.03E+01	0.00E+00	10,000	6.03E+01	0.00E+00	10,000
1996-2007 Cat 1 LLW (Alternative Groups A, C, D, and E)									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
200 West Area									
C-14	3.33E+00	0.00E+00	>10,000	4.06E+00	0.00E+00	>10,000	5.21E+00	0.00E+00	>10,000
Tc-99	3.00E-01	2.85E-03	2,180	3.66E-01	3.48E-03	2,180	3.99E-01	3.79E-03	2,180
Grouted Tc-99									
I-129	2.62E-03	2.49E-05	2,180	3.20E-03	3.04E-05	2,180	3.20E-03	3.04E-05	2,180
Grouted I-129									
U-233	1.03E-01	0.00E+00	>10,000	1.25E-01	0.00E+00	>10,000	1.25E-01	0.00E+00	>10,000
U-234	1.70E-01	0.00E+00	>10,000	2.07E-01	0.00E+00	>10,000	9.01E-01	0.00E+00	>10,000
U-235	3.56E-02	0.00E+00	>10,000	4.34E-02	0.00E+00	>10,000	8.86E-02	0.00E+00	>10,000
U-236	4.03E-03	0.00E+00	>10,000	4.92E-03	0.00E+00	>10,000	4.92E-03	0.00E+00	>10,000
U-238	4.06E-01	0.00E+00	>10,000	4.95E-01	0.00E+00	>10,000	1.66E+00	0.00E+00	>10,000

Table G.9. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)
1996-2007 Cat 3 LLW (Alternative Groups A, C, D, and E)									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
200 West Area									
C-14	1.48E-01	0.00E+00	>10,000	1.54E-01	0.00E+00	>10,000	3.50E-01	0.00E+00	>10,000
Tc-99									
Grouted Tc-99	7.20E+01	6.01E-03	1,840	7.20E+01	6.01E-03	1,840	7.20E+01	6.01E-03	1,840
I-129	3.39E-07	3.22E-09	2,180	3.53E-07	3.35E-09	2,180	3.53E-07	3.35E-09	2,180
Grouted I-129									
U-233	9.79E-02	0.00E+00	>10,000	1.02E-01	0.00E+00	>10,000	2.32E-01	0.00E+00	>10,000
U-234	1.24E+02	0.00E+00	>10,000	1.29E+02	0.00E+00	>10,000	2.94E+02	0.00E+00	>10,000
U-235	3.54E+00	0.00E+00	>10,000	3.69E+00	0.00E+00	>10,000	8.39E+00	0.00E+00	>10,000
U-236	1.60E+01	0.00E+00	>10,000	1.67E+01	0.00E+00	>10,000	3.80E+01	0.00E+00	>10,000
U-238	1.99E+02	0.00E+00	>10,000	2.07E+02	0.00E+00	>10,000	4.72E+02	0.00E+00	>10,000
1996-2007 Cat 1 LLW (Alternative Group B)									
200 East Area									
C-14	1.25E-01	1.46E-03	690	1.52E-01	1.78E-03	690	7.20E-01	8.44E-03	690
Tc-99	1.13E-02	1.47E-04	1,450	1.38E-02	1.79E-04	1,450	5.52E-02	7.17E-04	1,450
Grouted Tc-99									
I-129	9.84E-05	1.28E-06	1,450	1.20E-04	1.56E-06	1,450	4.42E-04	5.74E-06	1,450
Grouted I-129									
U-233	3.85E-03	4.54E-08	10,000	4.70E-03	4.92E-08	10,000	1.73E-02	5.78E-10	10,000
U-234	6.38E-03	7.52E-08	10,000	7.78E-03	8.15E-08	10,000	1.25E-01	8.68E-05	10,000
U-235	1.34E-03	1.58E-08	10,000	1.63E-03	1.71E-08	10,000	1.22E-02	8.47E-06	10,000
U-236	1.52E-04	1.79E-09	10,000	1.85E-04	1.94E-09	10,000	6.80E-04	4.72E-07	10,000
U-238	1.53E-02	1.80E-07	10,000	1.86E-02	1.95E-07	10,000	2.29E-01	1.59E-04	10,000
200 West Area									
C-14	3.21E+00	0.00E+00	>10,000	3.91E+00	0.00E+00	>10,000	4.49E+00	0.00E+00	>10,000
Tc-99	2.89E-01	2.74E-03	2,180	3.52E-01	3.34E-03	2,180	3.44E-01	3.27E-03	2,180
Grouted Tc-99									
I-129	2.53E-03	2.40E-05	2,180	3.08E-03	2.93E-05	2,180	2.76E-03	2.62E-05	2,180
Grouted I-129									
U-233	9.84E-02	0.00E+00	>10,000	1.20E-01	0.00E+00	>10,000	1.08E-01	0.00E+00	>10,000
U-234	1.63E-01	0.00E+00	>10,000	1.99E-01	0.00E+00	>10,000	7.77E-01	0.00E+00	>10,000
U-235	3.43E-02	0.00E+00	>10,000	4.18E-02	0.00E+00	>10,000	7.64E-02	0.00E+00	>10,000
U-236	3.88E-03	0.00E+00	>10,000	4.73E-03	0.00E+00	>10,000	4.24E-03	0.00E+00	>10,000
U-238	3.90E-01	0.00E+00	>10,000	4.76E-01	0.00E+00	>10,000	1.43E+00	0.00E+00	>10,000

Table G.9. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)
1996-2007 Cat 3 LLW (Alternative Group B)									
200 East Area									
C-14	5.56E-03	6.51E-05	690	5.79E-03	6.78E-05	690	1.32E-02	1.55E-04	690
Tc-99									
Grouted Tc-99	2.71E+00	2.51E-04	970	2.71E+00	2.51E-04	970	2.71E+00	2.51E-04	970
I-129	1.28E-08	1.66E-10	1,450	1.33E-08	1.73E-10	1,450	1.33E-08	1.73E-10	1,450
Grouted I-129									
U-233	3.68E-03	4.57E-13	10,000	3.83E-03	4.57E-13	10,000	8.70E-03	1.12E-12	10,000
U-234	4.66E+00	5.79E-10	10,000	4.85E+00	5.79E-10	10,000	1.11E+01	1.42E-09	10,000
U-235	1.33E-01	1.66E-11	10,000	1.39E-01	1.66E-11	10,000	3.15E-01	4.04E-11	10,000
U-236	6.02E-01	7.48E-11	10,000	6.27E-01	7.48E-11	10,000	1.43E+00	1.83E-10	10,000
U-238	7.47E+00	9.29E-10	10,000	7.78E+00	9.29E-10	10,000	1.77E+01	2.27E-09	10,000
200 West Area									
C-14	1.42E-01	0.00E+00	>10,000	1.48E-01	0.00E+00	>10,000	3.37E-01	0.00E+00	>10,000
Tc-99									
Grouted Tc-99	6.93E+01	5.78E-03	1,840	6.93E+01	5.78E-03	1,840	6.93E+01	5.78E-03	1,840
I-129	3.26E-07	0.00E+00	>10,000	3.40E-07	0.00E+00	>10,000	3.40E-07	0.00E+00	>10,000
Grouted I-129									
U-233	9.43E-02	0.00E+00	>10,000	9.82E-02	0.00E+00	>10,000	2.23E-01	0.00E+00	>10,000
U-234	1.19E+02	0.00E+00	>10,000	1.24E+02	0.00E+00	>10,000	2.83E+02	0.00E+00	>10,000
U-235	3.41E+00	0.00E+00	>10,000	3.55E+00	0.00E+00	>10,000	8.07E+00	0.00E+00	>10,000
U-236	1.55E+01	0.00E+00	>10,000	1.61E+01	0.00E+00	>10,000	3.66E+01	0.00E+00	>10,000
U-238	1.91E+02	0.00E+00	>10,000	1.99E+02	0.00E+00	>10,000	4.54E+02	0.00E+00	>10,000
1996-2007 MLLW (Alternative Groups A, C, D, and E)									
200 East Area									
C-14							2.50E-01	1.06E-07	10,000
Tc-99							1.43E+00	1.86E-02	1,450
Grouted Tc-99									
I-129							6.03E-03	7.83E-05	1,450
Grouted I-129									
U-233							8.23E-04	2.04E-09	10,000
U-234							9.32E-01	2.31E-06	10,000
U-235							1.49E-02	3.70E-08	10,000
U-236							1.74E-02	4.32E-08	10,000
U-238							2.33E-01	5.78E-07	10,000
200 West Area									
C-14	6.00E-01	0.00E+00	>10,000	6.01E-01	0.00E+00	>10,000	3.66E-01	0.00E+00	>10,000
Tc-99	3.43E+00	3.26E-02	2,180	3.44E+00	3.27E-02	2,180	2.09E+00	1.99E-02	2,180
Grouted Tc-99									
I-129	1.45E-02	1.38E-04	2,180	1.45E-02	1.38E-04	2,180	8.81E-03	8.37E-05	2,180
Grouted I-129									
U-233	1.96E-03	0.00E+00	>10,000	1.96E-03	0.00E+00	>10,000	1.18E-03	0.00E+00	>10,000
U-234	2.24E+00	0.00E+00	>10,000	2.24E+00	0.00E+00	>10,000	1.37E+00	0.00E+00	>10,000
U-235	3.58E-02	0.00E+00	>10,000	3.59E-02	0.00E+00	>10,000	2.18E-02	0.00E+00	>10,000
U-236	4.19E-02	0.00E+00	>10,000	4.20E-02	0.00E+00	>10,000	2.55E-02	0.00E+00	>10,000
U-238	5.60E-01	0.00E+00	>10,000	5.61E-01	0.00E+00	>10,000	3.41E-01	0.00E+00	>10,000

Table G.9. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)
1996-2007 Grouted MLLW (Alternative Groups A, C, D, and E)									
200 East Area									
C-14							1.35E+00	5.75E-07	10,000
Tc-99									
Grouted Tc-99							1.23E+02	1.14E-02	970
I-129									
Grouted I-129							1.07E-02	3.13E-07	970
U-233							1.40E-03	1.95E-14	10,000
U-234							2.24E+02	3.12E-09	10,000
U-235							9.95E+00	1.39E-10	10,000
U-236							3.12E-02	4.34E-13	10,000
U-238							2.33E+02	3.24E-09	10,000
200 West Area									
C-14	8.58E-01	0.00E+00	>10,000	8.60E-01	0.00E+00	>10,000	7.64E-01	0.00E+00	>10,000
Tc-99									
Grouted Tc-99	4.91E+00	4.10E-04	1,840	4.92E+00	4.10E-04	1,840	5.96E+01	4.97E-03	1,840
I-129									
Grouted I-129	2.06E-02	5.42E-07	1,840	2.06E-02	5.43E-07	1,840	8.03E-03	2.12E-07	1,840
U-233	2.67E-03	0.00E+00	>10,000	2.68E-03	0.00E+00	>10,000	1.04E-03	0.00E+00	>10,000
U-234	3.19E+00	0.00E+00	>10,000	3.20E+00	0.00E+00	>10,000	1.07E+02	0.00E+00	>10,000
U-235	5.08E-02	0.00E+00	>10,000	5.09E-02	0.00E+00	>10,000	4.76E+00	0.00E+00	>10,000
U-236	5.97E-02	0.00E+00	>10,000	5.98E-02	0.00E+00	>10,000	2.33E-02	0.00E+00	>10,000
U-238	7.93E-01	0.00E+00	>10,000	7.95E-01	0.00E+00	>10,000	1.11E+02	0.00E+00	>10,000
1996-2007 MLLW (Alternative Group B)									
200 East Area									
C-14							2.16E-02	9.20E-09	10,000
Tc-99							1.23E-01	1.60E-03	1,450
Grouted Tc-99									
I-129							5.16E-04	6.70E-06	1,450
Grouted I-129									
U-233							6.71E-05	1.43E-10	10,000
U-234							8.03E-02	1.72E-07	10,000
U-235							1.28E-03	2.74E-09	10,000
U-236							1.50E-03	3.21E-09	10,000
U-238							1.99E-02	4.25E-08	10,000
200 West Area									
C-14	3.50E-01	0.00E+00	>10,000	3.51E-01	0.00E+00	>10,000	1.52E-01	0.00E+00	>10,000
Tc-99	2.00E+00	1.90E-02	2,180	2.01E+00	1.91E-02	2,180	8.71E-01	8.28E-03	2,180
Grouted Tc-99									
I-129	8.43E-03	8.01E-05	2,180	8.46E-03	8.04E-05	2,180	3.65E-03	3.47E-05	2,180
Grouted I-129									
U-233	1.13E-03	0.00E+00	>10,000	1.13E-03	0.00E+00	>10,000	4.74E-04	0.00E+00	>10,000
U-234	1.30E+00	0.00E+00	>10,000	1.31E+00	0.00E+00	>10,000	5.68E-01	0.00E+00	>10,000
U-235	2.08E-02	0.00E+00	>10,000	2.09E-02	0.00E+00	>10,000	9.02E-03	0.00E+00	>10,000
U-236	2.44E-02	0.00E+00	>10,000	2.45E-02	0.00E+00	>10,000	1.06E-02	0.00E+00	>10,000
U-238	3.26E-01	0.00E+00	>10,000	3.27E-01	0.00E+00	>10,000	1.41E-01	0.00E+00	>10,000

Table G.9. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci)	Approx. Peak Arrival Time (yrs)
Grouted 1996-2007 MLLW (Alternative Group B)									
200 East Area									
C-14							1.12E+00	4.77E-07	10,000
Tc-99									
Grouted Tc-99							1.28E+02	1.18E-02	970
I-129									
Grouted I-129							4.18E-03	1.22E-07	970
U-233							5.43E-04	7.08E-15	10,000
U-234							2.35E+02	3.06E-09	10,000
U-235							1.05E+01	1.37E-10	10,000
U-236							1.21E-02	1.58E-13	10,000
U-238							2.45E+02	3.19E-09	10,000
200 West Area									
C-14	7.02E-01	0.00E+00	>10,000	7.05E-01	0.00E+00	>10,000	7.28E-01	0.00E+00	>10,000
Tc-99									
Grouted Tc-99	4.01E+00	3.35E-04	1,840	4.03E+00	3.36E-04	1,840	7.40E+01	6.17E-03	1,840
I-129									
Grouted I-129	1.68E-02	4.44E-07	1,840	1.69E-02	4.46E-07	1,840	4.45E-03	1.17E-07	1,840
U-233	2.19E-03	0.00E+00	>10,000	2.20E-03	0.00E+00	>10,000	5.79E-04	0.00E+00	>10,000
U-234	2.62E+00	0.00E+00	>10,000	2.63E+00	0.00E+00	>10,000	1.35E+02	0.00E+00	>10,000
U-235	4.16E-02	0.00E+00	>10,000	4.18E-02	0.00E+00	>10,000	6.00E+00	0.00E+00	>10,000
U-236	4.89E-02	0.00E+00	>10,000	4.91E-02	0.00E+00	>10,000	1.29E-02	0.00E+00	>10,000
U-238	6.49E-01	0.00E+00	>10,000	6.52E-01	0.00E+00	>10,000	1.41E+02	0.00E+00	>10,000

Table G.10. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a 1-km Line of Analysis, Alternative Group A

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	1.28E+01	0.00E+00	>10,000	1.56E+01	0.00E+00	>10,000	1.59E+01	0.00E+00	>10,000
Tc-99	900	1.08E+00	8.98E+00	1,910	1.32E+00	1.09E+01	1,910	1.33E+00	1.10E+01	1,910
Grouted Tc-99	900									
I-129	1	3.01E-03	2.50E-02	1,910	3.67E-03	3.04E-02	1,910	3.67E-03	3.04E-02	1,910
Grouted I-129	1									
U-233	(a)	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	(a)	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	(a)	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	(a)	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	(a)	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	4.44E-01	0.00E+00	>10,000	4.62E-01	0.00E+00	>10,000	1.45E+02	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	2.98E+02	1,230	3.23E+03	2.98E+02	1,230	3.23E+03	2.98E+02	1,230
I-129	1	1.96E-06	1.62E-05	1,910	2.04E-06	1.62E-05	1,910	2.04E-06	1.69E-05	1,910
Grouted I-129	1	5.00E+00	1.46E-01	1,230	5.00E+00	1.46E-01	1,230	5.00E+00	1.46E-01	1,230
U-233	(a)	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	(a)	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	(a)	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000

Table G.10. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
U-236	(a)	**4.82E+01**	**0.00E+00**	**>10,000**	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	(a)	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	1.78E+01	10,000	1.46E+00	3.42E-03	10,000	1.45E+00	3.40E-03	10,000
Tc-99	900	8.34E+00	6.79E+01	1,370	8.36E+00	6.80E+01	1,370	8.27E+00	6.73E+01	1,370
Grouted Tc-99	900									
I-129	1	3.50E-02	2.85E-01	1,370	3.51E-02	2.85E-01	1,370	3.48E-02	2.83E-01	1,370
Grouted I-129	1									
U-233	(a)	4.67E-03	3.56E-05	10,000	4.68E-03	4.09E-05	10,000	4.64E-03	7.14E-05	10,000
U-234	(a)	5.44E+00	4.14E-02	10,000	5.45E+00	4.76E-02	10,000	5.40E+00	8.30E-02	10,000
U-235	(a)	8.67E-02	6.60E-04	10,000	8.69E-02	7.59E-04	10,000	8.61E-02	1.32E-03	10,000
U-236	(a)	1.02E-01	7.75E-04	10,000	1.02E-01	8.90E-04	10,000	1.01E-01	1.55E-03	10,000
U-238	(a)	1.36E+00	1.03E-02	10,000	1.36E+00	1.19E-02	10,000	1.35E+00	2.08E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	3.50E+01	10,000	2.87E+00	6.73E-03	10,000	4.25E+00	9.96E-03	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.10E+01	680	1.57E+02	1.11E+01	680	3.34E+02	2.35E+01	680
I-129	1									
Grouted I-129	1	6.87E-02	1.53E-03	680	6.88E-02	1.53E-03	680	7.06E-02	1.57E-03	680
U-233	(a)	8.91E-03	2.21E-06	10,000	8.93E-03	2.22E-06	10,000	9.20E-03	2.31E-09	10,000
U-234	(a)	1.07E+01	2.65E-03	10,000	1.07E+01	2.65E-03	10,000	3.35E+02	8.42E-05	10,000
U-235	(a)	1.70E-01	4.21E-05	10,000	1.70E-01	4.22E-05	10,000	1.47E+01	3.69E-06	10,000
U-236	(a)	2.00E-01	4.95E-05	10,000	2.00E-01	4.96E-05	10,000	2.05E-01	5.15E-08	10,000
U-238	(a)	2.64E+00	6.56E-04	10,000	2.65E+00	6.57E-04	10,000	3.42E+02	8.59E-05	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									

Table G.10. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.74E+00	680	3.89E+01	2.74E+00	680	3.89E+01	2.74E+00	680
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	1.74E-03	10,000	8.49E-01	1.74E-03	10,000	8.49E-01	1.74E-03	10,000
U-234	(a)	4.60E-01	9.43E-04	10,000	4.60E-01	9.43E-04	10,000	4.60E-01	9.43E-04	10,000
U-235	(a)	1.90E-02	3.89E-05	10,000	1.90E-02	3.89E-05	10,000	1.90E-02	3.89E-05	10,000
U-236	(a)	1.70E-02	3.48E-05	10,000	1.70E-02	3.48E-05	10,000	1.70E-02	3.48E-05	10,000
U-238	(a)	4.10E-01	8.40E-04	10,000	4.10E-01	8.40E-04	10,000	4.10E-01	8.40E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.11. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a Line of Analysis Near the Columbia River, Alternative Group A

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	1.28E+01	0.00E+00	>10,000	1.56E+01	0.00E+00	>10,000	1.59E+01	0.00E+00	>10,000
Tc-99	900	1.08E+00	8.33E-01	2,260	1.32E+00	1.02E+00	2,260	1.33E+00	1.02E+00	2,260
Grouted Tc-99	900									
I-129	1	3.01E-03	2.32E-03	2,260	3.67E-03	2.83E-03	2,260	3.67E-03	2.83E-03	2,260
Grouted I-129	1									
U-233	(a)	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	(a)	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	(a)	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	(a)	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	(a)	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	4.44E-01	0.00E+00	>10,000	4.62E-01	0.00E+00	>10,000	1.45E+02	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	2.07E+01	1,710	3.23E+03	2.07E+01	1,710	3.23E+03	2.07E+01	1,710
I-129	1	1.96E-06	1.51E-06	2,260	2.04E-06	1.57E-06	2,260	2.04E-06	1.57E-06	2,260
Grouted I-129	1	5.00E+00	1.01E-02	1,710	5.00E+00	1.01E-02	1,710	5.00E+00	1.01E-02	1,710
U-233	(a)	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	(a)	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	(a)	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000
U-236	(a)	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	(a)	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000

Table G.11. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	2.15E-05	10,000	1.46E+00	2.15E-05	10,000	1.45E+00	2.14E-05	10,000
Tc-99	900	8.34E+00	9.43E+00	1,590	8.36E+00	9.44E+00	1,590	8.27E+00	9.34E+00	1,590
Grouted Tc-99	900									
I-129	1	3.50E-02	3.96E-02	1,590	3.51E-02	3.97E-02	1,590	3.48E-02	3.93E-02	1,590
Grouted I-129	1									
U-233	(a)	4.67E-03	1.86E-07	10,000	4.68E-03	2.19E-07	10,000	4.64E-03	4.34E-07	10,000
U-234	(a)	5.44E+00	2.17E-04	10,000	5.45E+00	2.55E-04	10,000	5.40E+00	5.05E-04	10,000
U-235	(a)	8.67E-02	3.45E-06	10,000	8.69E-02	4.07E-06	10,000	8.61E-02	8.06E-06	10,000
U-236	(a)	1.02E-01	4.05E-06	10,000	1.02E-01	4.78E-06	10,000	1.01E-01	9.45E-06	10,000
U-238	(a)	1.36E+00	5.41E-05	10,000	1.46E+00	6.37E-05	10,000	1.35E+00	1.26E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	4.22E-05	10,000	2.87E+00	4.00E-05	10,000	4.25E+00	6.26E-05	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.35E+00	940	1.57E+02	1.00E+00	940	3.34E+02	2.89E+00	940
I-129	1									
Grouted I-129	1	6.87E-02	1.88E-04	940	6.88E-02	2.00E-04	940	7.06E-02	1.93E-04	940
U-233	(a)	8.91E-03	2.15E-08	10,000	8.93E-03	2.00E-08	10,000	9.20E-03	1.24E-11	10,000
U-234	(a)	1.07E+01	2.57E-05	10,000	1.07E+01	3.00E-05	10,000	3.35E+02	4.51E-07	10,000
U-235	(a)	1.70E-01	4.08E-07	10,000	1.70E-01	4.00E-07	10,000	1.47E+01	1.98E-08	10,000
U-236	(a)	2.00E-01	4.80E-07	10,000	2.00E-01	5.00E-07	10,000	2.05E-01	2.76E-10	10,000
U-238	(a)	2.64E+00	6.37E-06	10,000	2.65E+00	6.00E-06	10,000	3.42E+02	4.60E-07	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.11. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	3.37E-01	940	3.89E+01	3.37E-01	940	3.89E+01	3.37E-01	940
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	2.16E-05	10,000	8.49E-01	2.16E-05	10,000	8.49E-01	2.16E-05	10,000
U-234	(a)	4.60E-01	1.17E-05	10,000	4.60E-01	1.17E-05	10,000	4.60E-01	1.17E-05	10,000
U-235	(a)	1.90E-02	4.83E-07	10,000	1.90E-02	4.83E-07	10,000	1.90E-02	4.83E-07	10,000
U-236	(a)	1.70E-02	4.32E-07	10,000	1.70E-02	4.32E-07	10,000	1.70E-02	4.32E-07	10,000
U-238	(a)	4.10E-01	1.04E-05	10,000	4.10E-01	1.04E-05	10,000	4.10E-01	1.04E-05	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.12. Predicted Peak River Flux of Key Constituents Disposed of After 2007 at a Line of Analysis to the Columbia River, Alternative Group A

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
200 West Area									
C-14	1.28E+01	0.00E+00	>10,000	1.56E+01	0.00E+00	>10,000	1.59E+01	0.00E+00	>10,000
Tc-99	1.08E+00	1.01E-02	2,340	1.32E+00	1.23E-02	2,340	1.33E+00	1.24E-02	2,340
Grouted Tc-99									
I-129	3.01E-03	2.80E-05	2,340	3.67E-03	3.41E-05	2,340	3.67E-03	3.41E-05	2,340
Grouted I-129									
U-233	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
200 West Area									
C-14	4.44E-01	0.00E+00	>10,000	4.62E-01	0.00E+00	>10,000	1.45E+02	0.00E+00	>10,000
Tc-99									
Grouted Tc-99	3.23E+03	2.69E-01	1,840	3.23E+03	2.69E-01	1,840	3.23E+03	2.69E-01	1,840
I-129	1.96E-06	1.82E-08	2,340	2.04E-06	1.89E-08	2,340	2.04E-06	1.89E-08	2,340
Grouted I-129	5.00E+00	1.32E-04	1,840	5.00E+00	1.32E-04	1,840	5.00E+00	1.32E-04	1,840
U-233	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000
U-236	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000

Table G.12. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected MLLW									
200 East Area									
C-14	1.46E+00	1.25E-07	10,000	1.46E+00	1.25E-07	10,000	1.45E+00	1.25E-07	10,000
Tc-99	8.34E+00	9.43E-02	1,630	8.36E+00	9.45E-02	1,630	8.27E+00	9.35E-02	1,630
Grouted Tc-99									
I-129	3.50E-02	3.96E-04	1,630	3.51E-02	3.97E-04	1,630	3.48E-02	3.93E-04	1,630
Grouted I-129									
U-233	4.67E-03	1.10E-09	10,000	4.68E-03	1.29E-09	10,000	4.64E-03	4.45E-13	10,000
U-234	5.44E+00	1.28E-06	10,000	5.45E+00	1.50E-06	10,000	5.40E+00	5.18E-10	10,000
U-235	8.67E-02	2.04E-08	10,000	8.69E-02	2.40E-08	10,000	8.61E-02	8.27E-12	10,000
U-236	1.02E-01	2.40E-08	10,000	1.02E-01	2.81E-08	10,000	1.01E-01	9.70E-12	10,000
U-238	1.36E+00	3.20E-07	10,000	1.36E+00	3.75E-07	10,000	1.35E+00	1.30E-10	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Grouted MLLW									
200 East Area									
C-14	2.86E+00	2.46E-07	10,000	2.87E+00	2.47E-07	10,000	4.25E+00	3.65E-07	10,000
Tc-99									
Grouted Tc-99	1.57E+02	1.45E-02	970	1.57E+02	1.45E-02	970	3.34E+02	3.09E-02	970
I-129									
Grouted I-129	6.87E-02	2.01E-06	970	6.88E-02	2.01E-06	970	7.06E-02	2.06E-06	970
U-233	8.91E-03	1.27E-10	10,000	8.93E-03	1.27E-10	10,000	9.20E-03	1.31E-10	10,000
U-234	1.07E+01	1.53E-07	10,000	1.07E+01	1.53E-07	10,000	3.35E+02	4.78E-06	10,000
U-235	1.70E-01	2.43E-09	10,000	1.70E-01	2.43E-09	10,000	1.47E+01	2.10E-07	10,000
U-236	2.00E-01	2.85E-09	10,000	2.00E-01	2.85E-09	10,000	2.05E-01	2.93E-09	10,000
U-238	2.64E+00	3.78E-08	10,000	2.65E+00	3.78E-08	10,000	3.42E+02	4.88E-06	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.12. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99	3.89E+01	3.19E-03	870	3.89E+01	3.19E-03	870	3.89E+01	3.19E-03	870
I-129									
Grouted I-129									
U-233	8.49E-01	2.62E-07	10,000	8.49E-01	2.62E-07	10,000	8.49E-01	2.62E-07	10,000
U-234	4.60E-01	1.42E-07	10,000	4.60E-01	1.42E-07	10,000	4.60E-01	1.42E-07	10,000
U-235	1.90E-02	5.86E-09	10,000	1.90E-02	5.86E-09	10,000	1.90E-02	5.86E-09	10,000
U-236	1.70E-02	5.24E-09	10,000	1.70E-02	5.24E-09	10,000	1.70E-02	5.24E-09	10,000
U-238	4.10E-01	1.26E-07	10,000	4.10E-01	1.26E-07	10,000	4.10E-01	1.26E-07	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.13. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a 1-km Line of Analysis, Alternative Group B

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentratio n Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	4.81E-01	3.84E-03	10,000	5.86E-01	4.68E-03	10,000	2.20E+00	1.76E-02	10,000
Tc-99	900	4.08E-02	2.52E-01	1,210	4.97E-02	3.08E-01	1,210	1.84E-01	1.14E+00	1,210
Grouted Tc-99	900									
I-129	1	1.13E-04	7.01E-04	1,210	1.38E-04	8.55E-04	1,210	5.07E-04	3.14E-03	1,210
Grouted I-129	1									
U-233	(a)	1.39E-02	4.48E-04	10,000	1.70E-02	5.20E-04	10,000	6.24E-02	2.42E-03	10,000
U-234	(a)	2.30E-02	7.41E-04	10,000	2.81E-02	8.60E-04	10,000	1.27E-01	4.93E-03	10,000
U-235	(a)	4.84E-03	1.55E-04	10,000	5.90E-03	1.81E-04	10,000	2.33E-02	9.04E-04	10,000
U-236	(a)	5.49E-04	1.76E-05	10,000	6.69E-04	2.05E-05	10,000	2.46E-03	9.55E-05	10,000
U-238	(a)	5.51E-02	1.77E-03	10,000	6.72E-02	2.06E-03	10,000	2.87E-01	1.11E-02	10,000
200 West Area										
C-14	2,000	1.23E+01	0.00E+00	>10,000	1.50E+01	0.00E+00	>10,000	1.37E+01	0.00E+00	>10,000
Tc-99	900	1.04E+00	9.25E+00	1,770	1.27E+00	1.13E+01	1,770	1.15E+00	1.02E+01	1,770
Grouted Tc-99	900									
I-129	1	2.89E-03	2.57E-02	1,770	3.53E-03	3.13E-02	1,770	3.16E-03	2.81E-02	1,770
Grouted I-129	1									
U-233	(a)	3.57E-01	0.00E+00	>10,000	4.35E-01	0.00E+00	>10,000	3.90E-01	0.00E+00	>10,000
U-234	(a)	5.90E-01	0.00E+00	>10,000	7.19E-01	0.00E+00	>10,000	7.93E-01	0.00E+00	>10,000
U-235	(a)	1.24E-01	0.00E+00	>10,000	1.51E-01	0.00E+00	>10,000	1.45E-01	0.00E+00	>10,000
U-236	(a)	1.40E-02	0.00E+00	>10,000	1.71E-02	0.00E+00	>10,000	1.53E-02	0.00E+00	>10,000
U-238	(a)	1.41E+00	0.00E+00	>10,000	1.72E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	1.66E-02	1.33E-04	10,000	1.73E-02	1.38E-04	10,000	5.45E+00	4.36E-02	10,000
Tc-99	900									
Grouted Tc-99	900	1.21E+02	5.08E+00	630	1.21E+02	5.08E+00	630	1.21E+02	5.08E+00	630
I-129	1	7.35E-08	4.55E-07	1,210	7.66E-08	4.74E-07	1,210	7.66E-08	4.74E-07	1,210
Grouted I-129	1									
U-233	(a)	1.11E-02	9.13E-09	10,000	1.16E-02	1.06E-08	10,000	6.80E-03	1.29E-08	10,000
U-234	(a)	1.40E+01	1.15E-05	10,000	1.46E+01	1.33E-05	10,000	1.17E+01	2.22E-05	10,000
U-235	(a)	4.00E-01	3.28E-07	10,000	4.17E-01	3.81E-07	10,000	4.51E-01	8.56E-07	10,000
U-236	(a)	1.81E+00	1.49E-06	10,000	1.89E+00	1.73E-06	10,000	1.09E+00	2.07E-06	10,000
U-238	(a)	2.25E+01	1.84E-05	10,000	2.34E+01	2.14E-05	10,000	1.89E+01	3.59E-05	10,000
200 West Area										
C-14	2,000	4.27E-01	0.00E+00	>10,000	4.45E-01	0.00E+00	>10,000	1.39E+02	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	3.11E+03	2.87E+02	1,230	3.11E+03	2.87E+02	1,230	3.11E+03	2.87E+02	1,710
I-129	1	1.88E-06	1.67E-05	1,770	1.96E-06	1.74E-05	1,770	1.96E-06	1.74E-05	2,110
Grouted I-129	1	5.00E+00	1.46E-01	1,230	5.00E+00	1.46E-01	1,230	5.00E+00	1.46E-01	1,710
U-233	(a)	2.86E-01	0.00E+00	>10,000	2.98E-01	0.00E+00	>10,000	1.73E-01	0.00E+00	>10,000
U-234	(a)	3.59E+02	0.00E+00	>10,000	3.74E+02	0.00E+00	>10,000	2.99E+02	0.00E+00	>10,000
U-235	(a)	1.03E+01	0.00E+00	>10,000	1.07E+01	0.00E+00	>10,000	1.15E+01	0.00E+00	>10,000
U-236	(a)	4.64E+01	0.00E+00	>10,000	4.83E+01	0.00E+00	>10,000	2.78E+01	0.00E+00	>10,000
U-238	(a)	5.77E+02	0.00E+00	>10,000	6.01E+02	0.00E+00	>10,000	4.85E+02	0.00E+00	>10,000

Table G.13. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentratio n Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.70E+00	1.27E-02	10,000	1.71E+00	1.27E-02	10,000	1.89E+00	1.41E-02	10,000
Tc-99	900	9.75E+00	1.01E+02	1,250	9.79E+00	1.01E+02	1,250	1.08E+01	1.11E+02	1,250
Grouted Tc-99	900									
I-129	1	4.10E-02	4.23E-01	1,250	4.12E-02	4.25E-01	1,250	4.55E-02	4.69E-01	1,250
Grouted I-129	1									
U-233	(a)	5.49E-03	1.12E-04	10,000	5.51E-03	2.32E-04	10,000	6.10E-03	1.54E-04	10,000
U-234	(a)	6.35E+00	1.30E-01	10,000	6.38E+00	2.69E-01	10,000	7.05E+00	1.78E-01	10,000
U-235	(a)	1.02E-01	2.08E-03	10,000	1.02E-01	4.30E-03	10,000	1.13E-01	2.85E-03	10,000
U-236	(a)	1.19E-01	2.42E-03	10,000	1.19E-01	5.02E-03	10,000	1.32E-01	3.33E-03	10,000
U-238	(a)	1.58E+00	3.24E-02	10,000	1.59E+00	6.71E-02	10,000	1.76E+00	4.43E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	3.01E+00	2.24E-02	10,000	3.02E+00	2.25E-02	10,000	4.56E+00	3.39E-02	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.11E+01	680	1.58E+02	1.11E+01	680	3.20E+02	2.25E+01	680
I-129	1									
Grouted I-129	1	7.22E-02	1.61E-03	680	7.25E-02	1.62E-03	680	8.07E-02	1.80E-03	680
U-233	(a)	9.38E-03	5.47E-07	10,000	9.42E-03	5.48E-07	10,000	1.05E-02	9.88E-09	10,000
U-234	(a)	1.13E+01	6.56E-04	10,000	1.13E+01	6.57E-04	10,000	3.06E+02	2.88E-04	10,000
U-235	(a)	1.78E-01	1.04E-05	10,000	1.79E-01	1.04E-05	10,000	1.33E+01	1.25E-05	10,000
U-236	(a)	2.09E-01	1.22E-05	10,000	2.10E-01	1.22E-05	10,000	2.34E-01	2.20E-07	10,000
U-238	(a)	2.79E+00	1.63E-04	10,000	2.80E+00	1.63E-04	10,000	3.11E+02	2.93E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.13. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentratio n Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.74E+00	680	3.89E+01	2.74E+00	680	3.89E+01	2.74E+00	680
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	2.51E-06	10,000	8.49E-01	2.51E-06	10,000	8.49E-01	2.51E-06	10,000
U-234	(a)	4.60E-01	1.36E-06	10,000	4.60E-01	1.36E-06	10,000	4.60E-01	1.36E-06	10,000
U-235	(a)	1.90E-02	5.61E-08	10,000	1.90E-02	5.61E-08	10,000	1.90E-02	5.61E-08	10,000
U-236	(a)	1.70E-02	5.02E-08	10,000	1.70E-02	5.02E-08	10,000	1.70E-02	5.02E-08	10,000
U-238	(a)	4.10E-01	1.21E-06	10,000	4.10E-01	1.21E-06	10,000	4.10E-01	1.21E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.14. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a Line of Analysis Near the Columbia River, Alternative Group B

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Cat 1 LLW										
200 East Area										
C-14	2,000	4.81E-01	7.24E-05	10,000	5.86E-01	8.83E-05	10,000	2.20E+00	3.31E-04	10,000
Tc-99	900	4.08E-02	6.10E-02	1,380	4.97E-02	7.44E-02	1,380	1.84E-01	2.75E-01	1,380
Grouted Tc-99	900									
I-129	1	1.13E-04	1.69E-04	1,380	1.38E-04	2.06E-04	1,380	5.07E-04	7.59E-04	1,380
Grouted I-129	1									
U-233	(a)	1.39E-02	4.48E-04	10,000	1.70E-02	5.20E-04	10,000	6.24E-02	2.42E-03	10,000
U-234	(a)	2.30E-02	7.41E-04	10,000	2.81E-02	8.60E-04	10,000	1.27E-01	4.93E-03	10,000
U-235	(a)	4.84E-03	1.55E-04	10,000	5.90E-03	1.81E-04	10,000	2.33E-02	9.04E-04	10,000
U-236	(a)	5.49E-04	1.76E-05	10,000	6.69E-04	2.05E-05	10,000	2.46E-03	9.55E-05	10,000
U-238	(a)	5.51E-02	1.77E-03	10,000	6.72E-02	2.06E-03	10,000	2.87E-01	1.11E-02	10,000
200 West Area										
C-14	2,000	1.23E+01	0.00E+00	>10,000	1.50E+01	0.00E+00	>10,000	1.37E+01	0.00E+00	>10,000
Tc-99	900	1.04E+00	8.44E-01	2,110	1.27E+00	1.03E+00	2,110	1.15E+00	9.32E-01	2,110
Grouted Tc-99	900									
I-129	1	2.89E-03	2.35E-03	2,110	3.53E-03	2.86E-03	2,110	3.16E-03	2.56E-03	2,110
Grouted I-129	1									
U-233	(a)	3.57E-01	0.00E+00	>10,000	4.35E-01	0.00E+00	>10,000	3.90E-01	0.00E+00	>10,000
U-234	(a)	5.90E-01	0.00E+00	>10,000	7.19E-01	0.00E+00	>10,000	7.93E-01	0.00E+00	>10,000
U-235	(a)	1.24E-01	0.00E+00	>10,000	1.51E-01	0.00E+00	>10,000	1.45E-01	0.00E+00	>10,000
U-236	(a)	1.40E-02	0.00E+00	>10,000	1.71E-02	0.00E+00	>10,000	1.53E-02	0.00E+00	>10,000
U-238	(a)	1.41E+00	0.00E+00	>10,000	1.72E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000
Cat 3 LLW										
200 East Area										
C-14	2,000	1.66E-02	2.50E-06	10,000	1.73E-02	2.61E-06	10,000	5.45E+00	8.21E-04	10,000
Tc-99	900									
Grouted Tc-99	900	1.21E+02	1.19E+00	860	1.21E+02	1.19E+00	860	1.21E+02	1.19E+00	860
I-129	1	7.35E-08	1.10E-07	1,380	7.66E-08	2.06E-04	1,380	7.66E-08	1.15E-07	1,380
Grouted I-129	1									
U-233	(a)	1.11E-02	1.49E-10	10,000	1.16E-02	1.73E-10	10,000	6.80E-03	2.11E-10	10,000
U-234	(a)	1.40E+01	1.88E-07	10,000	1.46E+01	2.18E-07	10,000	1.17E+01	3.63E-07	10,000
U-235	(a)	4.00E-01	5.36E-09	10,000	4.17E-01	6.23E-09	10,000	4.51E-01	1.40E-08	10,000
U-236	(a)	1.81E+00	2.43E-08	10,000	1.89E+00	2.82E-08	10,000	1.09E+00	3.38E-08	10,000
U-238	(a)	2.25E+01	3.01E-07	10,000	2.34E+01	3.50E-07	10,000	1.89E+01	5.87E-07	10,000
200 West Area										
C-14	2,000	4.27E-01	0.00E+00	>10,000	4.45E-01	0.00E+00	>10,000	1.39E+02	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	3.11E+03	1.99E+01	1,710	3.11E+03	1.99E+01	1,710	3.11E+03	1.99E+01	1,710
I-129	1	1.88E-06	1.52E-06	2,110	1.96E-06	1.59E-06	2,110	1.96E-06	1.59E-06	2,110
Grouted I-129	1	5.00E+00	1.01E-02	1,710	5.00E+00	1.01E-02	1,710	5.00E+00	1.01E-02	1,710
U-233	(a)	2.86E-01	0.00E+00	>10,000	2.98E-01	0.00E+00	>10,000	1.73E-01	0.00E+00	>10,000
U-234	(a)	3.59E+02	0.00E+00	>10,000	3.74E+02	0.00E+00	>10,000	2.99E+02	0.00E+00	>10,000
U-235	(a)	1.03E+01	0.00E+00	>10,000	1.07E+01	0.00E+00	>10,000	1.15E+01	0.00E+00	>10,000
U-236	(a)	4.64E+01	0.00E+00	>10,000	4.83E+01	0.00E+00	>10,000	2.78E+01	0.00E+00	>10,000
U-238	(a)	5.77E+02	0.00E+00	>10,000	6.01E+02	0.00E+00	>10,000	4.85E+02	0.00E+00	>10,000

Table G.14. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.70E+00	7.33E-05	10,000	1.71E+00	7.36E-05	10,000	1.89E+00	8.13E-05	10,000
Tc-99	900	9.75E+00	1.27E+01	1,430	9.79E+00	1.27E+01	1,430	1.08E+01	1.40E+01	1,430
Grouted Tc-99	900									
I-129	1	4.10E-02	5.33E-02	1,430	4.12E-02	5.35E-02	1,430	4.55E-02	5.91E-02	1,430
Grouted I-129	1									
U-233	(a)	5.49E-03	7.92E-07	10,000	5.51E-03	2.35E-06	10,000	6.10E-03	1.28E-06	10,000
U-234	(a)	6.35E+00	9.17E-04	10,000	6.38E+00	2.73E-03	10,000	7.05E+00	1.48E-03	10,000
U-235	(a)	1.02E-01	1.47E-05	10,000	1.02E-01	4.36E-05	10,000	1.13E-01	2.37E-05	10,000
U-236	(a)	1.19E-01	1.71E-05	10,000	1.19E-01	5.08E-05	10,000	1.32E-01	2.77E-05	10,000
U-238	(a)	1.58E+00	2.29E-04	10,000	1.59E+00	6.79E-04	10,000	1.76E+00	3.70E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	3.01E+00	1.29E-04	10,000	3.02E+00	1.30E-04	10,000	4.56E+00	1.96E-04	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.36E+00	940	1.58E+02	1.37E+00	940	3.20E+02	2.77E+00	940
I-129	1									
Grouted I-129	1	7.22E-02	1.97E-04	940	7.25E-02	1.98E-04	940	8.07E-02	2.21E-04	940
U-233	(a)	9.38E-03	2.93E-09	10,000	9.42E-03	2.93E-09	10,000	1.05E-02	5.29E-11	10,000
U-234	(a)	1.13E+01	0.00E+00	10,000	1.13E+01	0.00E+00	10,000	3.06E+02	1.54E-06	10,000
U-235	(a)	1.78E-01	0.00E+00	10,000	1.79E-01	0.00E+00	10,000	1.33E+01	6.70E-08	10,000
U-236	(a)	2.09E-01	0.00E+00	10,000	2.10E-01	0.00E+00	10,000	2.34E-01	1.18E-09	10,000
U-238	(a)	2.79E+00	0.00E+00	10,000	2.80E+00	0.00E+00	10,000	3.11E+02	1.57E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.14. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	3.37E-01	940	3.89E+01	3.37E-01	940	3.89E+01	3.37E-01	940
I-129	1									
Grouted I-129	1									
U-233	30	8.49E-01	1.33E-08	10,000	8.49E-01	1.33E-08	10,000	8.49E-01	1.33E-08	10,000
U-234	30	4.60E-01	7.23E-09	10,000	4.60E-01	7.23E-09	10,000	4.60E-01	7.23E-09	10,000
U-235	30	1.90E-02	2.99E-10	10,000	1.90E-02	2.99E-10	10,000	1.90E-02	2.99E-10	10,000
U-236	30	1.70E-02	2.67E-10	10,000	1.70E-02	2.67E-10	10,000	1.70E-02	2.67E-10	10,000
U-238	30	4.10E-01	6.44E-09	10,000	4.10E-01	6.44E-09	10,000	4.10E-01	6.44E-09	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.15. Predicted Peak River Flux of Key Constituents Disposed of After 2007 at a Line of Analysis to the Columbia River, Alternative Group B

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW									
200 East Area									
C-14	4.81E-01	2.05E-07	10,000	5.86E-01	2.49E-07	10,000	2.20E+00	9.37E-07	10,000
Tc-99	4.08E-02	5.29E-04	1,450	4.97E-02	6.46E-04	1,450	1.84E-01	2.39E-03	1,450
Grouted Tc-99									
I-129	1.13E-04	1.47E-06	1,450	1.38E-04	1.79E-06	1,450	5.07E-04	6.59E-06	1,450
Grouted I-129									
U-233	1.39E-02	4.21E-08	10,000	1.70E-02	4.89E-08	10,000	6.24E-02	2.83E-07	10,000
U-234	2.30E-02	6.96E-08	10,000	2.81E-02	8.09E-08	10,000	1.27E-01	5.75E-07	10,000
U-235	4.84E-03	1.46E-08	10,000	5.90E-03	1.70E-08	10,000	2.33E-02	1.05E-07	10,000
U-236	5.49E-04	1.66E-09	10,000	6.69E-04	1.93E-09	10,000	2.46E-03	1.11E-08	10,000
U-238	5.51E-02	1.66E-07	10,000	6.72E-02	1.93E-07	10,000	2.87E-01	1.30E-06	10,000
200 West Area									
C-14	1.23E+01	0.00E+00	>10,000	1.50E+01	0.00E+00	>10,000	1.37E+01	0.00E+00	>10,000
Tc-99	1.04E+00	9.90E-03	2,180	1.27E+00	1.21E-02	2,180	1.15E+00	1.09E-02	2,180
Grouted Tc-99									
I-129	2.89E-03	2.75E-05	2,180	3.53E-03	3.35E-05	2,180	3.16E-03	3.00E-05	2,180
Grouted I-129									
U-233	3.57E-01	0.00E+00	>10,000	4.35E-01	0.00E+00	>10,000	3.90E-01	0.00E+00	>10,000
U-234	5.90E-01	0.00E+00	>10,000	7.19E-01	0.00E+00	>10,000	7.93E-01	0.00E+00	>10,000
U-235	1.24E-01	0.00E+00	>10,000	1.51E-01	0.00E+00	>10,000	1.45E-01	0.00E+00	>10,000
U-236	1.40E-02	0.00E+00	>10,000	1.71E-02	0.00E+00	>10,000	1.53E-02	0.00E+00	>10,000
U-238	1.41E+00	0.00E+00	>10,000	1.72E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000
Projected Cat 3 LLW									
200 East Area									
C-14	1.66E-02	1.79E-04	1,490	1.73E-02	1.87E-04	1,490	5.45E+00	5.88E-02	1,490
Tc-99									
Grouted Tc-99	1.21E+02	1.12E-02	970	1.21E+02	1.12E-02	970	1.21E+02	1.12E-02	970
I-129	7.35E-08	3.45E-13	10,000	7.66E-08	3.59E-13	10,000	7.66E-08	3.59E-13	10,000
Grouted I-129									
U-233	1.11E-02	1.43E-13	10,000	1.16E-02	1.66E-13	10,000	6.80E-03	2.02E-13	10,000
U-234	1.40E+01	1.79E-10	10,000	1.46E+01	2.08E-10	10,000	1.17E+01	3.47E-10	10,000
U-235	4.00E-01	5.12E-12	10,000	4.17E-01	5.95E-12	10,000	4.51E-01	1.34E-11	10,000
U-236	1.81E+00	2.32E-11	10,000	1.89E+00	2.70E-11	10,000	1.09E+00	3.23E-11	10,000
U-238	2.25E+01	2.88E-10	10,000	2.34E+01	3.34E-10	10,000	1.89E+01	5.61E-10	10,000
200 West Area									
C-14	4.27E-01	0.00E+00	>10,000	4.45E-01	0.00E+00	>10,000	1.39E+02	0.00E+00	>10,000
Tc-99									
Grouted Tc-99	3.11E+03	2.59E-01	1,840	3.11E+03	2.59E-01	1,840	3.11E+03	2.59E-01	1,840
I-129	1.88E-06	1.79E-08	2,180	1.96E-06	1.86E-08	2,180	1.96E-06	1.86E-08	2,180
Grouted I-129	5.00E+00	1.32E-04	1,840	5.00E+00	1.32E-04	1,840	5.00E+00	1.32E-04	1,840
U-233	2.86E-01	0.00E+00	>10,000	2.98E-01	0.00E+00	>10,000	1.73E-01	0.00E+00	>10,000
U-234	3.59E+02	0.00E+00	>10,000	3.74E+02	0.00E+00	>10,000	2.99E+02	0.00E+00	>10,000
U-235	1.03E+01	0.00E+00	>10,000	1.07E+01	0.00E+00	>10,000	1.15E+01	0.00E+00	>10,000
U-236	4.64E+01	0.00E+00	>10,000	4.83E+01	0.00E+00	>10,000	2.78E+01	0.00E+00	>10,000
U-238	5.77E+02	0.00E+00	>10,000	6.01E+02	0.00E+00	>10,000	4.85E+02	0.00E+00	>10,000

Table G.15. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected MLLW									
200 East Area									
C-14	1.70E+00	4.27E-07	10,000	1.71E+00	4.29E-07	10,000	1.89E+00	4.74E-07	10,000
Tc-99	9.75E+00	1.21E-01	1,480	9.79E+00	1.22E-01	1,480	1.08E+01	1.34E-01	1,480
Grouted Tc-99									
I-129	4.10E-02	5.10E-04	1,480	4.12E-02	5.12E-04	1,480	4.55E-02	5.65E-04	1,480
Grouted I-129									
U-233	5.49E-03	4.69E-09	10,000	5.51E-03	1.43E-08	10,000	6.10E-03	7.64E-09	10,000
U-234	6.35E+00	5.43E-06	10,000	6.38E+00	1.66E-05	10,000	7.05E+00	8.83E-06	10,000
U-235	1.02E-01	8.68E-08	10,000	1.02E-01	2.65E-07	10,000	1.13E-01	1.41E-07	10,000
U-236	1.19E-01	1.01E-07	10,000	1.19E-01	3.10E-07	10,000	1.32E-01	1.65E-07	10,000
U-238	1.58E+00	1.35E-06	10,000	1.59E+00	4.14E-06	10,000	1.76E+00	2.20E-06	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Grouted MLLW									
200 East Area									
C-14	3.01E+00	7.55E-07	10,000	3.02E+00	7.58E-07	10,000	4.56E+00	1.14E-06	10,000
Tc-99									
Grouted Tc-99	1.57E+02	1.46E-02	970	1.58E+02	1.46E-02	970	3.20E+02	2.96E-02	970
I-129									
Grouted I-129	7.22E-02	2.11E-06	970	7.25E-02	2.12E-06	970	8.07E-02	2.36E-06	970
U-233	9.38E-03	1.72E-11	10,000	9.42E-03	1.73E-11	10,000	1.05E-02	3.11E-13	10,000
U-234	1.13E+01	2.07E-08	10,000	1.13E+01	2.07E-08	10,000	3.06E+02	9.07E-09	10,000
U-235	1.78E-01	3.27E-10	10,000	1.79E-01	3.28E-10	10,000	1.33E+01	3.94E-10	10,000
U-236	2.09E-01	3.84E-10	10,000	2.10E-01	3.85E-10	10,000	2.34E-01	6.93E-12	10,000
U-238	2.79E+00	5.12E-09	10,000	2.80E+00	5.13E-09	10,000	3.11E+02	9.22E-09	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.15. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99	3.89E+01	3.60E-03	970	3.89E+01	3.60E-03	970	3.89E+01	3.60E-03	970
I-129									
Grouted I-129									
U-233	8.49E-01	7.84E-11	>10,000	8.49E-01	7.84E-11	>10,000	8.49E-01	7.84E-11	>10,000
U-234	4.60E-01	4.25E-11	>10,000	4.60E-01	4.25E-11	>10,000	4.60E-01	4.25E-11	>10,000
U-235	1.90E-02	1.75E-12	>10,000	1.90E-02	1.75E-12	>10,000	1.90E-02	1.75E-12	>10,000
U-236	1.70E-02	1.57E-12	>10,000	1.70E-02	1.57E-12	>10,000	1.70E-02	1.57E-12	>10,000
U-238	4.10E-01	3.79E-11	>10,000	4.10E-01	3.79E-11	>10,000	4.10E-01	3.79E-11	>10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.16. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a 1-km Line of Analysis, Alternative Group C

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	1.28E+01	0.00E+00	>10,000	1.56E+01	0.00E+00	>10,000	1.59E+01	0.00E+00	>10,000
Tc-99	900	1.08E+00	8.98E+00	1,910	1.32E+00	1.09E+01	1,910	1.33E+00	1.10E+01	1,910
Grouted Tc-99	900	0.00E+00								
I-129	1	3.01E-03	2.50E-02	1,910	3.67E-03	3.04E-02	1,910	3.67E-03	3.04E-02	1,910
Grouted I-129	1	0.00E+00								
U-233	(a)	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	(a)	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	(a)	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	(a)	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	(a)	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	4.44E-01	0.00E+00	>10,000	4.62E-01	0.00E+00	>10,000	1.45E+02	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	2.98E+02	1,230	3.23E+03	2.98E+02	1,230	3.23E+03	2.98E+02	1,230
I-129	1	1.96E-06	1.62E-05	1,910	2.04E-06	1.69E-05	1,910	2.04E-06	1.69E-05	1,910
Grouted I-129	1	5.00E+00	1.46E-01	1,230	5.00E+00	1.46E-01	1,230	5.00E+00	1.46E-01	1,230
U-233	(a)	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	(a)	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	(a)	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000

Table G.16. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
U-236	(a)	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	(a)	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	3.41E-03	10,000	1.46E+00	3.42E-03	10,000	1.45E+00	3.40E-03	10,000
Tc-99	900	8.34E+00	6.79E+01	1,370	8.36E+00	6.80E+01	1,370	8.27E+00	6.73E+01	1,370
Grouted Tc-99	900									
I-129	1	3.50E-02	2.85E-01	1,370	3.51E-02	2.85E-01	1,370	3.48E-02	2.83E-01	1,370
Grouted I-129	1									
U-233	(a)	4.67E-03	3.56E-05	10,000	4.68E-03	4.09E-05	10,000	4.64E-03	7.14E-05	10,000
U-234	(a)	5.44E+00	4.14E-02	10,000	5.45E+00	4.76E-02	10,000	5.40E+00	8.30E-02	10,000
U-235	(a)	8.67E-02	6.60E-04	10,000	8.69E-02	7.59E-04	10,000	8.61E-02	1.32E-03	10,000
U-236	(a)	1.02E-01	7.75E-04	10,000	1.02E-01	8.90E-04	10,000	1.01E-01	1.55E-03	10,000
U-238	(a)	1.36E+00	1.03E-02	10,000	1.36E+00	1.19E-02	10,000	1.35E+00	2.08E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	6.71E-03	10,000	2.87E+00	6.73E-03	10,000	4.25E+00	9.96E-03	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.10E+01	680	1.57E+02	1.11E+01	680	3.34E+02	2.35E+01	680
I-129	1									
Grouted I-129	1	6.87E-02	1.53E-03	680	6.88E-02	1.53E-03	680	7.06E-02	1.57E-03	680
U-233	(a)	8.91E-03	2.21E-06	10,000	8.93E-03	2.22E-06	10,000	9.20E-03	2.31E-09	10,000
U-234	(a)	1.07E+01	2.65E-03	10,000	1.07E+01	2.65E-03	10,000	3.35E+02	8.42E-05	10,000
U-235	(a)	1.70E-01	4.21E-05	10,000	1.70E-01	4.22E-05	10,000	1.47E+01	3.69E-06	10,000
U-236	(a)	2.00E-01	4.95E-05	10,000	2.00E-01	4.96E-05	10,000	2.05E-01	5.15E-08	10,000
U-238	(a)	2.64E+00	6.56E-04	10,000	2.65E+00	6.57E-04	10,000	3.42E+02	8.59E-05	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									

Table G.16. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
U-238	(a)									
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	1.87E+00	680	3.89E+01	1.87E+00	680	3.89E+01	1.87E+00	680
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	1.79E-06	10,000	8.49E-01	1.79E-06	10,000	8.49E-01	1.79E-06	10,000
U-234	(a)	4.60E-01	9.68E-07	10,000	4.60E-01	9.68E-07	10,000	4.60E-01	9.68E-07	10,000
U-235	(a)	1.90E-02	4.00E-08	10,000	1.90E-02	4.00E-08	10,000	1.90E-02	4.00E-08	10,000
U-236	(a)	1.70E-02	3.58E-08	10,000	1.70E-02	3.58E-08	10,000	1.70E-02	3.58E-08	10,000
U-238	(a)	4.10E-01	8.62E-07	10,000	4.10E-01	8.62E-07	10,000	4.10E-01	8.62E-07	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.17. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a Line of Analysis Near the Columbia River, Alternative Group C

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	1.28E+01	0.00E+00	>10,000	1.56E+01	0.00E+00	>10,000	1.59E+01	0.00E+00	>10,000
Tc-99	900	1.08E+00	8.33E-01	2,260	1.32E+00	1.02E+00	2,260	1.33E+00	1.02E+00	2,260
Grouted Tc-99	900									
I-129	1	3.01E-03	2.32E-03	2,260	3.67E-03	2.83E-03	2,260	3.67E-03	2.83E-03	2,260
Grouted I-129	1									
U-233	(a)	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	(a)	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	(a)	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	(a)	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	(a)	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
200 West Area										
C-14	2,000	4.44E-01	0.00E+00	>10,000	4.62E-01	0.00E+00	>10,000	1.45E+02	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	2.07E+01	1,710	3.23E+03	2.07E+01	1,710	3.23E+03	2.07E+01	1,710
I-129	1	1.96E-06	1.51E-06	2,260	2.04E-06	1.57E-06	2,260	2.04E-06	1.57E-06	2,260
Grouted I-129	1	5.00E+00	1.01E-02	1,700	5.00E+00	1.01E-02	1,700	5.00E+00	1.01E-02	1,700
U-233	(a)	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	(a)	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	(a)	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000
U-236	(a)	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	(a)	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000

Table G.17. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	2.15E-05	10,000	1.46E+00	2.15E-05	10,000	1.45E+00	2.14E-05	10,000
Tc-99	900	8.34E+00	9.43E+00	1,590	8.36E+00	9.44E+00	1,590	8.27E+00	9.34E+00	1,590
Grouted Tc-99	900									
I-129	1	3.50E-02	3.96E-02	1,590	3.51E-02	3.97E-02	1,590	3.48E-02	3.93E-02	1,590
Grouted I-129	1									
U-233	(a)	4.67E-03	1.86E-07	10,000	4.68E-03	2.19E-07	10,000	4.64E-03	4.34E-07	10,000
U-234	(a)	5.44E+00	2.17E-04	10,000	5.45E+00	2.55E-04	10,000	5.40E+00	5.05E-04	10,000
U-235	(a)	8.67E-02	3.45E-06	10,000	8.69E-02	4.07E-06	10,000	8.61E-02	8.06E-06	10,000
U-236	(a)	1.02E-01	4.05E-06	10,000	1.02E-01	4.78E-06	10,000	1.01E-01	9.45E-06	10,000
U-238	(a)	1.36E+00	5.41E-05	10,000	1.36E+00	6.37E-05	10,000	1.35E+00	1.26E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	4.22E-05	10,000	2.87E+00	4.23E-05	10,000	4.25E+00	6.26E-05	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.35E+00	940	1.57E+02	1.36E+00	940	3.34E+02	2.89E+00	940
I-129	1									
Grouted I-129	1	6.87E-02	2.14E-04	850	6.88E-02	2.14E-04	850	7.06E-02	2.20E-04	850
U-233	(a)	8.91E-03	2.15E-08	10,000	8.93E-03	2.15E-08	10,000	9.20E-03	1.24E-11	10,000
U-234	(a)	1.07E+01	2.57E-05	10,000	1.07E+01	2.58E-05	10,000	3.35E+02	4.51E-07	10,000
U-235	(a)	1.70E-01	4.08E-07	10,000	1.70E-01	4.09E-07	10,000	1.47E+01	1.98E-08	10,000
U-236	(a)	2.00E-01	4.80E-07	10,000	2.00E-01	4.81E-07	10,000	2.05E-01	2.76E-10	10,000
U-238	(a)	2.64E+00	6.37E-06	10,000	2.65E+00	6.38E-06	10,000	3.42E+02	4.60E-07	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.17. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.03E-01	820	3.89E+01	2.03E-01	820	3.89E+01	2.03E-01	820
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	2.21E-08	10,000	8.49E-01	2.21E-08	10,000	8.49E-01	2.21E-08	10,000
U-234	(a)	4.60E-01	1.20E-08	10,000	4.60E-01	1.20E-08	10,000	4.60E-01	1.20E-08	10,000
U-235	(a)	1.90E-02	4.96E-10	10,000	1.90E-02	4.96E-10	10,000	1.90E-02	4.96E-10	10,000
U-236	(a)	1.70E-02	4.43E-10	10,000	1.70E-02	4.43E-10	10,000	1.70E-02	4.43E-10	10,000
U-238	(a)	4.10E-01	1.07E-08	10,000	4.10E-01	1.07E-08	10,000	4.10E-01	1.07E-08	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.18. Predicted Peak River Flux of Key Constituents Disposed of After 2007 at a Line of Analysis to the Columbia River, Alternative Group C

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
200 West Area									
C-14	1.28E+01	0.00E+00	>10,000	1.56E+01	0.00E+00	>10,000	1.59E+01	0.00E+00	>10,000
Tc-99	1.08E+00	1.01E-02	2,340	1.32E+00	1.23E-02	2,340	1.33E+00	1.24E-02	2,340
Grouted Tc-99									
I-129	3.01E-03	2.80E-05	2,340	3.67E-03	3.41E-05	2,340	3.67E-03	3.41E-05	2,340
Grouted I-129									
U-233	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
200 West Area									
C-14	4.44E-01	0.00E+00	>10,000	4.62E-01	0.00E+00	>10,000	1.45E+02	0.00E+00	>10,000
Tc-99									
Grouted Tc-99	3.23E+03	2.69E-01	1,840	3.23E+03	2.69E-01	1,840	3.23E+03	2.69E-01	1,840
I-129	1.96E-06	1.82E-08	2,340	2.04E-06	1.89E-08	2,340	2.04E-06	1.89E-08	2,340
Grouted I-129	5.00E+00	1.32E-04	1,840	5.00E+00	1.32E-04	1,840	5.00E+00	1.32E-04	1,840
U-233	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000
U-236	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000

Table G.18. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected MLLW									
200 East Area									
C-14	1.46E+00	1.25E-07	10,000	1.46E+00	1.25E-07	10,000	1.45E+00	1.25E-07	10,000
Tc-99	8.34E+00	9.43E-02	1,630	8.36E+00	9.45E-02	1,630	8.27E+00	9.35E-02	1,630
Grouted Tc-99								0.00E+00	
I-129	3.50E-02	3.96E-04	1,630	3.51E-02	3.97E-04	1,630	3.48E-02	3.93E-04	1,630
Grouted I-129									
U-233	4.67E-03	1.10E-09	10,000	4.68E-03	1.29E-09	10,000	4.64E-03	7.49E-13	10,000
U-234	5.44E+00	1.28E-06	10,000	5.45E+00	1.50E-06	10,000	5.40E+00	8.71E-10	10,000
U-235	8.67E-02	2.04E-08	10,000	8.69E-02	2.40E-08	10,000	8.61E-02	1.39E-11	10,000
U-236	1.02E-01	2.40E-08	10,000	1.02E-01	2.81E-08	10,000	1.01E-01	1.63E-11	10,000
U-238	1.36E+00	3.20E-07	10,000	1.36E+00	3.75E-07	10,000	1.35E+00	2.18E-10	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Grouted MLLW									
200 East Area									
C-14	2.86E+00	2.46E-07	10,000	2.87E+00	2.47E-07	10,000	4.25E+00	3.65E-07	10,000
Tc-99									
Grouted Tc-99	1.57E+02	1.45E-02	970	1.57E+02	1.45E-02	970	3.34E+02	3.09E-02	970
I-129									
Grouted I-129	6.87E-02	2.01E-06	970	6.88E-02	2.01E-06	970	7.06E-02	2.06E-06	970
U-233	8.91E-03	1.27E-10	10,000	8.93E-03	1.27E-10	10,000	9.20E-03	1.31E-10	10,000
U-234	1.07E+01	1.53E-07	10,000	1.07E+01	1.53E-07	10,000	3.35E+02	4.78E-06	10,000
U-235	1.70E-01	2.43E-09	10,000	1.70E-01	2.43E-09	10,000	1.47E+01	2.10E-07	10,000
U-236	2.00E-01	2.85E-09	10,000	2.00E-01	2.85E-09	10,000	2.05E-01	2.93E-09	10,000
U-238	2.64E+00	3.78E-08	10,000	2.65E+00	3.78E-08	10,000	3.42E+02	4.88E-06	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.18. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99	3.89E+01	3.19E-03	870	3.89E+01	3.19E-03	870	3.89E+01	3.19E-03	870
I-129									
Grouted I-129									
U-233	8.49E-01	2.69E-10	10,000	8.49E-01	2.69E-10	10,000	8.49E-01	2.69E-10	10,000
U-234	4.60E-01	1.46E-10	10,000	4.60E-01	1.46E-10	10,000	4.60E-01	1.46E-10	10,000
U-235	1.90E-02	6.01E-12	10,000	1.90E-02	6.01E-12	10,000	1.90E-02	6.01E-12	10,000
U-236	1.70E-02	5.38E-12	10,000	1.70E-02	5.38E-12	10,000	1.70E-02	5.38E-12	10,000
U-238	4.10E-01	1.30E-10	10,000	4.10E-01	1.30E-10	10,000	4.10E-01	1.30E-10	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.19. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a 1-km Line of Analysis, Alternative Group D_1

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	1.28E+01	2.01E-02	10,000	1.56E+01	2.45E-02	10,000	1.59E+01	2.50E-02	10,000
Tc-99	900	1.08E+00	6.39E+00	1,380	1.32E+00	7.80E+00	1,380	1.33E+00	7.86E+00	1,380
Grouted Tc-99	900									
I-129	1	3.01E-03	1.78E-02	1,380	3.67E-03	2.17E-02	1,380	3.67E-03	2.17E-02	1,380
Grouted I-129	1									
U-233	(a)	3.71E-01	3.29E-03	10,000	4.52E-01	3.88E-03	10,000	4.52E-01	5.61E-03	10,000
U-234	(a)	6.13E-01	5.44E-03	10,000	7.47E-01	6.41E-03	10,000	9.21E-01	1.14E-02	10,000
U-235	(a)	1.29E-01	1.14E-03	10,000	1.57E-01	1.35E-03	10,000	1.68E-01	2.08E-03	10,000
U-236	(a)	1.46E-02	1.30E-04	10,000	1.78E-02	1.53E-04	10,000	1.78E-02	2.21E-04	10,000
U-238	(a)	1.47E+00	1.30E-02	10,000	1.79E+00	1.54E-02	10,000	2.08E+00	2.58E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	4.44E-01	6.97E-04	10,000	4.62E-01	7.26E-04	10,000	1.45E+02	2.28E-01	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	1.55E+02	680	3.23E+03	1.55E+02	680	3.23E+03	1.55E+02	680
I-129	1	1.96E-06	1.16E-05	1,380	2.04E-06	1.21E-05	1,380	2.04E-06	1.21E-05	1,380
Grouted I-129	1	5.00E+00	7.61E-02	680	5.00E+00	7.61E-02	680	5.00E+00	7.61E-02	680
U-233	(a)	2.98E-01	2.56E-08	10,000	3.10E-01	2.97E-08	10,000	1.80E-01	4.43E-08	10,000
U-234	(a)	3.73E+02	3.21E-05	10,000	3.89E+02	3.73E-05	10,000	3.11E+02	7.65E-05	10,000
U-235	(a)	1.07E+01	9.16E-07	10,000	1.11E+01	1.06E-06	10,000	1.20E+01	2.95E-06	10,000
U-236	(a)	4.82E+01	4.14E-06	10,000	5.02E+01	4.81E-06	10,000	2.89E+01	7.11E-06	10,000
U-238	(a)	5.99E+02	5.15E-05	10,000	6.24E+02	5.98E-05	10,000	5.04E+02	1.24E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.19. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	2.29E-03	10,000	1.46E+00	2.29E-03	10,000	1.45E+00	2.28E-03	10,000
Tc-99	900	8.34E+00	4.93E+01	1,380	8.36E+00	4.94E+01	1,380	8.27E+00	4.89E+01	1,380
Grouted Tc-99	900		4.81E-02							
I-129	1	3.50E-02	2.07E-01	1,380	3.51E-02	2.07E-01	1,380	3.48E-02	2.06E-01	1,380
Grouted I-129	1									
U-233	(a)	4.67E-03	2.04E-05	10,000	4.68E-03	2.05E-05	10,000	4.64E-03	4.83E-05	10,000
U-234	(a)	5.44E+00	2.38E-02	10,000	5.45E+00	2.38E-02	10,000	5.40E+00	5.62E-02	10,000
U-235	(a)	8.67E-02	3.79E-04	10,000	8.69E-02	3.80E-04	10,000	8.61E-02	8.96E-04	10,000
U-236	(a)	1.02E-01	4.45E-04	10,000	1.02E-01	4.46E-04	10,000	1.01E-01	1.05E-03	10,000
U-238	(a)	1.36E+00	5.94E-03	10,000	1.36E+00	5.95E-03	10,000	1.35E+00	1.41E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	4.50E-03	10,000	2.87E+00	4.51E-03	10,000	4.25E+00	6.68E-03	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	7.54E+00	680	1.57E+02	7.55E+00	680	3.34E+02	1.61E+01	680
I-129	1									
Grouted I-129	1	6.87E-02	1.04E-03	680	6.88E-02	1.05E-03	680	7.06E-02	1.07E-03	680
U-233	(a)	8.91E-03	7.19E-08	10,000	8.93E-03	7.20E-08	10,000	9.20E-03	1.94E-08	10,000
U-234	(a)	1.07E+01	8.61E-05	10,000	1.07E+01	8.63E-05	10,000	3.35E+02	7.05E-04	10,000
U-235	(a)	1.70E-01	1.37E-06	10,000	1.70E-01	1.37E-06	10,000	1.47E+01	3.09E-05	10,000
U-236	(a)	2.00E-01	1.61E-06	10,000	2.00E-01	1.61E-06	10,000	2.05E-01	4.31E-07	10,000
U-238	(a)	2.64E+00	2.13E-05	10,000	2.65E+00	2.14E-05	10,000	3.42E+02	7.19E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.19. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	1.87E+00	680	3.89E+01	1.87E+00	680	3.89E+01	1.87E+00	680
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	1.79E-06	10,000	8.49E-01	1.79E-06	10,000	8.49E-01	1.79E-06	10,000
U-234	(a)	4.60E-01	9.68E-07	10,000	4.60E-01	9.68E-07	10,000	4.60E-01	9.68E-07	10,000
U-235	(a)	1.90E-02	4.00E-08	10,000	1.90E-02	4.00E-08	10,000	1.90E-02	4.00E-08	10,000
U-236	(a)	1.70E-02	3.58E-08	10,000	1.70E-02	3.58E-08	10,000	1.70E-02	3.58E-08	10,000
U-238	(a)	4.10E-01	8.62E-07	10,000	4.10E-01	8.62E-07	10,000	4.10E-01	8.62E-07	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.20. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a Line of Analysis Near the Columbia River, Alternative Group D_1

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	1.28E+01	2.96E-04	10,000	1.56E+01	3.61E-04	10,000	1.59E+01	3.68E-04	10,000
Tc-99	900	1.08E+00	7.36E-01	1,510	1.32E+00	8.97E-01	1,510	1.33E+00	9.04E-01	1,510
Grouted Tc-99	900									
I-129	1	3.01E-03	2.05E-03	1,510	3.67E-03	2.50E-03	1,510	3.67E-03	2.50E-03	1,510
Grouted I-129	1									
U-233	(a)	3.71E-01	4.40E-05	10,000	4.52E-01	5.12E-05	10,000	4.52E-01	8.41E-05	10,000
U-234	(a)	6.13E-01	7.27E-05	10,000	7.47E-01	8.47E-05	10,000	9.21E-01	1.71E-04	10,000
U-235	(a)	1.29E-01	1.53E-05	10,000	1.57E-01	1.78E-05	10,000	1.68E-01	3.13E-05	10,000
U-236	(a)	1.46E-02	1.73E-06	10,000	1.78E-02	2.02E-06	10,000	1.78E-02	3.31E-06	10,000
U-238	(a)	1.47E+00	1.74E-04	10,000	1.79E+00	2.03E-04	10,000	2.08E+00	3.87E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	4.44E-01	1.03E-05	10,000	4.62E-01	1.07E-05	10,000	1.45E+02	3.35E-03	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	1.69E+01	820	3.23E+03	1.69E+01	820	3.23E+03	1.69E+01	820
I-129	1	1.96E-06	1.33E-06	1,510	2.04E-06	1.39E-06	1,510	2.04E-06	1.39E-06	1,510
Grouted I-129	1	5.00E+00	8.26E-03	820	5.00E+00	8.26E-03	820	5.00E+00	8.26E-03	820
U-233	(a)	2.98E-01	3.17E-10	10,000	3.10E-01	3.68E-10	10,000	1.80E-01	5.49E-10	10,000
U-234	(a)	3.73E+02	3.98E-07	10,000	3.89E+02	4.62E-07	10,000	3.11E+02	9.49E-07	10,000
U-235	(a)	1.07E+01	1.14E-08	10,000	1.11E+01	1.32E-08	10,000	1.20E+01	3.66E-08	10,000
U-236	(a)	4.82E+01	5.13E-08	10,000	5.02E+01	5.97E-08	10,000	2.89E+01	8.82E-08	10,000
U-238	(a)	5.99E+02	6.38E-07	10,000	6.24E+02	7.42E-07	10,000	5.04E+02	1.54E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.20. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	3.37E-05	10,000	1.46E+00	3.38E-05	10,000	1.45E+00	3.35E-05	10,000
Tc-99	900	8.34E+00	5.67E+00	1,510	8.36E+00	5.68E+00	1,510	8.27E+00	5.62E+00	1,510
Grouted Tc-99	900									
I-129	1	3.50E-02	2.38E-02	1,510	3.51E-02	2.39E-02	1,510	3.48E-02	2.37E-02	1,510
Grouted I-129	1									
U-233	(a)	4.67E-03	2.53E-07	10,000	4.68E-03	2.54E-07	10,000	4.64E-03	6.77E-07	10,000
U-234	(a)	5.44E+00	2.95E-04	10,000	5.45E+00	2.96E-04	10,000	5.40E+00	7.88E-04	10,000
U-235	(a)	8.67E-02	4.70E-06	10,000	8.69E-02	4.71E-06	10,000	8.61E-02	1.26E-05	10,000
U-236	(a)	1.02E-01	5.52E-06	10,000	1.02E-01	5.53E-06	10,000	1.01E-01	1.47E-05	10,000
U-238	(a)	1.36E+00	7.36E-05	10,000	1.36E+00	7.37E-05	10,000	1.35E+00	1.97E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	6.62E-05	10,000	2.87E+00	6.64E-05	10,000	4.25E+00	9.83E-05	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	8.19E-01	820	1.57E+02		820	3.34E+02	1.75E+00	820
I-129	1									
Grouted I-129	1	6.87E-02	1.13E-04	820	6.88E-02	1.14E-04	820	7.06E-02	1.17E-04	820
U-233	(a)	8.91E-03	8.91E-10	10,000	8.93E-03	8.93E-10	10,000	9.20E-03	2.40E-10	10,000
U-234	(a)	1.07E+01	1.07E-06	10,000	1.07E+01	1.07E-06	10,000	3.35E+02	8.74E-06	10,000
U-235	(a)	1.70E-01	1.70E-08	10,000	1.70E-01	1.70E-08	10,000	1.47E+01	3.83E-07	10,000
U-236	(a)	2.00E-01	2.00E-08	10,000	2.00E-01	2.00E-08	10,000	2.05E-01	5.35E-09	10,000
U-238	(a)	2.64E+00	2.64E-07	10,000	2.65E+00	2.65E-07	10,000	3.42E+02	8.92E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.20. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.03E-01	820	3.89E+01	2.03E-01	820	3.89E+01	2.03E-01	820
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	2.21E-08	10,000	8.49E-01	2.21E-08	10,000	8.49E-01	2.21E-08	10,000
U-234	(a)	4.60E-01	1.20E-08	10,000	4.60E-01	1.20E-08	10,000	4.60E-01	1.20E-08	10,000
U-235	(a)	1.90E-02	4.96E-10	10,000	1.90E-02	4.96E-10	10,000	1.90E-02	4.96E-10	10,000
U-236	(a)	1.70E-02	4.43E-10	10,000	1.70E-02	4.43E-10	10,000	1.70E-02	4.43E-10	10,000
U-238	(a)	4.10E-01	1.07E-08	10,000	4.10E-01	1.07E-08	10,000	4.10E-01	1.07E-08	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.21. Predicted Peak River Flux of Key Constituents Disposed of After 2007 at a Line of Analysis to the Columbia River, Alternative Group D_1

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW									
200 East Area									
C-14	1.28E+01	3.60E-06	10,000	1.56E+01	4.39E-06	10,000	1.59E+01	4.48E-06	10,000
Tc-99	1.08E+00	1.15E-02	1,530	1.32E+00	1.40E-02	1,530	1.33E+00	1.41E-02	1,530
Grouted Tc-99									
I-129	3.01E-03	3.19E-05	1,530	3.67E-03	3.89E-05	1,530	3.67E-03	3.89E-05	1,530
Grouted I-129									
U-233	3.71E-01	5.34E-07	10,000	4.52E-01	6.22E-07	10,000	4.52E-01	1.03E-06	10,000
U-234	6.13E-01	8.83E-07	10,000	7.47E-01	1.03E-06	10,000	9.21E-01	2.10E-06	10,000
U-235	1.29E-01	1.86E-07	10,000	1.57E-01	2.16E-07	10,000	1.68E-01	3.84E-07	10,000
U-236	1.46E-02	2.10E-08	10,000	1.78E-02	2.45E-08	10,000	1.78E-02	4.06E-08	10,000
U-238	1.47E+00	2.12E-06	10,000	1.79E+00	2.46E-06	10,000	2.08E+00	4.75E-06	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Cat 3 LLW									
200 East Area									
C-14	4.44E-01	1.25E-07	10,000	4.62E-01	1.30E-07	10,000	1.45E+02	4.08E-05	10,000
Tc-99									
Grouted Tc-99	3.23E+03	2.65E-01	870	3.23E+03	2.69E-01	1,840	3.23E+03	2.65E-01	870
I-129	1.96E-06	2.07E-08	1,530	2.04E-06	2.16E-08	1,530	2.04E-06	2.16E-08	1,530
Grouted I-129	5.00E+00	1.30E-04	870	5.00E+00	1.32E-04	1,840	5.00E+00	1.30E-04	870
U-233	2.98E-01	3.85E-12	10,000	3.10E-01	4.47E-12	10,000	1.80E-01	6.66E-12	10,000
U-234	3.73E+02	4.83E-09	10,000	3.89E+02	5.61E-09	10,000	3.11E+02	1.15E-08	10,000
U-235	1.07E+01	1.38E-10	10,000	1.11E+01	1.60E-10	10,000	1.20E+01	4.44E-10	10,000
U-236	4.82E+01	6.23E-10	10,000	5.02E+01	7.24E-10	10,000	2.89E+01	1.07E-09	10,000
U-238	5.99E+02	7.74E-09	10,000	6.24E+02	9.00E-09	10,000	5.04E+02	1.86E-08	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.21. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected MLLW									
200 East Area									
C-14	1.46E+00	4.10E-07	10,000	1.46E+00	4.11E-07	10,000	1.45E+00	4.08E-07	10,000
Tc-99	8.34E+00	8.84E-02	1,530	8.36E+00	8.85E-02	1,530	8.27E+00	8.76E-02	1,530
Grouted Tc-99									
I-129	3.50E-02	3.71E-04	1,530	3.51E-02	3.72E-04	1,530	3.48E-02	3.69E-04	1,530
Grouted I-129									
U-233	4.67E-03	3.07E-09	10,000	4.68E-03	3.08E-09	10,000	4.64E-03	8.26E-09	10,000
U-234	5.44E+00	3.58E-06	10,000	5.45E+00	3.59E-06	10,000	5.40E+00	9.61E-06	10,000
U-235	8.67E-02	5.71E-08	10,000	8.69E-02	5.72E-08	10,000	8.61E-02	1.53E-07	10,000
U-236	1.02E-01	6.70E-08	10,000	1.02E-01	6.71E-08	10,000	1.01E-01	1.80E-07	10,000
U-238	1.36E+00	8.93E-07	10,000	1.36E+00	8.95E-07	10,000	1.35E+00	2.40E-06	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Grouted MLLW									
200 East Area									
C-14	2.86E+00	8.07E-07	10,000	2.87E+00	8.08E-07	10,000	4.25E+00	1.20E-06	10,000
Tc-99									
Grouted Tc-99	1.57E+02	1.28E-02	870	1.57E+02	1.29E-02	870	3.34E+02	2.74E-02	870
I-129									
Grouted I-129	6.87E-02	1.78E-06	870	6.88E-02	1.78E-06	870	7.06E-02	1.83E-06	870
U-233	8.91E-03	1.08E-11	10,000	8.93E-03	1.08E-11	10,000	9.20E-03	2.91E-12	10,000
U-234	1.07E+01	1.30E-08	10,000	1.07E+01	1.30E-08	10,000	3.35E+02	1.06E-07	10,000
U-235	1.70E-01	2.06E-10	10,000	1.70E-01	2.06E-10	10,000	1.47E+01	4.65E-09	10,000
U-236	2.00E-01	2.42E-10	10,000	2.00E-01	2.43E-10	10,000	2.05E-01	6.49E-11	10,000
U-238	2.64E+00	3.21E-09	10,000	2.65E+00	3.21E-09	10,000	3.42E+02	1.08E-07	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.21. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99	3.89E+01	3.19E-03	870	3.89E+01	3.19E-03	870	3.89E+01	3.19E-03	870
I-129									
Grouted I-129									
U-233	8.49E-01	2.69E-10	10,000	8.49E-01	2.69E-10	10,000	8.49E-01	2.69E-10	10,000
U-234	4.60E-01	1.46E-10	10,000	4.60E-01	1.46E-10	10,000	4.60E-01	1.46E-10	10,000
U-235	1.90E-02	6.01E-12	10,000	1.90E-02	6.01E-12	10,000	1.90E-02	6.01E-12	10,000
U-236	1.70E-02	5.38E-12	10,000	1.70E-02	5.38E-12	10,000	1.70E-02	5.38E-12	10,000
U-238	4.10E-01	1.30E-10	10,000	4.10E-01	1.30E-10	10,000	4.10E-01	1.30E-10	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.22. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a 1-km Line of Analysis, Alternative Group D_2

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	1.28E+01	3.09E-02	10,000	1.56E+01	3.76E-02	10,000	1.59E+01	3.84E-02	10,000
Tc-99	900	1.08E+00	5.17E+00	1,320	1.32E+00	6.31E+00	1,320	1.33E+00	6.36E+00	1,320
Grouted Tc-99	900									
I-129	1	3.01E-03	1.44E-02	1,320	3.67E-03	1.75E-02	1,320	3.67E-03	1.75E-02	1,320
Grouted I-129	1									
U-233	(a)	3.71E-01	5.20E-03	10,000	4.52E-01	6.13E-03	10,000	4.52E-01	8.62E-03	10,000
U-234	(a)	6.13E-01	8.59E-03	10,000	7.47E-01	1.01E-02	10,000	9.21E-01	1.76E-02	10,000
U-235	(a)	1.29E-01	1.81E-03	10,000	1.57E-01	2.13E-03	10,000	1.68E-01	3.20E-03	10,000
U-236	(a)	1.46E-02	2.05E-04	10,000	1.78E-02	2.42E-04	10,000	1.78E-02	3.39E-04	10,000
U-238	(a)	1.47E+00	2.06E-02	10,000	1.79E+00	2.43E-02	10,000	2.08E+00	3.97E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	4.44E-01	1.07E-03	10,000	4.62E-01	1.11E-03	10,000	1.45E+02	3.50E-01	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	1.35E+02	630	3.23E+03	1.35E+02	630	3.23E+03	1.35E+02	630
I-129	1	1.96E-06	9.36E-06	1,320	2.04E-06	9.75E-06	1,320	2.04E-06	9.75E-06	1,320
Grouted I-129	1	5.00E+00	6.63E-02	630	5.00E+00	6.63E-02	630	5.00E+00	6.63E-02	630
U-233	(a)	2.98E-01	4.08E-08	10,000	3.10E-01	4.74E-08	10,000	1.80E-01	7.07E-08	10,000
U-234	(a)	3.73E+02	5.12E-05	10,000	3.89E+02	5.95E-05	10,000	3.11E+02	1.22E-04	10,000
U-235	(a)	1.07E+01	1.46E-06	10,000	1.11E+01	1.70E-06	10,000	1.20E+01	4.71E-06	10,000
U-236	(a)	4.82E+01	6.61E-06	10,000	5.02E+01	7.68E-06	10,000	2.89E+01	1.13E-05	10,000
U-238	(a)	5.99E+02	8.21E-05	10,000	6.24E+02	9.54E-05	10,000	5.04E+02	1.98E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.22. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	3.41E-03	10,000	1.28E+01	2.01E-02	10,000	1.45E+00	3.40E-03	10,000
Tc-99	900	8.34E+00	6.79E+01	1,,370	1.08E+00	6.39E+00	1,,370	8.27E+00	6.73E+01	1,,370
Grouted Tc-99	900				0.00E+00					
I-129	1	3.50E-02	2.85E-01	1,,370	3.01E-03	1.78E-02	1,,370	3.48E-02	2.83E-01	1,,370
Grouted I-129	1									
U-233	(a)	4.67E-03	2.96E-05	10,000	3.71E-01	3.29E-03	>10,000	4.64E-03	7.14E-05	10,000
U-234	(a)	5.44E+00	3.45E-02	10,000	6.13E-01	5.44E-03	>10,000	5.40E+00	8.30E-02	10,000
U-235	(a)	8.67E-02	5.50E-04	10,000	1.29E-01	1.14E-03	>10,000	8.61E-02	1.32E-03	10,000
U-236	(a)	1.02E-01	6.45E-04	10,000	1.46E-02	1.30E-04	>10,000	1.01E-01	1.55E-03	10,000
U-238	(a)	1.36E+00	8.60E-03	10,000	1.47E+00	1.30E-02	>10,000	1.35E+00	2.08E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	6.71E-03	10,000	2.87E+00	6.73E-03	10,000	4.25E+00	9.96E-03	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.10E+01	680	1.57E+02	1.11E+01	680	3.34E+02	2.35E+01	680
I-129	1									
Grouted I-129	1	6.87E-02	1.53E-03	680	6.88E-02	1.53E-03	680	7.06E-02	1.57E-03	680
U-233	(a)	8.91E-03	1.04E-07	10,000	8.93E-03	1.04E-07	10,000	9.20E-03	2.80E-08	10,000
U-234	(a)	1.07E+01	1.25E-04	10,000	1.07E+01	1.25E-04	10,000	3.35E+02	1.02E-03	10,000
U-235	(a)	1.70E-01	1.98E-06	10,000	1.70E-01	1.99E-06	10,000	1.47E+01	4.48E-05	10,000
U-236	(a)	2.00E-01	2.33E-06	10,000	2.00E-01	2.34E-06	10,000	2.05E-01	6.25E-07	10,000
U-238	(a)	2.64E+00	3.09E-05	10,000	2.65E+00	3.10E-05	10,000	3.42E+02	1.04E-03	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.22. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.74E+00	680	3.89E+01	2.74E+00	680	3.89E+01	2.74E+00	680
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	2.51E-06	10,000	8.49E-01	2.51E-06	10,000	8.49E-01	2.51E-06	10,000
U-234	(a)	4.60E-01	1.36E-06	10,000	4.60E-01	1.36E-06	10,000	4.60E-01	1.36E-06	10,000
U-235	(a)	1.90E-02	5.61E-08	10,000	1.90E-02	5.61E-08	10,000	1.90E-02	5.61E-08	10,000
U-236	(a)	1.70E-02	5.02E-08	10,000	1.70E-02	5.02E-08	10,000	1.70E-02	5.02E-08	10,000
U-238	(a)	4.10E-01	1.21E-06	10,000	4.10E-01	1.21E-06	10,000	4.10E-01	1.21E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.23. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a Line of Analysis Near the Columbia River, Alternative Group D_2

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	1.28E+01	6.49E-04	10,000	1.56E+01	7.92E-04	10,000	1.59E+01	8.07E-04	10,000
Tc-99	900	1.08E+00	1.39E+00	1,530	1.32E+00	1.70E+00	1,530	1.33E+00	1.71E+00	1,530
Grouted Tc-99	900									
I-129	1	3.01E-03	3.87E-03	1,530	3.67E-03	4.71E-03	1,530	3.67E-03	4.71E-03	1,530
Grouted I-129	1									
U-233	(a)	3.71E-01	6.08E-05	10,000	4.52E-01	7.08E-05	10,000	4.52E-01	3.30E-07	10,000
U-234	(a)	6.13E-01	1.00E-04	10,000	7.47E-01	1.17E-04	10,000	9.21E-01	6.73E-07	10,000
U-235	(a)	1.29E-01	2.11E-05	10,000	1.57E-01	2.46E-05	10,000	1.68E-01	1.23E-07	10,000
U-236	(a)	1.46E-02	2.39E-06	10,000	1.78E-02	2.79E-06	10,000	1.78E-02	1.30E-08	10,000
U-238	(a)	1.47E+00	2.41E-04	10,000	1.79E+00	2.80E-04	10,000	2.08E+00	1.52E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	4.44E-01	2.25E-05	10,000	4.62E-01	2.34E-05	10,000	1.45E+02	7.36E-03	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	3.18E+01	860	3.23E+03	3.18E+01	860	3.23E+03	3.18E+01	860
I-129	1	1.96E-06	2.52E-06	1,530	2.04E-06	2.62E-06	1,530	2.04E-06	2.62E-06	1,530
Grouted I-129	1	5.00E+00	1.56E-02	860	5.00E+00	1.56E-02	860	5.00E+00	1.56E-02	860
U-233	(a)	2.98E-01	4.37E-10	10,000	3.10E-01	5.08E-10	10,000	1.80E-01	7.57E-10	10,000
U-234	(a)	3.73E+02	5.48E-07	10,000	3.89E+02	6.37E-07	10,000	3.11E+02	1.31E-06	10,000
U-235	(a)	1.07E+01	1.56E-08	10,000	1.11E+01	1.82E-08	10,000	1.20E+01	5.04E-08	10,000
U-236	(a)	4.82E+01	7.08E-08	10,000	5.02E+01	8.22E-08	10,000	2.89E+01	1.21E-07	10,000
U-238	(a)	5.99E+02	8.80E-07	10,000	6.24E+02	1.02E-06	10,000	5.04E+02	2.12E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.23. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	2.15E-05	10,000	1.46E+00	2.15E-05	10,000	1.45E+00	2.14E-05	10,000
Tc-99	900	8.34E+00	9.43E+00	1,590	8.36E+00	9.44E+00	1,590	8.27E+00	9.34E+00	1,590
Grouted Tc-99	900									
I-129	1	3.50E-02	3.96E-02	1,590	3.51E-02	3.97E-02	1,590	3.48E-02	3.93E-02	1,590
Grouted I-129	1									
U-233	(a)	4.67E-03	1.58E-07	10,000	4.68E-03	1.59E-07	10,000	4.64E-03	4.34E-07	10,000
U-234	(a)	5.44E+00	1.84E-04	10,000	5.45E+00	1.85E-04	10,000	5.40E+00	5.05E-04	10,000
U-235	(a)	8.67E-02	2.94E-06	10,000	8.69E-02	2.95E-06	10,000	8.61E-02	8.06E-06	10,000
U-236	(a)	1.02E-01	3.45E-06	10,000	1.02E-01	3.46E-06	10,000	1.01E-01	9.45E-06	10,000
U-238	(a)	1.36E+00	4.60E-05	10,000	1.36E+00	4.61E-05	10,000	1.35E+00	1.26E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	4.22E-05	10,000	2.87E+00	4.23E-05	10,000	4.25E+00	6.26E-05	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.35E+00	940	1.57E+02	1.36E+00	940	3.34E+02	2.89E+00	940
I-129	1									
Grouted I-129	1	6.87E-02	1.88E-04	940	6.88E-02	1.88E-04	940	7.06E-02	1.93E-04	940
U-233	(a)	8.91E-03	5.58E-10	10,000	8.93E-03	5.58E-10	10,000	9.20E-03	1.50E-10	10,000
U-234	(a)	1.07E+01	6.68E-07	10,000	1.07E+01	6.69E-07	10,000	3.35E+02	5.47E-06	10,000
U-235	(a)	1.70E-01	1.06E-08	10,000	1.70E-01	1.06E-08	10,000	1.47E+01	2.40E-07	10,000
U-236	(a)	2.00E-01	1.25E-08	10,000	2.00E-01	1.25E-08	10,000	2.05E-01	3.34E-09	10,000
U-238	(a)	2.64E+00	1.65E-07	10,000	2.65E+00	1.66E-07	10,000	3.42E+02	5.58E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

Table G.23. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	3.37E-01	940	3.89E+01	3.37E-01	940	3.89E+01	3.37E-01	940
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	1.33E-08	10,000	8.49E-01	1.33E-08	10,000	8.49E-01	1.33E-08	10,000
U-234	(a)	4.60E-01	7.23E-09	10,000	4.60E-01	7.23E-09	10,000	4.60E-01	7.23E-09	10,000
U-235	(a)	1.90E-02	2.99E-10	10,000	1.90E-02	2.99E-10	10,000	1.90E-02	2.99E-10	10,000
U-236	(a)	1.70E-02	2.67E-10	10,000	1.70E-02	2.67E-10	10,000	1.70E-02	2.67E-10	10,000
U-238	(a)	4.10E-01	6.44E-09	10,000	4.10E-01	6.44E-09	10,000	4.10E-01	6.44E-09	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.24. Predicted Peak River Flux of Key Constituents Disposed of After 2007 at a Line of Analysis to the Columbia River, Alternative Group D_2

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW									
200 East Area									
C-14	1.28E+01	1.86E-06	10,000	1.56E+01	2.27E-06	10,000	1.59E+01	2.31E-06	10,000
Tc-99	1.08E+00	1.27E-02	1,600	1.32E+00	1.55E-02	1,600	1.33E+00	1.56E-02	1,600
Grouted Tc-99									
I-129	3.01E-03	3.53E-05	1,600	3.67E-03	4.30E-05	1,600	3.67E-03	4.30E-05	1,600
Grouted I-129									
U-233	3.71E-01	2.74E-07	10,000	4.52E-01	3.18E-07	10,000	4.52E-01	5.46E-07	10,000
U-234	6.13E-01	4.53E-07	10,000	7.47E-01	5.26E-07	10,000	9.21E-01	1.11E-06	10,000
U-235	1.29E-01	9.51E-08	10,000	1.57E-01	1.11E-07	10,000	1.68E-01	2.03E-07	10,000
U-236	1.46E-02	1.08E-08	10,000	1.78E-02	1.25E-08	10,000	1.78E-02	2.15E-08	10,000
U-238	1.47E+00	1.08E-06	10,000	1.79E+00	1.26E-06	10,000	2.08E+00	2.51E-06	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Cat 3 LLW									
200 East Area									
C-14	4.44E-01	6.44E-08	10,000	4.62E-01	6.71E-08	10,000	1.45E+02	2.11E-05	10,000
Tc-99									
Grouted Tc-99	3.23E+03	2.99E-01	970	3.23E+03	2.99E-01	970	3.23E+03	2.99E-01	970
I-129	1.96E-06	2.29E-08	1,600	2.04E-06	2.39E-08	1,600	2.04E-06	2.39E-08	1,600
Grouted I-129	5.00E+00	1.46E-04	970	5.00E+00	1.46E-04	970	5.00E+00	1.46E-04	970
U-233	2.98E-01	1.96E-12	10,000	3.10E-01	2.28E-12	10,000	1.80E-01	3.40E-12	10,000
U-234	3.73E+02	2.46E-09	10,000	3.89E+02	2.86E-09	10,000	3.11E+02	5.87E-09	10,000
U-235	1.07E+01	7.02E-11	10,000	1.11E+01	8.16E-11	10,000	1.20E+01	2.26E-10	10,000
U-236	4.82E+01	3.18E-10	10,000	5.02E+01	3.69E-10	10,000	2.89E+01	5.45E-10	10,000
U-238	5.99E+02	3.95E-09	10,000	6.24E+02	4.59E-09	10,000	5.04E+02	9.51E-09	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.24. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected MLLW									
200 East Area									
C-14	1.46E+00	1.25E-07	10,000	1.46E+00	1.25E-07	10,000	1.45E+00	1.25E-07	10,000
Tc-99	8.34E+00	9.43E-02	1,630	8.36E+00	9.45E-02	1,630	8.27E+00	9.35E-02	1,630
Grouted Tc-99									
I-129	3.50E-02	3.96E-04	1,630	3.51E-02	3.97E-04	1,630	3.48E-02	3.93E-04	1,630
Grouted I-129									
U-233	4.67E-03	9.32E-10	10,000	4.68E-03	9.34E-10	10,000	4.64E-03	7.49E-13	10,000
U-234	5.44E+00	1.09E-06	10,000	5.45E+00	1.09E-06	10,000	5.40E+00	8.71E-10	10,000
U-235	8.67E-02	1.73E-08	10,000	8.69E-02	1.73E-08	10,000	8.61E-02	1.39E-11	10,000
U-236	1.02E-01	2.03E-08	10,000	1.02E-01	2.04E-08	10,000	1.01E-01	1.63E-11	10,000
U-238	1.36E+00	2.71E-07	10,000	1.36E+00	2.71E-07	10,000	1.35E+00	2.18E-10	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Grouted MLLW									
200 East Area									
C-14	2.86E+00	2.46E-07	10,000	2.87E+00	2.47E-07	10,000	4.25E+00	3.65E-07	10,000
Tc-99									
Grouted Tc-99	1.57E+02	1.45E-02	970	1.57E+02	1.45E-02	970	3.34E+02	3.09E-02	970
I-129									
Grouted I-129	6.87E-02	2.01E-06	970	6.88E-02	2.01E-06	970	7.06E-02	2.06E-06	970
U-233	8.91E-03	3.28E-12	10,000	8.93E-03	3.29E-12	10,000	9.20E-03	1.28E-13	10,000
U-234	1.07E+01	3.93E-09	10,000	1.07E+01	3.94E-09	10,000	3.35E+02	4.66E-09	10,000
U-235	1.70E-01	6.25E-11	10,000	1.70E-01	6.26E-11	10,000	1.47E+01	2.05E-10	10,000
U-236	2.00E-01	7.35E-11	10,000	2.00E-01	7.36E-11	10,000	2.05E-01	2.85E-12	10,000
U-238	2.64E+00	9.74E-10	10,000	2.65E+00	9.75E-10	10,000	3.42E+02	4.76E-09	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.24. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99	3.89E+01	3.60E-03	970	3.89E+01	3.60E-03	970	3.89E+01	3.60E-03	970
I-129									
Grouted I-129									
U-233	8.49E-01	7.84E-11	10,000	8.49E-01	7.84E-11	10,000	8.49E-01	7.84E-11	10,000
U-234	4.60E-01	4.25E-11	10,000	4.60E-01	4.25E-11	10,000	4.60E-01	4.25E-11	10,000
U-235	1.90E-02	1.75E-12	10,000	1.90E-02	1.75E-12	10,000	1.90E-02	1.75E-12	10,000
U-236	1.70E-02	1.57E-12	10,000	1.70E-02	1.57E-12	10,000	1.70E-02	1.57E-12	10,000
U-238	4.10E-01	3.79E-11	10,000	4.10E-01	3.79E-11	10,000	4.10E-01	3.79E-11	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.25. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a 1-km Line of Analysis, Alternative Group D_3

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	1.28E+01	0.00E+00	>10,000	1.56E+01	0.00E+00	>10,000	1.59E+01	0.00E+00	>10,000
Tc-99	900	1.08E+00	9.31E+00	1,740	1.32E+00	1.14E+01	1,740	1.33E+00	1.14E+01	1,740
Grouted Tc-99	900									
I-129	1	3.01E-03	2.59E-02	1,740	3.67E-03	3.16E-02	1,740	3.67E-03	3.16E-02	1,740
Grouted I-129	1									
U-233	(a)	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	(a)	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	(a)	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	(a)	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	(a)	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	4.44E-01	0.00E+00	>10,000	4.62E-01	0.00E+00	>10,000	1.45E+02	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	2.25E+02	1,070	3.23E+03	2.25E+02	1,070	3.23E+03	2.25E+02	1,070
I-129	1	1.96E-06	1.69E-05	1,740	2.04E-06	1.76E-05	1,740	2.04E-06	1.76E-05	1,740
Grouted I-129	1	5.00E+00	1.10E-01	1,070	5.00E+00	1.10E-01	1,070	5.00E+00	1.10E-01	1,070
U-233	(a)	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	(a)	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	(a)	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000
U-236	(a)	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	(a)	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000

Table G.25. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	1.46E+00	0.00E+00	>10,000	1.46E+00	0.00E+00	>10,000	1.45E+00	0.00E+00	>10,000
Tc-99	900	8.34E+00	7.18E+01	1,740	8.36E+00	7.19E+01	1,740	8.27E+00	7.12E+01	1,740
Grouted Tc-99	900									
I-129	1	3.50E-02	3.01E-01	1,740	3.51E-02	3.02E-01	1,740	3.48E-02	2.99E-01	1,740
Grouted I-129	1									
U-233	(a)	4.67E-03	0.00E+00	>10,000	4.68E-03	0.00E+00	>10,000	4.64E-03	0.00E+00	>10,000
U-234	(a)	5.44E+00	0.00E+00	>10,000	5.45E+00	0.00E+00	>10,000	5.40E+00	0.00E+00	>10,000
U-235	(a)	8.67E-02	0.00E+00	>10,000	8.69E-02	0.00E+00	>10,000	8.61E-02	0.00E+00	>10,000
U-236	(a)	1.02E-01	0.00E+00	>10,000	1.02E-01	0.00E+00	>10,000	1.01E-01	0.00E+00	>10,000
U-238	(a)	1.36E+00	0.00E+00	>10,000	1.36E+00	0.00E+00	>10,000	1.35E+00	0.00E+00	>10,000
Projected Grouted MLLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	2.86E+00	0.00E+00	>10,000	2.87E+00	0.00E+00	>10,000	4.25E+00	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.09E+01	1,070	1.57E+02	1.00E+01	1,070	3.34E+02	2.33E+01	1,070
I-129	1									
Grouted I-129	1	6.87E-02	1.51E-03	1,070	6.88E-02	2.00E-03	1,070	7.06E-02	1.56E-03	1,070
U-233	(a)	8.91E-03	0.00E+00	>10,000	8.93E-03	0.00E+00	>10,000	9.20E-03	0.00E+00	>10,000
U-234	(a)	1.07E+01	0.00E+00	>10,000	1.07E+01	000.E+00	>10,000	3.35E+02	0.00E+00	>10,000
U-235	(a)	1.70E-01	0.00E+00	>10,000	1.70E-01	0.00E+00	>10,000	1.47E+01	0.00E+00	>10,000
U-236	(a)	2.00E-01	0.00E+00	>10,000	2.00E-01	0.00E+00	>10,000	2.05E-01	0.00E+00	>10,000
U-238	(a)	2.64E+00	0.00E+00	>10,000	2.65E+00	000.E+00	>10,000	3.42E+02	0.00E+00	>10,000

Table G.25. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.71E+00	1,070	3.89E+01	2.71E+00	1,070	3.89E+01	2.71E+00	1,070
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000
U-234	(a)	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000
U-235	(a)	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000
U-236	(a)	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000
U-238	(a)	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.26. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a Line of Analysis Near the Columbia River, Alternative Group D_3

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	1.28E+01	0.00E+00	>10,000	1.56E+01	0.00E+00	>10,000	1.59E+01	0.00E+00	>10,000
Tc-99	900	1.08E+00	8.26E-01	2,010	1.32E+00	1.01E+00	2,010	1.33E+00	1.01E+00	2,010
Grouted Tc-99	900									
I-129	1	3.01E-03	2.30E-03	2,010	3.67E-03	2.80E-03	2,010	3.67E-03	2.80E-03	2,010
Grouted I-129	1									
U-233	(a)	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	(a)	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	(a)	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	(a)	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	(a)	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
ERDF Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	4.44E-01	0.00E+00	>10,000	4.62E-01	0.00E+00	>10,000	1.45E+02	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	1.97E+01	1,420	3.23E+03	1.97E+01	1,420	3.23E+03	1.97E+01	1,420
I-129	1	1.96E-06	1.49E-06	2,010	2.04E-06	1.56E-06	2,010	2.04E-06	1.56E-06	2,010
Grouted I-129	1	5.00E+00	9.65E-03	1,420	5.00E+00	9.65E-03	1,420	5.00E+00	9.65E-03	1,420
U-233	(a)	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	(a)	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	(a)	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000
U-236	(a)	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	(a)	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000
ERDF Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									

Table G.26. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
U-238	(a)									
Projected MLLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	1.46E+00	0.00E+00	>10,000	1.46E+00	0.00E+00	>10,000	1.45E+00	0.00E+00	>10,000
Tc-99	900	8.34E+00	6.36E+00	2,010	8.36E+00	6.38E+00	2,010	8.27E+00	6.31E+00	2,010
Grouted Tc-99	900									
I-129	1	3.50E-02	2.67E-02	2,010	3.51E-02	2.68E-02	2,010	3.48E-02	2.65E-02	2,010
Grouted I-129	1									
U-233	(a)	4.67E-03	0.00E+00	>10,000	4.68E-03	0.00E+00	>10,000	4.64E-03	0.00E+00	>10,000
U-234	(a)	5.44E+00	0.00E+00	>10,000	5.45E+00	0.00E+00	>10,000	5.40E+00	0.00E+00	>10,000
U-235	(a)	8.67E-02	0.00E+00	>10,000	8.69E-02	0.00E+00	>10,000	8.61E-02	0.00E+00	>10,000
U-236	(a)	1.02E-01	0.00E+00	>10,000	1.02E-01	0.00E+00	>10,000	1.01E-01	0.00E+00	>10,000
U-238	(a)	1.36E+00	0.00E+00	>10,000	1.36E+00	0.00E+00	>10,000	1.35E+00	0.00E+00	>10,000
Projected Grouted MLLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	2.86E+00	0.00E+00	>10,000	2.87E+00	0.00E+00	>10,000	4.25E+00	0.00E+00	>10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	9.56E-01	1,420	1.57E+02	9.58E-01	1,420	3.34E+02	2.04E+00	1,420
I-129	1									
Grouted I-129	1	6.87E-02	1.33E-04	1,420	6.88E-02	1.33E-04	1,420	7.06E-02	1.36E-04	1,420
U-233	(a)	8.91E-03	0.00E+00	>10,000	8.93E-03	0.00E+00	>10,000	9.20E-03	0.00E+00	>10,000
U-234	(a)	1.07E+01	0.00E+00	>10,000	1.07E+01	0.00E+00	>10,000	3.35E+02	0.00E+00	>10,000
U-235	(a)	1.70E-01	0.00E+00	>10,000	1.70E-01	0.00E+00	>10,000	1.47E+01	0.00E+00	>10,000
U-236	(a)	2.00E-01	0.00E+00	>10,000	2.00E-01	0.00E+00	>10,000	2.05E-01	0.00E+00	>10,000
U-238	(a)	2.64E+00	0.00E+00	>10,000	2.65E+00	0.00E+00	>10,000	3.42E+02	0.00E+00	>10,000

Table G.26. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.38E-01	1,420	3.89E+01	2.38E-01	1,420	3.89E+01	3.23E-03	1,510
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000
U-234	(a)	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000
U-235	(a)	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000
U-236	(a)	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000
U-238	(a)	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.27. Predicted Peak River Flux of Key Constituents Disposed of After 2007 at a Line of Analysis to the Columbia River, Alternative Group D_3

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14	1.28E+01	0.00E+00	>10,000	1.56E+01	0.00E+00	>10,000	1.59E+01	0.00E+00	>10,000
Tc-99	1.08E+00	1.08E-02	2,070	1.32E+00	1.31E-02	2,070	1.33E+00	1.32E-02	2,070
Grouted Tc-99									
I-129	3.01E-03	2.99E-05	2,070	3.67E-03	3.65E-05	2,070	3.67E-03	3.65E-05	2,070
Grouted I-129									
U-233	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14	4.44E-01	0.00E+00	>10,000	4.62E-01	0.00E+00	>10,000	1.45E+02	0.00E+00	>10,000
Tc-99									
Grouted Tc-99	3.23E+03	2.67E-01	1,510	3.23E+03	2.67E-01	1,510	3.23E+03	2.67E-01	1,510
I-129	1.96E-06	1.95E-08	2,070	2.04E-06	2.03E-08	2,070	2.04E-06	2.03E-08	2,070
Grouted I-129	5.00E+00	1.31E-04	1,510	5.00E+00	1.31E-04	1,510	5.00E+00	1.31E-04	1,510
U-233	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000

Table G.27. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
U-236	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000
Projected MLLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14	1.46E+00	0.00E+00	>10,000	1.46E+00	0.00E+00	>10,000	1.45E+00	0.00E+00	>10,000
Tc-99	8.34E+00	8.29E-02	2,070	8.36E+00	8.30E-02	2,070	8.27E+00	8.21E-02	2,070
Grouted Tc-99									
I-129	3.50E-02	3.48E-04	2,070	3.51E-02	3.49E-04	2,070	3.48E-02	3.46E-04	2,070
Grouted I-129									
U-233	4.67E-03	0.00E+00	>10,000	4.68E-03	0.00E+00	>10,000	4.64E-03	0.00E+00	>10,000
U-234	5.44E+00	0.00E+00	>10,000	5.45E+00	0.00E+00	>10,000	5.40E+00	0.00E+00	>10,000
U-235	8.67E-02	0.00E+00	>10,000	8.69E-02	0.00E+00	>10,000	8.61E-02	0.00E+00	>10,000
U-236	1.02E-01	0.00E+00	>10,000	1.02E-01	0.00E+00	>10,000	1.01E-01	0.00E+00	>10,000
U-238	1.36E+00	0.00E+00	>10,000	1.36E+00	0.00E+00	>10,000	1.35E+00	0.00E+00	>10,000
Projected Grouted MLLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14	2.86E+00	0.00E+00	>10,000	2.87E+00	0.00E+00	>10,000	4.25E+00	0.00E+00	>10,000
Tc-99									
Grouted Tc-99	1.57E+02	1.30E-02	1,510	1.57E+02	1.30E-02	1,510	3.34E+02	2.77E-02	1,510
I-129									
Grouted I-129	6.87E-02	1.80E-06	1,510	6.88E-02	1.80E-06	1,510	7.06E-02	1.85E-06	1,510
U-233	8.91E-03	0.00E+00	>10,000	8.93E-03	0.00E+00	>10,000	9.20E-03	0.00E+00	>10,000
U-234	1.07E+01	0.00E+00	>10,000	1.07E+01	0.00E+00	>10,000	3.35E+02	0.00E+00	>10,000
U-235	1.70E-01	0.00E+00	>10,000	1.70E-01	0.00E+00	>10,000	1.47E+01	0.00E+00	>10,000
U-236	2.00E-01	0.00E+00	>10,000	2.00E-01	0.00E+00	>10,000	2.05E-01	0.00E+00	>10,000

Table G.27. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
U-238	2.64E+00	0.00E+00	>10,000	2.65E+00	0.00E+00	>10,000	3.42E+02	0.00E+00	>10,000
Projected Melter Waste									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14									
Tc-99									
Grouted Tc-99	3.89E+01	3.23E-03	1,510	3.89E+01	3.23E-03	1,510	3.89E+01	3.23E-03	1,510
I-129									
Grouted I-129									
U-233	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000
U-234	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000
U-235	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000
U-236	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000
U-238	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000

Table G.28. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a 1-km Line of Analysis, Alternative Group E_1

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	1.28E+01	3.09E-02	10,000	1.56E+01	3.76E-02	10,000	1.59E+01	3.84E-02	10,000
Tc-99	900	1.08E+00	5.17E+00	1,320	1.32E+00	6.31E+00	1,320	1.33E+00	6.36E+00	1,320
Grouted Tc-99	900									
I-129	1	3.01E-03	1.44E-02	1,320	3.67E-03	1.75E-02	1,320	3.67E-03	1.75E-02	1,320
Grouted I-129	1									
U-233	30	3.71E-01	5.26E-03	10,000	4.52E-01	6.22E-03	10,000	4.52E-01	8.62E-03	10,000
U-234	30	6.13E-01	8.69E-03	10,000	7.47E-01	1.03E-02	10,000	9.21E-01	1.76E-02	10,000
U-235	30	1.29E-01	1.83E-03	10,000	1.57E-01	2.16E-03	10,000	1.68E-01	3.20E-03	10,000
U-236	30	1.46E-02	2.07E-04	10,000	1.78E-02	2.45E-04	10,000	1.78E-02	3.39E-04	10,000
U-238	30	1.47E+00	2.08E-02	10,000	1.79E+00	2.46E-02	10,000	2.08E+00	3.97E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	4.44E-01	1.07E-03	10,000	4.62E-01	1.11E-03	10,000	1.45E+02	3.50E-01	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	1.35E+02	630	3.23E+03	1.35E+02	630	3.23E+03	1.35E+02	630
I-129	1	1.96E-06	9.36E-06	1,320	2.04E-06	9.75E-06	1,320	2.04E-06	9.75E-06	1,320
Grouted I-129	1	5.00E+00	6.63E-02	630	5.00E+00	6.63E-02	630	5.00E+00	6.63E-02	630
U-233	30	2.98E-01	4.23E-08	10,000	3.10E-01	4.91E-08	10,000	1.80E-01	7.32E-08	10,000
U-234	30	3.73E+02	5.31E-05	10,000	3.89E+02	6.17E-05	10,000	3.11E+02	1.27E-04	10,000
U-235	30	1.07E+01	1.51E-06	10,000	1.11E+01	1.76E-06	10,000	1.20E+01	4.88E-06	10,000
U-236	30	4.82E+01	6.85E-06	10,000	5.02E+01	7.96E-06	10,000	2.89E+01	1.18E-05	10,000
U-238	30	5.99E+02	8.51E-05	10,000	6.24E+02	9.89E-05	10,000	5.04E+02	2.05E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.28. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	3.41E-03	10,000	1.46E+00	3.42E-03	10,000	1.45E+00	3.40E-03	10,000
Tc-99	900	8.34E+00	6.79E+01	1,370	8.36E+00	6.80E+01	1,370	8.27E+00	6.73E+01	1,370
Grouted Tc-99	900									
I-129	1	3.50E-02	2.85E-01	1,370	3.51E-02	2.85E-01	1,370	3.48E-02	2.83E-01	1,370
Grouted I-129	1									
U-233	30	4.67E-03	2.96E-05	10,000	4.68E-03	2.97E-05	10,000	4.64E-03	7.14E-05	10,000
U-234	30	5.44E+00	3.45E-02	10,000	5.45E+00	3.45E-02	10,000	5.40E+00	8.30E-02	10,000
U-235	30	8.67E-02	5.50E-04	10,000	8.69E-02	5.51E-04	10,000	8.61E-02	1.32E-03	10,000
U-236	30	1.02E-01	6.45E-04	10,000	1.02E-01	6.46E-04	10,000	1.01E-01	1.55E-03	10,000
U-238	30	1.36E+00	8.60E-03	10,000	1.36E+00	8.62E-03	10,000	1.35E+00	2.08E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	6.71E-03	10,000	2.87E+00	6.73E-03	10,000	4.25E+00	9.96E-03	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.10E+01	680	1.57E+02	1.11E+01	680	3.34E+02	2.35E+01	680
I-129	1									
Grouted I-129	1	6.87E-02	9.11E-04	620	6.88E-02	9.13E-04	620	7.06E-02	9.36E-04	620
U-233	30	8.91E-03	1.04E-07	10,000	8.93E-03	1.04E-07	10,000	9.20E-03	2.80E-08	10,000
U-234	30	1.07E+01	1.25E-04	10,000	1.07E+01	1.25E-04	10,000	3.35E+02	1.02E-03	10,000
U-235	30	1.70E-01	1.98E-06	10,000	1.70E-01	1.99E-06	10,000	1.47E+01	4.48E-05	10,000
U-236	30	2.00E-01	2.33E-06	10,000	2.00E-01	2.34E-06	10,000	2.05E-01	6.25E-07	10,000
U-238	30	2.64E+00	3.09E-05	10,000	2.65E+00	3.10E-05	10,000	3.42E+02	1.04E-03	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.28. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
ERDF Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.71E+00	1,070	3.89E+01	2.71E+00	1,070	3.89E+01	2.71E+00	1,070
I-129	1									
Grouted I-129	1									
U-233	30	8.49E-01	9.62E-04	10,000	8.49E-01	9.62E-04	10,000	8.49E-01	9.62E-04	10,000
U-234	30	4.60E-01	5.21E-04	10,000	4.60E-01	5.21E-04	10,000	4.60E-01	5.21E-04	10,000
U-235	30	1.90E-02	2.15E-05	10,000	1.90E-02	2.15E-05	10,000	1.90E-02	2.15E-05	10,000
U-236	30	1.70E-02	1.93E-05	10,000	1.70E-02	1.93E-05	10,000	1.70E-02	1.93E-05	10,000
U-238	30	4.10E-01	4.65E-04	10,000	4.10E-01	4.65E-04	10,000	4.10E-01	4.65E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.29. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a Line of Analysis Near the Columbia River, Alternative Group E_1

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	1.28E+01	6.49E-04	10,000	1.56E+01	7.92E-04	10,000	1.59E+01	8.07E-04	10,000
Tc-99	900	1.08E+00	1.39E+00	1,530	1.32E+00	1.70E+00	1,530	1.33E+00	1.71E+00	1,530
Grouted Tc-99	900									
I-129	1	3.01E-03	3.87E-03	1,530	3.67E-03	4.71E-03	1,530	3.67E-03	4.71E-03	1,530
Grouted I-129	1									
U-233	30	3.71E-01	9.60E-05	10,000	4.52E-01	1.12E-04	10,000	4.52E-01	1.85E-04	10,000
U-234	30	6.13E-01	1.59E-04	10,000	7.47E-01	1.85E-04	10,000	9.21E-01	3.77E-04	10,000
U-235	30	1.29E-01	3.33E-05	10,000	1.57E-01	3.88E-05	10,000	1.68E-01	6.88E-05	10,000
U-236	30	1.46E-02	3.78E-06	10,000	1.78E-02	4.40E-06	10,000	1.78E-02	7.29E-06	10,000
U-238	30	1.47E+00	3.80E-04	10,000	1.79E+00	4.43E-04	10,000	2.08E+00	8.51E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	4.44E-01	2.25E-05	10,000	4.62E-01	2.34E-05	10,000	1.45E+02	7.36E-03	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	3.18E+01	860	3.23E+03	3.18E+01	860	3.23E+03	3.18E+01	860
I-129	1	1.96E-06	2.52E-06	1,530	2.04E-06	2.62E-06	1,530	2.04E-06	2.62E-06	1,530
Grouted I-129	1	5.00E+00	1.56E-02	850	5.00E+00	1.56E-02	850	5.00E+00	1.56E-02	850
U-233	30	2.98E-01	6.92E-10	10,000	3.10E-01	8.04E-10	10,000	1.80E-01	1.20E-09	10,000
U-234	30	3.73E+02	8.68E-07	10,000	3.89E+02	1.01E-06	10,000	3.11E+02	2.07E-06	10,000
U-235	30	1.07E+01	2.48E-08	10,000	1.11E+01	2.88E-08	10,000	1.20E+01	7.98E-08	10,000
U-236	30	4.82E+01	1.12E-07	10,000	5.02E+01	1.30E-07	10,000	2.89E+01	1.92E-07	10,000
U-238	30	5.99E+02	1.39E-06	10,000	6.24E+02	1.62E-06	10,000	5.04E+02	3.35E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.29. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	2.15E-05	10,000	1.46E+00	2.15E-05	10,000	1.45E+00	2.14E-05	10,000
Tc-99	900	8.34E+00	9.43E+00	1,590	8.36E+00	9.44E+00	1,590	8.27E+00	9.34E+00	1,590
Grouted Tc-99	900									
I-129	1	3.50E-02	3.96E-02	1,590	3.51E-02	3.97E-02	1,590	3.48E-02	3.93E-02	1,590
Grouted I-129	1									
U-233	30	4.67E-03	1.58E-07	10,000	4.68E-03	1.59E-07	10,000	4.64E-03	4.34E-07	10,000
U-234	30	5.44E+00	1.84E-04	10,000	5.45E+00	1.85E-04	10,000	5.40E+00	5.05E-04	10,000
U-235	30	8.67E-02	2.94E-06	10,000	8.69E-02	2.95E-06	10,000	8.61E-02	8.06E-06	10,000
U-236	30	1.02E-01	3.45E-06	10,000	1.02E-01	3.46E-06	10,000	1.01E-01	9.45E-06	10,000
U-238	30	1.36E+00	4.60E-05	10,000	1.36E+00	4.61E-05	10,000	1.35E+00	1.26E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	4.22E-05	10,000	2.87E+00	4.23E-05	10,000	4.25E+00	6.26E-05	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.35E+00	940	1.57E+02	1.36E+00	940	3.34E+02	2.89E+00	940
I-129	1									
Grouted I-129	1	6.87E-02	2.14E-04	850	6.88E-02	2.14E-04	850	7.06E-02	2.20E-04	850
U-233	30	8.91E-03	5.58E-10	10,000	8.93E-03	5.58E-10	10,000	9.20E-03	1.50E-10	10,000
U-234	30	1.07E+01	6.68E-07	10,000	1.07E+01	6.69E-07	10,000	3.35E+02	5.47E-06	10,000
U-235	30	1.70E-01	1.06E-08	10,000	1.70E-01	1.06E-08	10,000	1.47E+01	2.40E-07	10,000
U-236	30	2.00E-01	1.25E-08	10,000	2.00E-01	1.25E-08	10,000	2.05E-01	3.34E-09	10,000
U-238	30	2.64E+00	1.65E-07	10,000	2.65E+00	1.66E-07	10,000	3.42E+02	5.58E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.29. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
ERDF Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.38E-01	1,420	3.89E+01	2.38E-01	1,420	3.89E+01	2.38E-01	1,420
I-129	1									
Grouted I-129	1									
U-233	30	8.49E-01	7.61E-07	10,000	8.49E-01	7.61E-07	10,000	8.49E-01	7.61E-07	10,000
U-234	30	4.60E-01	4.12E-07	10,000	4.60E-01	4.12E-07	10,000	4.60E-01	4.12E-07	10,000
U-235	30	1.90E-02	1.70E-08	10,000	1.90E-02	1.70E-08	10,000	1.90E-02	1.70E-08	10,000
U-236	30	1.70E-02	1.52E-08	10,000	1.70E-02	1.52E-08	10,000	1.70E-02	1.52E-08	10,000
U-238	30	4.10E-01	3.67E-07	10,000	4.10E-01	3.67E-07	10,000	4.10E-01	3.67E-07	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.30. Predicted Peak River Flux of Key Constituents Disposed of After 2007 at a Line of Analysis to the Columbia River, Alternative Group E_1

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW									
200 East Area									
C-14	1.28E+01	1.86E-06	10,000	1.56E+01	2.27E-06	10,000	1.59E+01	2.31E-06	10,000
Tc-99	1.08E+00	1.27E-02	1,600	1.32E+00	1.55E-02	1,600	1.33E+00	1.56E-02	1,600
Grouted Tc-99									
I-129	3.01E-03	3.53E-05	1,600	3.67E-03	4.30E-05	1,600	3.67E-03	4.30E-05	1,600
Grouted I-129									
U-233	3.71E-01	2.74E-07	10,000	4.52E-01	3.18E-07	10,000	4.52E-01	5.46E-07	10,000
U-234	6.13E-01	4.53E-07	10,000	7.47E-01	5.26E-07	10,000	9.21E-01	1.11E-06	10,000
U-235	1.29E-01	9.51E-08	10,000	1.57E-01	1.11E-07	10,000	1.68E-01	2.03E-07	10,000
U-236	1.46E-02	1.08E-08	10,000	1.78E-02	1.25E-08	10,000	1.78E-02	2.15E-08	10,000
U-238	1.47E+00	1.08E-06	10,000	1.79E+00	1.26E-06	10,000	2.08E+00	2.51E-06	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Cat 3 LLW									
200 East Area									
C-14	4.44E-01	6.44E-08	10,000	4.62E-01	6.71E-08	10,000	1.45E+02	2.11E-05	10,000
Tc-99									
Grouted Tc-99	3.23E+03	2.99E-01	970	3.23E+03	2.99E-01	970	3.23E+03	2.99E-01	970
I-129	1.96E-06	2.29E-08	1,600	2.04E-06	2.39E-08	1,600	2.04E-06	2.39E-08	1,600
Grouted I-129	5.00E+00	1.46E-04	970	5.00E+00	1.46E-04	970	5.00E+00	1.46E-04	970
U-233	2.98E-01	1.96E-12	10,000	3.10E-01	2.28E-12	10,000	1.80E-01	3.40E-12	10,000
U-234	3.73E+02	2.46E-09	10,000	3.89E+02	2.86E-09	10,000	3.11E+02	5.87E-09	10,000
U-235	1.07E+01	7.02E-11	10,000	1.11E+01	8.16E-11	10,000	1.20E+01	2.26E-10	10,000
U-236	4.82E+01	3.18E-10	10,000	5.02E+01	3.69E-10	10,000	2.89E+01	5.45E-10	10,000
U-238	5.99E+02	3.95E-09	10,000	6.24E+02	4.59E-09	10,000	5.04E+02	9.51E-09	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.30. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected MLLW									
200 East Area									
C-14	1.46E+00	1.25E-07	10,000	1.46E+00	1.25E-07	10,000	1.45E+00	1.25E-07	10,000
Tc-99	8.34E+00	9.43E-02	1,630	8.36E+00	9.45E-02	1,630	8.27E+00	9.35E-02	1,630
Grouted Tc-99									
I-129	3.50E-02	3.96E-04	1,630	3.51E-02	3.97E-04	1,630	3.48E-02	3.93E-04	1,630
Grouted I-129									
U-233	4.67E-03	9.32E-10	10,000	4.68E-03	9.34E-10	10,000	4.64E-03	2.56E-09	10,000
U-234	5.44E+00	1.09E-06	10,000	5.45E+00	1.09E-06	10,000	5.40E+00	2.98E-06	10,000
U-235	8.67E-02	1.73E-08	10,000	8.69E-02	1.73E-08	10,000	8.61E-02	4.75E-08	10,000
U-236	1.02E-01	2.03E-08	10,000	1.02E-01	2.04E-08	10,000	1.01E-01	5.57E-08	10,000
U-238	1.36E+00	2.71E-07	10,000	1.36E+00	2.71E-07	10,000	1.35E+00	7.44E-07	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Grouted MLLW									
200 East Area									
C-14	2.86E+00	2.46E-07	10,000	2.87E+00	2.47E-07	10,000	4.25E+00	3.65E-07	10,000
Tc-99									
Grouted Tc-99	1.57E+02	1.28E-02	970	1.57E+02	1.45E-02	970	3.34E+02	3.09E-02	970
I-129									
Grouted I-129	6.87E-02	2.01E-06	970	6.88E-02	2.01E-06	970	7.06E-02	2.06E-06	970
U-233	8.91E-03	3.28E-12	10,000	8.93E-03	3.29E-12	10,000	9.20E-03	8.83E-13	10,000
U-234	1.07E+01	3.93E-09	10,000	1.07E+01	3.94E-09	10,000	3.35E+02	3.22E-08	10,000
U-235	1.70E-01	6.25E-11	10,000	1.70E-01	6.26E-11	10,000	1.47E+01	1.41E-09	10,000
U-236	2.00E-01	7.35E-11	10,000	2.00E-01	7.36E-11	10,000	2.05E-01	1.97E-11	10,000
U-238	2.64E+00	9.74E-10	10,000	2.65E+00	9.75E-10	10,000	3.42E+02	3.28E-08	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.30. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste									
ERDF Area									
C-14									
Tc-99									
Grouted Tc-99	3.89E+01	3.23E-03	1,510	3.89E+01	3.23E-03	1,510	3.89E+01	3.23E-03	1,510
I-129									
Grouted I-129									
U-233	8.49E-01	4.92E-09	10,000	8.49E-01	4.92E-09	10,000	8.49E-01	4.92E-09	10,000
U-234	4.60E-01	2.67E-09	10,000	4.60E-01	2.67E-09	10,000	4.60E-01	2.67E-09	10,000
U-235	1.90E-02	1.10E-10	10,000	1.90E-02	1.10E-10	10,000	1.90E-02	1.10E-10	10,000
U-236	1.70E-02	9.86E-11	10,000	1.70E-02	9.86E-11	10,000	1.70E-02	9.86E-11	10,000
U-238	4.10E-01	2.38E-09	10,000	4.10E-01	2.38E-09	10,000	4.10E-01	2.38E-09	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.31. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a 1-km Line of Analysis, Alternative Group E_2

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concencration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	1.28E+01	2.01E-02	10,000	1.56E+01	2.45E-02	10,000	1.59E+01	2.50E-02	10,000
Tc-99	900	1.08E+00	6.39E+00	1,380	1.32E+00	7.80E+00	1,380	1.33E+00	7.86E+00	1,380
Grouted Tc-99	900									
I-129	1	3.01E-03	1.78E-02	1,380	3.67E-03	2.17E-02	1,380	3.67E-03	2.17E-02	1,380
Grouted I-129	1									
U-233	30	3.71E-01	3.29E-03	10,000	4.52E-01	3.88E-03	10,000	4.52E-01	5.61E-03	10,000
U-234	30	6.13E-01	5.44E-03	10,000	7.47E-01	6.41E-03	10,000	9.21E-01	1.14E-02	10,000
U-235	30	1.29E-01	1.14E-03	10,000	1.57E-01	1.35E-03	10,000	1.68E-01	2.08E-03	10,000
U-236	30	1.46E-02	1.30E-04	10,000	1.78E-02	1.53E-04	10,000	1.78E-02	2.21E-04	10,000
U-238	30	1.47E+00	1.30E-02	10,000	1.79E+00	1.54E-02	10,000	2.08E+00	2.58E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	4.44E-01	6.97E-04	10,000	4.62E-01	7.26E-04	10,000	1.45E+02	2.28E-01	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	1.55E+02	680	3.23E+03	1.55E+02	680	3.23E+03	1.55E+02	680
I-129	1	1.96E-06	1.16E-05	1,380	2.04E-06	1.21E-05	1,380	2.04E-06	1.21E-05	1,380
Grouted I-129	1	5.00E+00	7.61E-02	680	5.00E+00	7.61E-02	680	5.00E+00	7.61E-02	680
U-233	30	2.98E-01	2.56E-08	10,000	3.10E-01	2.97E-08	10,000	1.80E-01	4.43E-08	10,000
U-234	30	3.73E+02	3.21E-05	10,000	3.89E+02	3.73E-05	10,000	3.11E+02	7.65E-05	10,000
U-235	30	1.07E+01	9.16E-07	10,000	1.11E+01	1.06E-06	10,000	1.20E+01	2.95E-06	10,000
U-236	30	4.82E+01	4.14E-06	10,000	5.02E+01	4.81E-06	10,000	2.89E+01	7.11E-06	10,000
U-238	30	5.99E+02	5.15E-05	10,000	6.24E+02	5.98E-05	10,000	5.04E+02	1.24E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.31. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concencration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	2.29E-03	10,000	1.46E+00	2.29E-03	10,000	1.45E+00	2.28E-03	10,000
Tc-99	900	8.34E+00	4.93E+01	1,380	8.36E+00	4.94E+01	1,380	8.27E+00	4.89E+01	1,380
Grouted Tc-99	900									
I-129	1	3.50E-02	2.07E-01	1,380	3.51E-02	2.07E-01	1,380	3.48E-02	2.06E-01	1,380
Grouted I-129	1									
U-233	30	4.67E-03	2.04E-05	10,000	4.68E-03	2.05E-05	10,000	4.64E-03	4.83E-05	10,000
U-234	30	5.44E+00	2.38E-02	10,000	5.45E+00	2.38E-02	10,000	5.40E+00	5.62E-02	10,000
U-235	30	8.67E-02	3.79E-04	10,000	8.69E-02	3.80E-04	10,000	8.61E-02	8.96E-04	10,000
U-236	30	1.02E-01	4.45E-04	10,000	1.02E-01	4.46E-04	10,000	1.01E-01	1.05E-03	10,000
U-238	30	1.36E+00	5.94E-03	10,000	1.36E+00	5.95E-03	10,000	1.35E+00	1.41E-02	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	4.50E-03	10,000	2.87E+00	4.51E-03	10,000	4.25E+00	6.68E-03	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	7.54E+00	680	1.57E+02	7.55E+00	680	3.34E+02	1.61E+01	680
I-129	1									
Grouted I-129	1	6.87E-02	9.11E-04	620	6.88E-02	9.13E-04	620	7.06E-02	9.36E-04	620
U-233	30	8.91E-03	7.19E-08	10,000	8.93E-03	7.20E-08	10,000	9.20E-03	1.94E-08	10,000
U-234	30	1.07E+01	8.61E-05	10,000	1.07E+01	8.63E-05	10,000	3.35E+02	7.05E-04	10,000
U-235	30	1.70E-01	1.37E-06	10,000	1.70E-01	1.37E-06	10,000	1.47E+01	3.09E-05	10,000
U-236	30	2.00E-01	1.61E-06	10,000	2.00E-01	1.61E-06	10,000	2.05E-01	4.31E-07	10,000
U-238	30	2.64E+00	2.13E-05	10,000	2.65E+00	2.14E-05	10,000	3.42E+02	7.19E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.31. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concencration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
ERDF Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.71E+00	1,070	3.89E+01	2.71E+00	1,070	3.89E+01	2.71E+00	1,070
I-129	1									
Grouted I-129	1									
U-233	30	8.49E-01	9.62E-04	10,000	8.49E-01	9.62E-04	10,000	8.49E-01	9.62E-04	10,000
U-234	30	4.60E-01	5.21E-04	10,000	4.60E-01	5.21E-04	10,000	4.60E-01	5.21E-04	10,000
U-235	30	1.90E-02	2.15E-05	10,000	1.90E-02	2.15E-05	10,000	1.90E-02	2.15E-05	10,000
U-236	30	1.70E-02	1.93E-05	10,000	1.70E-02	1.93E-05	10,000	1.70E-02	1.93E-05	10,000
U-238	30	4.10E-01	4.65E-04	10,000	4.10E-01	4.65E-04	10,000	4.10E-01	4.65E-04	10,000

Table G.32. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a Line of Analysis Near the Columbia River, Alternative Group E_2

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000	1.28E+01	2.96E-04	10,000	1.56E+01	3.61E-04	10,000	1.59E+01	3.68E-04	10,000
Tc-99	900	1.08E+00	7.36E-01	1,510	1.32E+00	8.97E-01	1,510	1.33E+00	9.04E-01	1,510
Grouted Tc-99	900									
I-129	1	3.01E-03	2.05E-03	1,510	3.67E-03	2.50E-03	1,510	3.67E-03	2.50E-03	1,510
Grouted I-129	1									
U-233	30	3.71E-01	4.40E-05	10,000	4.52E-01	5.12E-05	10,000	4.52E-01	8.41E-05	10,000
U-234	30	6.13E-01	7.27E-05	10,000	7.47E-01	8.47E-05	10,000	9.21E-01	1.71E-04	10,000
U-235	30	1.29E-01	1.53E-05	10,000	1.57E-01	1.78E-05	10,000	1.68E-01	3.13E-05	10,000
U-236	30	1.46E-02	1.73E-06	10,000	1.78E-02	2.02E-06	10,000	1.78E-02	3.31E-06	10,000
U-238	30	1.47E+00	1.74E-04	10,000	1.79E+00	2.03E-04	10,000	2.08E+00	3.87E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
Projected Cat 3 LLW										
200 East Area										
C-14	2,000	4.44E-01	1.03E-05	10,000	4.62E-01	1.07E-05	10,000	1.45E+02	3.35E-03	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	1.69E+01	820	3.23E+03	1.69E+01	820	3.23E+03	1.69E+01	820
I-129	1	1.96E-06	1.33E-06	1,510	2.04E-06	1.39E-06	1,510	2.04E-06	1.39E-06	1,510
Grouted I-129	1	5.00E+00	0.00E+00	820	5.00E+00	8.26E-03	820	5.00E+00	0.00E+00	820
U-233	30	2.98E-01	2.56E-08	10,000	3.10E-01	2.97E-08	10,000	1.80E-01	4.43E-08	10,000
U-234	30	3.73E+02	3.21E-05	10,000	3.89E+02	3.73E-05	10,000	3.11E+02	7.65E-05	10,000
U-235	30	1.07E+01	9.16E-07	10,000	1.11E+01	1.06E-06	10,000	1.20E+01	2.95E-06	10,000
U-236	30	4.82E+01	4.14E-06	10,000	5.02E+01	4.81E-06	10,000	2.89E+01	7.11E-06	10,000
U-238	30	5.99E+02	5.15E-05	10,000	6.24E+02	5.98E-05	10,000	5.04E+02	1.24E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.32. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000	1.46E+00	3.37E-05	10,000	1.46E+00	3.38E-05	10,000	1.45E+00	3.35E-05	10,000
Tc-99	900	8.34E+00	5.67E+00	1,510	8.36E+00	5.68E+00	1,510	8.27E+00	5.62E+00	1,510
Grouted Tc-99	900									
I-129	1	3.50E-02	2.38E-02	1,510	3.51E-02	2.39E-02	1,510	3.48E-02	2.37E-02	1,510
Grouted I-129	1									
U-233	30	4.67E-03	2.53E-07	10,000	4.68E-03	2.54E-07	10,000	4.64E-03	6.77E-07	10,000
U-234	30	5.44E+00	2.95E-04	10,000	5.45E+00	2.96E-04	10,000	5.40E+00	7.88E-04	10,000
U-235	30	8.67E-02	4.70E-06	10,000	8.69E-02	4.71E-06	10,000	8.61E-02	1.26E-05	10,000
U-236	30	1.02E-01	5.52E-06	10,000	1.02E-01	5.53E-06	10,000	1.01E-01	1.47E-05	10,000
U-238	30	1.36E+00	7.36E-05	10,000	1.36E+00	7.37E-05	10,000	1.35E+00	1.97E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
Projected Grouted MLLW										
200 East Area										
C-14	2,000	2.86E+00	6.62E-05	10,000	2.87E+00	6.64E-05	10,000	4.25E+00	9.83E-05	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	8.19E-01	820	1.57E+02	8.21E-01	820	3.34E+02	1.75E+00	820
I-129	1									
Grouted I-129	1	6.87E-02	1.13E-04	820	6.88E-02	1.14E-04	820	7.06E-02	1.17E-04	820
U-233	30	8.91E-03	8.91E-10	10,000	8.93E-03	8.93E-10	10,000	9.20E-03	2.40E-10	10,000
U-234	30	1.07E+01	1.07E-06	10,000	1.07E+01	1.07E-06	10,000	3.35E+02	8.74E-06	10,000
U-235	30	1.70E-01	1.70E-08	10,000	1.70E-01	1.70E-08	10,000	1.47E+01	3.83E-07	10,000
U-236	30	2.00E-01	2.00E-08	10,000	2.00E-01	2.00E-08	10,000	2.05E-01	5.35E-09	10,000
U-238	30	2.64E+00	2.64E-07	10,000	2.65E+00	2.65E-07	10,000	3.42E+02	8.92E-06	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									

Table G.32. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	30									
U-234	30									
U-235	30									
U-236	30									
U-238	30									
ERDF Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.38E-01	1,420	3.89E+01	2.38E-01	1,420	3.89E+01	2.38E-01	1,420
I-129	1									
Grouted I-129	1									
U-233	30	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000
U-234	30	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000
U-235	30	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000
U-236	30	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000
U-238	30	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000

Table G.33. Predicted Peak River Flux of Key Constituents Disposed of After 2007 at a Line of Analysis to the Columbia River, Alternative Group E_2

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW									
200 East Area									
C-14	1.28E+01	3.60E-06	10,000	1.56E+01	4.39E-06	10,000	1.59E+01	4.48E-06	10,000
Tc-99	1.08E+00	1.15E-02	1,530	1.32E+00	1.40E-02	1,530	1.33E+00	1.41E-02	1,530
Grouted Tc-99									
I-129	3.01E-03	3.19E-05	1,530	3.67E-03	3.89E-05	1,530	3.67E-03	3.89E-05	1,530
Grouted I-129									
U-233	3.71E-01	5.34E-07	10,000	4.52E-01	6.22E-07	10,000	4.52E-01	1.03E-06	10,000
U-234	6.13E-01	8.83E-07	10,000	7.47E-01	1.03E-06	10,000	9.21E-01	2.10E-06	10,000
U-235	1.29E-01	1.86E-07	10,000	1.57E-01	2.16E-07	10,000	1.68E-01	3.84E-07	10,000
U-236	1.46E-02	2.10E-08	10,000	1.78E-02	2.45E-08	10,000	1.78E-02	4.06E-08	10,000
U-238	1.47E+00	2.12E-06	10,000	1.79E+00	2.46E-06	10,000	2.08E+00	4.75E-06	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Cat 3 LLW									
200 East Area									
C-14	4.44E-01	1.25E-07	10,000	4.62E-01	1.30E-07	10,000	1.45E+02	4.08E-05	10,000
Tc-99									
Grouted Tc-99	3.23E+03	2.65E-01	870	3.23E+03	2.65E-01	870	3.23E+03	2.65E-01	870
I-129	1.96E-06	2.07E-08	1,530	2.04E-06	2.16E-08	1,530	2.04E-06	2.16E-08	1,530
Grouted I-129	5.00E+00	0.00E+00	870	5.00E+00	1.30E-04	870	5.00E+00	0.00E+00	870
U-233	2.98E-01	3.85E-12	10,000	3.10E-01	4.47E-12	10,000	1.80E-01	6.66E-12	10,000
U-234	3.73E+02	4.83E-09	10,000	3.89E+02	5.61E-09	10,000	3.11E+02	1.15E-08	10,000
U-235	1.07E+01	1.38E-10	10,000	1.11E+01	1.60E-10	10,000	1.20E+01	4.44E-10	10,000
U-236	4.82E+01	6.23E-10	10,000	5.02E+01	7.24E-10	10,000	2.89E+01	1.07E-09	10,000
U-238	5.99E+02	7.74E-09	10,000	6.24E+02	9.00E-09	10,000	5.04E+02	1.86E-08	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.33. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected MLLW									
200 East Area									
C-14	1.46E+00	4.10E-07	10,000	1.46E+00	4.11E-07	10,000	1.45E+00	4.08E-07	10,000
Tc-99	8.34E+00	8.84E-02	1,530	8.36E+00	8.85E-02	1,530	8.27E+00	8.76E-02	1,530
Grouted Tc-99									
I-129	3.50E-02	3.71E-04	1,530	3.51E-02	3.72E-04	1,530	3.48E-02	3.69E-04	1,530
Grouted I-129									
U-233	4.67E-03	3.07E-09	10,000	4.68E-03	3.08E-09	10,000	4.64E-03	8.26E-09	10,000
U-234	5.44E+00	3.58E-06	10,000	5.45E+00	3.59E-06	10,000	5.40E+00	9.61E-06	10,000
U-235	8.67E-02	5.71E-08	10,000	8.69E-02	5.72E-08	10,000	8.61E-02	1.53E-07	10,000
U-236	1.02E-01	6.70E-08	10,000	1.02E-01	6.71E-08	10,000	1.01E-01	1.80E-07	10,000
U-238	1.36E+00	8.93E-07	10,000	1.36E+00	8.95E-07	10,000	1.35E+00	2.40E-06	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
Projected Grouted MLLW									
200 East Area									
C-14	2.86E+00	8.07E-07	10,000	2.87E+00	8.08E-07	10,000	4.25E+00	1.20E-06	10,000
Tc-99									
Grouted Tc-99	1.57E+02	1.28E-02	870	1.57E+02	1.29E-02	870	3.34E+02	2.74E-02	870
I-129									
Grouted I-129	6.87E-02	1.78E-06	870	6.88E-02	1.78E-06	870	7.06E-02	1.83E-06	870
U-233	8.91E-03	1.08E-11	10,000	8.93E-03	1.08E-11	10,000	9.20E-03	2.91E-12	10,000
U-234	1.07E+01	1.30E-08	10,000	1.07E+01	1.30E-08	10,000	3.35E+02	1.06E-07	10,000
U-235	1.70E-01	2.06E-10	10,000	1.70E-01	2.06E-10	10,000	1.47E+01	4.65E-09	10,000
U-236	2.00E-01	2.42E-10	10,000	2.00E-01	2.43E-10	10,000	2.05E-01	6.49E-11	10,000
U-238	2.64E+00	3.21E-09	10,000	2.65E+00	3.21E-09	10,000	3.42E+02	1.08E-07	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.33. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14									
Tc-99									
Grouted Tc-99	3.89E+01	3.23E-03	1,510	3.89E+01	3.23E-03	1,510	3.89E+01	3.23E-03	1,510
I-129									
Grouted I-129									
U-233	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000	8.49E-01	0.00E+00	>10,000
U-234	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000	4.60E-01	0.00E+00	>10,000
U-235	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000	1.90E-02	0.00E+00	>10,000
U-236	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000	1.70E-02	0.00E+00	>10,000
U-238	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000	4.10E-01	0.00E+00	>10,000

Table G.34. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a 1-km Line of Analysis, Alternative Group E_3

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	1.28E+01	1.58E-02	>10,000	1.56E+01	1.92E-02	>10,000	1.59E+01	1.96E-02	>10,000
Tc-99	900	1.08E+00	9.31E+00	1,740	1.32E+00	1.14E+01	1,740	1.33E+00	1.14E+01	1,740
Grouted Tc-99	900									
I-129	1	3.01E-03	2.59E-02	1,740	3.67E-03	3.16E-02	1,740	3.67E-03	3.16E-02	1,740
Grouted I-129	1									
U-233	(a)	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	(a)	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	(a)	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	(a)	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	(a)	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	4.44E-01	5.47E-04	10,000	4.62E-01	5.69E-04	10,000	1.45E+02	1.79E-01	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	2.25E+02	1,070	3.23E+03	2.25E+02	1,070	3.23E+03	2.25E+02	1,070
I-129	1	1.96E-06	1.69E-05	1,740	2.04E-06	1.76E-05	1,740	2.04E-06	1.76E-05	1,740
Grouted I-129	1	5.00E+00	1.10E-01	1,070	5.00E+00	1.10E-01	1,070	5.00E+00	1.10E-01	1,070
U-233	(a)	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	(a)	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	(a)	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000

Table G.34. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
U-236	(a)	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	(a)	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000
Projected MLLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	1.46E+00	1.80E-03	10,000	1.46E+00	1.80E-03	10,000	1.45E+00	1.79E-03	10,000
Tc-99	900	8.34E+00	7.18E+01	1,740	8.36E+00	7.19E+01	1,740	8.27E+00	7.12E+01	1,740
Grouted Tc-99	900									
I-129	1	3.50E-02	3.01E-01	1,740	3.51E-02	3.02E-01	1,740	3.48E-02	2.99E-01	1,740
Grouted I-129	1									
U-233	(a)	4.67E-03	0.00E+00	>10,000	4.68E-03	0.00E+00	>10,000	4.64E-03	0.00E+00	>10,000
U-234	(a)	5.44E+00	0.00E+00	>10,000	5.45E+00	0.00E+00	>10,000	5.40E+00	0.00E+00	>10,000
U-235	(a)	8.67E-02	0.00E+00	>10,000	8.69E-02	0.00E+00	>10,000	8.61E-02	0.00E+00	>10,000
U-236	(a)	1.02E-01	0.00E+00	>10,000	1.02E-01	0.00E+00	>10,000	1.01E-01	0.00E+00	>10,000
U-238	(a)	1.36E+00	0.00E+00	>10,000	1.36E+00	0.00E+00	>10,000	1.35E+00	0.00E+00	>10,000
Projected Grouted MLLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	2.86E+00	3.53E-03	10,000	2.87E+00	3.54E-03	10,000	4.25E+00	5.24E-03	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	1.09E+01	1,070	1.57E+02	1.09E+01	1,070	3.34E+02	2.33E+01	1,070
I-129	1									
Grouted I-129	1	6.87E-02	1.51E-03	1,070	6.88E-02	1.52E-03	1,070	7.06E-02	1.56E-03	1,070
U-233	(a)	8.91E-03	0.00E+00	>10,000	8.93E-03	0.00E+00	>10,000	9.20E-03	0.00E+00	>10,000
U-234	(a)	1.07E+01	0.00E+00	>10,000	1.07E+01	0.00E+00	>10,000	3.35E+02	0.00E+00	>10,000
U-235	(a)	1.70E-01	0.00E+00	>10,000	1.70E-01	0.00E+00	>10,000	1.47E+01	0.00E+00	>10,000

Table G.34. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
U-236	(a)	2.00E-01	0.00E+00	>10,000	2.00E-01	0.00E+00	>10,000	2.05E-01	0.00E+00	>10,000
U-238	(a)	2.64E+00	0.00E+00	>10,000	2.65E+00	0.00E+00	>10,000	3.42E+02	0.00E+00	>10,000
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	1.87E+00	680	3.89E+01	1.87E+00	680	3.89E+01	1.87E+00	680
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	1.26E-03	10,000	8.49E-01	1.26E-03	10,000	8.49E-01	1.26E-03	10,000
U-234	(a)	4.60E-01	6.82E-04	10,000	4.60E-01	6.82E-04	10,000	4.60E-01	6.82E-04	10,000
U-235	(a)	1.90E-02	2.82E-05	10,000	1.90E-02	2.82E-05	10,000	1.90E-02	2.82E-05	10,000
U-236	(a)	1.70E-02	2.52E-05	10,000	1.70E-02	2.52E-05	10,000	1.70E-02	2.52E-05	10,000
U-238	(a)	4.10E-01	6.08E-04	10,000	4.10E-01	6.08E-04	10,000	4.10E-01	6.08E-04	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.35. Predicted Peak Concentrations of Key Constituents Disposed of After 2007 at a Line of Analysis Near the Columbia River, Alternative Group E_3

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	1.28E+01	1.38E-05	10,000	1.56E+01	1.69E-05	10,000	1.59E+01	1.72E-05	10,000
Tc-99	900	1.08E+00	8.62E-01	1,660	1.32E+00	1.05E+00	1,660	1.33E+00	1.06E+00	1,660
Grouted Tc-99	900									
I-129	1	3.01E-03	2.40E-03	1,660	3.67E-03	2.92E-03	1,660	3.67E-03	2.92E-03	1,660
Grouted I-129	1									
U-233	(a)	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	(a)	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	(a)	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	(a)	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	(a)	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	4.44E-01	4.80E-07	10,000	4.62E-01	5.00E-07	10,000	1.45E+02	1.57E-04	10,000
Tc-99	900									
Grouted Tc-99	900	3.23E+03	1.97E+01	1,420	3.23E+03	1.97E+01	1,420	3.23E+03	1.97E+01	1,420
I-129	1	1.96E-06	1.56E-06	1,660	2.04E-06	1.62E-06	1,660	2.04E-06	1.62E-06	1,660
Grouted I-129	1	5.00E+00	1.01E-02	1,700	5.00E+00	1.01E-02	1,700	5.00E+00	1.01E-02	1,700
U-233	(a)	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	(a)	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	(a)	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000
U-236	(a)	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	(a)	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000

Table G.35. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected MLLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	1.46E+00	1.58E-06	10,000	1.46E+00	1.58E-06	10,000	1.45E+00	1.57E-06	10,000
Tc-99	900	8.34E+00	6.64E+00	1,660	8.36E+00	6.65E+00	1,660	8.27E+00	6.58E+00	1,660
Grouted Tc-99	900									
I-129	1	3.50E-02	2.79E-02	1,660	3.51E-02	2.79E-02	1,660	3.48E-02	2.77E-02	1,660
Grouted I-129	1									
U-233	(a)	4.67E-03	0.00E+00	>10,000	4.68E-03	0.00E+00	>10,000	4.64E-03	0.00E+00	>10,000
U-234	(a)	5.44E+00	0.00E+00	>10,000	5.45E+00	0.00E+00	>10,000	5.40E+00	0.00E+00	>10,000
U-235	(a)	8.67E-02	0.00E+00	>10,000	8.69E-02	0.00E+00	>10,000	8.61E-02	0.00E+00	>10,000
U-236	(a)	1.02E-01	0.00E+00	>10,000	1.02E-01	0.00E+00	>10,000	1.01E-01	0.00E+00	>10,000
U-238	(a)	1.36E+00	0.00E+00	>10,000	1.36E+00	0.00E+00	>10,000	1.35E+00	0.00E+00	>10,000
Projected Grouted MLLW										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									
ERDF Area										
C-14	2,000	2.86E+00	3.10E-06	10,000	2.87E+00	3.10E-06	10,000	4.25E+00	4.60E-06	10,000
Tc-99	900									
Grouted Tc-99	900	1.57E+02	9.56E-01	1,420	1.57E+02	9.58E-01	1,420	3.34E+02	2.04E+00	1,420
I-129	1									
Grouted I-129	1	6.87E-02	1.33E-04	1,420	6.88E-02	1.33E-04	1,420	7.06E-02	1.36E-04	1,420
U-233	(a)	8.91E-03	0.00E+00	>10,000	8.93E-03	0.00E+00	>10,000	9.20E-03	0.00E+00	>10,000
U-234	(a)	1.07E+01	0.00E+00	>10,000	1.07E+01	0.00E+00	>10,000	3.35E+02	0.00E+00	>10,000
U-235	(a)	1.70E-01	0.00E+00	>10,000	1.70E-01	0.00E+00	>10,000	1.47E+01	0.00E+00	>10,000
U-236	(a)	2.00E-01	0.00E+00	>10,000	2.00E-01	0.00E+00	>10,000	2.05E-01	0.00E+00	>10,000
U-238	(a)	2.64E+00	0.00E+00	>10,000	2.65E+00	0.00E+00	>10,000	3.42E+02	0.00E+00	>10,000

Table G.35. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
		Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concen-tration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Projected Melter Waste										
200 East Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900	3.89E+01	2.03E-01	820	3.89E+01	2.03E-01	820	3.89E+01	2.03E-01	820
I-129	1									
Grouted I-129	1									
U-233	(a)	8.49E-01	7.61E-07	10,000	8.49E-01	7.61E-07	10,000	8.49E-01	7.61E-07	10,000
U-234	(a)	4.60E-01	4.12E-07	10,000	4.60E-01	4.12E-07	10,000	4.60E-01	4.12E-07	10,000
U-235	(a)	1.90E-02	1.70E-08	10,000	1.90E-02	1.70E-08	10,000	1.90E-02	1.70E-08	10,000
U-236	(a)	1.70E-02	1.52E-08	10,000	1.70E-02	1.52E-08	10,000	1.70E-02	1.52E-08	10,000
U-238	(a)	4.10E-01	3.67E-07	10,000	4.10E-01	3.67E-07	10,000	4.10E-01	3.67E-07	10,000
200 West Area										
C-14	2,000									
Tc-99	900									
Grouted Tc-99	900									
I-129	1									
Grouted I-129	1									
U-233	(a)									
U-234	(a)									
U-235	(a)									
U-236	(a)									
U-238	(a)									

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.36. Predicted Peak River Flux of Key Constituents Disposed of After 2007 at a Line of Analysis to the Columbia River, Alternative E_3

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Projected Cat 1 LLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14	1.28E+01	8.79E-08	10,000	1.56E+01	1.07E-07	10,000	1.59E+01	1.09E-07	10,000
Tc-99	1.08E+00	1.12E-02	1,720	1.32E+00	1.36E-02	1,720	1.33E+00	1.37E-02	1,720
Grouted Tc-99									
I-129	3.01E-03	3.10E-05	1,720	3.67E-03	3.79E-05	1,720	3.67E-03	3.79E-05	1,20
Grouted I-129									
U-233	3.71E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000	4.52E-01	0.00E+00	>10,000
U-234	6.13E-01	0.00E+00	>10,000	7.47E-01	0.00E+00	>10,000	9.21E-01	0.00E+00	>10,000
U-235	1.29E-01	0.00E+00	>10,000	1.57E-01	0.00E+00	>10,000	1.68E-01	0.00E+00	>10,000
U-236	1.46E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000	1.78E-02	0.00E+00	>10,000
U-238	1.47E+00	0.00E+00	>10,000	1.79E+00	0.00E+00	>10,000	2.08E+00	0.00E+00	>10,000
Projected Cat 3 LLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14	4.44E-01	3.05E-09	10,000	4.62E-01	3.17E-09	10,000	1.45E+02	9.96E-07	10,000
Tc-99									
Grouted Tc-99	3.23E+03	2.67E-01	1,510	3.23E+03	2.67E-01	1,510	3.23E+03	2.67E-01	1,510
I-129	1.96E-06	2.02E-08	1,720	2.04E-06	2.10E-08	1,720	2.04E-06	2.10E-08	1,720
Grouted I-129	5.00E+00	1.31E-04	1,510	5.00E+00	1.31E-04	1,510	5.00E+00	1.31E-04	1,510
U-233	2.98E-01	0.00E+00	>10,000	3.10E-01	0.00E+00	>10,000	1.80E-01	0.00E+00	>10,000
U-234	3.73E+02	0.00E+00	>10,000	3.89E+02	0.00E+00	>10,000	3.11E+02	0.00E+00	>10,000
U-235	1.07E+01	0.00E+00	>10,000	1.11E+01	0.00E+00	>10,000	1.20E+01	0.00E+00	>10,000

Table G.36. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
U-236	4.82E+01	0.00E+00	>10,000	5.02E+01	0.00E+00	>10,000	2.89E+01	0.00E+00	>10,000
U-238	5.99E+02	0.00E+00	>10,000	6.24E+02	0.00E+00	>10,000	5.04E+02	0.00E+00	>10,000
Projected MLLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14	1.46E+00	1.00E-08	10,000	1.46E+00	1.00E-08	10,000	1.45E+00	9.96E-09	10,000
Tc-99	8.34E+00	8.61E-02	1,720	8.36E+00	8.62E-02	1,720	8.27E+00	8.53E-02	1,720
Grouted Tc-99									
I-129	3.50E-02	3.61E-04	1,720	3.51E-02	3.62E-04	1,720	3.48E-02	3.59E-04	1,720
Grouted I-129									
U-233	4.67E-03	0.00E+00	>10,000	4.68E-03	0.00E+00	>10,000	4.64E-03	0.00E+00	>10,000
U-234	5.44E+00	0.00E+00	>10,000	5.45E+00	0.00E+00	>10,000	5.40E+00	0.00E+00	>10,000
U-235	8.67E-02	0.00E+00	>10,000	8.69E-02	0.00E+00	>10,000	8.61E-02	0.00E+00	>10,000
U-236	1.02E-01	0.00E+00	>10,000	1.02E-01	0.00E+00	>10,000	1.01E-01	0.00E+00	>10,000
U-238	1.36E+00	0.00E+00	>10,000	1.36E+00	0.00E+00	>10,000	1.35E+00	0.00E+00	>10,000
Projected Grouted MLLW									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									
ERDF Area									
C-14	2.86E+00	1.97E-08	10,000	2.87E+00	1.97E-08	10,000	4.25E+00	2.92E-08	10,000
Tc-99									
Grouted Tc-99	1.57E+02	1.30E-02	1,510	1.57E+02	1.30E-02	1,510	3.34E+02	2.77E-02	1,510
I-129									
Grouted I-129	6.87E-02	1.80E-06	1,510	6.88E-02	1.80E-06	1,510	7.06E-02	1.85E-06	1,510
U-233	8.91E-03	0.00E+00	>10,000	8.93E-03	0.00E+00	>10,000	9.20E-03	0.00E+00	>10,000
U-234	1.07E+01	0.00E+00	>10,000	1.07E+01	0.00E+00	>10,000	3.35E+02	0.00E+00	>10,000
U-235	1.70E-01	0.00E+00	>10,000	1.70E-01	0.00E+00	>10,000	1.47E+01	0.00E+00	>10,000

Table G.36. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume			Upper Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
U-236	2.00E-01	0.00E+00	>10,000	2.00E-01	0.00E+00	>10,000	2.05E-01	0.00E+00	>10,000
U-238	2.64E+00	0.00E+00	>10,000	2.65E+00	0.00E+00	>10,000	3.42E+02	0.00E+00	>10,000
Projected Melter Waste									
200 East Area									
C-14									
Tc-99									
Grouted Tc-99	3.89E+01	3.19E-03	870	3.89E+01	3.19E-03	870	3.89E+01	3.19E-03	870
I-129									
Grouted I-129									
U-233	8.49E-01	1.89E-07	10,000	8.49E-01	1.89E-07	10,000	8.49E-01	1.89E-07	10,000
U-234	4.60E-01	1.03E-07	10,000	4.60E-01	1.03E-07	10,000	4.60E-01	1.03E-07	10,000
U-235	1.90E-02	4.24E-09	10,000	1.90E-02	4.24E-09	10,000	1.90E-02	4.24E-09	10,000
U-236	1.70E-02	3.79E-09	10,000	1.70E-02	3.79E-09	10,000	1.70E-02	3.79E-09	10,000
U-238	4.10E-01	9.14E-08	10,000	4.10E-01	9.14E-08	10,000	4.10E-01	9.14E-08	10,000
200 West Area									
C-14									
Tc-99									
Grouted Tc-99									
I-129									
Grouted I-129									
U-233									
U-234									
U-235									
U-236									
U-238									

Table G.37. Predicted Peak Concentrations of Key Constituents at a 1-km Line of Analysis, No Action Alternative

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume		
		Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Pre-1970 LLW							
200 East Area							
C-14	2,000						
Tc-99	900	5.16E-01	1.37E+01	110	5.16E-01	1.37E+01	110
Grouted Tc-99	900						
I-129	1	1.24E-03	3.30E-02	110	1.24E-03	3.30E-02	110
Grouted I-129	1						
U-233	(a)	1.03E+01	3.20E-01	10,000	1.03E+01	3.20E-01	10,000
U-234	(a)	3.68E-01	1.14E-02	10,000	3.68E-01	1.14E-02	10,000
U-235	(a)	1.12E-02	3.48E-04	10,000	1.12E-02	3.48E-04	10,000
U-236	(a)	7.53E-03	2.34E-04	10,000	7.53E-03	2.34E-04	10,000
U-238	(a)	2.69E-01	8.35E-03	10,000	2.69E-01	8.35E-03	10,000
200 West Area	(a)						
C-14	2,000						
Tc-99	900	1.30E-01	2.70E+00	190	1.30E-01	2.70E+00	190
Grouted Tc-99	900						
I-129	1	1.70E-04	3.54E-03	190	1.70E-04	3.54E-03	190
Grouted I-129	1						
U-233	(a)						
U-234	(a)	1.45E+00	0.00E+00	>10,000	1.45E+00	0.00E+00	>10,000
U-235	(a)	4.38E-02	0.00E+00	>10,000	4.38E-02	0.00E+00	>10,000
U-236	(a)	2.95E-02	0.00E+00	>10,000	2.95E-02	0.00E+00	>10,000
U-238	(a)	1.06E+00	0.00E+00	>10,000	1.06E+00	0.00E+00	>10,000
1970-1987 LLW							
200 East Area							
C-14	2,000	2.15E+02	4.84E+00	10,000	2.15E+02	4.84E+00	10,000
Tc-99	900						
Grouted Tc-99	900						
I-129	1	1.87E-02	5.23E-01	110	1.87E-02	5.23E-01	110
Grouted I-129	1						
U-233	(a)						
U-234	(a)	3.08E-02	1.89E-03	10,000	3.08E-02	1.89E-03	10,000
U-235	(a)	2.61E-03	1.60E-04	10,000	2.61E-03	1.60E-04	10,000
U-236	(a)						
U-238	(a)	6.28E-02	3.85E-03	10,000	6.28E-02	3.85E-03	10,000
200 West Area							
C-14	2,000	3.92E+02	0.00E+00	>10,000	3.92E+02	0.00E+00	>10,000
Tc-99	900						
Grouted Tc-99	900						
I-129	1	1.77E-03	3.94E-02	250	1.77E-03	3.94E-02	250
Grouted I-129	1						
U-233	(a)						
U-234	(a)	3.94E+01	0.00E+00	>10,000	3.94E+01	0.00E+00	>10,000
U-235	(a)	3.33E+00	0.00E+00	>10,000	3.33E+00	0.00E+00	>10,000
U-236	(a)						
U-238	(a)	2.82E+01	0.00E+00	>10,000	2.82E+01	0.00E+00	>10,000

Table G.37. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume		
		Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
1988-1995 LLW							
200 East Area							
C-14	2,000	5.11E+00	1.15E-01	10,000	5.11E+00	1.15E-01	10,000
Tc-99	900	1.39E-01	3.89E+00	110	1.39E-01	3.89E+00	110
Grouted Tc-99	900						
I-129	1	9.45E-05	2.64E-03	110	9.45E-05	2.64E-03	110
Grouted I-129	1						
U-233	(a)	2.09E-05	1.28E-06	10,000	2.09E-05	1.28E-06	10,000
U-234	(a)	1.85E-03	1.13E-04	10,000	1.85E-03	1.13E-04	10,000
U-235	(a)	4.29E-04	2.63E-05	10,000	4.29E-04	2.63E-05	10,000
U-236	(a)	1.85E-06	1.13E-07	10,000	1.85E-06	1.13E-07	10,000
U-238	(a)	1.93E-02	1.18E-03	10,000	1.93E-02	1.18E-03	10,000
200 West Area							
C-14	2,000	9.29E+00	0.00E+00	>10,000	9.29E+00	0.00E+00	>10,000
Tc-99	900	4.71E-01	1.18E+01	210	471E-01	1.18E+01	210
Grouted Tc-99	900						
I-129	1	3.06E-02	7.70E-01	210	3.06E-02	7.70E-01	210
Grouted I-129	1						
U-233	(a)	6.54E-02	0.00E+00	>10,000	6.54E-02	0.00E+00	>10,000
U-234	(a)	5.77E+00	0.00E+00	>10,000	5.77E+00	0.00E+00	>10,000
U-235	(a)	1.34E+00	0.00E+00	>10,000	134E+00	0.00E+00	>10,000
U-236	(a)	5.77E-03	0.00E+00	>10,000	5.77E-03	0.00E+00	>10,000
U-238	(a)	6.03-1	0.00E+00	>10,000	6.03E+01	0.00E+00	>10,000
Cat 1 LLW Disposed of After 1995							
200 East Area							
C-14	2,000	5.90E-01	1.33E-02	10,000	7.20E-01	1.62E-02	10,000
Tc-99	900	5.03E-02	5.32E-01	630	6.14E-02	6.49E-01	630
Grouted Tc-99	900						
I-129	1	2.03E-04	2.15E-03	630	2.48E-04	2.62E-03	630
Grouted I-129	1						
U-233	(a)	1.78E-02	1.09E-03	10,000	2.17E-02	1.33E-03	10,000
U-234	(a)	2.94E-02	1.80E-03	10,000	3.58E-02	2.19E-03	10,000
U-235	(a)	6.16E-03	3.77E-04	10,000	7.51E-03	4.60E-04	10,000
U-236	(a)	6.99E-04	4.29E-05	10,000	8.53E-04	5.23E-05	10,000
U-238	(a)	7.03E-02	4.31E-03	10,000	8.57E-02	5.25E-03	10,000
200 West Area	(a)						
C-14	2,000	1.53E+01	0.00E+00	>10,000	1.86E+01	0.00E+00	>10,000
Tc-99	900	1.29E+00	2.02E+01	1,070	1.57E+00	2.46E+01	1,070
Grouted Tc-99	900						
I-129	1	5.22E-03	8.18E-02	1,070	6.36E-03	9.98E-02	1,070
Grouted I-129	1						
U-233	(a)	4.55E-01	0.00E+00	>10,000	5.55E-01	0.00E+00	>10,000
U-234	(a)	7.53E-01	0.00E+00	>10,000	9.18E-01	0.00E+00	>10,000
U-235	(a)	1.57E-01	0.00E+00	>10,000	1.92E-01	0.00E+00	>10,000
U-236	(a)	1.79E-02	0.00E+00	>10,000	2.18E-02	0.00E+00	>10,000
U-238	(a)	1.80E+00	0.00E+00	>10,000	2.19E+00	0.00E+00	>10,000

Table G.37. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume		
		Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Cat 3 LLW Disposed of After 1995							
200 East Area							
C-14	2,000	2.21E-02	4.97E-04	10,000	2.30E-02	5.18E-04	10,000
Tc-99	900						
Grouted Tc-99	900	1.25E+02	5.24E+00	630	1.25E+02	5.24E+00	630
I-129	1	8.62E-08	9.11E-07	630	8.98E-08	9.49E-07	630
Grouted I-129	1						
U-233	(a)	1.48E-02	8.04E-04	10,000	1.54E-02	8.37E-04	10,000
U-234	(a)	1.86E+01	1.01E+00	10,000	1.94E+01	1.05E+00	10,000
U-235	(a)	5.34E-01	2.90E-02	10,000	5.56E-01	3.02E-02	10,000
U-236	(a)	2.41E+00	1.31E-01	10,000	2.51E+00	1.36E-01	10,000
U-238	(a)	3.00E+01	1.63E+00	10,000	3.12E+01	1.70E+00	10,000
200 West Area							
C-14	2,000	5.67E-01	0.00E+00	>10,000	5.91E-01	0.00E+00	>10,000
Tc-99	900						
Grouted Tc-99	900	3.18E+03	2.93E+02	1,230	3.18E+03	2.93E+02	1,230
I-129	1	221E-06	3.46E-05	1,070	2.30E-06	3.61E-05	1,070
Grouted I-129	1	5.00E+00	1.46E-01	1,230	5.00E+00	1.46E-01	1,230
U-233	(a)	3.79E-01	0.00E+00	>10,000	3.95E-01	0.00E+00	>10,000
U-234	(a)	4.78E+02	0.00E+00	>10,000	4.98E+02	0.00E+00	>10,000
U-235	(a)	1.36E+01	0.00E+00	>10,000	1.42E+01	0.00E+00	>10,000
U-236	(a)	6.17E+01	0.00E+00	>10,000	6.43E+01	0.00E+00	>10,000
U-238	(a)	7.67E+02	0.00E+00	>10,000	7.99E+02	0.00E+00	>10,000
MLLW Disposed of After 1995							
200 East Area							
C-14	2,000						
Tc-99	900						
Grouted Tc-99	900						
I-129	1						
Grouted I-129	1						
U-233	(a)						
U-234	(a)						
U-235	(a)						
U-236	(a)						
U-238	(a)						
200 West Area							
C-14	2,000	1.69E-01	0.00E+00	>10,000	1.69E-01	0.00E+00	>10,000
Tc-99	900	9.65E-01	1.51E+01	1,070	9.63E-01	1.51E+01	1,070
Grouted Tc-99	900					0.00E+00	
I-129	1	4.04E-03	6.34E-02	1,070	4.03E-03	6.33E-02	1,070
Grouted I-129	1						
U-233	(a)	5.25E-04	0.00E+00	>10,000	5.24E-04	0.00E+00	>10,000
U-234	(a)	6.29E-01	0.00E+00	>10,000	6.28E-01	0.00E+00	>10,000
U-235	(a)	9.99E-03	0.00E+00	>10,000	9.97E-03	0.00E+00	>10,000
U-236	(a)	1.17E-02	0.00E+00	>10,000	1.17E-02	0.00E+00	>10,000
U-238	(a)	1.56E-01	0.00E+00	>10,000	1.56E-01	0.00E+00	>10,000

Table G.37. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume		
		Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Grouted MLLW Disposed of After 1995							
200 East Area							
C-14	2,000						
Tc-99	900						
Grouted Tc-99	900						
I-129	1						
Grouted I-129	1						
U-233	(a)						
U-234	(a)						
U-235	(a)						
U-236	(a)						
U-238	(a)						
200 West Area							
C-14	2,000	5.85E-01	0.00E+00	>10,000	5.84E-01	0.00E+00	>10,000
Tc-99	900						
Grouted Tc-99	900	3.35E+00	2.39E-01	1,200	3.34E+00	2.39E-01	1,200
I-129	1						
Grouted I-129	1	1.40E-02	3.16E-04	1,200	1.40E-02	3.15E-04	1,200
U-233	(a)	1.82E-03	0.00E+00	>10,000	1.82E-03	0.00E+00	>10,000
U-234	(a)	2.18E+00	0.00E+00	>10,000	2.18E+00	0.00E+00	>10,000
U-235	(a)	3.46E-02	0.00E+00	>10,000	3.45E-02	0.00E+00	>10,000
U-236	(a)	4.07E-02	0.00E+00	>10,000	4.06E-02	0.00E+00	>10,000
U-238	(a)	5.41E-01	0.00E+00	>10,000	5.40E-01	0.00E+00	>10,000

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.38. Predicted Peak Concentrations of Key Constituents at a Line of Analysis Near the Columbia River, No Action Alternative

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume		
		Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Pre-1970 LLW							
200 East Area							
C-14	2,000						
Tc-99	900	5.16E-01	1.29E+00	260	5.16E-01	1.29E+00	260
Grouted Tc-99	900						
I-129	1	1.24E-03	3.10E-03	260	1.24E-03	3.10E-03	260
Grouted I-129	1						
U-233	(a)	1.03E+01	1.92E-02	10,000	1.03E+01	1.92E-02	10,000
U-234	(a)	3.68E-01	6.87E-04	10,000	3.68E-01	6.87E-04	10,000
U-235	(a)	1.12E-02	2.09E-05	10,000	1.12E-02	2.09E-05	10,000
U-236	(a)	7.53E-03	1.41E-05	10,000	7.53E-03	1.41E-05	10,000
U-238	(a)	2.69E-01	5.02E-04	10,000	2.69E-01	5.02E-04	10,000
200 West Area	(a)						
C-14	2,000						
Tc-99	900	1.30E-01	1.69E-01	530	1.30E-01	1.69E-01	530
Grouted Tc-99	900						
I-129	1	1.70E-04	2.21E-04	530	1.70E-04	2.21E-04	530
Grouted I-129	1						
U-233	(a)						
U-234	(a)	1.45E+00	0.00E+00	>10,000	1.45E+00	0.00E+00	>10,000
U-235	(a)	4.38E-02	0.00E+00	>10,000	4.38E-02	0.00E+00	>10,000
U-236	(a)	2.95E-02	0.00E+00	>10,000	2.95E-02	0.00E+00	>10,000
U-238	(a)	1.06E+00	0.00E+00	>10,000	1.06E+00	0.00E+00	>10,000
1970-1987 LLW							
200 East Area							
C-14	2,000	2.15E+02	3.89E-01	10,000	2.15E+02	3.89E-01	10,000
Tc-99	900						
Grouted Tc-99	900						
I-129	1	1.87E-02	4.66E-02	260	1.87E-02	4.66E-02	260
Grouted I-129	1						
U-233	(a)						
U-234	(a)	3.08E-02	1.12E-04	10,000	3.08E-02	1.12E-04	10,000
U-235	(a)	2.61E-03	9.48E-06	10,000	2.61E-03	9.48E-06	10,000
U-236	(a)						
U-238	(a)	6.28E-02	2.28E-04	10,000	6.28E-02	2.28E-04	10,000
200 West Area							
C-14	2,000	3.92E+02	0.00E+00	>10,000	3.92E+02	0.00E+00	>10,000
Tc-99	900						
Grouted Tc-99	900						
I-129	1	1.77E-03	2.01E-03	610	1.77E-03	2.01E-03	610
Grouted I-129	1						
U-233	(a)						
U-234	(a)	3.94E+01	0.00E+00	>10,000	3.94E+01	0.00E+00	>10,000
U-235	(a)	3.33E+00	0.00E+00	>10,000	3.33E+00	0.00E+00	>10,000
U-236	(a)						
U-238	(a)	2.82E+01	0.00E+00	>10,000	2.82E+01	0.00E+00	>10,000

Table G.38. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume		
		Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
1988-1995 LLW							
200 East Area							
C-14	2,000	5.11E+00	7.76E-03	10,000	5.11E+00	7.76E-03	10,000
Tc-99	900	1.39E-01	3.47E-01	260	1.39E-01	3.47E-01	260
Grouted Tc-99	900						
I-129	1	9.45E-05	2.36E-04	260	9.45E-05	2.36E-04	260
Grouted I-129	1						
U-233	(a)	2.09E-05	7.59E-08	10,000	2.09E-05	7.59E-08	10,000
U-234	(a)	1.85E-03	6.72E-06	10,000	1.85E-03	6.72E-06	10,000
U-235	(a)	4.29E-04	1.56E-06	10,000	4.29E-04	1.56E-06	10,000
U-236	(a)	1.85E-06	6.72E-09	10,000	1.85E-06	6.72E-09	10,000
U-238	(a)	1.93E-02	7.01E-05	10,000	1.93E-02	7.01E-05	10,000
200 West Area							
C-14	2,000	9.29E+00	0.00E+00	>10,000	9.29E+00	0.00E+00	>10,000
Tc-99	900	4.71E-01	5.32E-01	600	4.71E-01	5.32E-01	600
Grouted Tc-99	900						
I-129	1	3.06E-02	3.46E-02	600	3.06E-02	3.46E-02	600
Grouted I-129	1						
U-233	(a)	6.54E-02	0.00E+00	>10,000	6.54E-02	0.00E+00	>10,000
U-234	(a)	5.77E+00	0.00E+00	>10,000	5.77E+00	0.00E+00	>10,000
U-235	(a)	1.34E+00	0.00E+00	>10,000	1.34E+00	0.00E+00	>10,000
U-236	(a)	5.77E-03	0.00E+00	>10,000	5.77E-03	0.00E+00	>10,000
U-238	(a)	6.03E+01	0.00E+00	>10,000	6.03E+01	0.00E+00	>10,000
1996-2007 Cat 1 LLW							
200 East Area							
C-14	2,000	5.90E-01	4.35E-04	10,000	7.20E-01	5.31E-04	10,000
Tc-99	900	5.03E-02	7.89E-02	800	6.14E-02	9.62E-02	800
Grouted Tc-99	900						
I-129	1	2.03E-04	3.19E-04	800	2.48E-04	3.89E-04	800
Grouted I-129	1						
U-233	(a)	1.78E-02	6.46E-05	10,000	2.17E-02	7.88E-05	10,000
U-234	(a)	2.94E-02	1.07E-04	10,000	3.58E-02	1.30E-04	10,000
U-235	(a)	6.16E-03	2.24E-05	10,000	7.51E-03	2.73E-05	10,000
U-236	(a)	6.99E-04	2.54E-06	10,000	8.53E-04	3.10E-06	10,000
U-238	(a)	7.03E-02	2.55E-04	10,000	8.57E-02	3.11E-04	10,000
200 West Area	(a)						
C-14	2,000	1.53E+01	0.00E+00	>10,000	1.86E+01	0.00E+00	>10,000
Tc-99	900	1.29E+00	1.24E+00	1,420	1.57E+00	1.51E+00	1,420
Grouted Tc-99	900						
I-129	1	5.22E-03	5.03E-03	1,420	6.36E-03	6.13E-03	1,420
Grouted I-129	1						
U-233	(a)	4.55E-01	0.00E+00	>10,000	5.55E-01	0.00E+00	>10,000
U-234	(a)	7.53E-01	0.00E+00	>10,000	9.18E-01	0.00E+00	>10,000
U-235	(a)	1.57E-01	0.00E+00	>10,000	1.92E-01	0.00E+00	>10,000
U-236	(a)	1.79E-02	0.00E+00	>10,000	2.18E-02	0.00E+00	>10,000
U-238	(a)	1.80E+00	0.00E+00	>10,000	2.19E+00	0.00E+00	>10,000

Table G.38. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume		
		Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
1996-2007 Cat 3 LLW							
200 East Area							
C-14	2,000	2.21E-02	1.63E-05	10,000	2.30E-02	1.70E-05	10,000
Tc-99	900						
Grouted Tc-99	900	1.25E+02	1.23E+00	800	1.25E+02	1.23E+00	860
I-129	1	8.62E-08	1.35E-07	800	8.98E-08	1.41E-07	800
Grouted I-129	1						
U-233	(a)	1.48E-02	3.26E-05	10,000	1.54E-02	3.40E-05	10,000
U-234	(a)	1.86E+01	4.11E-02	10,000	1.94E+01	4.28E-02	10,000
U-235	(a)	5.34E-01	1.18E-03	10,000	5.56E-01	1.23E-03	10,000
U-236	(a)	2.41E+00	5.31E-03	10,000	2.51E+00	5.53E-03	10,000
U-238	(a)	3.00E+01	6.60E-02	10,000	3.12E+01	6.88E-02	10,000
200 West Area							
C-14	2,000	5.67E-01	0.00E+00	>10,000	5.91E-01	0.00E+00	>10,000
Tc-99	900						
Grouted Tc-99	900	3.18E+03	2.04E+01	1,710	3.18E+03	2.04E+01	1,710
I-129	1	2.21E-06	2.13E-06	1,420	2.30E-06	2.22E-06	1,420
1996-2007 Cat 3 LLW (contd)							
Grouted I-129	1	5.00E+00	1.01E-02	1,710	5.00E+00	1.01E-02	1,710
U-233	(a)	3.79E-01	0.00E+00	>10,000	3.95E-01	0.00E+00	>10,000
U-234	(a)	4.78E+02	0.00E+00	>10,000	4.98E+02	0.00E+00	>10,000
U-235	(a)	1.36E+01	0.00E+00	>10,000	1.42E+01	0.00E+00	>10,000
U-236	(a)	6.17E+01	0.00E+00	>10,000	6.43E+01	0.00E+00	>10,000
U-238	(a)				7.99E+02	0.00E+00	>10,000
1996-2007 MLLW							
200 East Area							
C-14	2,000						
Tc-99	900						
Grouted Tc-99	900						
I-129	1						
Grouted I-129	1						
U-233	(a)						
U-234	(a)						
U-235	(a)						
U-236	(a)						
U-238	(a)						
200 West Area							
C-14	2,000	1.69E-01	0.00E+00	>10,000	1.69E-01	0.00E+00	>10,000
Tc-99	900	9.65E-01	9.30E-01	1,420	9.63E-01	9.28E-01	1,420
Grouted Tc-99	900						
I-129	1	4.04E-03	3.89E-03	1,420	4.03E-03	3.89E-03	1,420
Grouted I-129	1						
U-233	(a)	5.25E-04	0.00E+00	>10,000	5.24E-04	0.00E+00	>10,000
U-234	(a)	6.29E-01	0.00E+00	>10,000	6.28E-01	0.00E+00	>10,000
U-235	(a)	9.99E-03	0.00E+00	>10,000	9.97E-03	0.00E+00	>10,000
U-236	(a)	1.17E-02	0.00E+00	>10,000	1.17E-02	0.00E+00	>10,000
U-238	(a)	1.56E-01	0.00E+00	>10,000	1.56E-01	0.00E+00	>10,000

Table G.38. (contd)

Constituent	Benchmark MCL (pCi/L)	Hanford Only Volume			Lower Bound Volume		
		Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum Concentration Within 10,000 yrs (pCi/L)	Approx. Peak Arrival Time (yrs)
Grouted 1996-2007 MLLW							
200 East Area							
C-14	2,000						
Tc-99	900						
Grouted Tc-99	900						
I-129	1						
Grouted I-129	1						
U-233	(a)						
U-234	(a)						
U-235	(a)						
U-236	(a)						
U-238	(a)						
200 West Area							
C-14	2,000	5.85E-01	0.00E+00	>10,000	5.84E-01	0.00E+00	>10,000
Tc-99	900						
Grouted 1996-2007 MLLW (contd)							
Grouted Tc-99	900	3.35E+00	2.29E-02	1,620	3.34E+00	2.29E-02	1,620
I-129	1						
Grouted I-129	1	1.40E-02	3.03E-05	1,620	1.40E-02	3.02E-05	1,620
U-233	(a)	1.82E-03	0.00E+00	>10,000	1.82E-03	0.00E+00	>10,000
U-234	(a)	2.18E+00	0.00E+00	>10,000	2.18E+00	0.00E+00	>10,000
U-235	(a)	3.46E-02	0.00E+00	>10,000	3.45E-02	0.00E+00	>10,000
U-236	(a)	4.07E-02	0.00E+00	>10,000	4.06E-02	0.00E+00	>10,000
U-238	(a)	5.41E-01	0.00E+00	>10,000	5.40E-01	0.00E+00	>10,000

(a) The benchmark MCL for uranium is 30 µg/L expressed as total uranium. To convert isotope specific concentrations from pCi/L to µg/L, use following conversion factors:

- Uranium-233 - 1.05E-04
- Uranium-234 - 1.62E-04
- Uranium-235 - 4.66E-01
- Uranium-236 - 1.58E-02
- Uranium-238 - 3.00E+00.

Table G.39. Predicted Peak River Flux of Key Constituents at a Line of Analysis Near the Columbia River, No Action Alternative

Constituent	Hanford Only Volume			Lower Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Pre-1970 LLW						
200 East Area						
C-14						
Tc-99	5.16E-01	9.81E-03	290	5.16E-01	9.81E-03	290
Grouted Tc-99						
I-129	1.24E-03	2.36E-05	290	1.24E-03	2.36E-05	290
Grouted I-129						
U-233	1.03E+01	1.54E-04	10,000	1.03E+01	1.54E-04	10,000
U-234	3.68E-01	5.50E-06	10,000	3.68E-01	5.50E-06	10,000
U-235	1.12E-02	1.67E-07	10,000	1.12E-02	1.67E-07	10,000
U-236	7.53E-03	1.13E-07	10,000	7.53E-03	1.13E-07	10,000
U-238	2.69E-01	4.02E-06	10,000	2.69E-01	4.02E-06	10,000
200 West Area						
C-14						
Tc-99	1.30E-01	1.68E-03	600	1.30E-01	1.68E-03	600
Grouted Tc-99						
I-129	1.70E-04	2.20E-06	600	1.70E-04	2.20E-06	600
Grouted I-129						
U-233						
U-234	1.45E+00	0.00E+00	>10,000	1.45E+00	0.00E+00	>10,000
U-235	4.38E-02	0.00E+00	>10,000	4.38E-02	0.00E+00	>10,000
U-236	2.95E-02	0.00E+00	>10,000	2.95E-02	0.00E+00	>10,000
U-238	1.06E+00	0.00E+00	>10,000	1.06E+00	0.00E+00	>10,000
1970-1987 LLW						
200 East Area						
C-14	2.15E+02	2.55E-03	10,000	2.15E+02	2.55E-03	10,000
Tc-99						
Grouted Tc-99						
I-129	1.87E-02	3.54E-04	290	1.87E-02	3.54E-04	290
Grouted I-129						
U-233						
U-234	3.08E-02	4.71E-07	10,000	3.08E-02	4.71E-07	10,000
U-235	2.61E-03	3.99E-08	10,000	2.61E-03	3.99E-08	10,000
U-236						
U-238	6.28E-02	9.60E-07	10,000	6.28E-02	9.60E-07	10,000
200 West Area						
C-14	3.92E+02	0.00E+00	>10,000	3.92E+02	0.00E+00	>10,000
Tc-99						
Grouted Tc-99						
I-129	1.77E-03	2.07E-05	690	1.77E-03	2.07E-05	690
Grouted I-129						
U-233						
U-234	3.94E+01	0.00E+00	>10,000	3.94E+01	0.00E+00	>10,000
U-235	3.33E+00	0.00E+00	>10,000	3.33E+00	0.00E+00	>10,000
U-236						
U-238	2.82E+01	0.00E+00	>10,000	2.82E+01	0.00E+00	>10,000

Table G.39. (contd)

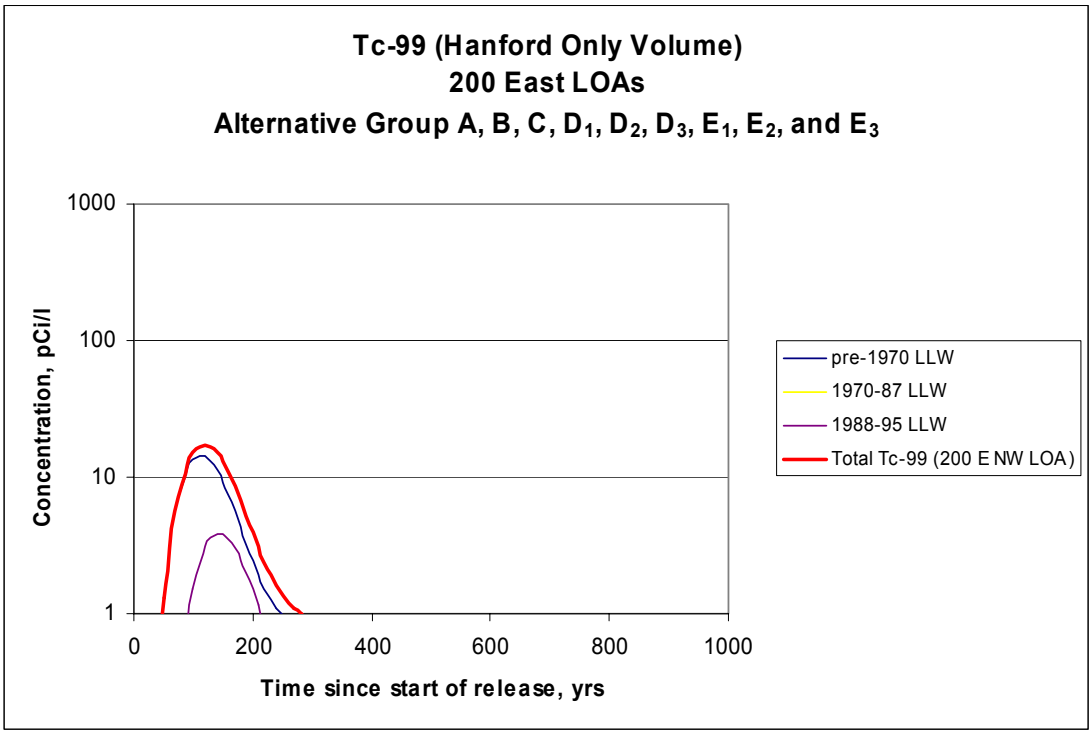
Constituent	Hanford Only Volume			Lower Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
1988-1995 LLW						
200 East Area						
C-14	5.11E+00	5.08E-05	10,000	5.11E+00	5.08E-05	10,000
Tc-99	1.39E-01	2.63E-03	290	1.39E-01	2.63E-03	290
Grouted Tc-99						
I-129	9.45E-05	1.79E-06	290	9.45E-05	1.79E-06	290
Grouted I-129						
U-233	2.09E-05	4.71E-11	10,000	2.09E-05	4.71E-11	10,000
U-234	1.85E-03	4.17E-09	10,000	1.85E-03	4.17E-09	10,000
U-235	4.29E-04	9.67E-10	10,000	4.29E-04	9.67E-10	10,000
U-236	1.85E-06	4.17E-12	10,000	1.85E-06	4.17E-12	10,000
U-238	1.93E-02	4.35E-08	10,000	1.93E-02	4.35E-08	10,000
200 West Area						
C-14	9.29E+00	0.00E+00	>10,000	9.29E+00	0.00E+00	>10,000
Tc-99	4.71E-01	5.51E-03	670	4.71E-01	5.51E-03	670
Grouted Tc-99						
I-129	3.06E-02	3.58E-04	670	3.06E-02	3.58E-04	670
Grouted I-129						
U-233	6.54E-02	0.00E+00	>10,000	6.54E-02	0.00E+00	>10,000
U-234	5.77E+00	0.00E+00	>10,000	5.77E+00	0.00E+00	>10,000
U-235	1.34E+00	0.00E+00	>10,000	1.34E+00	0.00E+00	>10,000
U-236	5.77E-03	0.00E+00	>10,000	5.77E-03	0.00E+00	>10,000
U-238	6.03E+01	0.00E+00	>10,000	6.03E+01	0.00E+00	>10,000
1996-2007 Cat 1 LLW						
200 East Area						
C-14	5.90E-01	2.34E-06	10,000	7.20E-01	2.86E-06	10,000
Tc-99	5.03E-02	7.31E-04	850	6.14E-02	8.92E-04	850
Grouted Tc-99						
I-129	2.03E-04	2.95E-06	850	2.48E-04	3.60E-06	850
Grouted I-129						
U-233	1.78E-02	4.01E-08	10,000	2.17E-02	4.89E-08	10,000
U-234	2.94E-02	6.62E-08	10,000	3.58E-02	8.07E-08	10,000
U-235	6.16E-03	1.39E-08	10,000	7.51E-03	1.69E-08	10,000
U-236	6.99E-04	1.58E-09	10,000	8.53E-04	1.92E-09	10,000
U-238	7.03E-02	1.58E-07	10,000	8.57E-02	1.93E-07	10,000
200 West Area						
C-14	1.53E+01	0.00E+00	>10,000	1.86E+01	0.00E+00	>10,000
Tc-99	1.29E+00	1.31E-02	1,610	1.57E+00	1.60E-02	1,610
Grouted Tc-99						
I-129	5.22E-03	5.32E-05	1,610	6.36E-03	6.49E-05	1,610
Grouted I-129						
U-233	4.55E-01	0.00E+00	>10,000	5.55E-01	0.00E+00	>10,000
U-234	7.53E-01	0.00E+00	>10,000	9.18E-01	0.00E+00	>10,000
U-235	1.57E-01	0.00E+00	>10,000	1.92E-01	0.00E+00	>10,000
U-236	1.79E-02	0.00E+00	>10,000	2.18E-02	0.00E+00	>10,000
U-238	1.80E+00	0.00E+00	>10,000	2.19E+00	0.00E+00	>10,000

Table G.39. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
1996-2007 Cat 3 LLW						
200 East Area						
C-14	2.21E-02	8.77E-08	10,000	2.30E-02	9.13E-08	10,000
Tc-99						
Grouted Tc-99	1.25E+02	1.16E-02	970	1.25E+02	1.16E-02	970
I-129	8.62E-08	1.25E-09	850	8.98E-08	1.30E-09	850
Grouted I-129						
U-233	1.48E-02	1.60E-08	10,000	1.54E-02	6.65E-11	10,000
U-234	1.86E+01	2.01E-05	10,000	1.94E+01	8.37E-08	10,000
U-235	5.34E-01	5.77E-07	10,000	5.56E-01	2.40E-09	10,000
U-236	2.41E+00	2.60E-06	10,000	2.51E+00	1.08E-08	10,000
U-238	3.00E+01	3.24E-05	10,000	3.12E+01	1.35E-07	10,000
200 West Area						
C-14	5.67E-01	0.00E+00	>10,000	5.91E-01	0.00E+00	>10,000
Tc-99						
Grouted Tc-99	3.18E+03	2.65E-01	1,840	3.18E+03	2.65E-01	1,840
I-129	2.21E-06	2.25E-08	1,610	2.30E-06	2.35E-08	1,610
Grouted I-129	5.00E+00	1.32E-04	1,840	5.00E+00	1.32E-04	1,840
U-233	3.79E-01	0.00E+00	>10,000	3.95E-01	0.00E+00	>10,000
U-234	4.78E+02	0.00E+00	>10,000	4.98E+02	0.00E+00	>10,000
U-235	1.36E+01	0.00E+00	>10,000	1.42E+01	0.00E+00	>10,000
U-236	6.17E+01	0.00E+00	>10,000	6.43E+01	0.00E+00	>10,000
U-238	7.67E+02	0.00E+00	>10,000	7.99E+02	0.00E+00	>10,000
1996-2007 MLLW						
200 East Area						
C-14						
Tc-99						
Grouted Tc-99						
I-129						
Grouted I-129						
U-233						
U-234						
U-235						
U-236						
U-238						
200 West Area						
C-14	1.69E-01	0.00E+00	>10,000	1.69E-01	0.00E+00	>10,000
Tc-99	9.65E-01	9.85E-03	1,610	9.63E-01	9.83E-03	1,610
Grouted Tc-99						
I-129	4.04E-03	4.12E-05	1,610	4.03E-03	4.11E-05	1,610
Grouted I-129						
U-233	5.25E-04	0.00E+00	>10,000	5.24E-04	0.00E+00	>10,000
U-234	6.29E-01	0.00E+00	>10,000	6.28E-01	0.00E+00	>10,000
U-235	9.99E-03	0.00E+00	>10,000	9.97E-03	0.00E+00	>10,000
U-236	1.17E-02	0.00E+00	>10,000	1.17E-02	0.00E+00	>10,000
U-238	1.56E-01	0.00E+00	>10,000	1.56E-01	0.00E+00	>10,000

Table G.39. (contd)

Constituent	Hanford Only Volume			Lower Bound Volume		
	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)	Inventory (Ci)	Maximum River Flux Within 10,000 yrs (Ci/10 yrs)	Approx. Peak Arrival Time (yrs)
Grouted 1996-2007 MLLW						
200 East Area						
C-14						
Tc-99						
Grouted Tc-99						
I-129						
Grouted I-129						
U-233						
U-234						
U-235						
U-236						
U-238						
200 West Area						
C-14	5.85E-01	0.00E+00	>10,000	5.84E-01	0.00E+00	>10,000
Tc-99						
Grouted Tc-99	3.35E+00	2.79E-04	1,840	3.34E+00	2.79E-04	1,840
I-129						
Grouted I-129	1.40E-02	3.03E-05	1,620	1.40E-02	3.02E-05	1,620
U-233	1.82E-03	0.00E+00	>10,000	1.82E-03	0.00E+00	>10,000
U-234	2.18E+00	0.00E+00	>10,000	2.18E+00	0.00E+00	>10,000
U-235	3.46E-02	0.00E+00	>10,000	3.45E-02	0.00E+00	>10,000
U-236	4.07E-02	0.00E+00	>10,000	4.06E-02	0.00E+00	>10,000
U-238	5.41E-01	0.00E+00	>10,000	5.40E-01	0.00E+00	>10,000



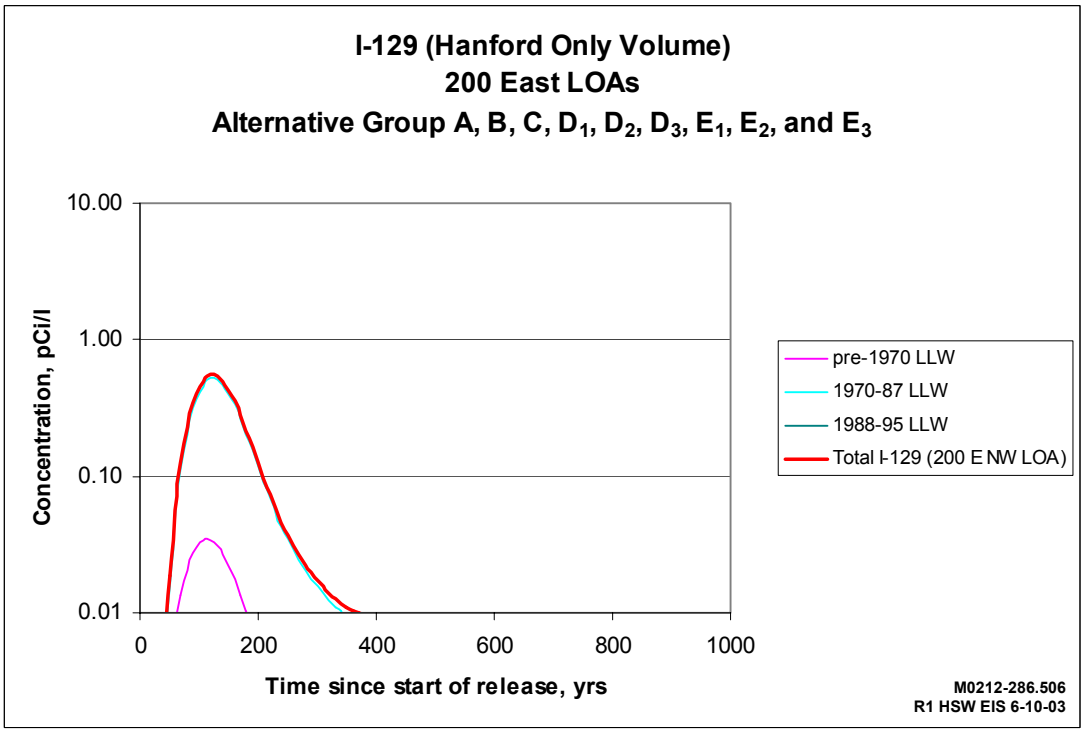


Figure G.18. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (All Action Alternatives – Wastes Disposed of Before 1996)

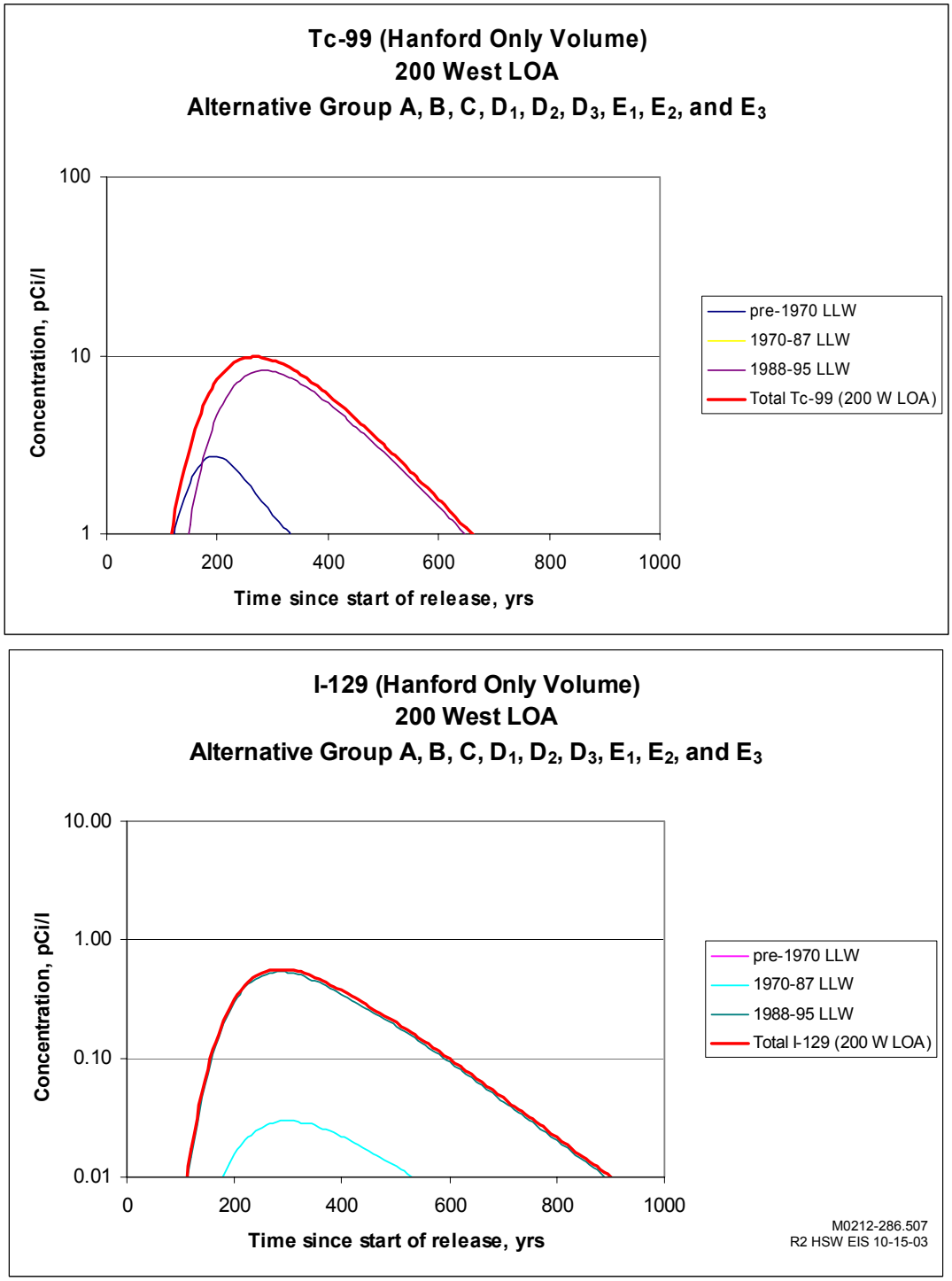
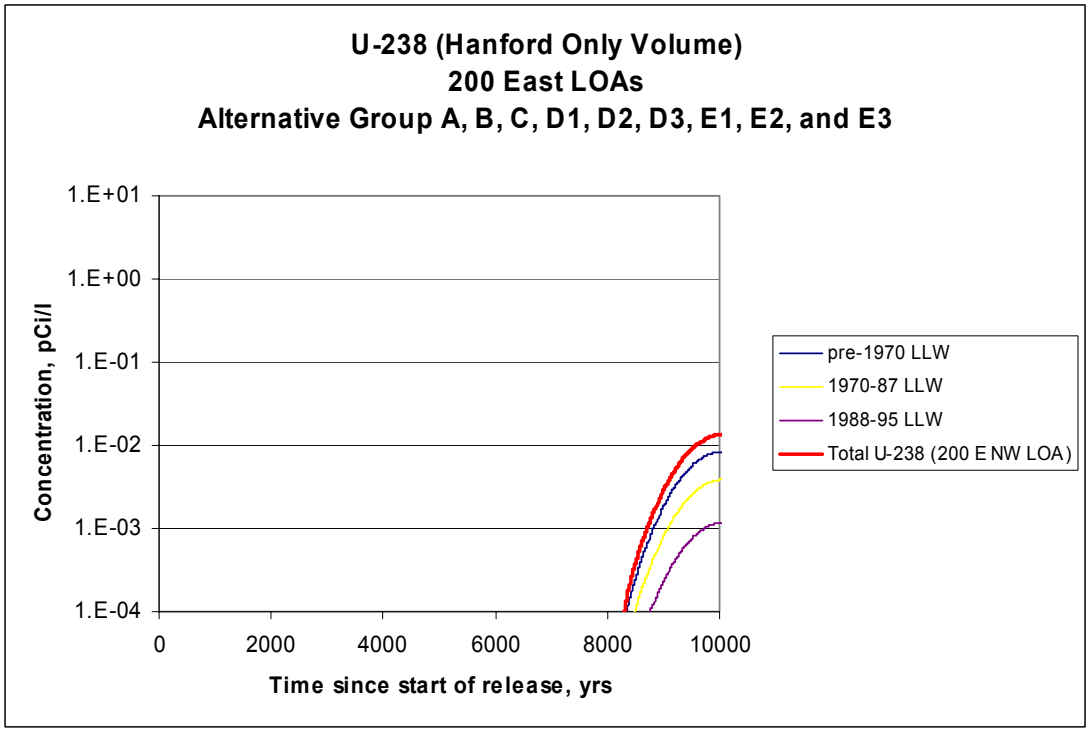


Figure G.19. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (All Action Alternatives – Wastes Disposed of Before 1996)



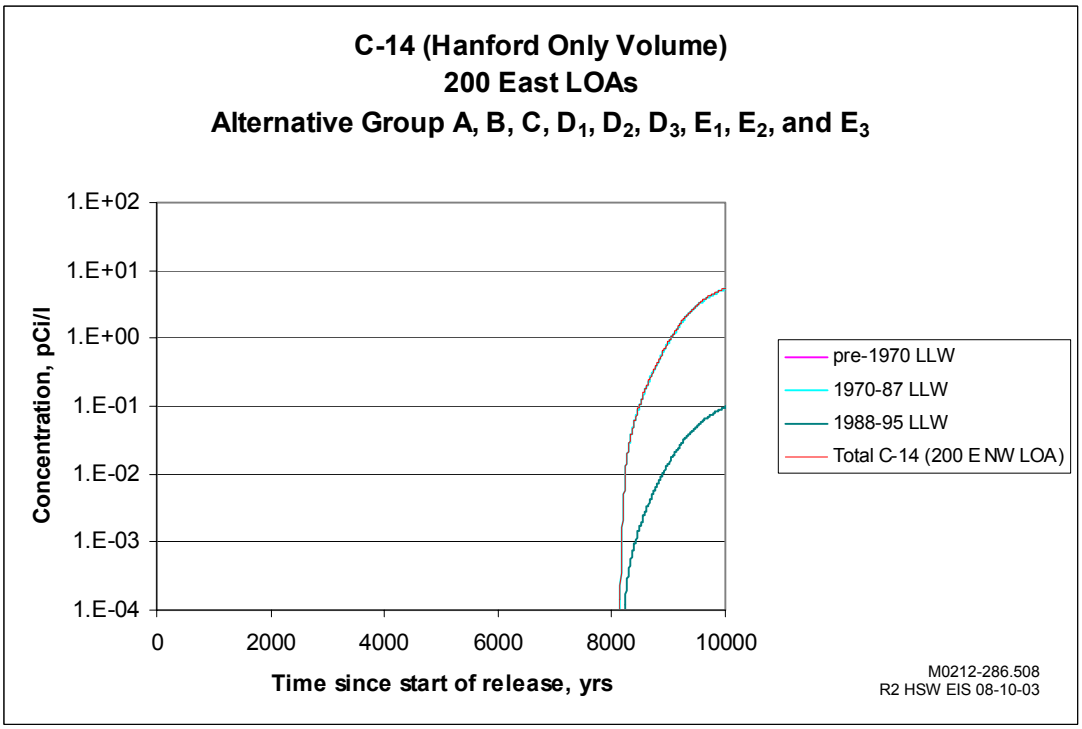
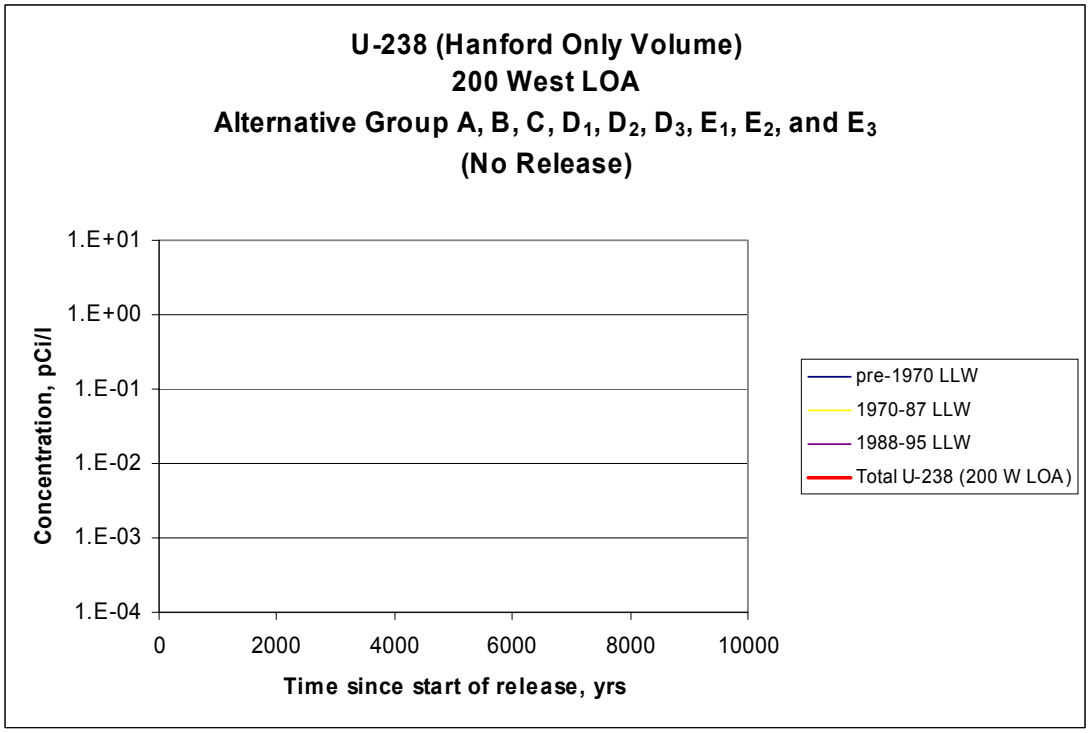


Figure G.20. U-238 and C-14 Concentration Profiles at the 1-km Line of Analysis (200 East) (All Action Alternatives – Wastes Disposed of Before 1996)



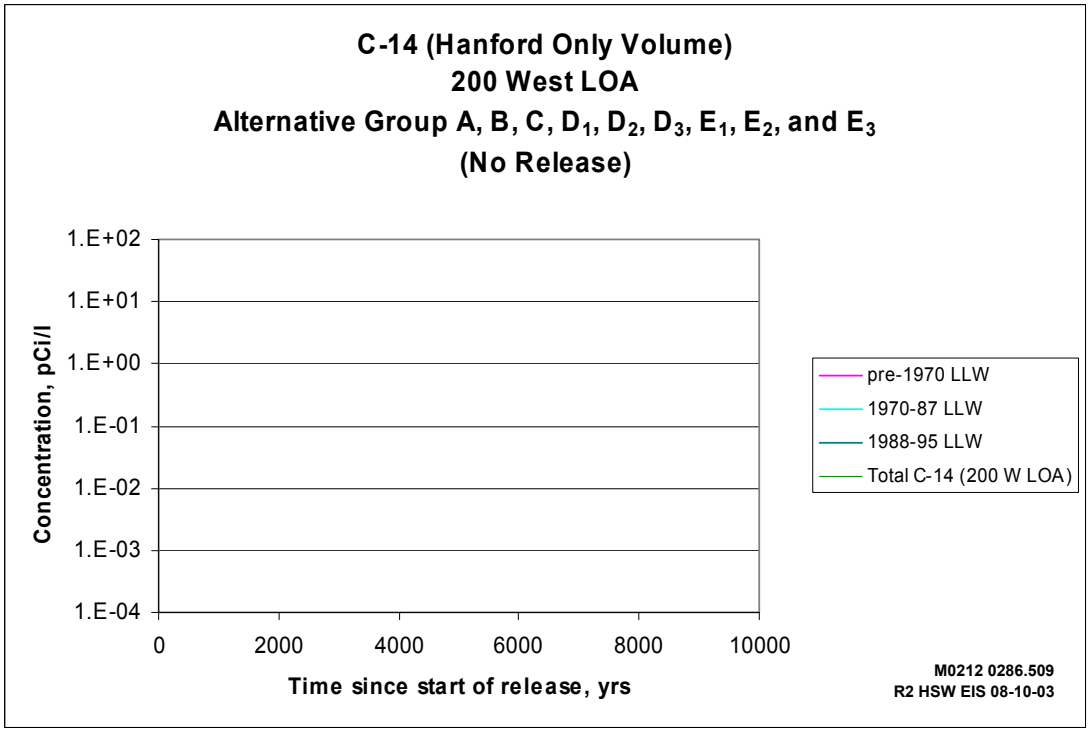
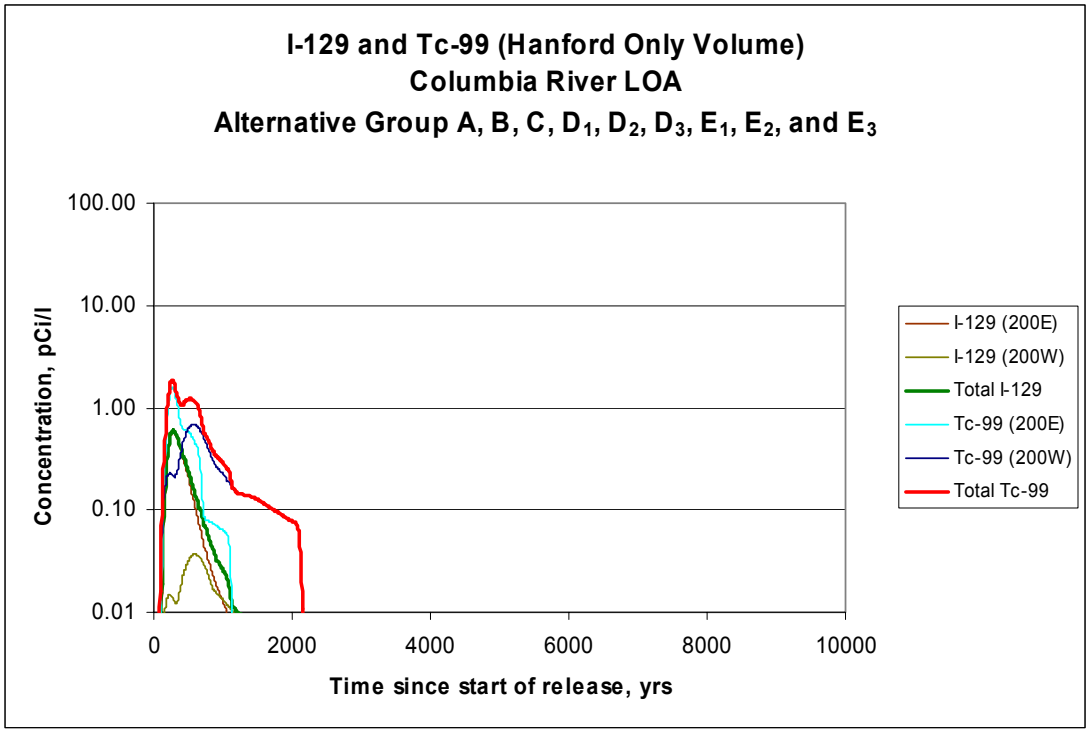


Figure G.21. U-238 and C-14 Concentration Profiles at the 1-km Line of Analysis (200 West) (All Action Alternatives – Wastes Disposed of Before 1996)



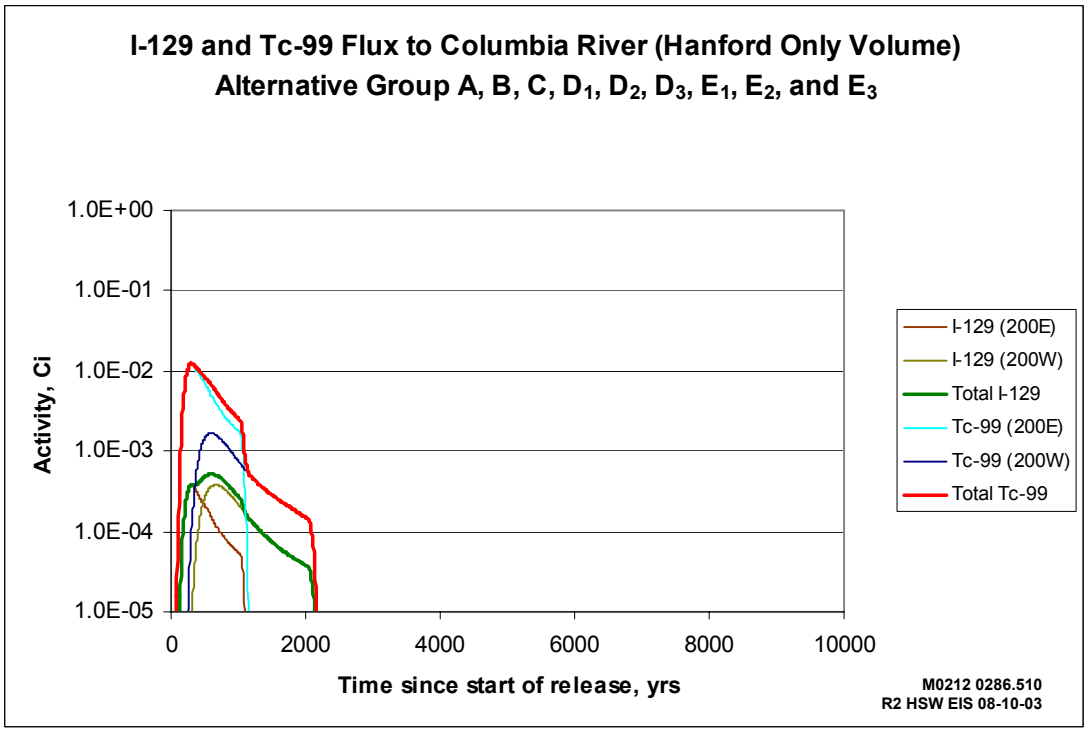
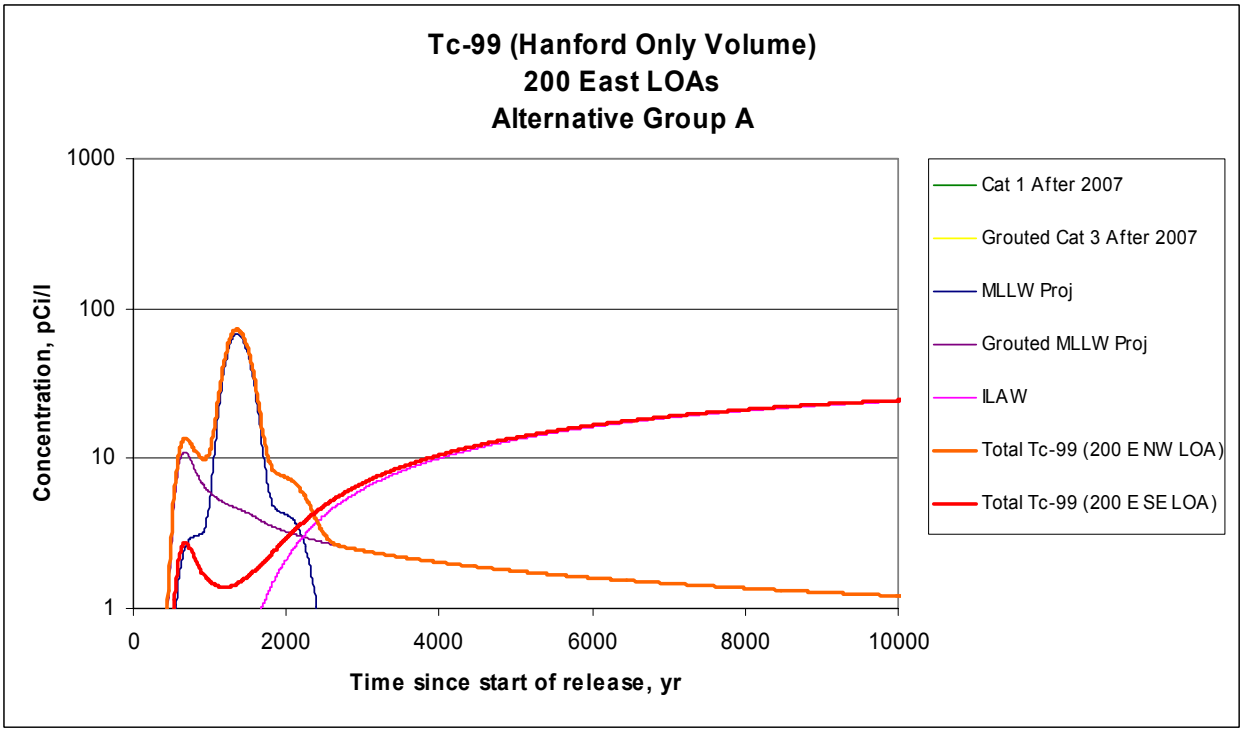


Figure G.22. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (All Action Alternatives – Wastes Disposed of Before 1996)



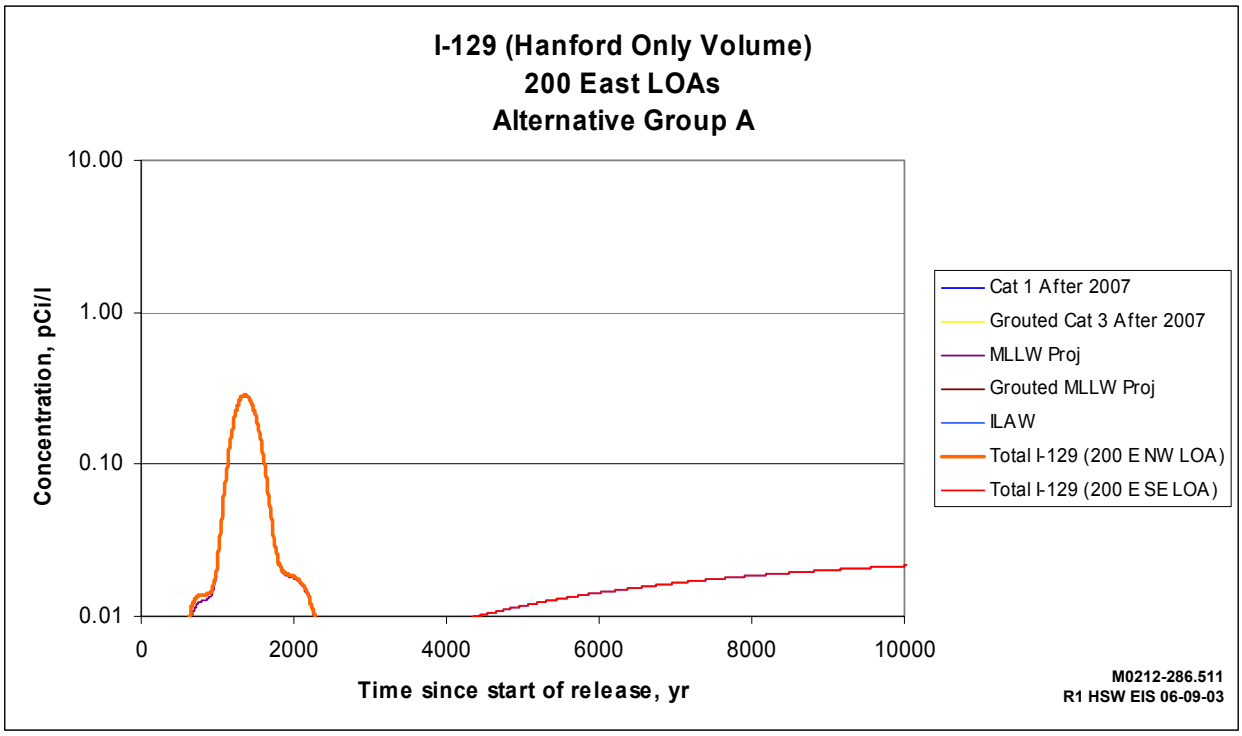
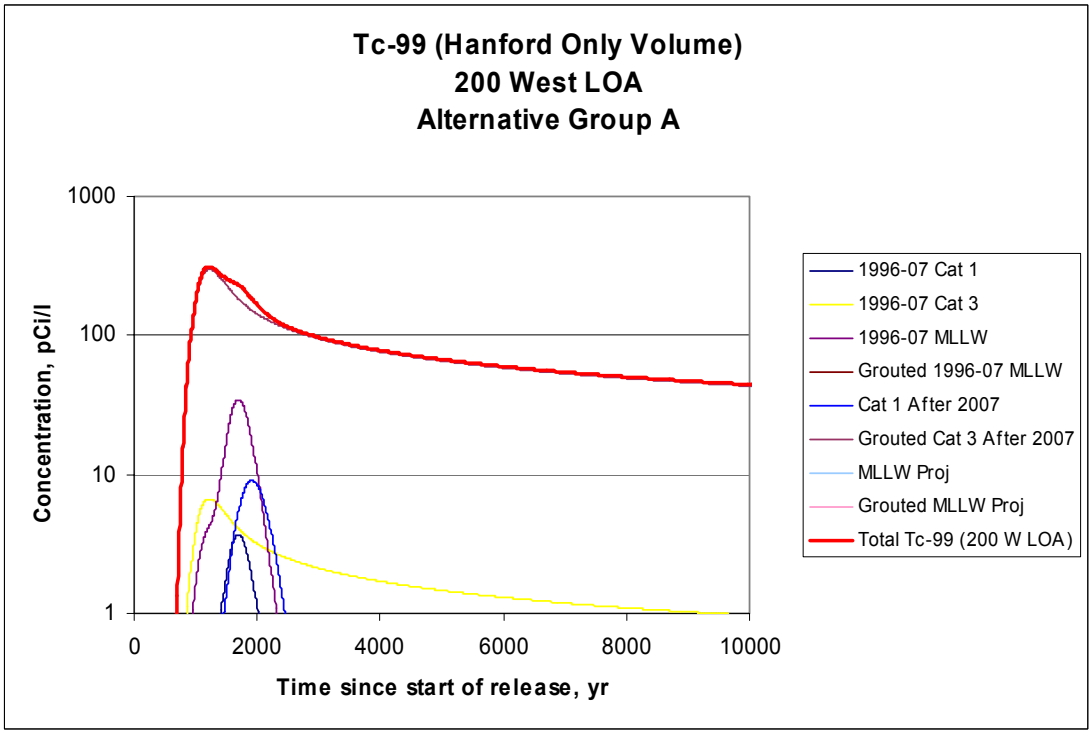


Figure G.23. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group A – Hanford Only Wastes Disposed of After 1995)



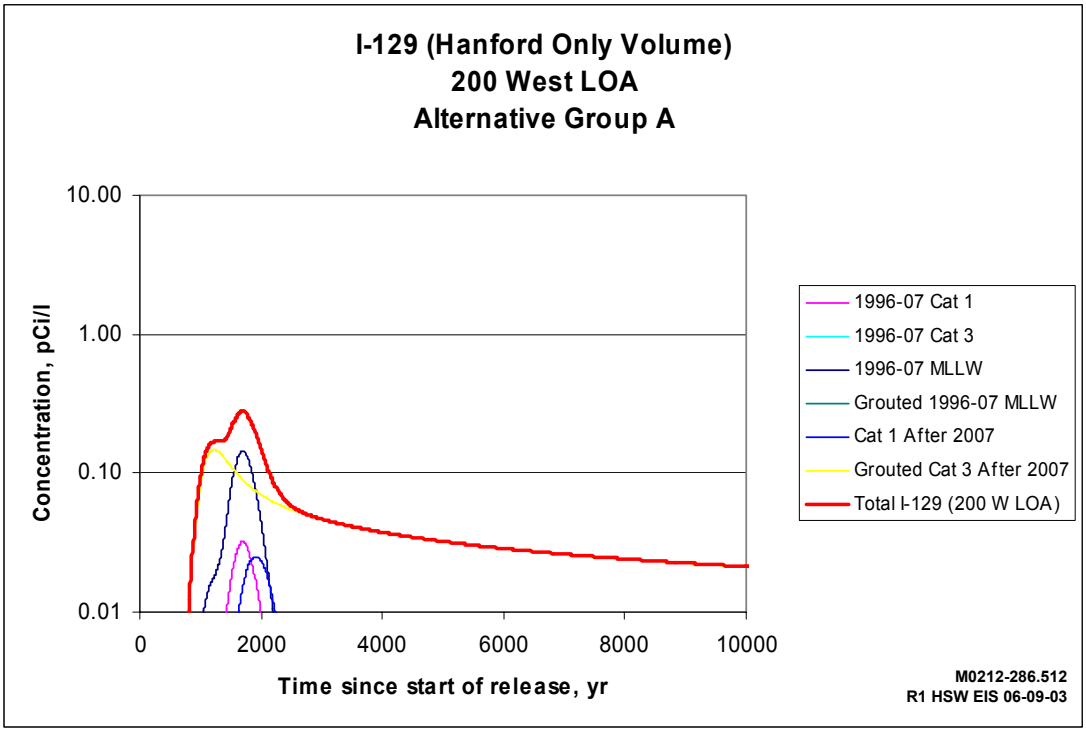
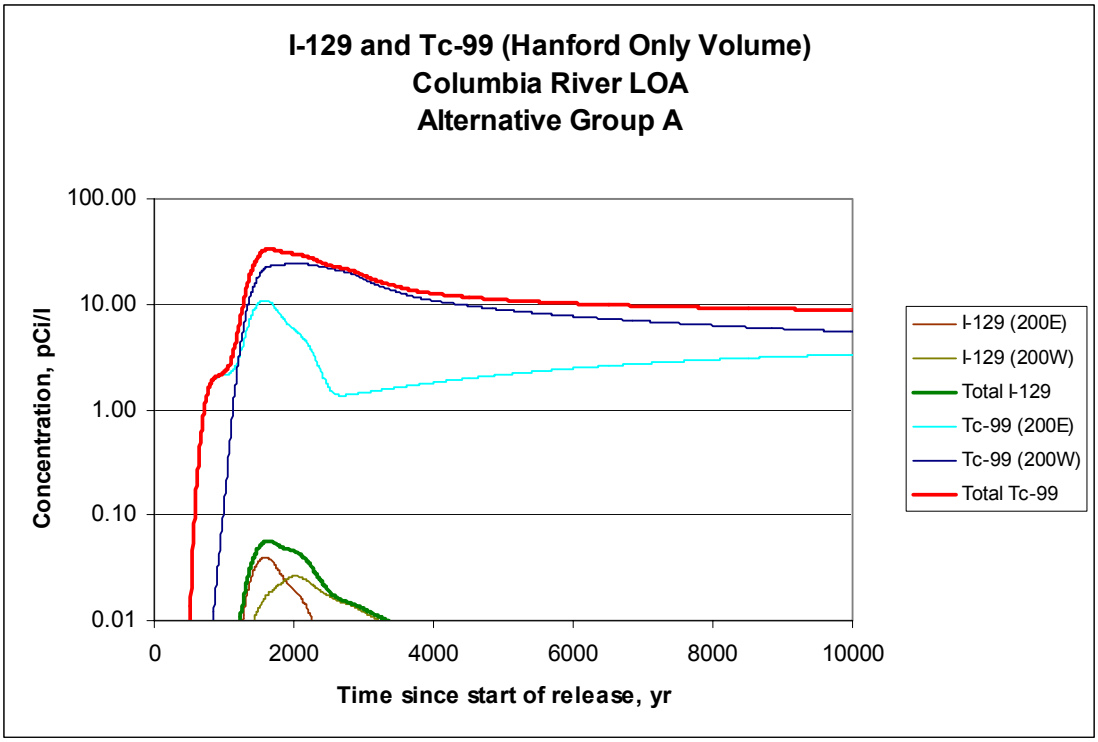


Figure G.24. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group A – Hanford Only Wastes Disposed of After 1995)



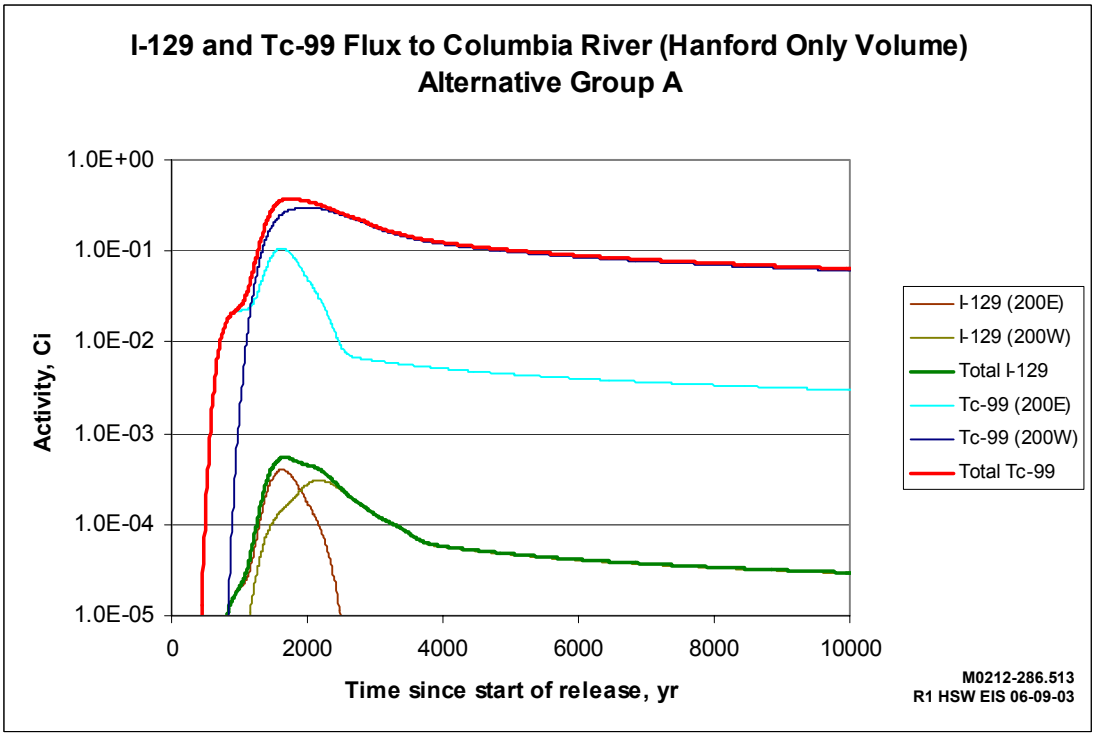
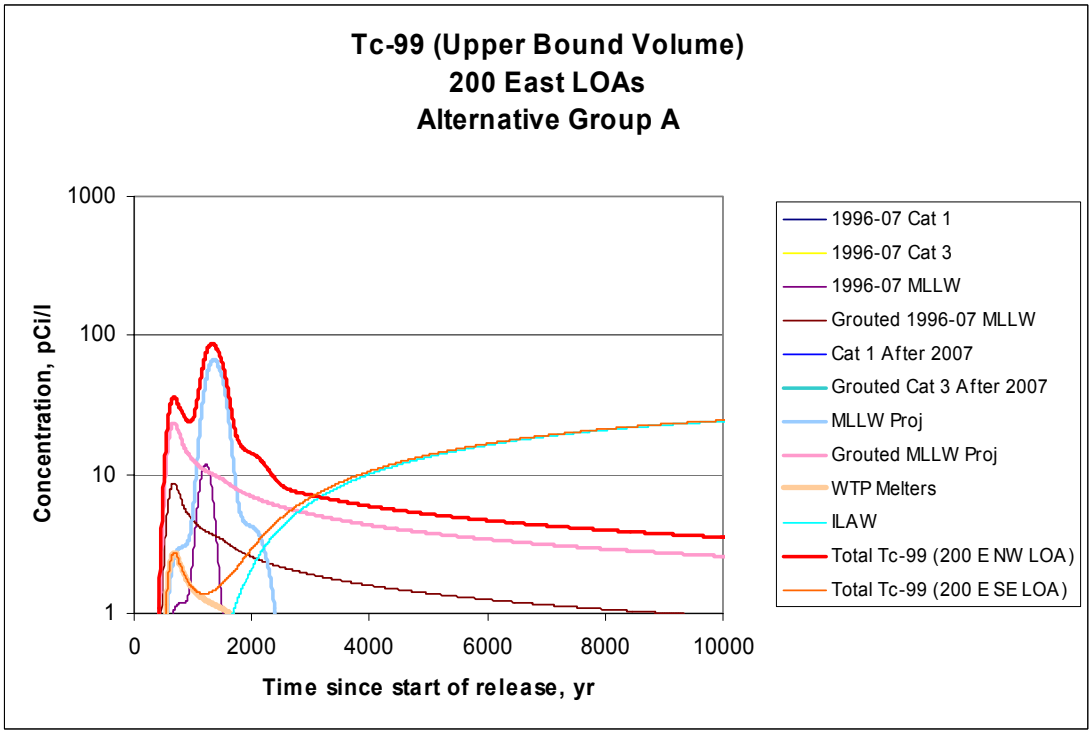


Figure G.25. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group A – Hanford Only Wastes Disposed of After 1995)



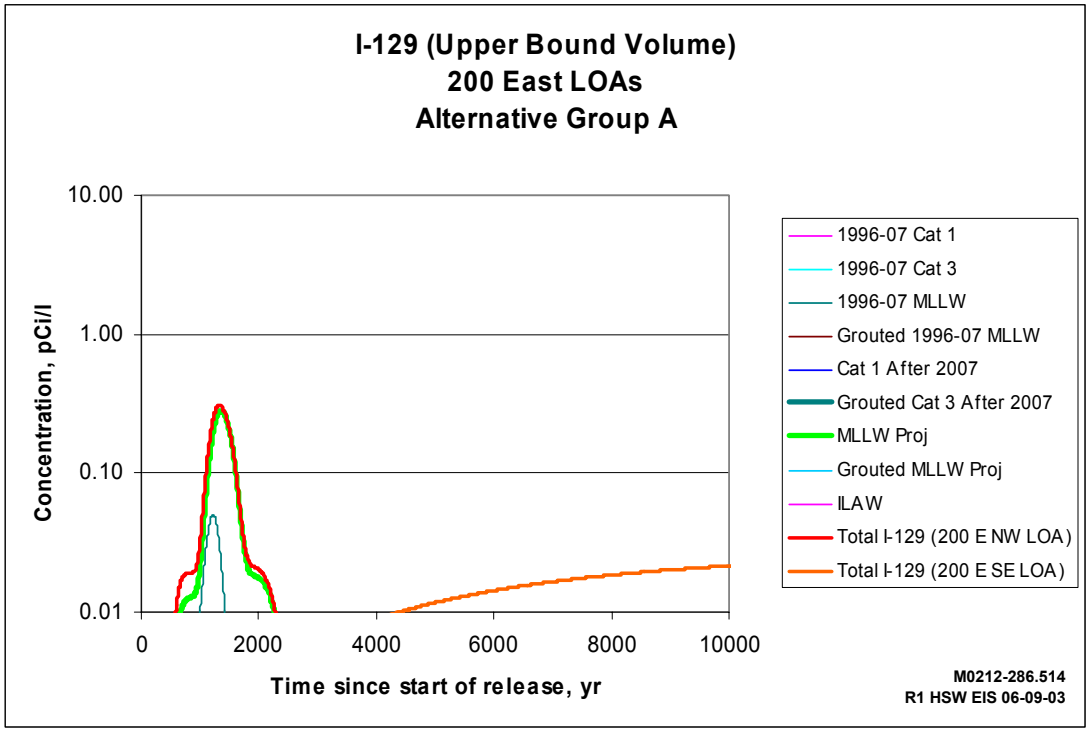
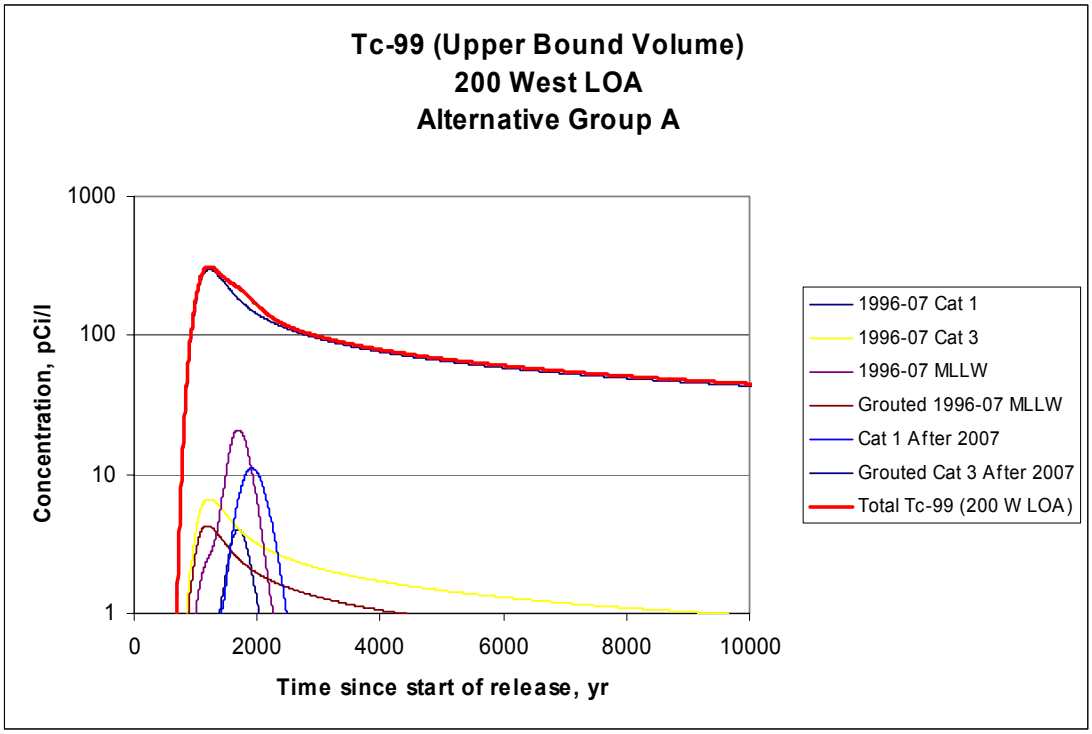


Figure G.26. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group A – Upper Bound Volume Wastes Disposed of After 1995)



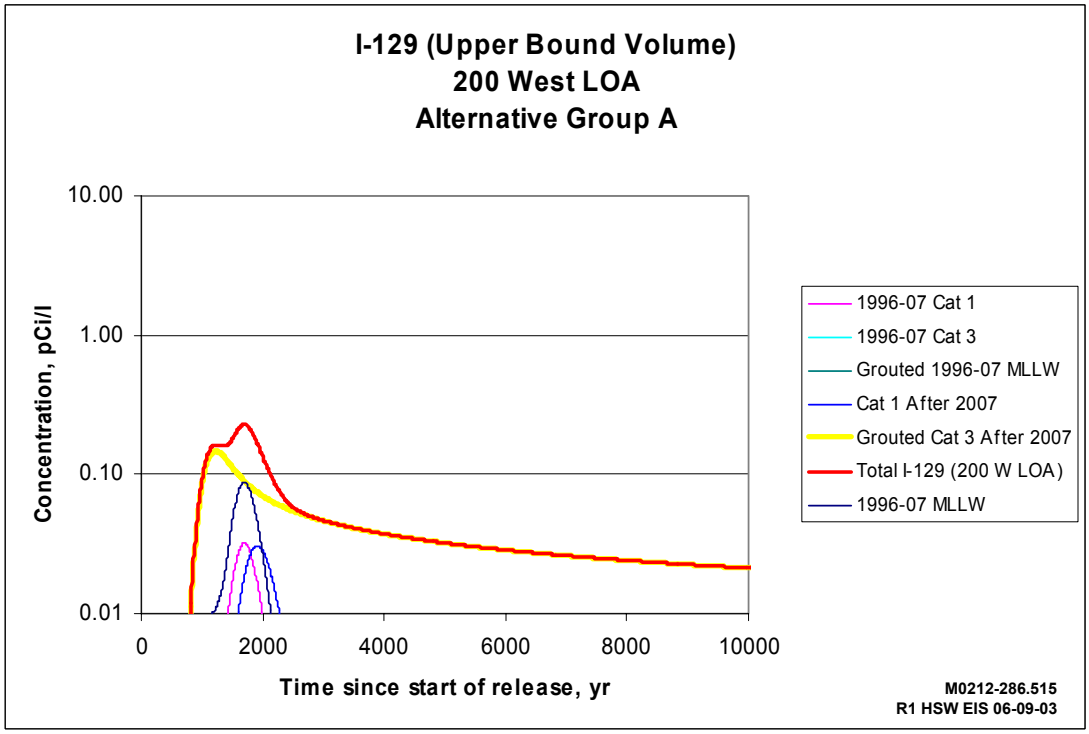
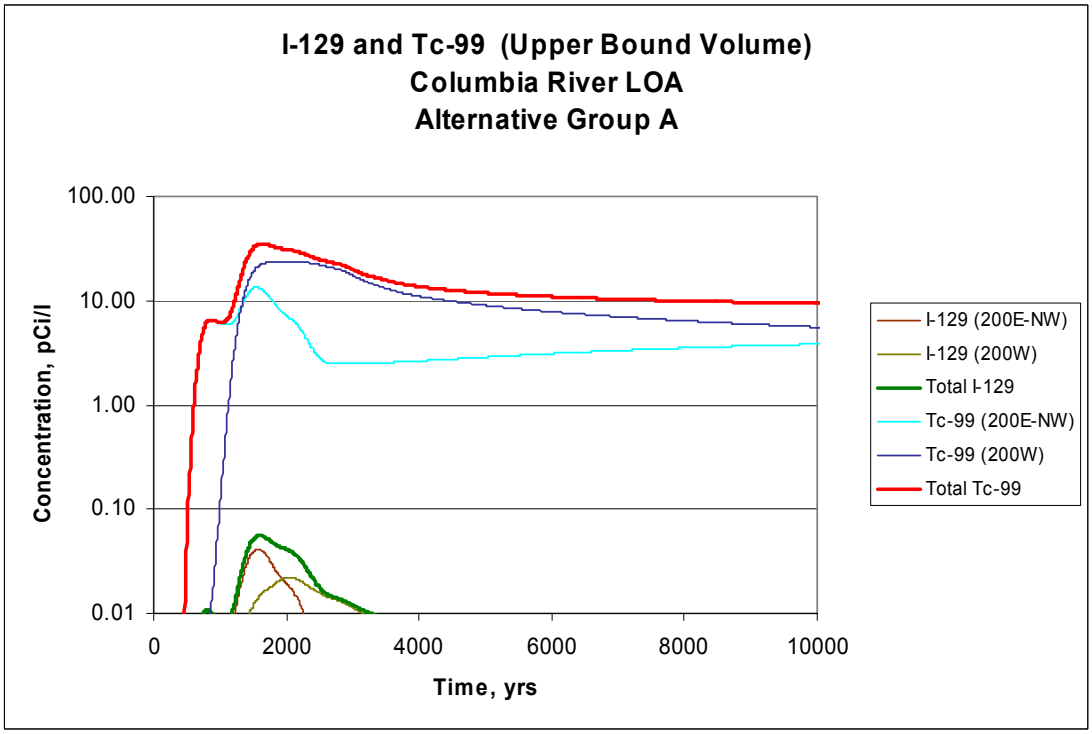


Figure G.27. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group A – Upper Bound Volume Wastes Disposed of After 1995)



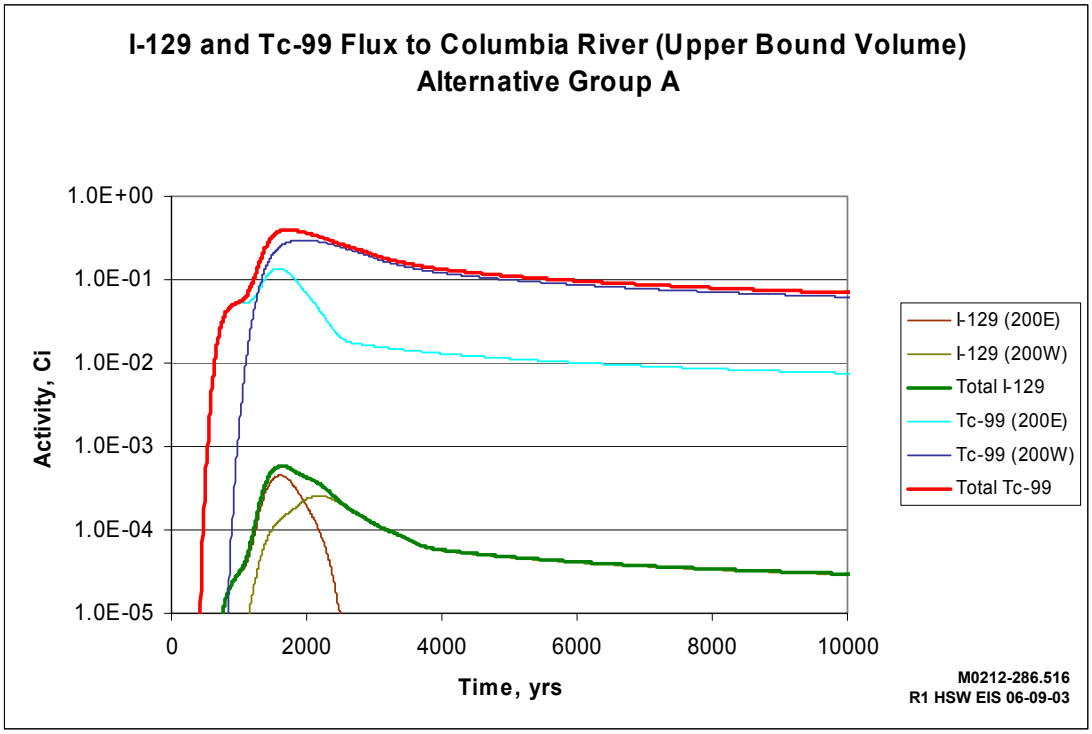
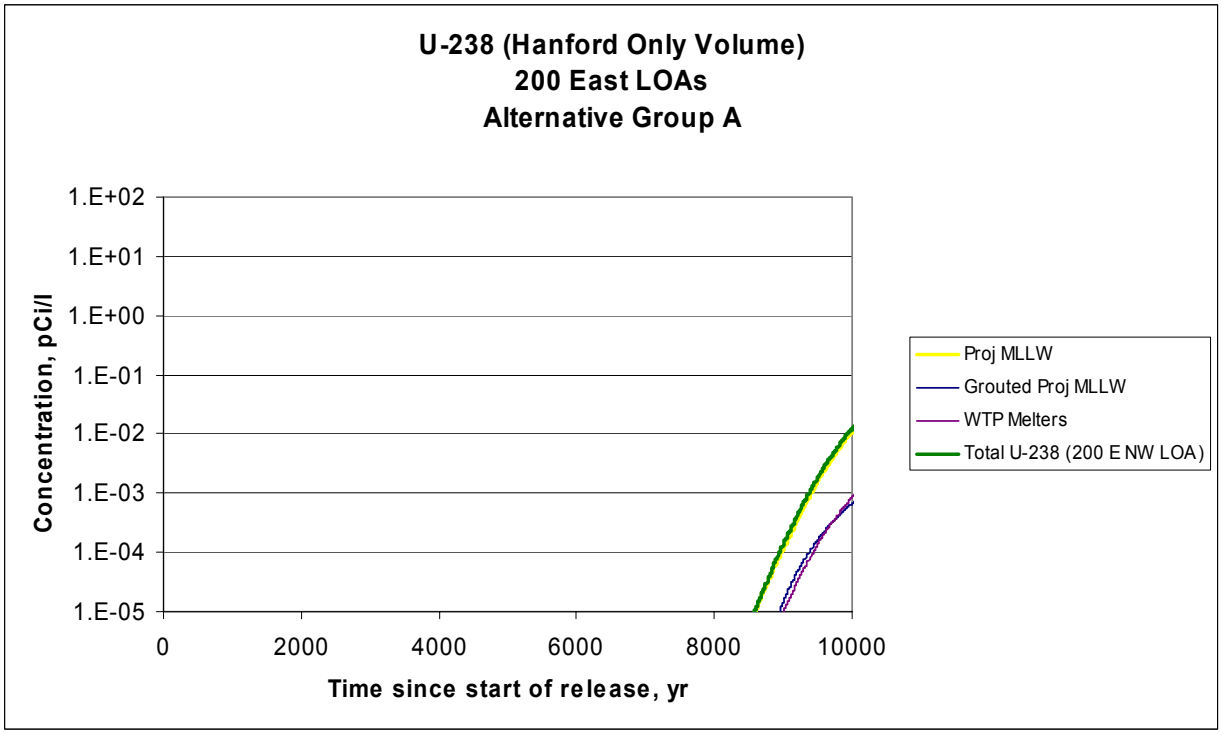


Figure G.28. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group A – Upper Bound Volume Wastes Disposed of After 1995)



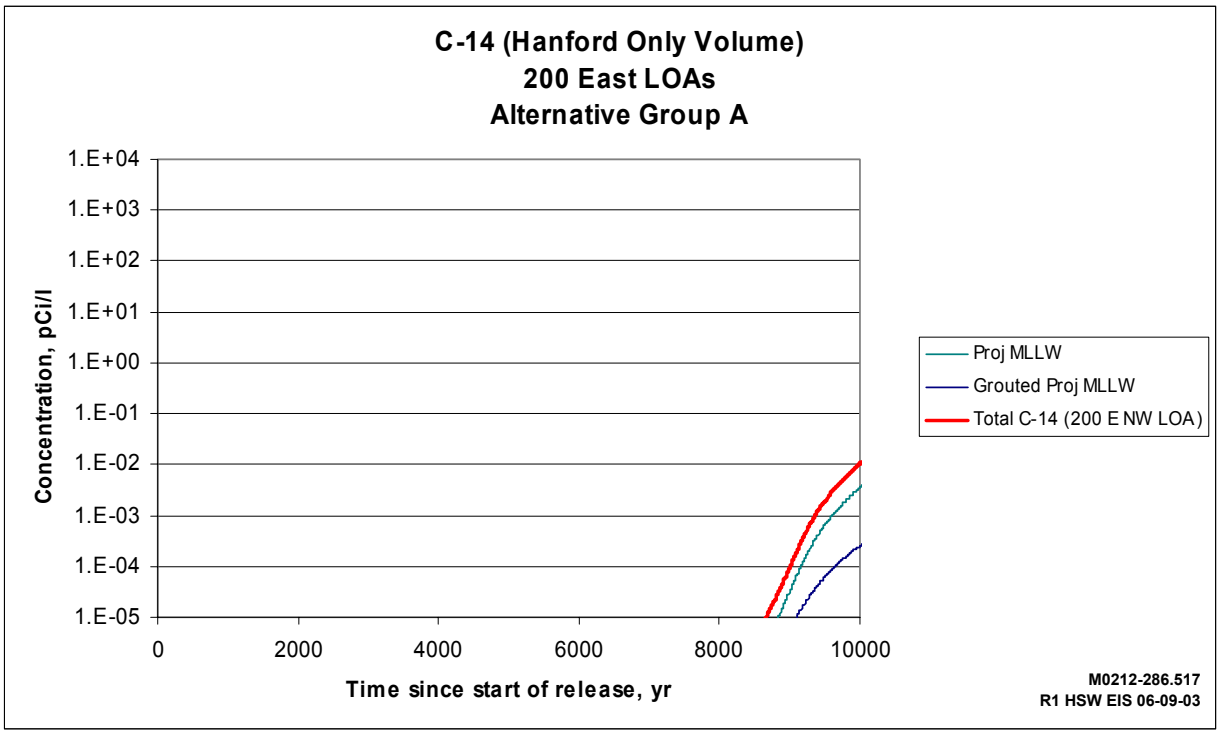
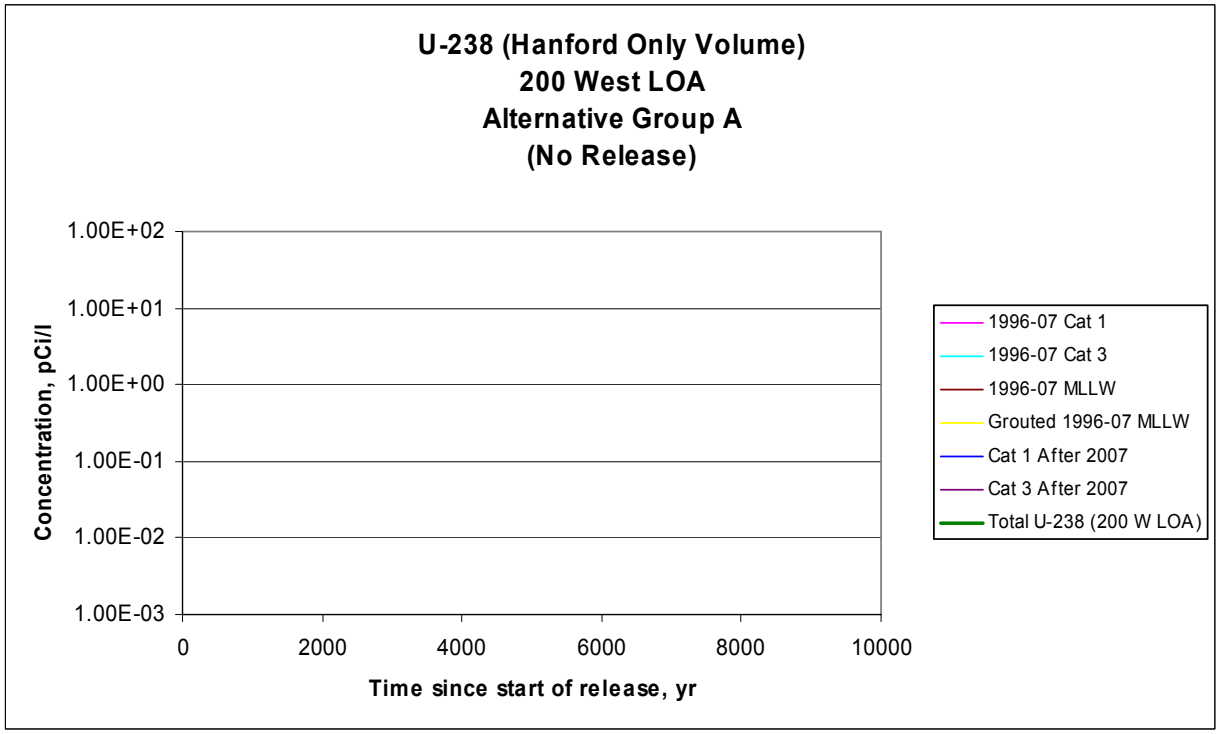


Figure G.29. U-238 and C-14 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group A – Hanford Only Wastes Disposed of After 1995)



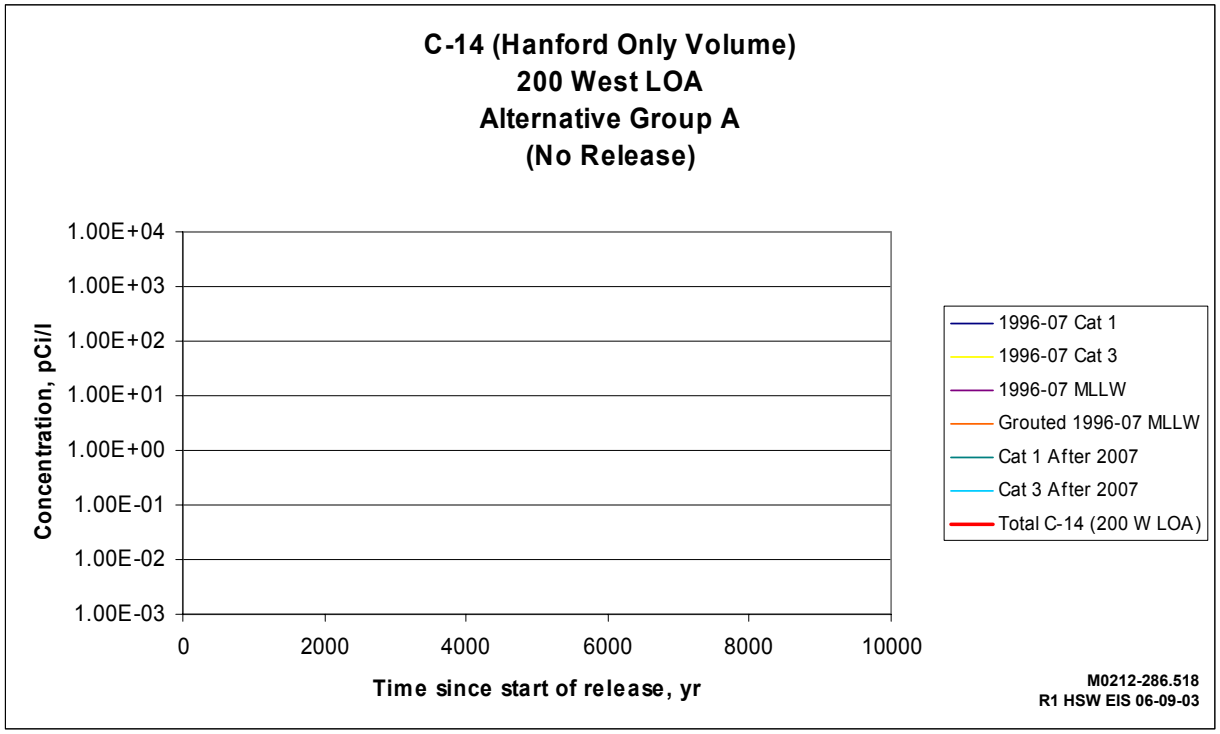
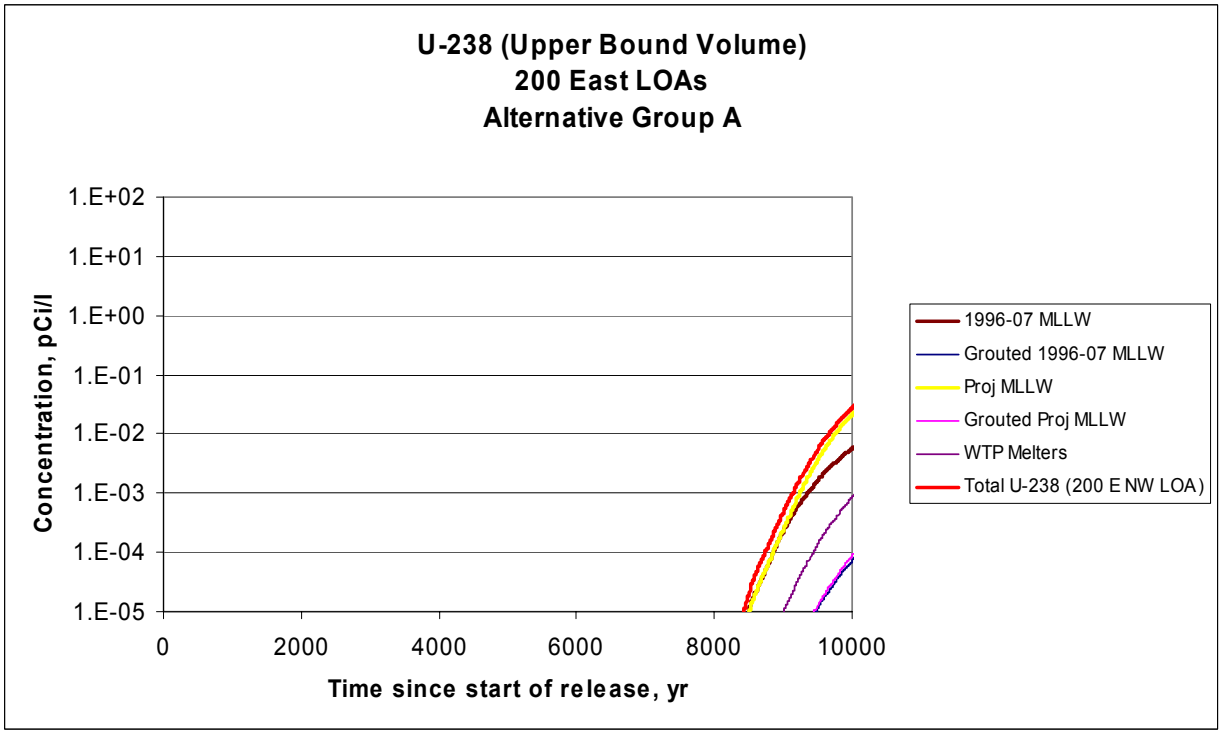


Figure G.30. U-238 and C-14 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group A – Hanford Only Wastes Disposed of After 1995)



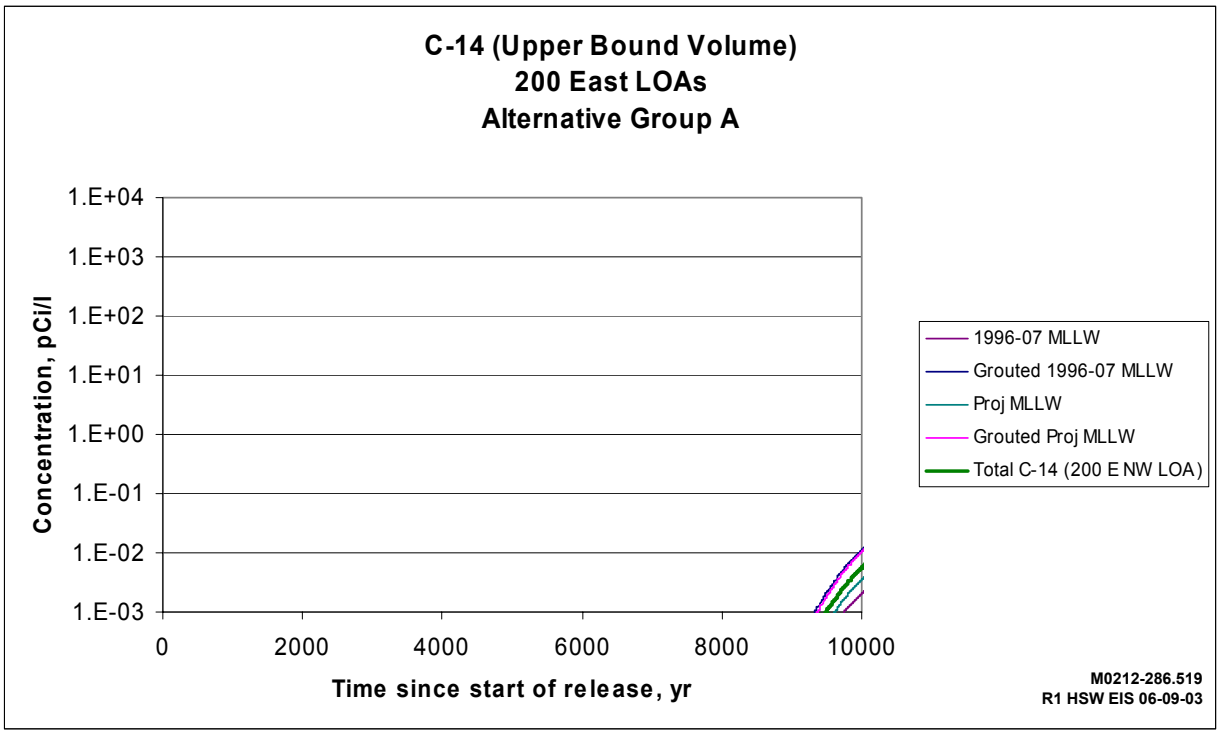
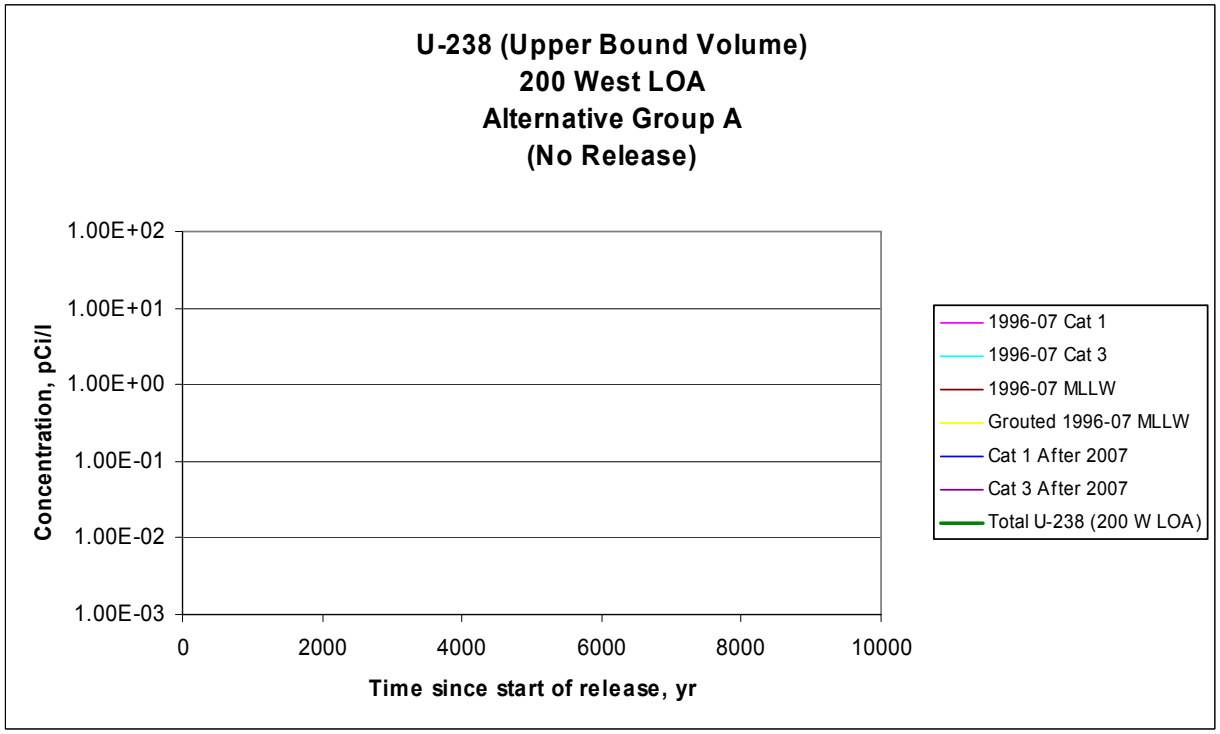


Figure G.31. U-238 and C-14 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group A – Upper Bound Volume Wastes Disposed of After 1995)



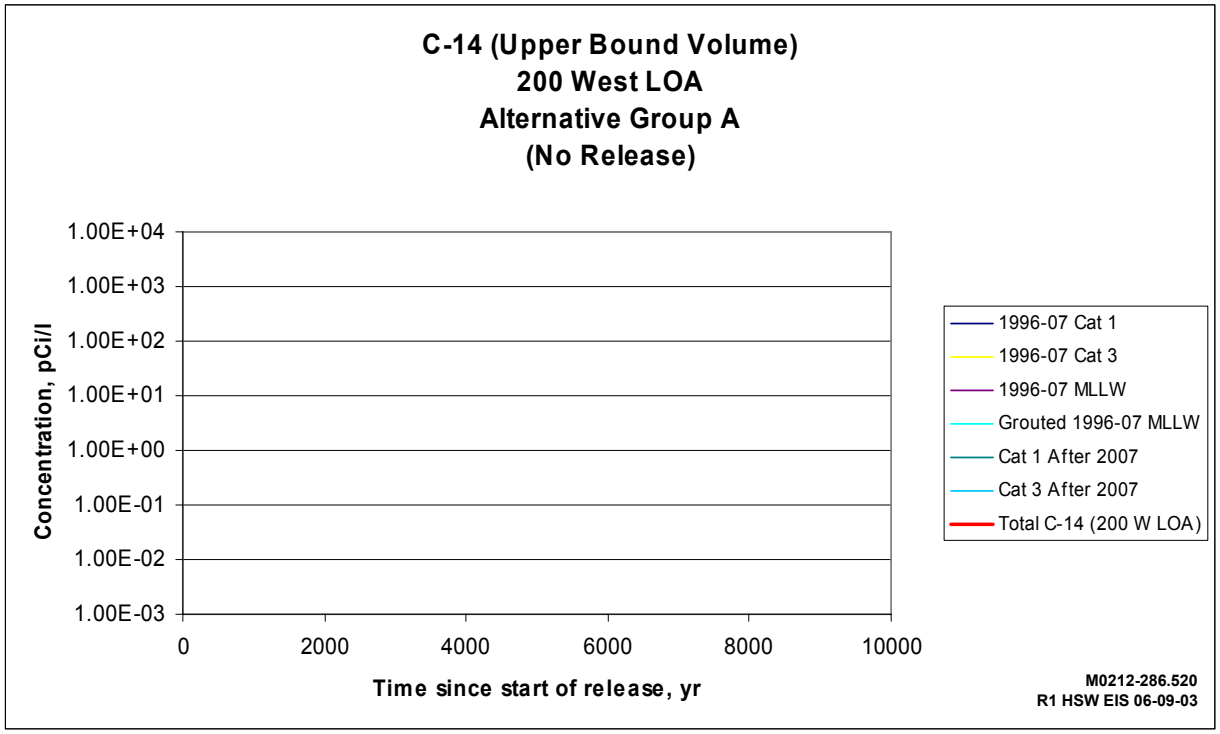
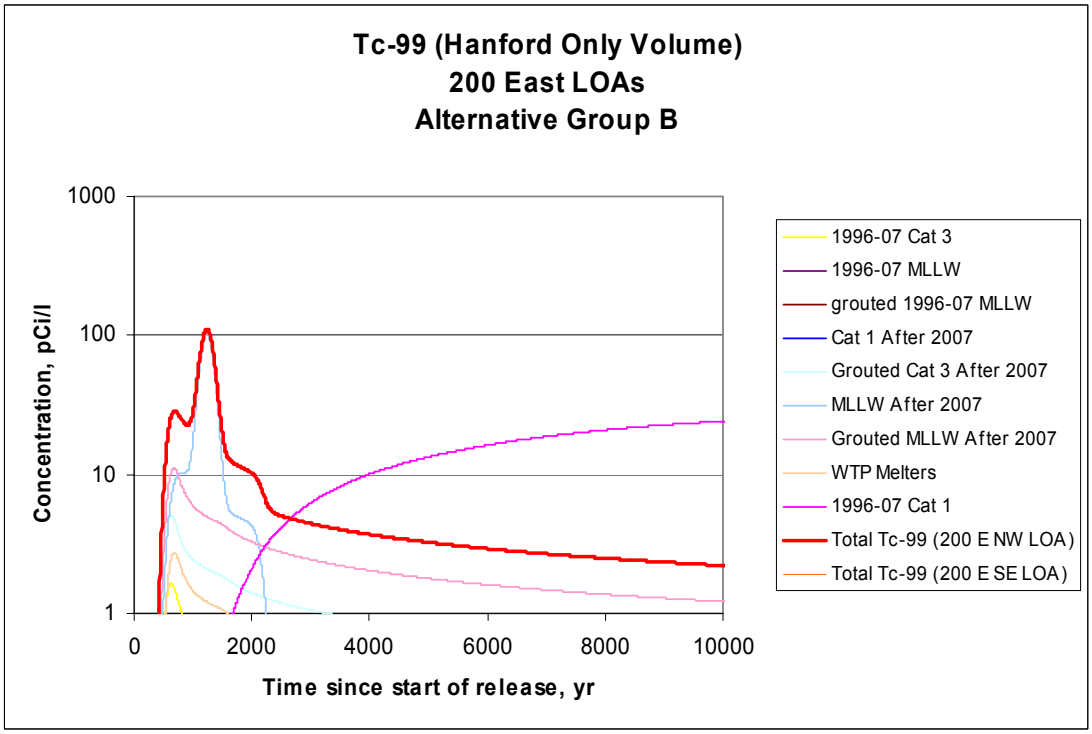


Figure G.32. U-238 and C-14 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group A – Upper Bound Volume Wastes Disposed of After 1995)



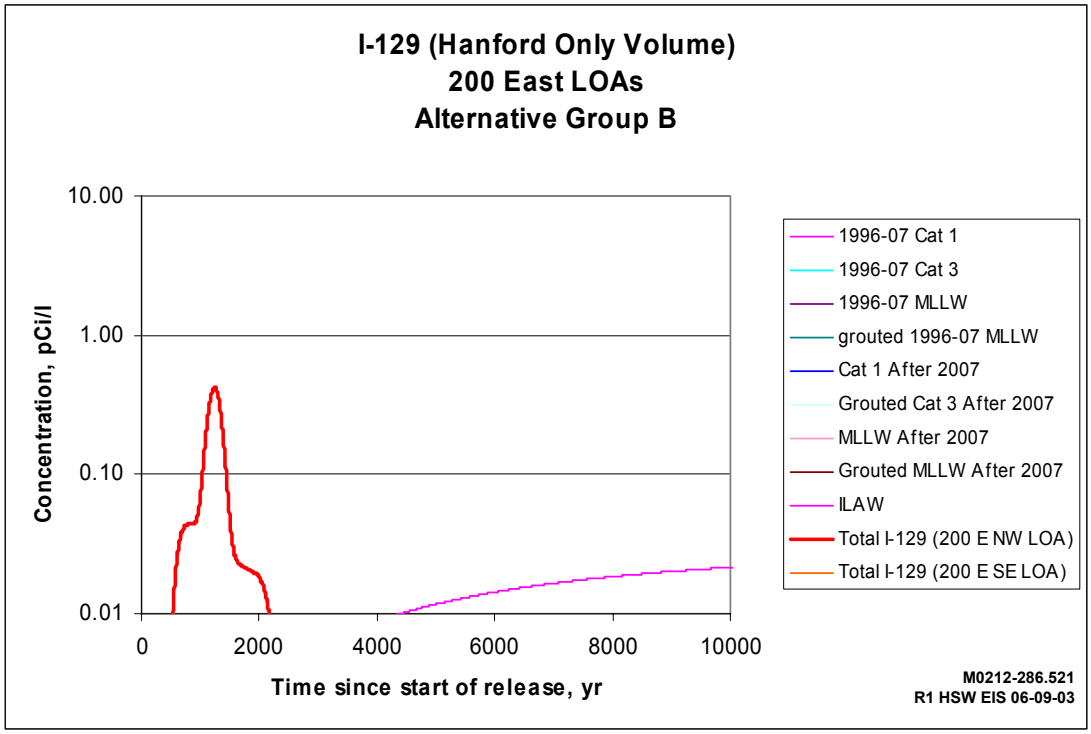
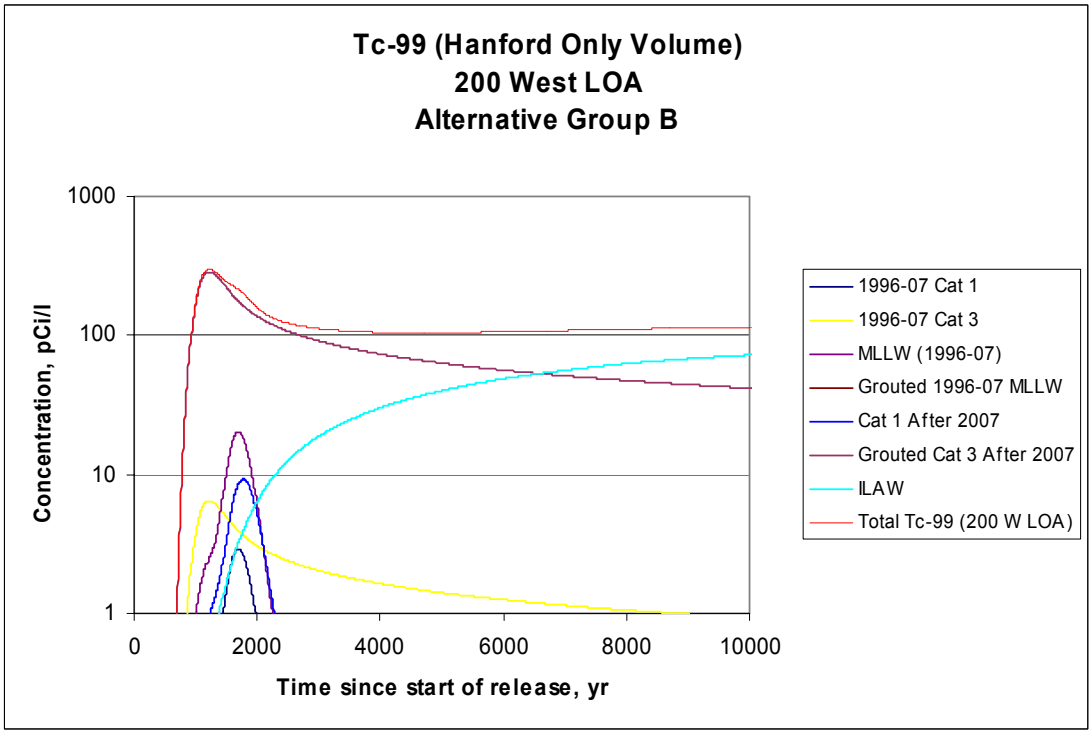


Figure G.33. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group B – Hanford Only Wastes Disposed of After 1995)



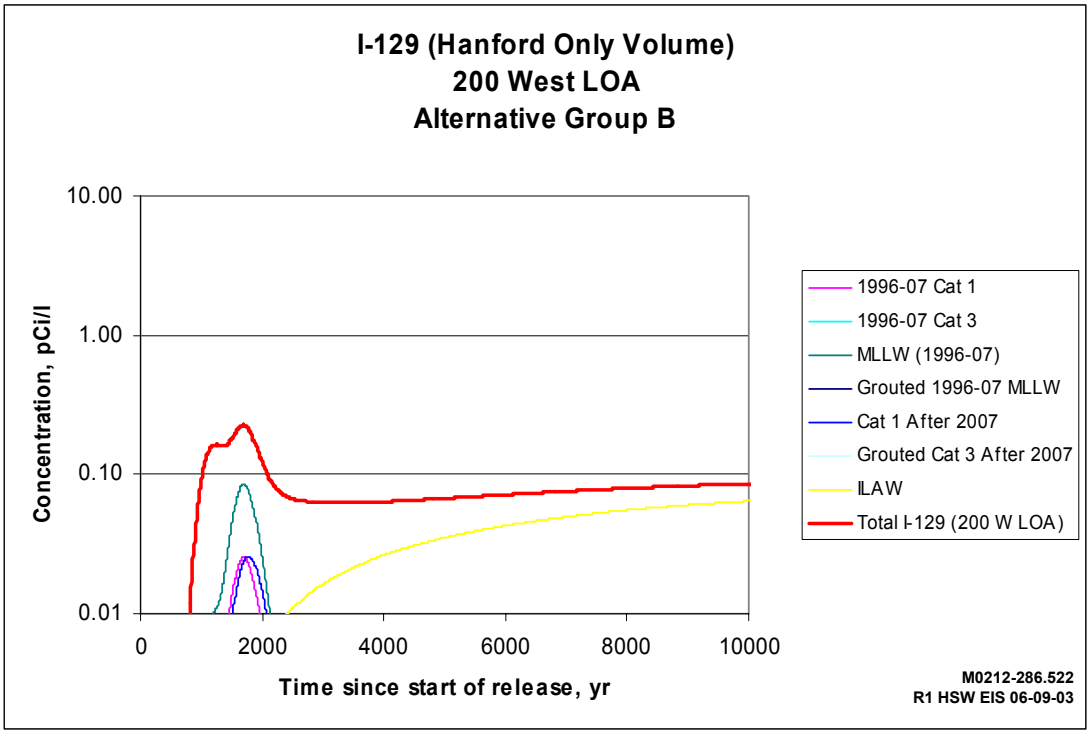
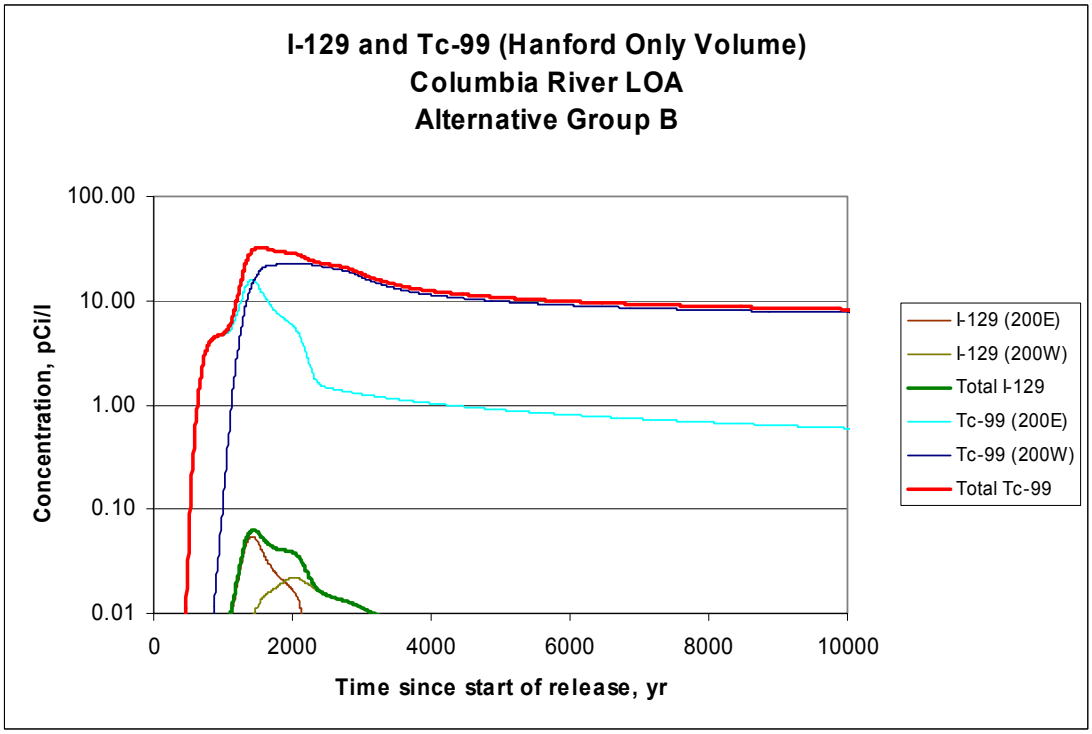


Figure G.34. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group B – Hanford Only Wastes Disposed of After 1995)



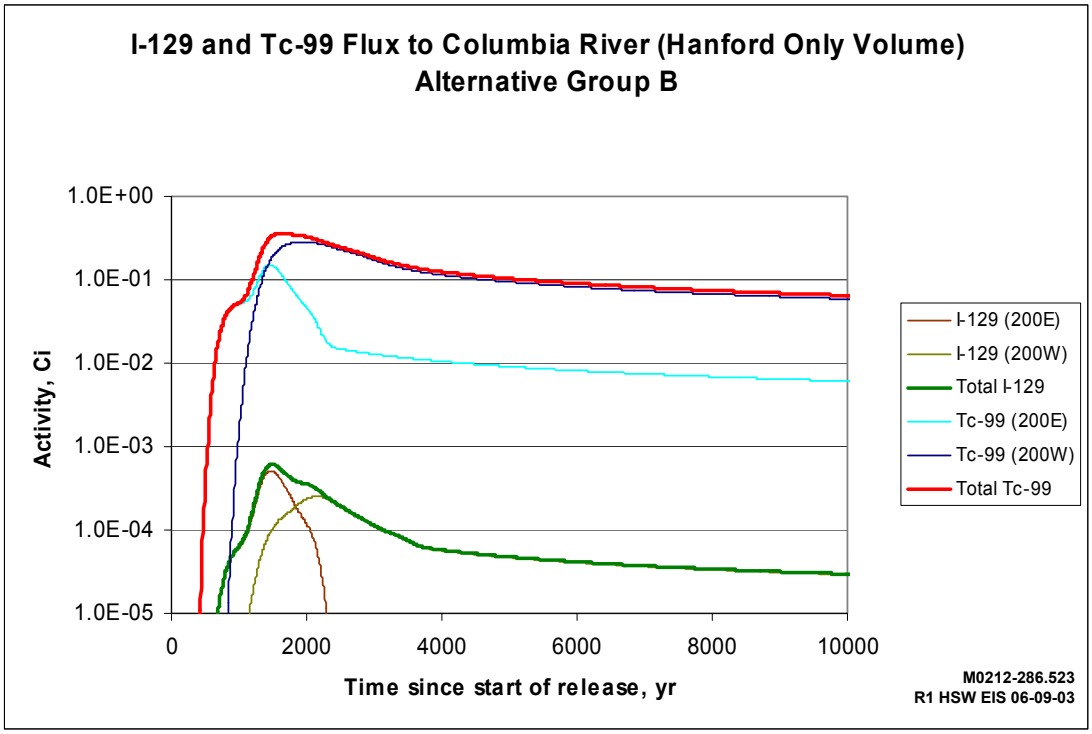
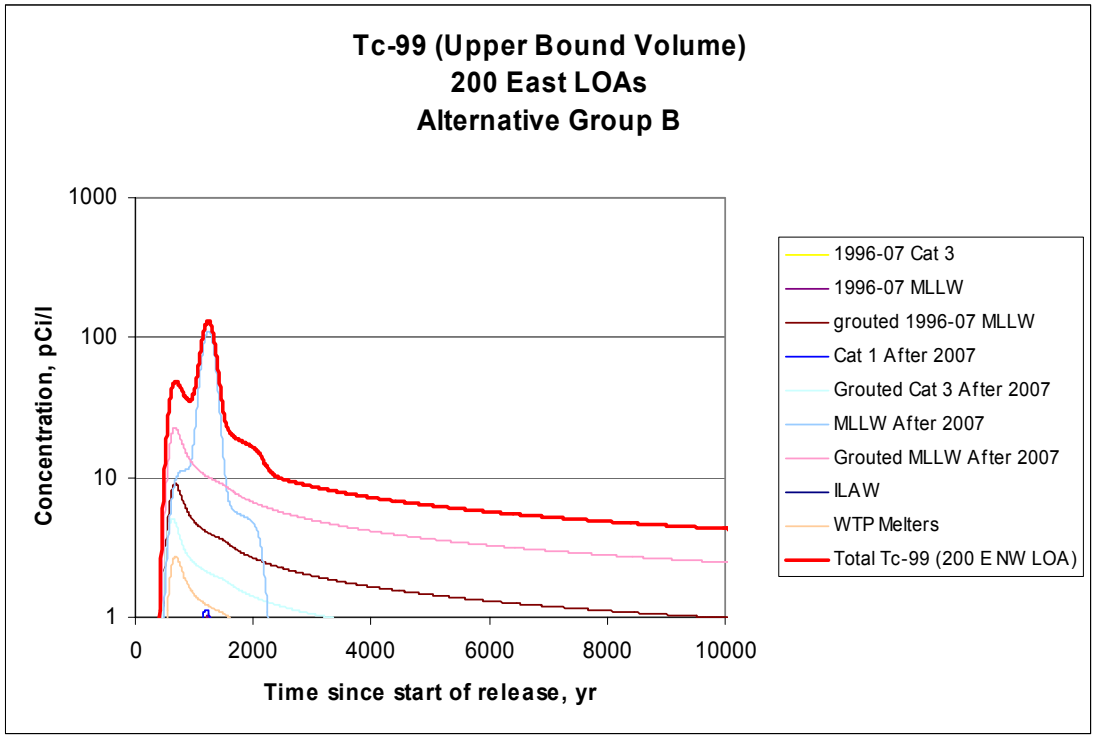


Figure G.35. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group B – Hanford Only Wastes Disposed of After 1995)



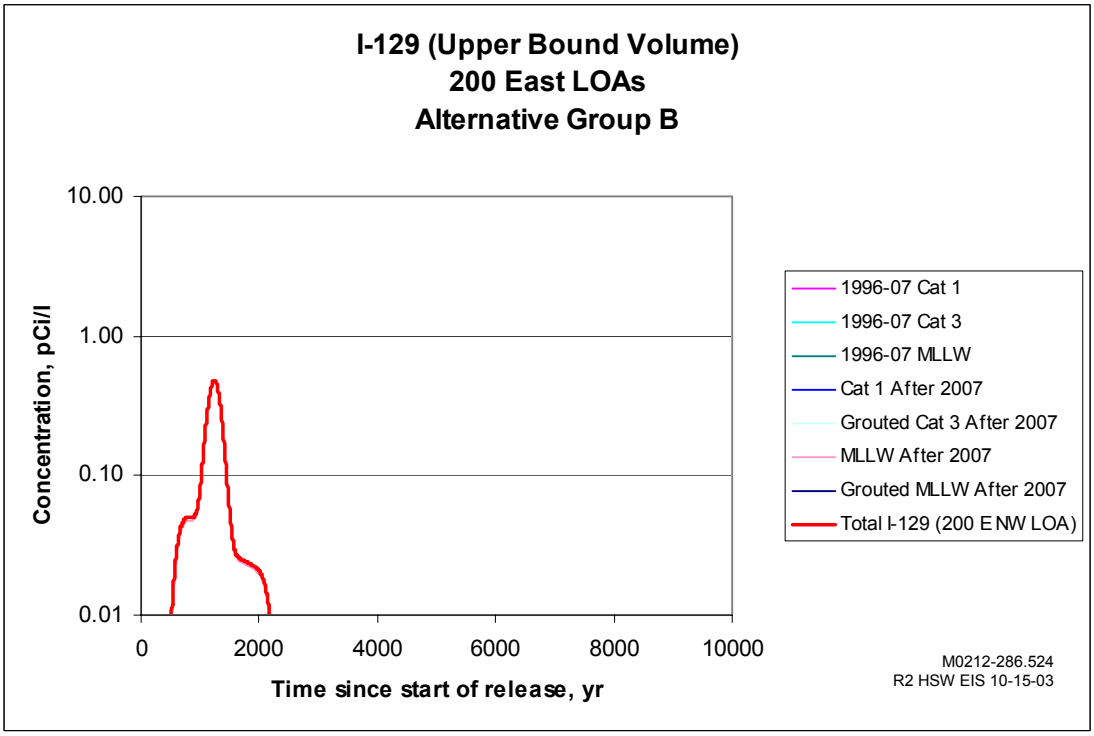
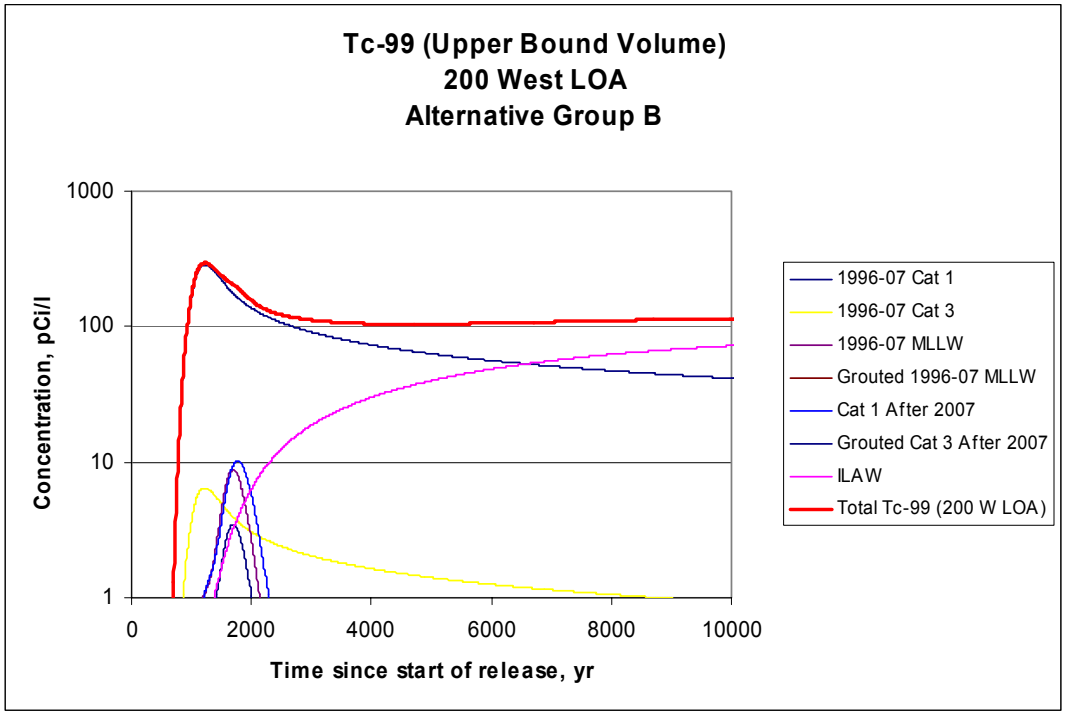


Figure G.36. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group B – Upper Bound Volume Wastes Disposed of After 1995)



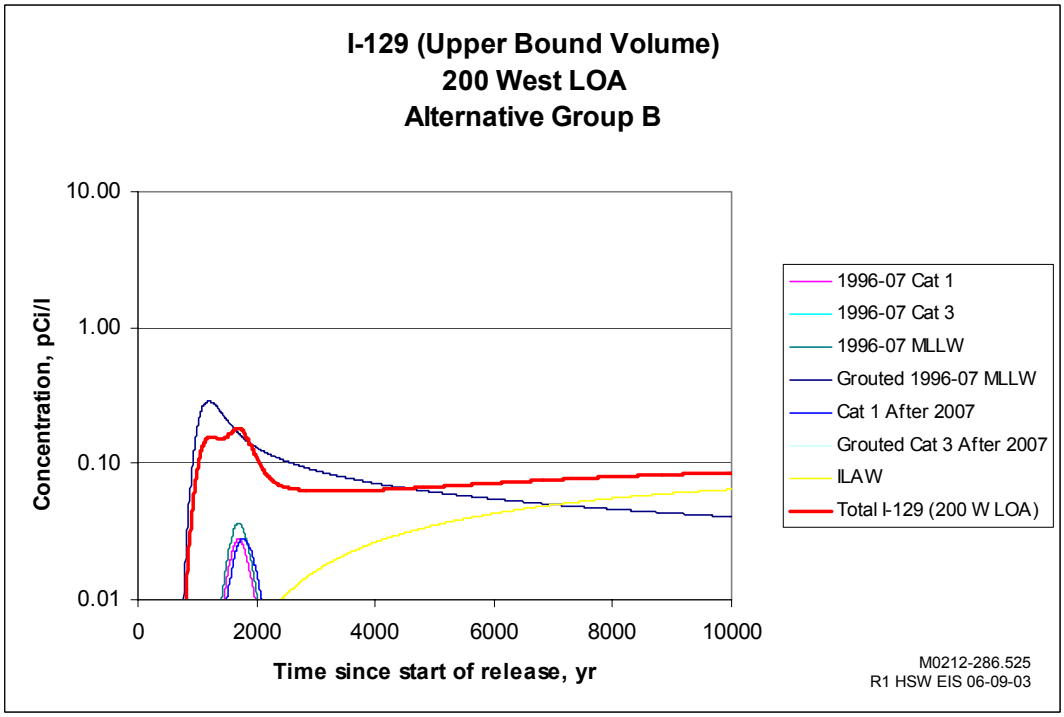
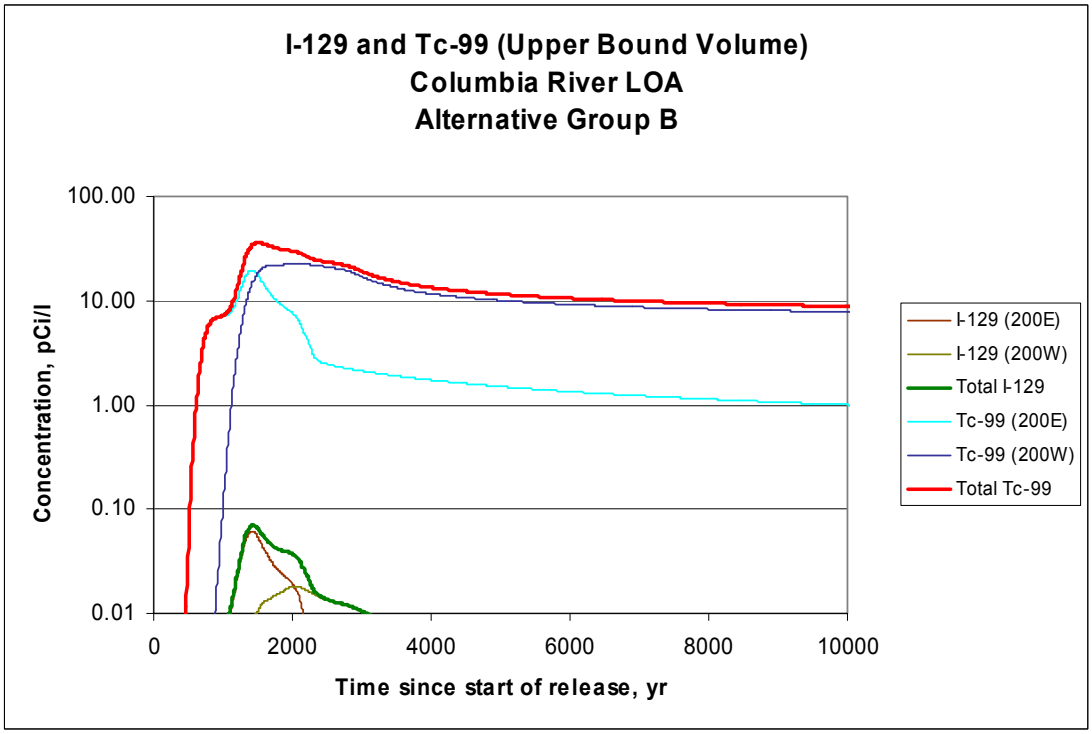


Figure G.37. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group B – Upper Bound Volume Wastes Disposed of After 1995)



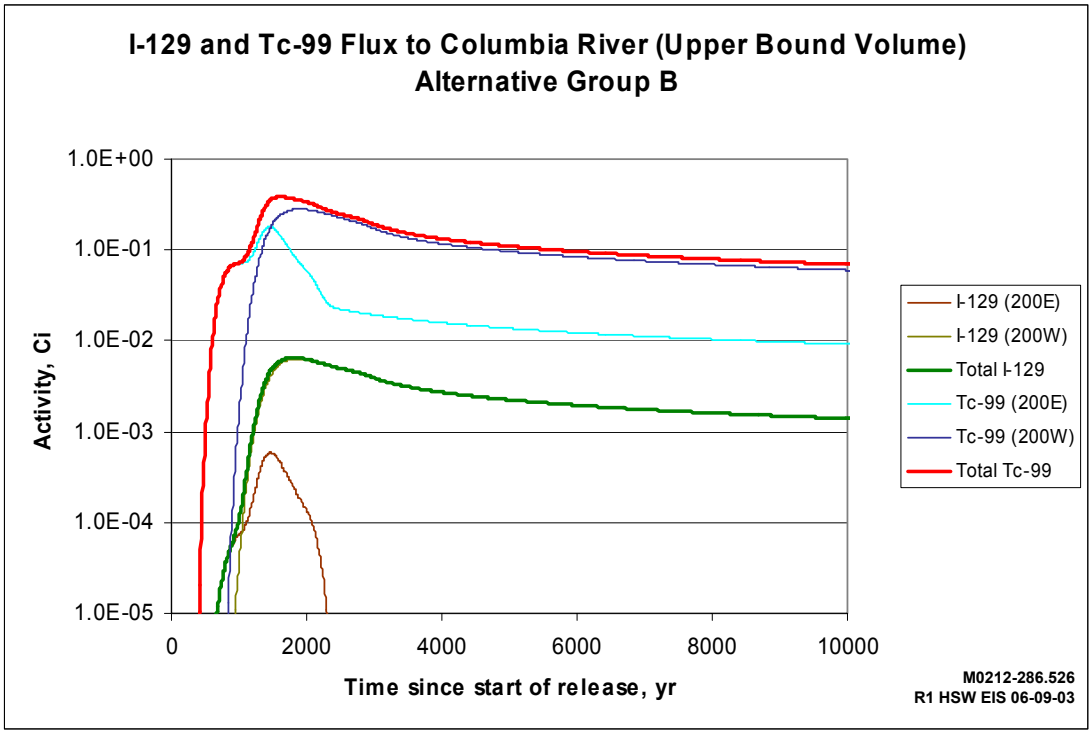
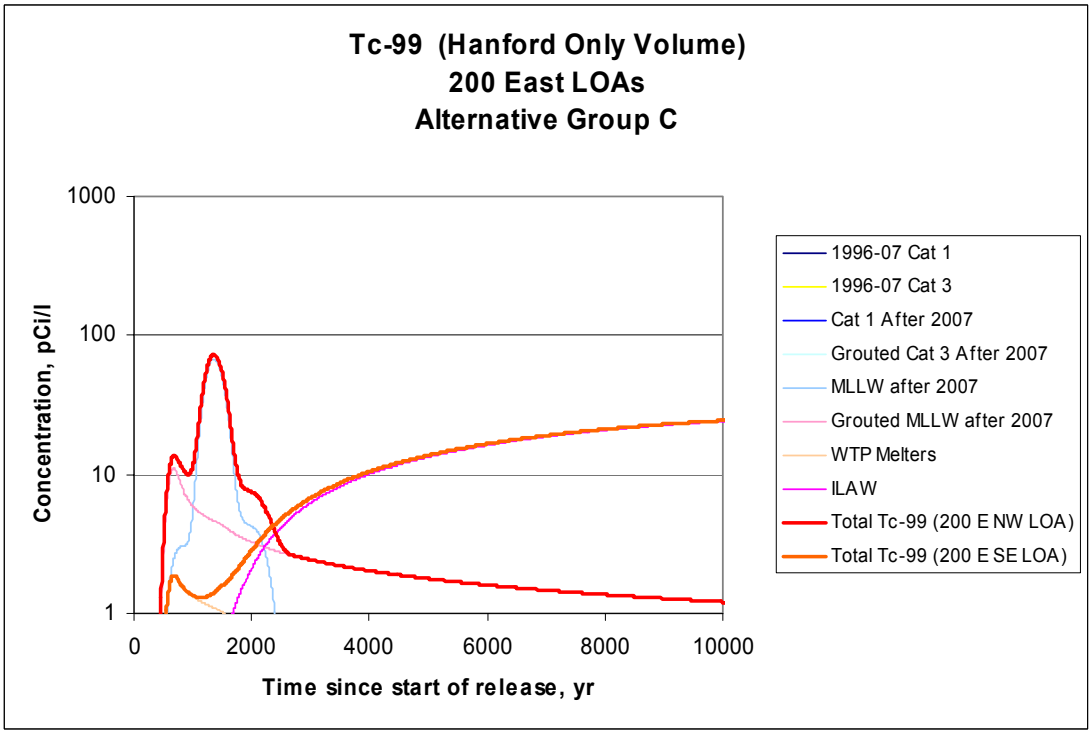


Figure G.38. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group B – Upper Bound Volume Wastes Disposed of After 1995)



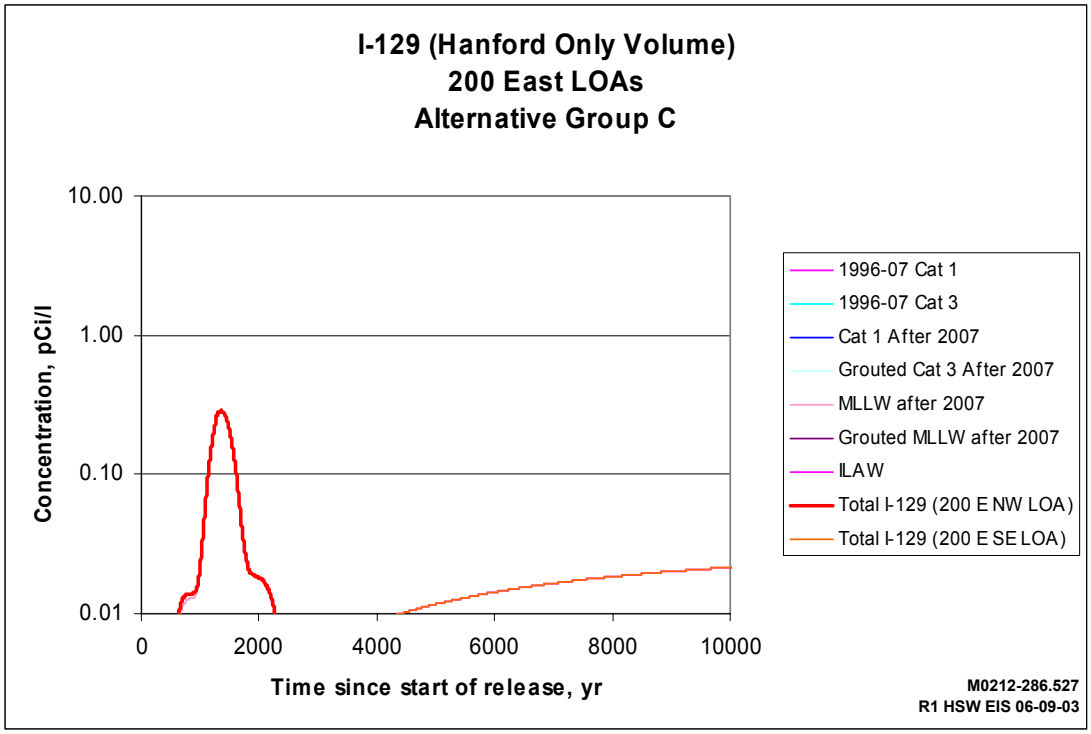
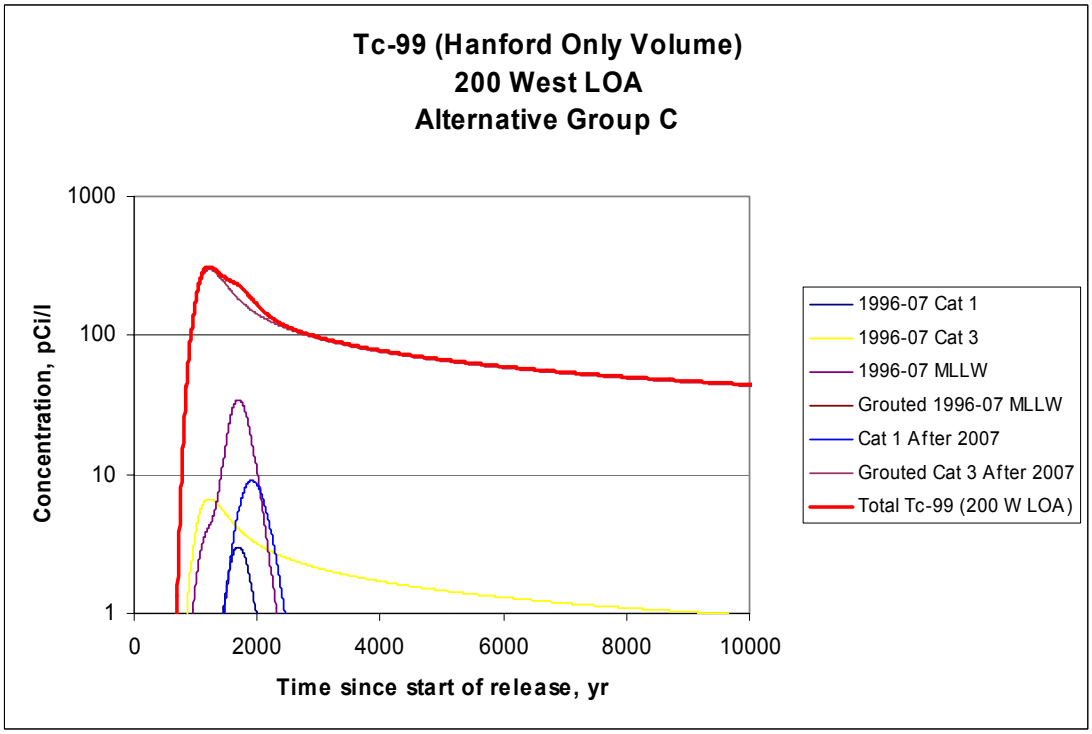


Figure G.39. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group C – Hanford Only Wastes Disposed of After 1995)



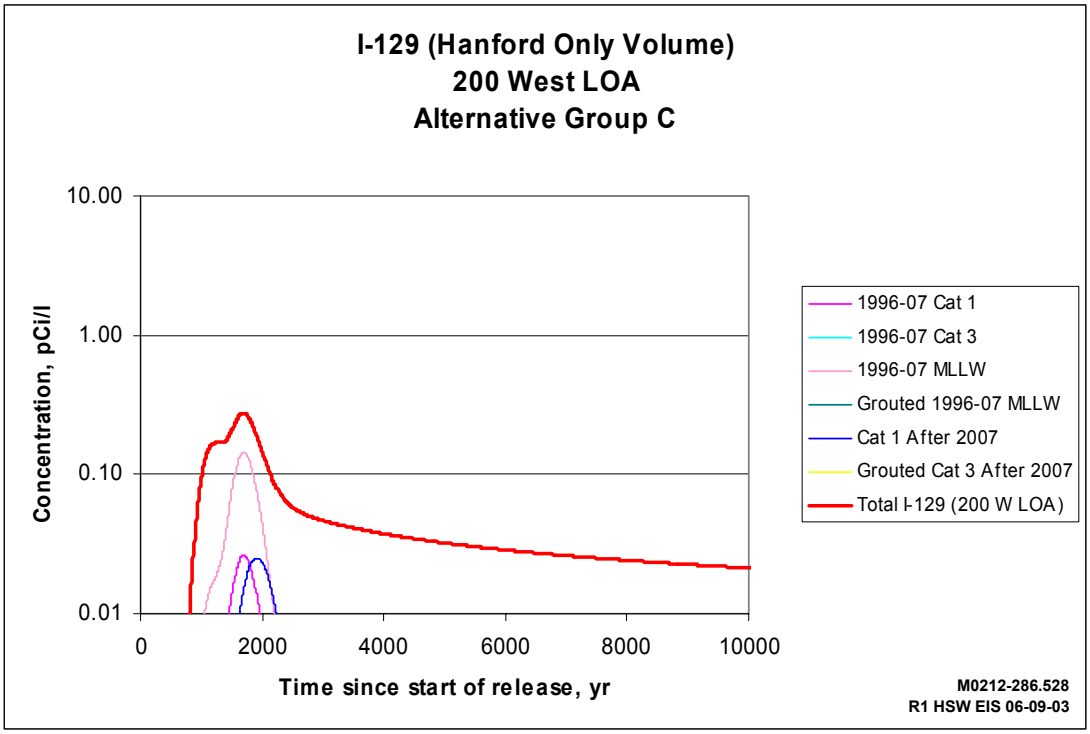
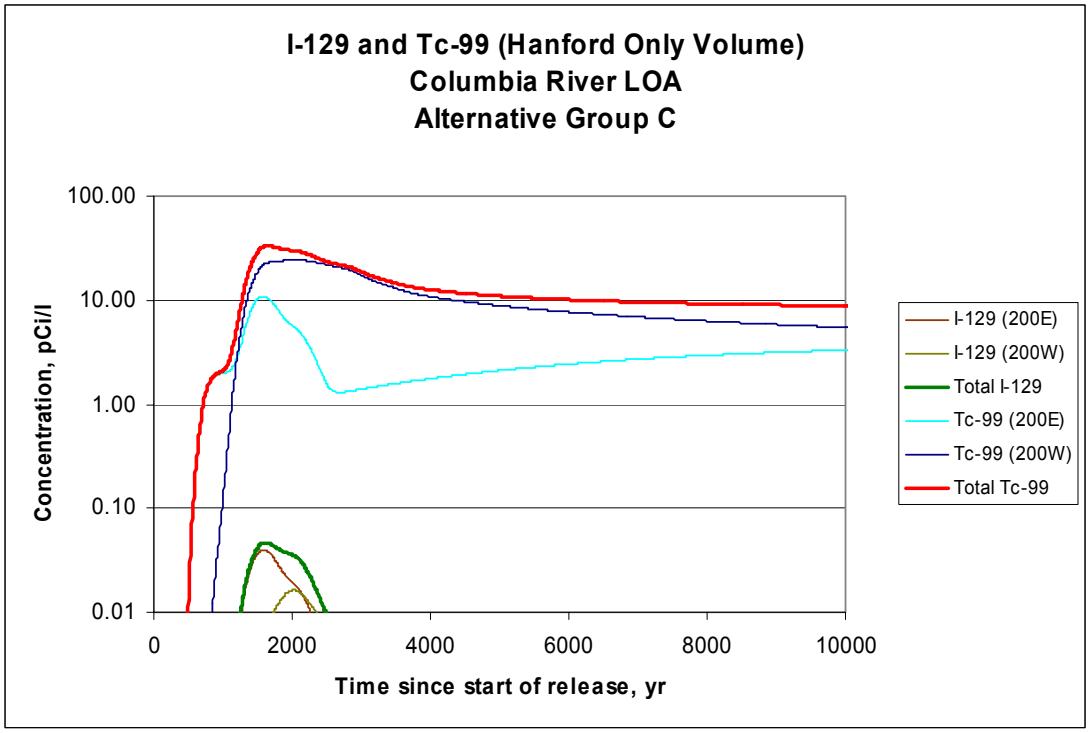


Figure G.40. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group C – Hanford Only Wastes Disposed of After 1995)



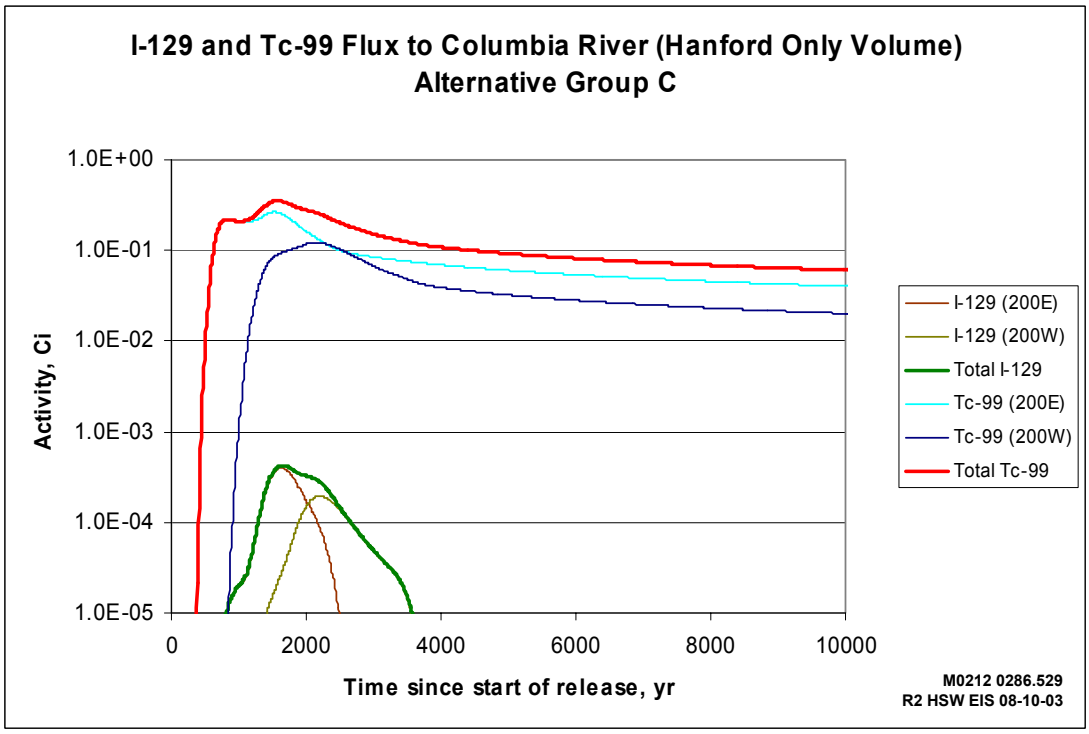
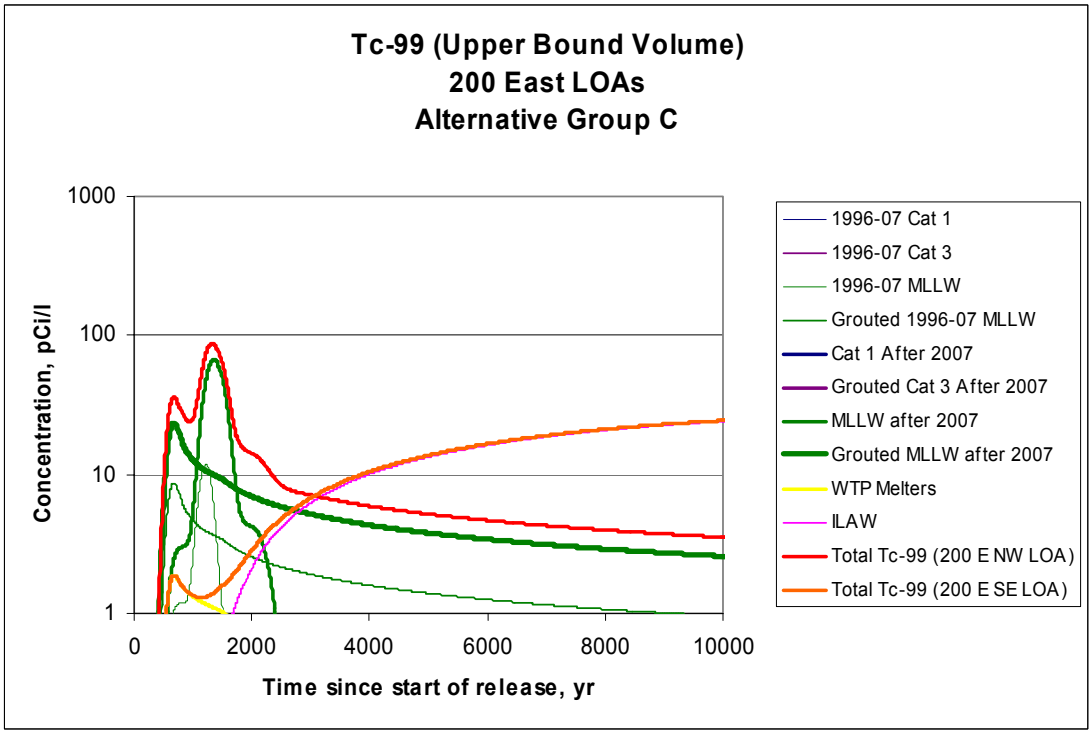


Figure G.41. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group C – Hanford Only Wastes Disposed of After 1995)



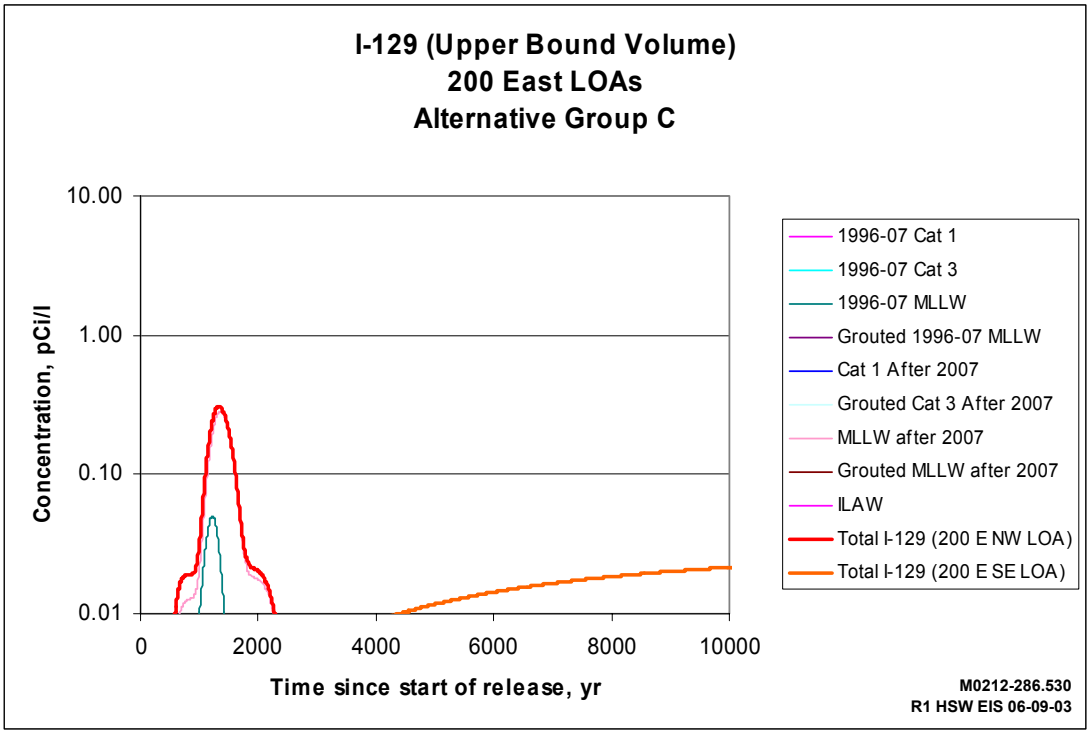
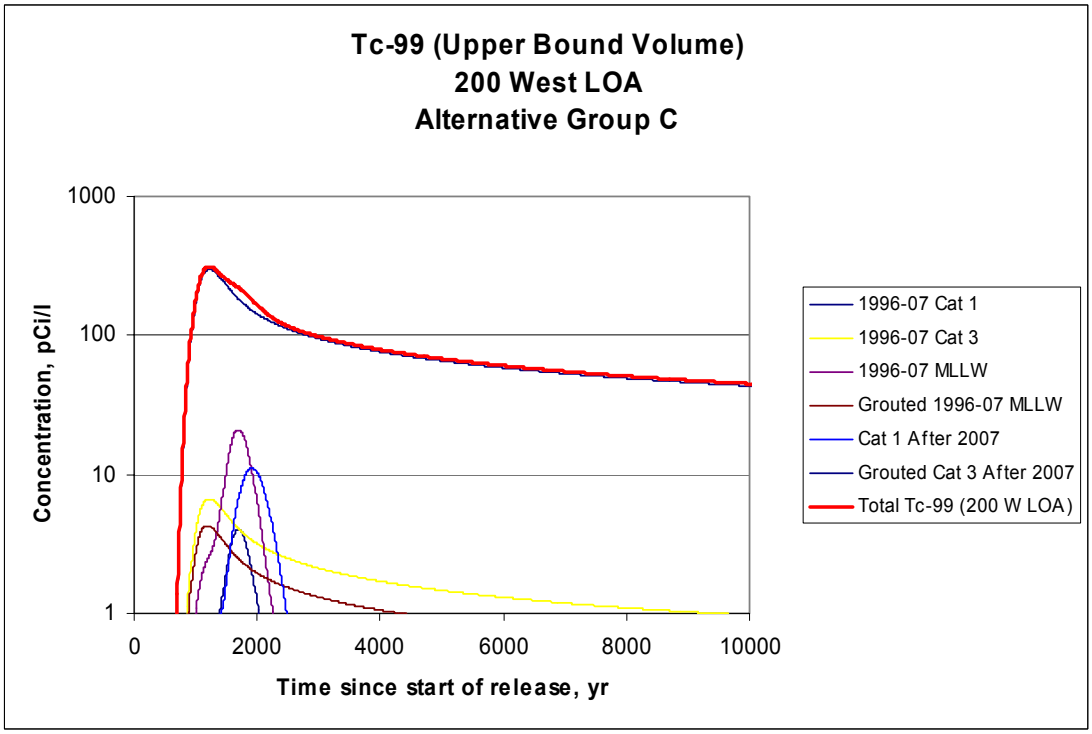


Figure G.42. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group C – Upper Bound Volume Wastes Disposed of After 1995)



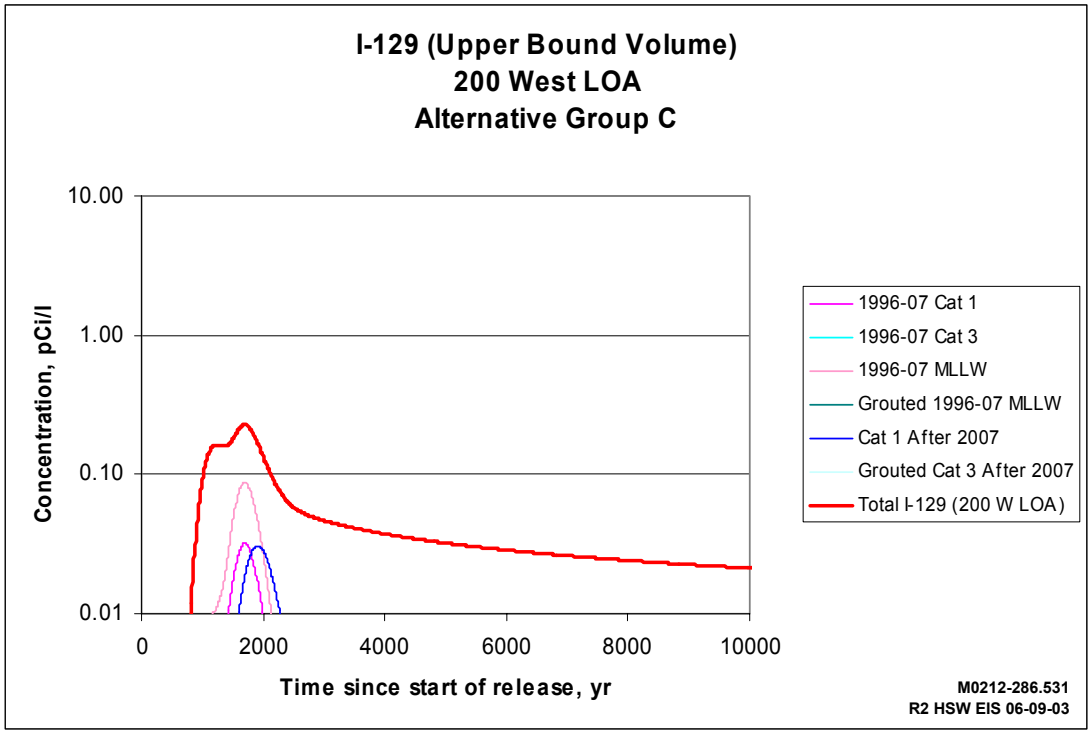
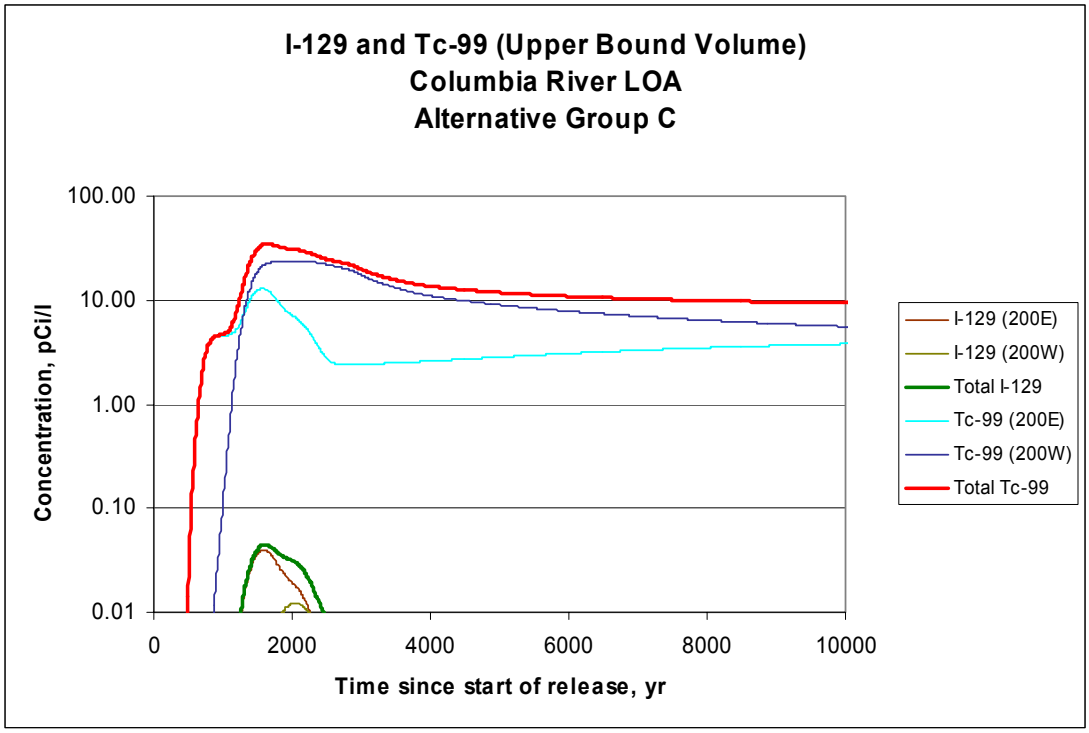


Figure G.43. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group C – Upper Bound Volume Wastes Disposed of After 1995)



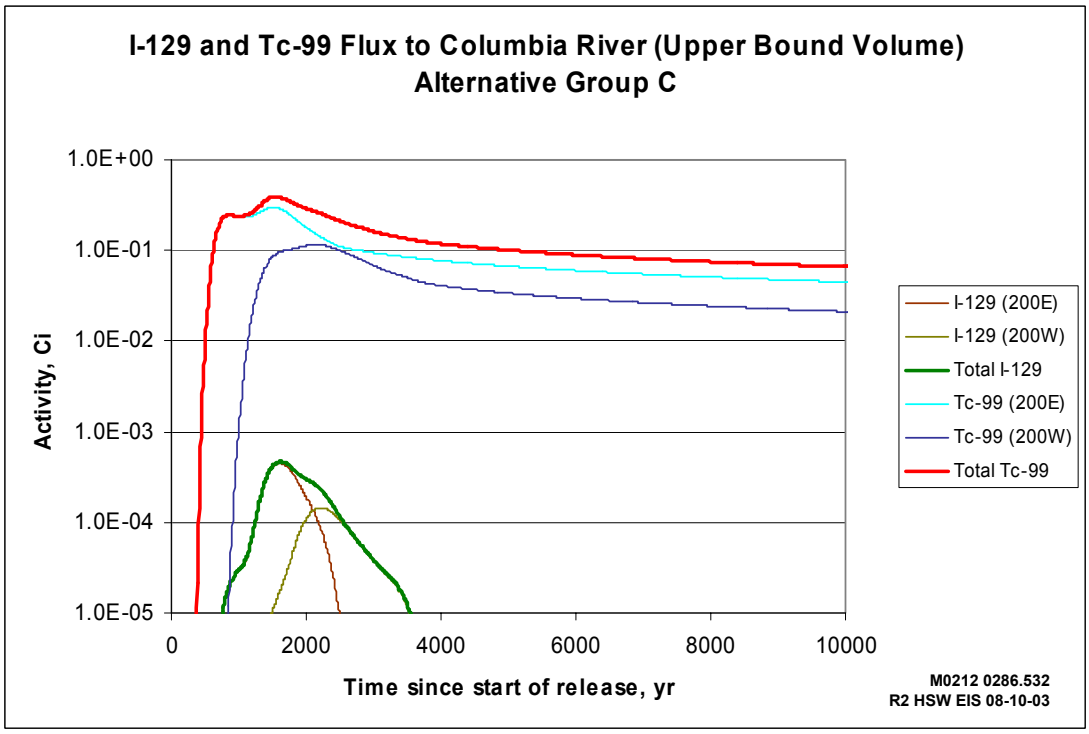
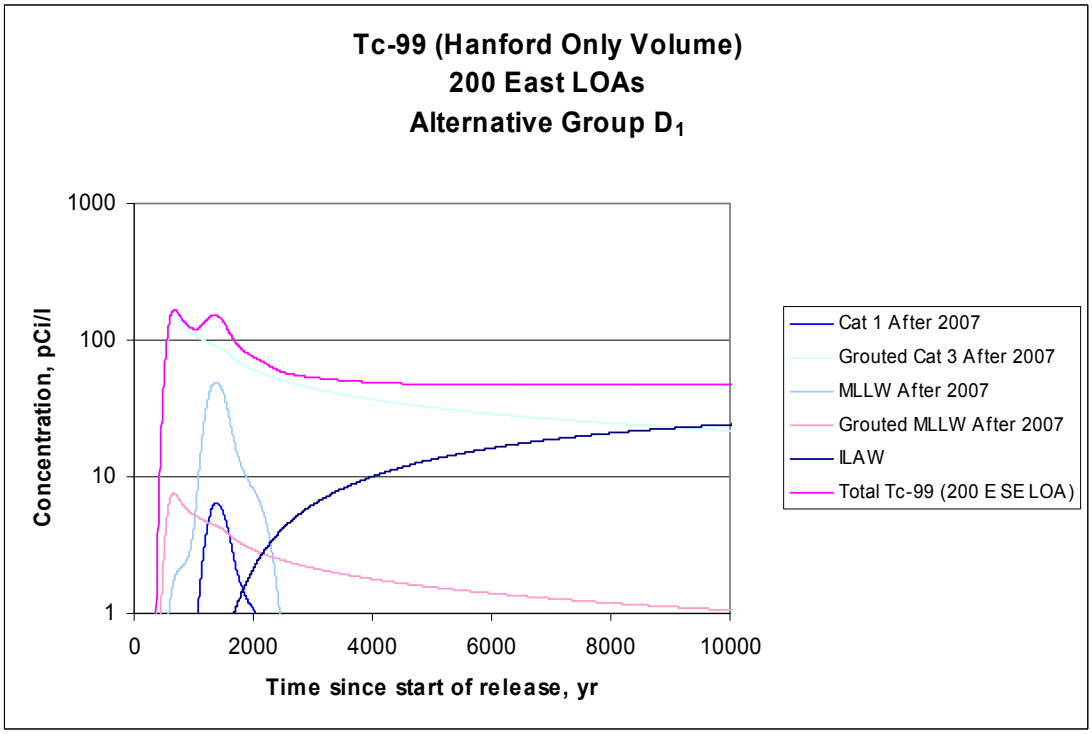


Figure G.44. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group C – Upper Bound Volume Wastes Disposed of After 1995)



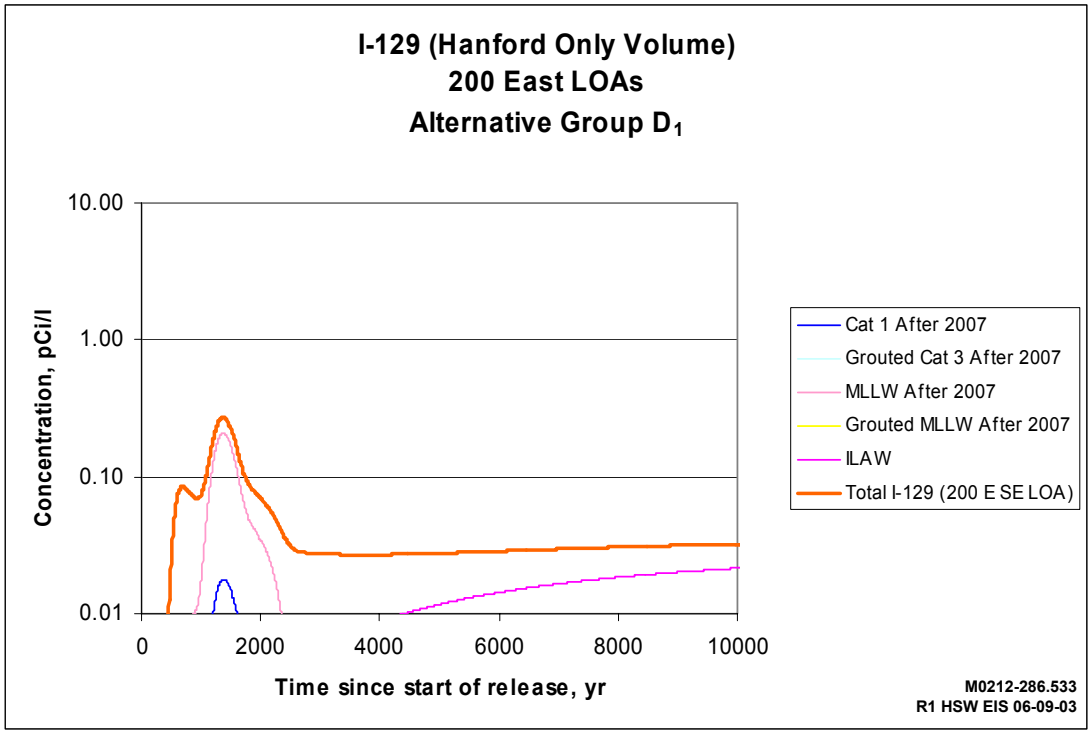
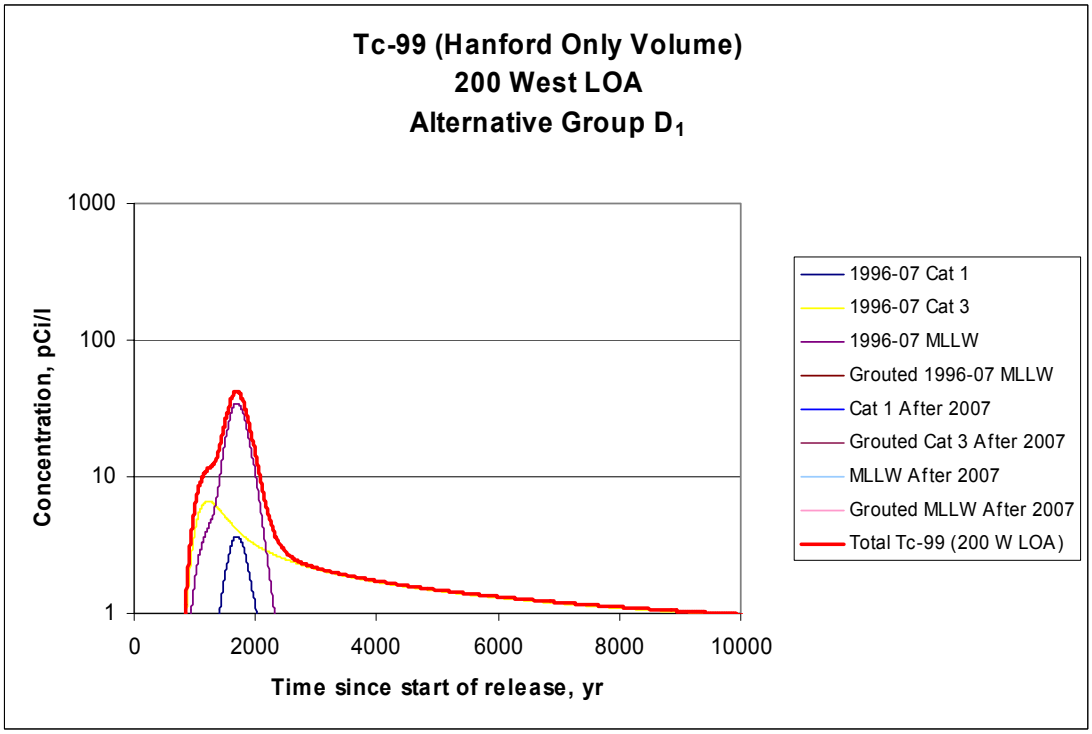


Figure G.45. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group D_1 – Hanford Only Wastes Disposed of After 1995)



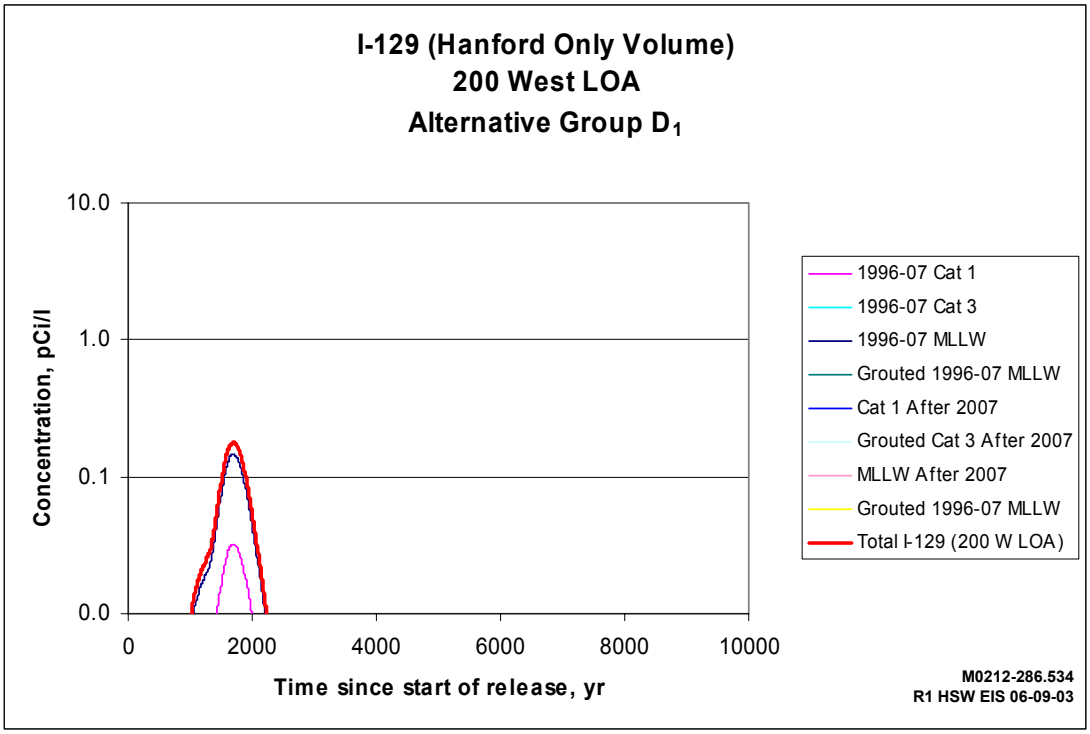
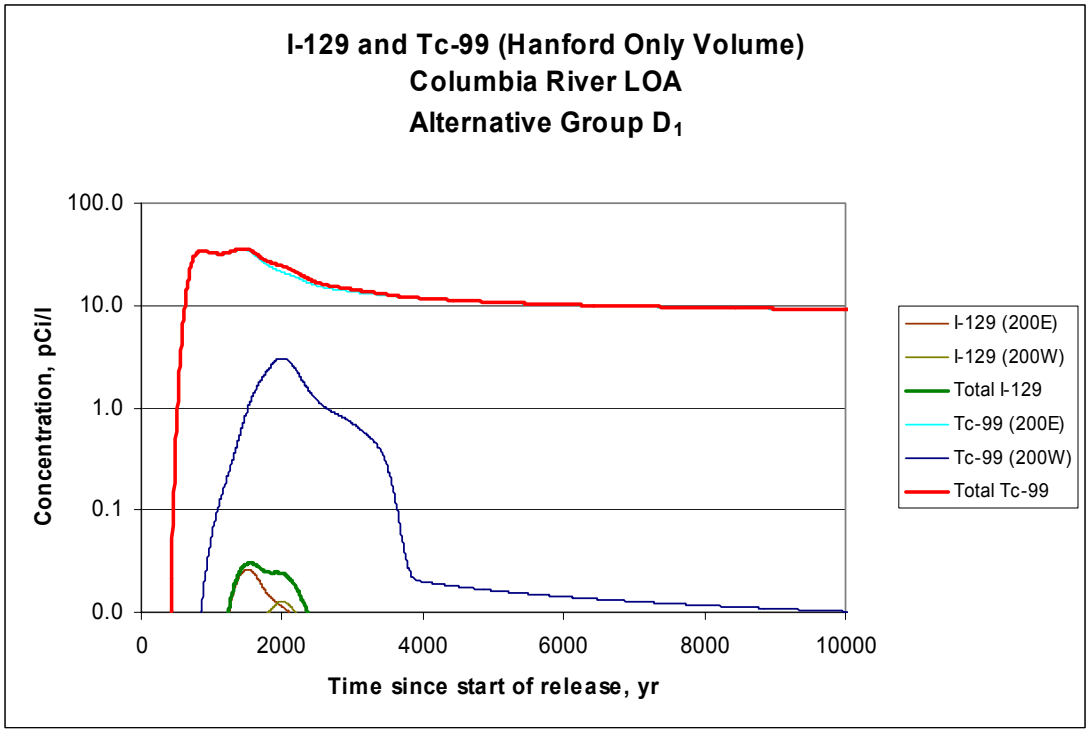


Figure G.46. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group D_1 – Hanford Only Wastes Disposed of After 1995)



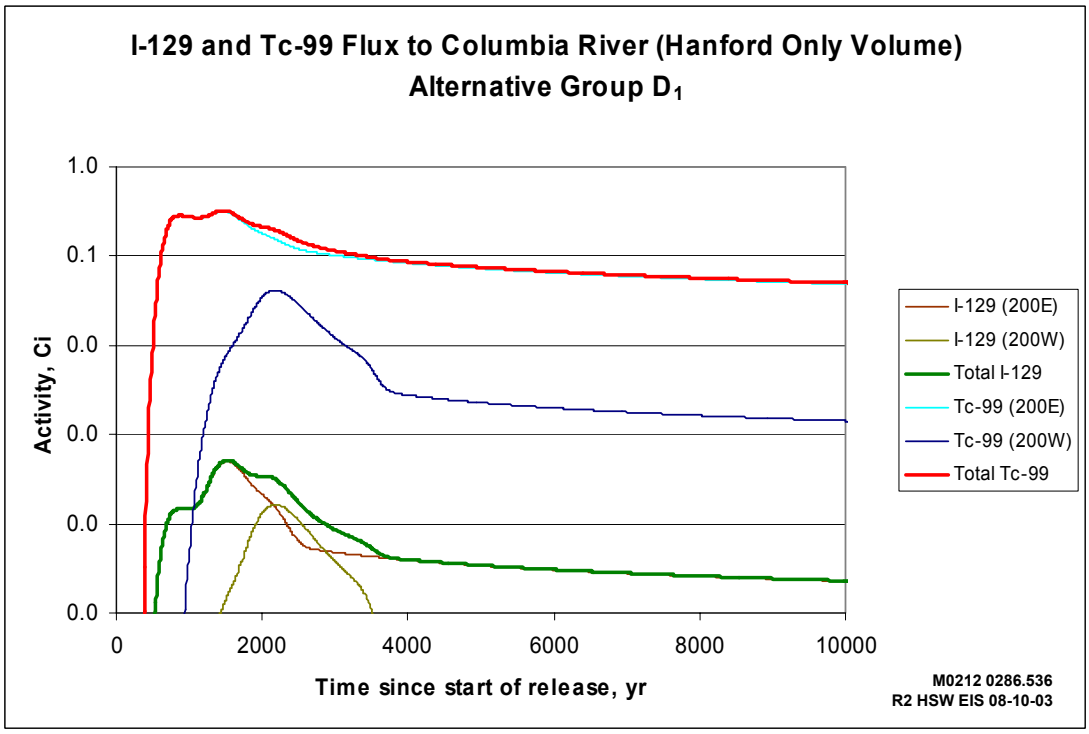
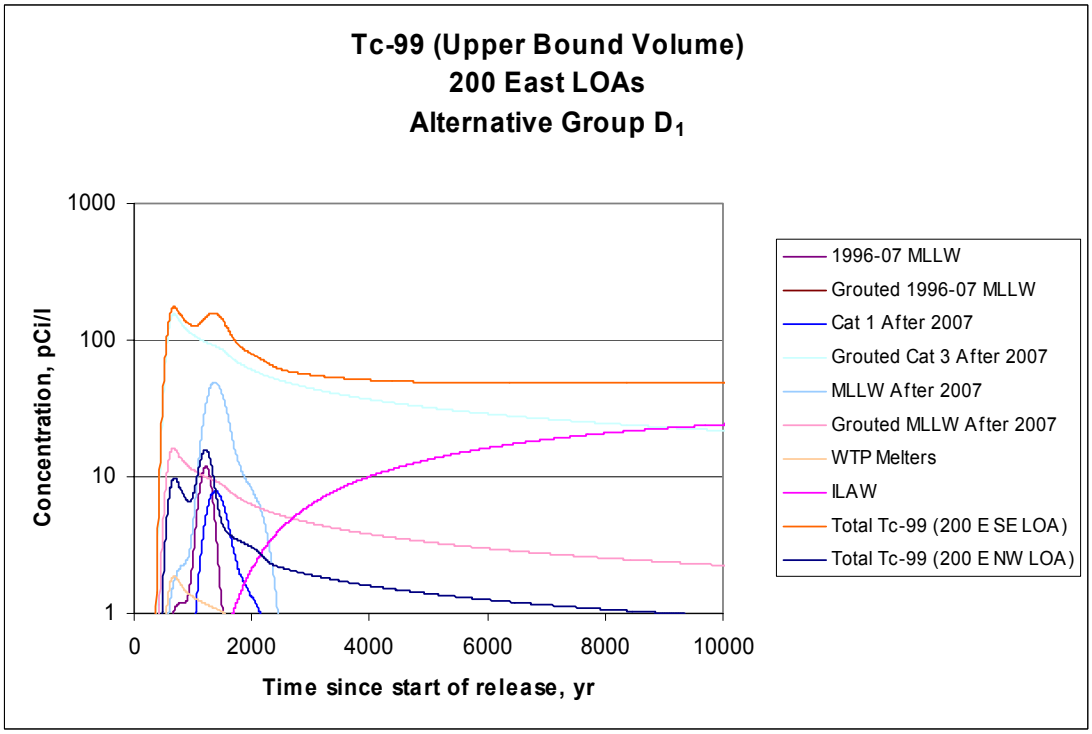


Figure G.47. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group D_1 – Hanford Only Wastes Disposed of After 1995)



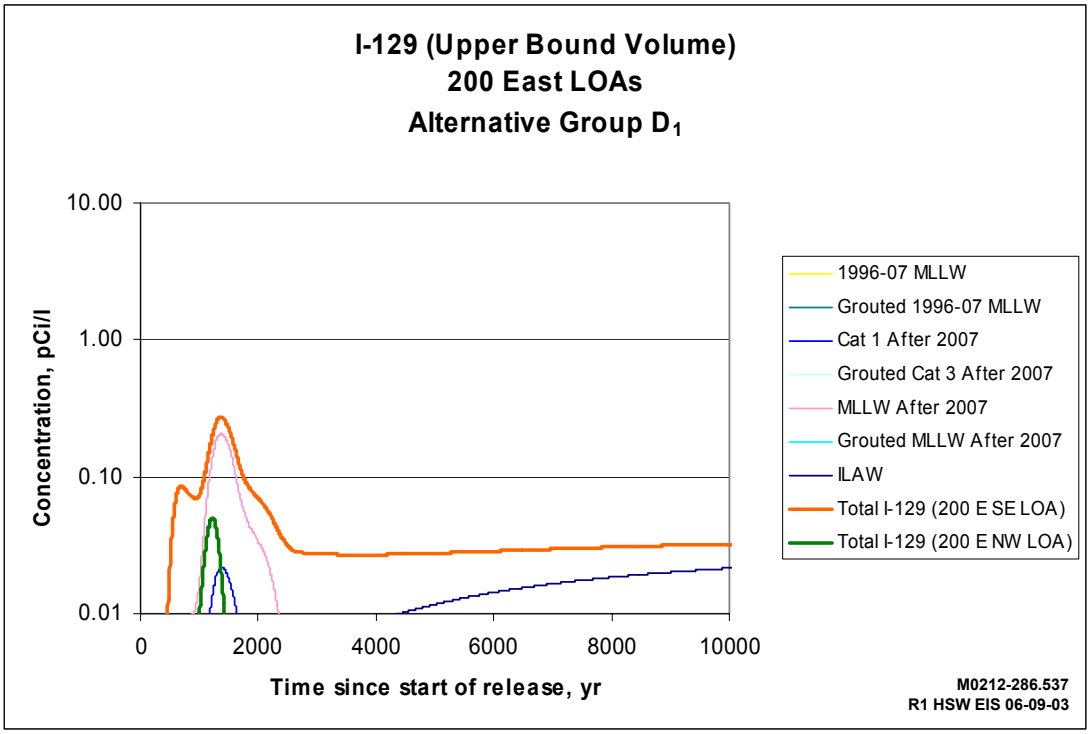
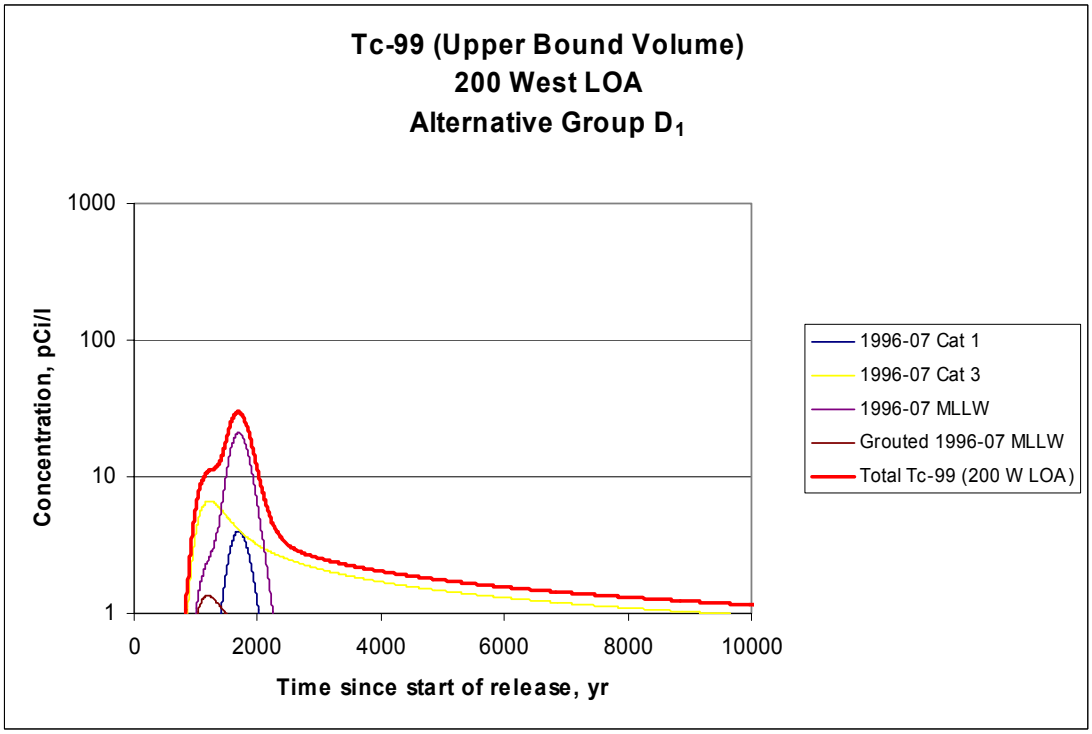


Figure G.48. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group D_1 – Upper Bound Volume Wastes Disposed of After 1995)



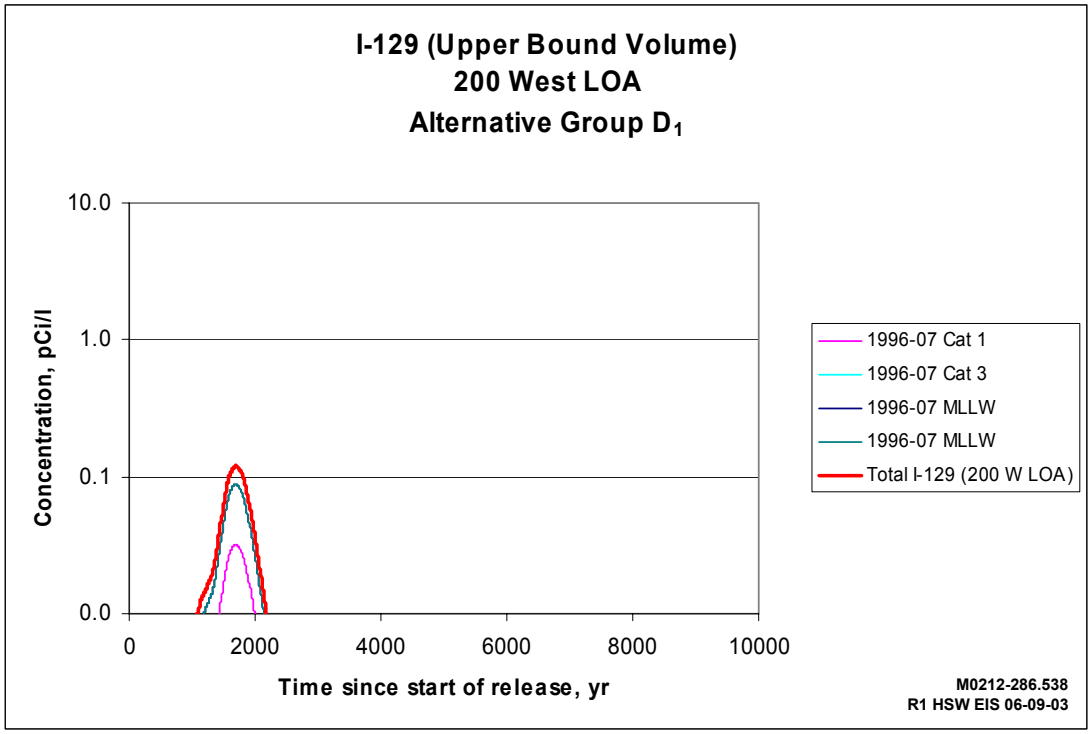
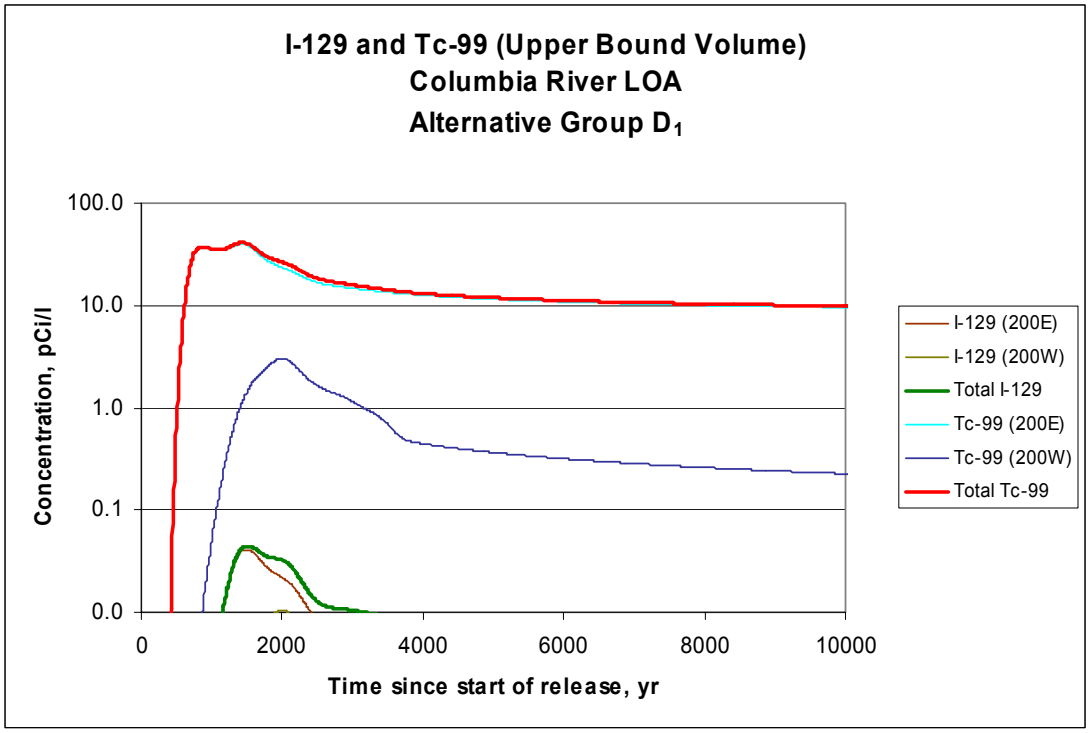


Figure G.49. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group D_1 – Upper Bound Volume Wastes Disposed of After 1995)



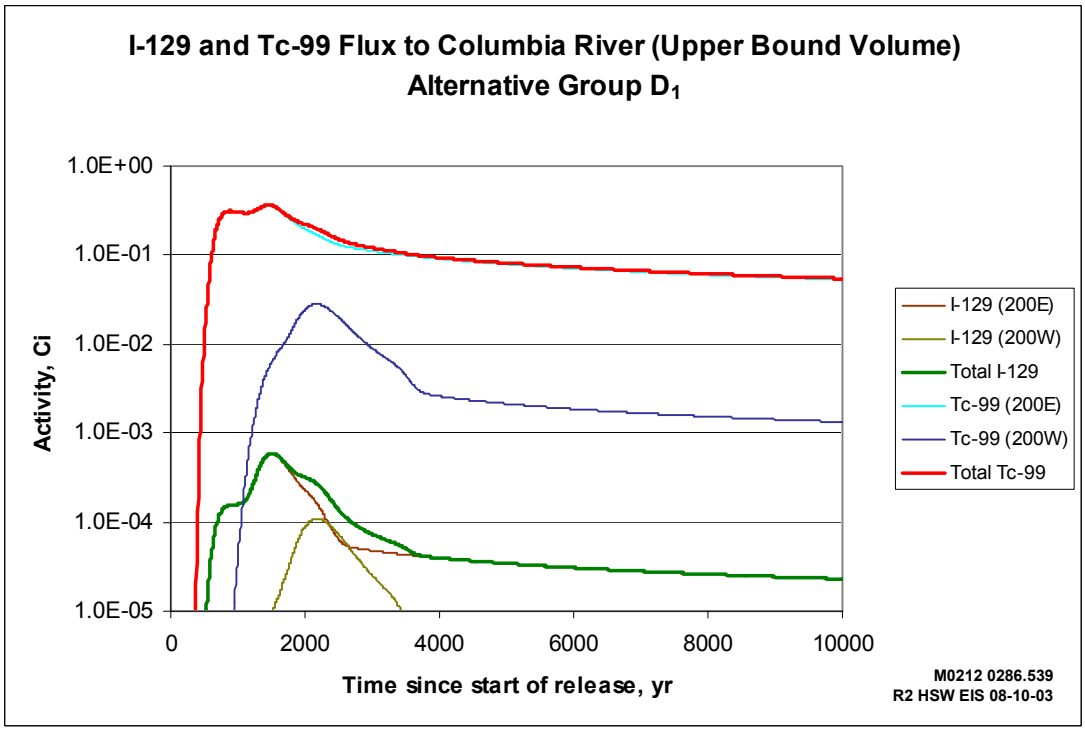
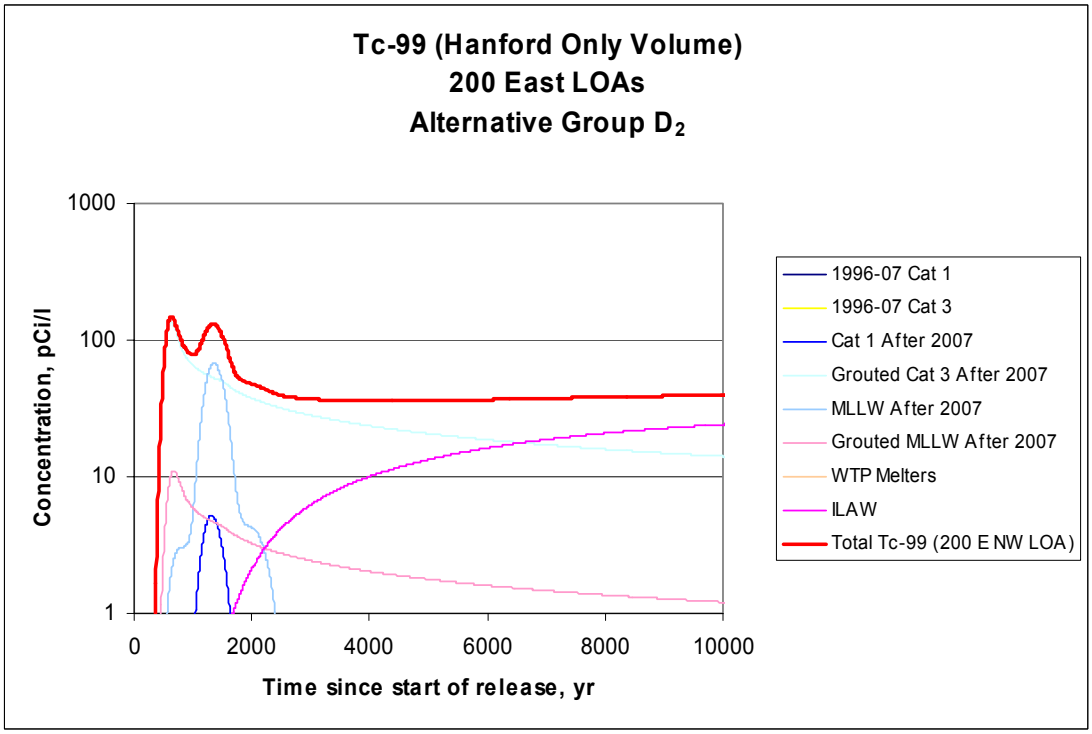


Figure G.50. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group D_1 – Upper Bound Volume Wastes Disposed of After 1995)



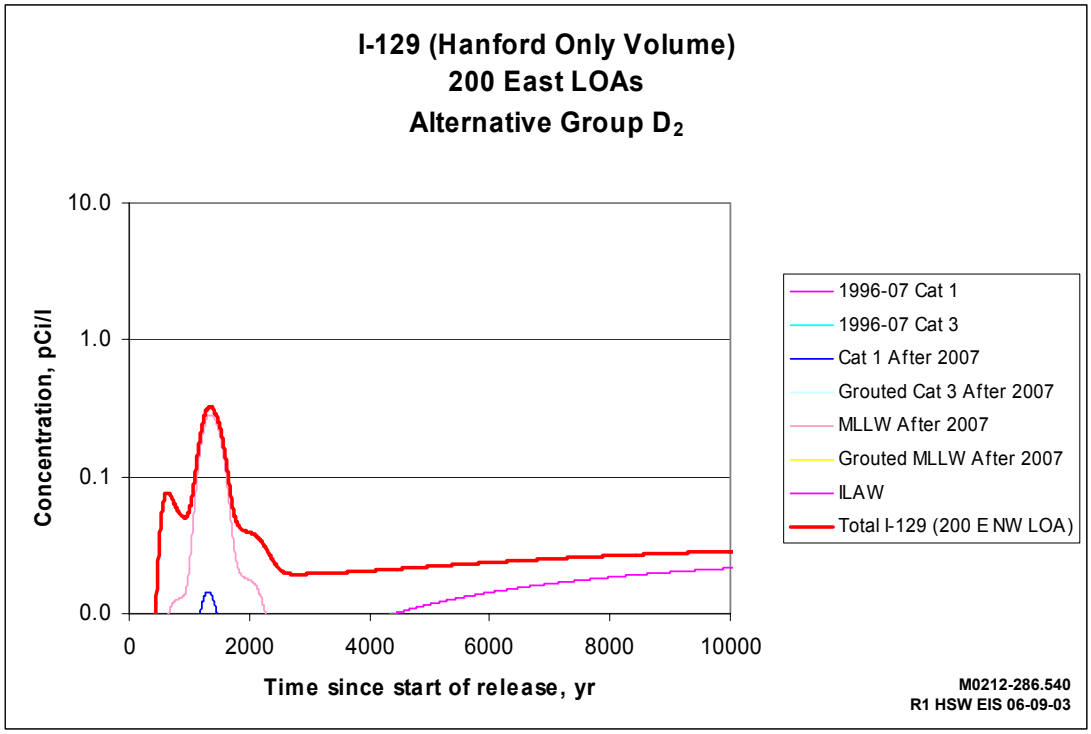
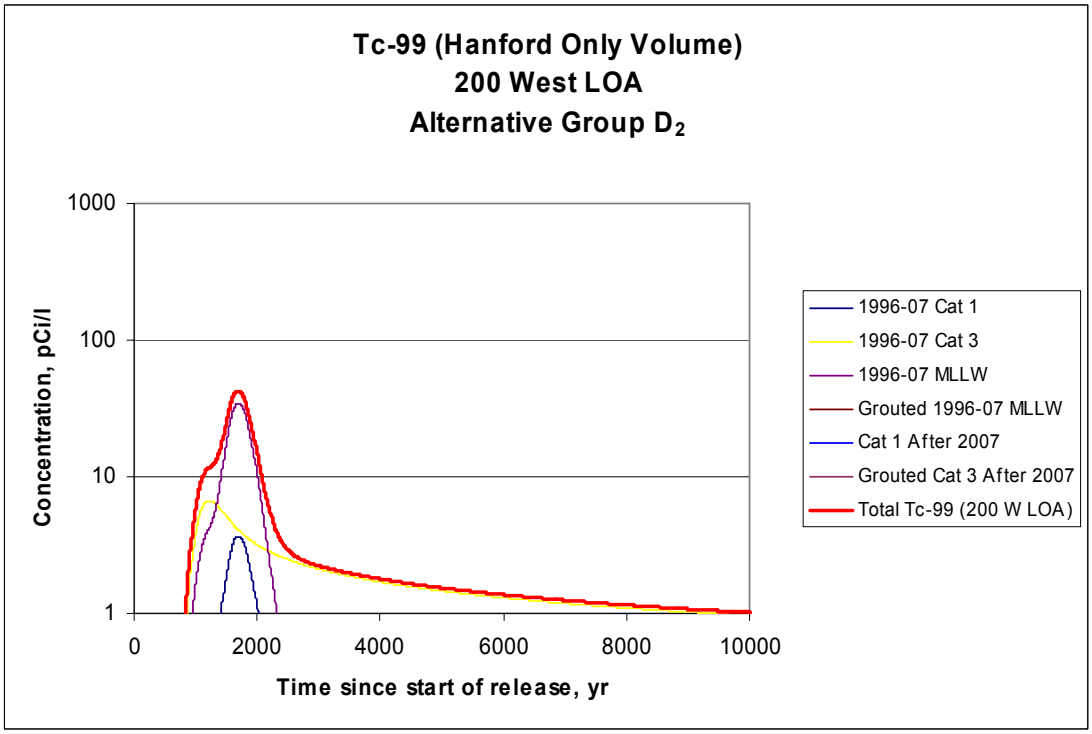


Figure G.51. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group D_2 – Hanford Only Wastes Disposed of After 1995)



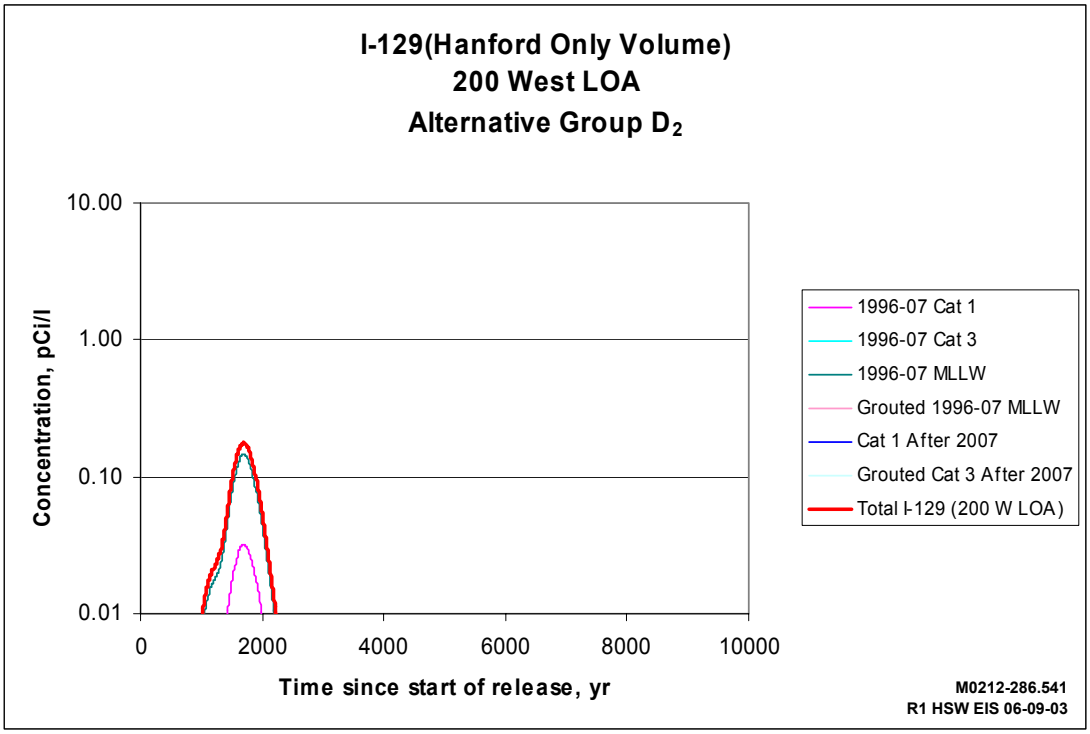
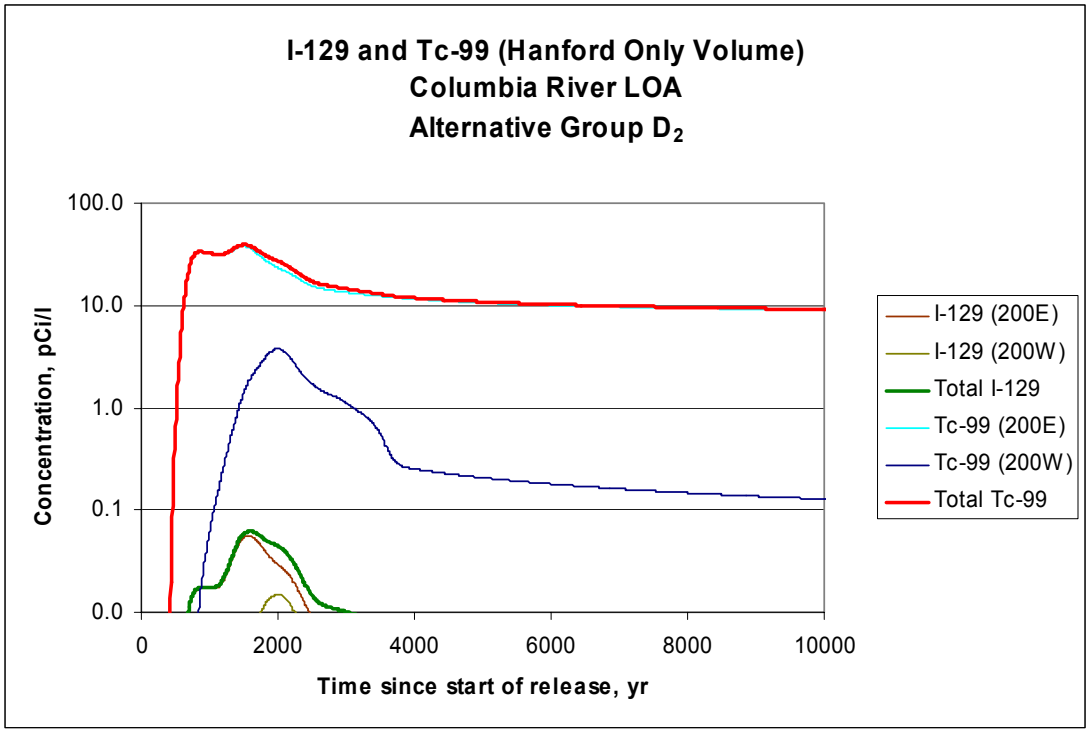


Figure G.52. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group D_2 – Hanford Only Wastes Disposed of After 1995)



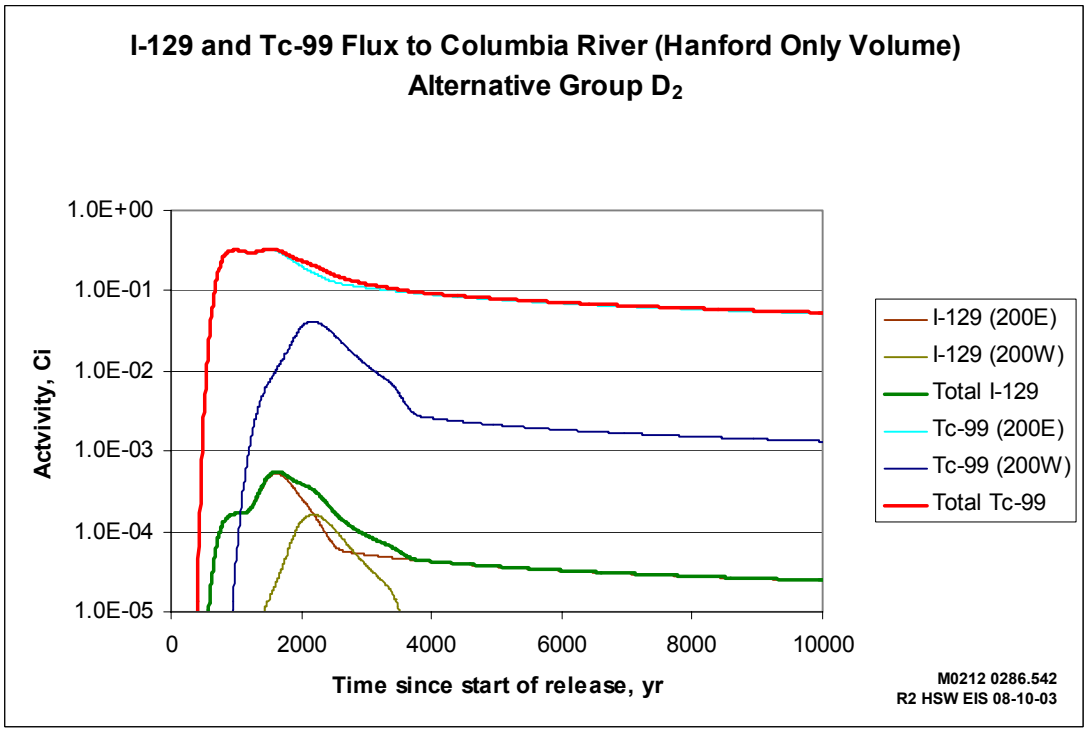
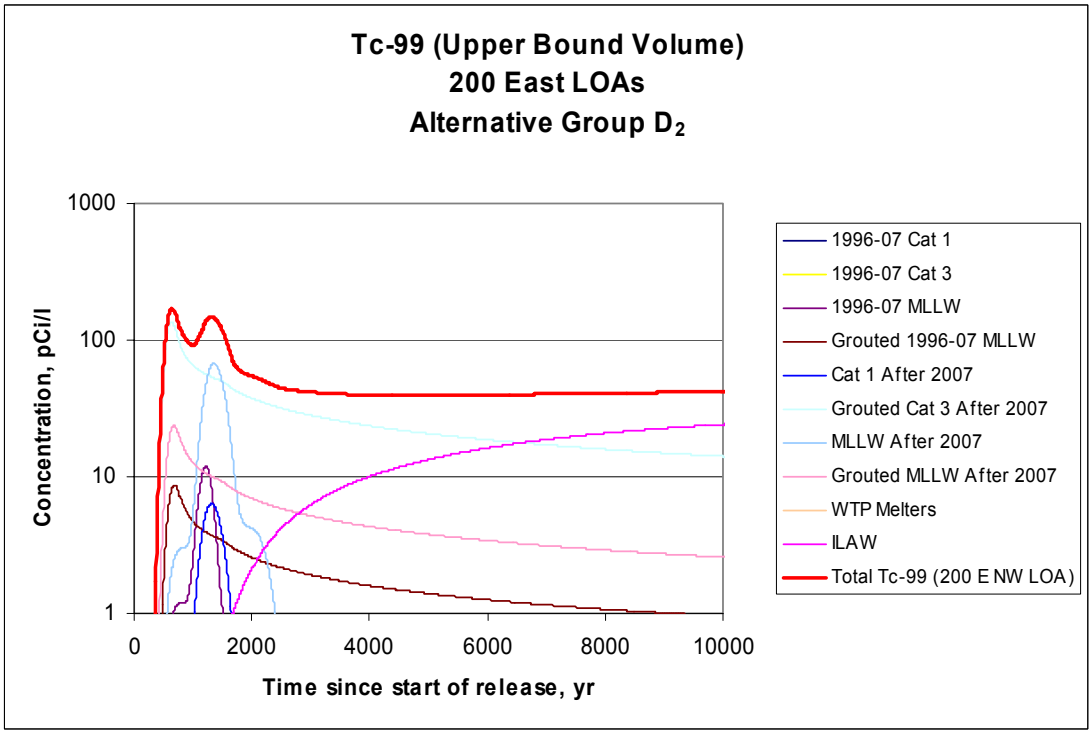


Figure G.53. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group D_2 – Hanford Only Wastes Disposed of After 1995)



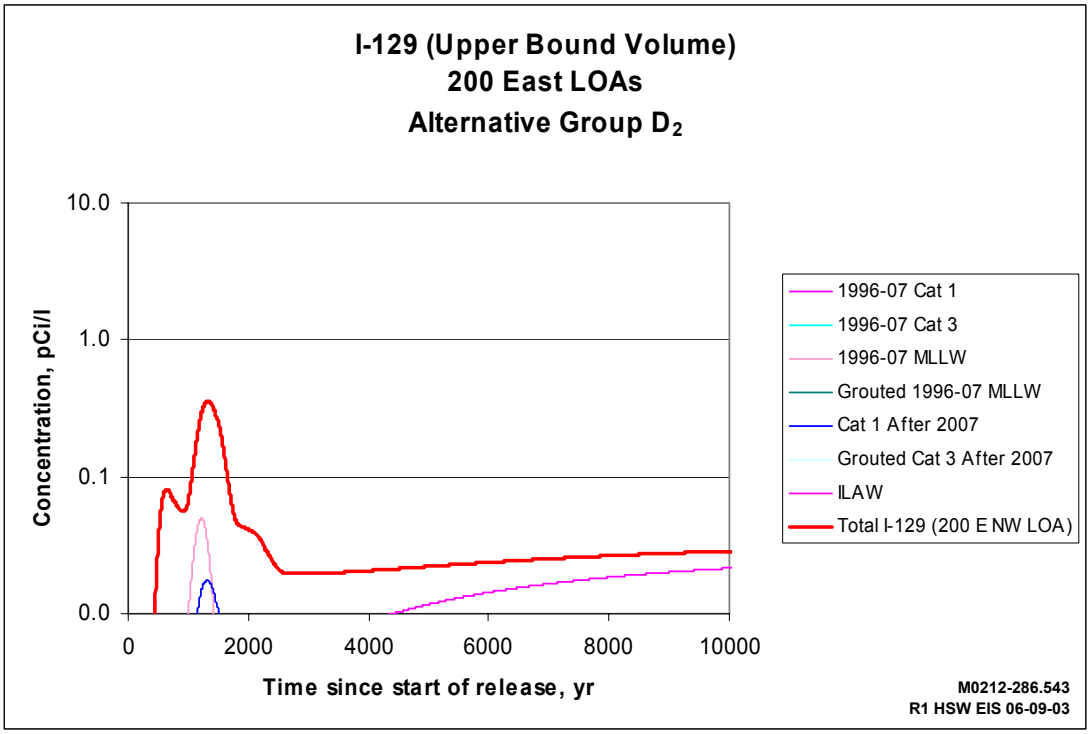
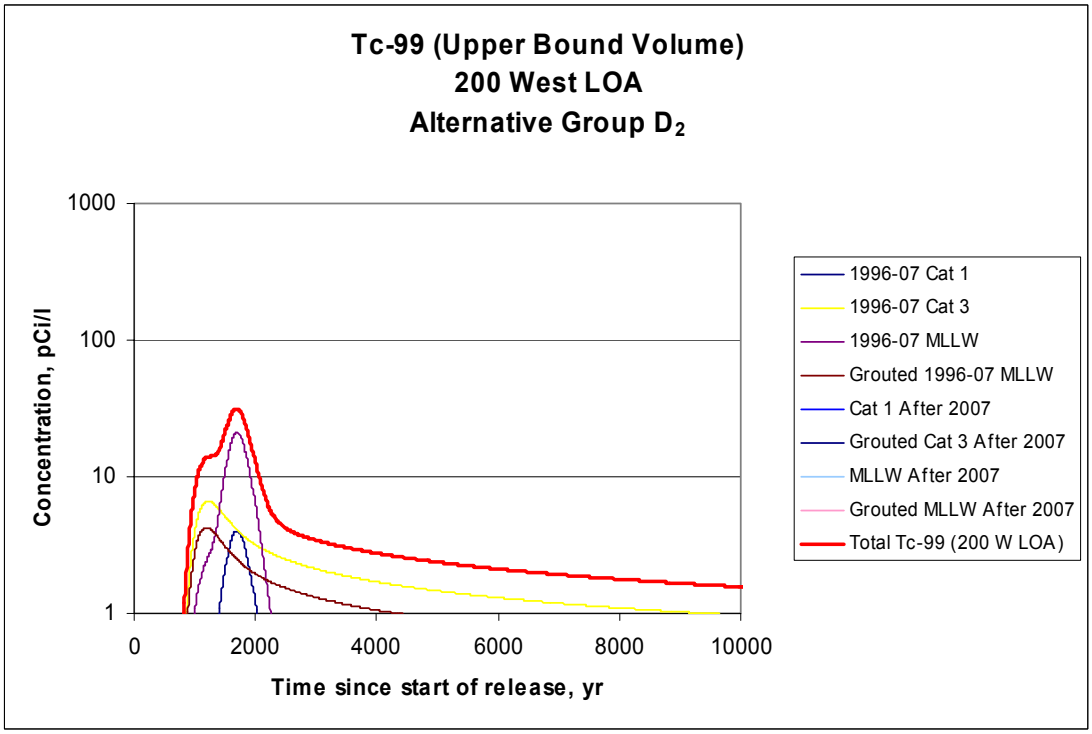


Figure G.54. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group D_2 – Upper Bound Volume Wastes Disposed of After 1995)



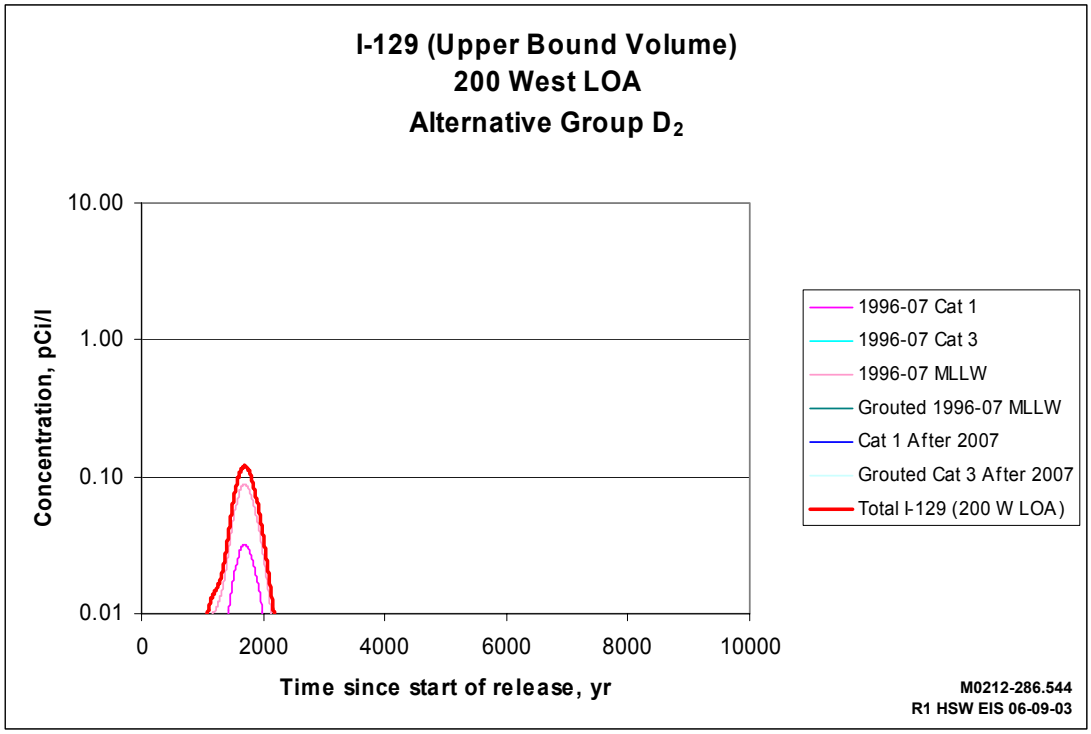
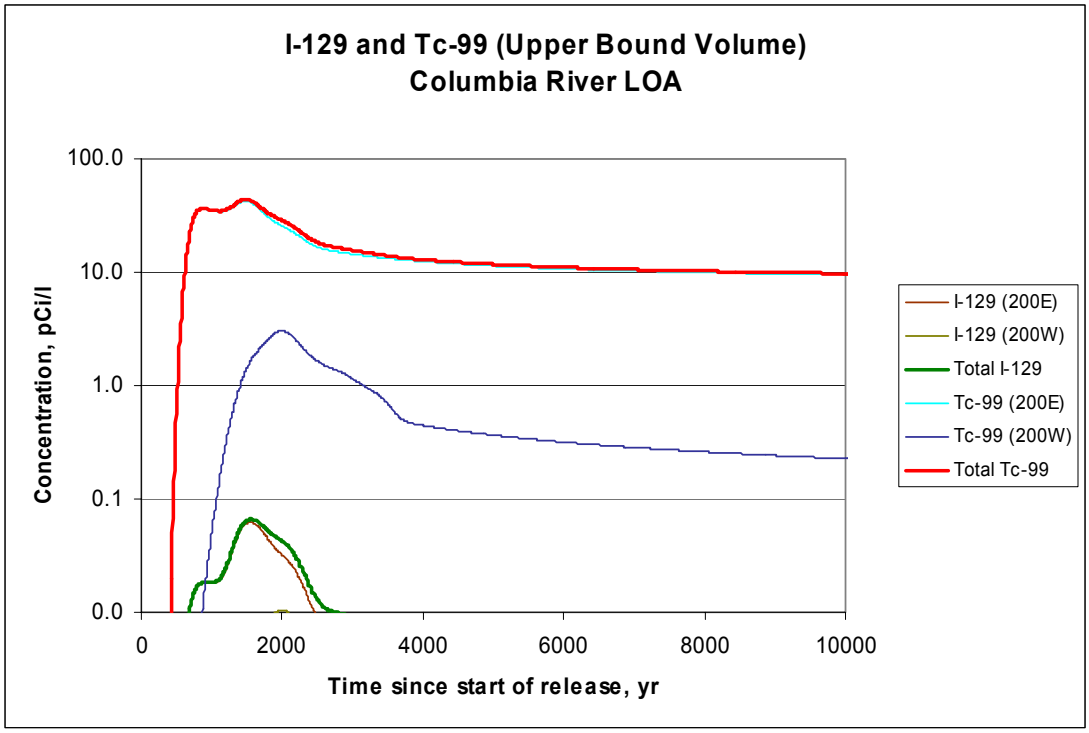


Figure G.55. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group D_2 – Upper Bound Volume Wastes Disposed of After 1995)



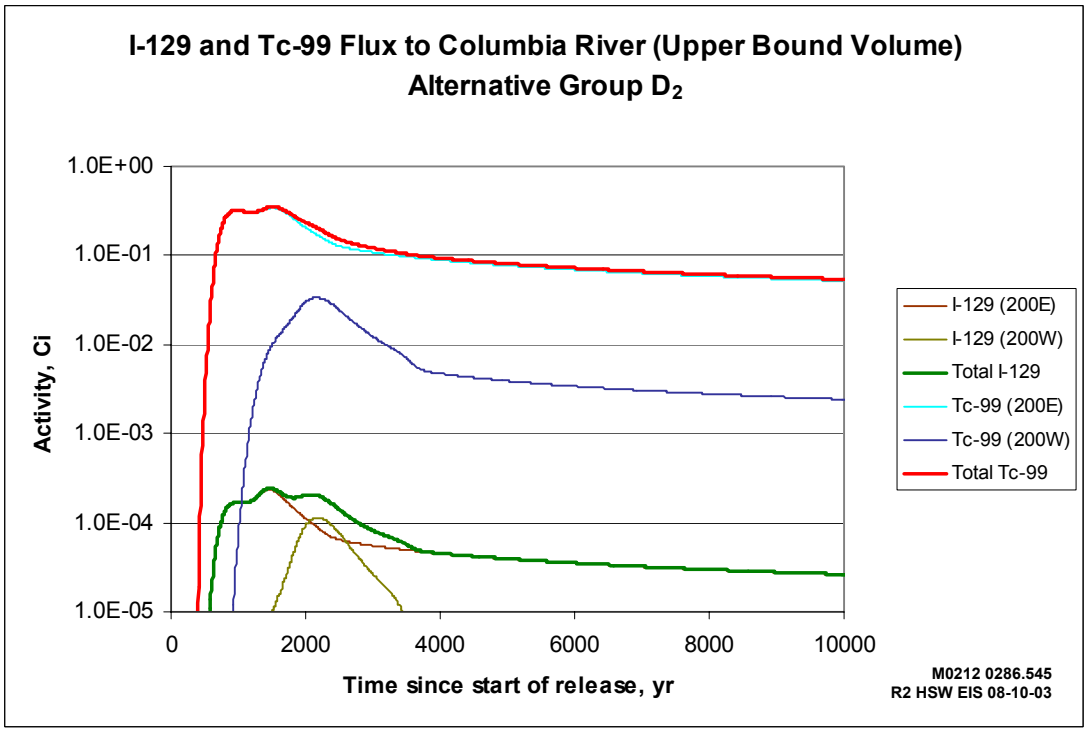
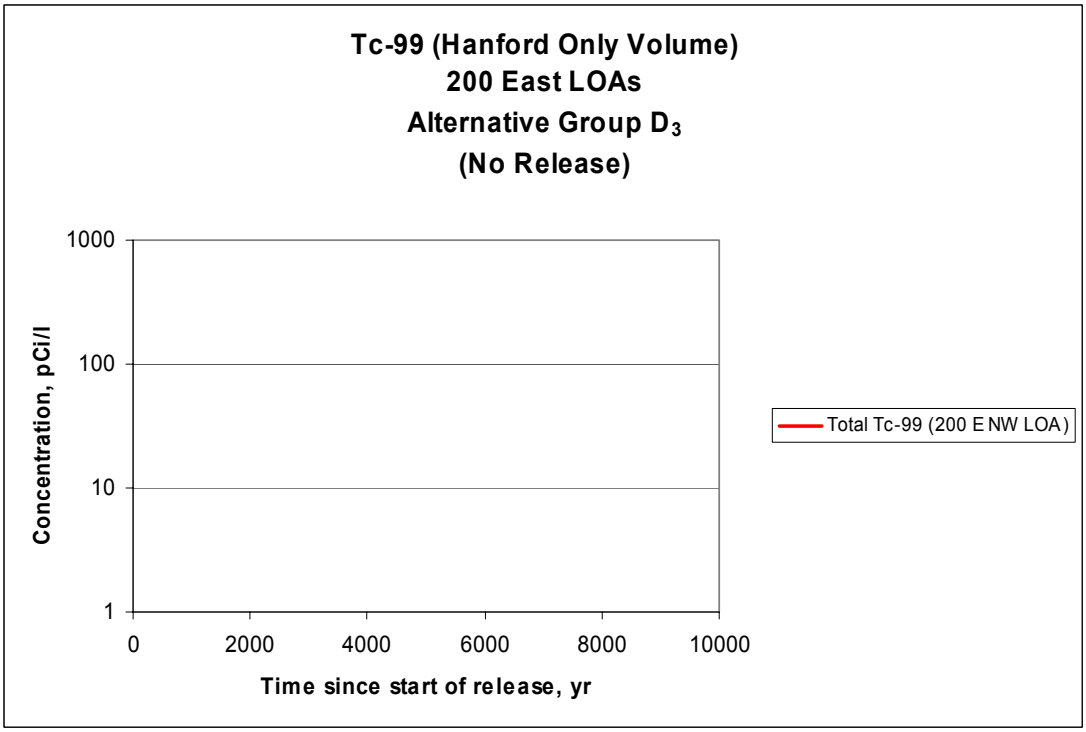


Figure G.56. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group D_2 – Upper Bound Volume Wastes Disposed of After 1995)



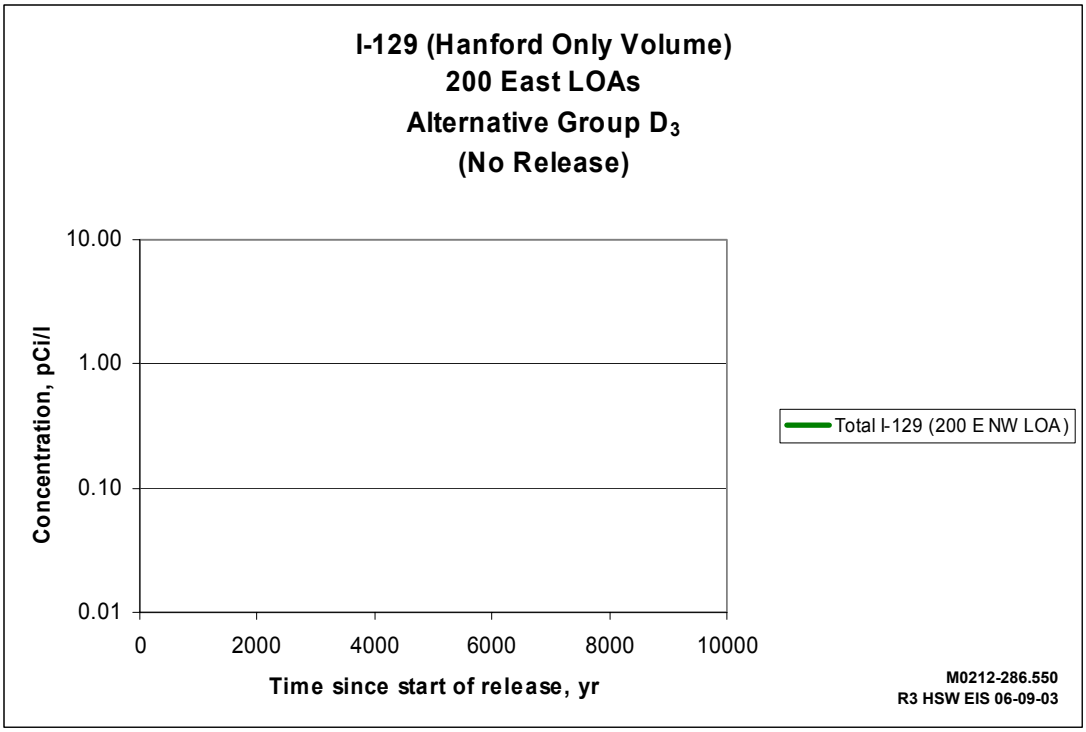
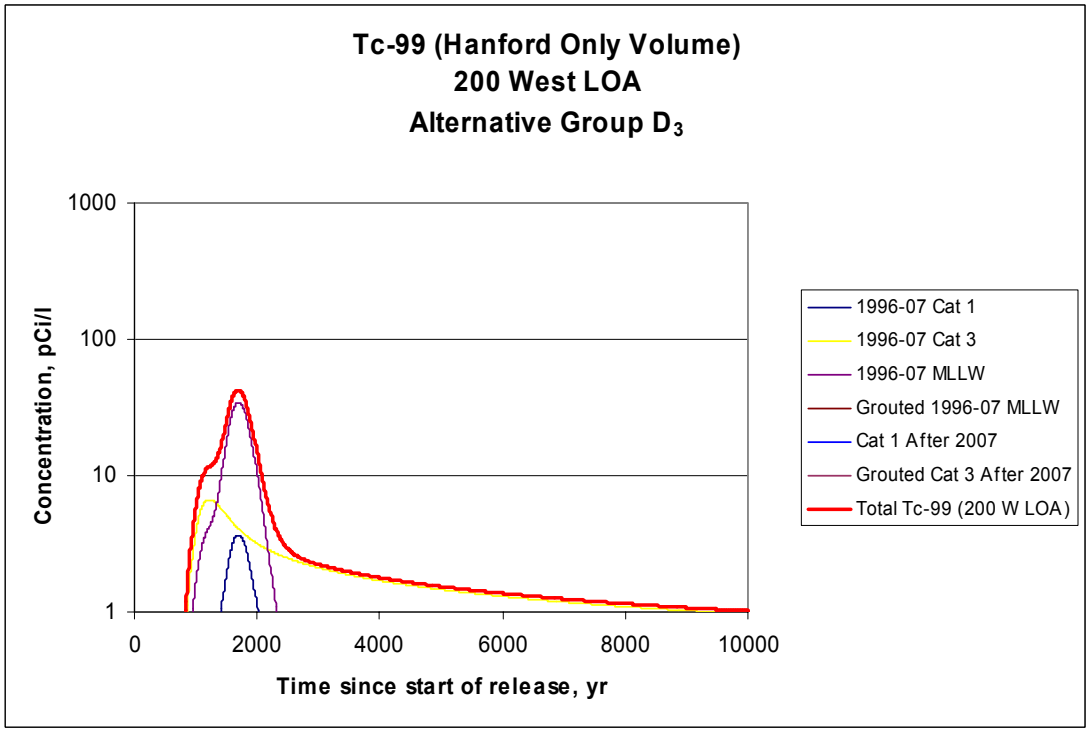


Figure G.57. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group D_3 – Hanford Only Wastes Disposed of After 1995)



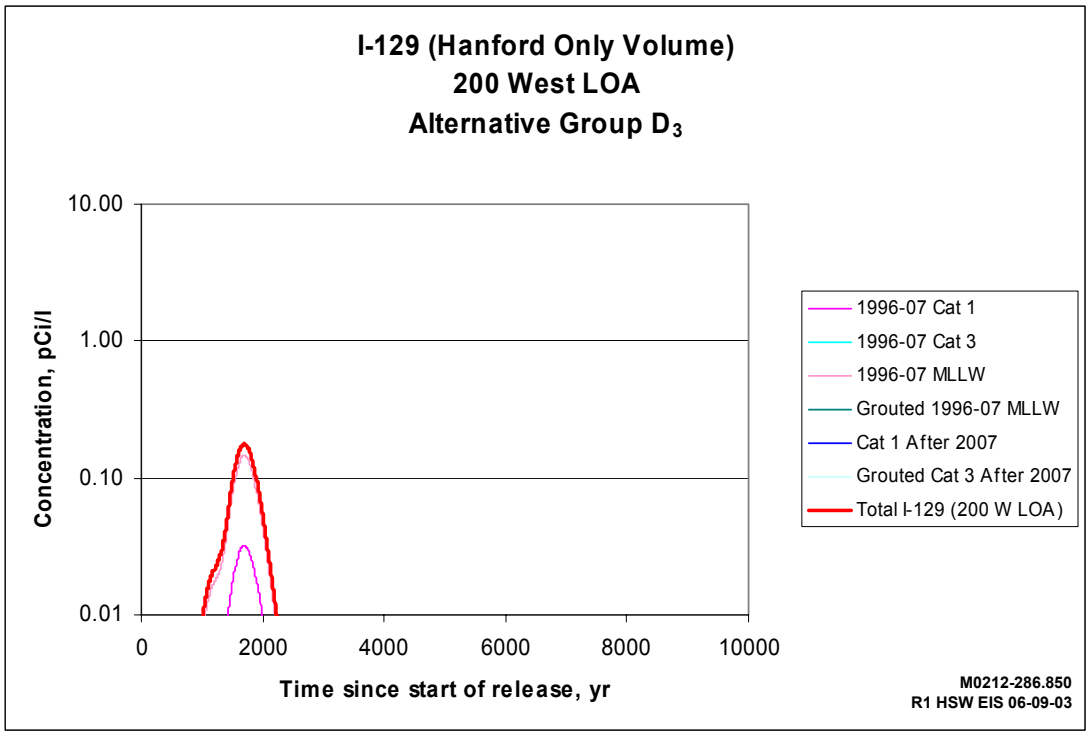
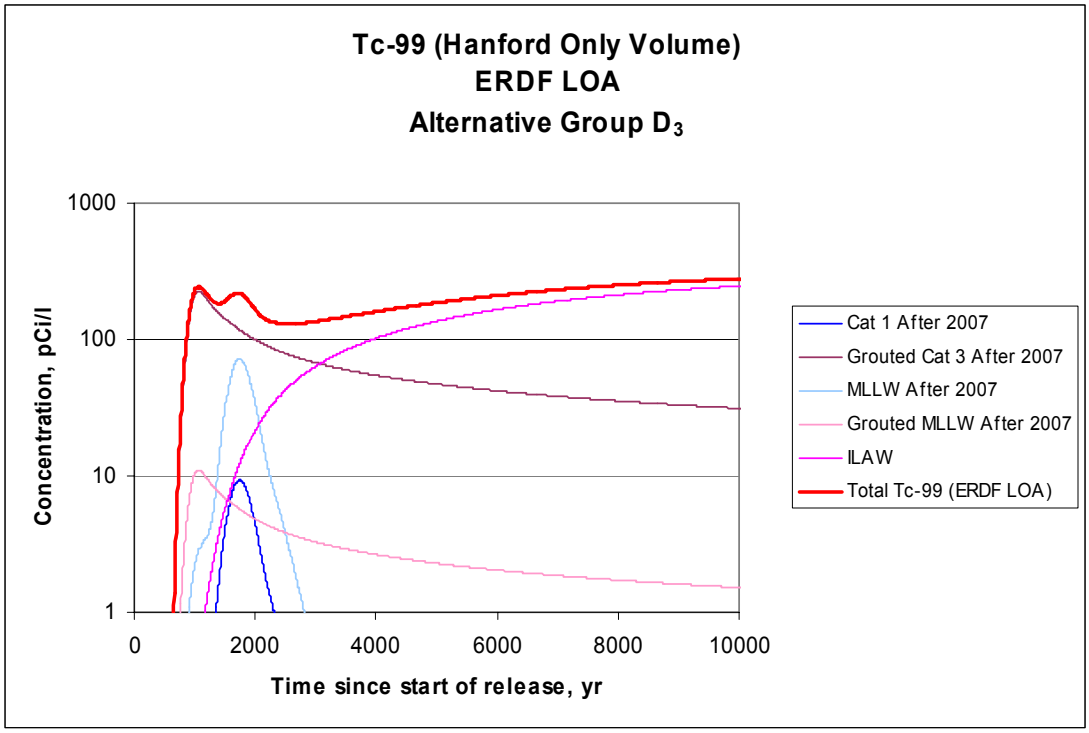


Figure G.58. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group D_3 – Hanford Only Wastes Disposed of After 1995)



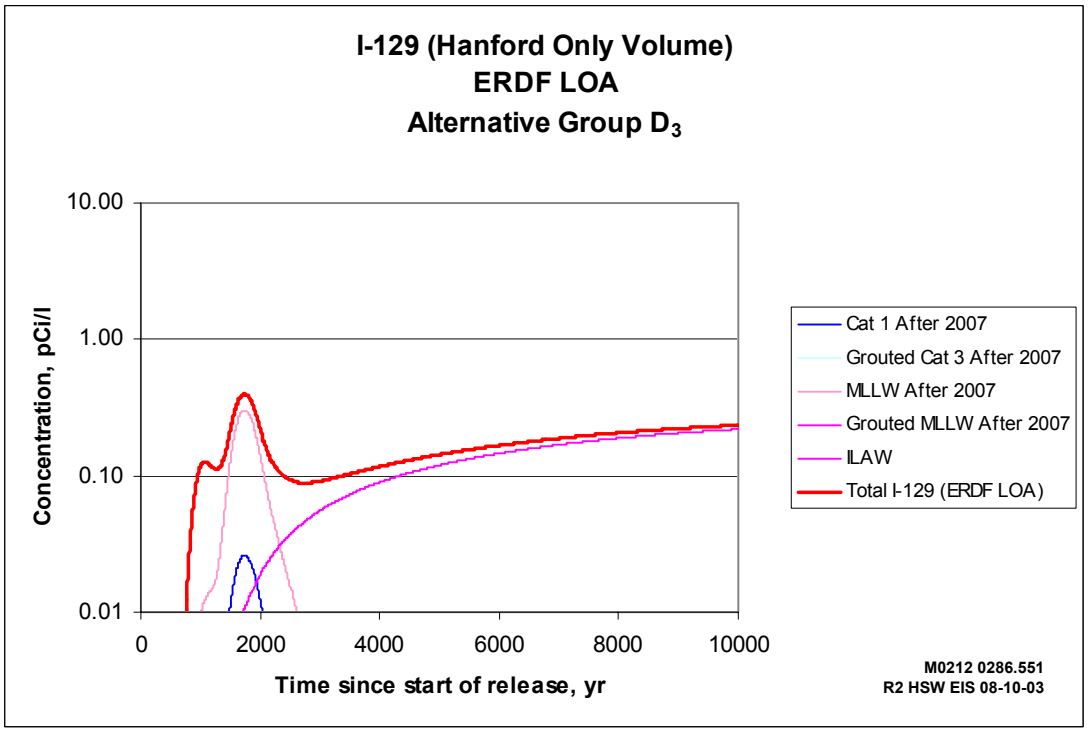
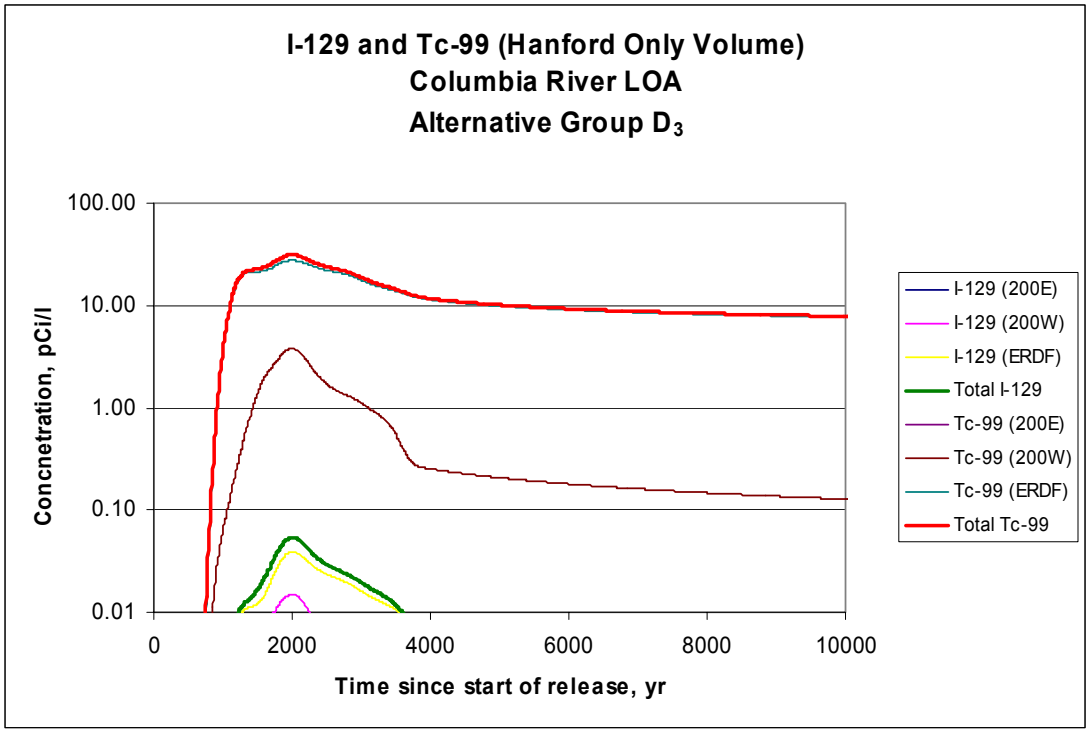


Figure G.59. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (ERDF) (Alternative Group D_3 – Hanford Only Wastes Disposed of After 1995)



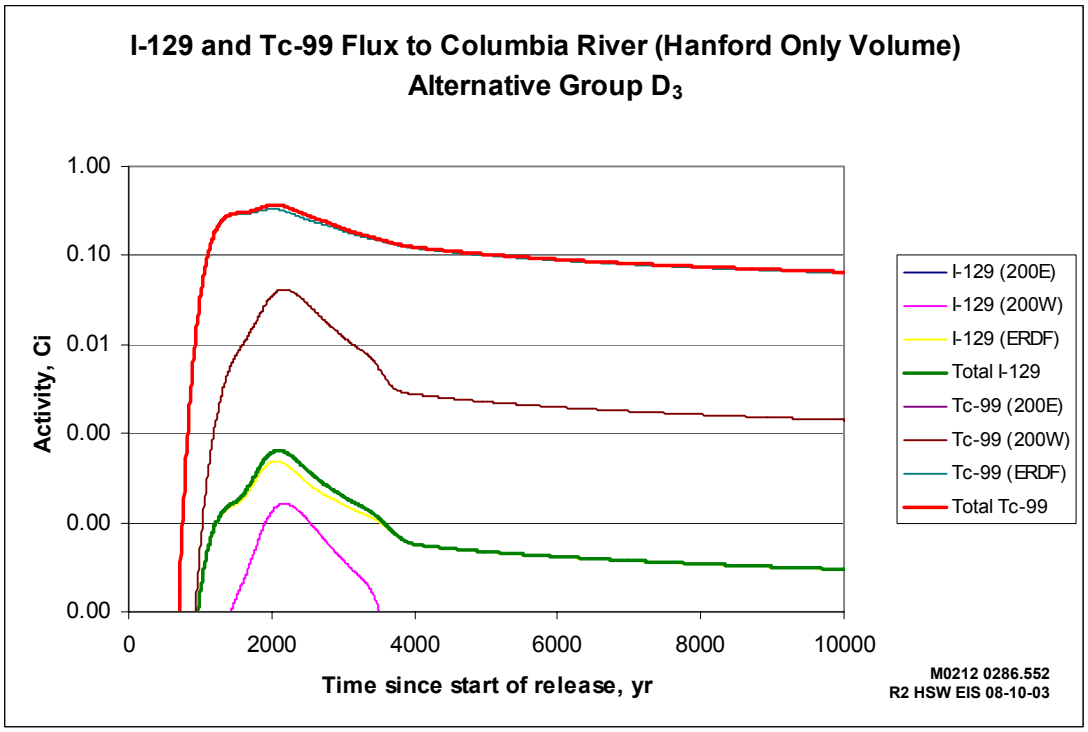
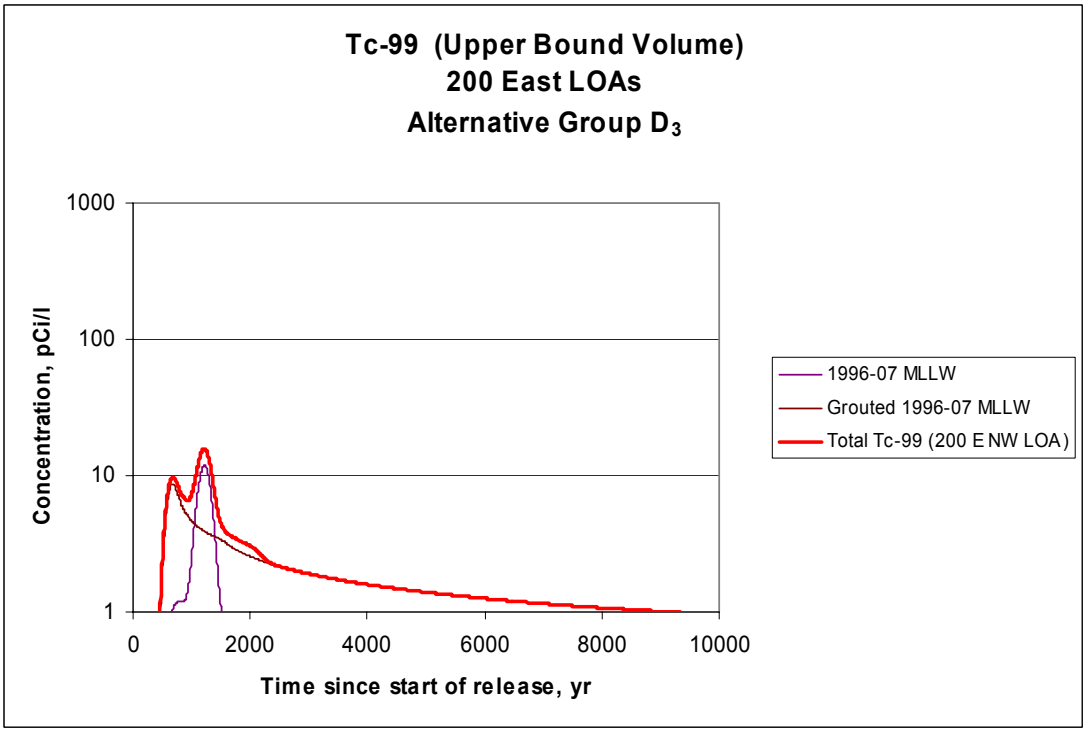


Figure G.60. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group D_3 – Hanford Only Wastes Disposed of After 1995)



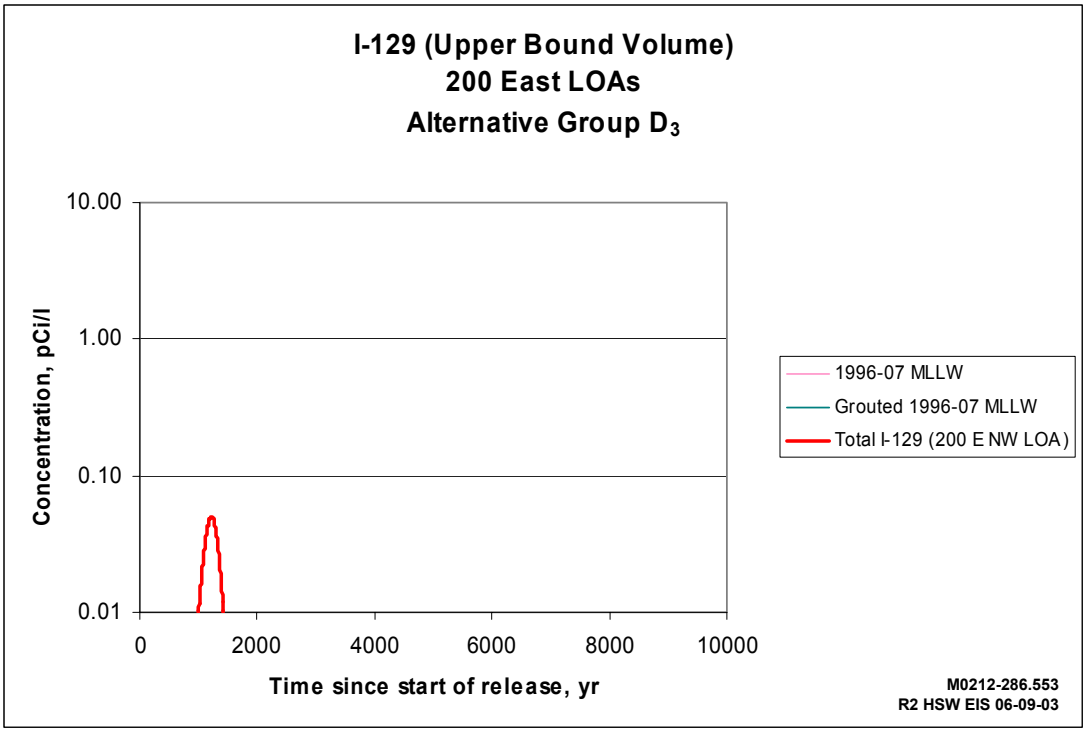
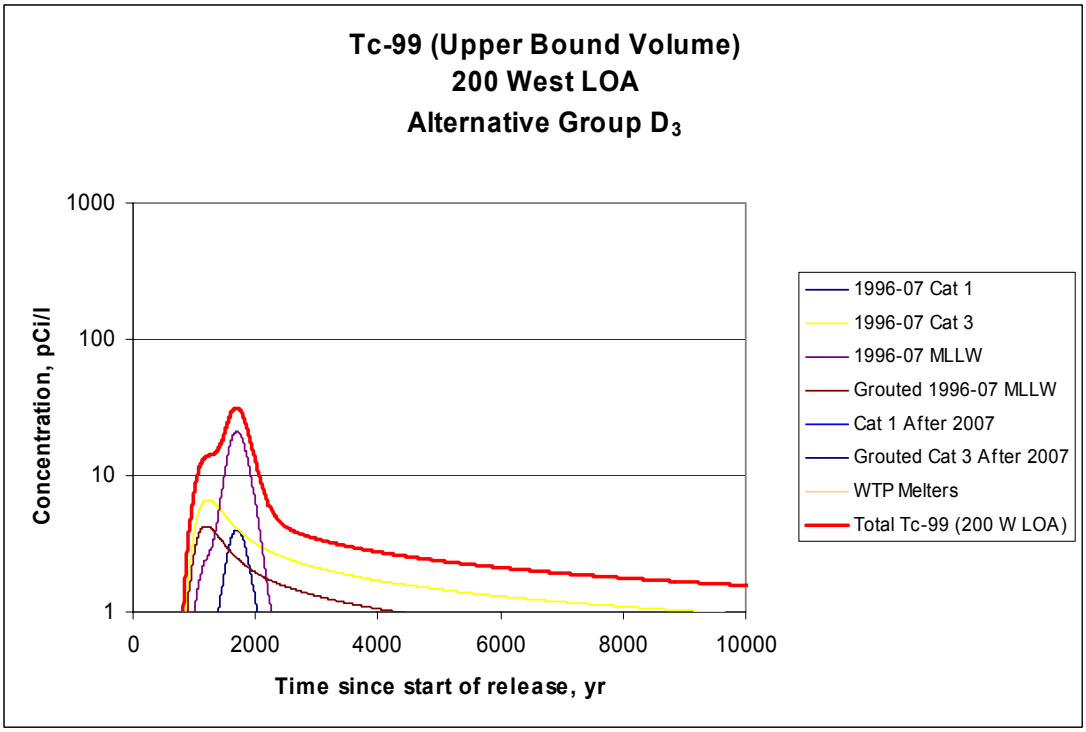


Figure G.61. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group D_3 – Upper Bound Volume Wastes Disposed of After 1995)



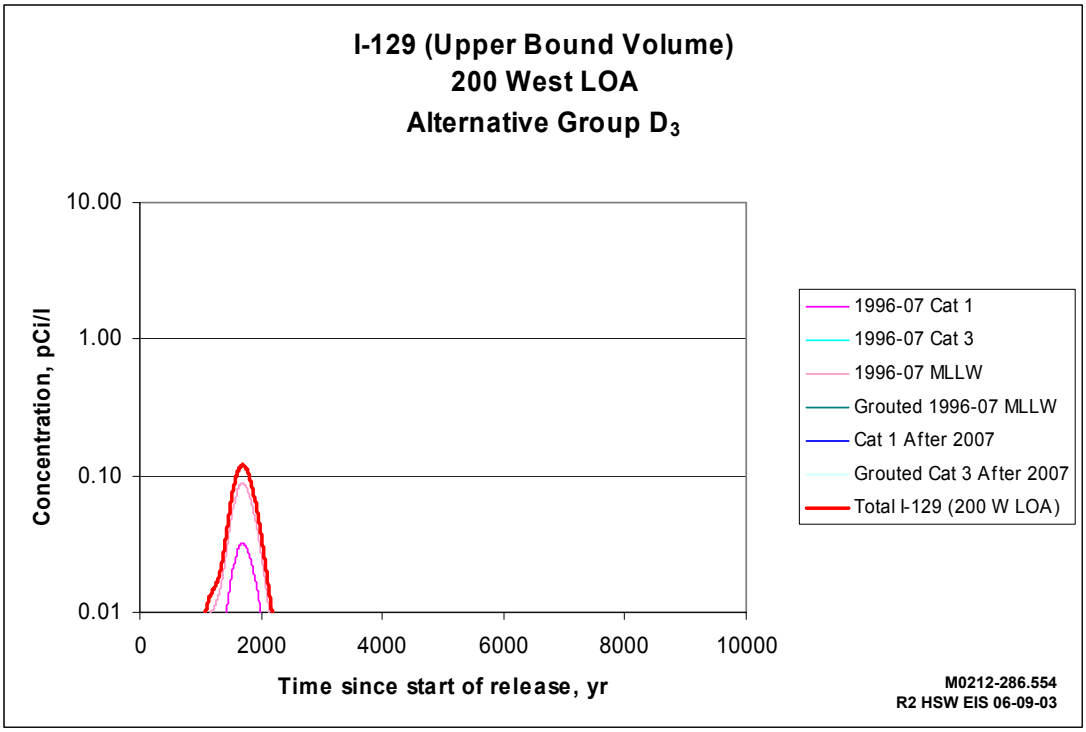
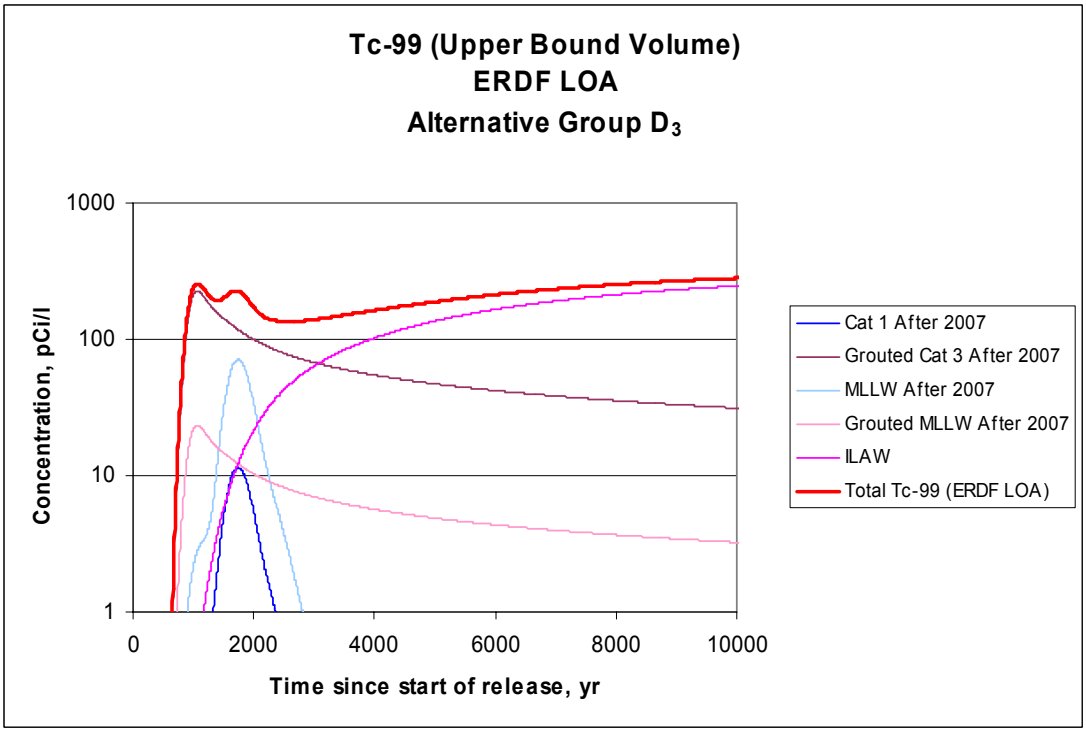


Figure G.62. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group D_3 – Upper Bound Volume Wastes Disposed of After 1995)



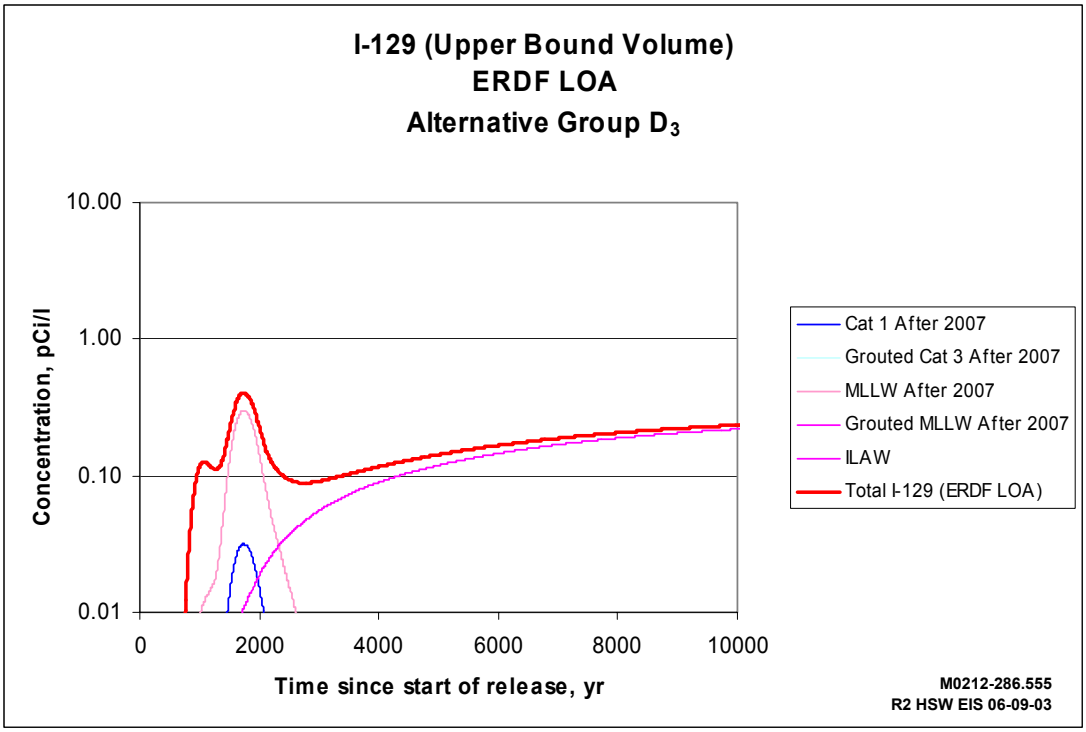
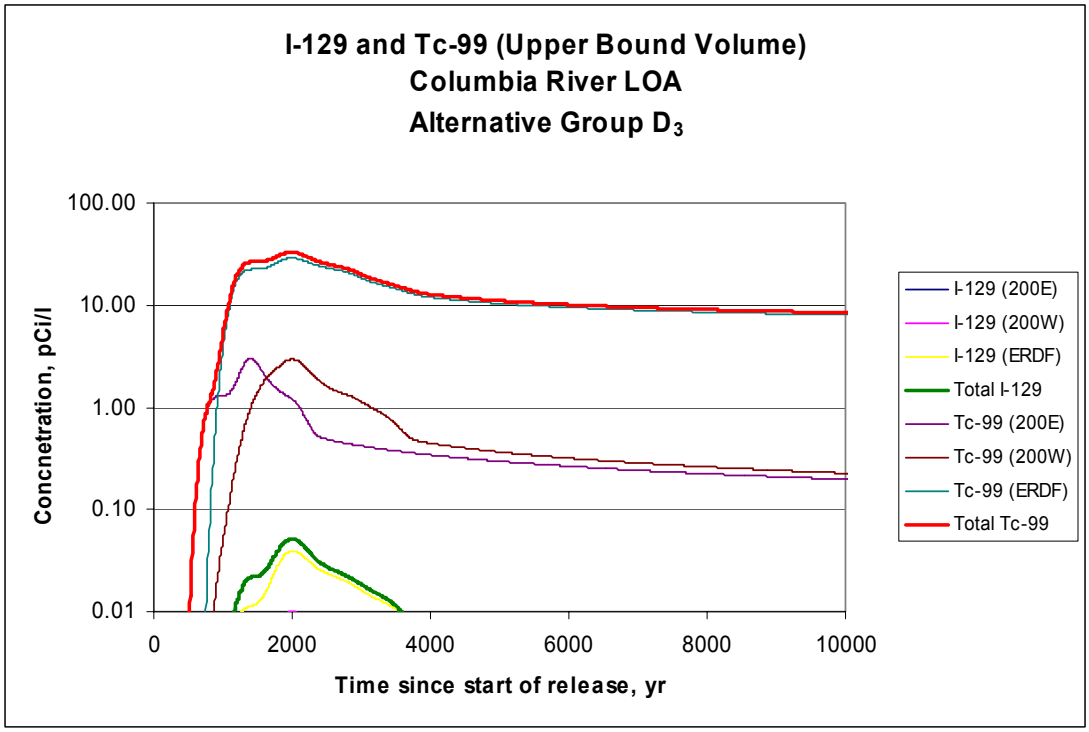


Figure G.63. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (ERDF) (Alternative Group D_3 – Upper Bound Volume Wastes Disposed of After 1995)



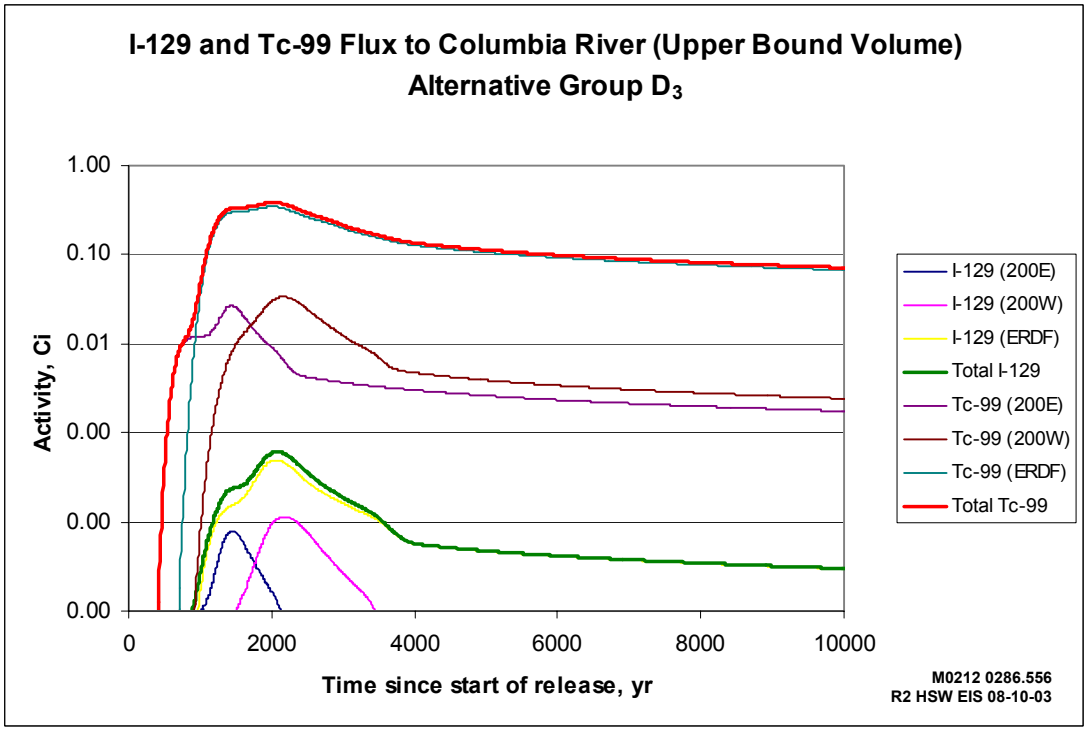
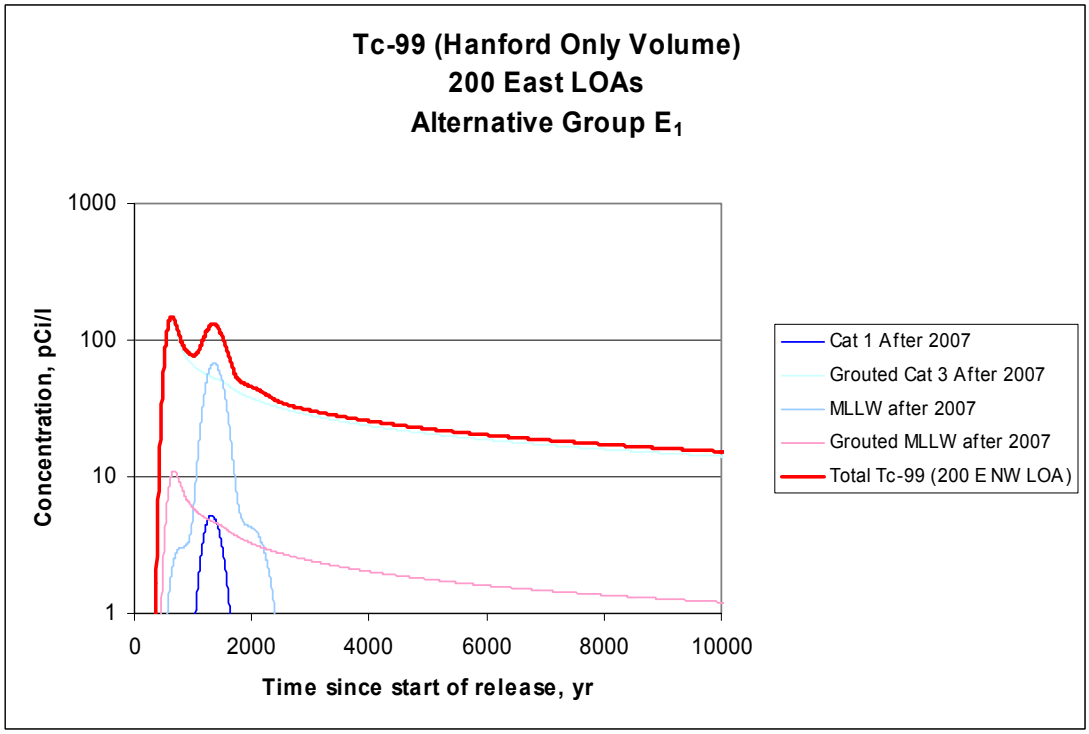


Figure G.64. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group D_3 – Upper Bound Volume Wastes Disposed of After 1995)



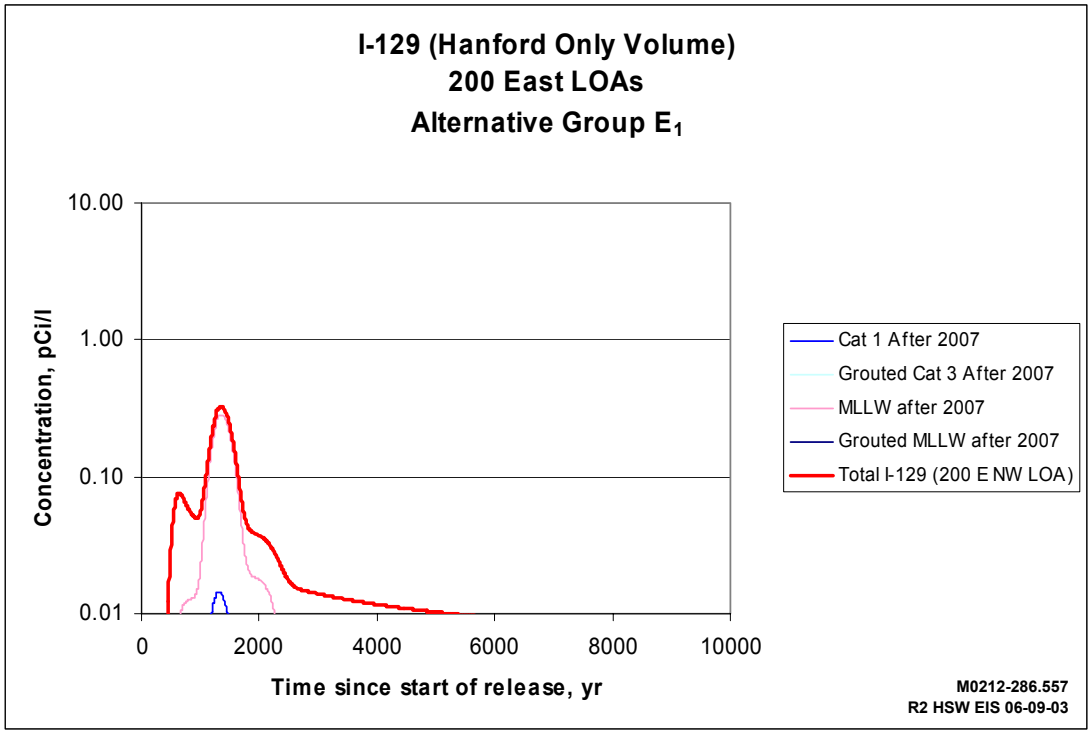
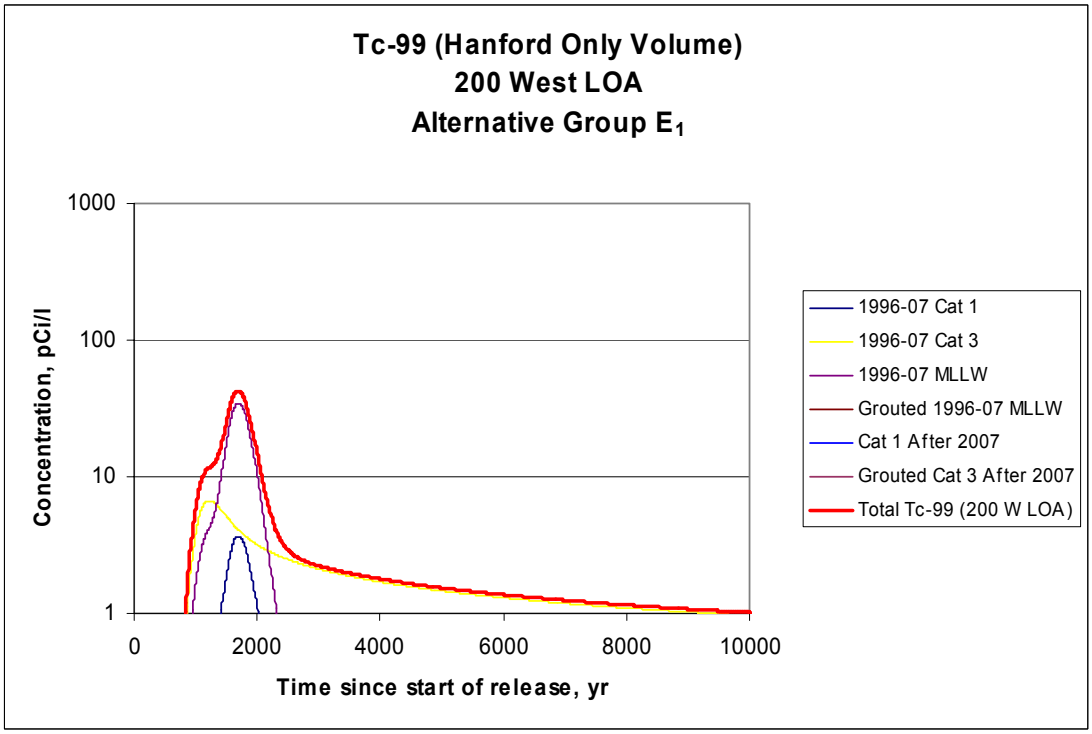


Figure G.65. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group E_1 – Hanford Only Wastes Disposed of After 1995)



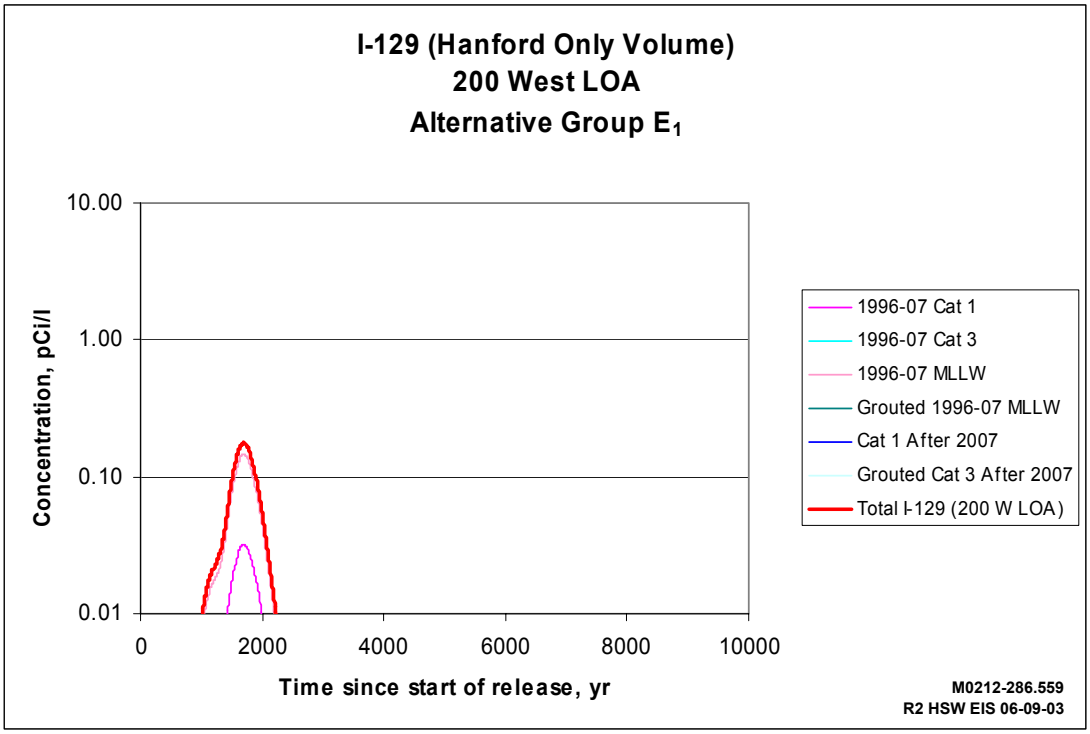
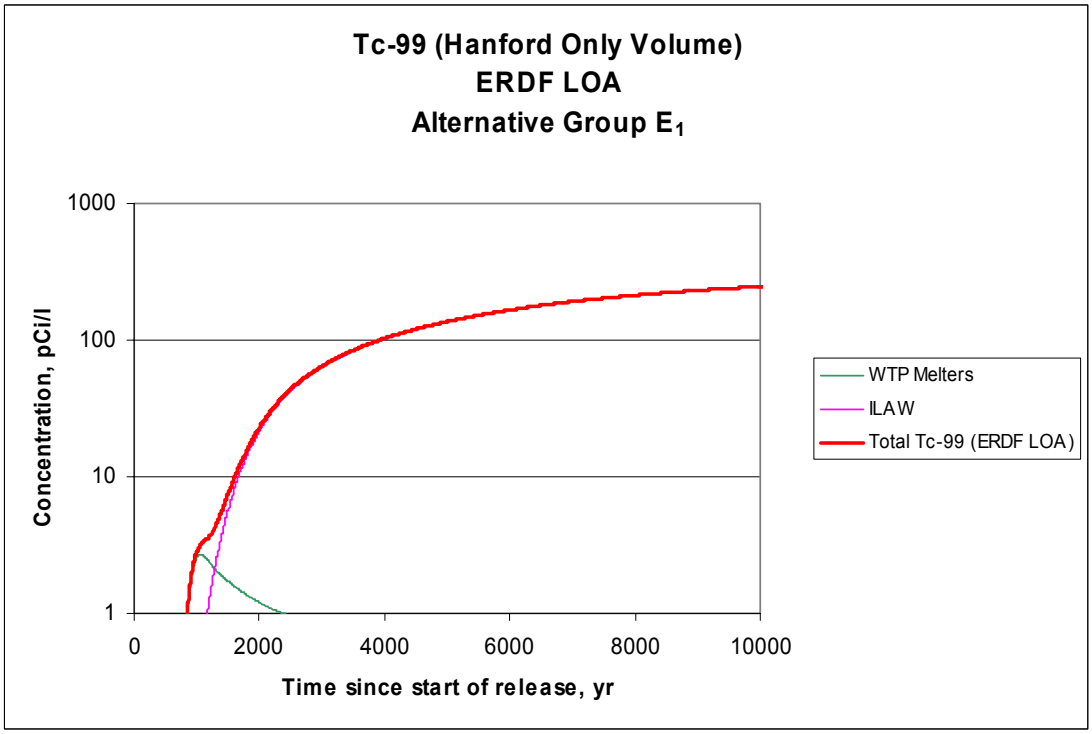


Figure G.66. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group E_1 – Hanford Only Wastes Disposed of After 1995)



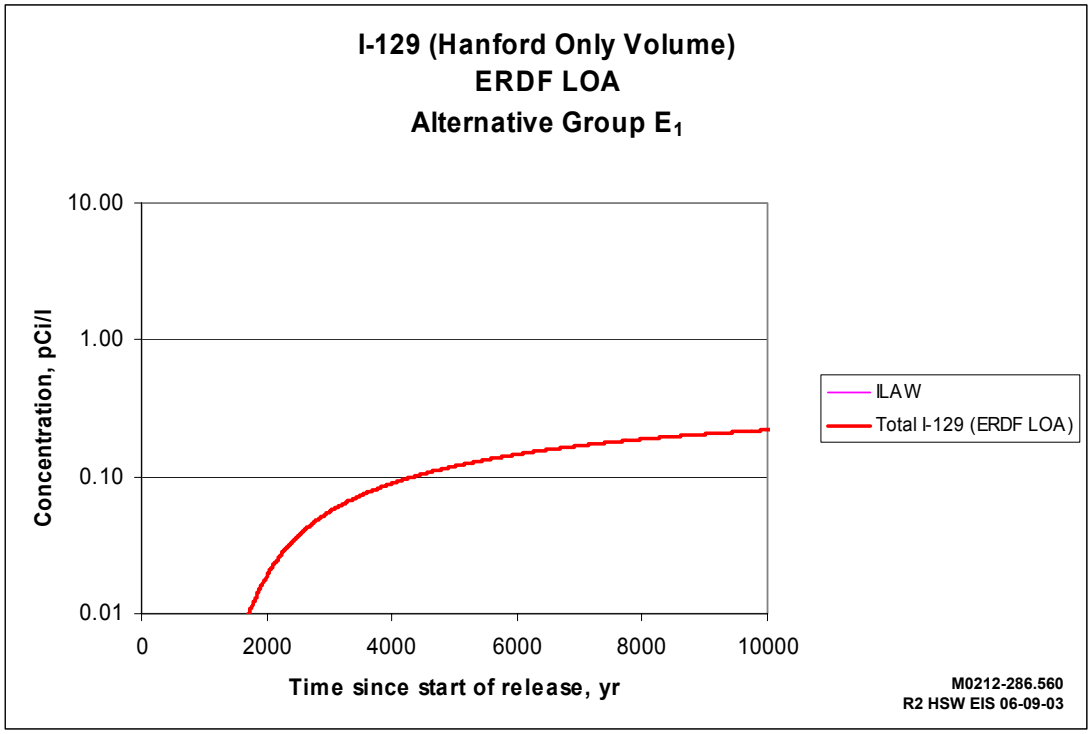
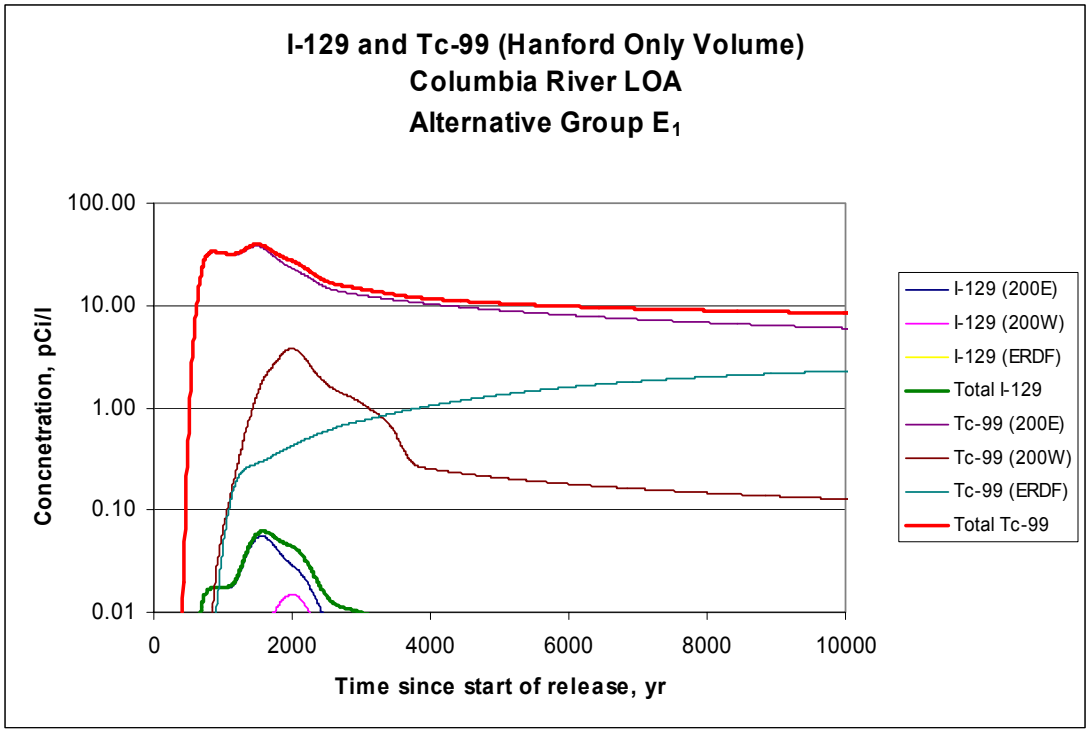


Figure G.67. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (ERDF) (Alternative Group E_1 – Hanford Only Wastes Disposed of After 1995)



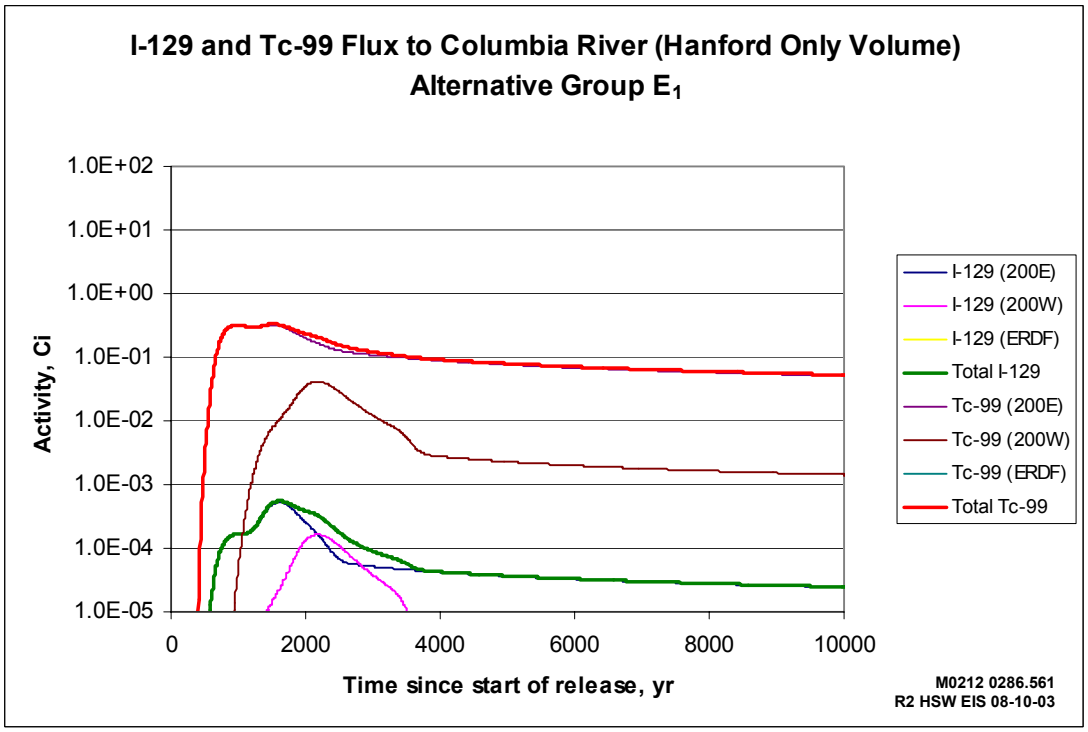
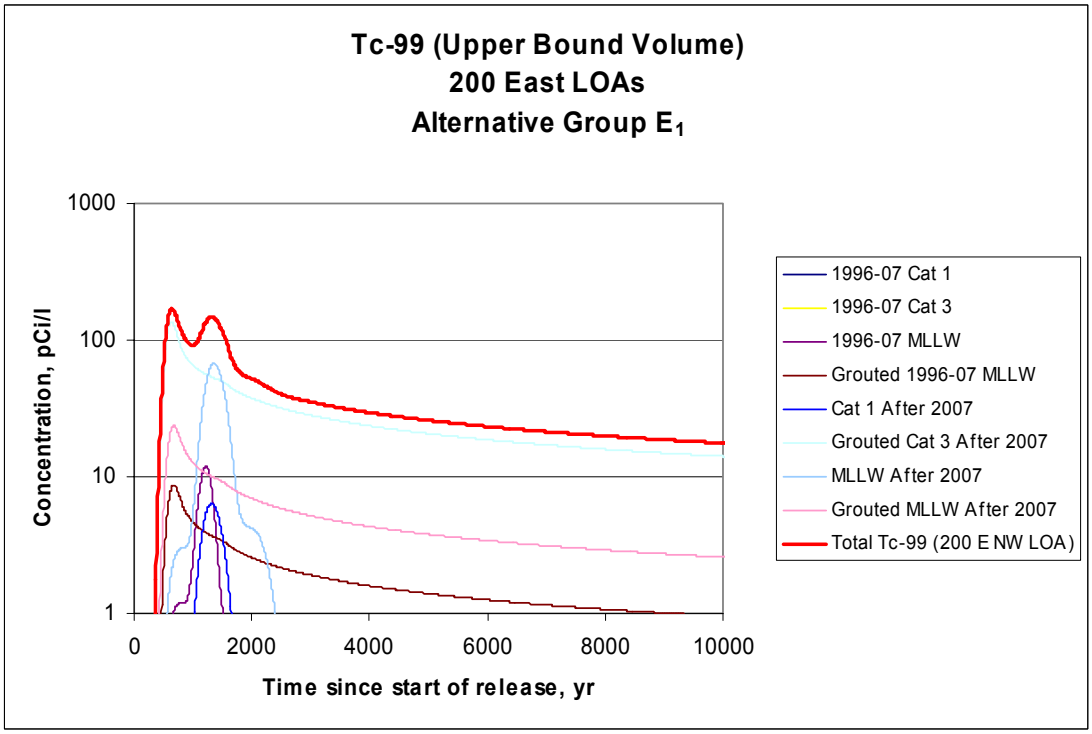


Figure G.68. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group E_1 – Hanford Only Wastes Disposed of After 1995)



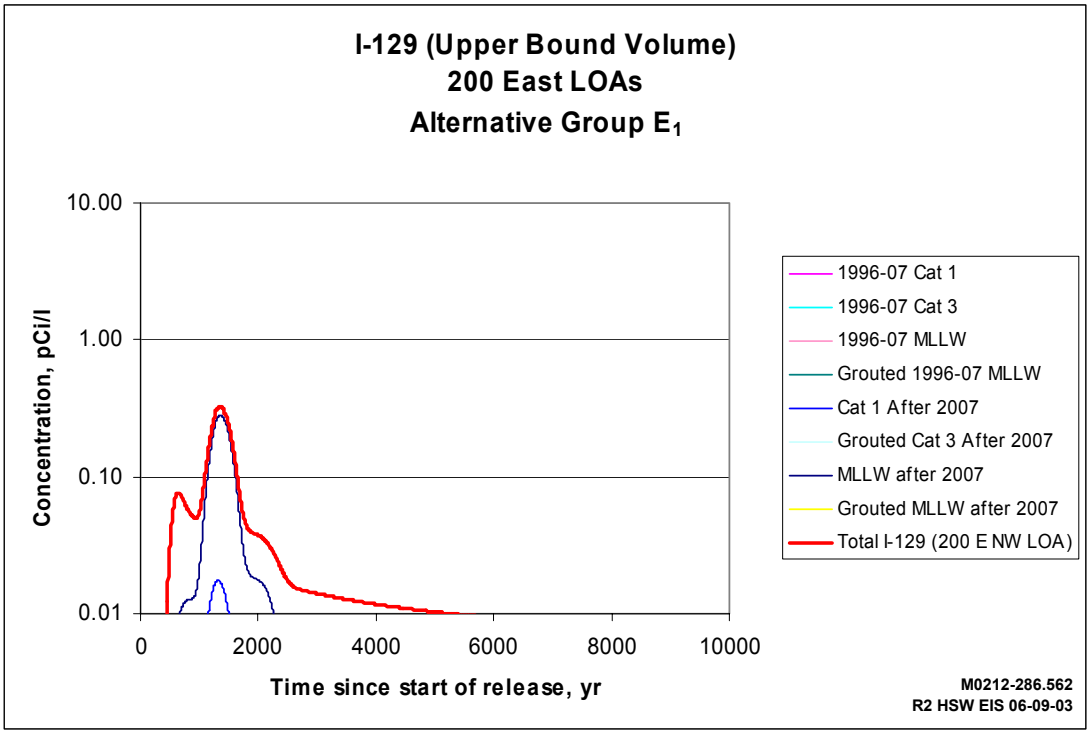
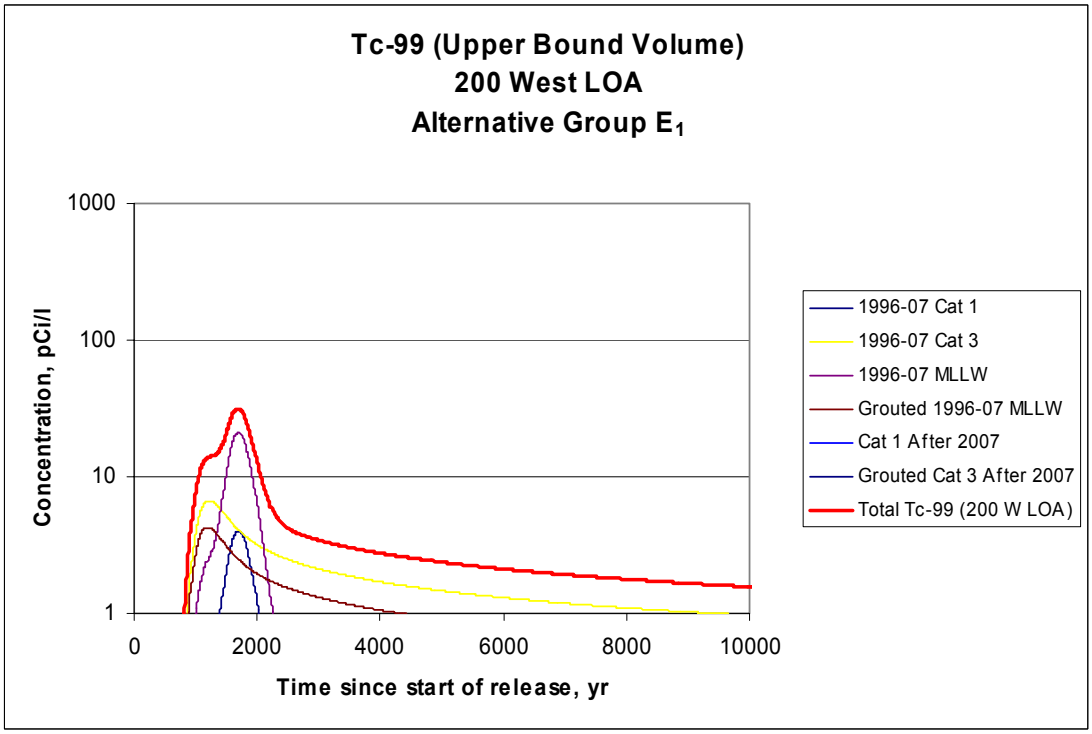


Figure G.69. Tc-99 and I-129 Concentration Profiles at 1-km Lines of Analysis (200 East) (Alternative Group E_1 – Upper Bound Volume Wastes Disposed of After 1995)



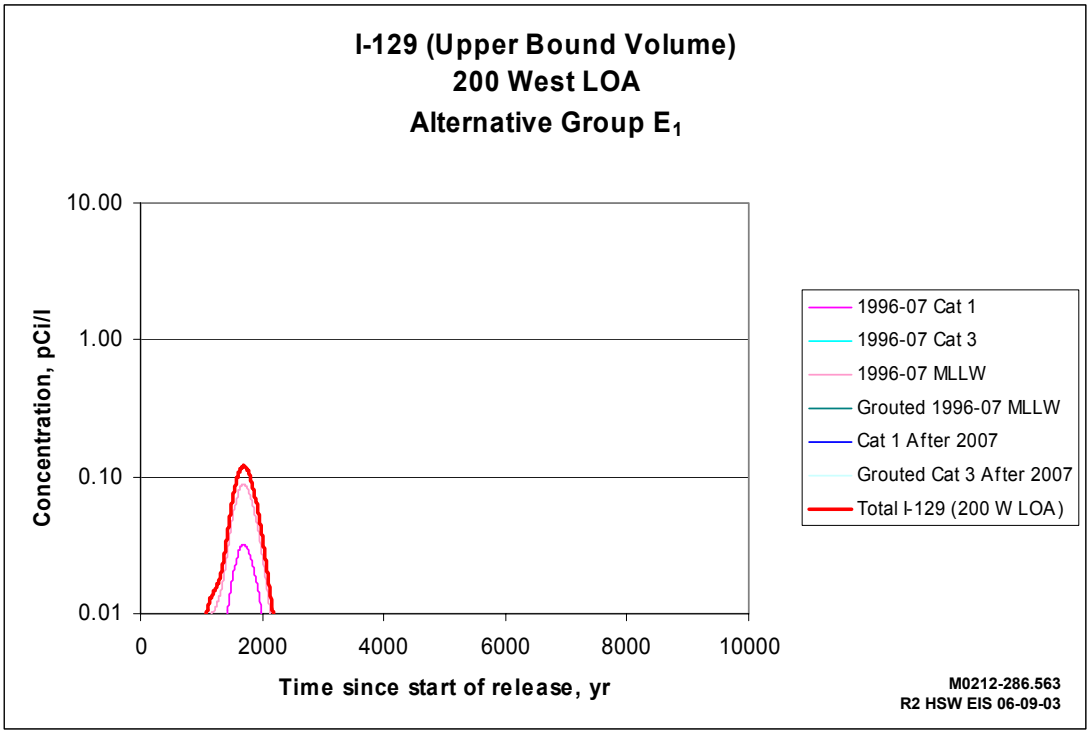
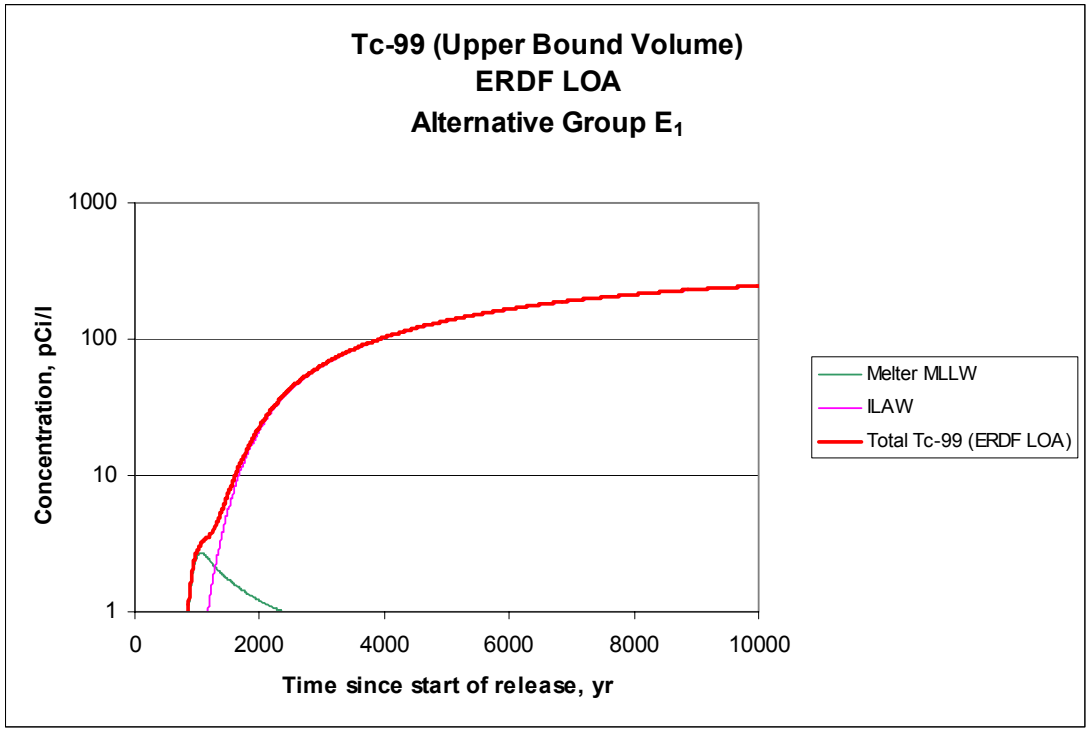


Figure G.70. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group E_1 – Upper Bound Volume Wastes Disposed of After 1995)



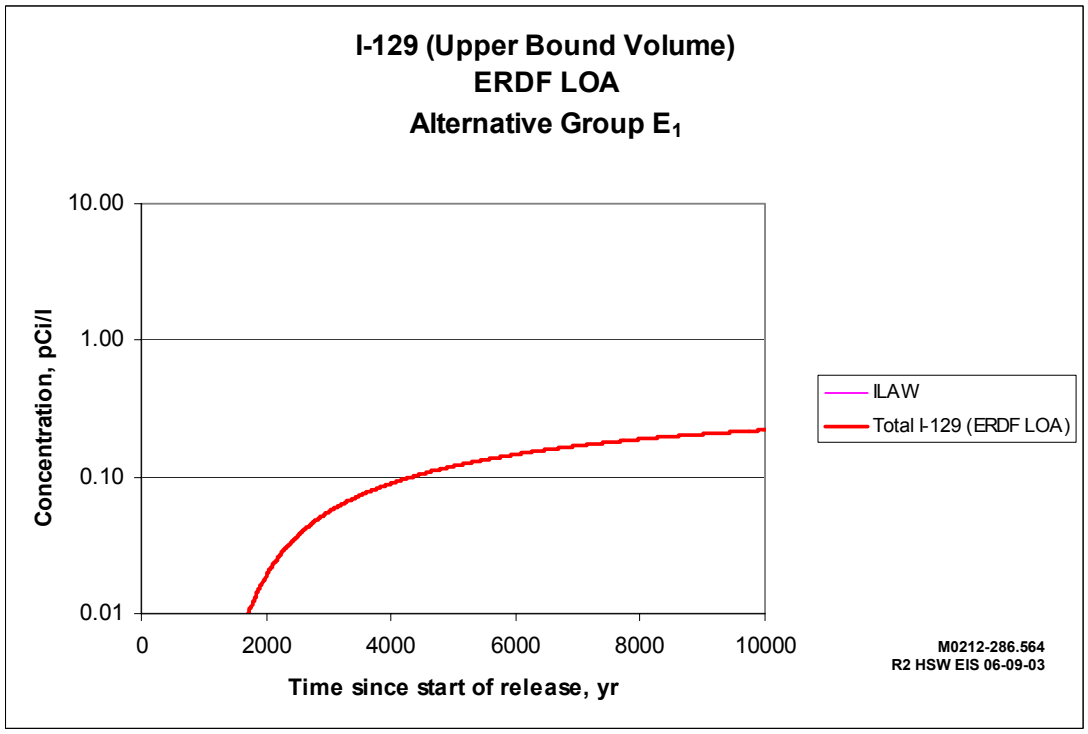
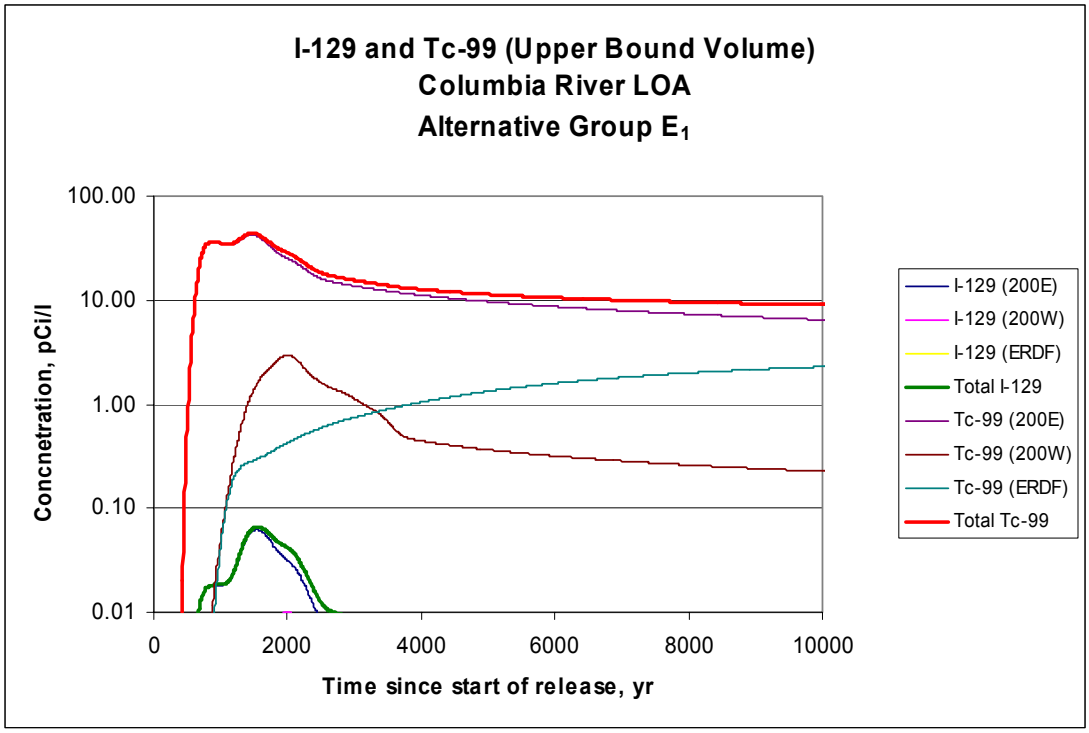


Figure G.71. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (ERDF) (Alternative Group E_1 – Upper Bound Volume Wastes Disposed of After 1995)



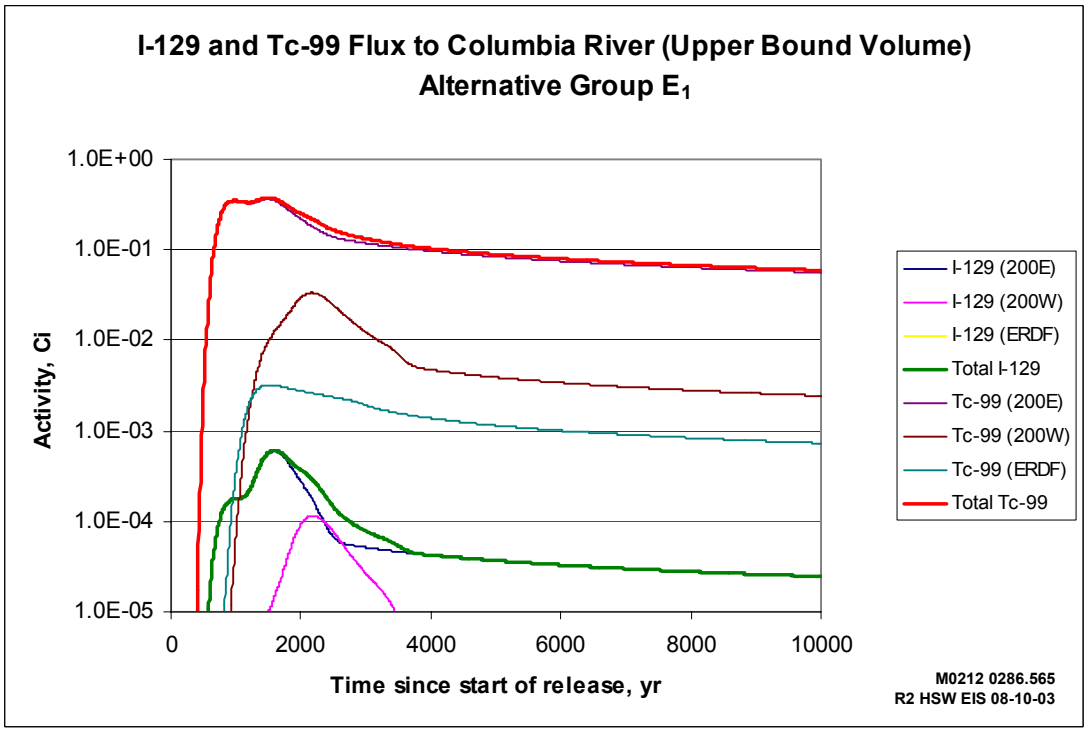
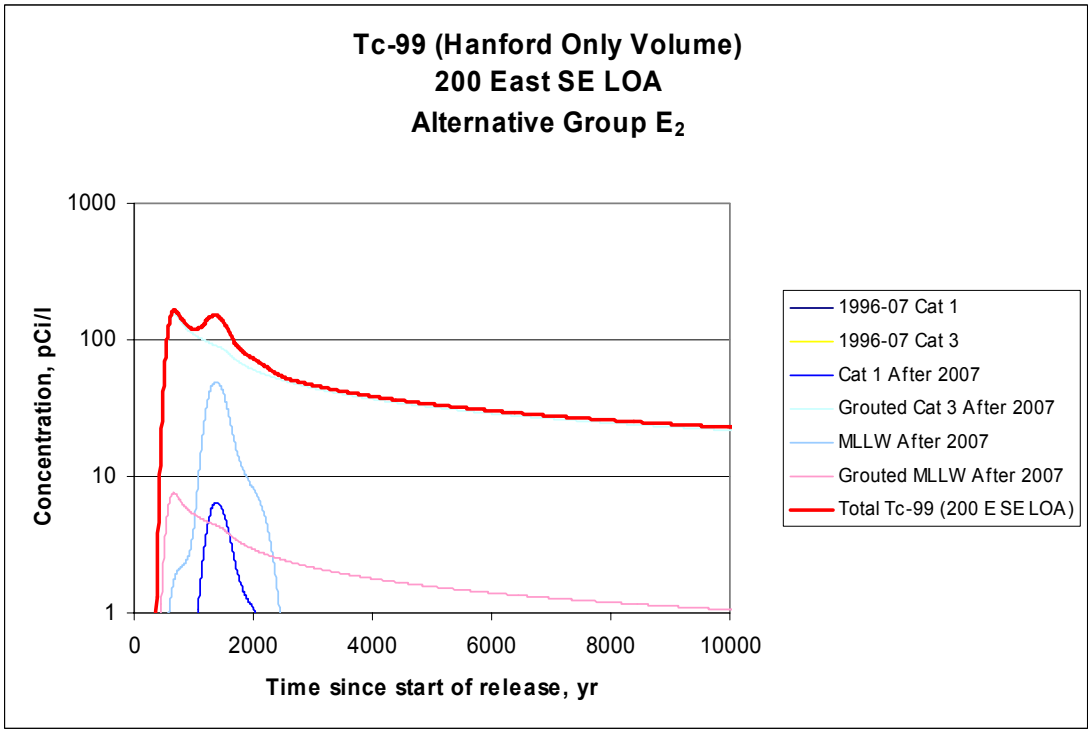


Figure G.72. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group E_1 – Upper Bound Volume Wastes Disposed of After 1995)



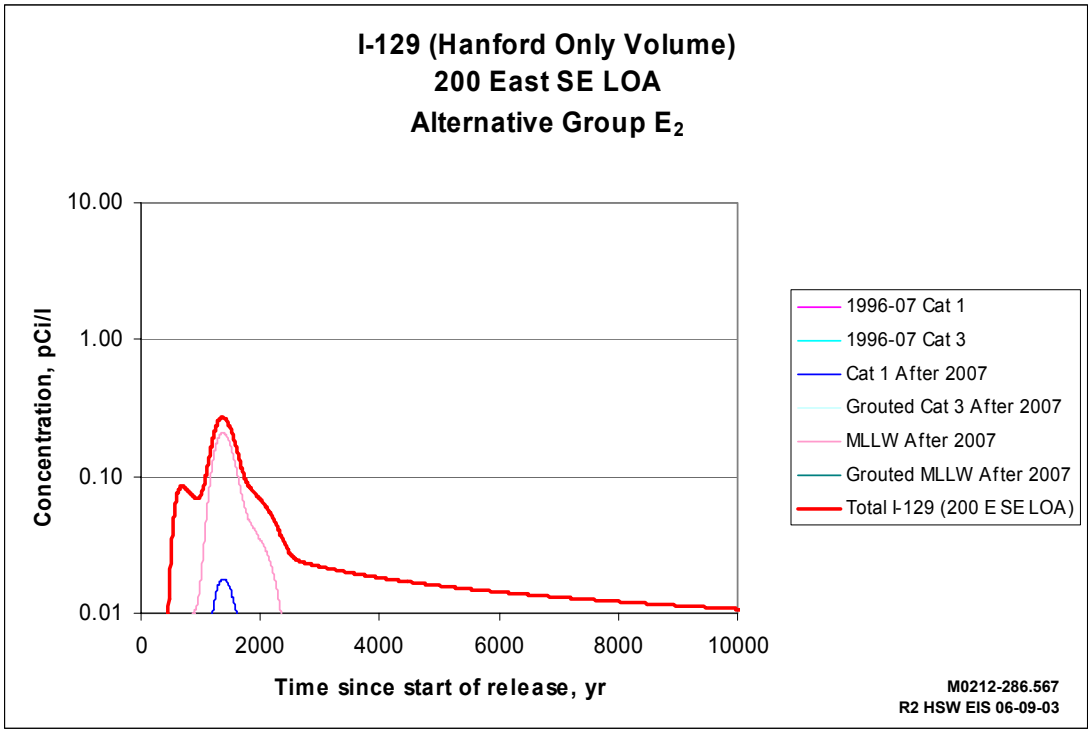
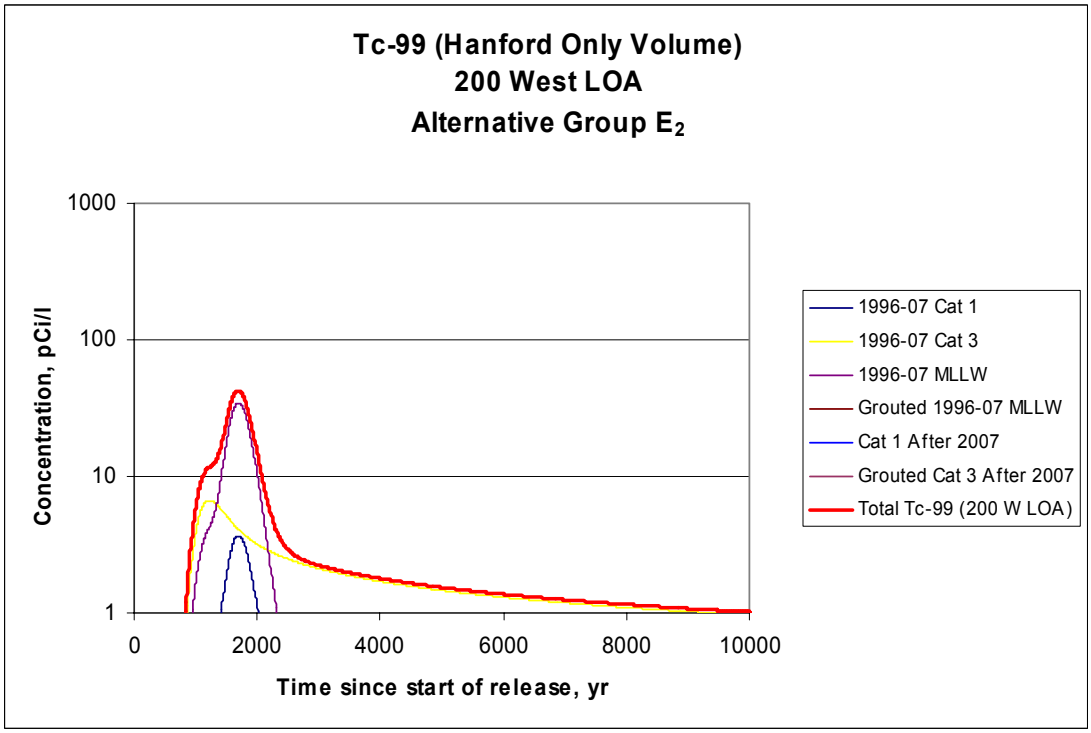


Figure G.73. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 East SE) (Alternative Group E_2 – Hanford Only Wastes Disposed of After 1995)



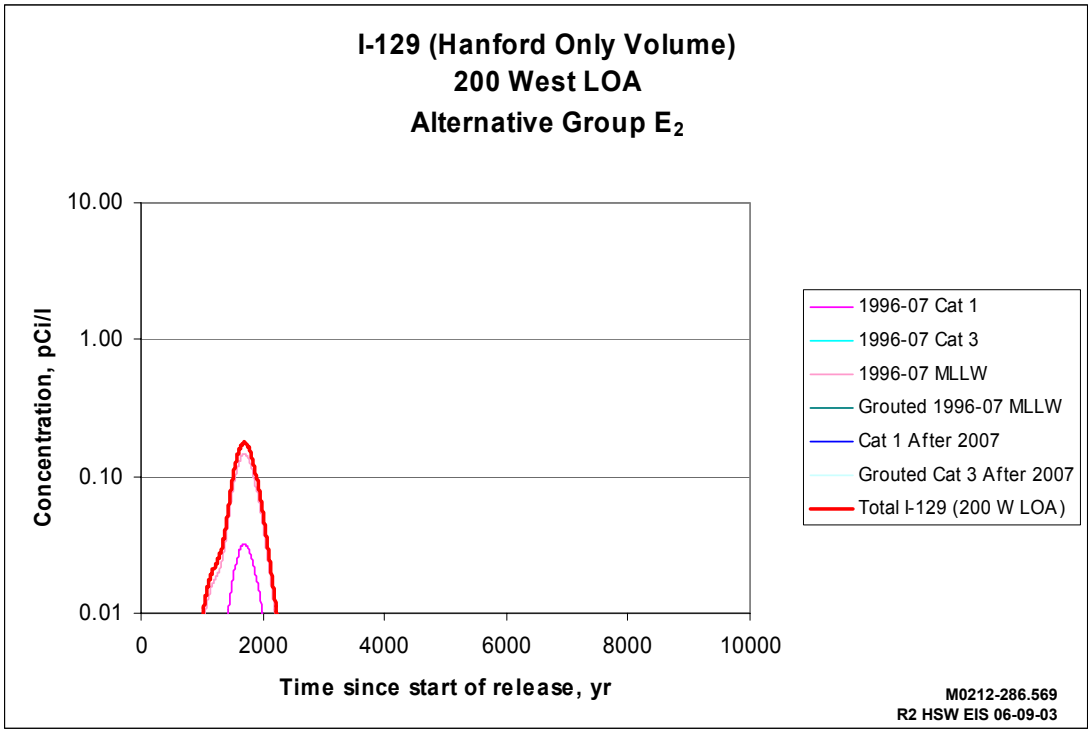
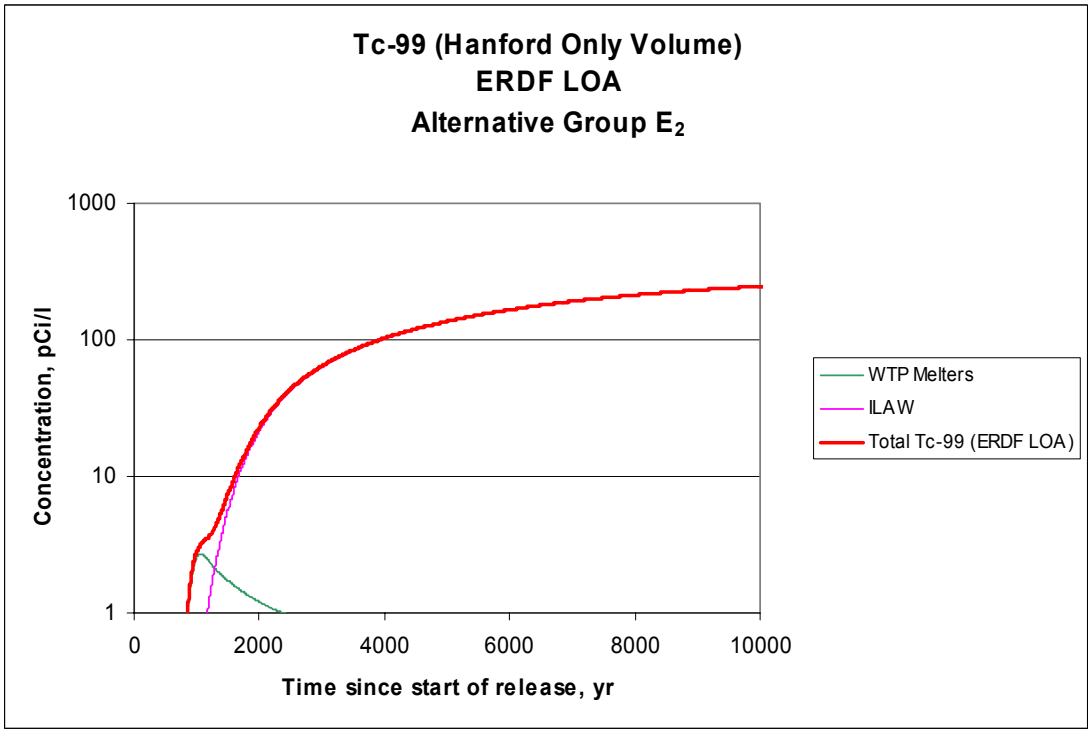


Figure G.74. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group E_2 – Hanford Only Wastes Disposed of After 1995)



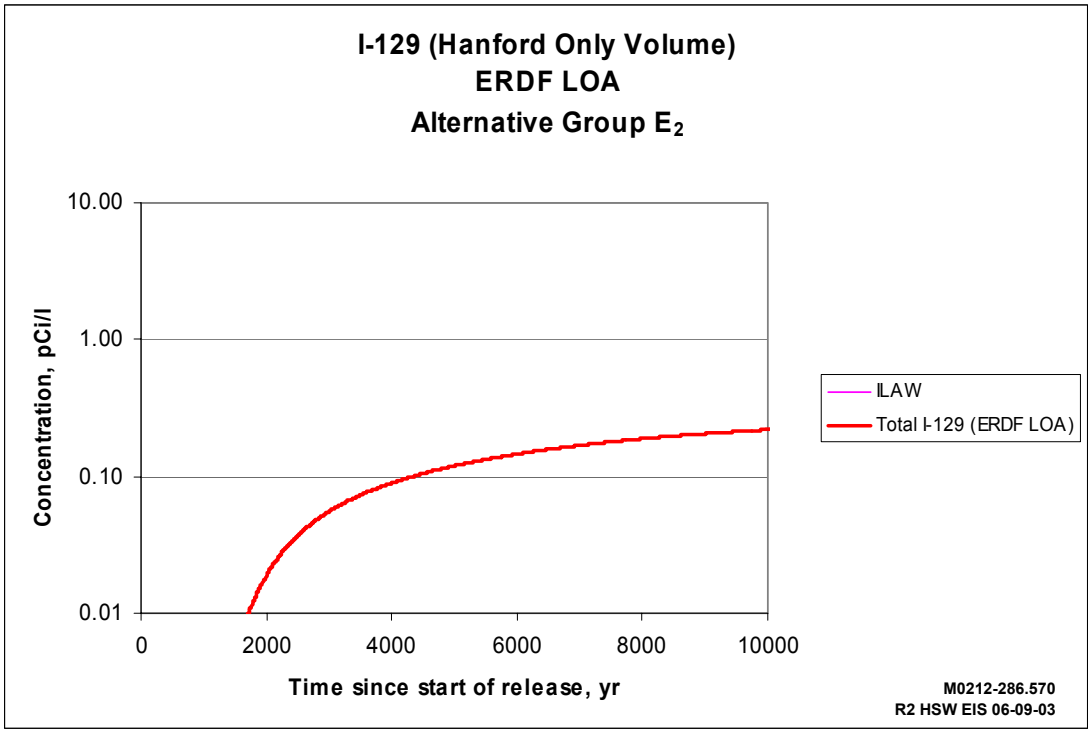
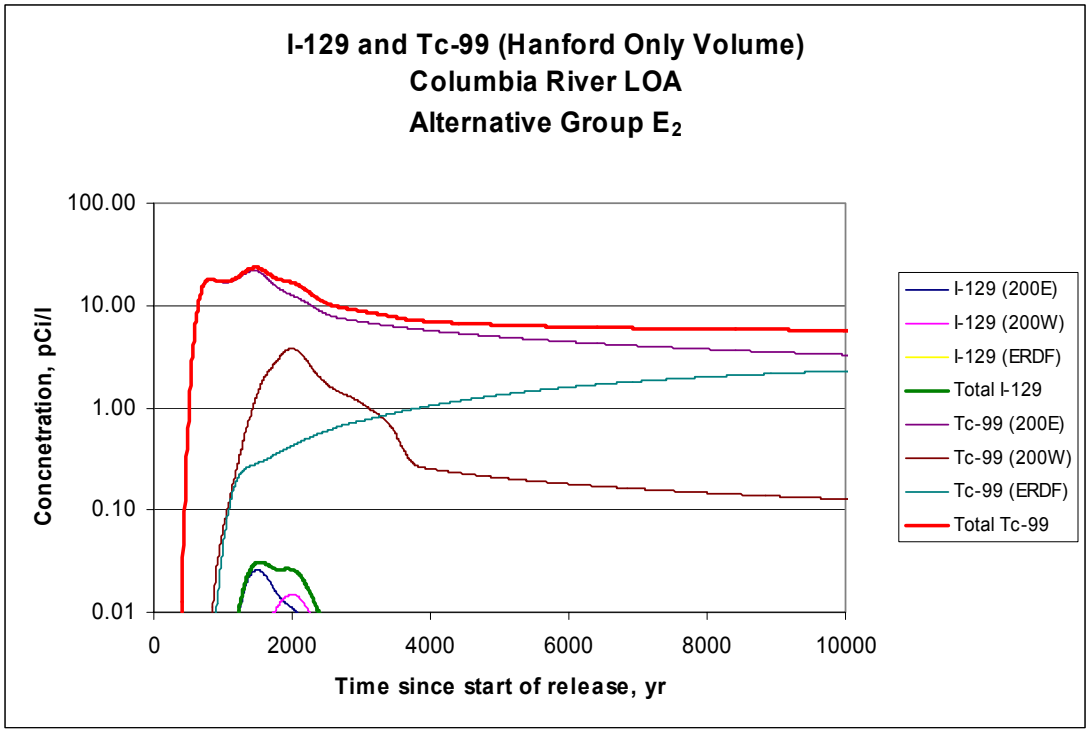


Figure G.75. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (ERDF) (Alternative Group E_2 – Hanford Only Wastes Disposed of After 1995)



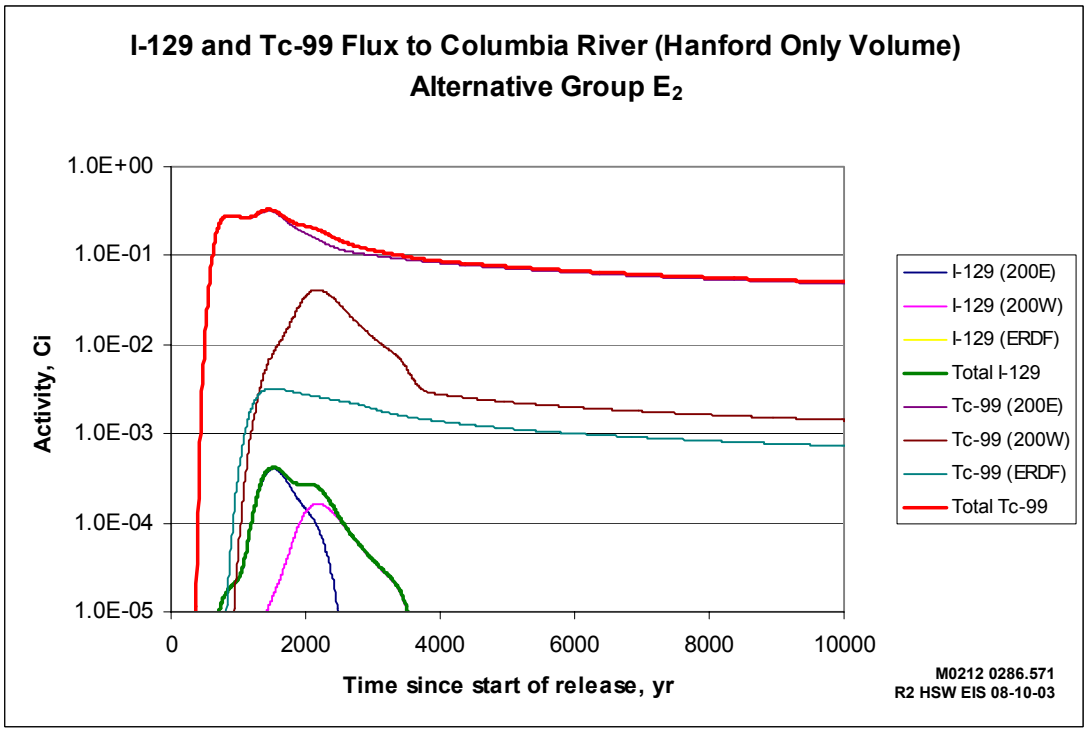
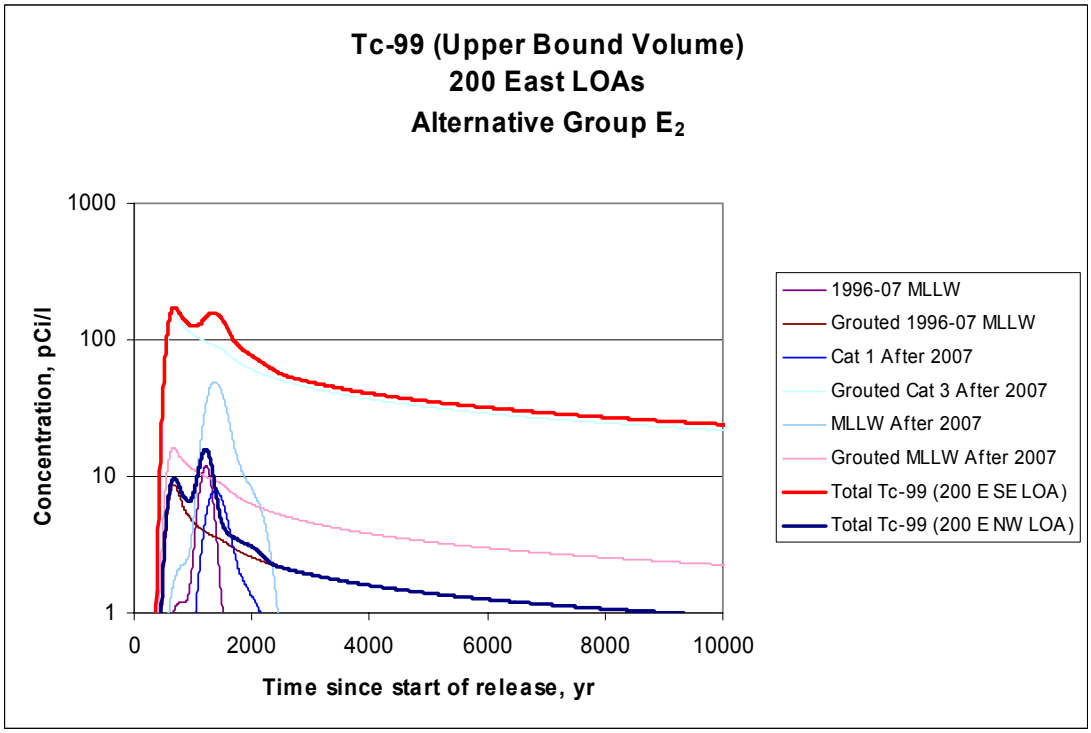


Figure G.76. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group E_2 – Hanford Only Wastes Disposed of After 1995)



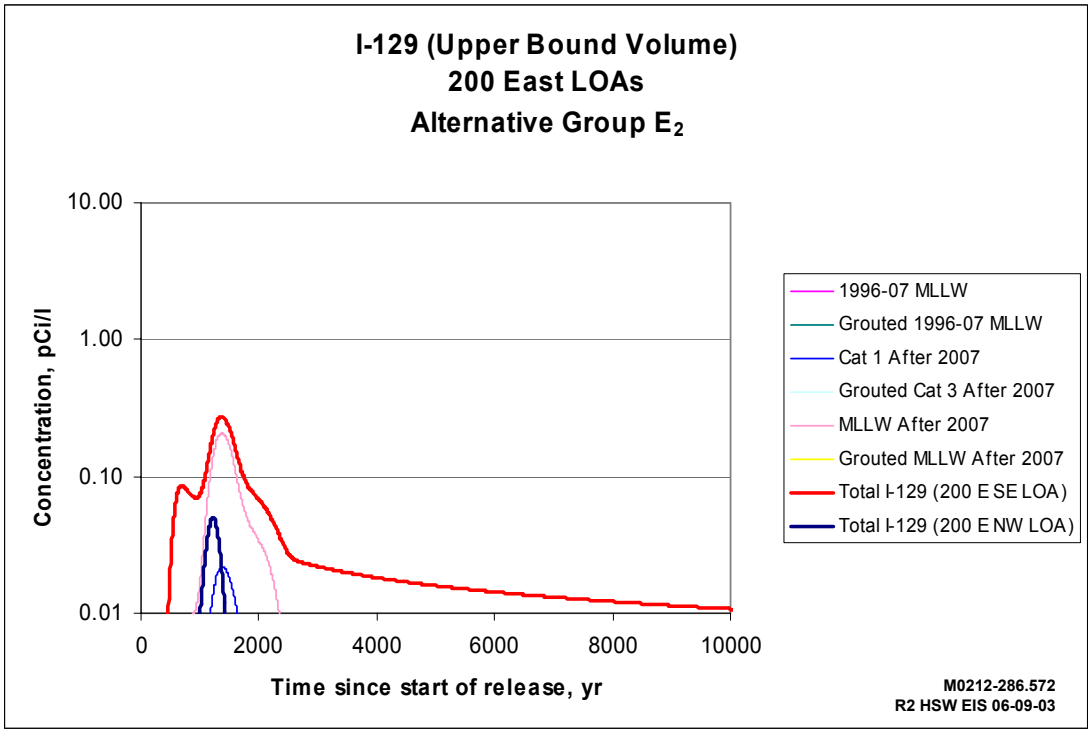
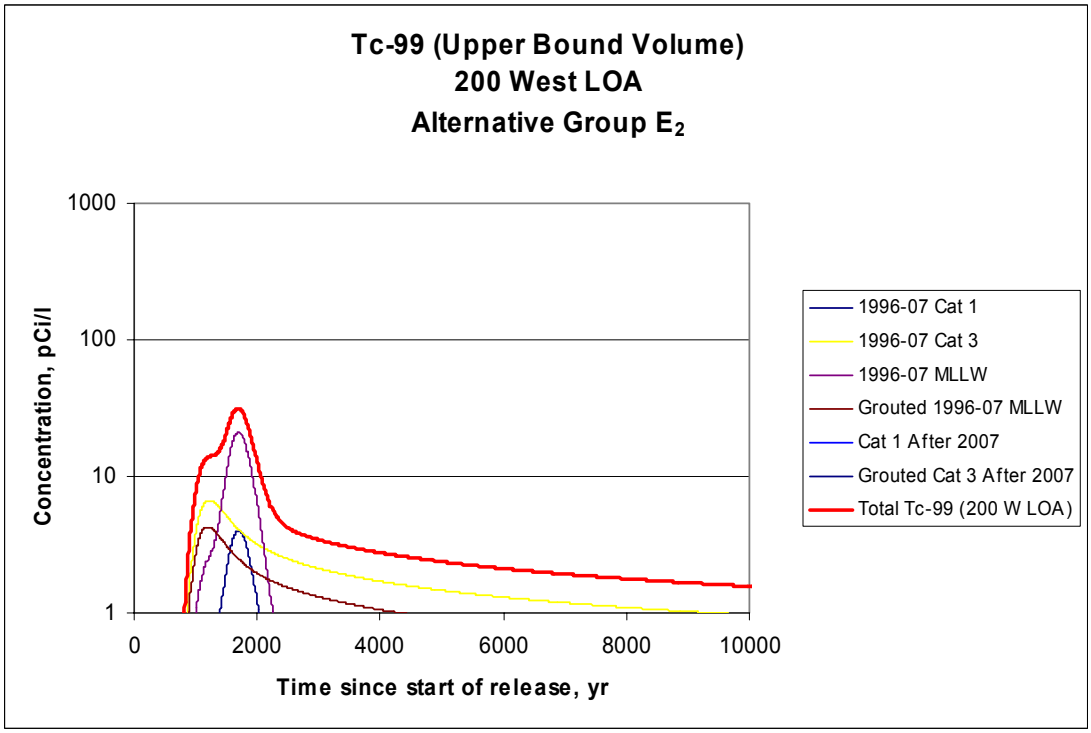


Figure G.77. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group E_2 – Upper Bound Volume Wastes Disposed of After 1995)



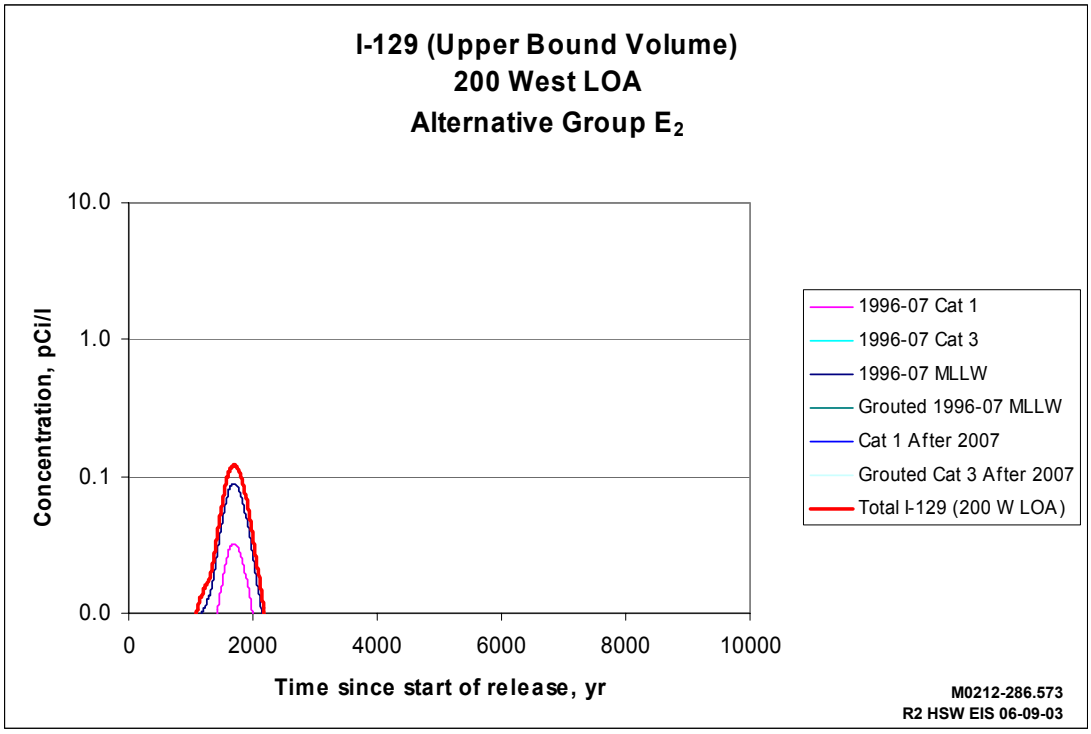
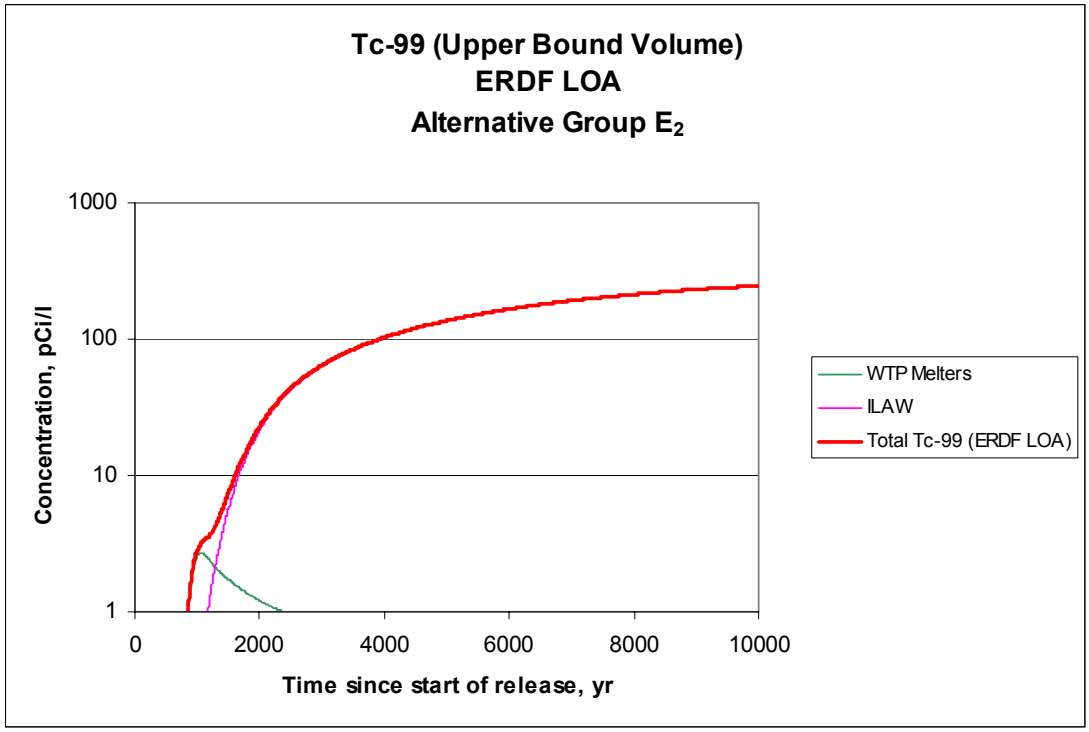


Figure G.78. Tc-99 and I-129 Concentration Profiles at 1-km Line of Analysis (200 West) (Alternative Group E_2 – Upper Bound Volume Wastes Disposed of After 1995)



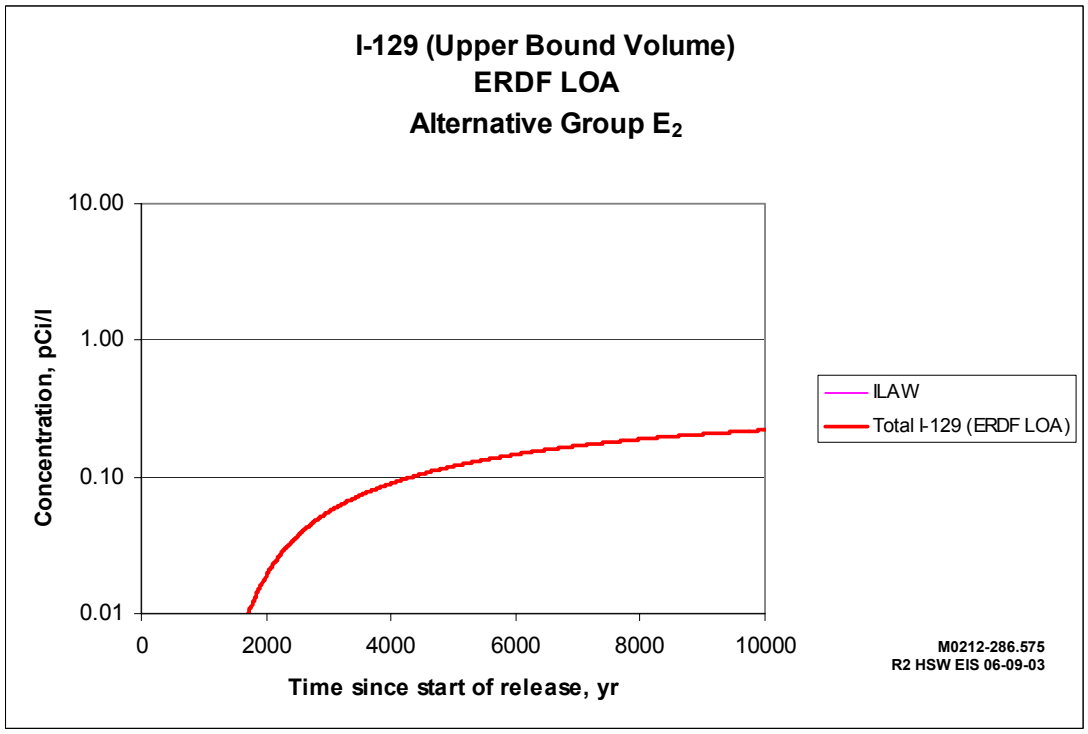
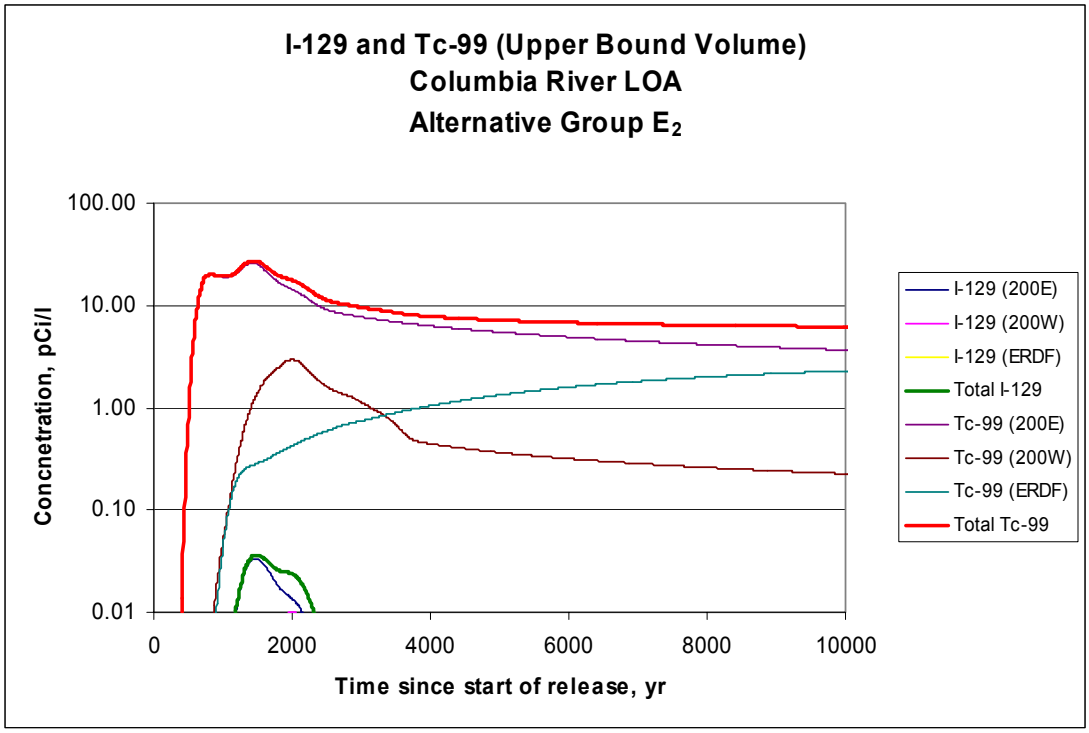


Figure G.79. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (ERDF) (Alternative Group E_2 – Upper Bound Volume Wastes Disposed of After 1995)



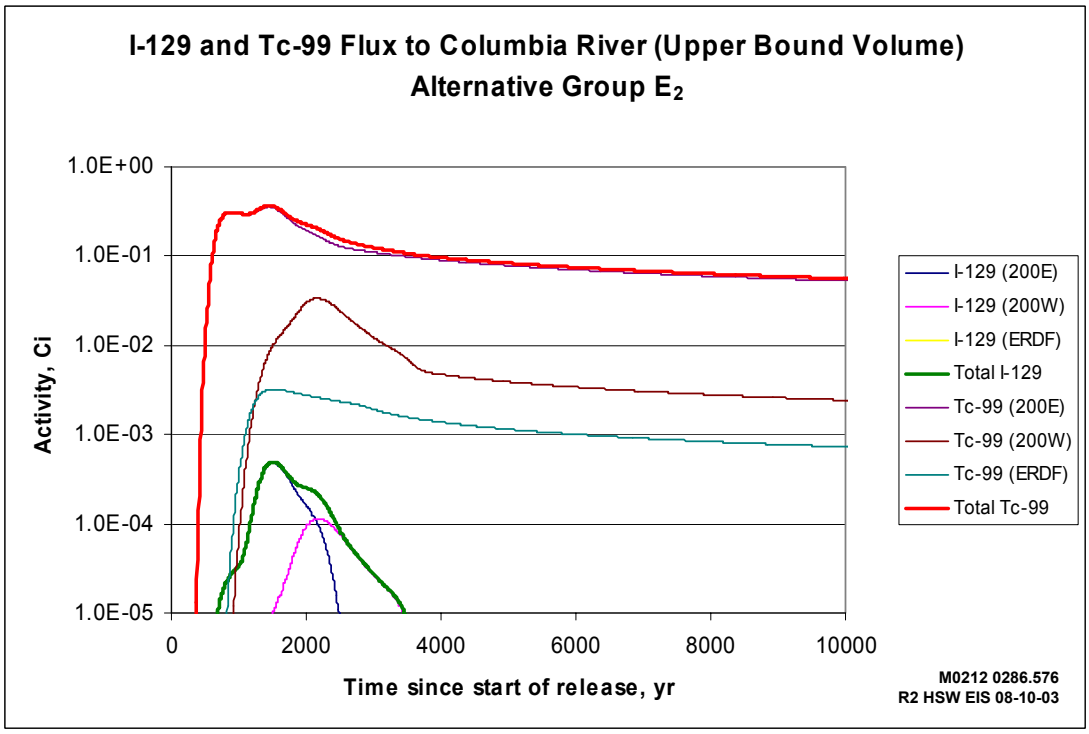
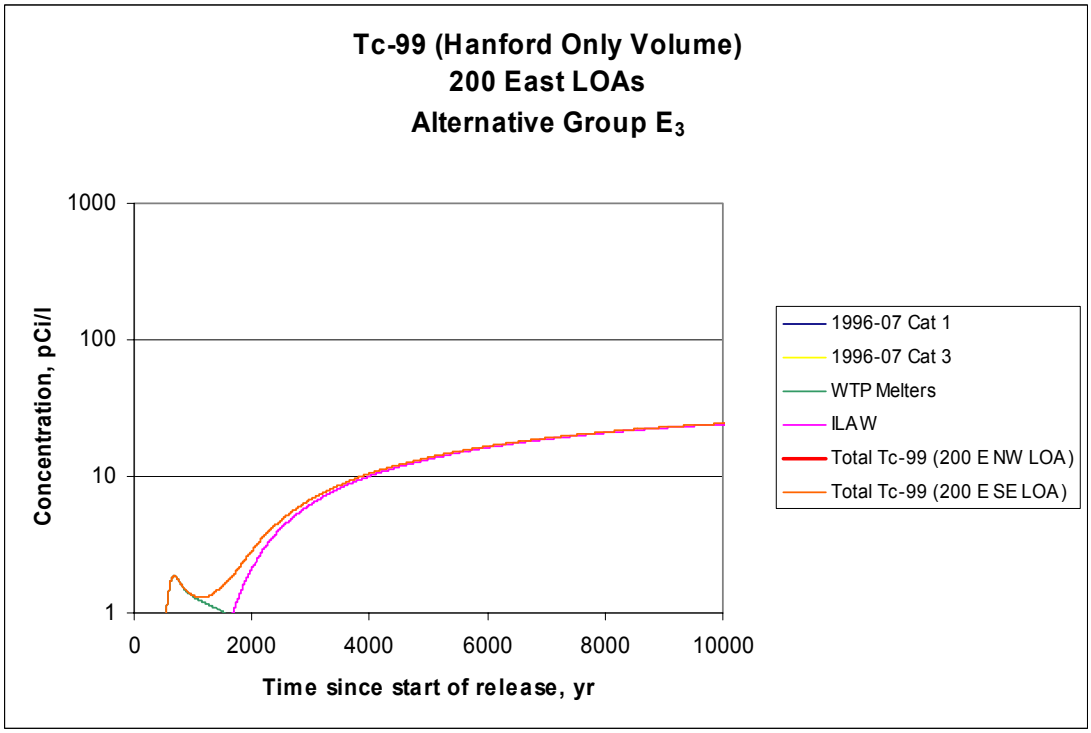


Figure G.80. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group E_2 – Upper Bound Volume Wastes Disposed of After 1995)



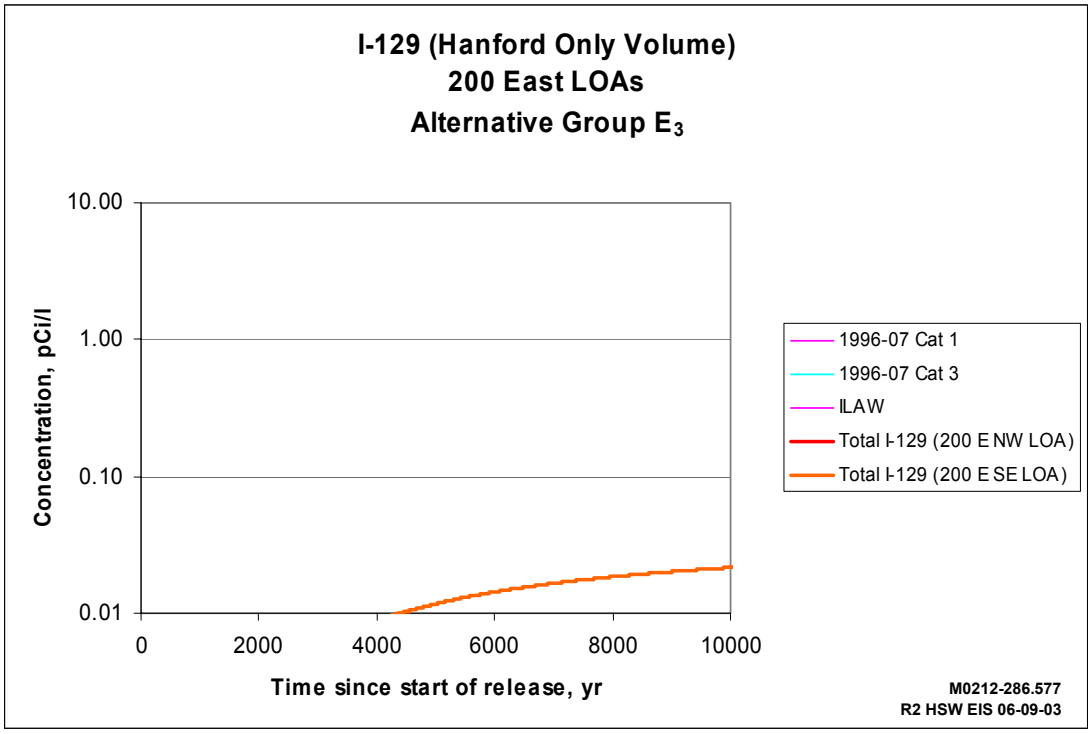
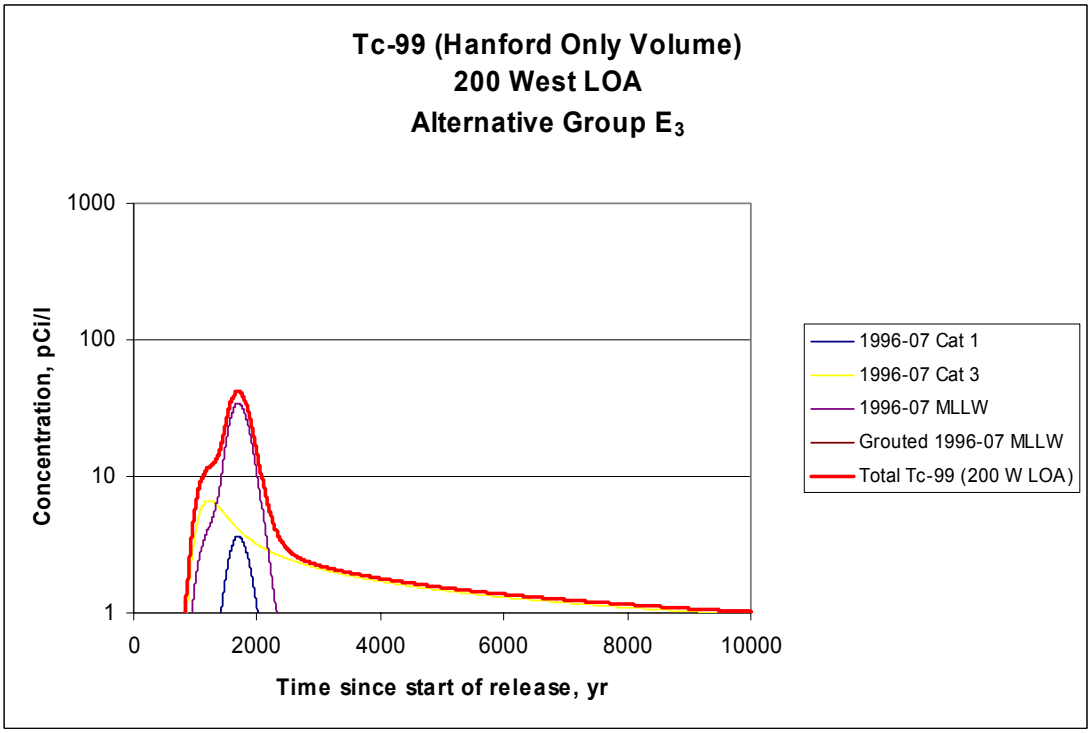


Figure G.81. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group E_3 – Hanford Only Wastes Disposed of After 1995)



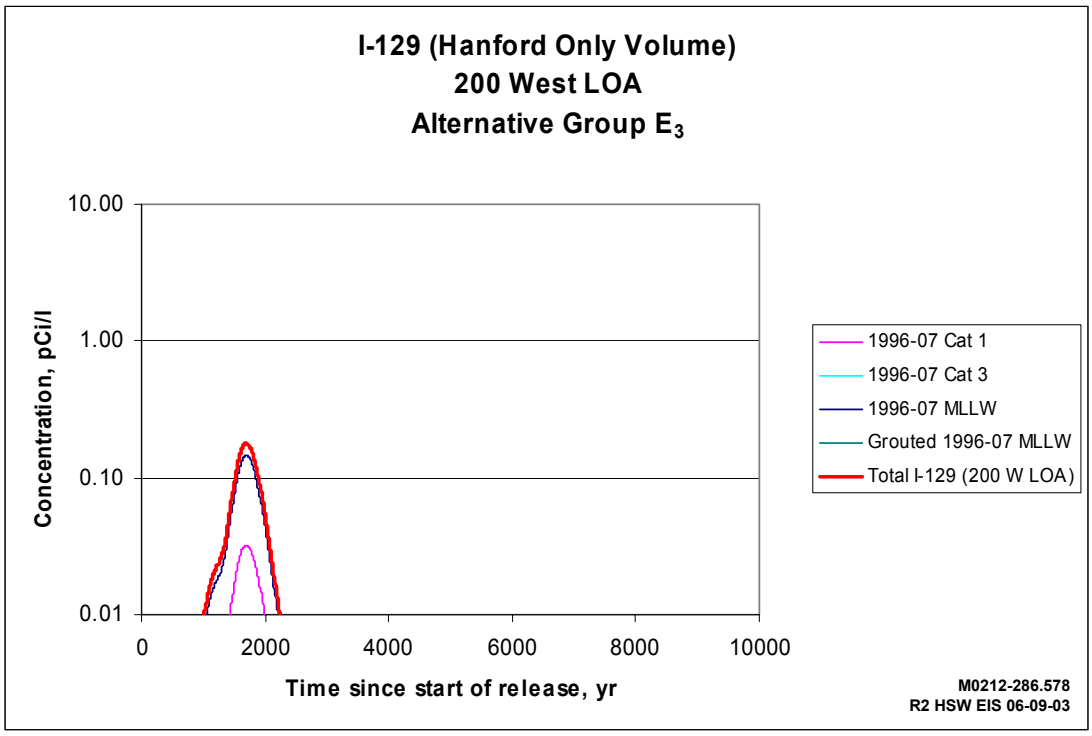
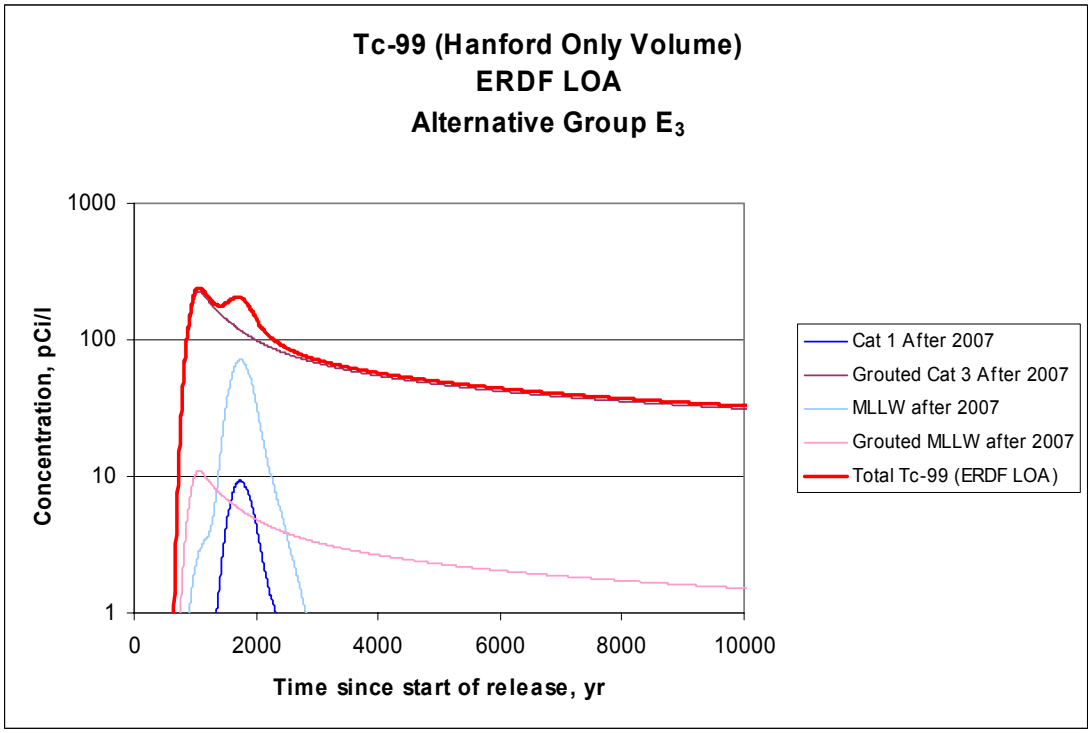


Figure G.82. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group E_3 – Hanford Only Wastes Disposed of After 1995)



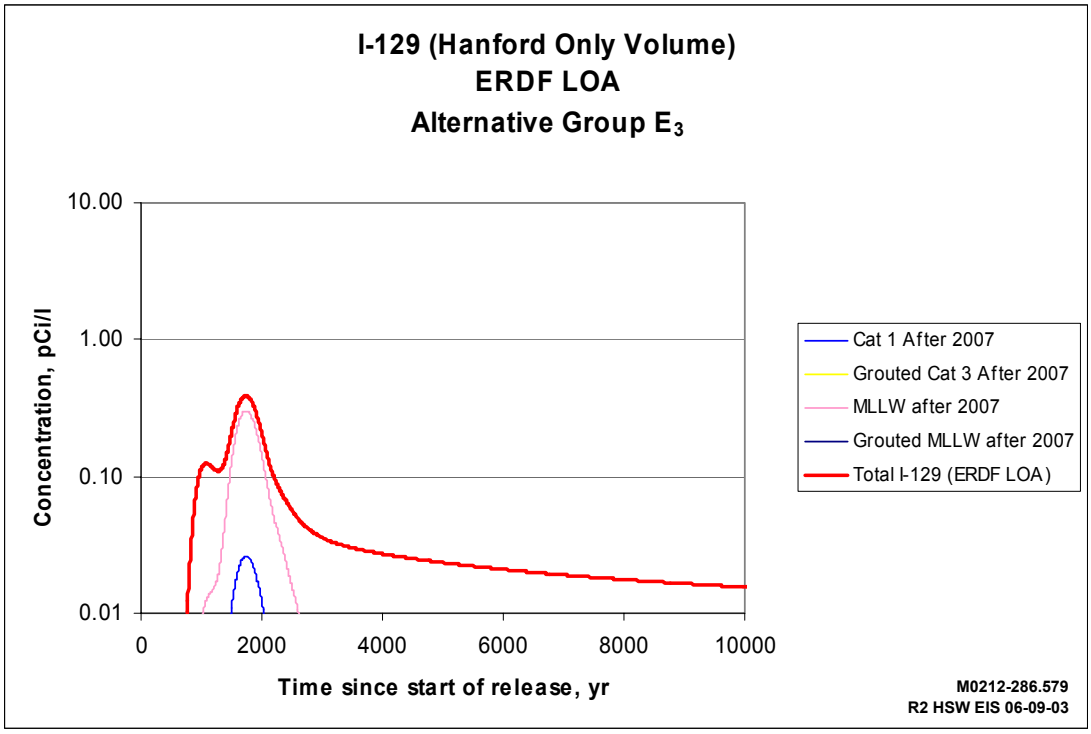
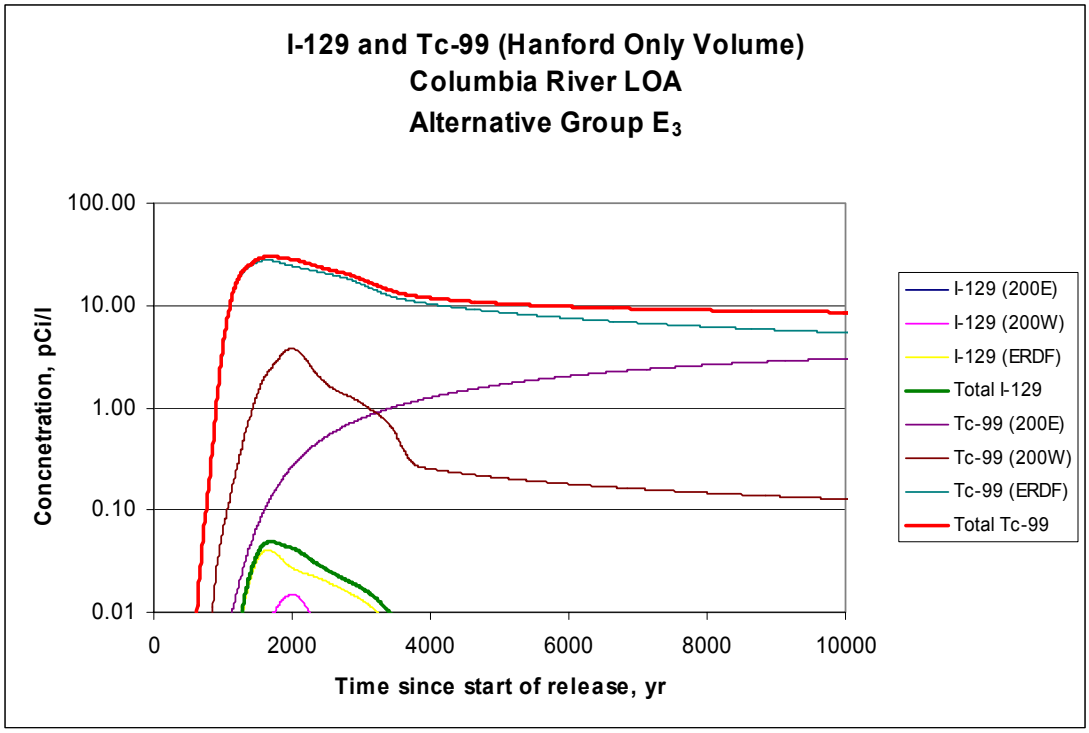


Figure G.83. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (ERDF) (Alternative Group E_3 – Hanford Only Wastes Disposed of After 1995)



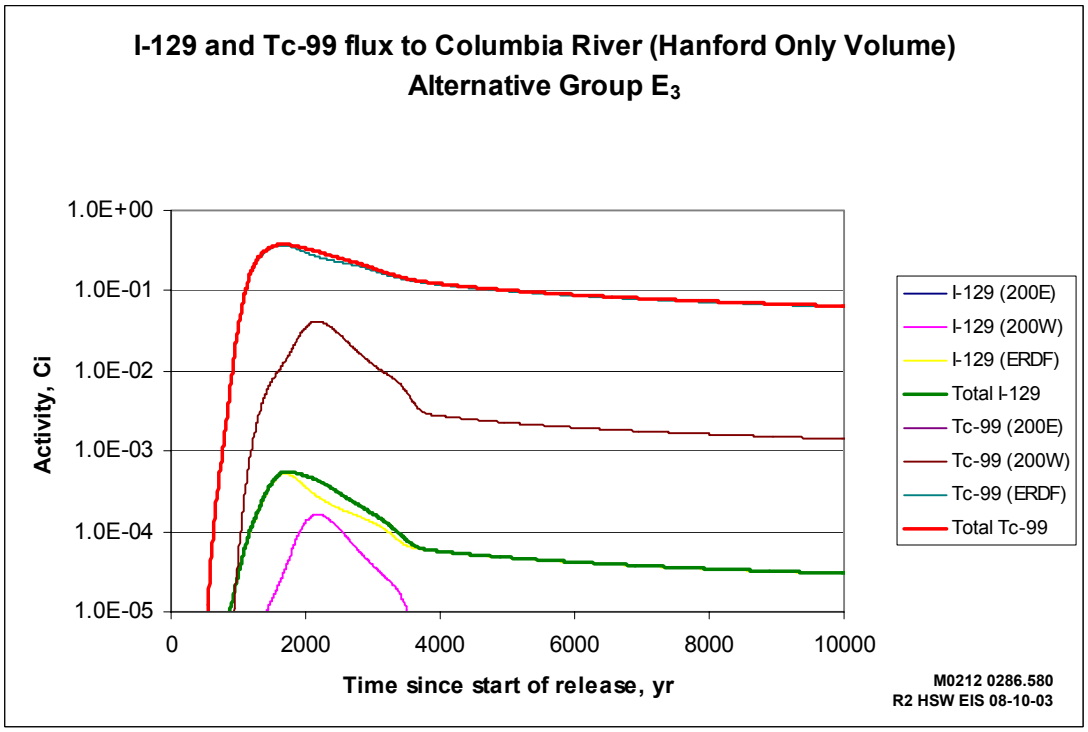
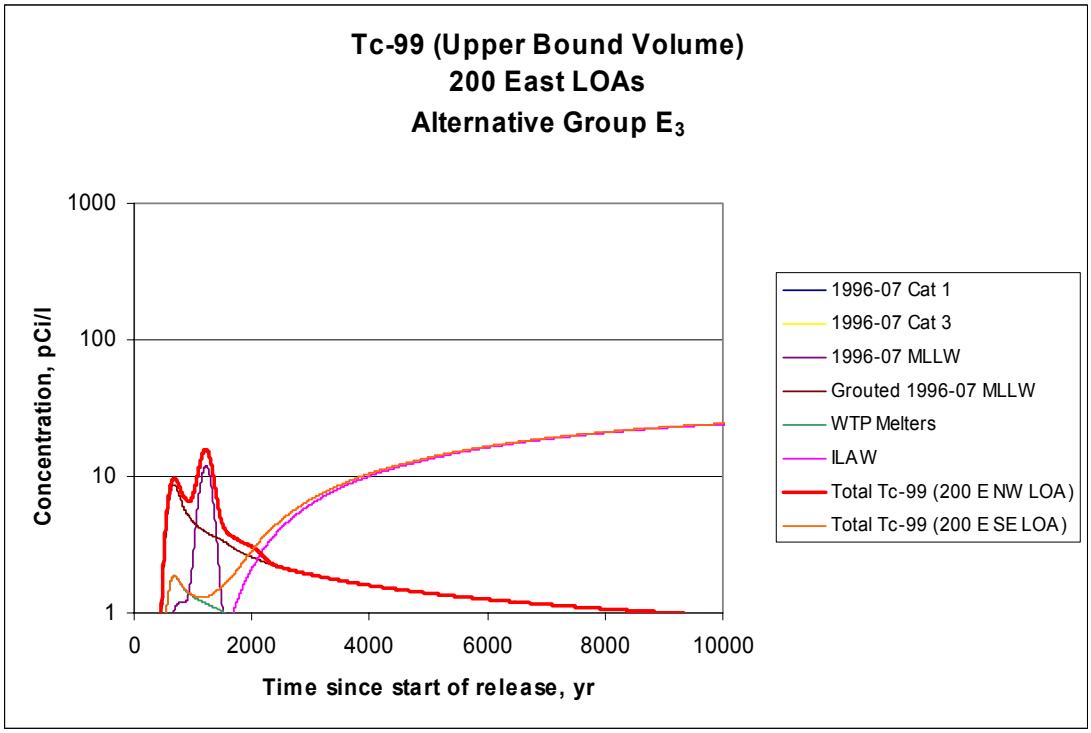


Figure G.84. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group E_3 – Hanford Only Wastes Disposed of After 1995)



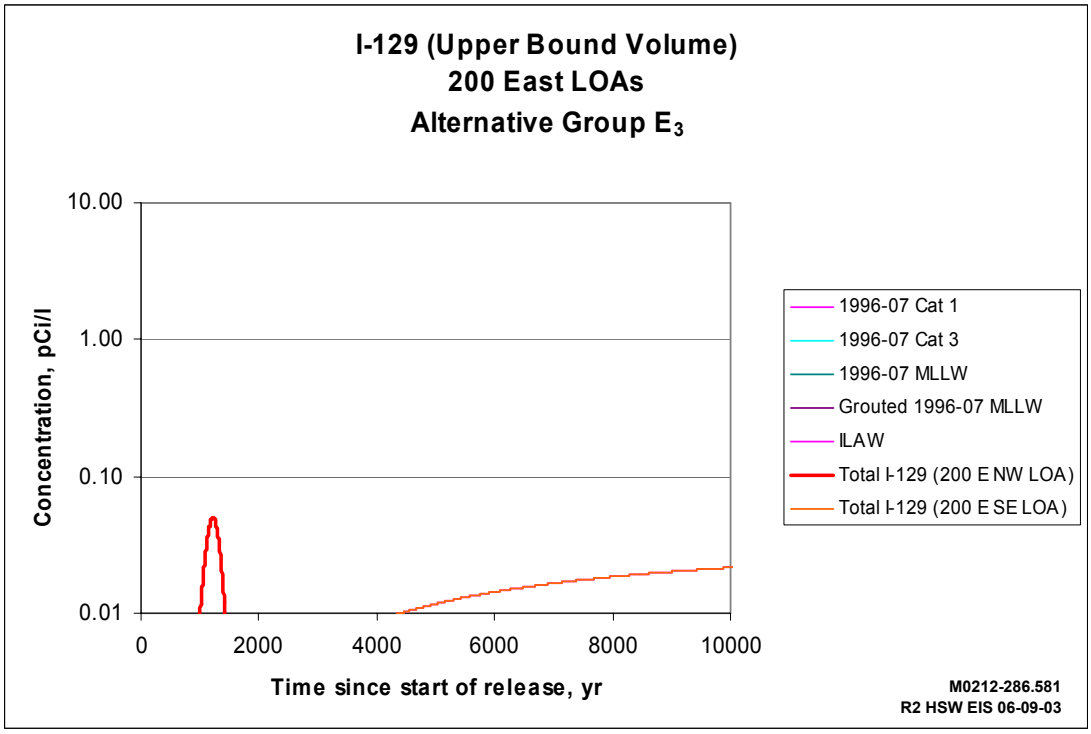
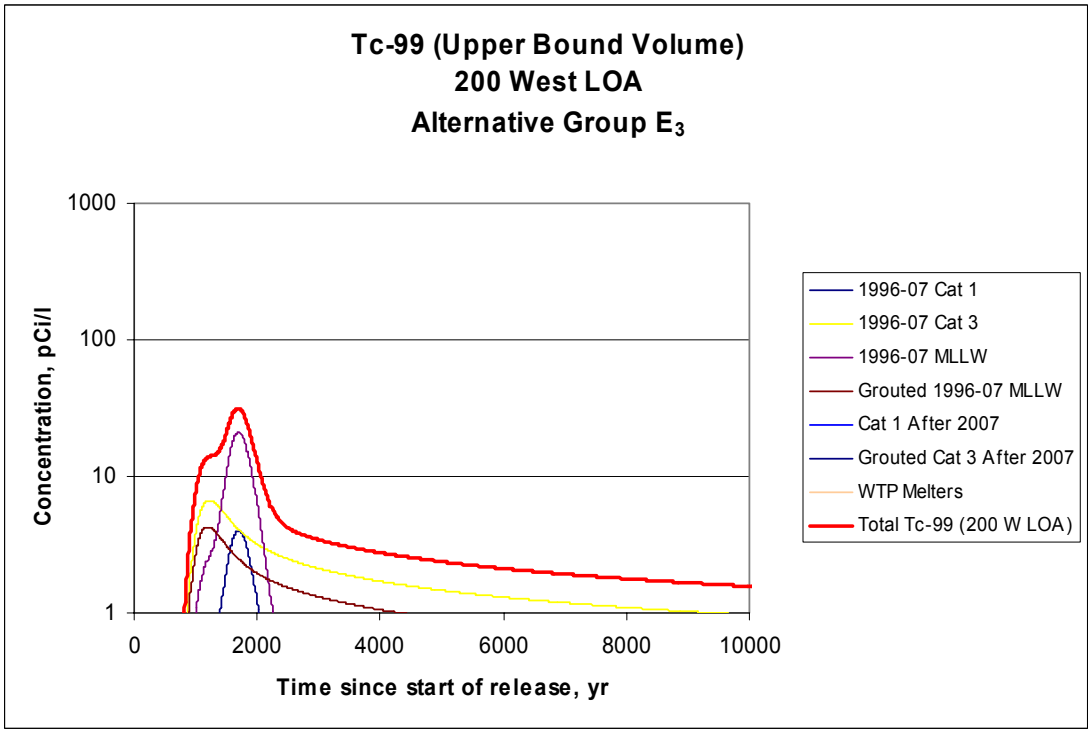


Figure G.85. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (Alternative Group E_3 – Upper Bound Volume Wastes Disposed of After 1995)



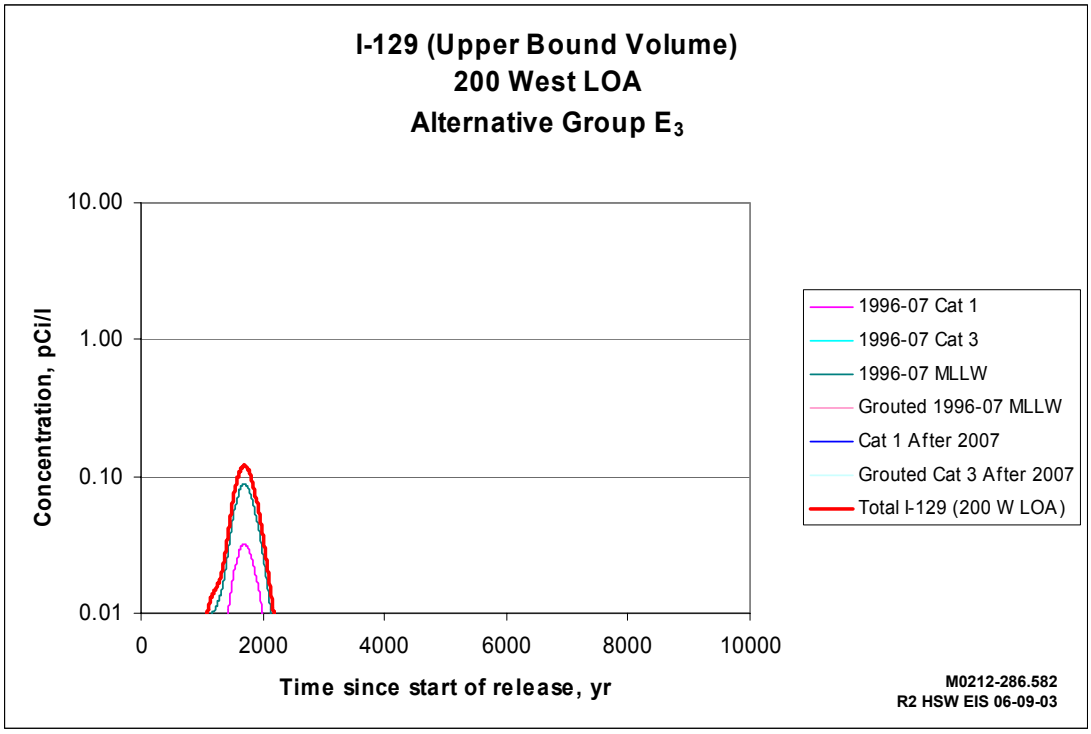
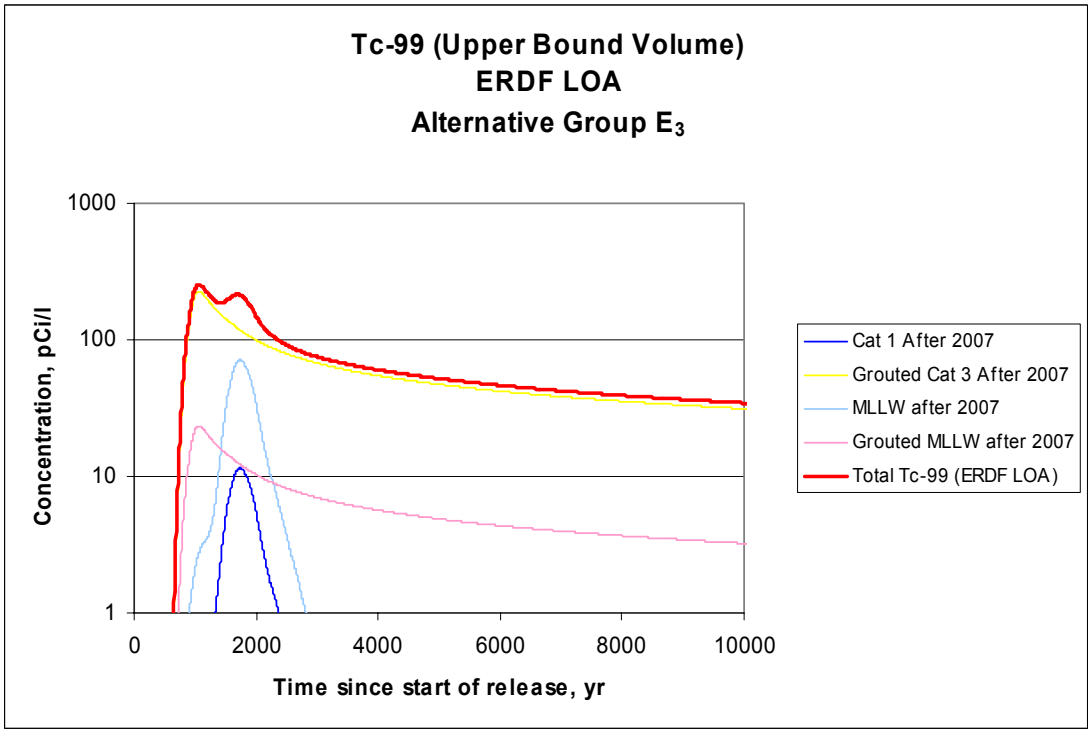


Figure G.86. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (Alternative Group E_3 – Upper Bound Volume Wastes Disposed of After 1995)



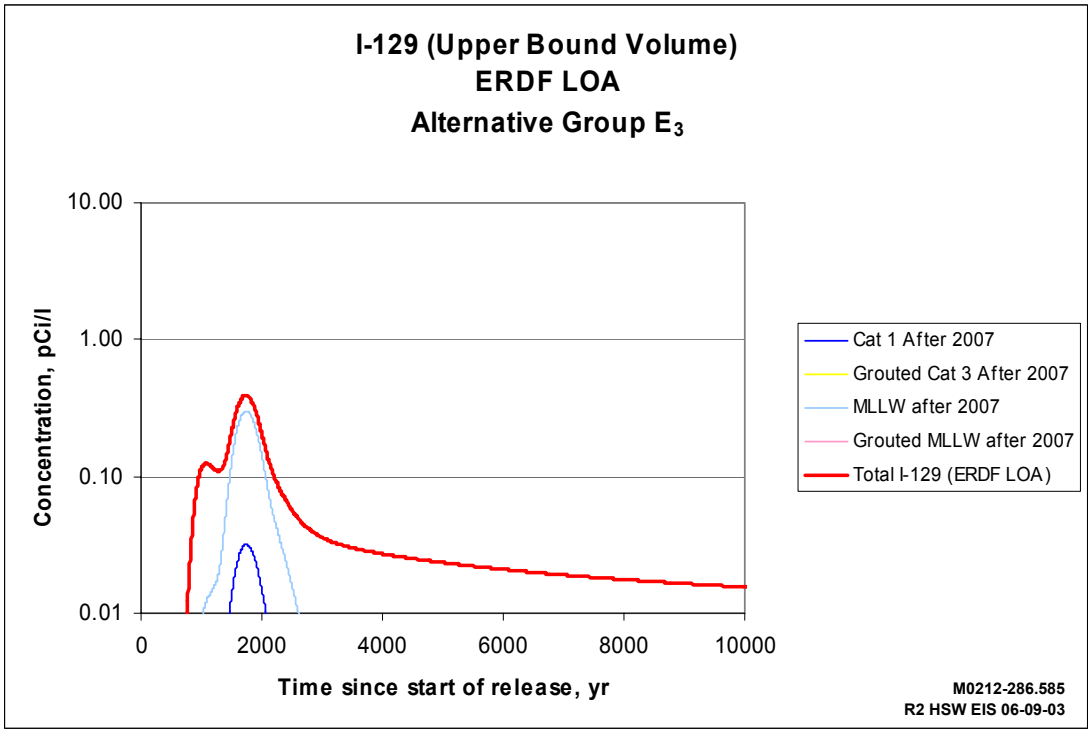
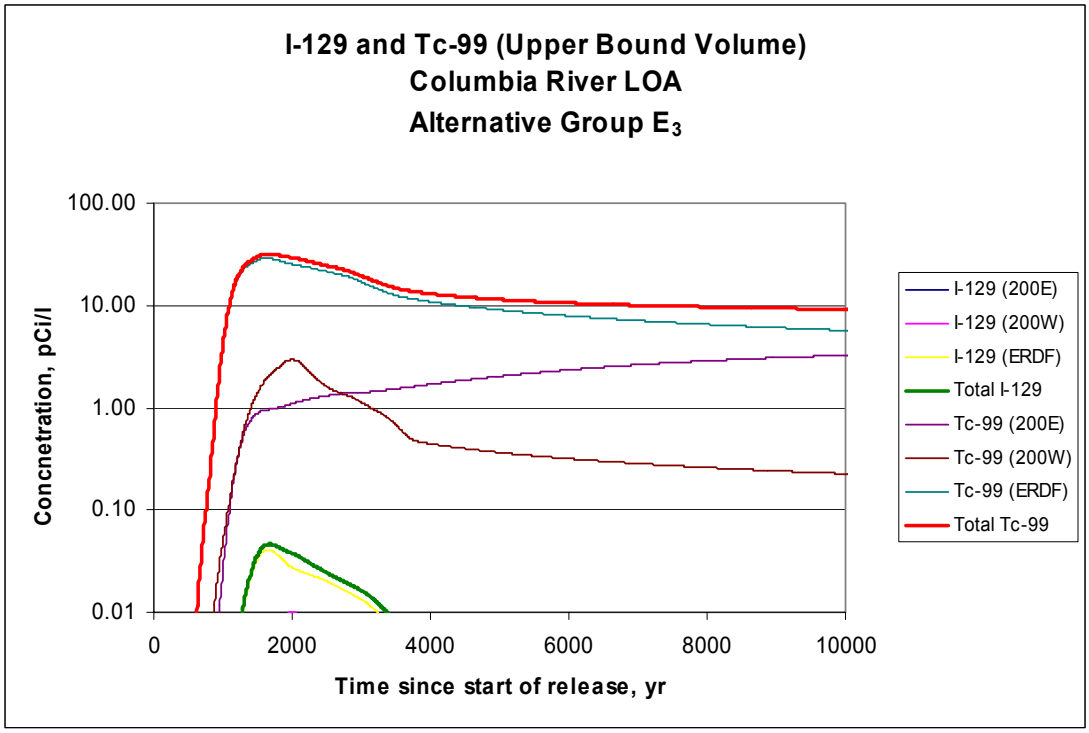


Figure G.87. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (ERDF) (Alternative Group E_3 – Upper Bound Volume Wastes Disposed of After 1995)



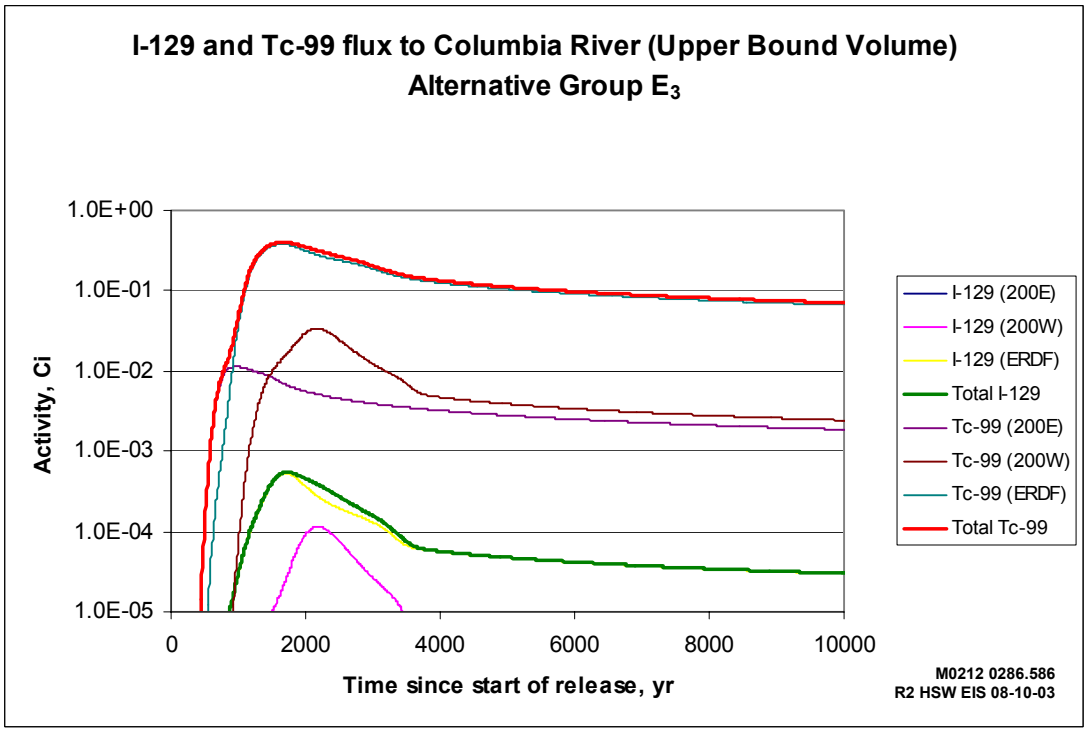
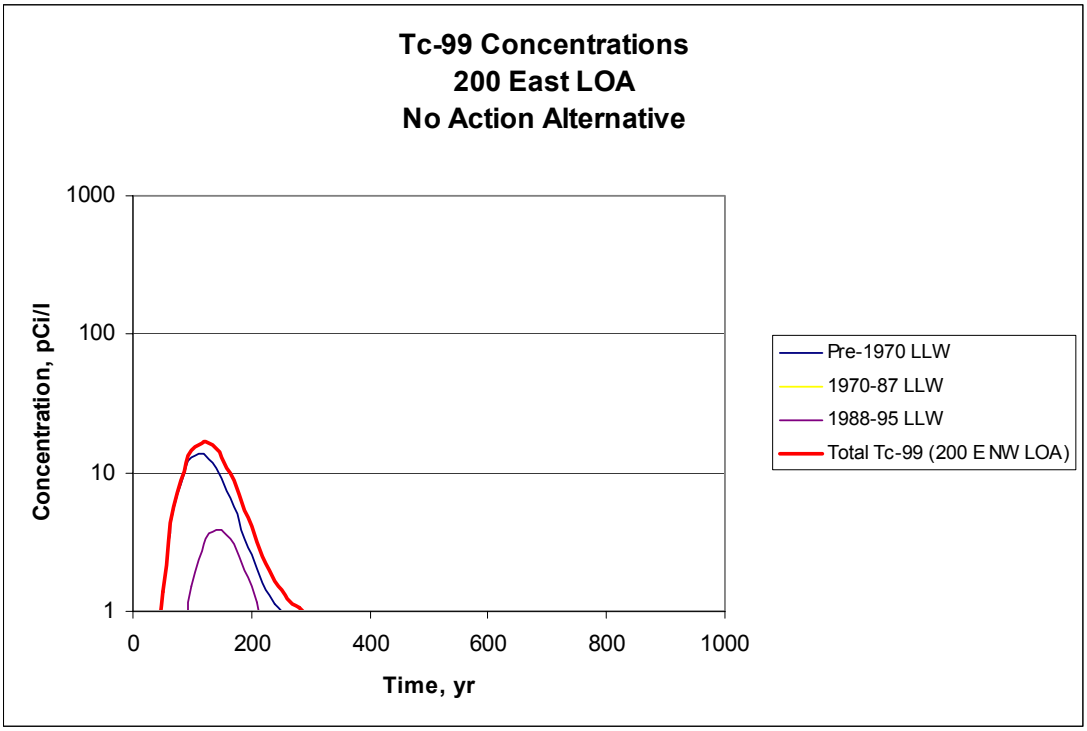


Figure G.88. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (Alternative Group E_3 – Upper Bound Volume Wastes Disposed of After 1995)



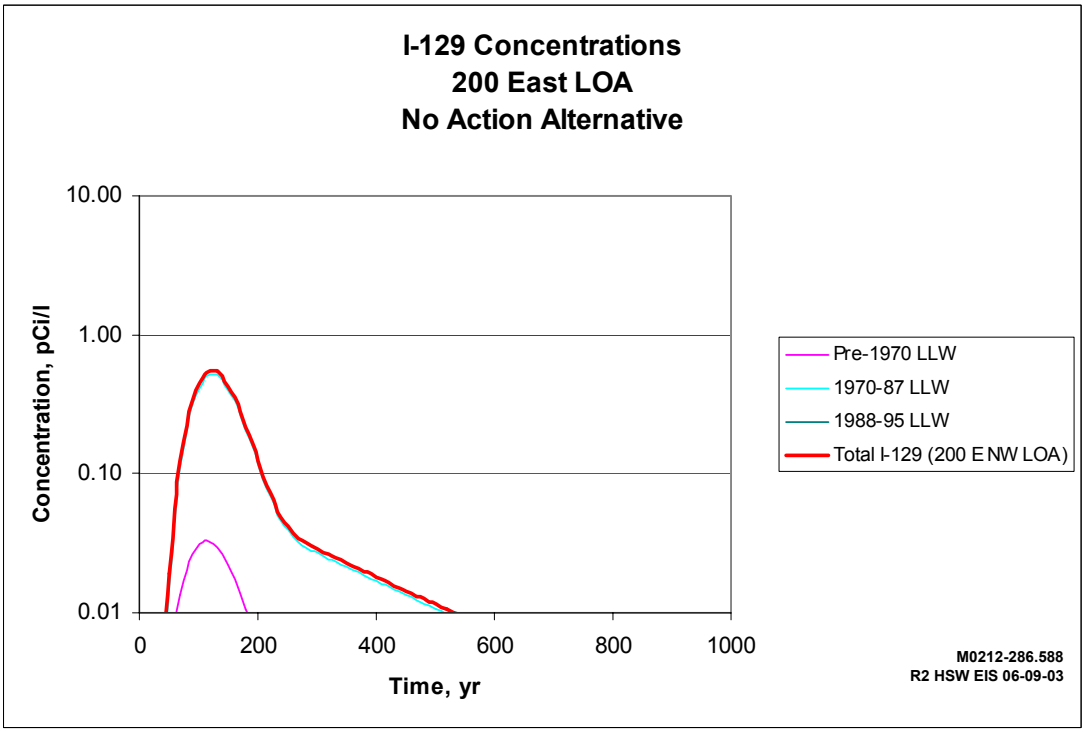
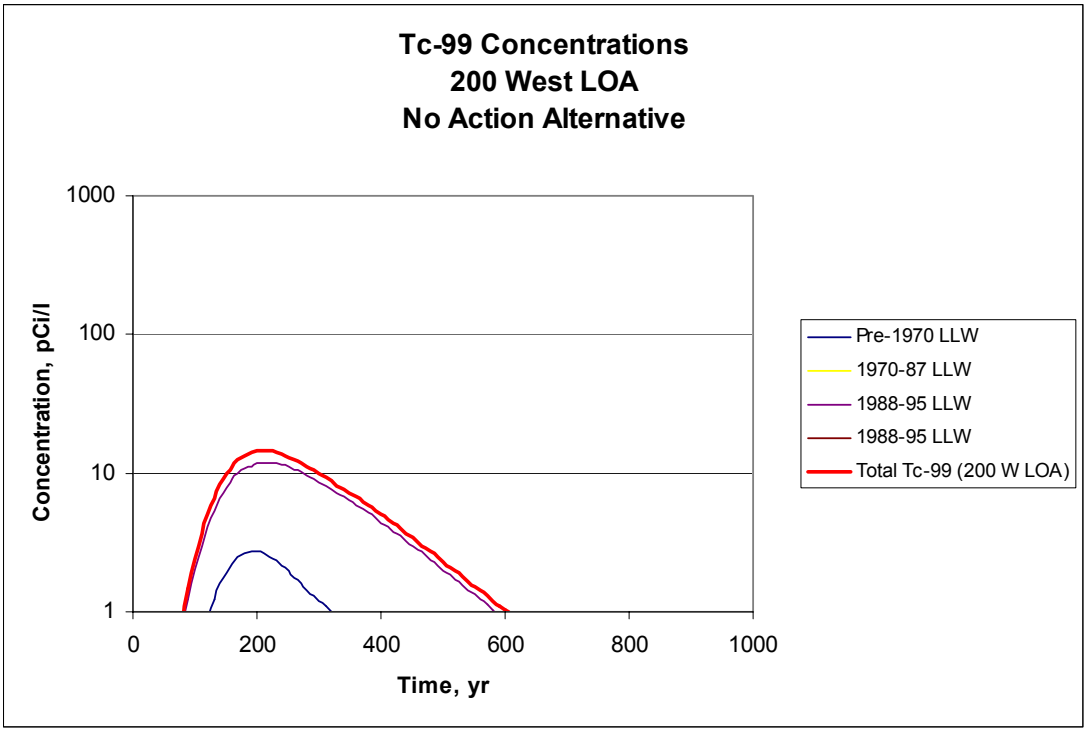


Figure G.89. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 East) (No Action Alternative – Wastes Disposed of Before 1996)



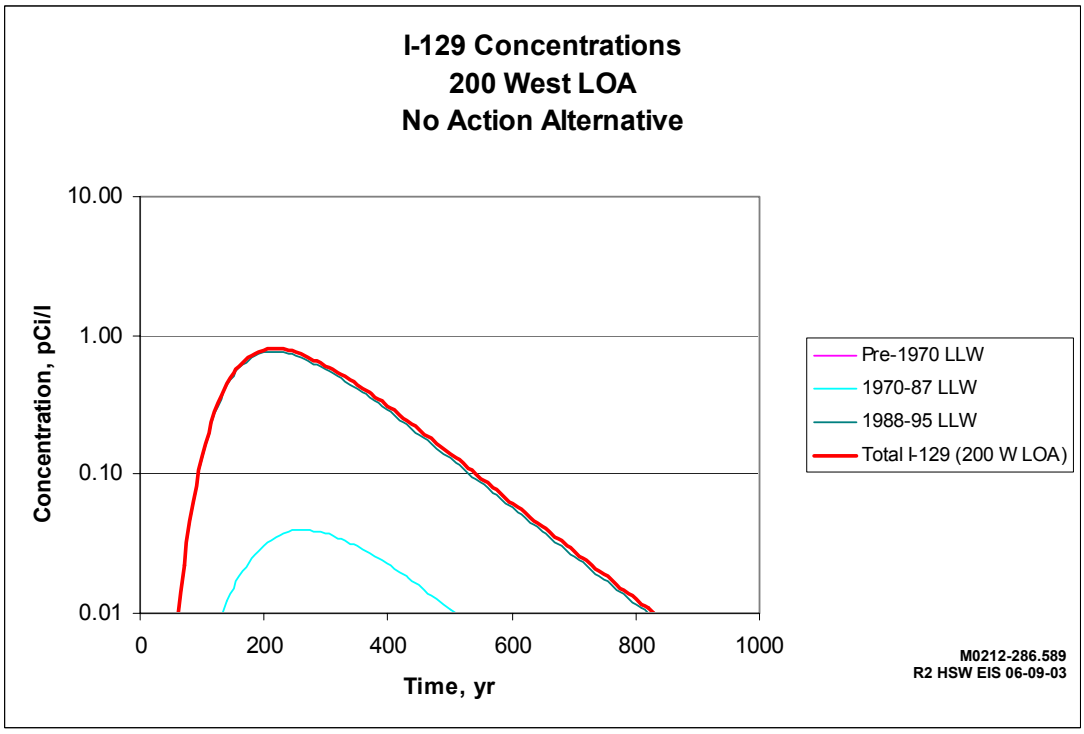
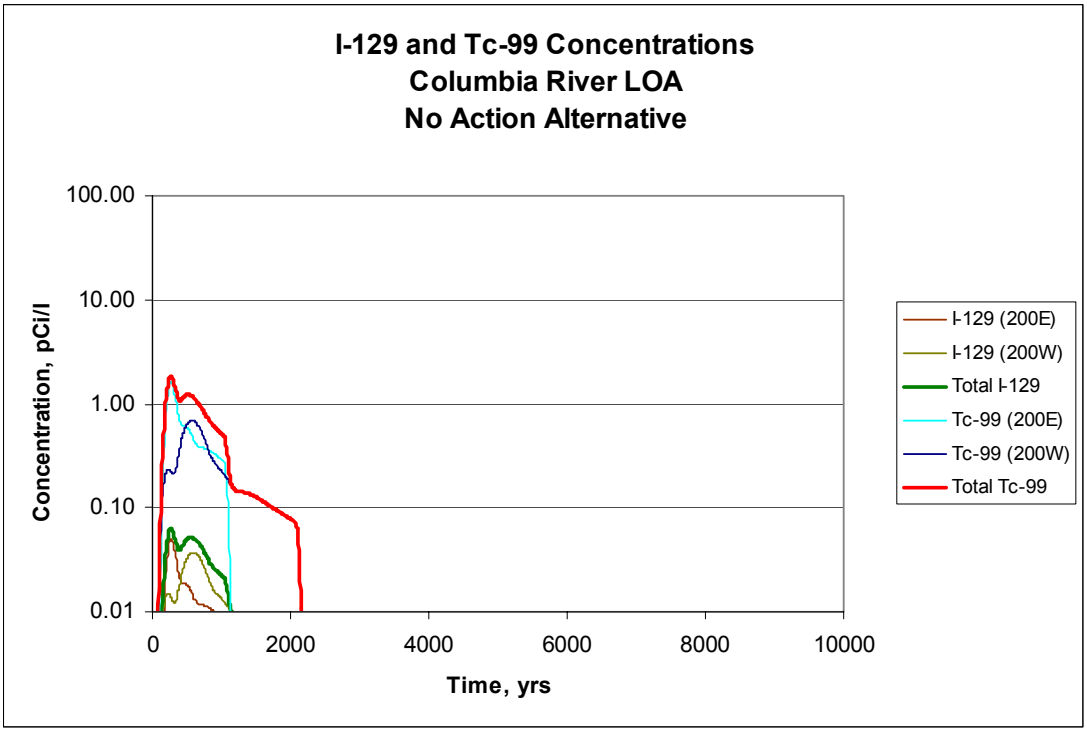


Figure G.90. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (No Action Alternative – Wastes Disposed of Before 1996)



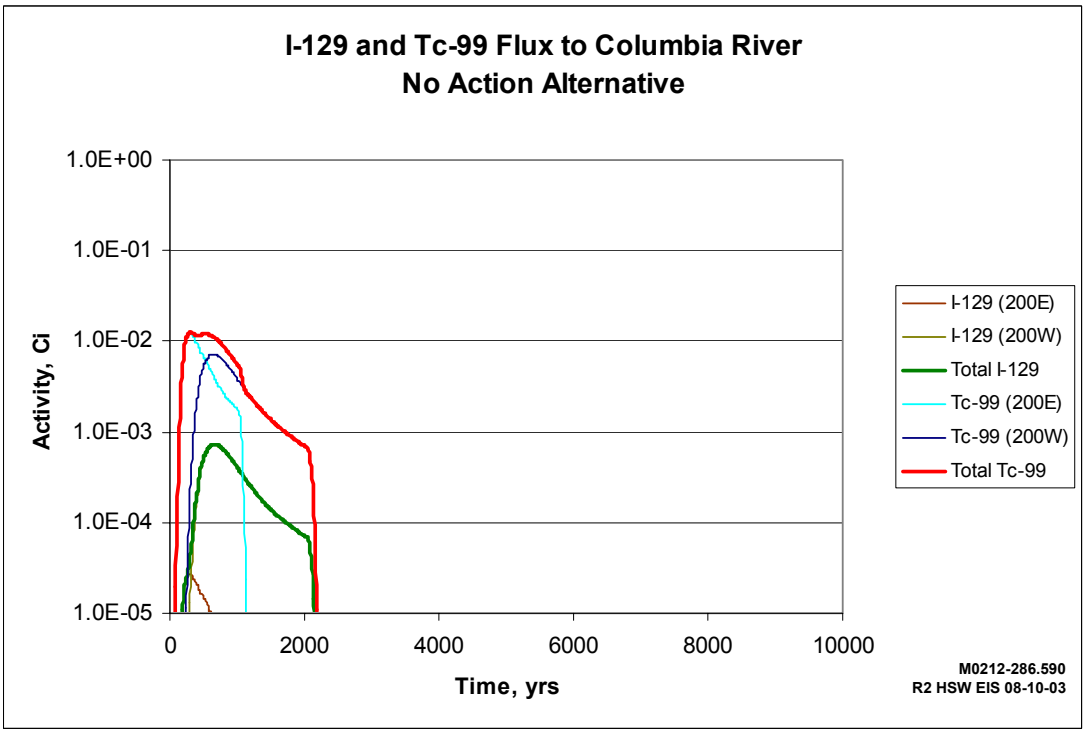
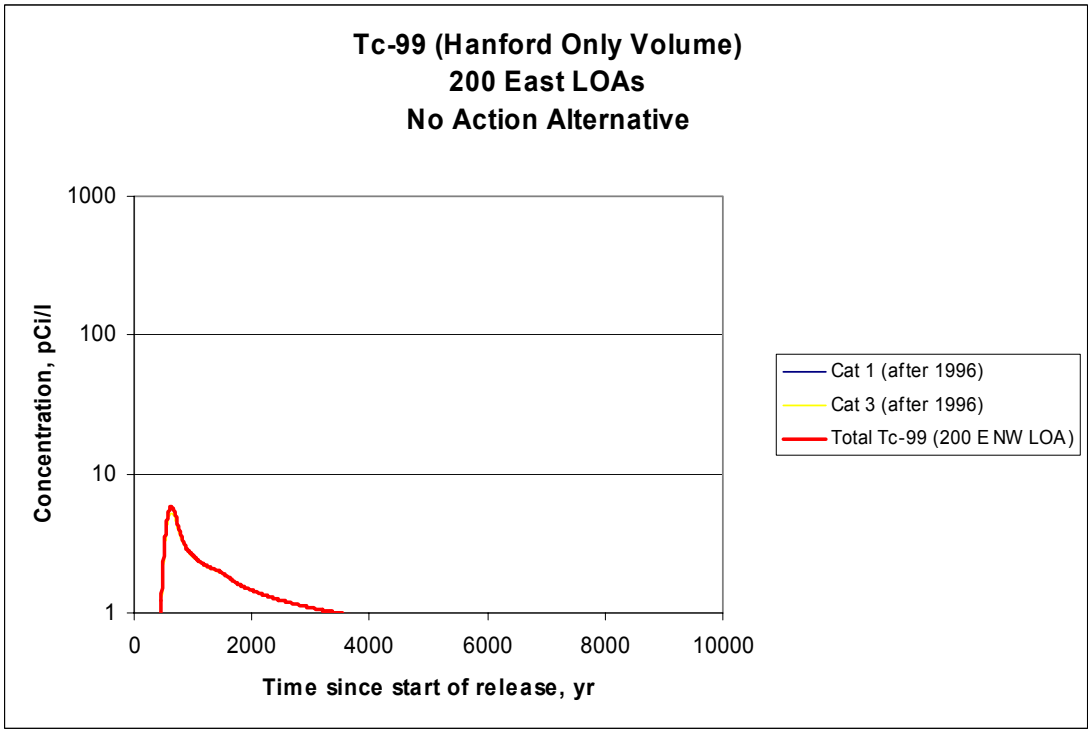


Figure G.91. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (No Action Alternative – Wastes Disposed of Before 1996)



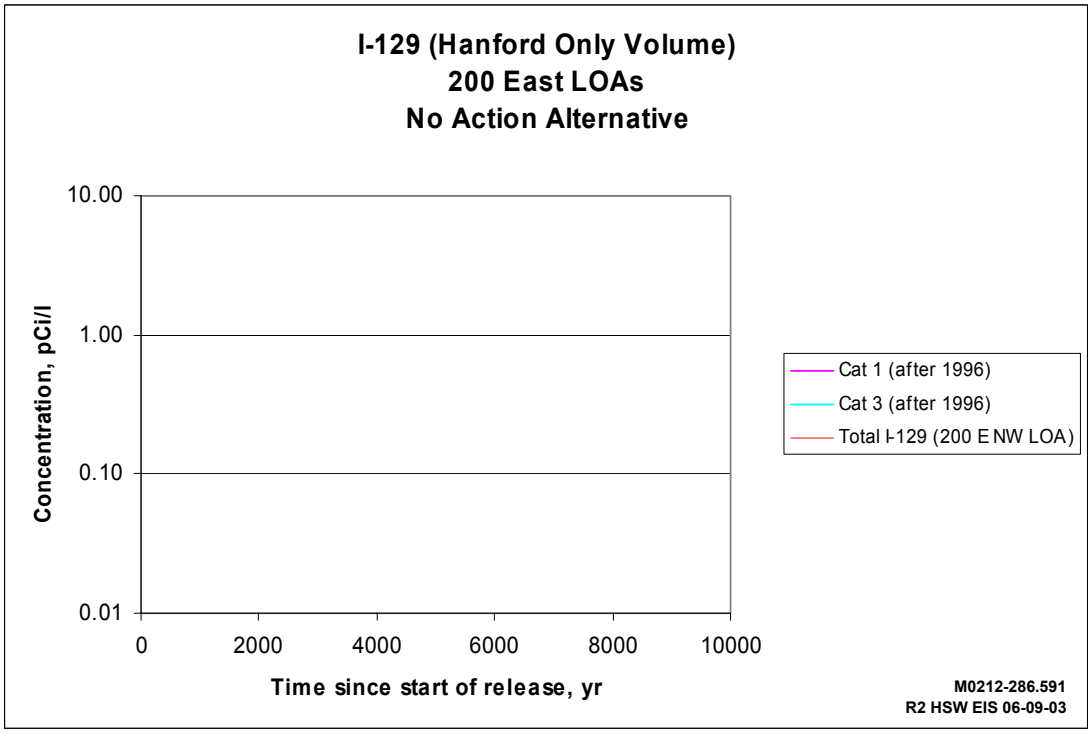
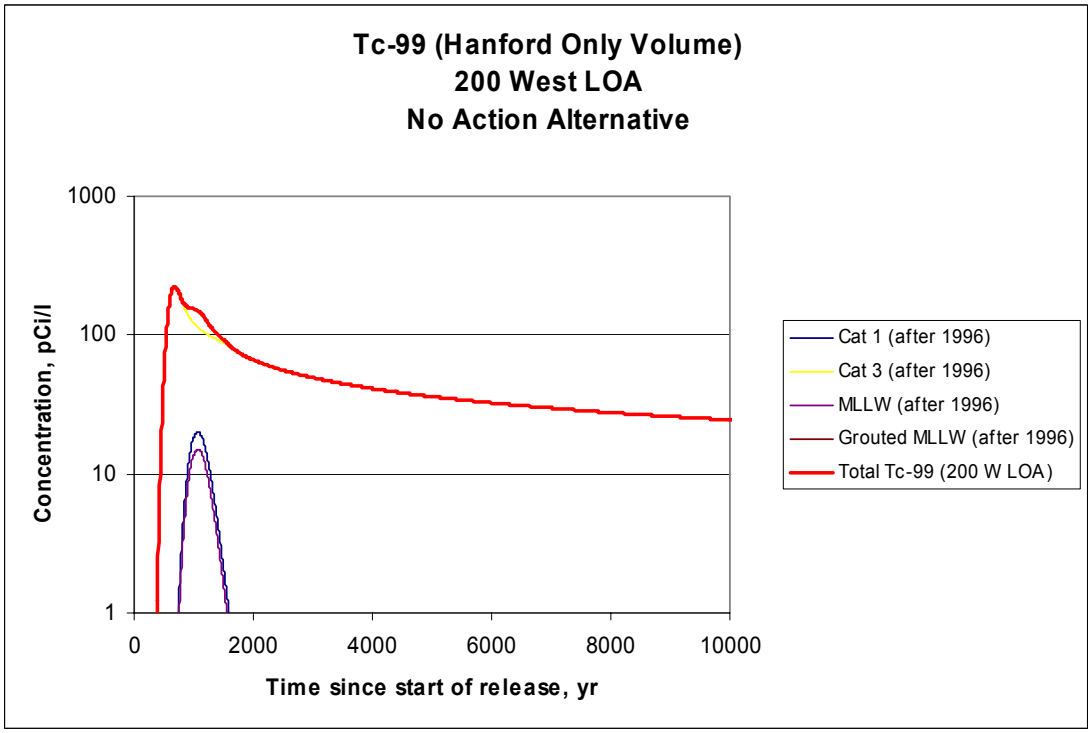


Figure G.92. Tc-99 and I-129 Concentration Profiles at the 1-km Lines of Analysis (200 East) (No Action Alternative – Hanford Only Wastes Disposed of After 1995)



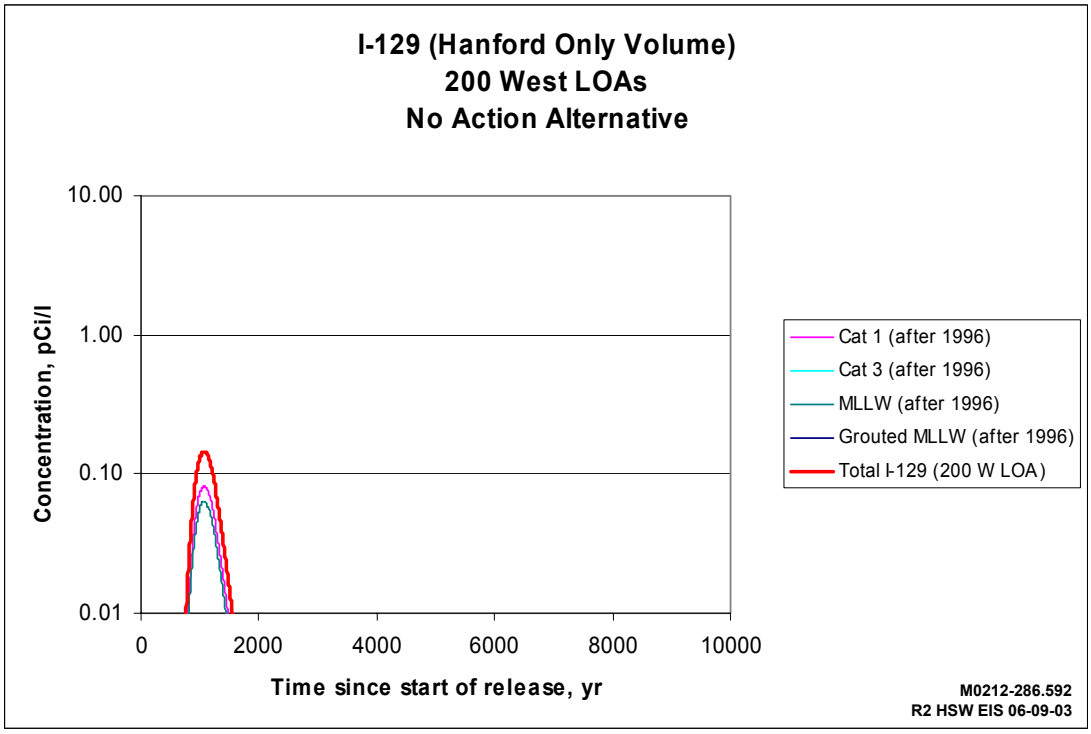
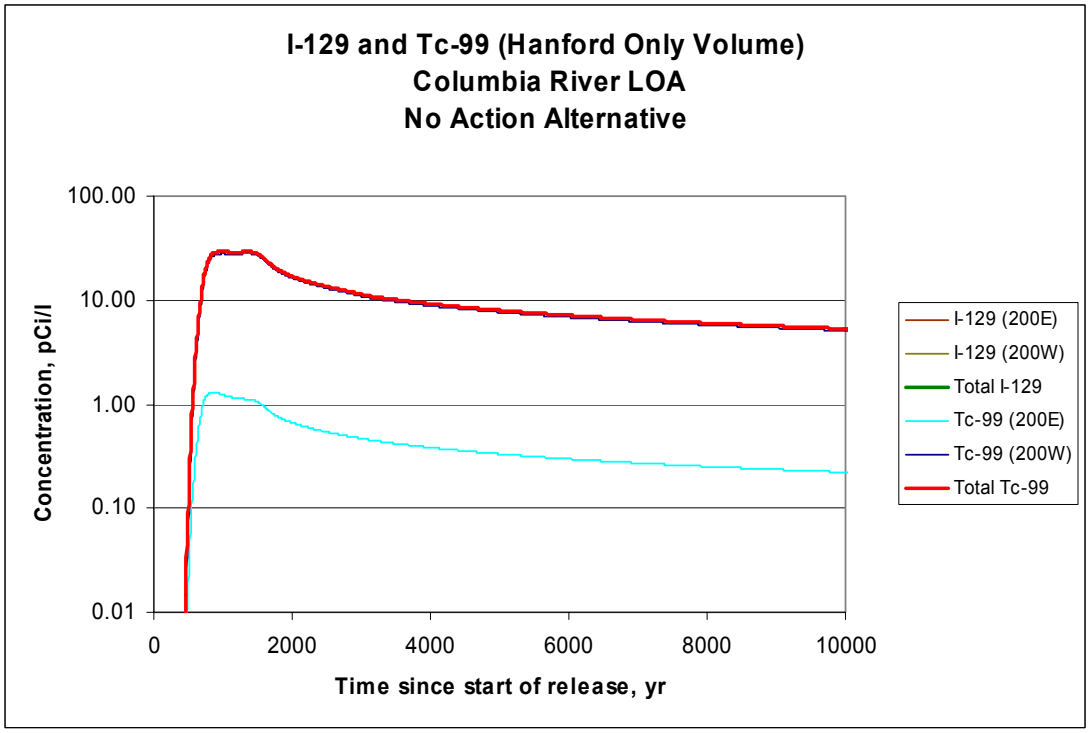


Figure G.93. Tc-99 and I-129 Concentration Profiles at the 1-km Line of Analysis (200 West) (No Action Alternative – Hanford Only Wastes Disposed of After 1995)



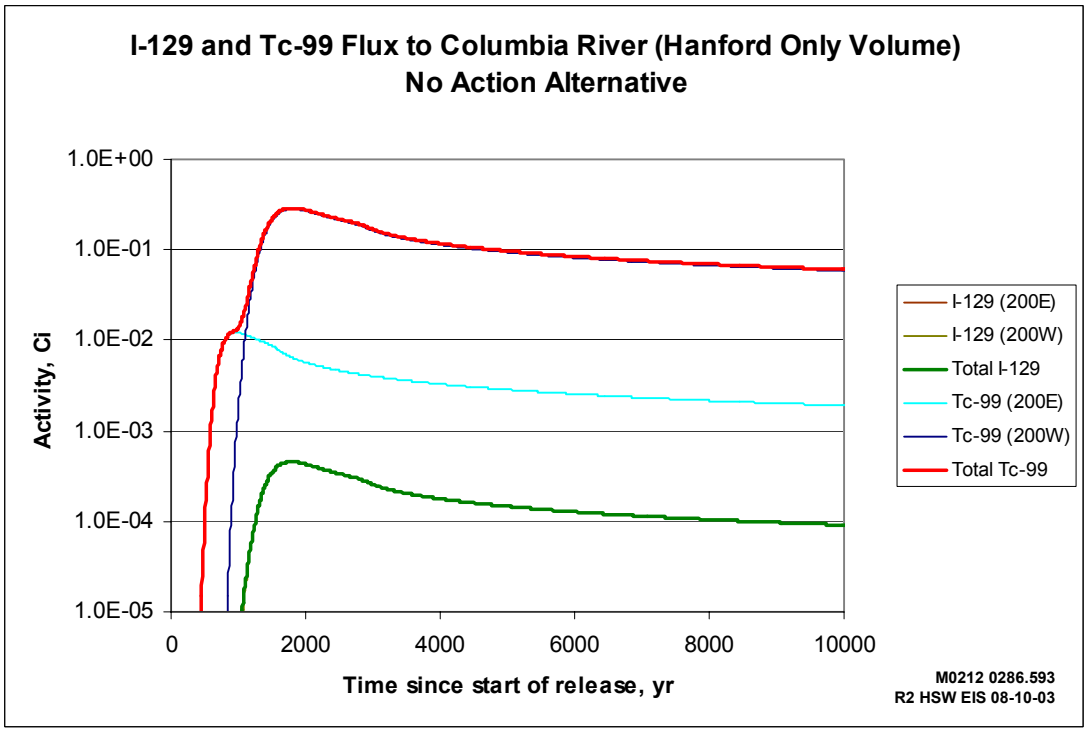


Figure G.94. I-129 and Tc-99 Concentration and River Flux Profiles Near the Columbia River (No Action Alternative – Hanford Only Wastes Disposed of After 1995)