Table A-1. RAO-Based Soil Concentrations.

Constituent	Half-Life	Organic Carbon Partition Coefficient	Waste Soils K_d	Clean Alluvium K_d	Clay Materials K_d	Interbeds Materials K_d	Vadose Zone Basalt K_d	Vadose Zone Weighted Average K_d	Carcinogenic 10^{-4} Preliminary RBC	Non-carcinogenic HI=1 Preliminary RBC	MCL
	(yr)	(mL/g)	(mL/g)					(mL/g)	pCi/L or mg/L	mg/L	pCi/L or mg/L
At-217	1.02E-09	NA	0	0	1	0	0	0.006	NA	NA	15
C-14	5.73E+03	NA	5	5	1	5	0	1.296	2.03E+01	NA	2000
H -3	1.24E+01	NA	0	0	0	0	0	0.000	6.20E+02	NA	20000
I-129	1.57E+07	NA	0	0	1	0	0	0.006	2.12E-01	NA	1
I-131	2.20E-02	NA	0	0	1	0	0	0.006	6.91E-01	NA	3
Kr-81	2.10E+05	NA	0	0	0	0	0	0.000	NA	NA	15
Kr-85	1.07E+01	NA	0	0	0	0	0	0.000	NA	NA	15
Rn-218	1.11E-09	NA	0	0	0	0	0	0.000	NA	NA	15
Rn-219	1.26E-07	NA	0	0	0	0	0	0.000	NA	NA	15
Rn-220	1.76E-06	NA	0	0	0	0	0	0.000	NA	NA	15
Rn-222	1.05E-02	NA	0	0	0	0	0	0.000	NA	NA	15
Tc-98	4.20E+06	NA	0.2	0.2	1	0.2	0	0.058	4.43E+00	NA	NA
Tc-99	2.13E+05	NA	0.2	0.2	1	0.2	0	0.058	1.14E+01	NA	900
Xe-127	9.97E-02	NA	0	0	0	0	0	0.000	NA	NA	15
Xe-129m	2.19E-02	NA	0	0	0	0	0	0.000	NA	NA	15
Xe-131m	3.26E-02	NA	0	0	0	0	0	0.000	NA	NA	15
Xe-133	1.44E-02	NA	0	0	0	0	0	0.000	NA	NA	15
1,1,1-Trichloroethane	3.0E+00	135.00	0.3375	0.3375	0	0.0675	0	0.043	NA	4.80E-03	2.00E-01
1,1,2,2-Tetrachloroethane	1.5E-01	79.00	0.1975	0.1975	0	0.0395	0	0.025	1.7E-04	NA	NA
1,1,2-Trichloroethane	8.6E+01	75.00	0.1875	0.1875	0	0.0375	0	0.024	6.2E-04	NA	5.00E-03
1,1-Dichloroethane	2.8E-01	53.00	0.1325	0.1325	0	0.0265	0	0.017	NA	7.33E-03	NA
1,1-Dichloroethene	2.7E-01	65.00	0.1625	0.1625	0	0.0325	0	0.021	1.4E-04	NA	7.00E-03
1,2,4-Trichlorobenzene	5.8E-01	1659.00	4.1475	4.1475	0	0.8295	0	0.533	NA	1.61E-03	7.00E-02
1,2-Dichlorobenzene	1.1E-02	379.00	0.9475	0.9475	0	0.1895	0	0.122	NA	3.32E-03	6.00E-01
1,2-Dichloroethane	6.4E-01	38.00	0.095	0.095	0	0.019	0	0.012	NA	9.19E-05	5.00E-03
1,2-Dichloroethene (total)	1.1E+00	35.50	0.08875	0.08875	0	0.01775	0	0.011	NA	5.50E-04	7.00E-02
1,3-Dichlorobenzene	5.8E-01	379.00	0.9475	0.9475	0	0.1895	0	0.122	NA	4.84E-05	NA
1,4-Dichlorobenzene	5.8E-01	616.00	1.54	1.54	0	0.308	0	0.198	1.5E-03	NA	7.50E-02
1,4-Dioxane	2.8E-01	11.09	0.02771725	0.02771725	0	0.00554345	0	0.004	1.9E-02	NA	NA
2,4,5-Trichlorophenol	9.8E-01	1600.00	4	4	0	0.8	0	0.514	NA	2.99E-02	NA
2,4,6-Trichlorophenol	2.5E+00	381.00	0.9525	0.9525	0	0.1905	0	0.122	1.7E-02	NA	NA
2,4-Dichlorophenol	1.3E-01	380.00	0.95	0.95	0	0.19	0	0.122	NA	9.53E-04	NA
2,4-Dimethylphenol	2.2E-02	209.00	0.5225	0.5225	0	0.1045	0	0.067	NA	6.45E-03	NA
2,4-Dinitrophenol	2.8E-02	0.01	0.000025	0.000025	0	0.000005	0	0.000	NA	6.60E-04	NA
2,4-Dinitrotoluene	5.0E-01	95.50	0.23875	0.23875	0	0.04775	0	0.031	NA	6.58E-04	NA
2,6-Dinitrotoluene	5.0E-01	69.20	0.173	0.173	0	0.0346	0	0.022	NA	3.30E-04	NA
2-Butanone	NA	4.50	0.01125	0.01125	0	0.00225	0	0.001	NA	1.73E-02	NA
2-Chloronaphthalene	1.9E-01	1550.00	3.875	3.875	0	0.775	0	0.498	NA	4.21E-03	NA
2-Chlorophenol	6.8E-03	398.00	0.995	0.995	0	0.199	0	0.128	NA	2.75E-04	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Design Inventory	Arrival Time of Peak Concentration	Simulated Long Term Groundwater Contaminant Peak Concentration (Dilution/ Attenuation Factor)	Carcinogenic RBC based Waste Soil Concentration	Non-carcinogenic RBC-based Waste Soil Concentration	MCL-based Waste Soil Concentration	Carcinogenic RBC based Waste Soil Concentration	Count Number of Carcinogenic Constituents	DI/Carcinogenic RBC-based Waste Soil Conc.	Fractional Carcinogenic Risk at Preliminary RBC	Available Carcinogenic Risk to be Added (Redistributed) to Preliminary Risk
	Ci/kg or mg/kg	years	kg/L	pCi/kg or mg/kg	mg/kg	pCi/kg or mg/kg	Ci/kg or mg/kg		Ratio		
At-217	5.12E-17	No Arrival	0.00E+00	NA	NA	No Limit	NA		NA	NA	NA
C-14	4.61E-14	2.38E+04	5.97E-06	3.39E+06	NA	3.35E+08	3.39E-06	1	1.36E-08	5.00E-07	3.35E-06
H -3	4.96E-08	6.97E+01	5.30E-12	1.17E+14	NA	3.77E+15	1.17E+02	1	4.24E-10	5.00E-07	3.35E-06
I-129	1.30E-09	3.66E+04	6.68E-04	3.18E+02	NA	1.50E+03	3.18E-10	1	4.09E+00	5.00E-07	3.35E-06
I-131	0.00E+00	1.46E+01	2.72E-215	2.54E+214	NA	1.10E+215	2.54E+202	1	0.00E+00	5.00E-07	3.35E-06
Kr-81	5.30E-18	3.18E+04	7.23E-04	NA	NA	2.08E+04	NA		NA	NA	NA
Kr-85	1.16E-06	6.17E+01	2.93E-12	NA	NA	5.11E+12	NA		NA	NA	NA
Rn-218	1.26E-125	No Arrival	0.00E+00	NA	NA	No Limit	NA		NA	NA	NA
Rn-219	2.03E-14	No Arrival	0.00E+00	NA	NA	No Limit	NA		NA	NA	NA
Rn-220	5.53E-13	No Arrival	0.00E+00	NA	NA	No Limit	NA		NA	NA	NA
Rn-222	6.21E-15	No Arrival	0.00E+00	NA	NA	No Limit	NA		NA	NA	NA
Tc-98	1.77E-16	5.90E+04	4.18E-04	1.06E+04	NA	NA	1.06E-08	1	1.67E-08	5.00E-07	3.35E-06
Tc-99	5.76E-09	5.66E+04	3.50E-04	3.26E+04	NA	2.57E+06	3.26E-08	1	1.77E-01	5.00E-07	3.35E-06
Xe-127	1.58E-81	1.20E+01	1.04E-52	NA	NA	1.45E+53	NA		NA	NA	NA
Xe-129m	0.00E+00	1.20E+01	1.49E-181	NA	NA	1.00E+182	NA		NA	NA	NA
Xe-131m	2.69E-121	1.20E+01	1.97E-127	NA	NA	7.63E+127	NA		NA	NA	NA
Xe-133	0.00E+00	1.20E+01	4.73E-268	NA	NA	3.17E+268	NA		NA	NA	NA
1,1,1-Trichloroethane	1.57E-02	30	3.34E-16	NA	1.43E+13	5.98E+14	NA		NA	NA	NA
1,1,2,2-Tetrachloroethane	4.95E-05	15	6.25E-45	2.76E+40	NA	NA	2.76E+40	1	1.79E-45	5.00E-07	3.35E-06
1,1,2-Trichloroethane	2.42E-04	228	1.34E-10	4.65E+06	NA	3.74E+07	4.65E+06	1	5.21E-11	5.00E-07	3.35E-06
1,1-Dichloroethane	2.34E-03	15	8.91E-32	NA	8.23E+28	NA	NA		NA	NA	NA
1,1-Dichloroethene	1.48E-03	15	7.09E-33	1.99E+28	NA	9.87E+29	1.99E+28	1	7.45E-32	5.00E-07	3.35E-06
1,2,4-Trichlorobenzene	1.14E-02	30	5.17E-32	NA	3.11E+28	1.35E+30	NA		NA	NA	NA
1,2-Dichlorobenzene	1.14E-02	No Arrival	0.00E+00	NA	No Limit	No Limit	NA		NA	NA	NA
1,2-Dichloroethane	5.38E-06	15	2.81E-23	NA	3.28E+18	1.78E+20	NA		NA	NA	NA
1,2-Dichloroethene (total)	3.24E-04	18	3.22E-20	NA	1.71E+16	2.17E+18	NA		NA	NA	NA
1,3-Dichlorobenzene	1.14E-02	30	5.17E-32	NA	9.35E+26	NA	NA		NA	NA	NA
1,4-Dichlorobenzene	4.50E-01	30	5.17E-32	2.97E+28	NA	1.45E+30	2.97E+28	1	1.52E-29	5.00E-07	3.35E-06
1,4-Dioxane	1.88E-05	12	4.04E-29	4.73E+26	NA	NA	4.73E+26	1	3.98E-32	5.00E-07	3.35E-06
2,4,5-Trichlorophenol	4.46E-02	30	1.14E-25	NA	2.63E+23	NA	NA		NA	NA	NA
2,4,6-Trichlorophenol	1.83E-02	30	4.52E-20	3.87E+17	NA	NA	3.87E+17	1	4.71E-20	5.00E-07	3.35E-06
2,4-Dichlorophenol	2.16E-02	30	4.70E-83	NA	2.03E+79	NA	NA		NA	NA	NA
2,4-Dimethylphenol	1.83E-02	No Arrival	0.00E+00	NA	No Limit	NA	NA		NA	NA	NA
2,4-Dinitrophenol	5.09E-02	12	1.42E-146	NA	4.64E+142	NA	NA		NA	NA	NA
2,4-Dinitrotoluene	1.14E-02	15	4.09E-25	NA	1.61E+21	NA	NA		NA	NA	NA
2,6-Dinitrotoluene	2.07E-02	15	4.09E-25	NA	8.07E+20	NA	NA		NA	NA	NA
2-Butanone	2.47E-02	32605	8.04E-04	NA	2.15E+01	NA	NA		NA	NA	NA
2-Chloronaphthalene	1.14E-02	30	9.02E-64	NA	4.67E+60	NA	NA		NA	NA	NA
2-Chlorophenol	1.83E-02	No Arrival	0.00E+00	NA	No Limit	NA	NA		NA	NA	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Adjusted Fractional Carcinogenic Risk	Adjusted Carcinogenic RBC based Waste Soil Concentration	Carcinogenic Risk at Design Inventory	Is the Adjusted Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, "No Limit"	Count Number of Non-carcinogenic Constituents	DI/Non-carcinogenic RBC-based Waste Soil Conc.	Non-Carcinogenic Hazard Index at Preliminary RBC	Available Non-carcinogenic Fractional Hazard Index to be Added (Redistributed) to Preliminary Hazard Index	Adjusted Non-carcinogenic Fractional Hazard Index	Adjusted Non-Carcinogenic RBC based Waste Soil Concentration
		Ci/kg or mg/kg				Ratio				mg/kg
At-217	NA	NA	NA	NA		NA	NA	NA	NA	NA
C-14	3.85E-06	2.61E-05	1.36E-12	2.61E-05		NA	NA	NA	NA	NA
H -3	3.85E-06	9.00E+02	4.24E-14	9.00E+02		NA	NA	NA	NA	NA
I-129	3.85E-06	2.44E-09	4.09E-04	2.44E-09		NA	NA	NA	NA	NA
I-131	3.85E-06	1.95E+203	0.00E+00	No Limit		NA	NA	NA	NA	NA
Kr-81	NA	NA	NA	NA		NA	NA	NA	NA	NA
Kr-85	NA	NA	NA	NA		NA	NA	NA	NA	NA
Rn-218	NA	NA	NA	NA		NA	NA	NA	NA	NA
Rn-219	NA	NA	NA	NA		NA	NA	NA	NA	NA
Rn-220	NA	NA	NA	NA		NA	NA	NA	NA	NA
Rn-222	NA	NA	NA	NA		NA	NA	NA	NA	NA
Tc-98	3.85E-06	8.14E-08	1.67E-12	8.14E-08		NA	NA	NA	NA	NA
Tc-99	3.85E-06	2.51E-07	1.77E-05	2.51E-07		NA	NA	NA	NA	NA
Xe-127	NA	NA	NA	NA		NA	NA	NA	NA	NA
Xe-129m	NA	NA	NA	NA		NA	NA	NA	NA	NA
Xe-131m	NA	NA	NA	NA		NA	NA	NA	NA	NA
Xe-133	NA	NA	NA	NA		NA	NA	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA	NA	1	1.09E-15	1.15E-02	6.36E-03	1.79E-02	2.23E+13
1,1,2,2-Tetrachloroethane	3.85E-06	2.12E+41	1.79E-49	No Limit		NA	NA	NA	NA	NA
1,1,2-Trichloroethane	3.85E-06	3.58E+07	5.21E-15	No Limit		NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	1	2.84E-32	1.15E-02	6.36E-03	1.79E-02	1.28E+29
1,1-Dichloroethene	3.85E-06	1.53E+29	7.45E-36	No Limit		NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	1	3.66E-31	1.15E-02	6.36E-03	1.79E-02	4.83E+28
1,2-Dichlorobenzene	NA	NA	NA	NA	1	No Limit	No Limit	No Limit	No Limit	No Limit
1,2-Dichloroethane	NA	NA	NA	NA	1	1.64E-24	1.15E-02	6.36E-03	1.79E-02	5.09E+18
1,2-Dichloroethene (total)	NA	NA	NA	NA	1	1.90E-20	1.15E-02	6.36E-03	1.79E-02	2.65E+16
1,3-Dichlorobenzene	NA	NA	NA	NA	1	1.22E-29	1.15E-02	6.36E-03	1.79E-02	1.45E+27
1,4-Dichlorobenzene	3.85E-06	2.28E+29	1.52E-33	No Limit		NA	NA	NA	NA	NA
1,4-Dioxane	3.85E-06	3.64E+27	3.98E-36	No Limit		NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	1	1.70E-25	1.15E-02	6.36E-03	1.79E-02	4.08E+23
2,4,6-Trichlorophenol	3.85E-06	2.98E+18	4.71E-24	No Limit		NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	1	1.06E-81	1.15E-02	6.36E-03	1.79E-02	3.15E+79
2,4-Dimethylphenol	NA	NA	NA	NA	1	No Limit	No Limit	No Limit	No Limit	No Limit
2,4-Dinitrophenol	NA	NA	NA	NA	1	1.10E-144	1.15E-02	6.36E-03	1.79E-02	7.21E+142
2,4-Dinitrotoluene	NA	NA	NA	NA	1	7.07E-24	1.15E-02	6.36E-03	1.79E-02	2.50E+21
2,6-Dinitrotoluene	NA	NA	NA	NA	1	2.56E-23	1.15E-02	6.36E-03	1.79E-02	1.25E+21
2-Butanone	NA	NA	NA	NA	1	1.15E-03	1.15E-02	6.36E-03	1.79E-02	3.34E+01
2-Chloronaphthalene	NA	NA	NA	NA	1	2.44E-63	1.15E-02	6.36E-03	1.79E-02	7.25E+60
2-Chlorophenol	NA	NA	NA	NA	1	No Limit	No Limit	No Limit	No Limit	No Limit

Table A-1. RAO-Based Soil Concentrations.

Constituent	Non-carcinogenic HI at DI	Is the Adjusted Non-Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, then "No Limit"	MCL-based Waste Soil Concentration	Is the MCL-based Waste Soil Concentration greater than unity? If so, then "No Limit"
			Ci/kg or mg/kg	
At-217	NA	NA	No Limit	No Limit
C-14	NA	NA	3.35E-04	3.35E-04
H -3	NA	NA	3.77E+03	3.77E+03
I-129	NA	NA	1.50E-09	1.50E-09
I-131	NA	NA	1.10E+203	No Limit
Kr-81	NA	NA	2.08E-08	2.08E-08
Kr-85	NA	NA	5.11E+00	5.11E+00
Rn-218	NA	NA	No Limit	No Limit
Rn-219	NA	NA	No Limit	No Limit
Rn-220	NA	NA	No Limit	No Limit
Rn-222	NA	NA	No Limit	No Limit
Tc-98	NA	NA	NA	NA
Tc-99	NA	NA	2.57E-06	2.57E-06
Xe-127	NA	NA	1.45E+41	No Limit
Xe-129m	NA	NA	1.00E+170	No Limit
Xe-131m	NA	NA	7.63E+115	No Limit
Xe-133	NA	NA	3.17E+256	No Limit
1,1,1-Trichloroethane	1.09E-15	No Limit	5.98E+14	No Limit
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	3.74E+07	No Limit
1,1-Dichloroethane	2.84E-32	No Limit	NA	NA
1,1-Dichloroethene	NA	NA	9.87E+29	No Limit
1,2,4-Trichlorobenzene	3.66E-31	No Limit	1.35E+30	No Limit
1,2-Dichlorobenzene	No Limit	No Limit	No Limit	No Limit
1,2-Dichloroethane	1.64E-24	No Limit	1.78E+20	No Limit
1,2-Dichloroethene (total)	1.90E-20	No Limit	2.17E+18	No Limit
1,3-Dichlorobenzene	1.22E-29	No Limit	NA	NA
1,4-Dichlorobenzene	NA	NA	1.45E+30	No Limit
1,4-Dioxane	NA	NA	NA	NA
2,4,5-Trichlorophenol	1.70E-25	No Limit	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA
2,4-Dichlorophenol	1.06E-81	No Limit	NA	NA
2,4-Dimethylphenol	No Limit	No Limit	NA	NA
2,4-Dinitrophenol	1.10E-144	No Limit	NA	NA
2,4-Dinitrotoluene	7.07E-24	No Limit	NA	NA
2,6-Dinitrotoluene	2.56E-23	No Limit	NA	NA
2-Butanone	1.15E-03	3.34E+01	NA	NA
2-Chloronaphthalene	2.44E-63	No Limit	NA	NA
2-Chlorophenol	No Limit	No Limit	NA	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Half-Life	Organic Carbon Partition Coefficient	Waste Soils K_d	Clean Alluvium K_d	Clay Materials K_d	Interbeds Materials K_d	Vadose Zone Basalt K_d	Vadose Zone Weighted Average K_d	Carcinogenic 10^{-4} Preliminary RBC	Non-carcinogenic HI=1 Preliminary RBC	MCL
	(yr)	(mL/g)	(mL/g)					(mL/g)	pCi/L or mg/L	mg/L	pCi/L or mg/L
2-Hexanone	NA	15.11	0.03776425	0.03776425	0	0.00755285	0	0.005	NA	1.31E-02	NA
2-Methylnaphthalene	NA	2241.89	5.6047205	5.6047205	0	1.1209441	0	0.720	NA	5.19E-03	NA
2-Methylphenol	3.8E-02	91.20	0.228	0.228	0	0.0456	0	0.029	NA	1.63E-02	NA
2-Nitroaniline	NA	16.98	0.04245	0.04245	0	0.00849	0	0.005	NA	3.15E-06	NA
2-Nitrophenol	5.8E-02	38.99	0.0974695	0.0974695	0	0.0194939	0	0.013	NA	2.63E-03	NA
3,3'-Dichlorobenzidine	5.1E-01	724.00	1.81	1.81	0	0.362	0	0.232	4.5E-04	NA	NA
3-Nitroaniline	NA	16.98	0.04245	0.04245	0	0.00849	0	0.005	NA	3.15E-06	NA
4,6-Dinitro-2-methylphenol	1.1E-01	633.62	1.584054	1.584054	0	0.3168108	0	0.203	NA	6.51E-04	NA
4-Chloro-3-methylphenol	NA	50.00	0.125	0.125	0	0.025	0	0.016	NA	NA	NA
4-Chloroaniline	NA	66.10	0.16525	0.16525	0	0.03305	0	0.021	NA	1.25E-03	NA
4-Chlorophenyl-phenylether	NA	3105.00	7.7625	7.7625	0	1.5525	0	0.997	NA	NA	NA
4-Methyl-2-Pentanone	3.8E-02	134.00	0.335	0.335	0	0.067	0	0.043	NA	1.43E-03	NA
4-Methylphenol	3.8E-02	80.78	0.20194825	0.20194825	0	0.04038965	0	0.026	NA	1.63E-03	NA
4-Nitroaniline	NA	16.98	0.04245	0.04245	0	0.00849	0	0.005	NA	3.15E-06	NA
4-Nitrophenol	1.5E-02	38.99	0.0974695	0.0974695	0	0.0194939	0	0.013	NA	2.62E-03	NA
Acenaphthylene	2.8E-01	2001.86	5.004642	5.004642	0	1.0009284	0	0.643	NA	3.22E-03	NA
Acetone	1.1E-02	0.58	0.0014375	0.0014375	0	0.0002875	0	0.000	NA	5.52E-03	NA
Acetonitrile	4.8E-02	15.60	0.039	0.039	0	0.0078	0	0.005	NA	7.19E-04	NA
Acrolein	4.2E-02	21.20	0.053	0.053	0	0.0106	0	0.007	NA	3.79E-07	NA
Acrylonitrile	6.6E-02	0.85	0.002125	0.002125	0	0.000425	0	0.000	NA	3.40E-05	NA
Benzene	4.4E-01	62.00	0.155	0.155	0	0.031	0	0.020	NA	1.01E-04	5.00E-03
Benzidine	2.7E-02	154.88	0.38720425	0.38720425	0	0.07744085	0	0.050	9.1E-07	NA	NA
Benzoic acid	1.9E-02	0.60	0.0015	0.0015	0	0.0003	0	0.000	NA	1.31E+00	NA
bis(2-Chloroethoxy)methane	NA	5.46	0.0136605	0.0136605	0	0.0027321	0	0.002	NA	NA	NA
bis(2-Chloroethyl)ether	5.8E-01	76.00	0.19	0.19	0	0.038	0	0.024	3.1E-05	NA	NA
bis(2-Chloroisopropyl)ether	3.4E-01	61.00	0.1525	0.1525	0	0.0305	0	0.020	8.5E-04	NA	NA
Butane,1,1,3,4-Tetrachloro-	1.5E-01	79.00	0.1975	0.1975	0	0.0395	0	0.025	NA	NA	NA
Carbazole	NA	3390.00	8.475	8.475	0	1.695	0	1.088	9.0E-03	NA	NA
Carbon Disulfide	4.1E-03	45.70	0.11425	0.11425	0	0.02285	0	0.015	NA	9.35E-03	NA
Chlorobenzene	3.5E-01	224.00	0.56	0.56	0	0.112	0	0.072	NA	9.52E-04	NA
Chloroethane	2.7E-02	14.70	0.03675	0.03675	0	0.00735	0	0.005	1.2E-02	NA	NA
Chloromethane	NA	35.00	0.0875	0.0875	0	0.0175	0	0.011	4.7E-03	NA	NA
Diacetone alcohol	3.8E-02	134.00	0.335	0.335	0	0.067	0	0.043	NA	NA	NA
Diethylphthalate	1.6E-01	288.00	0.72	0.72	0	0.144	0	0.092	NA	2.63E-01	NA
Dimethylphthalate	2.2E-02	68.94	0.1723575	0.1723575	0	0.0344715	0	0.022	NA	3.30E+00	NA
Ethylbenzene	2.1E-01	204.00	0.51	0.51	0	0.102	0	0.065	NA	1.16E-02	7.00E-01
Famphur	3.2E-01	419.00	1.0475	1.0475	0	0.2095	0	0.134	NA	NA	NA
Hexachloroethane	2.9E-01	1780.00	4.45	4.45	0	0.89	0	0.571	NA	3.08E-04	NA
Isobutyl alcohol	1.2E-02	4.70	0.01175625	0.01175625	0	0.00235125	0	0.002	NA	9.89E-02	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Design Inventory	Arrival Time of Peak Concentration	Simulated Long Term Groundwater Contaminant Peak Concentration (Dilution/ Attenuation Factor)	Carcinogenic RBC based Waste Soil Concentration	Non-carcinogenic RBC-based Waste Soil Concentration	MCL-based Waste Soil Concentration	Carcinogenic RBC based Waste Soil Concentration	Count Number of Carcinogenic Constituents	DI/Carcinogenic RBC-based Waste Soil Conc.	Fractional Carcinogenic Risk at Preliminary RBC	Available Carcinogenic Risk to be Added (Redistributed) to Preliminary Risk
	Ci/kg or mg/kg	years	kg/L	pCi/kg or mg/kg	mg/kg	pCi/kg or mg/kg	Ci/kg or mg/kg		Ratio		
2-Hexanone	2.70E-03	32605	8.04E-04	NA	1.63E+01	NA	NA		NA	NA	NA
2-Methylnaphthalene	5.12E-01	59007	4.23E-04	NA	1.23E+01	NA	NA		NA	NA	NA
2-Methylphenol	2.06E-02	15	1.28E-130	NA	1.28E+128	NA	NA		NA	NA	NA
2-Nitroaniline	2.72E-02	32605	8.04E-04	NA	3.92E-03	NA	NA		NA	NA	NA
2-Nitrophenol	1.83E-02	15	1.51E-92	NA	1.74E+89	NA	NA		NA	NA	NA
3,3'-Dichlorobenzidine	1.14E-02	30	3.80E-34	1.19E+30	NA	NA	1.19E+30	1	9.54E-33	5.00E-07	3.35E-06
3-Nitroaniline	2.72E-02	32605	8.04E-04	NA	3.92E-03	NA	NA		NA	NA	NA
4,6-Dinitro-2-methylphenol	4.46E-02	30	3.84E-96	NA	1.69E+92	NA	NA		NA	NA	NA
4-Chloro-3-methylphenol	1.83E-02	36605	6.70E-04	NA	NA	NA	NA		NA	NA	NA
4-Chloroaniline	4.08E-02	36605	6.70E-04	NA	1.87E+00	NA	NA		NA	NA	NA
4-Chlorophenyl-phenylether	1.14E-02	59007	4.23E-04	NA	NA	NA	NA		NA	NA	NA
4-Methyl-2-Pentanone	2.96E-02	15	1.28E-130	NA	1.12E+127	NA	NA		NA	NA	NA
4-Methylphenol	3.86E-02	15	1.28E-130	NA	1.28E+127	NA	NA		NA	NA	NA
4-Nitroaniline	2.72E-02	32605	8.04E-04	NA	3.92E-03	NA	NA		NA	NA	NA
4-Nitrophenol	5.16E-02	15	2.01E-299	NA	1.31E+296	NA	NA		NA	NA	NA
Acenaphthylene	2.07E-02	30	2.49E-48	NA	1.29E+45	NA	NA		NA	NA	NA
Acetone	6.20E-01	No Arrival	0.00E+00	NA	No Limit	NA	NA		NA	NA	NA
Acetonitrile	1.88E-05	12	6.59E-92	NA	1.09E+88	NA	NA		NA	NA	NA
Acrolein	9.06E-06	15	1.44E-119	NA	2.62E+112	NA	NA		NA	NA	NA
Acrylonitrile	9.06E-06	12	6.78E-71	NA	5.01E+65	NA	NA		NA	NA	NA
Benzene	6.03E-01	15	2.85E-26	NA	3.55E+21	1.75E+23	NA		NA	NA	NA
Benzidine	2.91E-04	15	2.62E-176	3.48E+169	NA	NA	3.48E+169	1	8.34E-174	5.00E-07	3.35E-06
Benzoic acid	8.56E-03	12	3.83E-205	NA	3.41E+204	NA	NA		NA	NA	NA
bis(2-Chloroethoxy)methane	1.14E-02	32605	8.04E-04	NA	NA	NA	NA		NA	NA	NA
bis(2-Chloroethyl)ether	1.14E-02	15	5.36E-24	5.70E+18	NA	NA	5.70E+18	1	2.00E-21	5.00E-07	3.35E-06
bis(2-Chloroisopropyl)ether	1.14E-02	15	3.62E-29	2.35E+25	NA	NA	2.35E+25	1	4.83E-28	5.00E-07	3.35E-06
Butane,1,1,3,4-Tetrachloro-	7.89E-03	15	6.25E-45	NA	NA	NA	NA		NA	NA	NA
Carbazole	3.23E-02	59007	4.23E-04	2.13E+01	NA	NA	2.13E+01	1	1.52E-03	5.00E-07	3.35E-06
Carbon Disulfide	4.55E-02	No Arrival	0.00E+00	NA	No Limit	NA	NA		NA	NA	NA
Chlorobenzene	6.57E-03	30	4.29E-42	NA	2.22E+38	NA	NA		NA	NA	NA
Chloroethane	3.02E-06	12	1.59E-148	7.58E+145	NA	NA	7.58E+145	1	3.98E-152	5.00E-07	3.35E-06
Chloromethane	3.53E-04	36605	6.70E-04	7.04E+00	NA	NA	7.04E+00	1	5.01E-05	5.00E-07	3.35E-06
Diacetone alcohol	4.32E+00	15	1.28E-130	NA	NA	NA	NA		NA	NA	NA
Diethylphthalate	1.14E-02	30	8.87E-72	NA	2.96E+70	NA	NA		NA	NA	NA
Dimethylphthalate	1.14E-02	15	2.76E-216	NA	1.20E+216	NA	NA		NA	NA	NA
Ethylbenzene	7.81E-02	30	7.31E-59	NA	1.58E+56	9.58E+57	NA		NA	NA	NA
Famphur	5.81E-05	30	7.13E-45	NA	NA	NA	NA		NA	NA	NA
Hexachloroethane	1.14E-02	30	5.08E-47	NA	6.06E+42	NA	NA		NA	NA	NA
Isobutyl alcohol	1.88E-05	No Arrival	0.00E+00	NA	No Limit	NA	NA		NA	NA	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Adjusted Fractional Carcinogenic Risk	Adjusted Carcinogenic RBC based Waste Soil Concentration	Carcinogenic Risk at Design Inventory	Is the Adjusted Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, "No Limit"	Count Number of Non-carcinogenic Constituents	DI/Non-carcinogenic RBC-based Waste Soil Conc.	Non-Carcinogenic Hazard Index at Preliminary RBC	Available Non-carcinogenic Fractional Hazard Index to be Added (Redistributed) to Preliminary Hazard Index	Adjusted Non-carcinogenic Fractional Hazard Index	Adjusted Non-Carcinogenic RBC based Waste Soil Concentration
		Ci/kg or mg/kg				Ratio				mg/kg
2-Hexanone	NA	NA	NA	NA	1	1.65E-04	1.15E-02	6.36E-03	1.79E-02	2.54E+01
2-Methylnaphthalene	NA	NA	NA	NA	1	4.16E-02	1.15E-02	6.36E-03	1.79E-02	1.91E+01
2-Methylphenol	NA	NA	NA	NA	1	1.62E-130	1.15E-02	6.36E-03	1.79E-02	1.98E+128
2-Nitroaniline	NA	NA	NA	NA	1	6.95E+00	1.15E-02	6.36E-03	1.79E-02	6.08E-03
2-Nitrophenol	NA	NA	NA	NA	1	1.05E-91	1.15E-02	6.36E-03	1.79E-02	2.70E+89
3,3'-Dichlorobenzidine	3.85E-06	9.18E+30	9.54E-37	No Limit		NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	1	6.95E+00	1.15E-02	6.36E-03	1.79E-02	6.08E-03
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	1	2.63E-94	1.15E-02	6.36E-03	1.79E-02	2.63E+92
4-Chloro-3-methylphenol	NA	NA	NA	NA		NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	1	2.18E-02	1.15E-02	6.36E-03	1.79E-02	2.91E+00
4-Chlorophenyl-phenylether	NA	NA	NA	NA		NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	NA	NA	NA	NA	1	2.64E-129	1.15E-02	6.36E-03	1.79E-02	1.74E+127
4-Methylphenol	NA	NA	NA	NA	1	3.03E-129	1.15E-02	6.36E-03	1.79E-02	1.98E+127
4-Nitroaniline	NA	NA	NA	NA	1	6.95E+00	1.15E-02	6.36E-03	1.79E-02	6.08E-03
4-Nitrophenol	NA	NA	NA	NA	1	3.95E-298	1.15E-02	6.36E-03	1.79E-02	2.03E+296
Acenaphthylene	NA	NA	NA	NA	1	1.60E-47	1.15E-02	6.36E-03	1.79E-02	2.01E+45
Acetone	NA	NA	NA	NA	1	No Limit	No Limit	No Limit	No Limit	No Limit
Acetonitrile	NA	NA	NA	NA	1	1.72E-93	1.15E-02	6.36E-03	1.79E-02	1.69E+88
Acrolein	NA	NA	NA	NA	1	3.45E-118	1.15E-02	6.36E-03	1.79E-02	4.08E+112
Acrylonitrile	NA	NA	NA	NA	1	1.81E-71	1.15E-02	6.36E-03	1.79E-02	7.78E+65
Benzene	NA	NA	NA	NA	1	1.70E-22	1.15E-02	6.36E-03	1.79E-02	5.52E+21
Benzidine	3.85E-06	2.68E+170	8.34E-178	No Limit		NA	NA	NA	NA	NA
Benzoic acid	NA	NA	NA	NA	1	2.51E-207	1.15E-02	6.36E-03	1.79E-02	5.30E+204
bis(2-Chloroethoxy)methane	NA	NA	NA	NA		NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	3.85E-06	4.38E+19	2.00E-25	No Limit		NA	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	3.85E-06	1.81E+26	4.83E-32	No Limit		NA	NA	NA	NA	NA
Butane,1,1,3,4-Tetrachloro-	NA	NA	NA	NA		NA	NA	NA	NA	NA
Carbazole	3.85E-06	1.64E+02	1.52E-07	1.64E+02		NA	NA	NA	NA	NA
Carbon Disulfide	NA	NA	NA	NA	1	No Limit	No Limit	No Limit	No Limit	No Limit
Chlorobenzene	NA	NA	NA	NA	1	2.96E-41	1.15E-02	6.36E-03	1.79E-02	3.45E+38
Chloroethane	3.85E-06	5.83E+146	3.98E-156	No Limit		NA	NA	NA	NA	NA
Chloromethane	3.85E-06	5.41E+01	5.01E-09	5.41E+01		NA	NA	NA	NA	NA
Diacetone alcohol	NA	NA	NA	NA		NA	NA	NA	NA	NA
Diethylphthalate	NA	NA	NA	NA	1	3.84E-73	1.15E-02	6.36E-03	1.79E-02	4.60E+70
Dimethylphthalate	NA	NA	NA	NA	1	9.50E-219	1.15E-02	6.36E-03	1.79E-02	1.86E+216
Ethylbenzene	NA	NA	NA	NA	1	4.93E-58	1.15E-02	6.36E-03	1.79E-02	2.46E+56
Famphur	NA	NA	NA	NA		NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	1	1.88E-45	1.15E-02	6.36E-03	1.79E-02	9.41E+42
Isobutyl alcohol	NA	NA	NA	NA	1	No Limit	No Limit	No Limit	No Limit	No Limit

Table A-1. RAO-Based Soil Concentrations.

Constituent	Non-carcinogenic HI at DI	Is the Adjusted Non-Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, then "No Limit"	MCL-based Waste Soil Concentration	Is the MCL-based Waste Soil Concentration greater than unity? If so, then "No Limit"
			Ci/kg or mg/kg	
2-Hexanone	1.65E-04	2.54E+01	NA	NA
2-Methylnaphthalene	4.16E-02	1.91E+01	NA	NA
2-Methylphenol	1.62E-130	No Limit	NA	NA
2-Nitroaniline	6.95E+00	6.08E-03	NA	NA
2-Nitrophenol	1.05E-91	No Limit	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA
3-Nitroaniline	6.95E+00	6.08E-03	NA	NA
4,6-Dinitro-2-methylphenol	2.63E-94	No Limit	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA
4-Chloroaniline	2.18E-02	2.91E+00	NA	NA
4-Chlorophenyl-phenylether	NA	NA	NA	NA
4-Methyl-2-Pentanone	2.64E-129	No Limit	NA	NA
4-Methylphenol	3.03E-129	No Limit	NA	NA
4-Nitroaniline	6.95E+00	6.08E-03	NA	NA
4-Nitrophenol	3.95E-298	No Limit	NA	NA
Acenaphthylene	1.60E-47	No Limit	NA	NA
Acetone	No Limit	No Limit	NA	NA
Acetonitrile	1.72E-93	No Limit	NA	NA
Acrolein	3.45E-118	No Limit	NA	NA
Acrylonitrile	1.81E-71	No Limit	NA	NA
Benzene	1.70E-22	No Limit	1.75E+23	No Limit
Benzidine	NA	NA	NA	NA
Benzoic acid	2.51E-207	No Limit	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	NA	NA	NA	NA
Butane,1,1,3,4-Tetrachloro-	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA
Carbon Disulfide	No Limit	No Limit	NA	NA
Chlorobenzene	2.96E-41	No Limit	NA	NA
Chloroethane	NA	NA	NA	NA
Chloromethane	NA	NA	NA	NA
Diacetone alcohol	NA	NA	NA	NA
Diethylphthalate	3.84E-73	No Limit	NA	NA
Dimethylphthalate	9.50E-219	No Limit	NA	NA
Ethylbenzene	4.93E-58	No Limit	9.58E+57	No Limit
Famphur	NA	NA	NA	NA
Hexachloroethane	1.88E-45	No Limit	NA	NA
Isobutyl alcohol	No Limit	No Limit	NA	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Half-Life	Organic Carbon Partition Coefficient	Waste Soils K_d	Clean Alluvium K_d	Clay Materials K_d	Interbeds Materials K_d	Vadose Zone Basalt K_d	Vadose Zone Weighted Average K_d	Carcinogenic 10^{-4} Preliminary RBC	Non-carcinogenic HI=1 Preliminary RBC	MCL
	(yr)	(mL/g)	(mL/g)					(mL/g)	pCi/L or mg/L	mg/L	pCi/L or mg/L
Isophorone	5.8E-01	46.80	0.117	0.117	0	0.0234	0	0.015	NA	6.57E-02	NA
Isopropyl Alcohol/2-propanol	1.1E-02	0.58	0.0014375	0.0014375	0	0.0002875	0	0.000	NA	NA	NA
Mesityl oxide	3.8E-02	134.00	0.335	0.335	0	0.067	0	0.043	NA	NA	NA
Methyl Acetate	NA	2.20	0.0055	0.0055	0	0.0011	0	0.001	NA	5.52E-02	NA
Methylene Chloride	3.0E-02	10.00	0.025	0.025	0	0.005	0	0.003	1.3E-02	NA	NA
Naphthalene	9.8E-02	2000.00	5	5	0	1	0	0.642	NA	5.62E-05	NA
Nitrobenzene	5.4E-01	64.60	0.1615	0.1615	0	0.0323	0	0.021	NA	3.07E-05	NA
N-Nitroso-di-n-propylamine	5.6E-01	24.00	0.06	0.06	0	0.012	0	0.008	3.0E-05	NA	NA
N-Nitrosodiphenylamine	1.2E-01	1290.00	3.225	3.225	0	0.645	0	0.414	4.0E-02	NA	NA
Pentachlorophenol	1.1E+00	592.00	1.48	1.48	0	0.296	0	0.190	8.0E-04	NA	1.00E-03
Phenanthrene	5.9E-01	4803.36	12.00839625	12.00839625	0	2.40167925	0	1.542	NA	6.65E-02	NA
Phenol	1.0E-02	28.80	0.072	0.072	0	0.0144	0	0.009	NA	1.97E-01	NA
Phenol,2,6-Bis(1,1-Dimethyl)	2.2E-02	209.00	0.5225	0.5225	0	0.1045	0	0.067	NA	NA	NA
RDX	NA	7.17	0.01792375	0.01792375	0	0.00358475	0	0.002	1.8E-03	NA	NA
Styrene	3.1E-01	912.00	2.28	2.28	0	0.456	0	0.293	NA	1.46E-02	1.00E-01
Tetrachloroethene	7.6E-01	265.00	0.6625	0.6625	0	0.1325	0	0.085	3.1E-03	NA	5.00E-03
Toluene	4.2E-02	140.00	0.35	0.35	0	0.07	0	0.045	NA	6.51E-03	1.00E+00
Trichloroethene	7.2E-01	94.30	0.23575	0.23575	0	0.04715	0	0.030	NA	3.30E-04	5.00E-03
Trinitrotoluene	2.8E-01	1.00	0.0025015	0.0025015	0	0.0005003	0	0.000	NA	1.61E-04	NA
Xylene (ortho)	7.1E-02	196.00	0.49	0.49	0	0.098	0	0.063	NA	1.30E-02	1.00E+01
Xylene (total)	7.1E-02	196.00	0.49	0.49	0	0.098	0	0.063	NA	1.30E-02	1.00E+01
Arsenic	NA	NA	3	3	7	3	0	0.816	1.4E-04	NA	5.00E-03
Boron	NA	NA	5	5	1	5	0	1.296	NA	2.98E-02	NA
Calcium	NA	NA	5	5	50	5	0	1.590	NA	NA	NA
Chloride	NA	NA	0	0	0	0	0	0.000	NA	NA	250
Cyanide	NA	8.90	0.022255	0.022255	0	0.004451	0	0.003	NA	NA	2.00E-01
Fluoride	NA	NA	0	0	0	0	0	0.000	NA	NA	4.00E+00
Magnesium	NA	NA	5	5	50	5	0	1.590	NA	NA	NA
Nitrate	NA	NA	0	0	0	0	0	0.000	NA	NA	10
Nitrate/Nitrite-N	NA	NA	0	0	0	0	0	0.000	NA	NA	10
Nitrite	NA	NA	0	0	0	0	0	0.000	NA	NA	1
Phosphorus	NA	NA	5	5	35	5	0	1.500	NA	NA	NA
Sulfate	NA	NA	0	0	0	0	0	0.000	NA	NA	NA
Sulfide	NA	NA	0	0	0	0	0	0.000	NA	NA	NA
Vanadium	NA	NA	6	6	6	6	0	1.584	NA	2.17E-03	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Design Inventory	Arrival Time of Peak Concentration	Simulated Long Term Groundwater Contaminant Peak Concentration (Dilution/ Attenuation Factor)	Carcinogenic RBC based Waste Soil Concentration	Non-carcinogenic RBC-based Waste Soil Concentration	MCL-based Waste Soil Concentration	Carcinogenic RBC based Waste Soil Concentration	Count Number of Carcinogenic Constituents	DI/Carcinogenic RBC-based Waste Soil Conc.	Fractional Carcinogenic Risk at Preliminary RBC	Available Carcinogenic Risk to be Added (Redistributed) to Preliminary Risk
	Ci/kg or mg/kg	years	kg/L	pCi/kg or mg/kg	mg/kg	pCi/kg or mg/kg	Ci/kg or mg/kg		Ratio		
Isophorone	1.14E-02	15	5.36E-24	NA	1.23E+22	NA	NA		NA	NA	NA
Isopropyl Alcohol/2-propanol	2.12E-03	No Arrival	0.00E+00	NA	NA	NA	NA		NA	NA	NA
Mesityl oxide	8.48E-02	15	1.28E-130	NA	NA	NA	NA		NA	NA	NA
Methyl Acetate	4.84E-04	32605	8.04E-04	NA	6.86E+01	NA	NA		NA	NA	NA
Methylene Chloride	8.36E-02	12	1.62E-136	8.19E+133	NA	NA	8.19E+133	1	1.02E-135	5.00E-07	3.35E-06
Naphthalene	4.25E-01	30	1.78E-107	NA	3.16E+102	NA	NA		NA	NA	NA
Nitrobenzene	1.14E-02	15	1.79E-24	NA	1.71E+19	NA	NA		NA	NA	NA
N-Nitroso-di-n-propylamine	1.14E-02	15	2.94E-24	1.02E+19	NA	NA	1.02E+19	1	1.12E-21	5.00E-07	3.35E-06
N-Nitrosodiphenylamine	1.14E-02	30	1.29E-90	3.11E+88	NA	NA	3.11E+88	1	3.66E-91	5.00E-07	3.35E-06
Pentachlorophenol	5.59E-02	30	1.21E-24	6.60E+20	NA	8.26E+20	6.60E+20	1	8.47E-23	5.00E-07	3.35E-06
Phenanthrene	1.17E+00	30	1.45E-31	NA	4.59E+29	NA	NA		NA	NA	NA
Phenol	7.98E-02	No Arrival	0.00E+00	NA	No Limit	NA	NA		NA	NA	NA
Phenol,2,6-Bis(1,1-Dimethyl)	4.05E-03	No Arrival	0.00E+00	NA	NA	NA	NA		NA	NA	NA
RDX	0.00E+00	32605	8.04E-04	2.30E+00	NA	NA	2.30E+00	1	0.00E+00	5.00E-07	3.35E-06
Styrene	1.03E-06	30	1.49E-45	NA	9.76E+42	6.70E+43	NA		NA	NA	NA
Tetrachloroethene	9.64E-03	30	3.22E-28	9.78E+24	NA	1.55E+25	9.78E+24	1	9.85E-28	5.00E-07	3.35E-06
Toluene	9.82E-01	15	1.09E-120	NA	5.97E+117	9.17E+119	NA		NA	NA	NA
Trichloroethene	7.20E-02	15	1.85E-22	NA	1.78E+18	2.70E+19	NA		NA	NA	NA
Trinitrotoluene	0.00E+00	12	4.04E-29	NA	3.98E+24	NA	NA		NA	NA	NA
Xylene (ortho)	3.88E-03	30	6.60E-142	NA	1.96E+139	1.52E+142	NA		NA	NA	NA
Xylene (total)	3.45E+00	30	6.60E-142	NA	1.96E+139	1.52E+142	NA		NA	NA	NA
Arsenic	5.65E+00	59007	4.23E-04	3.31E-01	NA	1.18E+01	3.31E-01	1	1.71E+01	5.00E-07	3.35E-06
Boron	1.85E+02	59007	4.23E-04	NA	7.04E+01	NA	NA		NA	NA	NA
Calcium	2.04E+04	59007	4.23E-04	NA	NA	NA	NA		NA	NA	NA
Chloride	1.87E+00	32605	8.04E-04	NA	NA	3.11E+05	NA		NA	NA	NA
Cyanide	3.37E-01	32605	8.04E-04	NA	NA	2.49E+02	NA		NA	NA	NA
Fluoride	3.87E+00	32605	8.04E-04	NA	NA	4.97E+03	NA		NA	NA	NA
Magnesium	4.47E+03	59007	4.23E-04	NA	NA	NA	NA		NA	NA	NA
Nitrate	3.93E+00	32605	8.04E-04	NA	NA	1.24E+04	NA		NA	NA	NA
Nitrate/Nitrite-N	2.22E-01	32605	8.04E-04	NA	NA	1.24E+04	NA		NA	NA	NA
Nitrite	8.49E-03	32605	8.04E-04	NA	NA	1.24E+03	NA		NA	NA	NA
Phosphorus	9.74E+01	59007	4.23E-04	NA	NA	NA	NA		NA	NA	NA
Sulfate	2.05E+01	32605	8.04E-04	NA	NA	NA	NA		NA	NA	NA
Sulfide	7.59E+02	32605	8.04E-04	NA	NA	NA	NA		NA	NA	NA
Vanadium	2.12E+01	59007	4.23E-04	NA	5.12E+00	NA	NA		NA	NA	NA
								26			

Table A-1. RAO-Based Soil Concentrations.

Constituent	Adjusted Fractional Carcinogenic Risk	Adjusted Carcinogenic RBC based Waste Soil Concentration	Carcinogenic Risk at Design Inventory	Is the Adjusted Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, "No Limit"	Count Number of Non-carcinogenic Constituents	DI/Non-carcinogenic RBC-based Waste Soil Conc.	Non-Carcinogenic Hazard Index at Preliminary RBC	Available Non-carcinogenic Fractional Hazard Index to be Added (Redistributed) to Preliminary Hazard Index	Adjusted Non-carcinogenic Fractional Hazard Index	Adjusted Non-Carcinogenic RBC based Waste Soil Concentration
		Ci/kg or mg/kg				Ratio				mg/kg
Isophorone	NA	NA	NA	NA	1	9.28E-25	1.15E-02	6.36E-03	1.79E-02	1.90E+22
Isopropyl Alcohol/2-propanol	NA	NA	NA	NA		NA	NA	NA	NA	NA
Mesityl oxide	NA	NA	NA	NA		NA	NA	NA	NA	NA
Methyl Acetate	NA	NA	NA	NA	1	7.06E-06	1.15E-02	6.36E-03	1.79E-02	1.07E+02
Methylene Chloride	3.85E-06	6.30E+134	1.02E-139	No Limit		NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	1	1.35E-103	1.15E-02	6.36E-03	1.79E-02	4.91E+102
Nitrobenzene	NA	NA	NA	NA	1	6.64E-22	1.15E-02	6.36E-03	1.79E-02	2.66E+19
N-Nitroso-di-n-propylamine	3.85E-06	7.82E+19	1.12E-25	No Limit		NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	3.85E-06	2.39E+89	3.66E-95	No Limit		NA	NA	NA	NA	NA
Pentachlorophenol	3.85E-06	5.07E+21	8.47E-27	No Limit		NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	1	2.54E-30	1.15E-02	6.36E-03	1.79E-02	7.14E+29
Phenol	NA	NA	NA	NA	1	No Limit	No Limit	No Limit	No Limit	No Limit
Phenol,2,6-Bis(1,1-Dimethyl)	NA	NA	NA	NA		NA	NA	NA	NA	NA
RDX	3.85E-06	1.77E+01	0.00E+00	1.77E+01		NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	1	1.05E-49	1.15E-02	6.36E-03	1.79E-02	1.52E+43
Tetrachloroethene	3.85E-06	7.52E+25	9.85E-32	No Limit		NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	1	1.65E-118	1.15E-02	6.36E-03	1.79E-02	9.27E+117
Trichloroethene	NA	NA	NA	NA	1	4.04E-20	1.15E-02	6.36E-03	1.79E-02	2.77E+18
Trinitrotoluene	NA	NA	NA	NA	1	0.00E+00	1.15E-02	6.36E-03	1.79E-02	6.19E+24
Xylene (ortho)	NA	NA	NA	NA	1	1.98E-142	1.15E-02	6.36E-03	1.79E-02	3.05E+139
Xylene (total)	NA	NA	NA	NA	1	1.76E-139	1.15E-02	6.36E-03	1.79E-02	3.05E+139
Arsenic	3.85E-06	2.55E+00	1.71E-03	2.55E+00		NA	NA	NA	NA	NA
Boron	NA	NA	NA	NA	1	2.62E+00	1.15E-02	6.36E-03	1.79E-02	1.09E+02
Calcium	NA	NA	NA	NA		NA	NA	NA	NA	NA
Chloride	NA	NA	NA	NA		NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA		NA	NA	NA	NA	NA
Fluoride	NA	NA	NA	NA		NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA		NA	NA	NA	NA	NA
Nitrate	NA	NA	NA	NA		NA	NA	NA	NA	NA
Nitrate/Nitrite-N	NA	NA	NA	NA		NA	NA	NA	NA	NA
Nitrite	NA	NA	NA	NA		NA	NA	NA	NA	NA
Phosphorus	NA	NA	NA	NA		NA	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA		NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA		NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	1	4.15E+00	1.15E-02	6.36E-03	1.79E-02	7.96E+00
			2.13E-03		56					

Table A-1. RAO-Based Soil Concentrations.

Constituent	Non-carcinogenic HI at DI	Is the Adjusted Non-Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, then "No Limit"	MCL-based Waste Soil Concentration	Is the MCL-based Waste Soil Concentration greater than unity? If so, then "No Limit"
			Ci/kg or mg/kg	
Isophorone	9.28E-25	No Limit	NA	NA
Isopropyl Alcohol/2-propanol	NA	NA	NA	NA
Mesityl oxide	NA	NA	NA	NA
Methyl Acetate	7.06E-06	1.07E+02	NA	NA
Methylene Chloride	NA	NA	NA	NA
Naphthalene	1.35E-103	No Limit	NA	NA
Nitrobenzene	6.64E-22	No Limit	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA
Pentachlorophenol	NA	NA	8.26E+20	No Limit
Phenanthrene	2.54E-30	No Limit	NA	NA
Phenol	No Limit	No Limit	NA	NA
Phenol,2,6-Bis(1,1-Dimethyl)	NA	NA	NA	NA
RDX	NA	NA	NA	NA
Styrene	1.05E-49	No Limit	6.70E+43	No Limit
Tetrachloroethene	NA	NA	1.55E+25	No Limit
Toluene	1.65E-118	No Limit	9.17E+119	No Limit
Trichloroethene	4.04E-20	No Limit	2.70E+19	No Limit
Trinitrotoluene	0.00E+00	No Limit	NA	NA
Xylene (ortho)	1.98E-142	No Limit	1.52E+142	No Limit
Xylene (total)	1.76E-139	No Limit	1.52E+142	No Limit
Arsenic	NA	NA	1.18E+01	1.18E+01
Boron	2.62E+00	1.09E+02	NA	NA
Calcium	NA	NA	NA	NA
Chloride	NA	NA	3.11E+05	3.11E+05
Cyanide	NA	NA	2.49E+02	2.49E+02
Fluoride	NA	NA	4.97E+03	4.97E+03
Magnesium	NA	NA	NA	NA
Nitrate	NA	NA	1.24E+04	1.24E+04
Nitrate/Nitrite-N	NA	NA	1.24E+04	1.24E+04
Nitrite	NA	NA	1.24E+03	1.24E+03
Phosphorus	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA
Vanadium	4.15E+00	7.96E+00	NA	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Half-Life	Organic Carbon Partition Coefficient	Waste Soils K_d	Clean Alluvium K_d	Clay Materials K_d	Interbeds Materials K_d	Vadose Zone Basalt K_d	Vadose Zone Weighted Average K_d	Carcinogenic 10^{-4} Preliminary RBC	Non-carcinogenic HI=1 Preliminary RBC	MCL
	(yr)	(mL/g)	(mL/g)					(mL/g)	pCi/L or mg/L	mg/L	pCi/L or mg/L
[redacted]											
Ac-225	2.74E-02	NA	450	450	2400	450	0	130.500	1.66E-01	NA	15
Ac-227	2.18E+01	NA	450	450	2400	450	0	130.500	1.56E-01	NA	NA
Ac-228	7.00E-04	NA	450	450	2400	450	0	130.500	1.58E+01	NA	NA
Ag-106	4.57E-05	NA	90	90	180	90	0	24.300	5.31E+02	NA	NA
Ag-108	4.51E-06	NA	90	90	180	90	0	24.300	NA	NA	NA
Ag-108m	1.27E+02	NA	90	90	180	90	0	24.300	3.86E+00	NA	NA
Ag-109m	1.26E-06	NA	90	90	180	90	0	24.300	NA	NA	NA
Ag-110	7.80E-07	NA	90	90	180	90	0	24.300	NA	NA	NA
Ag-110m	6.85E-01	NA	90	90	180	90	0	24.300	3.18E+00	NA	90
Ag-111	2.04E-02	NA	90	90	180	90	0	24.300	3.83E+00	NA	100
Am-241	4.32E+02	NA	340	340	340	340	0	89.760	3.02E-01	NA	15
Am-242	1.83E-03	NA	340	340	340	340	0	89.760	1.76E+01	NA	15
Am-242m	1.52E+02	NA	340	340	340	340	0	89.760	4.45E-01	NA	15
Am-243	7.38E+03	NA	340	340	340	340	0	89.760	3.05E-01	NA	15
Am-245	2.34E-04	NA	340	340	340	340	0	89.760	1.42E+02	NA	NA
Am-246	7.42E-05	NA	340	340	340	340	0	89.760	2.56E+02	NA	NA
Ba-136m	9.77E-09	NA	50	50	50	50	0	13.200	NA	NA	NA
Ba-137m	4.85E-06	NA	50	50	50	50	0	13.200	NA	NA	NA
Ba-140	3.48E-02	NA	50	50	50	50	0	13.200	2.11E+00	NA	90
Be-10	1.52E+06	NA	250	250	1300	250	0	72.300	4.47E+00	NA	NA
Bi-210	1.37E-02	NA	100	100	600	100	0	29.400	3.52E+00	NA	NA
Bi-211	4.07E-06	NA	100	100	600	100	0	29.400	NA	NA	15
Bi-212	1.15E-04	NA	100	100	600	100	0	29.400	4.43E+01	NA	NA
Bi-213	8.69E-05	NA	100	100	600	100	0	29.400	6.15E+01	NA	NA
Bi-214	3.79E-05	NA	100	100	600	100	0	29.400	1.64E+02	NA	NA
Bk-249	8.77E-01	NA	4000	4000	6000	4000	0	1068.000	2.83E+01	NA	NA
Bk-250	3.68E-04	NA	4000	4000	6000	4000	0	1068.000	5.55E+01	NA	NA
Cd-109	1.27E+00	NA	6	6	560	6	0	4.908	6.29E+00	NA	600
Cd-113m	1.36E+01	NA	6	6	560	6	0	4.908	1.10E+00	NA	NA
Cd-115m	1.22E-01	NA	6	6	560	6	0	4.908	1.85E+00	NA	90
Ce-141	8.90E-02	NA	500	500	20000	500	0	249.000	6.79E+00	NA	300
Ce-142	3.78E-03	NA	500	500	20000	500	0	249.000	NA	NA	15
Ce-144	7.78E-01	NA	500	500	20000	500	0	249.000	8.93E-01	NA	NA
Cf-249	3.51E+02	NA	510	510	510	510	0	134.640	2.47E-01	NA	15

Table A-1. RAO-Based Soil Concentrations.

Constituent	Design Inventory	Arrival Time of Peak Concentration	Simulated Long Term Groundwater Contaminant Peak Concentration (Dilution/ Attenuation Factor)	Carcinogenic RBC based Waste Soil Concentration	Non-carcinogenic RBC-based Waste Soil Concentration	MCL-based Waste Soil Concentration	Carcinogenic RBC based Waste Soil Concentration	Count Number of Carcinogenic Constituents	DI/Carcinogenic RBC-based Waste Soil Conc.	Fractional Carcinogenic Risk at Preliminary RBC	Available Carcinogenic Risk to be Added (Redistributed) to Preliminary Risk
	Ci/kg or mg/kg	years	kg/L	pCi/kg or mg/kg	mg/kg	pCi/kg or mg/kg	Ci/kg or mg/kg		Ratio		
[redacted]											
Ac-225	5.12E-17	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Ac-227	2.04E-14	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Ac-228	1.52E-19	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Ag-106	0.00E+00	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Ag-108	3.69E-18	No Arrival	0.00E+00	NA	NA	NA	NA		NA	NA	NA
Ag-108m	8.00E-10	4.65E+04	4.04E-128	9.56E+127	NA	NA	9.56E+115	1	8.36E-126	5.00E-07	7.47E-08
Ag-109m	4.92E-21	No Arrival	0.00E+00	NA	NA	NA	NA		NA	NA	NA
Ag-110	5.18E-20	No Arrival	0.00E+00	NA	NA	NA	NA		NA	NA	NA
Ag-110m	5.55E-18	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Ag-111	0.00E+00	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Am-241	2.38E-08	2.80E+05	1.27E-214	2.39E+213	NA	1.18E+215	2.39E+201	1	9.99E-210	5.00E-07	7.47E-08
Am-242	4.53E-14	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Am-242m	4.52E-14	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Am-243	3.34E-13	2.80E+05	6.04E-31	5.05E+29	NA	2.48E+31	5.05E+17	1	6.61E-31	5.00E-07	7.47E-08
Am-245	0.00E+00	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Am-246	1.38E-34	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Ba-136m	0.00E+00	No Arrival	0.00E+00	NA	NA	NA	NA		NA	NA	NA
Ba-137m	2.31E-05	No Arrival	0.00E+00	NA	NA	NA	NA		NA	NA	NA
Ba-140	0.00E+00	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Be-10	1.14E-15	1.00E+06	2.31E-07	1.94E+07	NA	NA	1.94E-05	1	5.90E-11	5.00E-07	7.47E-08
Bi-210	1.09E-15	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Bi-211	1.83E-14	No Arrival	0.00E+00	NA	NA	No Limit	NA		NA	NA	NA
Bi-212	5.53E-13	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Bi-213	0.00E+00	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Bi-214	5.62E-15	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Bk-249	2.16E-30	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Bk-250	7.75E-35	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Cd-109	4.92E-21	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Cd-113m	1.62E-09	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Cd-115m	4.25E-63	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Ce-141	1.80E-80	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Ce-142	0.00E+00	No Arrival	0.00E+00	NA	NA	No Limit	NA		NA	NA	NA
Ce-144	1.81E-12	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Cf-249	4.12E-25	2.80E+05	1.20E-259	2.06E+258	NA	1.25E+260	2.06E+246	1	2.00E-271	5.00E-07	7.47E-08

Table A-1. RAO-Based Soil Concentrations.

Constituent	Adjusted Fractional Carcinogenic Risk	Adjusted Carcinogenic RBC based Waste Soil Concentration	Carcinogenic Risk at Design Inventory	Is the Adjusted Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, "No Limit"	Count Number of Non-carcinogenic Constituents	DI/Non-carcinogenic RBC-based Waste Soil Conc.	Non-Carcinogenic Hazard Index at Preliminary RBC	Available Non-carcinogenic Fractional Hazard Index to be Added (Redistributed) to Preliminary Hazard Index	Adjusted Non-carcinogenic Fractional Hazard Index	Adjusted Non-Carcinogenic RBC based Waste Soil Concentration
		Ci/kg or mg/kg				Ratio				mg/kg
			2nd group major constituents sum of risk 2.12E-03							
Ac-225	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Ac-227	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Ac-228	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Ag-106	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Ag-108	NA	NA	NA	NA		NA	NA	NA	NA	NA
Ag-108m	5.75E-07	1.10E+116	8.36E-130	No Limit		NA	NA	NA	NA	NA
Ag-109m	NA	NA	NA	NA		NA	NA	NA	NA	NA
Ag-110	NA	NA	NA	NA		NA	NA	NA	NA	NA
Ag-110m	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Ag-111	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Am-241	5.75E-07	2.74E+201	9.99E-214	No Limit		NA	NA	NA	NA	NA
Am-242	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Am-242m	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Am-243	5.75E-07	5.81E+17	6.61E-35	No Limit		NA	NA	NA	NA	NA
Am-245	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Am-246	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Ba-136m	NA	NA	NA	NA		NA	NA	NA	NA	NA
Ba-137m	NA	NA	NA	NA		NA	NA	NA	NA	NA
Ba-140	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Be-10	5.75E-07	2.23E-05	5.90E-15	2.23E-05		NA	NA	NA	NA	NA
Bi-210	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Bi-211	NA	NA	NA	NA		NA	NA	NA	NA	NA
Bi-212	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Bi-213	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Bi-214	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Bk-249	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Bk-250	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cd-109	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cd-113m	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cd-115m	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Ce-141	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Ce-142	NA	NA	NA	NA		NA	NA	NA	NA	NA
Ce-144	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cf-249	5.75E-07	2.37E+246	2.00E-275	No Limit		NA	NA	NA	NA	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Non-carcinogenic HI at DI	Is the Adjusted Non-Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, then "No Limit"	MCL-based Waste Soil Concentration	Is the MCL-based Waste Soil Concentration greater than unity? If so, then "No Limit"
			Ci/kg or mg/kg	
[redacted]				
Ac-225	NA	NA	No Limit	No Limit
Ac-227	NA	NA	NA	NA
Ac-228	NA	NA	NA	NA
Ag-106	NA	NA	NA	NA
Ag-108	NA	NA	NA	NA
Ag-108m	NA	NA	NA	NA
Ag-109m	NA	NA	NA	NA
Ag-110	NA	NA	NA	NA
Ag-110m	NA	NA	No Limit	No Limit
Ag-111	NA	NA	No Limit	No Limit
Am-241	NA	NA	1.18E+203	No Limit
Am-242	NA	NA	No Limit	No Limit
Am-242m	NA	NA	No Limit	No Limit
Am-243	NA	NA	2.48E+19	No Limit
Am-245	NA	NA	NA	NA
Am-246	NA	NA	NA	NA
Ba-136m	NA	NA	NA	NA
Ba-137m	NA	NA	NA	NA
Ba-140	NA	NA	No Limit	No Limit
Be-10	NA	NA	NA	NA
Bi-210	NA	NA	NA	NA
Bi-211	NA	NA	No Limit	No Limit
Bi-212	NA	NA	NA	NA
Bi-213	NA	NA	NA	NA
Bi-214	NA	NA	NA	NA
Bk-249	NA	NA	NA	NA
Bk-250	NA	NA	NA	NA
Cd-109	NA	NA	No Limit	No Limit
Cd-113m	NA	NA	NA	NA
Cd-115m	NA	NA	No Limit	No Limit
Ce-141	NA	NA	No Limit	No Limit
Ce-142	NA	NA	No Limit	No Limit
Ce-144	NA	NA	NA	NA
Cf-249	NA	NA	1.25E+248	No Limit

Table A-1. RAO-Based Soil Concentrations.

Constituent	Half-Life	Organic Carbon Partition Coefficient	Waste Soils K_d	Clean Alluvium K_d	Clay Materials K_d	Interbeds Materials K_d	Vadose Zone Basalt K_d	Vadose Zone Weighted Average K_d	Carcinogenic 10^{-4} Preliminary RBC	Non-carcinogenic HI=1 Preliminary RBC	MCL
	(yr)	(mL/g)	(mL/g)					(mL/g)	pCi/L or mg/L	mg/L	pCi/L or mg/L
Cf-250	1.31E+01	NA	510	510	510	510	0	134.640	3.65E-01	NA	15
Cf-251	8.98E+02	NA	510	510	510	510	0	134.640	2.38E-01	NA	15
Cf-252	2.64E+00	NA	510	510	510	510	0	134.640	NA	NA	15
Cm-241	8.99E-02	NA	4000	4000	6000	4000	0	1068.000	6.48E+00	NA	NA
Cm-242	4.47E-01	NA	4000	4000	6000	4000	0	1068.000	8.16E-01	NA	15
Cm-243	2.85E+01	NA	4000	4000	6000	4000	0	1068.000	3.32E-01	NA	15
Cm-244	1.81E+01	NA	4000	4000	6000	4000	0	1068.000	3.76E-01	NA	15
Cm-245	8.50E+03	NA	4000	4000	6000	4000	0	1068.000	3.02E-01	NA	15
Cm-246	4.73E+03	NA	4000	4000	6000	4000	0	1068.000	3.08E-01	NA	15
Cm-247	1.56E+07	NA	4000	4000	6000	4000	0	1068.000	3.16E-01	NA	15
Cm-248	3.39E+05	NA	4000	4000	6000	4000	0	1068.000	NA	NA	15
Cm-250	9.70E+03	NA	4000	4000	6000	4000	0	1068.000	NA	NA	NA
Co-57	7.42E-01	NA	10	10	550	10	0	5.880	3.03E+01	NA	1000
Co-58	1.94E-01	NA	10	10	550	10	0	5.880	1.07E+01	NA	300
Co-60	5.27E+00	NA	10	10	550	10	0	5.880	2.00E+00	NA	100
Cr-51	7.59E-02	NA	30	30	1500	30	0	16.740	1.70E+02	NA	6000
Cs-132	1.78E-02	NA	500	500	1500	500	0	138.000	2.15E+01	NA	NA
Cs-134	2.06E+00	NA	500	500	1500	500	0	138.000	7.45E-01	NA	80
Cs-135	2.30E+06	NA	500	500	1500	500	0	138.000	6.63E+00	NA	900
Cs-136	3.59E-02	NA	500	500	1500	500	0	138.000	3.63E+00	NA	800
Cs-137	3.00E+01	NA	500	500	1500	500	0	138.000	1.03E+00	NA	200
Er-169	2.55E-02	NA	240	240	240	240	0	63.360	1.24E+01	NA	300
Eu-150	1.44E-03	NA	340	340	340	340	0	89.760	1.32E+01	NA	NA
Eu-152	1.33E+01	NA	340	340	340	340	0	89.760	5.18E+00	NA	200
Eu-154	8.80E+00	NA	340	340	340	340	0	89.760	3.05E+00	NA	60
Eu-155	4.96E+00	NA	340	340	340	340	0	89.760	1.65E+01	NA	600
Eu-156	4.16E-02	NA	340	340	340	340	0	89.760	2.47E+00	NA	NA
Fe-59	1.22E-01	NA	220	220	165	220	0	57.750	3.99E+00	NA	200
Fr-221	9.13E-06	NA	500	500	1500	500	0	138.000	NA	NA	15
Fr-223	4.15E-05	NA	500	500	1500	500	0	138.000	4.31E+00	NA	NA
Gd-152	1.08E+14	NA	240	240	240	240	0	63.360	1.06E+00	NA	15
Gd-153	6.63E-01	NA	240	240	240	240	0	63.360	2.07E+01	NA	600
Hf-181	1.16E-01	NA	450	450	2400	450	0	130.500	4.94E+00	NA	200
Ho-166m	3.06E-03	NA	250	250	1300	250	0	72.300	3.41E+00	NA	90
In-114	2.28E-06	NA	390	390	390	390	0	102.960	NA	NA	NA
In-114m	1.36E-01	NA	390	390	390	390	0	102.960	1.27E+00	NA	60
In-115	5.10E+15	NA	390	390	390	390	0	102.960	9.30E-01	NA	300
In-115m	5.13E-04	NA	390	390	390	390	0	102.960	7.14E+01	NA	1000
K-40	1.28E+09	NA	15	15	75	15	0	4.320	1.27E+00	NA	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Design Inventory	Arrival Time of Peak Concentration	Simulated Long Term Groundwater Contaminant Peak Concentration (Dilution/ Attenuation Factor)	Carcinogenic RBC based Waste Soil Concentration	Non-carcinogenic RBC-based Waste Soil Concentration	MCL-based Waste Soil Concentration	Carcinogenic RBC based Waste Soil Concentration	Count Number of Carcinogenic Constituents	DI/Carcinogenic RBC-based Waste Soil Conc.	Fractional Carcinogenic Risk at Preliminary RBC	Available Carcinogenic Risk to be Added (Redistributed) to Preliminary Risk
	Ci/kg or mg/kg	years	kg/L	pCi/kg or mg/kg	mg/kg	pCi/kg or mg/kg	Ci/kg or mg/kg		Ratio		
Cf-250	2.11E-25	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Cf-251	9.52E-28	2.80E+05	2.21E-113	1.08E+112	NA	6.77E+113	1.08E+100	1	8.85E-128	5.00E-07	7.47E-08
Cf-252	2.24E-29	No Arrival	0.00E+00	NA	NA	No Limit	NA		NA	NA	NA
Cm-241	1.30E-89	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Cm-242	5.39E-26	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Cm-243	3.55E-15	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Cm-244	1.80E-12	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Cm-245	8.02E-17	2.80E+05	1.93E-29	1.57E+28	NA	7.77E+29	1.57E+16	1	5.12E-33	5.00E-07	7.47E-08
Cm-246	1.79E-18	2.80E+05	2.41E-37	1.28E+36	NA	6.22E+37	1.28E+24	1	1.40E-42	5.00E-07	7.47E-08
Cm-247	6.39E-25	1.00E+06	3.04E-15	1.04E+14	NA	4.93E+15	1.04E+02	1	6.15E-27	5.00E-07	7.47E-08
Cm-248	1.95E-25	1.00E+06	4.11E-16	NA	NA	3.65E+16	NA		NA	NA	NA
Cm-250	5.53E-34	2.80E+05	3.25E-28	NA	NA	NA	NA		NA	NA	NA
Co-57	3.69E-12	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Co-58	5.88E-26	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Co-60	1.93E-07	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Cr-51	2.30E-63	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Cs-132	0.00E+00	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Cs-134	1.12E-08	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Cs-135	3.58E-11	1.00E+06	2.35E-15	2.82E+15	NA	3.83E+17	2.82E+03	1	1.27E-14	5.00E-07	7.47E-08
Cs-136	0.00E+00	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Cs-137	2.44E-05	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Er-169	0.00E+00	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Eu-150	1.73E-17	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Eu-152	9.68E-07	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Eu-154	8.21E-07	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Eu-155	1.76E-07	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Eu-156	0.00E+00	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Fe-59	4.51E-44	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Fr-221	5.12E-17	No Arrival	0.00E+00	NA	NA	No Limit	NA		NA	NA	NA
Fr-223	2.82E-16	No Arrival	0.00E+00	No Limit	NA	NA	No Limit	1	No Limit	No Limit	No Limit
Gd-152	2.72E-23	1.00E+06	3.64E-07	2.90E+06	NA	4.12E+07	2.90E-06	1	9.36E-18	5.00E-07	7.47E-08
Gd-153	2.01E-20	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Hf-181	7.80E-46	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
Ho-166m	2.70E-15	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
In-114	1.89E-63	No Arrival	0.00E+00	NA	NA	NA	NA		NA	NA	NA
In-114m	1.97E-63	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
In-115	5.78E-21	1.00E+06	3.18E-15	2.92E+14	NA	9.44E+16	2.92E+02	1	1.98E-23	5.00E-07	7.47E-08
In-115m	0.00E+00	No Arrival	0.00E+00	No Limit	NA	No Limit	No Limit	1	No Limit	No Limit	No Limit
K-40	1.92E-09	1.00E+06	1.76E-05	7.24E+04	NA	NA	7.24E-08	1	2.65E-02	5.00E-07	7.47E-08

Table A-1. RAO-Based Soil Concentrations.

Constituent	Adjusted Fractional Carcinogenic Risk	Adjusted Carcinogenic RBC based Waste Soil Concentration	Carcinogenic Risk at Design Inventory	Is the Adjusted Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, "No Limit"	Count Number of Non-carcinogenic Constituents	DI/Non-carcinogenic RBC-based Waste Soil Conc.	Non-Carcinogenic Hazard Index at Preliminary RBC	Available Non-carcinogenic Fractional Hazard Index to be Added (Redistributed) to Preliminary Hazard Index	Adjusted Non-carcinogenic Fractional Hazard Index	Adjusted Non-Carcinogenic RBC based Waste Soil Concentration
		Ci/kg or mg/kg				Ratio				mg/kg
Cf-250	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cf-251	5.75E-07	1.24E+100	8.85E-132	No Limit		NA	NA	NA	NA	NA
Cf-252	NA	NA	NA	NA		NA	NA	NA	NA	NA
Cm-241	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cm-242	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cm-243	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cm-244	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cm-245	5.75E-07	1.80E+16	5.12E-37	No Limit		NA	NA	NA	NA	NA
Cm-246	5.75E-07	1.47E+24	1.40E-46	No Limit		NA	NA	NA	NA	NA
Cm-247	5.75E-07	1.19E+02	6.15E-31	No Limit		NA	NA	NA	NA	NA
Cm-248	NA	NA	NA	NA		NA	NA	NA	NA	NA
Cm-250	NA	NA	NA	NA		NA	NA	NA	NA	NA
Co-57	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Co-58	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Co-60	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cr-51	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cs-132	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cs-134	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cs-135	5.75E-07	3.24E+03	1.27E-18	No Limit		NA	NA	NA	NA	NA
Cs-136	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Cs-137	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Er-169	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Eu-150	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Eu-152	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Eu-154	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Eu-155	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Eu-156	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Fe-59	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Fr-221	NA	NA	NA	NA		NA	NA	NA	NA	NA
Fr-223	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Gd-152	5.75E-07	3.34E-06	9.36E-22	No Limit		NA	NA	NA	NA	NA
Gd-153	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Hf-181	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
Ho-166m	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
In-114	NA	NA	NA	NA		NA	NA	NA	NA	NA
In-114m	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
In-115	5.75E-07	3.36E+02	1.98E-27	No Limit		NA	NA	NA	NA	NA
In-115m	No Limit	No Limit	No Limit	No Limit		NA	NA	NA	NA	NA
K-40	5.75E-07	8.33E-08	2.65E-06	8.33E-08		NA	NA	NA	NA	NA

Table A-1. RAO-Based Soil Concentrations.

Constituent	Non-carcinogenic HI at DI	Is the Adjusted Non-Carcinogenic RBC-based Waste Soil Concentration greater than unity? If so, then "No Limit"	MCL-based Waste Soil Concentration	Is the MCL-based Waste Soil Concentration greater than unity? If so, then "No Limit"
			Ci/kg or mg/kg	
Cf-250	NA	NA	No Limit	No Limit
Cf-251	NA	NA	6.77E+101	No Limit
Cf-252	NA	NA	No Limit	No Limit
Cm-241	NA	NA	NA	NA
Cm-242	NA	NA	No Limit	No Limit
Cm-243	NA	NA	No Limit	No Limit
Cm-244	NA	NA	No Limit	No Limit
Cm-245	NA	NA	7.77E+17	No Limit
Cm-246	NA	NA	6.22E+25	No Limit
Cm-247	NA	NA	4.93E+03	No Limit
Cm-248	NA	NA	3.65E+04	No Limit
Cm-250	NA	NA	NA	NA
Co-57	NA	NA	No Limit	No Limit
Co-58	NA	NA	No Limit	No Limit
Co-60	NA	NA	No Limit	No Limit
Cr-51	NA	NA	No Limit	No Limit
Cs-132	NA	NA	NA	NA
Cs-134	NA	NA	No Limit	No Limit
Cs-135	NA	NA	3.83E+05	No Limit
Cs-136	NA	NA	No Limit	No Limit
Cs-137	NA	NA	No Limit	No Limit
Er-169	NA	NA	No Limit	No Limit
Eu-150	NA	NA	NA	NA
Eu-152	NA	NA	No Limit	No Limit
Eu-154	NA	NA	No Limit	No Limit
Eu-155	NA	NA	No Limit	No Limit
Eu-156	NA	NA	NA	NA
Fe-59	NA	NA	No Limit	No Limit
Fr-221	NA	NA	No Limit	No Limit
Fr-223	NA	NA	NA	NA
Gd-152	NA	NA	4.12E-05	No Limit
Gd-153	NA	NA	No Limit	No Limit
Hf-181	NA	NA	No Limit	No Limit
Ho-166m	NA	NA	No Limit	No Limit
In-114	NA	NA	NA	NA
In-114m	NA	NA	No Limit	No Limit
In-115	NA	NA	9.44E+04	No Limit
In-115m	NA	NA	No Limit	No Limit
K-40	NA	NA	NA	NA