Appendix A

Allowable Mass Loadings

Table A1-1a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of Formaldehyde (50-00-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.3E+06	Inhalation	1.2E-12	5.4E-14
		90	6.4E+04	Inhalation	2.4E-11	1.1E-12
		95	3.1E+04	Inhalation	4.9E-11	2.2E-12
Cancer	Child					
		50	1.3E+06	Inhalation	1.2E-12	5.3E-14
		90	6.4E+04	Inhalation	2.4E-11	1.1E-12
		95	3.2E+04	Inhalation	4.8E-11	2.1E-12
Clay Liner						
Cancer	Adult					
		50	7.1E+05	Inhalation	2.2E-12	9.8E-14
		90	5.9E+04	Inhalation	2.6E-11	1.2E-12
		95	3.2E+04	Inhalation	4.9E-11	2.2E-12
Cancer	Child					
		50	7.3E+05	Inhalation	2.1E-12	9.4E-14
		90	5.8E+04	Inhalation	2.6E-11	1.2E-12
		95	3.3E+04	Inhalation	4.7E-11	2.1E-12
Composite Liner						
Cancer	Adult					
		50	1.6E+05	Inhalation	9.6E-12	4.3E-13
		90	2.0E+04	Inhalation	7.8E-11	3.5E-12
		95	1.2E+04	Inhalation	1.3E-10	5.9E-12
Cancer	Child					
		50	1.6E+05	Inhalation	9.7E-12	4.4E-13
		90	2.0E+04	Inhalation	7.5E-11	3.4E-12
		95	1.1E+04	Inhalation	1.3E-10	6.0E-12

Table A1-1b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Formaldehyde (50-00-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	5.4E+10	Shower	2.8E-17	1.3E-18
		90	2.3E+05	Shower	6.6E-12	3.0E-13
		95	7.9E+04	Shower	2.0E-11	8.8E-13
Clay Liner						
Cancer	Adult					
		50	2.6E+14	Shower	5.9E-21	2.7E-22
		90	1.6E+06	Shower	9.6E-13	4.3E-14
		95	3.9E+05	Shower	4.0E-12	1.8E-13
Composite Liner						
Cancer	Adult					
		90	1.5E+16	Shower	1.0E-22	4.6E-24
		95	2.7E+15	Shower	5.6E-22	2.5E-23

Table A1-2a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of Aniline (62-53-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	6.7E+08	Inhalation	1.8E-14	1.0E-16
		90	2.2E+06	Inhalation	5.5E-12	3.1E-14
		95	8.5E+05	Inhalation	1.4E-11	8.1E-14
Cancer	Child					
		50	6.8E+08	Inhalation	1.8E-14	1.0E-16
		90	2.2E+06	Inhalation	5.5E-12	3.2E-14
		95	8.4E+05	Inhalation	1.4E-11	8.2E-14
Clay Liner						
Cancer	Adult					
		50	2.5E+08	Inhalation	4.8E-14	2.7E-16
		90	2.4E+06	Inhalation	5.1E-12	2.9E-14
		95	1.0E+06	Inhalation	1.2E-11	6.8E-14
Cancer	Child					
		50	2.5E+08	Inhalation	4.9E-14	2.8E-16
		90	2.3E+06	Inhalation	5.3E-12	3.0E-14
		95	9.9E+05	Inhalation	1.2E-11	7.0E-14
Composite Liner						
Cancer	Adult					
		50	3.6E+07	Inhalation	3.4E-13	1.9E-15
		90	1.3E+06	Inhalation	9.4E-12	5.3E-14
		95	6.1E+05	Inhalation	2.0E-11	1.1E-13
Cancer	Child					
		50	3.7E+07	Inhalation	3.3E-13	1.9E-15
		90	1.3E+06	Inhalation	9.7E-12	5.5E-14
		95	6.1E+05	Inhalation	2.0E-11	1.1E-13
Synthetic Liner						
Cancer	Adult					
		50	7.4E+07	Inhalation	1.6E-13	9.3E-16
		90	1.9E+06	Inhalation	6.5E-12	3.7E-14
		95	8.3E+05	Inhalation	1.5E-11	8.3E-14
Cancer	Child					
		50	7.3E+07	Inhalation	1.7E-13	9.5E-16
		90	1.8E+06	Inhalation	6.6E-12	3.7E-14
		95	8.0E+05	Inhalation	1.5E-11	8.7E-14

Table A1-2b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Aniline (62-53-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.4E+08	Shower	5.9E-16	3.4E-18
				Drinking water	8.5E-14	4.9E-16
				Total	8.6E-14	4.9E-16
		90	1.9E+03	Shower	5.4E-11	3.1E-13
				Drinking water	6.3E-09	3.6E-11
				Total	6.3E-09	3.6E-11
		95	6.5E+02	Shower	2.6E-10	1.5E-12
				Drinking water	1.8E-08	1.0E-10
				Total	1.9E-08	1.1E-10
Cancer	Child					
		50	1.6E+08	Drinking water	7.7E-14	4.4E-16
		90	2.3E+03	Drinking water	5.4E-09	3.1E-11
		95	7.2E+02	Drinking water	1.7E-08	9.6E-11
Clay Liner						
Cancer	Adult					
		50	3.3E+12	Shower	1.7E-19	9.7E-22
				Drinking water	3.5E-18	2.0E-20
				Total	3.6E-18	2.1E-20
		90	9.3E+03	Shower	1.8E-11	1.0E-13
				Drinking water	1.3E-09	7.3E-12
				Total	1.3E-09	7.4E-12
		95	2.7E+03	Shower	2.5E-10	1.5E-12
				Drinking water	4.2E-09	2.4E-11
				Total	4.5E-09	2.6E-11
Cancer	Child					
		50	4.3E+12	Drinking water	2.8E-18	1.6E-20
		90	1.1E+04	Drinking water	1.1E-09	6.5E-12
		95	3.2E+03	Drinking water	3.8E-09	2.2E-11
Composite Liner						
Cancer	Adult					
		90	2.5E+14	Shower	1.1E-21	6.4E-24
				Drinking water	4.8E-20	2.7E-22
				Total	4.9E-20	2.8E-22
		95	4.5E+13	Shower	3.6E-21	2.0E-23
				Drinking water	2.7E-19	1.5E-21
				Total	2.7E-19	1.5E-21
Cancer	Child					
		90	3.0E+14	Drinking water	4.1E-20	2.3E-22
		95	5.2E+13	Drinking water	2.3E-19	1.3E-21

Table A1-2b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Aniline (62-53-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Synthetic Liner						
Cancer	Adult					
		50	1.0E+17	Shower	1.6E-24	9.1E-27
				Drinking water	1.2E-22	6.6E-25
				Total	1.2E-22	6.7E-25
		90	1.4E+09	Shower	8.4E-17	4.8E-19
				Drinking water	8.3E-15	4.7E-17
				Total	8.4E-15	4.8E-17
		95	1.6E+07	Shower	2.5E-15	1.4E-17
				Drinking water	7.7E-13	4.4E-15
				Total	7.7E-13	4.4E-15
Cancer	Child					
		50	1.1E+17	Drinking water	1.1E-22	6.1E-25
		90	1.6E+09	Drinking water	7.6E-15	4.3E-17
		95	1.9E+07	Drinking water	6.4E-13	3.7E-15

Table A1-4a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of o-Anisidine (90-04-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.1E+06	Inhalation	4.5E-13	6.3E-14
		90	6.2E+04	Inhalation	7.9E-12	1.1E-12
		95	3.0E+04	Inhalation	1.6E-11	2.3E-12
Cancer	Child					
		50	1.1E+06	Inhalation	4.3E-13	6.0E-14
		90	5.9E+04	Inhalation	8.3E-12	1.2E-12
		95	3.0E+04	Inhalation	1.6E-11	2.3E-12
Clay Liner						
Cancer	Adult					
		50	7.9E+05	Inhalation	6.3E-13	8.8E-14
		90	5.8E+04	Inhalation	8.6E-12	1.2E-12
		95	3.1E+04	Inhalation	1.6E-11	2.2E-12
Cancer	Child					
		50	8.5E+05	Inhalation	5.8E-13	8.1E-14
		90	5.6E+04	Inhalation	8.9E-12	1.2E-12
		95	3.0E+04	Inhalation	1.7E-11	2.3E-12
Composite Liner						
Cancer	Adult					
		50	2.2E+05	Inhalation	2.3E-12	3.2E-13
		90	2.5E+04	Inhalation	2.0E-11	2.8E-12
		95	1.4E+04	Inhalation	3.5E-11	4.9E-12
Cancer	Child					
		50	2.1E+05	Inhalation	2.3E-12	3.2E-13
		90	2.4E+04	Inhalation	2.1E-11	2.9E-12
		95	1.3E+04	Inhalation	3.9E-11	5.4E-12
Synthetic Liner						
Cancer	Adult					
		50	3.5E+05	Inhalation	1.4E-12	2.0E-13
		90	3.6E+04	Inhalation	1.4E-11	1.9E-12
		95	1.9E+04	Inhalation	2.6E-11	3.6E-12
Cancer	Child					
		50	3.5E+05	Inhalation	1.4E-12	1.9E-13
		90	3.3E+04	Inhalation	1.5E-11	2.1E-12
		95	1.8E+04	Inhalation	2.7E-11	3.8E-12

Table A1-4b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of o-Anisidine (90-04-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.9E+05	Shower	1.8E-14	2.5E-15
				Drinking water	1.7E-12	2.4E-13
				Total	1.7E-12	2.4E-13
		90	3.0E+01	Shower	3.4E-10	4.8E-11
				Drinking water	1.6E-08	2.3E-09
				Total	1.6E-08	2.3E-09
		95	1.1E+01	Shower	6.2E-10	8.7E-11
				Drinking water	4.6E-08	6.5E-09
				Total	4.7E-08	6.6E-09
Cancer	Child					
		50	3.3E+05	Drinking water	1.5E-12	2.1E-13
		90	3.6E+01	Drinking water	1.4E-08	1.9E-09
		95	1.2E+01	Drinking water	4.2E-08	5.9E-09
Clay Liner						
Cancer	Adult					
		50	1.5E+10	Shower	2.6E-19	3.6E-20
				Drinking water	3.2E-17	4.5E-18
				Total	3.3E-17	4.6E-18
		90	1.1E+02	Shower	4.0E-11	5.6E-12
				Drinking water	4.5E-09	6.4E-10
				Total	4.6E-09	6.4E-10
		95	3.3E+01	Shower	6.5E-11	9.1E-12
				Drinking water	1.5E-08	2.1E-09
				Total	1.5E-08	2.1E-09
Cancer	Child					
		50	1.8E+10	Drinking water	2.8E-17	3.9E-18
		90	1.2E+02	Drinking water	4.0E-09	5.6E-10
		95	4.0E+01	Drinking water	1.2E-08	1.7E-09
Composite Liner						
Cancer	Adult					
		90	1.4E+12	Shower	1.9E-21	2.7E-22
				Drinking water	3.6E-19	5.0E-20
				Total	3.6E-19	5.0E-20
		95	2.3E+11	Shower	9.4E-21	1.3E-21
				Drinking water	2.1E-18	3.0E-19
				Total	2.1E-18	3.0E-19
Cancer	Child					
		90	1.6E+12	Drinking water	3.1E-19	4.3E-20
		95	2.7E+11	Drinking water	1.8E-18	2.6E-19

Table A1-4b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of o-Anisidine (90-04-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Synthetic Liner						
Cancer	Adult					
		50	4.7E+14	Shower	8.3E-24	1.2E-24
				Drinking water	1.0E-21	1.5E-22
				Total	1.1E-21	1.5E-22
		90	2.9E+05	Shower	8.2E-15	1.2E-15
				Drinking water	1.7E-12	2.4E-13
				Total	1.7E-12	2.4E-13
		95	1.1E+04	Shower	1.4E-13	1.9E-14
				Drinking water	4.7E-11	6.5E-12
				Total	4.7E-11	6.5E-12
Cancer	Child					
		50	5.0E+14	Drinking water	9.9E-22	1.4E-22
		90	3.2E+05	Drinking water	1.5E-12	2.2E-13
		95	1.5E+04	Drinking water	3.2E-11	4.5E-12

Table A1-5a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of 4-4-Bis(dimethylamino) benzophenone (90-94-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	9.0E+11	Inhalation	9.0E-20	7.7E-20
		90	8.3E+09	Inhalation	9.7E-18	8.3E-18
		95	2.0E+09	Inhalation	4.1E-17	3.5E-17
Cancer	Child					
		50	9.6E+11	Inhalation	8.4E-20	7.2E-20
		90	8.1E+09	Inhalation	9.9E-18	8.5E-18
		95	2.0E+09	Inhalation	4.0E-17	3.4E-17
Clay Liner						
Cancer	Adult					
		50	3.8E+11	Inhalation	2.1E-19	1.8E-19
		90	1.3E+10	Inhalation	6.3E-18	5.4E-18
		95	5.8E+09	Inhalation	1.4E-17	1.2E-17
Cancer	Child					
		50	4.0E+11	Inhalation	2.0E-19	1.7E-19
		90	1.2E+10	Inhalation	6.5E-18	5.6E-18
		95	6.0E+09	Inhalation	1.3E-17	1.2E-17
Composite Liner						
Cancer	Adult					
		50	3.4E+10	Inhalation	2.4E-18	2.1E-18
		90	1.1E+09	Inhalation	7.2E-17	6.2E-17
		95	4.3E+08	Inhalation	1.9E-16	1.6E-16
Cancer	Child					
		50	3.4E+10	Inhalation	2.4E-18	2.0E-18
		90	1.1E+09	Inhalation	7.1E-17	6.1E-17
		95	4.7E+08	Inhalation	1.7E-16	1.5E-16

Table A1-5b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 4-4-Bis(dimethylamino) benzophenone (90-94-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.0E+15	Shower	4.6E-31	4.0E-31
				Drinking water	2.0E-23	1.7E-23
				Total	2.0E-23	1.7E-23
		90	2.1E+12	Shower	1.9E-27	1.7E-27
				Drinking water	3.9E-20	3.3E-20
				Total	3.9E-20	3.3E-20
		95	7.1E+11	Shower	2.0E-27	1.7E-27
				Drinking water	1.1E-19	9.8E-20
				Total	1.1E-19	9.8E-20
Cancer	Child					
		50	4.8E+15	Drinking water	1.7E-23	1.4E-23
		90	2.3E+12	Drinking water	3.4E-20	2.9E-20
		95	8.2E+11	Drinking water	9.9E-20	8.5E-20
Clay Liner						
Cancer	Adult					
		50	6.9E+16	Shower	3.0E-32	2.6E-32
				Drinking water	1.2E-24	1.0E-24
				Total	1.2E-24	1.0E-24
		90	5.6E+12	Shower	3.8E-28	3.3E-28
				Drinking water	1.4E-20	1.2E-20
				Total	1.4E-20	1.2E-20
		95	1.7E+12	Shower	1.6E-28	1.4E-28
				Drinking water	4.8E-20	4.2E-20
				Total	4.8E-20	4.2E-20
Cancer	Child					
		50	7.9E+16	Drinking water	1.0E-24	8.8E-25
		90	6.7E+12	Drinking water	1.2E-20	1.0E-20
		95	2.1E+12	Drinking water	3.8E-20	3.3E-20
Composite Liner						
Cancer	Adult					
		90	2.4E+17	Shower	5.0E-33	4.3E-33
				Drinking water	3.4E-25	2.9E-25
				Total	3.4E-25	2.9E-25
		95	3.5E+15	Shower	4.2E-31	3.6E-31
				Drinking water	2.3E-23	1.9E-23
				Total	2.3E-23	1.9E-23
Cancer	Child					
		90	2.9E+17	Drinking water	2.8E-25	2.4E-25
		95	4.3E+15	Drinking water	1.9E-23	1.6E-23

Table A1-8a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of 3,3-Dichlorobenzidine (91-94-1) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	6.7E+08	Inhalation	8.6E-17	1.0E-16
		90	8.5E+06	Inhalation	6.8E-15	8.1E-15
		95	2.6E+06	Inhalation	2.2E-14	2.7E-14
Cancer	Child					
		50	7.5E+08	Inhalation	7.7E-17	9.2E-17
		90	8.4E+06	Inhalation	6.9E-15	8.2E-15
		95	2.6E+06	Inhalation	2.2E-14	2.6E-14
Clay Liner						
Cancer	Adult					
		50	3.3E+08	Inhalation	1.7E-16	2.1E-16
		90	1.0E+07	Inhalation	5.6E-15	6.7E-15
		95	4.5E+06	Inhalation	1.3E-14	1.5E-14
Cancer	Child					
		50	3.7E+08	Inhalation	1.5E-16	1.8E-16
		90	1.0E+07	Inhalation	5.7E-15	6.9E-15
		95	4.7E+06	Inhalation	1.2E-14	1.5E-14
Composite Liner						
Cancer	Adult					
		50	3.0E+07	Inhalation	1.9E-15	2.3E-15
		90	1.7E+06	Inhalation	3.5E-14	4.2E-14
		95	8.4E+05	Inhalation	6.8E-14	8.2E-14
Cancer	Child					
		50	3.1E+07	Inhalation	1.9E-15	2.2E-15
		90	1.6E+06	Inhalation	3.5E-14	4.2E-14
		95	8.2E+05	Inhalation	7.0E-14	8.4E-14

Table A1-8b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 3,3-Dichlorobenzidine (91-94-1) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.6E+13	Shower	7.5E-26	9.0E-26
				Drinking water	3.4E-21	1.5E-21
				Total	3.4E-21	1.5E-21
		90	2.2E+10	Shower	1.4E-22	1.7E-22
				Drinking water	7.1E-18	3.2E-18
				Total	7.1E-18	3.2E-18
		95	1.2E+08	Shower	3.7E-21	4.5E-21
				Drinking water	1.3E-15	5.8E-16
				Total	1.3E-15	5.8E-16
Cancer	Child					
		50	5.2E+13	Drinking water	3.0E-21	1.3E-21
		90	2.5E+10	Drinking water	6.1E-18	2.8E-18
		95	1.5E+08	Drinking water	1.0E-15	4.5E-16
Clay Liner						
Cancer	Adult					
		50	7.2E+14	Shower	5.7E-27	6.9E-27
				Drinking water	2.1E-22	9.6E-23
				Total	2.1E-22	9.6E-23
		90	2.4E+11	Shower	9.3E-24	1.1E-23
				Drinking water	6.4E-19	2.9E-19
				Total	6.4E-19	2.9E-19
		95	6.9E+10	Shower	4.4E-23	5.3E-23
				Drinking water	2.2E-18	1.0E-18
				Total	2.2E-18	1.0E-18
Cancer	Child					
		50	7.7E+14	Drinking water	2.0E-22	9.0E-23
		90	3.0E+11	Drinking water	5.1E-19	2.3E-19
		95	9.0E+10	Drinking water	1.7E-18	7.7E-19
Composite Liner						
Cancer	Adult					
		90	8.9E+14	Shower	1.0E-26	1.3E-26
				Drinking water	1.7E-22	7.7E-23
				Total	1.7E-22	7.7E-23
		95	5.7E+13	Shower	3.3E-25	4.0E-25
				Drinking water	2.7E-21	1.2E-21
				Total	2.7E-21	1.2E-21
Cancer	Child					
		90	9.7E+14	Drinking water	1.6E-22	7.1E-23
		95	6.6E+13	Drinking water	2.3E-21	1.1E-21

Table A1-10a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of Benzidine (92-87-5) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	5.2E+07	Inhalation	5.7E-18	1.3E-15
		90	5.4E+05	Inhalation	5.6E-16	1.3E-13
		95	1.3E+05	Inhalation	2.4E-15	5.5E-13
Cancer	Child					
		50	5.5E+07	Inhalation	5.4E-18	1.3E-15
		90	5.3E+05	Inhalation	5.7E-16	1.3E-13
		95	1.3E+05	Inhalation	2.3E-15	5.2E-13
Clay Liner						
Cancer	Adult					
		50	2.6E+07	Inhalation	1.2E-17	2.7E-15
		90	8.5E+05	Inhalation	3.5E-16	8.1E-14
		95	3.8E+05	Inhalation	7.8E-16	1.8E-13
Cancer	Child					
		50	2.6E+07	Inhalation	1.1E-17	2.6E-15
		90	8.3E+05	Inhalation	3.6E-16	8.4E-14
		95	4.0E+05	Inhalation	7.6E-16	1.7E-13
Composite Liner						
Cancer	Adult					
		50	2.3E+06	Inhalation	1.3E-16	3.0E-14
		90	7.7E+04	Inhalation	3.9E-15	9.0E-13
		95	3.1E+04	Inhalation	9.6E-15	2.2E-12
Cancer	Child					
		50	2.3E+06	Inhalation	1.3E-16	3.0E-14
		90	7.8E+04	Inhalation	3.9E-15	8.9E-13
		95	3.3E+04	Inhalation	9.2E-15	2.1E-12
Synthetic Liner						
Cancer	Adult					
		50	6.4E+06	Inhalation	4.7E-17	1.1E-14
		90	1.7E+05	Inhalation	1.8E-15	4.2E-13
		95	5.5E+04	Inhalation	5.4E-15	1.3E-12
Cancer	Child					
		50	6.6E+06	Inhalation	4.6E-17	1.0E-14
		90	1.6E+05	Inhalation	1.9E-15	4.3E-13
		95	5.5E+04	Inhalation	5.4E-15	1.2E-12

Table A1-10b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Benzidine (92-87-5) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.9E+09	Shower	6.8E-27	1.6E-24
				Drinking water	6.2E-20	1.4E-17
				Total	6.2E-20	1.4E-17
		90	1.2E+02	Shower	5.5E-19	1.3E-16
				Drinking water	2.5E-12	5.8E-10
				Total	2.5E-12	5.8E-10
		95	9.6E+00	Shower	1.7E-17	3.8E-15
				Drinking water	3.1E-11	7.2E-09
				Total	3.1E-11	7.2E-09
Cancer	Child					
		50	5.6E+09	Drinking water	5.4E-20	1.2E-17
		90	1.2E+02	Drinking water	2.5E-12	5.8E-10
		95	1.0E+01	Drinking water	3.0E-11	6.8E-09
Clay Liner						
Cancer	Adult					
		50	1.4E+11	Shower	8.4E-28	1.9E-25
				Drinking water	2.2E-21	5.1E-19
				Total	2.2E-21	5.1E-19
		90	4.3E+06	Shower	1.1E-23	2.6E-21
				Drinking water	7.0E-17	1.6E-14
				Total	7.0E-17	1.6E-14
		95	2.3E+04	Shower	1.3E-20	3.0E-18
				Drinking water	1.3E-14	3.0E-12
				Total	1.3E-14	3.0E-12
Cancer	Child					
		50	1.5E+11	Drinking water	2.0E-21	4.5E-19
		90	5.4E+06	Drinking water	5.6E-17	1.3E-14
		95	2.3E+04	Drinking water	1.3E-14	3.0E-12
Composite Liner						
Cancer	Adult					
		90	1.4E+11	Shower	4.9E-28	1.1E-25
				Drinking water	2.2E-21	5.0E-19
				Total	2.2E-21	5.0E-19
		95	2.3E+10	Shower	4.5E-27	1.0E-24
				Drinking water	1.3E-20	3.0E-18
				Total	1.3E-20	3.0E-18
Cancer	Child					
		90	1.6E+11	Drinking water	1.9E-21	4.5E-19
		95	2.9E+10	Drinking water	1.0E-20	2.4E-18

Table A1-10b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Benzidine (92-87-5) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Synthetic Liner						
Cancer	Adult					
		50	1.7E+14	Shower	9.8E-31	2.2E-28
				Drinking water	1.8E-24	4.1E-22
				Total	1.8E-24	4.1E-22
		90	3.3E+09	Shower	1.1E-25	2.4E-23
				Drinking water	9.1E-20	2.1E-17
				Total	9.1E-20	2.1E-17
		95	6.7E+08	Shower	6.7E-26	1.5E-23
				Drinking water	4.5E-19	1.0E-16
				Total	4.5E-19	1.0E-16
Cancer	Child					
		50	1.9E+14	Drinking water	1.6E-24	3.6E-22
		90	4.2E+09	Drinking water	7.2E-20	1.6E-17
		95	7.8E+08	Drinking water	3.9E-19	8.9E-17

Table A1-12a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of o-Toluidine (95-53-4) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	7.9E+08	Inhalation	3.6E-16	8.7E-17
		90	2.2E+05	Inhalation	1.3E-12	3.1E-13
		95	7.9E+04	Inhalation	3.7E-12	8.8E-13
Cancer	Child					
		50	7.9E+08	Inhalation	3.7E-16	8.8E-17
		90	2.2E+05	Inhalation	1.3E-12	3.1E-13
		95	7.8E+04	Inhalation	3.7E-12	8.9E-13
Clay Liner						
Cancer	Adult					
		50	2.7E+08	Inhalation	1.1E-15	2.6E-16
		90	2.5E+05	Inhalation	1.2E-12	2.8E-13
		95	9.3E+04	Inhalation	3.1E-12	7.4E-13
Cancer	Child					
		50	2.6E+08	Inhalation	1.1E-15	2.6E-16
		90	2.3E+05	Inhalation	1.3E-12	3.0E-13
		95	9.2E+04	Inhalation	3.1E-12	7.5E-13
Composite Liner						
Cancer	Adult					
		50	2.0E+07	Inhalation	1.4E-14	3.5E-15
		90	1.4E+05	Inhalation	2.0E-12	4.9E-13
		95	5.9E+04	Inhalation	4.9E-12	1.2E-12
Cancer	Child					
		50	2.0E+07	Inhalation	1.4E-14	3.4E-15
		90	1.4E+05	Inhalation	2.1E-12	5.1E-13
		95	6.0E+04	Inhalation	4.8E-12	1.2E-12

Table A1-12b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of o-Toluidine (95-53-4) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.6E+12	Shower	3.0E-21	7.2E-22
				Drinking water	6.0E-20	1.4E-20
				Total	6.3E-20	1.5E-20
		90	1.8E+05	Shower	4.0E-14	9.7E-15
				Drinking water	1.6E-12	3.8E-13
				Total	1.6E-12	3.9E-13
		95	1.3E+04	Shower	5.3E-13	1.3E-13
				Drinking water	2.2E-11	5.3E-12
				Total	2.3E-11	5.5E-12
Cancer	Child					
		50	5.4E+12	Drinking water	5.3E-20	1.3E-20
		90	1.8E+05	Drinking water	1.6E-12	3.7E-13
		95	1.4E+04	Drinking water	2.1E-11	5.0E-12
Clay Liner						
Cancer	Adult					
		50	8.9E+13	Shower	2.3E-23	5.6E-24
				Drinking water	3.2E-21	7.7E-22
				Total	3.2E-21	7.8E-22
		90	1.2E+10	Shower	7.6E-20	1.8E-20
				Drinking water	2.4E-17	5.9E-18
				Total	2.4E-17	5.9E-18
		95	5.6E+07	Shower	1.1E-16	2.7E-17
				Drinking water	5.1E-15	1.2E-15
				Total	5.2E-15	1.2E-15
Cancer	Child					
		50	1.0E+14	Drinking water	2.8E-21	6.7E-22
		90	1.5E+10	Drinking water	2.0E-17	4.8E-18
		95	5.9E+07	Drinking water	4.8E-15	1.2E-15
Composite Liner						
Cancer	Adult					
		90	9.6E+13	Shower	9.9E-23	2.4E-23
				Drinking water	2.9E-21	7.0E-22
				Total	3.0E-21	7.2E-22
		95	1.6E+13	Shower	1.1E-21	2.7E-22
				Drinking water	1.6E-20	4.0E-21
				Total	1.8E-20	4.2E-21
Cancer	Child					
		90	1.1E+14	Drinking water	2.7E-21	6.4E-22
		95	1.9E+13	Drinking water	1.6E-20	3.7E-21

Table A1-13b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 1,2-Phenylenediamine (95-54-5) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.6E+06	Drinking water	4.1E-13	1.9E-14
		90	1.6E+02	Drinking water	9.0E-09	4.2E-10
		95	5.9E+01	Drinking water	2.5E-08	1.2E-09
Cancer	Child					
		50	4.4E+06	Drinking water	3.4E-13	1.6E-14
		90	1.8E+02	Drinking water	8.0E-09	3.8E-10
		95	6.3E+01	Drinking water	2.3E-08	1.1E-09
Clay Liner						
Cancer	Adult					
		50	6.6E+11	Drinking water	2.2E-18	1.1E-19
		90	7.1E+02	Drinking water	2.1E-09	9.7E-11
		95	2.0E+02	Drinking water	7.3E-09	3.4E-10
Cancer	Child					
		50	8.2E+11	Drinking water	1.8E-18	8.5E-20
		90	8.3E+02	Drinking water	1.8E-09	8.4E-11
		95	2.5E+02	Drinking water	5.9E-09	2.8E-10
Composite Liner						
Cancer	Adult					
		90	4.9E+13	Drinking water	3.0E-20	1.4E-21
		95	9.2E+12	Drinking water	1.6E-19	7.5E-21
Cancer	Child					
		90	5.7E+13	Drinking water	2.6E-20	1.2E-21
		95	1.1E+13	Drinking water	1.4E-19	6.4E-21
Synthetic Liner						
Cancer	Adult					
		50	1.4E+16	Drinking water	1.1E-22	4.9E-24
		90	1.0E+07	Drinking water	1.4E-13	6.7E-15
		95	4.1E+05	Drinking water	3.6E-12	1.7E-13
Cancer	Child					
		50	1.6E+16	Drinking water	9.4E-23	4.4E-24
		90	1.2E+07	Drinking water	1.2E-13	5.5E-15
		95	4.8E+05	Drinking water	3.1E-12	1.4E-13

Table A1-14b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 2,4-Dimethylaniline (2,4-xylidine) (95-68-1) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.7E+06	Drinking water	3.5E-14	2.6E-14
		90	2.1E+01	Drinking water	4.4E-09	3.3E-09
		95	6.4E+00	Drinking water	1.4E-08	1.1E-08
Cancer	Child					
		50	3.2E+06	Drinking water	2.9E-14	2.1E-14
		90	2.4E+01	Drinking water	3.9E-09	2.9E-09
		95	7.1E+00	Drinking water	1.3E-08	9.7E-09
Clay Liner						
Cancer	Adult					
		50	2.9E+10	Drinking water	3.1E-18	2.3E-18
		90	1.0E+02	Drinking water	9.0E-10	6.7E-10
		95	2.8E+01	Drinking water	3.3E-09	2.5E-09
Cancer	Child					
		50	3.4E+10	Drinking water	2.7E-18	2.1E-18
		90	1.2E+02	Drinking water	7.6E-10	5.7E-10
		95	3.3E+01	Drinking water	2.8E-09	2.1E-09
Composite Liner						
Cancer	Adult					
		90	1.2E+12	Drinking water	7.7E-20	5.7E-20
		95	2.1E+11	Drinking water	4.5E-19	3.4E-19
Cancer	Child					
		90	1.4E+12	Drinking water	6.8E-20	5.1E-20
		95	2.4E+11	Drinking water	3.8E-19	2.9E-19
Synthetic Liner						
Cancer	Adult					
		50	1.2E+15	Drinking water	7.8E-23	5.9E-23
		90	1.7E+08	Drinking water	5.3E-16	4.0E-16
		95	4.3E+05	Drinking water	2.2E-13	1.6E-13
Cancer	Child					
		50	1.3E+15	Drinking water	7.1E-23	5.3E-23
		90	1.8E+08	Drinking water	5.0E-16	3.8E-16
		95	4.9E+05	Drinking water	1.9E-13	1.4E-13

Table A1-15a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of Toluene-2,4-diamine (95-80-7) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.6E+07	Inhalation	1.1E-15	4.3E-15
		90	2.6E+05	Inhalation	6.6E-14	2.6E-13
		95	8.0E+04	Inhalation	2.2E-13	8.7E-13
Cancer	Child					
		50	1.9E+07	Inhalation	8.9E-16	3.6E-15
		90	2.8E+05	Inhalation	6.2E-14	2.5E-13
		95	8.7E+04	Inhalation	2.0E-13	8.0E-13
Clay Liner						
Cancer	Adult					
		50	8.6E+06	Inhalation	2.0E-15	8.1E-15
		90	3.4E+05	Inhalation	5.1E-14	2.1E-13
		95	1.6E+05	Inhalation	1.1E-13	4.4E-13
Cancer	Child					
		50	1.0E+07	Inhalation	1.7E-15	6.9E-15
		90	3.4E+05	Inhalation	5.1E-14	2.1E-13
		95	1.6E+05	Inhalation	1.1E-13	4.3E-13
Composite Liner						
Cancer	Adult					
		50	9.6E+05	Inhalation	1.8E-14	7.2E-14
		90	5.0E+04	Inhalation	3.5E-13	1.4E-12
		95	2.3E+04	Inhalation	7.4E-13	2.9E-12
Cancer	Child					
		50	1.1E+06	Inhalation	1.5E-14	6.1E-14
		90	5.2E+04	Inhalation	3.3E-13	1.3E-12
		95	2.4E+04	Inhalation	7.3E-13	2.9E-12
Synthetic Liner						
Cancer	Adult					
		50	2.5E+06	Inhalation	7.0E-15	2.8E-14
		90	9.2E+04	Inhalation	1.9E-13	7.5E-13
		95	3.9E+04	Inhalation	4.4E-13	1.8E-12
Cancer	Child					
		50	3.1E+06	Inhalation	5.5E-15	2.2E-14
		90	9.4E+04	Inhalation	1.8E-13	7.3E-13
		95	3.7E+04	Inhalation	4.7E-13	1.9E-12

Table A1-15b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Toluene-2,4-diamine (95-80-7) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	5.3E+02	Shower	2.4E-16	9.5E-16
				Drinking water	4.0E-11	1.3E-10
				Total	4.0E-11	1.3E-10
		90	3.4E-01	Shower	4.5E-13	1.8E-12
				Drinking water	6.3E-08	2.0E-07
				Total	6.3E-08	2.0E-07
		95	1.3E-01	Shower	3.5E-13	1.4E-12
				Drinking water	1.7E-07	5.4E-07
				Total	1.7E-07	5.4E-07
Cancer	Child					
		50	6.5E+02	Drinking water	3.3E-11	1.1E-10
		90	3.8E-01	Drinking water	5.7E-08	1.8E-07
		95	1.4E-01	Drinking water	1.5E-07	4.8E-07
Clay Liner						
Cancer	Adult					
		50	7.5E+07	Shower	1.6E-21	6.6E-21
				Drinking water	2.9E-16	9.2E-16
				Total	2.9E-16	9.2E-16
		90	9.9E-01	Shower	2.5E-13	1.0E-12
				Drinking water	2.2E-08	7.0E-08
				Total	2.2E-08	7.0E-08
		95	3.0E-01	Shower	1.5E-13	6.1E-13
				Drinking water	7.3E-08	2.3E-07
				Total	7.3E-08	2.3E-07
Cancer	Child					
		50	1.2E+08	Drinking water	1.8E-16	5.7E-16
		90	1.1E+00	Drinking water	1.9E-08	6.1E-08
		95	3.6E-01	Drinking water	5.9E-08	1.9E-07
Composite Liner						
Cancer	Adult					
		90	3.4E+10	Shower	1.9E-24	7.7E-24
				Drinking water	6.3E-19	2.0E-18
				Total	6.3E-19	2.0E-18
		95	3.1E+09	Shower	8.9E-23	3.5E-22
				Drinking water	6.9E-18	2.2E-17
				Total	6.9E-18	2.2E-17
Cancer	Child					
		90	4.1E+10	Drinking water	5.3E-19	1.7E-18
		95	3.7E+09	Drinking water	5.8E-18	1.9E-17

Table A1-15b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Toluene-2,4-diamine (95-80-7) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Synthetic Liner						
Cancer	Adult					
		50	5.3E+12	Shower	5.0E-26	2.0E-25
				Drinking water	4.1E-21	1.3E-20
				Total	4.1E-21	1.3E-20
		90	1.4E+02	Shower	9.9E-16	3.9E-15
				Drinking water	1.5E-10	4.9E-10
				Total	1.5E-10	4.9E-10
		95	1.7E+01	Shower	9.9E-15	3.9E-14
				Drinking water	1.3E-09	4.1E-09
				Total	1.3E-09	4.1E-09
Cancer	Child					
		50	5.3E+12	Drinking water	4.0E-21	1.3E-20
		90	1.7E+02	Drinking water	1.3E-10	4.1E-10
		95	2.0E+01	Drinking water	1.1E-09	3.4E-09

Table A1-17b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 5-Nitro-o-toluidine (99-55-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.8E+14	Drinking water	4.3E-21	1.4E-22
		90	1.4E+12	Drinking water	1.5E-18	5.0E-20
		95	1.9E+11	Drinking water	1.1E-17	3.6E-19
Cancer	Child					
		50	5.5E+14	Drinking water	3.8E-21	1.3E-22
		90	1.6E+12	Drinking water	1.3E-18	4.3E-20
		95	2.3E+11	Drinking water	9.3E-18	3.1E-19
Clay Liner						
Cancer	Adult					
		50	3.7E+15	Drinking water	5.6E-22	1.9E-23
		90	6.1E+12	Drinking water	3.4E-19	1.1E-20
		95	1.9E+12	Drinking water	1.1E-18	3.6E-20
Cancer	Child					
		50	4.4E+15	Drinking water	4.8E-22	1.6E-23
		90	7.0E+12	Drinking water	3.0E-19	9.9E-21
		95	2.2E+12	Drinking water	9.6E-19	3.2E-20
Composite Liner						
Cancer	Adult					
		90	2.4E+15	Drinking water	8.9E-22	2.9E-23
		95	3.6E+14	Drinking water	5.8E-21	1.9E-22
Cancer	Child					
		90	2.4E+15	Drinking water	8.6E-22	2.8E-23
		95	4.3E+14	Drinking water	4.8E-21	1.6E-22

Table A1-18a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of 5-Nitro-o-anisidine (99-59-2) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.1E+09	Inhalation	1.2E-15	6.0E-17
		90	1.2E+07	Inhalation	1.2E-13	5.8E-15
		95	3.9E+06	Inhalation	3.6E-13	1.8E-14
Cancer	Child					
		50	1.2E+09	Inhalation	1.2E-15	5.8E-17
		90	1.2E+07	Inhalation	1.2E-13	5.8E-15
		95	4.1E+06	Inhalation	3.4E-13	1.7E-14
Clay Liner						
Cancer	Adult					
		50	3.4E+08	Inhalation	4.1E-15	2.0E-16
		90	1.1E+07	Inhalation	1.2E-13	6.0E-15
		95	5.2E+06	Inhalation	2.7E-13	1.3E-14
Cancer	Child					
		50	3.5E+08	Inhalation	4.1E-15	2.0E-16
		90	1.1E+07	Inhalation	1.3E-13	6.2E-15
		95	5.3E+06	Inhalation	2.6E-13	1.3E-14
Composite Liner						
Cancer	Adult					
		50	4.3E+07	Inhalation	3.3E-14	1.6E-15
		90	3.0E+06	Inhalation	4.7E-13	2.3E-14
		95	1.5E+06	Inhalation	9.4E-13	4.6E-14
Cancer	Child					
		50	4.3E+07	Inhalation	3.3E-14	1.6E-15
		90	3.0E+06	Inhalation	4.7E-13	2.3E-14
		95	1.5E+06	Inhalation	9.3E-13	4.5E-14
Synthetic Liner						
Cancer	Adult					
		50	8.8E+07	Inhalation	1.6E-14	7.9E-16
		90	4.3E+06	Inhalation	3.3E-13	1.6E-14
		95	2.1E+06	Inhalation	6.8E-13	3.3E-14
Cancer	Child					
		50	9.3E+07	Inhalation	1.5E-14	7.5E-16
		90	4.2E+06	Inhalation	3.3E-13	1.6E-14
		95	2.0E+06	Inhalation	7.2E-13	3.5E-14

Table A1-18b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 5-Nitro-o-anisidine (99-59-2) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.1E+14	Shower	4.3E-24	2.1E-25
				Drinking water	1.4E-20	6.5E-22
				Total	1.4E-20	6.5E-22
		90	7.5E+08	Shower	3.2E-19	1.6E-20
				Drinking water	2.0E-15	9.2E-17
				Total	2.0E-15	9.2E-17
		95	5.8E+06	Shower	3.8E-17	1.9E-18
				Drinking water	2.6E-13	1.2E-14
				Total	2.6E-13	1.2E-14
Cancer	Child					
		50	1.2E+14	Drinking water	1.2E-20	5.7E-22
		90	7.3E+08	Drinking water	2.1E-15	9.4E-17
		95	6.2E+06	Drinking water	2.4E-13	1.1E-14
Clay Liner						
Cancer	Adult					
		50	5.4E+14	Shower	3.3E-25	1.6E-26
				Drinking water	2.8E-21	1.3E-22
				Total	2.8E-21	1.3E-22
		90	6.4E+09	Shower	5.4E-20	2.6E-21
				Drinking water	2.4E-16	1.1E-17
				Total	2.4E-16	1.1E-17
		95	4.9E+07	Shower	1.7E-18	8.1E-20
				Drinking water	3.1E-14	1.4E-15
				Total	3.1E-14	1.4E-15
Cancer	Child					
		50	6.3E+14	Drinking water	2.4E-21	1.1E-22
		90	7.5E+09	Drinking water	2.0E-16	9.2E-18
		95	5.2E+07	Drinking water	2.9E-14	1.3E-15
Composite Liner						
Cancer	Adult					
		90	8.7E+14	Shower	1.4E-25	7.1E-27
				Drinking water	1.7E-21	8.0E-23
				Total	1.7E-21	8.0E-23
		95	1.5E+14	Shower	1.6E-24	7.9E-26
				Drinking water	1.0E-20	4.7E-22
				Total	1.0E-20	4.7E-22
Cancer	Child					
		90	9.6E+14	Drinking water	1.6E-21	7.2E-23
		95	1.7E+14	Drinking water	8.9E-21	4.1E-22

Table A1-18b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 5-Nitro-o-anisidine (99-59-2) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Synthetic Liner						
Cancer	Adult					
		50	6.2E+17	Shower	3.9E-27	1.9E-28
				Drinking water	2.4E-24	1.1E-25
				Total	2.4E-24	1.1E-25
		90	1.5E+13	Shower	1.6E-23	7.6E-25
				Drinking water	1.0E-19	4.6E-21
				Total	1.0E-19	4.6E-21
		95	3.1E+12	Shower	3.7E-23	1.8E-24
				Drinking water	4.9E-19	2.2E-20
				Total	4.9E-19	2.2E-20
Cancer	Child					
		50	7.0E+17	Drinking water	2.1E-24	9.9E-26
		90	1.9E+13	Drinking water	7.9E-20	3.7E-21
		95	3.5E+12	Drinking water	4.3E-19	2.0E-20

Table A1-20a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of 4,4-Methylenedianiline (101-77-9) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	7.0E+09	Inhalation	6.2E-18	9.9E-18
		90	7.0E+07	Inhalation	6.2E-16	9.9E-16
		95	1.6E+07	Inhalation	2.6E-15	4.2E-15
Cancer	Child					
		50	7.4E+09	Inhalation	5.8E-18	9.3E-18
		90	6.9E+07	Inhalation	6.3E-16	1.0E-15
		95	1.7E+07	Inhalation	2.5E-15	4.0E-15
Clay Liner						
Cancer	Adult					
		50	3.4E+09	Inhalation	1.3E-17	2.1E-17
		90	1.1E+08	Inhalation	3.9E-16	6.3E-16
		95	5.0E+07	Inhalation	8.7E-16	1.4E-15
Cancer	Child					
		50	3.5E+09	Inhalation	1.2E-17	2.0E-17
		90	1.1E+08	Inhalation	4.0E-16	6.4E-16
		95	5.1E+07	Inhalation	8.4E-16	1.3E-15
Composite Liner						
Cancer	Adult					
		50	2.9E+08	Inhalation	1.5E-16	2.4E-16
		90	1.0E+07	Inhalation	4.3E-15	6.9E-15
		95	4.1E+06	Inhalation	1.1E-14	1.7E-14
Cancer	Child					
		50	2.9E+08	Inhalation	1.5E-16	2.4E-16
		90	1.0E+07	Inhalation	4.3E-15	6.8E-15
		95	4.3E+06	Inhalation	1.0E-14	1.6E-14

Table A1-20b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 4,4-Methylenedianiline (101-77-9) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	9.8E+11	Shower	2.1E-26	3.4E-26
				Drinking water	4.4E-20	7.0E-20
				Total	4.4E-20	7.0E-20
		90	4.0E+04	Shower	2.8E-19	4.5E-19
				Drinking water	1.1E-12	1.7E-12
				Total	1.1E-12	1.7E-12
		95	2.5E+03	Shower	9.1E-18	1.5E-17
				Drinking water	1.7E-11	2.8E-11
				Total	1.7E-11	2.8E-11
Cancer	Child					
		50	1.2E+12	Drinking water	3.7E-20	6.0E-20
		90	3.6E+04	Drinking water	1.2E-12	1.9E-12
		95	2.7E+03	Drinking water	1.6E-11	2.6E-11
Clay Liner						
Cancer	Adult					
		50	2.6E+13	Shower	6.5E-28	1.0E-27
				Drinking water	1.7E-21	2.7E-21
				Total	1.7E-21	2.7E-21
		90	3.6E+09	Shower	3.1E-24	5.0E-24
				Drinking water	1.2E-17	1.9E-17
				Total	1.2E-17	1.9E-17
		95	1.6E+07	Shower	1.8E-21	2.9E-21
				Drinking water	2.7E-15	4.3E-15
				Total	2.7E-15	4.3E-15
Cancer	Child					
		50	3.1E+13	Drinking water	1.4E-21	2.3E-21
		90	4.2E+09	Drinking water	1.0E-17	1.6E-17
		95	1.7E+07	Drinking water	2.5E-15	4.0E-15
Composite Liner						
Cancer	Adult					
		90	2.4E+13	Shower	8.4E-28	1.3E-27
				Drinking water	1.8E-21	2.9E-21
				Total	1.8E-21	2.9E-21
		95	3.9E+12	Shower	2.7E-27	4.3E-27
				Drinking water	1.1E-20	1.8E-20
				Total	1.1E-20	1.8E-20
Cancer	Child					
		90	2.8E+13	Drinking water	1.6E-21	2.5E-21
		95	4.7E+12	Drinking water	9.2E-21	1.5E-20

Table A1-22a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of Azobenzene (103-33-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	7.1E+06	Inhalation	8.8E-14	9.7E-15
		90	5.1E+05	Inhalation	1.2E-12	1.4E-13
		95	2.6E+05	Inhalation	2.4E-12	2.6E-13
Cancer	Child					
		50	7.4E+06	Inhalation	8.5E-14	9.4E-15
		90	5.1E+05	Inhalation	1.2E-12	1.4E-13
		95	2.8E+05	Inhalation	2.3E-12	2.5E-13
Clay Liner						
Cancer	Adult					
		50	4.9E+06	Inhalation	1.3E-13	1.4E-14
		90	4.6E+05	Inhalation	1.4E-12	1.5E-13
		95	2.6E+05	Inhalation	2.4E-12	2.7E-13
Cancer	Child					
		50	5.0E+06	Inhalation	1.3E-13	1.4E-14
		90	4.6E+05	Inhalation	1.4E-12	1.5E-13
		95	2.7E+05	Inhalation	2.4E-12	2.6E-13
Composite Liner						
Cancer	Adult					
		50	1.8E+06	Inhalation	3.5E-13	3.8E-14
		90	2.3E+05	Inhalation	2.7E-12	3.0E-13
		95	1.4E+05	Inhalation	4.5E-12	5.0E-13
Cancer	Child					
		50	1.8E+06	Inhalation	3.5E-13	3.8E-14
		90	2.4E+05	Inhalation	2.6E-12	2.8E-13
		95	1.4E+05	Inhalation	4.6E-12	5.1E-13
Synthetic Liner						
Cancer	Adult					
		50	2.5E+06	Inhalation	2.5E-13	2.8E-14
		90	3.0E+05	Inhalation	2.1E-12	2.3E-13
		95	1.8E+05	Inhalation	3.6E-12	3.9E-13
Cancer	Child					
		50	2.6E+06	Inhalation	2.4E-13	2.7E-14
		90	3.0E+05	Inhalation	2.1E-12	2.3E-13
		95	1.8E+05	Inhalation	3.6E-12	3.9E-13

Table A1-22b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Azobenzene (103-33-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.5E+15	Shower	3.0E-23	3.3E-24
				Drinking water	2.2E-22	2.5E-23
				Total	2.5E-22	2.8E-23
		90	3.5E+12	Shower	2.3E-20	2.5E-21
				Drinking water	1.6E-19	1.7E-20
				Total	1.8E-19	2.0E-20
		95	1.2E+12	Shower	6.5E-20	7.1E-21
				Drinking water	4.5E-19	4.9E-20
				Total	5.1E-19	5.6E-20
Cancer	Child					
		50	3.3E+15	Drinking water	1.9E-22	2.1E-23
		90	4.5E+12	Drinking water	1.4E-19	1.5E-20
		95	1.5E+12	Drinking water	4.1E-19	4.5E-20
Clay Liner						
Cancer	Adult					
		50	1.5E+16	Shower	6.7E-24	7.4E-25
				Drinking water	3.4E-23	3.8E-24
				Total	4.1E-23	4.5E-24
		90	8.0E+12	Shower	2.0E-21	2.2E-22
				Drinking water	7.7E-20	8.5E-21
				Total	7.9E-20	8.7E-21
		95	2.5E+12	Shower	3.2E-20	3.6E-21
				Drinking water	2.1E-19	2.4E-20
				Total	2.5E-19	2.7E-20
Cancer	Child					
		50	2.1E+16	Drinking water	3.0E-23	3.3E-24
		90	1.1E+13	Drinking water	5.8E-20	6.4E-21
		95	3.2E+12	Drinking water	2.0E-19	2.1E-20
Composite Liner						
Cancer	Adult					
		90	1.4E+16	Shower	6.0E-24	6.6E-25
				Drinking water	4.1E-23	4.5E-24
				Total	4.7E-23	5.1E-24
		95	7.3E+14	Shower	5.0E-23	5.5E-24
				Drinking water	8.1E-22	8.9E-23
				Total	8.6E-22	9.5E-23
Cancer	Child					
		90	1.8E+16	Drinking water	3.5E-23	3.9E-24
		95	9.8E+14	Drinking water	6.4E-22	7.0E-23

Table A1-22b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Azobenzene (103-33-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Synthetic Liner						
Cancer	Adult					
		50	1.2E+28	Shower	6.2E-36	6.8E-37
				Drinking water	4.4E-35	4.9E-36
				Total	5.1E-35	5.6E-36
		90	1.4E+14	Shower	4.3E-22	4.7E-23
				Drinking water	4.1E-21	4.5E-22
				Total	4.5E-21	5.0E-22
		95	2.5E+13	Shower	1.5E-21	1.7E-22
				Drinking water	2.3E-20	2.6E-21
				Total	2.5E-20	2.7E-21
Cancer	Child					
		50	1.4E+28	Drinking water	4.6E-35	5.0E-36
		90	2.0E+14	Drinking water	3.2E-21	3.5E-22
		95	3.4E+13	Drinking water	1.8E-20	2.0E-21

Table A1-24b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 4-Chloroaniline (106-47-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	6.8E+08	Drinking water	1.9E-15	1.0E-16
		90	6.3E+02	Drinking water	2.0E-09	1.1E-10
		95	1.8E+02	Drinking water	7.1E-09	3.8E-10
Cancer	Child					
		50	6.5E+08	Drinking water	2.0E-15	1.1E-16
		90	7.3E+02	Drinking water	1.8E-09	9.5E-11
		95	2.0E+02	Drinking water	6.3E-09	3.4E-10
Clay Liner						
Cancer	Adult					
		50	1.2E+13	Drinking water	1.0E-19	5.7E-21
		90	4.8E+03	Drinking water	2.7E-10	1.4E-11
		95	1.1E+03	Drinking water	1.2E-09	6.4E-11
Cancer	Child					
		50	1.2E+13	Drinking water	1.0E-19	5.7E-21
		90	5.8E+03	Drinking water	2.2E-10	1.2E-11
		95	1.3E+03	Drinking water	9.8E-10	5.3E-11
Composite Liner						
Cancer	Adult					
		90	2.6E+14	Drinking water	4.8E-21	2.6E-22
		95	8.3E+12	Drinking water	1.5E-19	8.4E-21
Cancer	Child					
		90	2.9E+14	Drinking water	4.4E-21	2.4E-22
		95	9.3E+12	Drinking water	1.4E-19	7.4E-21
Synthetic Liner						
Cancer	Adult					
		50	3.7E+19	Drinking water	3.5E-26	1.9E-27
		90	6.8E+10	Drinking water	1.9E-17	1.0E-18
		95	6.6E+08	Drinking water	1.9E-15	1.0E-16
Cancer	Child					
		50	3.4E+19	Drinking water	3.8E-26	2.1E-27
		90	8.0E+10	Drinking water	1.6E-17	8.7E-19
		95	8.4E+08	Drinking water	1.5E-15	8.2E-17

Table A1-25b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of p-Toluidine (106-49-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	5.3E+12	Drinking water	6.9E-20	1.3E-20
		90	2.3E+05	Drinking water	1.6E-12	3.0E-13
		95	1.6E+04	Drinking water	2.3E-11	4.3E-12
Cancer	Child					
		50	6.3E+12	Drinking water	5.8E-20	1.1E-20
		90	2.3E+05	Drinking water	1.6E-12	3.0E-13
		95	1.8E+04	Drinking water	2.1E-11	3.9E-12
Clay Liner						
Cancer	Adult					
		50	2.3E+16	Drinking water	1.6E-23	2.9E-24
		90	1.5E+10	Drinking water	2.4E-17	4.6E-18
		95	7.0E+07	Drinking water	5.2E-15	9.9E-16
Cancer	Child					
		50	2.8E+16	Drinking water	1.3E-23	2.4E-24
		90	1.8E+10	Drinking water	2.0E-17	3.8E-18
		95	7.4E+07	Drinking water	5.0E-15	9.4E-16
Composite Liner						
Cancer	Adult					
		90	1.7E+15	Drinking water	2.1E-22	4.1E-23
		95	6.9E+13	Drinking water	5.2E-21	1.0E-21
Cancer	Child					
		90	1.8E+15	Drinking water	2.1E-22	3.9E-23
		95	7.7E+13	Drinking water	4.7E-21	8.9E-22

Table A1-29a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of 2-Aminoanthraquinone (117-79-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	5.4E+10	Inhalation	3.9E-18	1.3E-19
		90	5.4E+08	Inhalation	3.9E-16	1.3E-17
		95	1.3E+08	Inhalation	1.6E-15	5.1E-17
Cancer	Child					
		50	5.7E+10	Inhalation	3.7E-18	1.2E-19
		90	5.3E+08	Inhalation	4.0E-16	1.3E-17
		95	1.4E+08	Inhalation	1.5E-15	5.0E-17
Clay Liner						
Cancer	Adult					
		50	2.5E+10	Inhalation	8.3E-18	2.7E-19
		90	8.3E+08	Inhalation	2.5E-16	8.3E-18
		95	3.8E+08	Inhalation	5.6E-16	1.8E-17
Cancer	Child					
		50	2.6E+10	Inhalation	8.0E-18	2.6E-19
		90	8.0E+08	Inhalation	2.6E-16	8.6E-18
		95	3.9E+08	Inhalation	5.4E-16	1.8E-17
Composite Liner						
Cancer	Adult					
		50	2.3E+09	Inhalation	9.2E-17	3.0E-18
		90	8.3E+07	Inhalation	2.5E-15	8.3E-17
		95	3.6E+07	Inhalation	5.8E-15	1.9E-16
Cancer	Child					
		50	2.3E+09	Inhalation	9.2E-17	3.0E-18
		90	8.5E+07	Inhalation	2.5E-15	8.2E-17
		95	3.7E+07	Inhalation	5.7E-15	1.9E-16

Table A1-29b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 2-Aminoanthraquinone (117-79-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.2E+14	Shower	5.0E-28	1.7E-29
				Drinking water	9.6E-22	3.2E-23
				Total	9.6E-22	3.2E-23
		90	4.2E+11	Shower	1.5E-25	5.0E-27
				Drinking water	5.0E-19	1.6E-20
				Total	5.0E-19	1.6E-20
		95	1.2E+11	Shower	7.3E-25	2.4E-26
				Drinking water	1.8E-18	6.0E-20
				Total	1.8E-18	6.0E-20
Cancer	Child					
		50	2.5E+14	Drinking water	8.3E-22	2.8E-23
		90	5.0E+11	Drinking water	4.2E-19	1.4E-20
		95	1.5E+11	Drinking water	1.4E-18	4.7E-20
Clay Liner						
Cancer	Adult					
		50	2.3E+15	Shower	1.7E-28	5.7E-30
				Drinking water	9.3E-23	3.1E-24
				Total	9.3E-23	3.1E-24
		90	1.5E+12	Shower	9.8E-26	3.2E-27
				Drinking water	1.4E-19	4.7E-21
				Total	1.4E-19	4.7E-21
		95	4.6E+11	Shower	1.3E-25	4.2E-27
				Drinking water	4.5E-19	1.5E-20
				Total	4.5E-19	1.5E-20
Cancer	Child					
		50	2.7E+15	Drinking water	7.7E-23	2.6E-24
		90	1.8E+12	Drinking water	1.1E-19	3.8E-21
		95	5.4E+11	Drinking water	3.9E-19	1.3E-20
Composite Liner						
Cancer	Adult					
		90	2.1E+15	Shower	1.4E-28	4.6E-30
				Drinking water	9.8E-23	3.2E-24
				Total	9.8E-23	3.2E-24
		95	2.3E+14	Shower	4.2E-28	1.4E-29
				Drinking water	9.0E-22	3.0E-23
				Total	9.0E-22	3.0E-23
Cancer	Child					
		90	2.4E+15	Drinking water	8.9E-23	2.9E-24
		95	2.8E+14	Drinking water	7.6E-22	2.5E-23

Table A1-30b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 3,3-Dimethoxybenzidine (119-90-4) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	8.9E+12	Drinking water	5.5E-19	7.7E-21
		90	9.1E+04	Drinking water	5.4E-11	7.6E-13
		95	1.4E+04	Drinking water	3.4E-10	4.8E-12
Cancer	Child					
		50	9.8E+12	Drinking water	5.1E-19	7.1E-21
		90	1.0E+05	Drinking water	4.8E-11	6.7E-13
		95	1.5E+04	Drinking water	3.2E-10	4.5E-12
Clay Liner						
Cancer	Adult					
		50	3.5E+16	Drinking water	1.4E-22	2.0E-24
		90	2.3E+07	Drinking water	2.2E-13	3.1E-15
		95	1.1E+06	Drinking water	4.6E-12	6.5E-14
Cancer	Child					
		50	4.1E+16	Drinking water	1.2E-22	1.7E-24
		90	3.1E+07	Drinking water	1.6E-13	2.2E-15
		95	1.3E+06	Drinking water	3.7E-12	5.2E-14
Composite Liner						
Cancer	Adult					
		90	2.1E+16	Drinking water	2.3E-22	3.3E-24
		95	6.5E+14	Drinking water	7.6E-21	1.1E-22
Cancer	Child					
		90	2.0E+16	Drinking water	2.4E-22	3.4E-24
		95	8.0E+14	Drinking water	6.2E-21	8.6E-23

Table A1-31b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 3,3-Dimethylbenzidine (119-93-7) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.4E+13	Drinking water	8.8E-22	2.0E-21
		90	8.7E+10	Drinking water	3.5E-19	8.0E-19
		95	2.9E+10	Drinking water	1.1E-18	2.4E-18
Cancer	Child					
		50	3.7E+13	Drinking water	8.1E-22	1.9E-21
		90	1.0E+11	Drinking water	2.9E-19	6.7E-19
		95	3.4E+10	Drinking water	8.8E-19	2.0E-18
Clay Liner						
Cancer	Adult					
		50	3.4E+17	Drinking water	8.9E-26	2.1E-25
		90	2.5E+11	Drinking water	1.2E-19	2.8E-19
		95	8.2E+10	Drinking water	3.7E-19	8.4E-19
Cancer	Child					
		50	3.3E+17	Drinking water	9.1E-26	2.1E-25
		90	2.9E+11	Drinking water	1.0E-19	2.4E-19
		95	9.0E+10	Drinking water	3.3E-19	7.7E-19
Composite Liner						
Cancer	Adult					
		90	2.6E+17	Drinking water	1.2E-25	2.7E-25
		95	9.7E+14	Drinking water	3.1E-23	7.1E-23
Cancer	Child					
		90	3.4E+17	Drinking water	8.9E-26	2.1E-25
		95	1.0E+15	Drinking water	2.9E-23	6.7E-23

Table A1-32a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of p-Cresidine (120-71-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	9.5E+06	Inhalation	4.8E-14	7.3E-15
		90	4.0E+05	Inhalation	1.2E-12	1.7E-13
		95	1.9E+05	Inhalation	2.4E-12	3.7E-13
Cancer	Child					
		50	1.0E+07	Inhalation	4.5E-14	6.8E-15
		90	4.0E+05	Inhalation	1.1E-12	1.7E-13
		95	1.9E+05	Inhalation	2.5E-12	3.7E-13
Clay Liner						
Cancer	Adult					
		50	6.8E+06	Inhalation	6.8E-14	1.0E-14
		90	3.9E+05	Inhalation	1.2E-12	1.8E-13
		95	2.1E+05	Inhalation	2.2E-12	3.3E-13
Cancer	Child					
		50	7.8E+06	Inhalation	5.9E-14	8.8E-15
		90	3.9E+05	Inhalation	1.2E-12	1.8E-13
		95	2.0E+05	Inhalation	2.3E-12	3.4E-13
Composite Liner						
Cancer	Adult					
		50	1.5E+06	Inhalation	3.0E-13	4.5E-14
		90	1.6E+05	Inhalation	2.9E-12	4.4E-13
		95	8.6E+04	Inhalation	5.4E-12	8.0E-13
Cancer	Child					
		50	1.6E+06	Inhalation	2.9E-13	4.4E-14
		90	1.6E+05	Inhalation	3.0E-12	4.4E-13
		95	8.2E+04	Inhalation	5.6E-12	8.4E-13
Synthetic Liner						
Cancer	Adult					
		50	2.7E+06	Inhalation	1.7E-13	2.6E-14
		90	2.4E+05	Inhalation	2.0E-12	2.9E-13
		95	1.2E+05	Inhalation	3.7E-12	5.6E-13
Cancer	Child					
		50	3.0E+06	Inhalation	1.5E-13	2.3E-14
		90	2.3E+05	Inhalation	2.0E-12	3.1E-13
		95	1.2E+05	Inhalation	3.9E-12	5.8E-13

Table A1-32b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of p-Cresidine (120-71-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.3E+07	Shower	1.7E-17	2.5E-18
				Drinking water	2.0E-14	3.0E-15
				Total	2.0E-14	3.0E-15
		90	1.2E+02	Shower	6.4E-12	9.5E-13
				Drinking water	3.7E-09	5.6E-10
				Total	3.7E-09	5.6E-10
		95	3.7E+01	Shower	1.3E-11	1.9E-12
				Drinking water	1.2E-08	1.9E-09
				Total	1.2E-08	1.9E-09
Cancer	Child					
		50	2.7E+07	Drinking water	1.7E-14	2.6E-15
		90	1.4E+02	Drinking water	3.2E-09	4.9E-10
		95	4.2E+01	Drinking water	1.1E-08	1.6E-09
Clay Liner						
Cancer	Adult					
		50	1.2E+11	Shower	3.5E-21	5.3E-22
				Drinking water	3.7E-18	5.6E-19
				Total	3.7E-18	5.6E-19
		90	6.6E+02	Shower	4.6E-13	6.9E-14
				Drinking water	6.9E-10	1.0E-10
				Total	6.9E-10	1.0E-10
		95	1.7E+02	Shower	3.1E-13	4.6E-14
				Drinking water	2.6E-09	4.0E-10
				Total	2.6E-09	4.0E-10
Cancer	Child					
		50	1.4E+11	Drinking water	3.4E-18	5.1E-19
		90	7.9E+02	Drinking water	5.8E-10	8.8E-11
		95	2.1E+02	Drinking water	2.2E-09	3.3E-10
Composite Liner						
Cancer	Adult					
		90	5.0E+12	Shower	5.3E-23	7.9E-24
				Drinking water	9.2E-20	1.4E-20
				Total	9.2E-20	1.4E-20
		95	8.3E+11	Shower	3.6E-23	5.3E-24
				Drinking water	5.5E-19	8.3E-20
				Total	5.5E-19	8.3E-20
Cancer	Child					
		90	5.4E+12	Drinking water	8.6E-20	1.3E-20
		95	9.5E+11	Drinking water	4.9E-19	7.3E-20

Table A1-32b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of p-Cresidine (120-71-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Synthetic Liner						
Cancer	Adult					
		50	4.2E+15	Shower	1.6E-25	2.4E-26
				Drinking water	1.1E-22	1.7E-23
				Total	1.1E-22	1.7E-23
		90	3.6E+09	Shower	1.5E-19	2.3E-20
				Drinking water	1.3E-16	1.9E-17
				Total	1.3E-16	1.9E-17
		95	5.6E+06	Shower	4.1E-17	6.1E-18
				Drinking water	8.2E-14	1.2E-14
				Total	8.2E-14	1.2E-14
Cancer	Child					
		50	4.8E+15	Drinking water	9.5E-23	1.4E-23
		90	3.4E+09	Drinking water	1.4E-16	2.0E-17
		95	6.5E+06	Drinking water	7.1E-14	1.1E-14

Table A2-1a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of Formaldehyde (50-00-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	5.0E+05	Inhalation	6.1E-13	2.8E-14
		90	1.4E+04	Inhalation	2.2E-11	9.7E-13
		95	5.8E+03	Inhalation	5.2E-11	2.4E-12
Cancer	Child					
		50	4.8E+05	Inhalation	6.4E-13	2.9E-14
		90	1.4E+04	Inhalation	2.2E-11	9.9E-13
		95	6.0E+03	Inhalation	5.2E-11	2.3E-12
Clay Liner						
Cancer	Adult					
		50	5.0E+05	Inhalation	6.1E-13	2.8E-14
		90	1.4E+04	Inhalation	2.2E-11	9.8E-13
		95	5.7E+03	Inhalation	5.4E-11	2.4E-12
Cancer	Child					
		50	4.8E+05	Inhalation	6.4E-13	2.9E-14
		90	1.4E+04	Inhalation	2.2E-11	1.0E-12
		95	5.9E+03	Inhalation	5.2E-11	2.4E-12
Composite Liner						
Cancer	Adult					
		50	5.0E+05	Inhalation	6.1E-13	2.8E-14
		90	1.4E+04	Inhalation	2.2E-11	9.8E-13
		95	5.8E+03	Inhalation	5.3E-11	2.4E-12
Cancer	Child					
		50	4.8E+05	Inhalation	6.4E-13	2.9E-14
		90	1.4E+04	Inhalation	2.2E-11	1.0E-12
		95	5.9E+03	Inhalation	5.2E-11	2.3E-12

Table A2-1b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of Formaldehyde (50-00-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.8E+07	Shower	1.1E-14	5.0E-16
		90	1.6E+05	Shower	1.9E-12	8.6E-14
		95	4.6E+04	Shower	6.7E-12	3.0E-13
Clay Liner						
Cancer	Adult					
		50	7.4E+07	Shower	4.1E-15	1.9E-16
		90	4.0E+05	Shower	7.6E-13	3.4E-14
		95	1.2E+05	Shower	2.6E-12	1.2E-13
Composite Liner						
Cancer	Adult					
		50	1.6E+33	Shower	2.0E-40	8.8E-42
		90	2.9E+11	Shower	1.1E-18	4.8E-20
		95	3.2E+10	Shower	9.5E-18	4.3E-19

Table A2-2a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of Aniline (62-53-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.5E+06	Inhalation	7.0E-13	4.0E-15
		90	9.2E+04	Inhalation	2.6E-11	1.5E-13
		95	3.9E+04	Inhalation	6.2E-11	3.5E-13
Cancer	Child					
		50	3.3E+06	Inhalation	7.4E-13	4.2E-15
		90	8.7E+04	Inhalation	2.8E-11	1.6E-13
		95	3.7E+04	Inhalation	6.6E-11	3.8E-13
Clay Liner						
Cancer	Adult					
		50	3.5E+06	Inhalation	7.0E-13	4.0E-15
		90	8.9E+04	Inhalation	2.7E-11	1.5E-13
		95	3.8E+04	Inhalation	6.5E-11	3.7E-13
Cancer	Child					
		50	3.3E+06	Inhalation	7.4E-13	4.2E-15
		90	8.6E+04	Inhalation	2.8E-11	1.6E-13
		95	3.6E+04	Inhalation	6.8E-11	3.9E-13
Composite Liner						
Cancer	Adult					
		50	3.4E+06	Inhalation	7.1E-13	4.0E-15
		90	8.9E+04	Inhalation	2.7E-11	1.6E-13
		95	3.7E+04	Inhalation	6.5E-11	3.7E-13
Cancer	Child					
		50	3.3E+06	Inhalation	7.5E-13	4.2E-15
		90	8.5E+04	Inhalation	2.8E-11	1.6E-13
		95	3.6E+04	Inhalation	6.7E-11	3.8E-13

Table A2-2b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of Aniline (62-53-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.6E+05	Shower	2.8E-14	1.6E-16
				Drinking water	6.6E-12	3.8E-14
				Total	6.7E-12	3.8E-14
		90	1.7E+03	Shower	7.5E-12	4.2E-14
				Drinking water	1.4E-09	7.9E-12
				Total	1.4E-09	8.0E-12
		95	3.6E+02	Shower	8.6E-11	4.9E-13
				Drinking water	6.6E-09	3.8E-11
				Total	6.7E-09	3.8E-11
Cancer	Child					
		50	4.1E+05	Drinking water	5.9E-12	3.3E-14
		90	2.0E+03	Drinking water	1.2E-09	7.1E-12
		95	4.5E+02	Drinking water	5.4E-09	3.1E-11
Clay Liner						
Cancer	Adult					
		50	1.0E+06	Shower	1.7E-14	9.7E-17
				Drinking water	2.4E-12	1.4E-14
				Total	2.4E-12	1.4E-14
		90	4.4E+03	Shower	5.3E-12	3.0E-14
				Drinking water	5.5E-10	3.1E-12
				Total	5.5E-10	3.1E-12
		95	9.4E+02	Shower	1.7E-11	9.5E-14
				Drinking water	2.6E-09	1.5E-11
				Total	2.6E-09	1.5E-11
Cancer	Child					
		50	1.1E+06	Drinking water	2.1E-12	1.2E-14
		90	5.1E+03	Drinking water	4.8E-10	2.7E-12
		95	1.1E+03	Drinking water	2.2E-09	1.2E-11
Composite Liner						
Cancer	Adult					
		50	2.2E+31	Shower	1.6E-39	9.3E-42
				Drinking water	1.1E-37	6.3E-40
				Total	1.1E-37	6.4E-40
		90	3.1E+09	Shower	4.4E-18	2.5E-20
				Drinking water	7.8E-16	4.4E-18
				Total	7.8E-16	4.5E-18
		95	3.8E+08	Shower	2.6E-17	1.5E-19
				Drinking water	6.3E-15	3.6E-17
				Total	6.4E-15	3.6E-17
Cancer	Child					
		50	2.6E+31	Drinking water	9.4E-38	5.3E-40
		90	3.7E+09	Drinking water	6.6E-16	3.8E-18
		95	3.5E+08	Drinking water	7.0E-15	4.0E-17

Table A2-4a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of o-Anisidine (90-04-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	8.8E+04	Inhalation	1.1E-12	1.6E-13
		90	3.0E+03	Inhalation	3.3E-11	4.7E-12
		95	1.3E+03	Inhalation	7.5E-11	1.1E-11
Cancer	Child					
		50	8.5E+04	Inhalation	1.2E-12	1.6E-13
		90	3.0E+03	Inhalation	3.3E-11	4.6E-12
		95	1.3E+03	Inhalation	7.4E-11	1.0E-11
Clay Liner						
Cancer	Adult					
		50	8.7E+04	Inhalation	1.1E-12	1.6E-13
		90	2.9E+03	Inhalation	3.4E-11	4.8E-12
		95	1.3E+03	Inhalation	7.7E-11	1.1E-11
Cancer	Child					
		50	8.4E+04	Inhalation	1.2E-12	1.6E-13
		90	2.9E+03	Inhalation	3.3E-11	4.7E-12
		95	1.3E+03	Inhalation	7.5E-11	1.1E-11
Composite Liner						
Cancer	Adult					
		50	8.6E+04	Inhalation	1.1E-12	1.6E-13
		90	2.9E+03	Inhalation	3.4E-11	4.8E-12
		95	1.3E+03	Inhalation	7.8E-11	1.1E-11
Cancer	Child					
		50	8.4E+04	Inhalation	1.2E-12	1.6E-13
		90	2.9E+03	Inhalation	3.4E-11	4.7E-12
		95	1.3E+03	Inhalation	7.6E-11	1.1E-11

Table A2-4b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of o-Anisidine (90-04-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.1E+04	Shower	7.1E-14	9.9E-15
				Drinking water	8.6E-12	1.2E-12
				Total	8.7E-12	1.2E-12
		90	7.6E+01	Shower	1.3E-11	1.8E-12
				Drinking water	1.3E-09	1.8E-10
				Total	1.3E-09	1.8E-10
		95	1.9E+01	Shower	1.2E-11	1.7E-12
				Drinking water	5.2E-09	7.3E-10
				Total	5.2E-09	7.3E-10
Cancer	Child					
		50	1.3E+04	Drinking water	7.6E-12	1.1E-12
		90	8.3E+01	Drinking water	1.2E-09	1.7E-10
		95	2.3E+01	Drinking water	4.2E-09	5.9E-10
Clay Liner						
Cancer	Adult					
		50	3.1E+04	Shower	9.4E-15	1.3E-15
				Drinking water	3.2E-12	4.5E-13
				Total	3.2E-12	4.5E-13
		90	1.9E+02	Shower	2.0E-12	2.8E-13
				Drinking water	5.1E-10	7.2E-11
				Total	5.1E-10	7.2E-11
		95	4.8E+01	Shower	6.1E-12	8.6E-13
				Drinking water	2.0E-09	2.9E-10
				Total	2.0E-09	2.9E-10
Cancer	Child					
		50	3.5E+04	Drinking water	2.8E-12	3.9E-13
		90	2.2E+02	Drinking water	4.4E-10	6.2E-11
		95	5.6E+01	Drinking water	1.8E-09	2.5E-10
Composite Liner						
Cancer	Adult					
		50	8.4E+29	Shower	1.4E-40	1.9E-41
				Drinking water	1.2E-37	1.6E-38
				Total	1.2E-37	1.6E-38
		90	1.1E+08	Shower	3.7E-18	5.2E-19
				Drinking water	8.6E-16	1.2E-16
				Total	8.6E-16	1.2E-16
		95	1.5E+07	Shower	5.7E-17	7.9E-18
				Drinking water	6.6E-15	9.3E-16
				Total	6.7E-15	9.4E-16
Cancer	Child					
		50	1.0E+30	Drinking water	9.5E-38	1.3E-38
		90	1.4E+08	Drinking water	7.2E-16	1.0E-16
		95	1.5E+07	Drinking water	6.6E-15	9.2E-16

Table A2-5a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of 4-4-Bis(dimethylamino) benzophenone (90-94-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	7.2E+09	Inhalation	2.2E-18	1.9E-18
		90	2.5E+08	Inhalation	6.5E-17	5.6E-17
		95	9.8E+07	Inhalation	1.6E-16	1.4E-16
Cancer	Child					
		50	7.0E+09	Inhalation	2.3E-18	2.0E-18
		90	2.5E+08	Inhalation	6.4E-17	5.5E-17
		95	1.0E+08	Inhalation	1.6E-16	1.4E-16
Clay Liner						
Cancer	Adult					
		50	7.2E+09	Inhalation	2.2E-18	1.9E-18
		90	2.4E+08	Inhalation	6.7E-17	5.8E-17
		95	9.7E+07	Inhalation	1.7E-16	1.4E-16
Cancer	Child					
		50	7.0E+09	Inhalation	2.3E-18	2.0E-18
		90	2.5E+08	Inhalation	6.4E-17	5.5E-17
		95	1.0E+08	Inhalation	1.6E-16	1.4E-16
Composite Liner						
Cancer	Adult					
		50	7.2E+09	Inhalation	2.2E-18	1.9E-18
		90	2.4E+08	Inhalation	6.6E-17	5.7E-17
		95	9.8E+07	Inhalation	1.6E-16	1.4E-16
Cancer	Child					
		50	7.0E+09	Inhalation	2.3E-18	2.0E-18
		90	2.5E+08	Inhalation	6.4E-17	5.5E-17
		95	1.0E+08	Inhalation	1.6E-16	1.4E-16

Table A2-5b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 4-4-Bis(dimethylamino) benzophenone (90-94-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.0E+06	Shower	4.3E-22	3.7E-22
				Drinking water	5.4E-15	4.6E-15
				Total	5.4E-15	4.6E-15
		90	1.8E+03	Shower	6.9E-19	5.9E-19
				Drinking water	8.7E-12	7.5E-12
				Total	8.7E-12	7.5E-12
		95	2.5E+02	Shower	2.3E-18	2.0E-18
				Drinking water	6.5E-11	5.6E-11
				Total	6.5E-11	5.6E-11
Cancer	Child					
		50	3.4E+06	Drinking water	4.7E-15	4.0E-15
		90	2.3E+03	Drinking water	7.1E-12	6.1E-12
		95	3.1E+02	Drinking water	5.2E-11	4.4E-11
Clay Liner						
Cancer	Adult					
		50	1.3E+07	Shower	2.9E-23	2.5E-23
				Drinking water	1.3E-15	1.1E-15
				Total	1.3E-15	1.1E-15
		90	7.6E+03	Shower	1.6E-20	1.3E-20
				Drinking water	2.1E-12	1.8E-12
				Total	2.1E-12	1.8E-12
		95	9.7E+02	Shower	1.6E-18	1.4E-18
				Drinking water	1.7E-11	1.4E-11
				Total	1.7E-11	1.4E-11
Cancer	Child					
		50	1.4E+07	Drinking water	1.2E-15	1.0E-15
		90	8.9E+03	Drinking water	1.8E-12	1.5E-12
		95	1.2E+03	Drinking water	1.4E-11	1.2E-11
Composite Liner						
Cancer	Adult					
		50	1.1E+33	Shower	2.8E-49	2.4E-49
				Drinking water	1.5E-41	1.3E-41
				Total	1.5E-41	1.3E-41
		90	2.4E+13	Shower	1.4E-29	1.2E-29
				Drinking water	6.7E-22	5.8E-22
				Total	6.7E-22	5.8E-22
		95	1.1E+11	Shower	3.4E-27	2.9E-27
				Drinking water	1.4E-19	1.2E-19
				Total	1.4E-19	1.2E-19
Cancer	Child					
		50	1.2E+33	Drinking water	1.3E-41	1.2E-41
		90	2.3E+13	Drinking water	7.0E-22	6.1E-22
		95	1.2E+11	Drinking water	1.3E-19	1.1E-19

Table A2-8a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of 3,3-Dichlorobenzidine (91-94-1) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.5E+06	Inhalation	2.6E-15	3.1E-15
		90	1.2E+05	Inhalation	9.5E-14	1.1E-13
		95	4.4E+04	Inhalation	2.6E-13	3.1E-13
Cancer	Child					
		50	4.3E+06	Inhalation	2.7E-15	3.2E-15
		90	1.3E+05	Inhalation	8.9E-14	1.1E-13
		95	4.5E+04	Inhalation	2.5E-13	3.0E-13
Clay Liner						
Cancer	Adult					
		50	4.5E+06	Inhalation	2.6E-15	3.1E-15
		90	1.2E+05	Inhalation	9.6E-14	1.2E-13
		95	4.4E+04	Inhalation	2.6E-13	3.1E-13
Cancer	Child					
		50	4.3E+06	Inhalation	2.7E-15	3.2E-15
		90	1.3E+05	Inhalation	8.9E-14	1.1E-13
		95	4.5E+04	Inhalation	2.6E-13	3.1E-13
Composite Liner						
Cancer	Adult					
		50	4.5E+06	Inhalation	2.6E-15	3.1E-15
		90	1.2E+05	Inhalation	9.6E-14	1.2E-13
		95	4.4E+04	Inhalation	2.6E-13	3.2E-13
Cancer	Child					
		50	4.3E+06	Inhalation	2.7E-15	3.2E-15
		90	1.3E+05	Inhalation	8.9E-14	1.1E-13
		95	4.5E+04	Inhalation	2.6E-13	3.1E-13

Table A2-8b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 3,3-Dichlorobenzidine (91-94-1) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.2E+05	Shower	6.2E-18	7.4E-18
				Drinking water	2.6E-13	1.2E-13
				Total	2.6E-13	1.2E-13
		90	2.6E+02	Shower	2.3E-15	2.8E-15
				Drinking water	1.2E-10	5.4E-11
				Total	1.2E-10	5.4E-11
		95	4.5E+01	Shower	4.7E-15	5.6E-15
				Drinking water	6.8E-10	3.0E-10
				Total	6.8E-10	3.0E-10
Cancer	Child					
		50	1.3E+05	Drinking water	2.4E-13	1.1E-13
		90	2.7E+02	Drinking water	1.1E-10	5.1E-11
		95	6.2E+01	Drinking water	4.9E-10	2.2E-10
Clay Liner						
Cancer	Adult					
		50	4.1E+05	Shower	1.6E-18	1.9E-18
				Drinking water	7.4E-14	3.3E-14
				Total	7.4E-14	3.3E-14
		90	8.3E+02	Shower	1.8E-15	2.1E-15
				Drinking water	3.7E-11	1.7E-11
				Total	3.7E-11	1.7E-11
		95	1.6E+02	Shower	7.5E-16	9.0E-16
				Drinking water	1.9E-10	8.6E-11
				Total	1.9E-10	8.6E-11
Cancer	Child					
		50	4.4E+05	Drinking water	6.9E-14	3.1E-14
		90	9.4E+02	Drinking water	3.3E-11	1.5E-11
		95	2.2E+02	Drinking water	1.4E-10	6.4E-11
Composite Liner						
Cancer	Adult					
		50	2.5E+31	Shower	9.0E-45	1.1E-44
				Drinking water	1.2E-39	5.4E-40
				Total	1.2E-39	5.4E-40
		90	5.3E+10	Shower	1.8E-23	2.1E-23
				Drinking water	5.7E-19	2.6E-19
				Total	5.7E-19	2.6E-19
		95	1.0E+09	Shower	4.4E-22	5.2E-22
				Drinking water	3.0E-17	1.3E-17
				Total	3.0E-17	1.3E-17
Cancer	Child					
		50	3.0E+31	Drinking water	1.0E-39	4.5E-40
		90	6.1E+10	Drinking water	5.1E-19	2.3E-19
		95	1.3E+09	Drinking water	2.4E-17	1.1E-17

Table A2-10a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of Benzidine (92-87-5) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.6E+06	Inhalation	1.7E-17	3.8E-15
		90	9.0E+04	Inhalation	6.7E-16	1.5E-13
		95	3.1E+04	Inhalation	1.9E-15	4.5E-13
Cancer	Child					
		50	3.6E+06	Inhalation	1.7E-17	3.9E-15
		90	9.1E+04	Inhalation	6.6E-16	1.5E-13
		95	3.1E+04	Inhalation	1.9E-15	4.4E-13
Clay Liner						
Cancer	Adult					
		50	3.6E+06	Inhalation	1.7E-17	3.8E-15
		90	8.9E+04	Inhalation	6.8E-16	1.6E-13
		95	3.0E+04	Inhalation	2.0E-15	4.5E-13
Cancer	Child					
		50	3.6E+06	Inhalation	1.7E-17	3.9E-15
		90	9.1E+04	Inhalation	6.6E-16	1.5E-13
		95	3.1E+04	Inhalation	2.0E-15	4.5E-13
Composite Liner						
Cancer	Adult					
		50	3.6E+06	Inhalation	1.7E-17	3.8E-15
		90	8.9E+04	Inhalation	6.7E-16	1.5E-13
		95	3.1E+04	Inhalation	1.9E-15	4.5E-13
Cancer	Child					
		50	3.6E+06	Inhalation	1.7E-17	3.9E-15
		90	9.2E+04	Inhalation	6.6E-16	1.5E-13
		95	3.2E+04	Inhalation	1.9E-15	4.4E-13

Table A2-10b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of Benzidine (92-87-5) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.8E+01	Shower	7.4E-19	1.7E-16
				Drinking water	3.3E-12	7.5E-10
				Total	3.3E-12	7.5E-10
		90	7.1E-02	Shower	1.2E-16	2.7E-14
				Drinking water	8.4E-10	1.9E-07
				Total	8.4E-10	1.9E-07
		95	1.5E-02	Shower	1.8E-15	4.1E-13
				Drinking water	4.1E-09	9.5E-07
				Total	4.1E-09	9.5E-07
Cancer	Child					
		50	2.0E+01	Drinking water	3.0E-12	6.8E-10
		90	7.6E-02	Drinking water	7.9E-10	1.8E-07
		95	1.8E-02	Drinking water	3.3E-09	7.5E-07
Clay Liner						
Cancer	Adult					
		50	4.9E+01	Shower	4.7E-19	1.1E-16
				Drinking water	1.2E-12	2.8E-10
				Total	1.2E-12	2.8E-10
		90	1.8E-01	Shower	1.6E-16	3.7E-14
				Drinking water	3.3E-10	7.7E-08
				Total	3.3E-10	7.7E-08
		95	3.9E-02	Shower	2.6E-16	5.9E-14
				Drinking water	1.5E-09	3.6E-07
				Total	1.5E-09	3.6E-07
Cancer	Child					
		50	5.4E+01	Drinking water	1.1E-12	2.6E-10
		90	2.0E-01	Drinking water	2.9E-10	6.8E-08
		95	4.3E-02	Drinking water	1.4E-09	3.2E-07
Composite Liner						
Cancer	Adult					
		50	1.0E+27	Shower	2.2E-44	5.0E-42
				Drinking water	5.9E-38	1.4E-35
				Total	5.9E-38	1.4E-35
		90	1.8E+05	Shower	6.0E-23	1.4E-20
				Drinking water	3.3E-16	7.7E-14
				Total	3.3E-16	7.7E-14
		95	1.7E+04	Shower	1.3E-21	3.0E-19
				Drinking water	3.6E-15	8.3E-13
				Total	3.6E-15	8.3E-13
Cancer	Child					
		50	1.2E+27	Drinking water	5.1E-38	1.2E-35
		90	2.0E+05	Drinking water	3.0E-16	6.9E-14
		95	1.9E+04	Drinking water	3.2E-15	7.3E-13

Table A2-12a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of o-Toluidine (95-53-4) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.3E+05	Inhalation	4.5E-13	1.1E-13
		90	2.4E+03	Inhalation	2.4E-11	5.7E-12
		95	1.0E+03	Inhalation	5.7E-11	1.4E-11
Cancer	Child					
		50	1.2E+05	Inhalation	4.9E-13	1.2E-13
		90	2.4E+03	Inhalation	2.4E-11	5.9E-12
		95	9.5E+02	Inhalation	6.1E-11	1.5E-11
Clay Liner						
Cancer	Adult					
		50	1.3E+05	Inhalation	4.5E-13	1.1E-13
		90	2.4E+03	Inhalation	2.4E-11	5.7E-12
		95	1.0E+03	Inhalation	5.8E-11	1.4E-11
Cancer	Child					
		50	1.2E+05	Inhalation	4.9E-13	1.2E-13
		90	2.3E+03	Inhalation	2.5E-11	5.9E-12
		95	9.5E+02	Inhalation	6.1E-11	1.5E-11
Composite Liner						
Cancer	Adult					
		50	1.3E+05	Inhalation	4.5E-13	1.1E-13
		90	2.4E+03	Inhalation	2.4E-11	5.7E-12
		95	1.0E+03	Inhalation	5.8E-11	1.4E-11
Cancer	Child					
		50	1.2E+05	Inhalation	4.9E-13	1.2E-13
		90	2.4E+03	Inhalation	2.4E-11	5.9E-12
		95	9.6E+02	Inhalation	6.0E-11	1.4E-11

Table A2-12b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of o-Toluidine (95-53-4) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.1E+04	Shower	8.4E-14	2.0E-14
				Drinking water	2.7E-12	6.5E-13
				Total	2.8E-12	6.7E-13
		90	7.5E+01	Shower	1.4E-11	3.3E-12
				Drinking water	7.5E-10	1.8E-10
				Total	7.7E-10	1.8E-10
		95	1.5E+01	Shower	5.6E-11	1.3E-11
				Drinking water	3.7E-09	8.9E-10
				Total	3.8E-09	9.0E-10
Cancer	Child					
		50	2.2E+04	Drinking water	2.6E-12	6.2E-13
		90	8.2E+01	Drinking water	7.0E-10	1.7E-10
		95	1.9E+01	Drinking water	3.0E-09	7.2E-10
Clay Liner						
Cancer	Adult					
		50	5.6E+04	Shower	6.8E-14	1.6E-14
				Drinking water	9.6E-13	2.3E-13
				Total	1.0E-12	2.5E-13
		90	1.9E+02	Shower	9.0E-12	2.2E-12
				Drinking water	2.9E-10	6.9E-11
				Total	3.0E-10	7.1E-11
		95	4.0E+01	Shower	1.2E-11	2.8E-12
				Drinking water	1.4E-09	3.5E-10
				Total	1.5E-09	3.5E-10
Cancer	Child					
		50	6.0E+04	Drinking water	9.5E-13	2.3E-13
		90	2.1E+02	Drinking water	2.7E-10	6.5E-11
		95	4.8E+01	Drinking water	1.2E-09	2.9E-10
Composite Liner						
Cancer	Adult					
		50	1.0E+30	Shower	3.5E-40	8.4E-41
				Drinking water	5.5E-38	1.3E-38
				Total	5.6E-38	1.3E-38
		90	1.9E+08	Shower	1.4E-17	3.4E-18
				Drinking water	2.9E-16	7.1E-17
				Total	3.1E-16	7.4E-17
		95	1.7E+07	Shower	6.8E-18	1.6E-18
				Drinking water	3.3E-15	8.0E-16
				Total	3.3E-15	8.0E-16
Cancer	Child					
		50	1.2E+30	Drinking water	4.9E-38	1.2E-38
		90	2.1E+08	Drinking water	2.7E-16	6.5E-17
		95	1.9E+07	Drinking water	3.1E-15	7.4E-16

Table A2-13b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 1,2-Phenylenediamine (95-54-5) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.7E+04	Drinking water	7.9E-12	3.7E-13
		90	1.8E+02	Drinking water	1.6E-09	7.7E-11
		95	3.8E+01	Drinking water	7.8E-09	3.7E-10
Cancer	Child					
		50	4.2E+04	Drinking water	7.0E-12	3.3E-13
		90	2.0E+02	Drinking water	1.5E-09	7.0E-11
		95	4.7E+01	Drinking water	6.3E-09	2.9E-10
Clay Liner						
Cancer	Adult					
		50	9.9E+04	Drinking water	3.0E-12	1.4E-13
		90	4.5E+02	Drinking water	6.6E-10	3.1E-11
		95	1.0E+02	Drinking water	2.9E-09	1.4E-10
Cancer	Child					
		50	1.1E+05	Drinking water	2.6E-12	1.2E-13
		90	5.1E+02	Drinking water	5.8E-10	2.7E-11
		95	1.2E+02	Drinking water	2.5E-09	1.2E-10
Composite Liner						
Cancer	Adult					
		50	2.4E+30	Drinking water	1.2E-37	5.8E-39
		90	3.2E+08	Drinking water	9.2E-16	4.3E-17
		95	3.6E+07	Drinking water	8.1E-15	3.8E-16
Cancer	Child					
		50	2.7E+30	Drinking water	1.1E-37	5.1E-39
		90	3.8E+08	Drinking water	7.8E-16	3.7E-17
		95	3.6E+07	Drinking water	8.3E-15	3.9E-16

Table A2-14b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 2,4-Dimethylaniline (2,4-xylidine) (95-68-1) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.6E+03	Drinking water	4.0E-12	3.0E-12
		90	1.8E+01	Drinking water	1.0E-09	7.9E-10
		95	3.7E+00	Drinking water	5.0E-09	3.7E-09
Cancer	Child					
		50	5.2E+03	Drinking water	3.5E-12	2.7E-12
		90	1.9E+01	Drinking water	9.5E-10	7.1E-10
		95	4.3E+00	Drinking water	4.3E-09	3.2E-09
Clay Liner						
Cancer	Adult					
		50	1.2E+04	Drinking water	1.5E-12	1.1E-12
		90	4.4E+01	Drinking water	4.2E-10	3.2E-10
		95	8.7E+00	Drinking water	2.1E-09	1.6E-09
Cancer	Child					
		50	1.4E+04	Drinking water	1.3E-12	1.0E-12
		90	4.9E+01	Drinking water	3.8E-10	2.8E-10
		95	1.0E+01	Drinking water	1.8E-09	1.3E-09
Composite Liner						
Cancer	Adult					
		50	2.3E+29	Drinking water	8.1E-38	6.1E-38
		90	4.1E+07	Drinking water	4.5E-16	3.4E-16
		95	3.7E+06	Drinking water	5.0E-15	3.8E-15
Cancer	Child					
		50	2.8E+29	Drinking water	6.5E-38	4.9E-38
		90	4.8E+07	Drinking water	3.9E-16	2.9E-16
		95	3.8E+06	Drinking water	4.9E-15	3.7E-15

Table A2-15a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of Toluene-2,4-diamine (95-80-7) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.1E+06	Inhalation	1.1E-15	4.5E-15
		90	5.5E+04	Inhalation	6.2E-14	2.5E-13
		95	1.8E+04	Inhalation	1.9E-13	7.8E-13
Cancer	Child					
		50	3.0E+06	Inhalation	1.1E-15	4.6E-15
		90	5.7E+04	Inhalation	6.1E-14	2.4E-13
		95	1.7E+04	Inhalation	2.0E-13	7.9E-13
Clay Liner						
Cancer	Adult					
		50	3.0E+06	Inhalation	1.2E-15	4.6E-15
		90	5.1E+04	Inhalation	6.7E-14	2.7E-13
		95	1.6E+04	Inhalation	2.1E-13	8.4E-13
Cancer	Child					
		50	2.9E+06	Inhalation	1.2E-15	4.7E-15
		90	5.5E+04	Inhalation	6.3E-14	2.5E-13
		95	1.6E+04	Inhalation	2.1E-13	8.4E-13
Composite Liner						
Cancer	Adult					
		50	3.0E+06	Inhalation	1.2E-15	4.6E-15
		90	5.1E+04	Inhalation	6.8E-14	2.7E-13
		95	1.6E+04	Inhalation	2.1E-13	8.4E-13
Cancer	Child					
		50	2.9E+06	Inhalation	1.2E-15	4.7E-15
		90	5.5E+04	Inhalation	6.3E-14	2.5E-13
		95	1.6E+04	Inhalation	2.1E-13	8.4E-13

Table A2-15b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of Toluene-2,4-diamine (95-80-7) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.2E+02	Shower	1.8E-16	7.0E-16
				Drinking water	1.0E-11	3.3E-11
				Total	1.0E-11	3.3E-11
		90	2.1E+00	Shower	1.0E-14	4.0E-14
				Drinking water	2.1E-09	6.6E-09
				Total	2.1E-09	6.6E-09
		95	4.7E-01	Shower	1.1E-13	4.5E-13
				Drinking water	9.2E-09	3.0E-08
				Total	9.2E-09	3.0E-08
Cancer	Child					
		50	4.8E+02	Drinking water	9.0E-12	2.9E-11
		90	2.3E+00	Drinking water	1.9E-09	6.1E-09
		95	5.4E-01	Drinking water	8.0E-09	2.6E-08
Clay Liner						
Cancer	Adult					
		50	1.1E+03	Shower	2.1E-17	8.2E-17
				Drinking water	3.9E-12	1.3E-11
				Total	3.9E-12	1.3E-11
		90	5.2E+00	Shower	1.0E-15	4.0E-15
				Drinking water	8.3E-10	2.7E-09
				Total	8.3E-10	2.7E-09
		95	1.1E+00	Shower	2.9E-14	1.1E-13
				Drinking water	3.8E-09	1.2E-08
				Total	3.8E-09	1.2E-08
Cancer	Child					
		50	1.3E+03	Drinking water	3.3E-12	1.1E-11
		90	5.9E+00	Drinking water	7.3E-10	2.3E-09
		95	1.3E+00	Drinking water	3.2E-09	1.0E-08
Composite Liner						
Cancer	Adult					
		50	2.9E+28	Shower	2.1E-43	8.4E-43
				Drinking water	1.5E-37	4.7E-37
				Total	1.5E-37	4.7E-37
		90	3.7E+06	Shower	7.7E-21	3.1E-20
				Drinking water	1.2E-15	3.7E-15
				Total	1.2E-15	3.7E-15
		95	4.1E+05	Shower	1.7E-20	6.6E-20
				Drinking water	1.0E-14	3.3E-14
				Total	1.0E-14	3.3E-14
Cancer	Child					
		50	3.4E+28	Drinking water	1.3E-37	4.1E-37
		90	4.4E+06	Drinking water	9.8E-16	3.1E-15
		95	4.2E+05	Drinking water	1.0E-14	3.3E-14

Table A2-17b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 5-Nitro-o-toluidine (99-55-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.5E+05	Drinking water	1.2E-12	3.9E-14
		90	1.0E+03	Drinking water	4.0E-10	1.3E-11
		95	2.1E+02	Drinking water	2.0E-09	6.5E-11
Cancer	Child					
		50	3.9E+05	Drinking water	1.1E-12	3.5E-14
		90	1.1E+03	Drinking water	3.7E-10	1.2E-11
		95	2.5E+02	Drinking water	1.7E-09	5.6E-11
Clay Liner						
Cancer	Adult					
		50	9.2E+05	Drinking water	4.5E-13	1.5E-14
		90	2.6E+03	Drinking water	1.6E-10	5.4E-12
		95	5.3E+02	Drinking water	7.9E-10	2.6E-11
Cancer	Child					
		50	1.0E+06	Drinking water	4.0E-13	1.3E-14
		90	2.9E+03	Drinking water	1.4E-10	4.8E-12
		95	6.4E+02	Drinking water	6.6E-10	2.2E-11
Composite Liner						
Cancer	Adult					
		50	2.0E+31	Drinking water	2.1E-38	7.1E-40
		90	3.3E+09	Drinking water	1.3E-16	4.2E-18
		95	2.7E+08	Drinking water	1.5E-15	5.1E-17
Cancer	Child					
		50	2.3E+31	Drinking water	1.8E-38	6.1E-40
		90	3.5E+09	Drinking water	1.2E-16	3.9E-18
		95	3.3E+08	Drinking water	1.3E-15	4.2E-17

Table A2-18a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of 5-Nitro-o-anisidine (99-59-2) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.7E+07	Inhalation	7.7E-15	3.8E-16
		90	1.1E+06	Inhalation	2.6E-13	1.3E-14
		95	4.2E+05	Inhalation	6.7E-13	3.3E-14
Cancer	Child					
		50	3.7E+07	Inhalation	7.6E-15	3.7E-16
		90	1.2E+06	Inhalation	2.5E-13	1.2E-14
		95	4.2E+05	Inhalation	6.8E-13	3.3E-14
Clay Liner						
Cancer	Adult					
		50	3.6E+07	Inhalation	7.8E-15	3.8E-16
		90	1.1E+06	Inhalation	2.6E-13	1.3E-14
		95	4.2E+05	Inhalation	6.7E-13	3.3E-14
Cancer	Child					
		50	3.7E+07	Inhalation	7.6E-15	3.7E-16
		90	1.1E+06	Inhalation	2.5E-13	1.2E-14
		95	4.1E+05	Inhalation	6.8E-13	3.4E-14
Composite Liner						
Cancer	Adult					
		50	3.6E+07	Inhalation	7.8E-15	3.8E-16
		90	1.1E+06	Inhalation	2.5E-13	1.2E-14
		95	4.3E+05	Inhalation	6.6E-13	3.2E-14
Cancer	Child					
		50	3.7E+07	Inhalation	7.6E-15	3.7E-16
		90	1.1E+06	Inhalation	2.5E-13	1.2E-14
		95	4.2E+05	Inhalation	6.7E-13	3.3E-14

Table A2-18b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 5-Nitro-o-anisidine (99-59-2) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.1E+05	Shower	1.2E-17	6.0E-19
				Drinking water	2.8E-12	1.3E-13
				Total	2.8E-12	1.3E-13
		90	4.3E+02	Shower	7.9E-14	3.9E-15
				Drinking water	7.0E-10	3.2E-11
				Total	7.0E-10	3.2E-11
		95	8.8E+01	Shower	6.5E-13	3.2E-14
				Drinking water	3.4E-09	1.6E-10
				Total	3.4E-09	1.6E-10
Cancer	Child					
		50	1.2E+05	Drinking water	2.5E-12	1.1E-13
		90	4.5E+02	Drinking water	6.6E-10	3.0E-11
		95	1.1E+02	Drinking water	2.7E-09	1.3E-10
Clay Liner						
Cancer	Adult					
		50	2.8E+05	Shower	3.9E-17	1.9E-18
				Drinking water	1.1E-12	4.9E-14
				Total	1.1E-12	4.9E-14
		90	1.1E+03	Shower	2.7E-14	1.3E-15
				Drinking water	2.8E-10	1.3E-11
				Total	2.8E-10	1.3E-11
		95	2.2E+02	Shower	1.6E-13	7.7E-15
				Drinking water	1.3E-09	6.2E-11
				Total	1.3E-09	6.2E-11
Cancer	Child					
		50	3.2E+05	Drinking water	9.5E-13	4.4E-14
		90	1.2E+03	Drinking water	2.4E-10	1.1E-11
		95	2.5E+02	Drinking water	1.2E-09	5.4E-11
Composite Liner						
Cancer	Adult					
		50	5.6E+30	Shower	1.6E-41	7.7E-43
				Drinking water	5.3E-38	2.5E-39
				Total	5.3E-38	2.5E-39
		90	8.3E+08	Shower	8.7E-20	4.3E-21
				Drinking water	3.6E-16	1.7E-17
				Total	3.6E-16	1.7E-17
		95	8.1E+07	Shower	3.7E-19	1.8E-20
				Drinking water	3.7E-15	1.7E-16
				Total	3.7E-15	1.7E-16
Cancer	Child					
		50	7.3E+30	Drinking water	4.1E-38	1.9E-39
		90	1.0E+09	Drinking water	2.9E-16	1.3E-17
		95	8.4E+07	Drinking water	3.6E-15	1.6E-16

Table A2-20a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of 4,4-Methylenedianiline (101-77-9) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.6E+08	Inhalation	1.9E-17	3.0E-17
		90	1.1E+07	Inhalation	7.8E-16	1.2E-15
		95	3.8E+06	Inhalation	2.3E-15	3.6E-15
Cancer	Child					
		50	4.5E+08	Inhalation	1.9E-17	3.1E-17
		90	1.1E+07	Inhalation	7.6E-16	1.2E-15
		95	3.9E+06	Inhalation	2.2E-15	3.5E-15
Clay Liner						
Cancer	Adult					
		50	4.6E+08	Inhalation	1.9E-17	3.0E-17
		90	1.1E+07	Inhalation	7.9E-16	1.3E-15
		95	3.8E+06	Inhalation	2.3E-15	3.6E-15
Cancer	Child					
		50	4.5E+08	Inhalation	1.9E-17	3.1E-17
		90	1.1E+07	Inhalation	7.7E-16	1.2E-15
		95	3.8E+06	Inhalation	2.3E-15	3.6E-15
Composite Liner						
Cancer	Adult					
		50	4.5E+08	Inhalation	1.9E-17	3.0E-17
		90	1.1E+07	Inhalation	7.7E-16	1.2E-15
		95	3.8E+06	Inhalation	2.3E-15	3.6E-15
Cancer	Child					
		50	4.5E+08	Inhalation	1.9E-17	3.1E-17
		90	1.1E+07	Inhalation	7.6E-16	1.2E-15
		95	3.9E+06	Inhalation	2.2E-15	3.6E-15

Table A2-20b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 4,4-Methylenedianiline (101-77-9) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.0E+03	Shower	8.5E-19	1.4E-18
				Drinking water	2.9E-12	4.7E-12
				Total	2.9E-12	4.7E-12
		90	1.1E+01	Shower	1.1E-16	1.7E-16
				Drinking water	7.7E-10	1.2E-09
				Total	7.7E-10	1.2E-09
		95	2.2E+00	Shower	2.3E-15	3.7E-15
				Drinking water	3.9E-09	6.3E-09
				Total	3.9E-09	6.3E-09
Cancer	Child					
		50	3.3E+03	Drinking water	2.7E-12	4.2E-12
		90	1.2E+01	Drinking water	7.4E-10	1.2E-09
		95	2.8E+00	Drinking water	3.1E-09	4.9E-09
Clay Liner						
Cancer	Adult					
		50	8.0E+03	Shower	7.1E-19	1.1E-18
				Drinking water	1.1E-12	1.7E-12
				Total	1.1E-12	1.7E-12
		90	2.8E+01	Shower	1.4E-16	2.3E-16
				Drinking water	3.0E-10	4.9E-10
				Total	3.0E-10	4.9E-10
		95	6.0E+00	Shower	5.0E-16	8.0E-16
				Drinking water	1.4E-09	2.3E-09
				Total	1.4E-09	2.3E-09
Cancer	Child					
		50	8.7E+03	Drinking water	9.9E-13	1.6E-12
		90	3.1E+01	Drinking water	2.8E-10	4.5E-10
		95	6.6E+00	Drinking water	1.3E-09	2.1E-09
Composite Liner						
Cancer	Adult					
		50	1.7E+29	Shower	1.8E-44	2.9E-44
				Drinking water	5.2E-38	8.3E-38
				Total	5.2E-38	8.3E-38
		90	2.8E+07	Shower	3.2E-22	5.1E-22
				Drinking water	3.1E-16	5.0E-16
				Total	3.1E-16	5.0E-16
		95	2.6E+06	Shower	7.7E-22	1.2E-21
				Drinking water	3.4E-15	5.4E-15
				Total	3.4E-15	5.4E-15
Cancer	Child					
		50	1.9E+29	Drinking water	4.6E-38	7.4E-38
		90	3.0E+07	Drinking water	2.9E-16	4.6E-16
		95	2.8E+06	Drinking water	3.1E-15	4.9E-15

Table A2-22a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of Azobenzene (103-33-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.0E+04	Inhalation	3.1E-12	3.5E-13
		90	2.4E+03	Inhalation	5.3E-11	5.8E-12
		95	1.2E+03	Inhalation	1.1E-10	1.2E-11
Cancer	Child					
		50	3.9E+04	Inhalation	3.2E-12	3.6E-13
		90	2.4E+03	Inhalation	5.3E-11	5.8E-12
		95	1.2E+03	Inhalation	1.0E-10	1.1E-11
Clay Liner						
Cancer	Adult					
		50	4.0E+04	Inhalation	3.2E-12	3.5E-13
		90	2.4E+03	Inhalation	5.3E-11	5.8E-12
		95	1.2E+03	Inhalation	1.1E-10	1.2E-11
Cancer	Child					
		50	3.9E+04	Inhalation	3.2E-12	3.6E-13
		90	2.4E+03	Inhalation	5.3E-11	5.9E-12
		95	1.2E+03	Inhalation	1.0E-10	1.1E-11
Composite Liner						
Cancer	Adult					
		50	4.0E+04	Inhalation	3.2E-12	3.5E-13
		90	2.4E+03	Inhalation	5.2E-11	5.8E-12
		95	1.2E+03	Inhalation	1.1E-10	1.2E-11
Cancer	Child					
		50	3.9E+04	Inhalation	3.2E-12	3.6E-13
		90	2.4E+03	Inhalation	5.3E-11	5.8E-12
		95	1.2E+03	Inhalation	1.0E-10	1.1E-11

Table A2-22b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of Azobenzene (103-33-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	5.6E+06	Shower	1.5E-15	1.7E-16
				Drinking water	2.1E-14	2.3E-15
				Total	2.3E-14	2.5E-15
		90	9.2E+03	Shower	1.7E-12	1.8E-13
				Drinking water	1.2E-11	1.3E-12
				Total	1.4E-11	1.5E-12
		95	1.8E+03	Shower	5.0E-12	5.5E-13
				Drinking water	6.7E-11	7.3E-12
				Total	7.2E-11	7.9E-12
Cancer	Child					
		50	6.7E+06	Drinking water	1.9E-14	2.1E-15
		90	1.3E+04	Drinking water	9.9E-12	1.1E-12
		95	2.4E+03	Drinking water	5.3E-11	5.8E-12
Clay Liner						
Cancer	Adult					
		50	2.1E+07	Shower	6.2E-16	6.9E-17
				Drinking water	5.3E-15	5.9E-16
				Total	6.0E-15	6.5E-16
		90	3.6E+04	Shower	1.7E-13	1.8E-14
				Drinking water	3.4E-12	3.7E-13
				Total	3.5E-12	3.9E-13
		95	6.4E+03	Shower	2.1E-12	2.3E-13
				Drinking water	1.8E-11	1.9E-12
				Total	2.0E-11	2.2E-12
Cancer	Child					
		50	2.5E+07	Drinking water	5.0E-15	5.5E-16
		90	4.4E+04	Drinking water	2.9E-12	3.2E-13
		95	8.7E+03	Drinking water	1.4E-11	1.6E-12
Composite Liner						
Cancer	Adult					
		50	1.3E+33	Shower	1.2E-41	1.3E-42
				Drinking water	8.3E-41	9.1E-42
				Total	9.5E-41	1.0E-41
		90	3.9E+12	Shower	1.3E-21	1.4E-22
				Drinking water	3.1E-20	3.4E-21
				Total	3.2E-20	3.5E-21
		95	5.5E+10	Shower	2.3E-19	2.6E-20
				Drinking water	2.0E-18	2.2E-19
				Total	2.3E-18	2.5E-19
Cancer	Child					
		50	1.8E+33	Drinking water	7.1E-41	7.8E-42
		90	5.3E+12	Drinking water	2.3E-20	2.6E-21
		95	7.8E+10	Drinking water	1.6E-18	1.8E-19

Table A2-24b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 4-Chloroaniline (106-47-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.4E+04	Drinking water	7.4E-12	4.0E-13
		90	1.9E+02	Drinking water	1.4E-09	7.3E-11
		95	5.2E+01	Drinking water	4.9E-09	2.7E-10
Cancer	Child					
		50	3.8E+04	Drinking water	6.7E-12	3.6E-13
		90	2.2E+02	Drinking water	1.2E-09	6.3E-11
		95	6.0E+01	Drinking water	4.3E-09	2.3E-10
Clay Liner						
Cancer	Adult					
		50	8.7E+04	Drinking water	2.9E-12	1.6E-13
		90	5.0E+02	Drinking water	5.1E-10	2.8E-11
		95	1.2E+02	Drinking water	2.1E-09	1.1E-10
Cancer	Child					
		50	9.9E+04	Drinking water	2.6E-12	1.4E-13
		90	5.5E+02	Drinking water	4.7E-10	2.5E-11
		95	1.5E+02	Drinking water	1.7E-09	9.2E-11
Composite Liner						
Cancer	Adult					
		50	7.2E+30	Drinking water	3.6E-38	1.9E-39
		90	1.0E+09	Drinking water	2.5E-16	1.4E-17
		95	5.1E+07	Drinking water	5.0E-15	2.7E-16
Cancer	Child					
		50	8.5E+30	Drinking water	3.0E-38	1.6E-39
		90	1.1E+09	Drinking water	2.3E-16	1.2E-17
		95	5.7E+07	Drinking water	4.5E-15	2.4E-16

Table A2-25b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of p-Toluidine (106-49-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.6E+04	Drinking water	2.7E-12	5.2E-13
		90	9.5E+01	Drinking water	7.7E-10	1.5E-10
		95	1.9E+01	Drinking water	3.7E-09	7.1E-10
Cancer	Child					
		50	2.8E+04	Drinking water	2.6E-12	4.9E-13
		90	1.0E+02	Drinking water	7.0E-10	1.3E-10
		95	2.4E+01	Drinking water	3.0E-09	5.8E-10
Clay Liner						
Cancer	Adult					
		50	7.2E+04	Drinking water	1.0E-12	1.9E-13
		90	2.4E+02	Drinking water	3.1E-10	5.8E-11
		95	5.0E+01	Drinking water	1.5E-09	2.8E-10
Cancer	Child					
		50	7.5E+04	Drinking water	9.6E-13	1.8E-13
		90	2.6E+02	Drinking water	2.8E-10	5.2E-11
		95	5.8E+01	Drinking water	1.2E-09	2.4E-10
Composite Liner						
Cancer	Adult					
		50	4.8E+30	Drinking water	1.5E-38	2.9E-39
		90	5.8E+08	Drinking water	1.2E-16	2.4E-17
		95	3.0E+07	Drinking water	2.4E-15	4.6E-16
Cancer	Child					
		50	5.6E+30	Drinking water	1.3E-38	2.5E-39
		90	6.9E+08	Drinking water	1.1E-16	2.0E-17
		95	3.8E+07	Drinking water	1.9E-15	3.6E-16

Table A2-29a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of 2-Aminoanthraquinone (117-79-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	8.0E+09	Inhalation	5.3E-18	1.7E-19
		90	2.5E+08	Inhalation	1.7E-16	5.6E-18
		95	9.5E+07	Inhalation	4.4E-16	1.5E-17
Cancer	Child					
		50	7.7E+09	Inhalation	5.5E-18	1.8E-19
		90	2.5E+08	Inhalation	1.7E-16	5.5E-18
		95	9.4E+07	Inhalation	4.4E-16	1.5E-17
Clay Liner						
Cancer	Adult					
		50	8.0E+09	Inhalation	5.3E-18	1.7E-19
		90	2.4E+08	Inhalation	1.7E-16	5.6E-18
		95	9.5E+07	Inhalation	4.4E-16	1.5E-17
Cancer	Child					
		50	7.7E+09	Inhalation	5.5E-18	1.8E-19
		90	2.5E+08	Inhalation	1.7E-16	5.5E-18
		95	9.4E+07	Inhalation	4.5E-16	1.5E-17
Composite Liner						
Cancer	Adult					
		50	8.0E+09	Inhalation	5.3E-18	1.7E-19
		90	2.5E+08	Inhalation	1.7E-16	5.6E-18
		95	9.6E+07	Inhalation	4.4E-16	1.4E-17
Cancer	Child					
		50	7.7E+09	Inhalation	5.5E-18	1.8E-19
		90	2.5E+08	Inhalation	1.7E-16	5.5E-18
		95	9.4E+07	Inhalation	4.4E-16	1.5E-17

Table A2-29b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 2-Aminoanthraquinone (117-79-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.1E+06	Shower	1.6E-20	5.2E-22
				Drinking water	2.0E-14	6.5E-16
				Total	2.0E-14	6.5E-16
		90	3.7E+03	Shower	1.8E-17	6.1E-19
				Drinking water	1.1E-11	3.7E-13
				Total	1.1E-11	3.7E-13
		95	6.4E+02	Shower	2.0E-17	6.8E-19
				Drinking water	6.6E-11	2.2E-12
				Total	6.6E-11	2.2E-12
Cancer	Child					
		50	2.3E+06	Drinking water	1.8E-14	5.9E-16
		90	4.1E+03	Drinking water	1.0E-11	3.4E-13
		95	7.4E+02	Drinking water	5.6E-11	1.9E-12
Clay Liner						
Cancer	Adult					
		50	6.8E+06	Shower	3.4E-21	1.1E-22
				Drinking water	6.1E-15	2.0E-16
				Total	6.1E-15	2.0E-16
		90	1.2E+04	Shower	1.8E-18	5.9E-20
				Drinking water	3.5E-12	1.2E-13
				Total	3.5E-12	1.2E-13
		95	1.9E+03	Shower	1.2E-17	3.9E-19
				Drinking water	2.2E-11	7.1E-13
				Total	2.2E-11	7.1E-13
Cancer	Child					
		50	7.5E+06	Drinking water	5.6E-15	1.8E-16
		90	1.3E+04	Drinking water	3.1E-12	1.0E-13
		95	2.4E+03	Drinking water	1.7E-11	5.6E-13
Composite Liner						
Cancer	Adult					
		50	3.4E+32	Shower	3.4E-46	1.1E-47
				Drinking water	1.2E-39	4.0E-41
				Total	1.2E-39	4.0E-41
		90	2.0E+11	Shower	9.6E-25	3.2E-26
				Drinking water	2.1E-18	6.8E-20
				Total	2.1E-18	6.8E-20
		95	5.9E+09	Shower	9.8E-24	3.2E-25
				Drinking water	7.1E-17	2.4E-18
				Total	7.1E-17	2.4E-18
Cancer	Child					
		50	3.8E+32	Drinking water	1.1E-39	3.6E-41
		90	2.0E+11	Drinking water	2.1E-18	6.8E-20
		95	6.8E+09	Drinking water	6.2E-17	2.0E-18

Table A2-30b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 3,3-Dimethoxybenzidine (119-90-4) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.6E+05	Drinking water	6.1E-12	8.5E-14
		90	7.6E+02	Drinking water	1.3E-09	1.8E-11
		95	1.7E+02	Drinking water	5.7E-09	8.0E-11
Cancer	Child					
		50	1.8E+05	Drinking water	5.4E-12	7.5E-14
		90	8.7E+02	Drinking water	1.1E-09	1.6E-11
		95	2.1E+02	Drinking water	4.6E-09	6.4E-11
Clay Liner						
Cancer	Adult					
		50	4.2E+05	Drinking water	2.4E-12	3.3E-14
		90	2.0E+03	Drinking water	5.0E-10	7.0E-12
		95	4.4E+02	Drinking water	2.2E-09	3.1E-11
Cancer	Child					
		50	4.9E+05	Drinking water	2.0E-12	2.8E-14
		90	2.2E+03	Drinking water	4.5E-10	6.3E-12
		95	5.5E+02	Drinking water	1.8E-09	2.5E-11
Composite Liner						
Cancer	Adult					
		50	3.3E+31	Drinking water	3.0E-38	4.2E-40
		90	4.2E+09	Drinking water	2.4E-16	3.3E-18
		95	2.5E+08	Drinking water	4.0E-15	5.6E-17
Cancer	Child					
		50	3.9E+31	Drinking water	2.5E-38	3.5E-40
		90	5.3E+09	Drinking water	1.9E-16	2.6E-18
		95	2.4E+08	Drinking water	4.1E-15	5.7E-17

Table A2-31b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 3,3-Dimethylbenzidine (119-93-7) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.1E+04	Drinking water	1.9E-13	4.4E-13
		90	4.1E+01	Drinking water	1.5E-10	3.4E-10
		95	6.8E+00	Drinking water	8.8E-10	2.0E-09
Cancer	Child					
		50	3.4E+04	Drinking water	1.8E-13	4.1E-13
		90	4.5E+01	Drinking water	1.3E-10	3.1E-10
		95	8.3E+00	Drinking water	7.3E-10	1.7E-09
Clay Liner						
Cancer	Adult					
		50	8.8E+04	Drinking water	6.8E-14	1.6E-13
		90	1.2E+02	Drinking water	5.2E-11	1.2E-10
		95	2.0E+01	Drinking water	3.1E-10	7.0E-10
Cancer	Child					
		50	1.0E+05	Drinking water	5.9E-14	1.4E-13
		90	1.3E+02	Drinking water	4.6E-11	1.1E-10
		95	2.3E+01	Drinking water	2.6E-10	5.9E-10
Composite Liner						
Cancer	Adult					
		50	1.1E+31	Drinking water	5.5E-40	1.3E-39
		90	1.2E+10	Drinking water	5.1E-19	1.2E-18
		95	1.6E+08	Drinking water	3.8E-17	8.7E-17
Cancer	Child					
		50	1.3E+31	Drinking water	4.6E-40	1.1E-39
		90	1.6E+10	Drinking water	3.9E-19	8.9E-19
		95	1.8E+08	Drinking water	3.3E-17	7.6E-17

Table A2-32a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of p-Cresidine (120-71-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	5.4E+05	Inhalation	1.7E-13	2.5E-14
		90	1.3E+04	Inhalation	7.2E-12	1.1E-12
		95	5.0E+03	Inhalation	1.8E-11	2.8E-12
Cancer	Child					
		50	5.4E+05	Inhalation	1.7E-13	2.6E-14
		90	1.3E+04	Inhalation	7.0E-12	1.1E-12
		95	5.1E+03	Inhalation	1.8E-11	2.7E-12
Clay Liner						
Cancer	Adult					
		50	5.4E+05	Inhalation	1.7E-13	2.6E-14
		90	1.3E+04	Inhalation	7.3E-12	1.1E-12
		95	4.7E+03	Inhalation	2.0E-11	3.0E-12
Cancer	Child					
		50	5.3E+05	Inhalation	1.7E-13	2.6E-14
		90	1.3E+04	Inhalation	7.1E-12	1.1E-12
		95	4.9E+03	Inhalation	1.9E-11	2.8E-12
Composite Liner						
Cancer	Adult					
		50	5.4E+05	Inhalation	1.7E-13	2.6E-14
		90	1.3E+04	Inhalation	7.2E-12	1.1E-12
		95	4.7E+03	Inhalation	2.0E-11	2.9E-12
Cancer	Child					
		50	5.3E+05	Inhalation	1.7E-13	2.6E-14
		90	1.3E+04	Inhalation	7.1E-12	1.1E-12
		95	4.9E+03	Inhalation	1.9E-11	2.8E-12

Table A2-32b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of p-Cresidine (120-71-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.1E+04	Shower	4.1E-15	6.1E-16
				Drinking water	8.4E-12	1.3E-12
				Total	8.4E-12	1.3E-12
		90	5.9E+01	Shower	8.7E-13	1.3E-13
				Drinking water	1.6E-09	2.3E-10
				Total	1.6E-09	2.3E-10
		95	1.5E+01	Shower	4.7E-12	7.0E-13
				Drinking water	6.2E-09	9.3E-10
				Total	6.2E-09	9.3E-10
Cancer	Child					
		50	1.3E+04	Drinking water	7.1E-12	1.1E-12
		90	6.5E+01	Drinking water	1.4E-09	2.1E-10
		95	1.8E+01	Drinking water	5.2E-09	7.8E-10
Clay Liner						
Cancer	Adult					
		50	3.0E+04	Shower	7.1E-16	1.1E-16
				Drinking water	3.1E-12	4.6E-13
				Total	3.1E-12	4.6E-13
		90	1.5E+02	Shower	1.4E-13	2.2E-14
				Drinking water	6.1E-10	9.2E-11
				Total	6.1E-10	9.2E-11
		95	3.8E+01	Shower	3.2E-12	4.8E-13
				Drinking water	2.4E-09	3.6E-10
				Total	2.4E-09	3.6E-10
Cancer	Child					
		50	3.4E+04	Drinking water	2.7E-12	4.0E-13
		90	1.8E+02	Drinking water	5.2E-10	7.7E-11
		95	4.4E+01	Drinking water	2.1E-09	3.1E-10
Composite Liner						
Cancer	Adult					
		50	7.9E+29	Shower	1.2E-40	1.8E-41
				Drinking water	1.2E-37	1.7E-38
				Total	1.2E-37	1.7E-38
		90	1.2E+08	Shower	2.1E-19	3.2E-20
				Drinking water	8.0E-16	1.2E-16
				Total	8.0E-16	1.2E-16
		95	1.4E+07	Shower	4.1E-18	6.1E-19
				Drinking water	6.4E-15	9.6E-16
				Total	6.4E-15	9.6E-16
Cancer	Child					
		50	1.0E+30	Drinking water	9.1E-38	1.4E-38
		90	1.4E+08	Drinking water	6.4E-16	9.6E-17
		95	1.4E+07	Drinking water	6.7E-15	1.0E-15

Table A3-1a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of Formaldehyde (50-00-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	3.6E+07	Inhalation	4.7E-18	2.1E-19
		90	2.3E+06	Inhalation	7.3E-17	3.3E-18
		95	9.8E+05	Inhalation	1.7E-16	7.7E-18
Cancer	Child					
		50	3.7E+07	Inhalation	4.5E-18	2.0E-19
		90	2.3E+06	Inhalation	7.2E-17	3.2E-18
		95	1.2E+06	Inhalation	1.5E-16	6.6E-18

Table A3-2a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of Aniline (62-53-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	8.2E+06	Inhalation	1.6E-16	9.2E-19
		90	1.4E+05	Inhalation	9.3E-15	5.3E-17
		95	5.8E+04	Inhalation	2.3E-14	1.3E-16
Cancer	Child					
		50	8.2E+06	Inhalation	1.6E-16	9.2E-19
		90	1.5E+05	Inhalation	8.9E-15	5.1E-17
		95	6.0E+04	Inhalation	2.2E-14	1.3E-16

Table A3-4a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of o-Anisidine (90-04-0) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	3.6E+05	Inhalation	1.5E-16	2.1E-17
		90	9.7E+03	Inhalation	5.6E-15	7.8E-16
		95	3.8E+03	Inhalation	1.4E-14	2.0E-15
Cancer	Child					
		50	3.7E+05	Inhalation	1.5E-16	2.0E-17
		90	9.5E+03	Inhalation	5.7E-15	7.9E-16
		95	4.0E+03	Inhalation	1.3E-14	1.9E-15

Table A3-5a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of 4-4-Bis(dimethylamino) benzophenone (90-94-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	2.1E+10	Inhalation	4.2E-22	3.6E-22
		90	4.6E+08	Inhalation	1.9E-20	1.6E-20
		95	1.5E+08	Inhalation	5.8E-20	5.0E-20
Cancer	Child					
		50	2.2E+10	Inhalation	4.1E-22	3.5E-22
		90	4.5E+08	Inhalation	2.0E-20	1.7E-20
		95	1.5E+08	Inhalation	5.7E-20	4.9E-20

Table A3-8a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of 3,3-Dichlorobenzidine (91-94-1) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	1.5E+07	Inhalation	4.2E-19	5.0E-19
		90	2.9E+05	Inhalation	2.2E-17	2.6E-17
		95	9.8E+04	Inhalation	6.4E-17	7.7E-17
Cancer	Child					
		50	1.5E+07	Inhalation	4.1E-19	5.0E-19
		90	2.9E+05	Inhalation	2.2E-17	2.6E-17
		95	9.6E+04	Inhalation	6.6E-17	7.9E-17

Table A3-10a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of Benzidine (92-87-5) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	1.2E+07	Inhalation	2.9E-21	6.6E-19
		90	2.9E+05	Inhalation	1.1E-19	2.6E-17
		95	9.4E+04	Inhalation	3.5E-19	8.0E-17
Cancer	Child					
		50	1.2E+07	Inhalation	2.8E-21	6.4E-19
		90	2.9E+05	Inhalation	1.1E-19	2.6E-17
		95	9.8E+04	Inhalation	3.4E-19	7.7E-17

Table A3-12a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of o-Toluidine (95-53-4) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	2.5E+05	Inhalation	1.3E-16	3.0E-17
		90	2.6E+03	Inhalation	1.2E-14	2.9E-15
		95	1.0E+03	Inhalation	3.0E-14	7.3E-15
Cancer	Child					
		50	2.5E+05	Inhalation	1.2E-16	3.0E-17
		90	2.6E+03	Inhalation	1.2E-14	2.9E-15
		95	1.1E+03	Inhalation	2.9E-14	7.0E-15

Table A3-15a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of Toluene-2,4-diamine (95-80-7) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	1.3E+07	Inhalation	1.4E-19	5.7E-19
		90	2.6E+05	Inhalation	7.1E-18	2.9E-17
		95	8.7E+04	Inhalation	2.2E-17	8.7E-17
Cancer	Child					
		50	1.3E+07	Inhalation	1.4E-19	5.7E-19
		90	2.7E+05	Inhalation	7.1E-18	2.8E-17
		95	8.4E+04	Inhalation	2.3E-17	9.1E-17

Table A3-18a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of 5-Nitro-o-anisidine (99-59-2) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	1.2E+08	Inhalation	1.3E-18	6.4E-20
		90	2.9E+06	Inhalation	5.4E-17	2.6E-18
		95	1.1E+06	Inhalation	1.5E-16	7.1E-18
Cancer	Child					
		50	1.2E+08	Inhalation	1.3E-18	6.3E-20
		90	2.9E+06	Inhalation	5.4E-17	2.6E-18
		95	1.0E+06	Inhalation	1.5E-16	7.5E-18

Table A3-20a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of 4,4-Methylenedianiline (101-77-9) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	1.4E+09	Inhalation	3.3E-21	5.4E-21
		90	3.5E+07	Inhalation	1.4E-19	2.2E-19
		95	1.1E+07	Inhalation	4.2E-19	6.7E-19
Cancer	Child					
		50	1.4E+09	Inhalation	3.3E-21	5.3E-21
		90	3.5E+07	Inhalation	1.4E-19	2.2E-19
		95	1.2E+07	Inhalation	3.9E-19	6.2E-19

Table A3-22a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of Azobenzene (103-33-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	9.7E+04	Inhalation	7.1E-16	7.8E-17
		90	3.9E+03	Inhalation	1.8E-14	2.0E-15
		95	1.8E+03	Inhalation	3.7E-14	4.1E-15
Cancer	Child					
		50	9.8E+04	Inhalation	7.0E-16	7.7E-17
		90	3.7E+03	Inhalation	1.9E-14	2.0E-15
		95	1.9E+03	Inhalation	3.7E-14	4.1E-15

Table A3-29a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of 2-Aminoanthraquinone (117-79-3) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	2.5E+10	Inhalation	9.3E-21	3.1E-22
		90	5.8E+08	Inhalation	4.0E-19	1.3E-20
		95	2.0E+08	Inhalation	1.1E-18	3.8E-20
Cancer	Child					
		50	2.5E+10	Inhalation	9.1E-21	3.0E-22
		90	5.7E+08	Inhalation	4.0E-19	1.3E-20
		95	2.0E+08	Inhalation	1.1E-18	3.7E-20

Table A3-32a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of p-Cresidine (120-71-8) Including Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	2.4E+06	Inhalation	2.1E-17	3.1E-18
		90	5.0E+04	Inhalation	1.0E-15	1.5E-16
		95	1.8E+04	Inhalation	2.8E-15	4.2E-16
Cancer	Child					
		50	2.5E+06	Inhalation	2.1E-17	3.1E-18
		90	5.1E+04	Inhalation	9.9E-16	1.5E-16
		95	1.8E+04	Inhalation	2.8E-15	4.3E-16

Table A4-1a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of Aniline (62-53-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.8E+08	Inhalation	6.9E-14	3.9E-16
		90	4.0E+05	Inhalation	3.1E-11	1.7E-13
		95	1.7E+05	Inhalation	7.2E-11	4.1E-13
Cancer	Child					
		50	1.9E+08	Inhalation	6.5E-14	3.7E-16
		90	4.0E+05	Inhalation	3.0E-11	1.7E-13
		95	1.7E+05	Inhalation	7.0E-11	4.0E-13
Clay Liner						
Cancer	Adult					
		50	4.7E+07	Inhalation	2.6E-13	1.5E-15
		90	4.0E+05	Inhalation	3.0E-11	1.7E-13
		95	1.8E+05	Inhalation	6.8E-11	3.9E-13
Cancer	Child					
		50	4.7E+07	Inhalation	2.6E-13	1.5E-15
		90	3.9E+05	Inhalation	3.1E-11	1.8E-13
		95	1.8E+05	Inhalation	6.6E-11	3.8E-13
Synthetic Liner						
Cancer	Adult					
		50	6.4E+06	Inhalation	1.9E-12	1.1E-14
		90	3.1E+05	Inhalation	3.9E-11	2.2E-13
		95	1.5E+05	Inhalation	8.0E-11	4.6E-13
Cancer	Child					
		50	6.6E+06	Inhalation	1.9E-12	1.1E-14
		90	3.1E+05	Inhalation	3.9E-11	2.2E-13
		95	1.5E+05	Inhalation	8.1E-11	4.6E-13

Table A4-1b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Aniline (62-53-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.9E+04	Shower	3.7E-11	2.1E-13
				Drinking water	6.0E-10	3.4E-12
				Total	6.4E-10	3.6E-12
		90	4.4E+01	Shower	2.0E-09	1.2E-11
				Drinking water	2.7E-07	1.5E-09
				Total	2.7E-07	1.6E-09
		95	1.7E+01	Shower	1.3E-08	7.7E-11
				Drinking water	6.9E-07	3.9E-09
				Total	7.0E-07	4.0E-09
Cancer	Child					
		50	2.2E+04	Drinking water	5.6E-10	3.2E-12
		90	5.3E+01	Drinking water	2.3E-07	1.3E-09
		95	2.0E+01	Drinking water	6.1E-07	3.5E-09
Clay Liner						
Cancer	Adult					
		50	2.1E+06	Shower	1.5E-14	8.8E-17
				Drinking water	5.7E-12	3.3E-14
				Total	5.7E-12	3.3E-14
		90	1.1E+02	Shower	3.7E-09	2.1E-11
				Drinking water	1.1E-07	6.1E-10
				Total	1.1E-07	6.4E-10
		95	3.5E+01	Shower	7.3E-09	4.2E-11
				Drinking water	3.4E-07	1.9E-09
				Total	3.5E-07	2.0E-09
Cancer	Child					
		50	2.6E+06	Drinking water	4.7E-12	2.7E-14
		90	1.3E+02	Drinking water	9.5E-08	5.4E-10
		95	4.3E+01	Drinking water	2.8E-07	1.6E-09
Synthetic Liner						
Cancer	Adult					
		50	1.4E+09	Shower	2.1E-17	1.2E-19
				Drinking water	9.0E-15	5.1E-17
				Total	9.0E-15	5.1E-17
		90	4.3E+03	Shower	5.8E-11	3.3E-13
				Drinking water	2.8E-09	1.6E-11
				Total	2.8E-09	1.6E-11
		95	7.2E+02	Shower	1.0E-09	5.7E-12
				Drinking water	1.6E-08	9.1E-11
				Total	1.7E-08	9.6E-11
Cancer	Child					
		50	1.7E+09	Drinking water	7.3E-15	4.2E-17
		90	5.5E+03	Drinking water	2.2E-09	1.3E-11
		95	8.9E+02	Drinking water	1.4E-08	7.7E-11

Table A4-2b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 1,2-Phenylenediamine (95-54-5) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.0E+03	Drinking water	1.5E-09	6.8E-11
		90	3.0E+00	Drinking water	4.9E-07	2.3E-08
		95	1.2E+00	Drinking water	1.2E-06	5.7E-08
Cancer	Child					
		50	1.2E+03	Drinking water	1.3E-09	5.9E-11
		90	3.6E+00	Drinking water	4.1E-07	1.9E-08
		95	1.4E+00	Drinking water	1.1E-06	5.0E-08
Clay Liner						
Cancer	Adult					
		50	7.4E+04	Drinking water	2.0E-11	9.4E-13
		90	5.7E+00	Drinking water	2.6E-07	1.2E-08
		95	1.9E+00	Drinking water	7.8E-07	3.7E-08
Cancer	Child					
		50	8.4E+04	Drinking water	1.7E-11	8.2E-13
		90	6.4E+00	Drinking water	2.3E-07	1.1E-08
		95	2.3E+00	Drinking water	6.5E-07	3.0E-08
Synthetic Liner						
Cancer	Adult					
		50	4.4E+07	Drinking water	3.4E-14	1.6E-15
		90	1.8E+02	Drinking water	8.0E-09	3.8E-10
		95	3.1E+01	Drinking water	4.7E-08	2.2E-09
Cancer	Child					
		50	4.8E+07	Drinking water	3.1E-14	1.4E-15
		90	2.3E+02	Drinking water	6.3E-09	3.0E-10
		95	3.6E+01	Drinking water	4.1E-08	1.9E-09

Table A4-3b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 2,4-Dimethylaniline (2,4-xylidine) (95-68-1) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	6.4E+02	Drinking water	1.4E-10	1.1E-10
		90	1.2E+00	Drinking water	7.5E-08	5.6E-08
		95	4.4E-01	Drinking water	2.1E-07	1.6E-07
Cancer	Child					
		50	7.4E+02	Drinking water	1.2E-10	9.3E-11
		90	1.5E+00	Drinking water	6.3E-08	4.7E-08
		95	5.1E-01	Drinking water	1.8E-07	1.4E-07
Clay Liner						
Cancer	Adult					
		50	6.9E+04	Drinking water	1.3E-12	1.0E-12
		90	3.7E+00	Drinking water	2.5E-08	1.9E-08
		95	1.2E+00	Drinking water	7.7E-08	5.8E-08
Cancer	Child					
		50	7.9E+04	Drinking water	1.2E-12	8.8E-13
		90	4.4E+00	Drinking water	2.1E-08	1.6E-08
		95	1.4E+00	Drinking water	6.4E-08	4.8E-08
Synthetic Liner						
Cancer	Adult					
		50	1.1E+08	Drinking water	8.6E-16	6.4E-16
		90	1.6E+02	Drinking water	5.8E-10	4.3E-10
		95	2.7E+01	Drinking water	3.4E-09	2.6E-09
Cancer	Child					
		50	1.1E+08	Drinking water	8.6E-16	6.5E-16
		90	1.9E+02	Drinking water	4.8E-10	3.6E-10
		95	3.1E+01	Drinking water	3.0E-09	2.2E-09

Table A4-5a. Allowable Mass Loadings in Landfills Due to Inhalation of Ambient Air of Azobenzene (103-33-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.8E+06	Inhalation	2.2E-13	2.5E-14
		90	9.7E+04	Inhalation	6.5E-12	7.1E-13
		95	4.7E+04	Inhalation	1.3E-11	1.5E-12
Cancer	Child					
		50	2.9E+06	Inhalation	2.2E-13	2.4E-14
		90	1.0E+05	Inhalation	6.2E-12	6.8E-13
		95	5.1E+04	Inhalation	1.2E-11	1.3E-12
Clay Liner						
Cancer	Adult					
		50	1.2E+06	Inhalation	5.3E-13	5.8E-14
		90	8.2E+04	Inhalation	7.7E-12	8.4E-13
		95	4.5E+04	Inhalation	1.4E-11	1.5E-12
Cancer	Child					
		50	1.3E+06	Inhalation	5.0E-13	5.5E-14
		90	8.4E+04	Inhalation	7.5E-12	8.2E-13
		95	4.5E+04	Inhalation	1.4E-11	1.5E-12
Synthetic Liner						
Cancer	Adult					
		50	4.4E+05	Inhalation	1.4E-12	1.6E-13
		90	5.2E+04	Inhalation	1.2E-11	1.3E-12
		95	3.0E+04	Inhalation	2.1E-11	2.3E-12
Cancer	Child					
		50	4.5E+05	Inhalation	1.4E-12	1.5E-13
		90	5.2E+04	Inhalation	1.2E-11	1.3E-12
		95	2.9E+04	Inhalation	2.1E-11	2.4E-12

Table A4-5b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of Azobenzene (103-33-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	5.6E+06	Shower	2.5E-15	2.8E-16
				Drinking water	1.1E-13	1.2E-14
				Total	1.1E-13	1.2E-14
		90	1.5E+03	Shower	2.9E-11	3.2E-12
				Drinking water	3.9E-10	4.3E-11
				Total	4.2E-10	4.6E-11
		95	5.1E+02	Shower	6.7E-11	7.4E-12
				Drinking water	1.2E-09	1.3E-10
				Total	1.2E-09	1.4E-10
Cancer	Child					
		50	7.4E+06	Drinking water	8.5E-14	9.3E-15
		90	2.0E+03	Drinking water	3.2E-10	3.5E-11
		95	6.3E+02	Drinking water	9.9E-10	1.1E-10
Clay Liner						
Cancer	Adult					
		50	9.7E+08	Shower	5.6E-17	6.2E-18
				Drinking water	5.9E-16	6.5E-17
				Total	6.5E-16	7.1E-17
		90	6.8E+03	Shower	7.1E-12	7.8E-13
				Drinking water	8.5E-11	9.3E-12
				Total	9.2E-11	1.0E-11
		95	1.9E+03	Shower	2.8E-11	3.1E-12
				Drinking water	3.1E-10	3.4E-11
				Total	3.3E-10	3.7E-11
Cancer	Child					
		50	1.3E+09	Drinking water	4.8E-16	5.3E-17
		90	9.1E+03	Drinking water	6.9E-11	7.6E-12
		95	2.6E+03	Drinking water	2.4E-10	2.7E-11
Synthetic Liner						
Cancer	Adult					
		50	1.9E+21	Shower	4.4E-29	4.8E-30
				Drinking water	2.8E-28	3.1E-29
				Total	3.3E-28	3.6E-29
		90	2.4E+06	Shower	1.7E-14	1.8E-15
				Drinking water	2.5E-13	2.7E-14
				Total	2.6E-13	2.9E-14
		95	2.7E+05	Shower	9.7E-14	1.1E-14
				Drinking water	2.2E-12	2.4E-13
				Total	2.3E-12	2.5E-13
Cancer	Child					
		50	2.8E+21	Drinking water	2.2E-28	2.5E-29
		90	3.1E+06	Drinking water	2.0E-13	2.2E-14
		95	3.5E+05	Drinking water	1.8E-12	2.0E-13

Table A4-6b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of 4-Chloroaniline (106-47-8) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.5E+04	Drinking water	8.3E-11	4.5E-12
		90	2.9E+01	Drinking water	4.5E-08	2.4E-09
		95	1.0E+01	Drinking water	1.2E-07	6.7E-09
Cancer	Child					
		50	1.7E+04	Drinking water	7.4E-11	4.0E-12
		90	3.4E+01	Drinking water	3.8E-08	2.0E-09
		95	1.2E+01	Drinking water	1.1E-07	5.9E-09
Clay Liner						
Cancer	Adult					
		50	9.3E+07	Drinking water	1.4E-14	7.4E-16
		90	8.9E+01	Drinking water	1.4E-08	7.8E-10
		95	2.9E+01	Drinking water	4.5E-08	2.4E-09
Cancer	Child					
		50	9.6E+07	Drinking water	1.3E-14	7.2E-16
		90	1.1E+02	Drinking water	1.2E-08	6.6E-10
		95	3.5E+01	Drinking water	3.6E-08	2.0E-09
Synthetic Liner						
Cancer	Adult					
		50	7.2E+12	Drinking water	1.8E-19	9.6E-21
		90	3.4E+03	Drinking water	3.8E-10	2.0E-11
		95	5.6E+02	Drinking water	2.3E-09	1.2E-10
Cancer	Child					
		50	7.1E+12	Drinking water	1.8E-19	9.7E-21
		90	4.1E+03	Drinking water	3.1E-10	1.7E-11
		95	6.4E+02	Drinking water	2.0E-09	1.1E-10

Table A4-7b. Allowable Mass Loadings in Landfills Due to Groundwater Pathways of p-Toluidine (106-49-0) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	1.9E+03	Drinking water	1.9E-10	3.7E-11
		90	3.8E+00	Drinking water	9.5E-08	1.8E-08
		95	1.4E+00	Drinking water	2.6E-07	5.0E-08
Cancer	Child					
		50	2.1E+03	Drinking water	1.8E-10	3.4E-11
		90	4.5E+00	Drinking water	8.0E-08	1.5E-08
		95	1.6E+00	Drinking water	2.3E-07	4.4E-08
Clay Liner						
Cancer	Adult					
		50	9.6E+06	Drinking water	3.8E-14	7.2E-15
		90	1.1E+01	Drinking water	3.2E-08	6.1E-09
		95	3.6E+00	Drinking water	1.0E-07	1.9E-08
Cancer	Child					
		50	9.4E+06	Drinking water	3.9E-14	7.4E-15
		90	1.3E+01	Drinking water	2.7E-08	5.2E-09
		95	4.4E+00	Drinking water	8.2E-08	1.6E-08
Synthetic Liner						
Cancer	Adult					
		50	2.7E+11	Drinking water	1.4E-18	2.6E-19
		90	4.0E+02	Drinking water	9.1E-10	1.7E-10
		95	6.5E+01	Drinking water	5.6E-09	1.1E-09
Cancer	Child					
		50	2.8E+11	Drinking water	1.3E-18	2.4E-19
		90	4.8E+02	Drinking water	7.6E-10	1.4E-10
		95	7.7E+01	Drinking water	4.8E-09	9.0E-10

Table A5-1a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of Aniline (62-53-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Composite Liner						
Cancer	Adult					
		50	2.0E+06	Inhalation	1.2E-12	7.0E-15
		90	6.3E+04	Inhalation	3.9E-11	2.2E-13
		95	2.8E+04	Inhalation	8.6E-11	4.9E-13
Cancer	Child					
		50	1.9E+06	Inhalation	1.3E-12	7.3E-15
		90	6.1E+04	Inhalation	4.0E-11	2.3E-13
		95	2.6E+04	Inhalation	9.2E-11	5.2E-13

Table A5-1b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of Aniline (62-53-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Composite Liner						
Cancer	Adult					
		50	1.3E+31	Shower	2.1E-39	1.2E-41
				Drinking water	1.8E-37	1.0E-39
				Total	1.8E-37	1.1E-39
		90	1.7E+09	Shower	4.0E-17	2.3E-19
				Drinking water	1.4E-15	8.0E-18
				Total	1.4E-15	8.2E-18
		95	1.8E+08	Shower	1.0E-16	5.9E-19
				Drinking water	1.4E-14	7.8E-17
				Total	1.4E-14	7.8E-17
Cancer	Child					
		50	1.7E+31	Drinking water	1.5E-37	8.3E-40
		90	1.9E+09	Drinking water	1.3E-15	7.2E-18
		95	1.9E+08	Drinking water	1.3E-14	7.5E-17

Table A5-3b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 2,4-Dimethylaniline (2,4-xylidine) (95-68-1) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	4.6E+03	Drinking water	4.0E-12	3.0E-12
		90	1.7E+01	Drinking water	1.1E-09	8.1E-10
		95	3.3E+00	Drinking water	5.6E-09	4.2E-09
Cancer	Child					
		50	5.0E+03	Drinking water	3.7E-12	2.7E-12
		90	1.8E+01	Drinking water	1.0E-09	7.5E-10
		95	4.0E+00	Drinking water	4.6E-09	3.4E-09
Clay Liner						
Cancer	Adult					
		50	1.2E+04	Drinking water	1.5E-12	1.1E-12
		90	4.2E+01	Drinking water	4.4E-10	3.3E-10
		95	8.7E+00	Drinking water	2.1E-09	1.6E-09
Cancer	Child					
		50	1.4E+04	Drinking water	1.4E-12	1.0E-12
		90	4.7E+01	Drinking water	4.0E-10	3.0E-10
		95	9.9E+00	Drinking water	1.9E-09	1.4E-09

Table A5-5a. Allowable Mass Loadings in Surface Impoundments Due to Inhalation of Ambient Air of Azobenzene (103-33-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.8E+04	Inhalation	4.5E-12	5.0E-13
		90	1.8E+03	Inhalation	6.9E-11	7.6E-12
		95	9.4E+02	Inhalation	1.3E-10	1.5E-11
Cancer	Child					
		50	2.6E+04	Inhalation	4.8E-12	5.3E-13
		90	1.7E+03	Inhalation	7.4E-11	8.2E-12
		95	8.9E+02	Inhalation	1.4E-10	1.6E-11
Clay Liner						
Cancer	Adult					
		50	2.8E+04	Inhalation	4.5E-12	5.0E-13
		90	1.8E+03	Inhalation	6.9E-11	7.6E-12
		95	9.4E+02	Inhalation	1.3E-10	1.5E-11
Cancer	Child					
		50	2.6E+04	Inhalation	4.8E-12	5.3E-13
		90	1.7E+03	Inhalation	7.5E-11	8.2E-12
		95	8.9E+02	Inhalation	1.4E-10	1.6E-11
Composite Liner						
Cancer	Adult					
		50	2.8E+04	Inhalation	4.5E-12	5.0E-13
		90	1.8E+03	Inhalation	7.0E-11	7.7E-12
		95	9.3E+02	Inhalation	1.3E-10	1.5E-11
Cancer	Child					
		50	2.6E+04	Inhalation	4.8E-12	5.3E-13
		90	1.7E+03	Inhalation	7.5E-11	8.3E-12
		95	8.9E+02	Inhalation	1.4E-10	1.6E-11

Table A5-5b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of Azobenzene (103-33-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	3.6E+05	Shower	1.7E-14	1.9E-15
				Drinking water	3.3E-13	3.6E-14
				Total	3.4E-13	3.8E-14
		90	1.2E+03	Shower	7.8E-12	8.6E-13
				Drinking water	9.9E-11	1.1E-11
				Total	1.1E-10	1.2E-11
		95	2.9E+02	Shower	3.6E-11	3.9E-12
				Drinking water	3.9E-10	4.3E-11
				Total	4.3E-10	4.7E-11
Cancer	Child					
		50	4.9E+05	Drinking water	2.6E-13	2.8E-14
		90	1.4E+03	Drinking water	8.7E-11	9.6E-12
		95	3.7E+02	Drinking water	3.4E-10	3.7E-11
Clay Liner						
Cancer	Adult					
		50	1.3E+06	Shower	5.0E-15	5.5E-16
				Drinking water	9.3E-14	1.0E-14
				Total	9.8E-14	1.1E-14
		90	3.9E+03	Shower	4.8E-12	5.2E-13
				Drinking water	2.7E-11	3.0E-12
				Total	3.2E-11	3.5E-12
		95	1.0E+03	Shower	1.7E-11	1.9E-12
				Drinking water	1.1E-10	1.2E-11
				Total	1.2E-10	1.4E-11
Cancer	Child					
		50	1.7E+06	Drinking water	7.4E-14	8.1E-15
		90	5.2E+03	Drinking water	2.4E-11	2.7E-12
		95	1.4E+03	Drinking water	8.7E-11	9.6E-12
Composite Liner						
Cancer	Adult					
		50	6.5E+31	Shower	1.2E-40	1.3E-41
				Drinking water	1.8E-39	2.0E-40
				Total	1.9E-39	2.1E-40
		90	3.9E+11	Shower	1.7E-20	1.9E-21
				Drinking water	3.1E-19	3.4E-20
				Total	3.2E-19	3.6E-20
		95	5.6E+09	Shower	5.1E-18	5.7E-19
				Drinking water	1.7E-17	1.9E-18
				Total	2.2E-17	2.5E-18
Cancer	Child					
		50	8.9E+31	Drinking water	1.4E-39	1.5E-40
		90	5.3E+11	Drinking water	2.4E-19	2.6E-20
		95	7.2E+09	Drinking water	1.7E-17	1.9E-18

Table A5-6b. Allowable Mass Loadings in Surface Impoundments Due to Groundwater Pathways of 4-Chloroaniline (106-47-8) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Unlined						
Cancer	Adult					
		50	2.6E+04	Drinking water	9.9E-12	5.4E-13
		90	1.5E+02	Drinking water	1.7E-09	9.3E-11
		95	3.7E+01	Drinking water	6.9E-09	3.7E-10
Cancer	Child					
		50	2.9E+04	Drinking water	8.8E-12	4.7E-13
		90	1.7E+02	Drinking water	1.5E-09	8.3E-11
		95	4.7E+01	Drinking water	5.4E-09	2.9E-10
Clay Liner						
Cancer	Adult					
		50	6.6E+04	Drinking water	3.9E-12	2.1E-13
		90	3.8E+02	Drinking water	6.8E-10	3.7E-11
		95	9.4E+01	Drinking water	2.7E-09	1.5E-10
Cancer	Child					
		50	7.6E+04	Drinking water	3.4E-12	1.8E-13
		90	4.5E+02	Drinking water	5.7E-10	3.1E-11
		95	1.2E+02	Drinking water	2.2E-09	1.2E-10
Composite Liner						
Cancer	Adult					
		50	5.7E+30	Drinking water	4.5E-38	2.4E-39
		90	7.8E+08	Drinking water	3.3E-16	1.8E-17
		95	4.6E+07	Drinking water	5.5E-15	3.0E-16
Cancer	Child					
		50	7.5E+30	Drinking water	3.4E-38	1.8E-39
		90	9.3E+08	Drinking water	2.8E-16	1.5E-17
		95	4.8E+07	Drinking water	5.4E-15	2.9E-16

Table A6-1a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of Aniline (62-53-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	5.1E+06	Inhalation	2.6E-16	1.5E-18
		90	1.1E+05	Inhalation	1.2E-14	7.0E-17
		95	4.6E+04	Inhalation	2.9E-14	1.6E-16
Cancer	Child					
		50	5.0E+06	Inhalation	2.7E-16	1.5E-18
		90	1.1E+05	Inhalation	1.2E-14	7.0E-17
		95	4.7E+04	Inhalation	2.8E-14	1.6E-16

Table A6-5a. Allowable Mass Loadings in Tanks Due to Inhalation of Ambient Air of Azobenzene (103-33-3) Without Degradation

Effect	Receptor	Percentile	Mass Load (kg/yr)	Pathway	Unit Dose (mg/kg/d)	Unit Risk or HQ
Cancer	Adult					
		50	8.2E+04	Inhalation	8.4E-16	9.2E-17
		90	3.3E+03	Inhalation	2.1E-14	2.3E-15
		95	1.6E+03	Inhalation	4.4E-14	4.9E-15
Cancer	Child					
		50	8.2E+04	Inhalation	8.4E-16	9.3E-17
		90	3.2E+03	Inhalation	2.2E-14	2.4E-15
		95	1.6E+03	Inhalation	4.4E-14	4.8E-15