

Table 1

Residential Ingestion-Dermal Soil Remediation Standards (mg/kg)

Contaminant	CAS No.	Carcinogenic Ingestion- Dermal Human Health-based Criterion	Non- carcinogenic Ingestion- Dermal Human Health-based Criterion	Soil Reporting Limit	Residential Ingestion- Dermal Soil Remediation Standard
Acenaphthene	83-32-9	NA	3,600	0.17	3,600
Acetone (2-Propanone)	67-64-1	NA	70,000	0.01	70,000
Acetophenone	98-86-2	NA	7,800	0.33	7,800
Aldrin	309-00-2	0.032	1.9	0.002	0.032
Aluminum (total)	7429-90-5	NA	78,000	20	78,000
Anthracene	120-12-7	NA	18,000	0.17	18,000
Antimony (total)	7440-36-0	NA	31	1	31
Arsenic (total)	7440-38-2	0.43	22	0.5	19 ¹
Atrazine	1912-24-9	NA	220	0.33	220
Barium (total)	7440-39-3	NA	16,000	5	16,000
Benzaldehyde	100-52-7	NA	7,800	0.33	7,800
Benzene	71-43-2	3.0	310	0.005	3.0
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	0.70	NA	0.17	0.70
Benzo(a)pyrene	50-32-8	0.070	NA	0.17	0.17 ²
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	0.70	NA	0.17	0.70
Benzo(k)fluoranthene	207-08-9	7.0	NA	0.17	7.0
Beryllium	7440-41-7	NA	160	0.5	160
1,1'-Biphenyl	92-52-4	87	39,000	0.17	87
Bis(2-chloroethoxy)methane	111-91-1	NA	190	0.17	190
Bis(2-chloroethyl)ether	111-44-4	0.63	NA	0.33	0.63
Bis(2-ethylhexyl)phthalate	117-81-7	39	1,300	0.17	39
Bromodichloromethane (Dichlorobromomethane)	75-27-4	11	1,600	0.005	11
Bromoform	75-25-2	69	1,300	0.005	69
Bromomethane (Methyl bromide)	74-83-9	NA	110	0.005	110
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	NA	47,000	0.01	47,000
Butylbenzyl phthalate	85-68-7	290	13,000	0.17	290
Cadmium	7440-43-9	NA	71	0.5	71
Caprolactam	105-60-2	NA	32,000	0.33	32,000
Carbon disulfide	75-15-0	NA	NA	0.005	NA
Carbon tetrachloride	56-23-5	7.6	310	0.005	7.6

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Chlordane (alpha and gamma forms summed)	57-74-9	0.27	36	0.002	0.27
4-Chloroaniline	106-47-8	2.7	250	0.17	2.7
Chlorobenzene	108-90-7	NA	510	0.005	510
Chloroethane (Ethyl chloride)	75-00-3	NA	NA	0.005	NA
Chloroform	67-66-3	NA	780	0.005	780
Chloromethane (Methyl chloride)	74-87-3	NA	NA	0.005	NA
2-Chloronaphthalene	91-58-7	NA	6,300	0.17	6,300
2-Chlorophenol (o-Chlorophenol)	95-57-8	NA	390	0.17	390
Chrysene	218-01-9	70	NA	0.17	70
Cobalt (total)	7440-48-4	NA	23	0.5	23
Copper (total)	7440-50-8	NA	3,100	1	3,100
Cyanide	57-12-5	NA	47	0.5	47
Cyclohexane	110-82-7	NA	NA	0.005	NA
4,4'-DDD (p,p'-TDE)	72-54-8	2.3	NA	0.003	2.3
4,4'-DDE (p,p'-DDX)	72-55-9	1.6	NA	0.003	1.6
4,4'-DDT	50-29-3	1.9	37	0.003	1.9
Dibenz(a,h)anthracene	53-70-3	0.070	NA	0.17	0.17 ²
Dibromochloromethane (Chlorodibromomethane)	124-48-1	6.5	1300	0.005	6.5
1,2-Dibromo-3-chloropropane	96-12-8	0.87	16	0.005	0.87
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.35	700	0.005	0.35
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	NA	6,700	0.005	6,700
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	NA	6,700	0.005	6,700
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	NA	780	0.005	780
3,3'-Dichlorobenzidine	91-94-1	1.2	NA	0.33	1.2
Dichlorodifluoromethane (Freon 12)	75-71-8	NA	16,000	0.005	16,000
1,1-Dichloroethane	75-34-3	120	16,000	0.005	120
1,2-Dichloroethane	107-06-2	5.8	NA	0.005	5.8
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	NA	11	0.005	11
1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	NA	780	0.005	780
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	NA	1,300	0.005	1,300

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2,4-Dichlorophenol	120-83-2	NA	190	0.17	190
1,2-Dichloropropane	78-87-5	19	7,000	0.005	19
1,3-Dichloropropene (total)	542-75-6	7.0	2,300	0.005	7.0
Dieldrin	60-57-1	0.034	3.2	0.003	0.034
Diethylphthalate	84-66-2	NA	51,000	0.17	51,000
2,4-Dimethylphenol	105-67-9	NA	1,300	0.17	1,300
Di-n-butyl phthalate	84-74-2	NA	6,300	0.17	6,300
2,4-Dinitrophenol	51-28-5	NA	130	0.33	130
2,4-Dinitrotoluene/2,6-Dinitrotoluene (mixture)	25321-14-6	0.80	NA	0.17	0.80
Di-n-octyl phthalate	117-84-0	NA	630	0.33	630
1,4-Dioxane	123-91-1	5.4	1,900	0.067	5.4
Endosulfan I and Endosulfan II (alpha and beta) (summed)	115-29-7	NA	380	0.003	380
Endrin	72-20-8	NA	19	0.003	19
Ethylbenzene	100-41-4	NA	7,800	0.005	7,800
Extractable Petroleum Hydrocarbons (No. 2 Fuel Oil and Diesel)	various	NA	5,300 ³	80	5,300 ³
Extractable Petroleum Hydrocarbons (Other)	various	NA	Sample-specific ⁴	80	Sample-specific ⁴
Fluoranthene	206-44-0	NA	2,400	0.33	2,400
Fluorene	86-73-7	NA	2,400	0.17	2,400
alpha-HCH (alpha-BHC)	319-84-6	0.086	510	0.002	0.086
beta-HCH (beta-BHC)	319-85-7	0.30	NA	0.002	0.30
Heptachlor	76-44-8	0.12	32	0.002	0.12
Heptachlor epoxide	1024-57-3	0.060	0.82	0.002	0.060
Hexachlorobenzene	118-74-1	0.34	51	0.17	0.34
Hexachloro-1,3-butadiene	87-68-3	7.0	63	0.17	7.0
Hexachlorocyclopentadiene	77-47-4	NA	380	0.33	380
Hexachloroethane	67-72-1	14	44	0.17	14
n-Hexane	110-54-3	NA	4,700	-	4,700
2-Hexanone	591-78-6	NA	390	0.01	390
Indeno(1,2,3-cd)pyrene	193-39-5	0.70	NA	0.17	0.70
Isophorone	78-59-1	570	13,000	0.17	570
Isopropylbenzene	98-82-8	NA	7,800	0.005	7,800
Lead (total)	7439-92-1	NA	NA	0.5	400 ⁵
Lindane (gamma-HCH)(gamma-BHC)	58-89-9	0.49	19	0.002	0.49

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Manganese (total)	7439-96-5	NA	1,900	0.5	1,900
Mercury (total)	7439-97-6	NA	23	0.1	23
Methoxychlor	72-43-5	NA	320	0.02	320
Methyl acetate	79-20-9	NA	78,000	0.005	78,000
Methylene chloride (Dichloromethane)	75-09-2	50	470	0.005	50
2-Methylnaphthalene	91-57-6	NA	240	0.17	240
4-Methyl-2-pentanone (MIBK)	108-10-1	NA	6,300	0.01	6,300
2-Methylphenol (o-cresol)	95-48-7	NA	320	0.33	320
4-Methylphenol (p-cresol)	106-44-5	NA	630	0.33	630
Methyl tert-butyl ether (MTBE)	1634-04-4	NA	780	0.005	780
Naphthalene	91-20-3	NA	2,500	0.17	2,500
Nickel (total)	7440-02-0	NA	1,600	0.5	1,600
4-Nitroaniline	100-01-6	27	250	0.33	27
Nitrobenzene	98-95-3	NA	160	0.17	160
N-Nitrosodi-n-propylamine	621-64-7	0.078	NA	0.17	0.17 ²
N-Nitrosodiphenylamine	86-30-6	110	NA	0.17	110
2,2'-oxybis(1-chloropropane)	108-60-1	NA	3,100	0.33	3,100
Pentachlorophenol	87-86-5	1.0	250	0.33	1.0
Phenol	108-95-2	NA	19,000	0.33	19,000
Polychlorinated biphenyls (PCBs)	1336-36-3	0.25	NA	0.03	0.25
Pyrene	129-00-0	NA	1,800	0.17	1,800
Selenium (total)	7782-49-2	NA	390	2.5	390
Silver (total)	7440-22-4	NA	390	0.5	390
Styrene	100-42-5	NA	16,000	0.005	16,000
Tertiary butyl alcohol (TBA)	75-65-0	NA	1,400	0.1	1,400
1,2,4,5-Tetrachlorobenzene	95-94-3	NA	19	0.17	19
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	NA	0.000051	0.000001	0.000051 ⁶
1,1,2,2-Tetrachloroethane	79-34-5	3.5	1,600	0.005	3.5
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	330	470	0.005	330
2,3,4,6-Tetrachlorophenol	58-90-2	NA	1,900	0.17	1,900
Toluene	108-88-3	NA	6,300	0.005	6,300
Toxaphene	8001-35-2	0.49	NA	0.2	0.49
1,2,4-Trichlorobenzene	120-82-1	NA	630	0.005	630
1,1,1-Trichloroethane	71-55-6	NA	160,000	0.005	160,000
1,1,2-Trichloroethane	79-00-5	12	310	0.005	12

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Trichloroethene (TCE) (Trichloroethylene)	79-01-6	15	39	0.005	15
Trichlorofluoromethane (Freon 11)	75-69-4	NA	23,000	0.005	23,000
2,4,5-Trichlorophenol	95-95-4	NA	6,300	0.2	6,300
2,4,6-Trichlorophenol	88-06-2	49	63	0.2	49
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	NA	NA	0.005	NA
1,2,4-Trimethylbenzene	95-63-6	NA	NA	0.076	NA
Vanadium (total)	7440-62-2	NA	390	2.5	390
Vinyl chloride	75-01-4	0.97	230	0.005	0.97
Xylenes (total)	1330-20-7	NA	12,000	0.005	12,000
Zinc (total)	7440-66-6	NA	23,000	1	23,000

NA = Appropriate toxicological information not available

1 – Standard is based on natural background

2 – Standard set at soil reporting limit

3 – Special calculation for EPH – see Appendix 2

4 – Sample-specific calculation using EPH calculator – see Appendix 2

5 – Standard based on the Integrated Exposure Uptake Biokinetic (IEUBK) model for lead in children

6 – This standard is used for comparison to site soil data that have been converted to sample-specific TCDD-TEQ values through application of the Toxicity Equivalence Factor Methodology (USEPA 2010) and using the WHO 2005 Mammalian Toxic Equivalency Factors (TEFs).