

**Table 1A Tier 1 Environmental Quality Standards for Soil at a Potable Site (mg/kg)**

Soil Type		Fine				Coarse			
Land Use		Agricultural	Residential/ Parkland	Commercial	Industrial	Agricultural	Residential/ Parkland	Commercial	Industrial
Parameter	CAS #	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Inorganic Parameters</b>									
Aluminum	7429-90-5	15,400	15,400	15,400	198,000	15,400	15,400	15,400	198,000
Antimony	7440-36-0	7.5	7.5	63	63	7.5	7.5	63	63
Arsenic	7440-38-2	17	31	31	31	17	31	31	31
Barium	7440-39-3	400	10,000	15,000	140,000	400	10,000	15,000	140,000
Beryllium	7440-41-7	5	38	320	320	5	38	320	320
Boron (Total)	7440-42-8	4,300	4,300	24,000	24,000	4,300	4,300	24,000	24,000
Boron (Hot Water Soluble)	7440-42-8	2	-	-	-	2	-	-	-
Cadmium	7440-43-9	1.4	14	49	192	1.4	14	49	192
Chromium (hexavalent)	7440-47-3	0.4	160	1,300	1,300	0.4	160	1,300	1,300
Chromium (total)	7440-47-3	52	220	630	2,300	52	220	630	2,300
Cobalt	7440-48-4	20	22	250	250	20	22	250	250
Copper	7440-50-8	63	1,100	4,000	16,000	63	1,100	4,000	16,000
Cyanide	57-12-5	0.9	29	110	420	0.9	29	110	420
Iron	7439-92-1	11,000	11,000	11,000	144,000	11,000	11,000	11,000	144,000
Lead	7439-92-1	70	140	260	740	70	140	260	740
Manganese	7439-96-5	-	-	-	-	-	-	-	-
Mercury (total)	7439-97-6	6.6	6.6	24	99	6.6	6.6	24	99
Methylmercury	22967-92-6	1	1.6	1.6	20	0.8	1.6	1.6	20
Molybdenum	7439-98-7	40	110	1,200	1,200	40	110	1,200	1,200
Nickel	7440-02-0	50	330	2,200	2,200	50	330	2,200	2,200
Selenium	7782-49-2	1	80	125	1135	1	80	125	1135
Silver	7440-22-4	20	77	490	490	20	77	490	490
Strontium	7440-24-6	9,400	9,400	9,400	122,000	9,400	9,400	9,400	122,000
Thallium	7440-28-0	1	1	1	1	1	1	1	1
Tin	7440-31-5	5	9,400	9,400	122,000	5	9,400	9,400	122,000
Uranium	7440-61-1	23	23	33	300	23	23	33	300
Vanadium	7440-62-2	39	39	160	160	39	39	160	160
Zinc	7440-66-6	200	5,600	47,000	47,000	200	5,600	47,000	47,000
<b>Petroleum Hydrocarbons (PHC) Parameters</b>									
Benzene	71-43-2	0.094	0.094	0.094	0.094	0.042	0.042	0.042	0.042
Toluene	108-88-3	0.74	0.74	0.74	0.74	0.35	0.35	0.35	0.35
Ethylbenzene	100-41-4	0.13	0.13	0.13	0.13	0.065	0.065	0.065	0.065
Xylene	various	22	22	22	22	8.8	8.8	11	11
Modified TPH (Gas)	various	210	1,900	1,900	1,900	74	74	870	870
Modified TPH (Fuel)	various	150	4,700	4,700	4,700	150	270	1,800	1,800
Modified TPH (Lube)	various	1,300	10,000	10,000	10,000	300	1,100	10,000	10,000
MTBE	1634-04-4	0.05	0.05	0.05	0.05	0.05	0.05	0.062	0.062
<b>Polycyclic Aromatic Hydrocarbons (PAH) Parameters</b>									
<b>PAH Compounds</b>									
Naphthalene	91-20-3	0.75	28	28	28	0.6	2.2	25	25
1 - Methylnaphthalene	90-12-0	42	42	42	42	30	30	30	30
2 - Methylnaphthalene	91-57-6	42	42	42	42	30	30	30	30
Acenaphthene	83-32-9	21.5	5,300	8,000	8,000	21.5	3,900	8,000	8,000
Acenaphthylene	208-96-8	32	32	32	32	4.5	4.5	23	23
Anthracene	120-12-7	2.5	24,000	37,000	37,000	2.5	24,000	37,000	37,000
Fluoranthene	206-44-0	15.4	3,500	5,300	5,300	15.4	3,500	5,300	5,300
Fluorene	86-73-7	15.4	2,700	4,100	4,100	15.4	2,700	4,100	4,100
Phenanthrene	85-01-8	7.8	17	24	24	6.2	17	17	17
Pyrene	129-00-0	7.7	2,100	3,200	3,200	7.7	2,100	3,200	3,200
<b>Carcinogenic PAH Compounds</b>									
BaP Total Potency Equivalents (Human Health)	-	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Benz[a]anthracene (Ecological)	56-55-3	0.63	-	-	-	0.5	-	-	-

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Parameter	CAS #	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzo[a]pyrene (Ecological)	50-32-8	0.6	-	-	-	0.6	-	-	-
Benzo[b,j,k]fluoranthene isomers (Ecological)	207-08-9	6.2	-	-	-	6.2	-	-	-
Benzo[g,h,i]perylene (Ecological)	191-24-2	8.3	-	-	-	6.6	-	-	-
Chrysene (Ecological)	218-01-9	6.2	-	-	-	6.2	-	-	-
Dibenz[a,h]anthracene	53-70-3	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]pyrene (Ecological)	193-39-5	0.48	-	-	-	0.38	-	-	-
<b>Volatile Organic Compound (VOC) Parameters</b>									
Bromodichloromethane	75-27-4	1.9	1.9	1.9	1.9	1.5	1.5	1.5	1.5
Bromoform	75-25-2	2.6	2.6	2.9	2.9	2.3	2.3	2.3	2.3
Bromomethane	74-83-9	0.05	0.05	0.1	0.1	0.05	0.05	0.05	0.05
Carbon Tetrachloride (Tetrachloromethane)	56-23-5	0.05	0.05	0.09	0.09	0.05	0.05	0.05	0.05
Chlorobenzene	108-90-7	0.39	0.39	0.61	0.61	0.05	0.05	0.22	0.22
Chloroethane	75-00-3	-	-	-	-	-	-	-	-
Chloroform	67-66-3	0.05	0.05	0.15	0.15	0.05	0.05	0.05	0.05
Chloromethane	74-87-3	-	-	-	-	-	-	-	-
Dibromochloromethane	124-48-1	0.91	0.91	0.91	0.91	0.27	0.27	1.5	1.5
1,2-Dichlorobenzene	95-50-1	0.097	0.097	0.097	0.097	0.18	0.18	0.18	0.18
1,3-Dichlorobenzene	541-73-1	6	34	34	34	4.8	24	24	24
1,4-Dichlorobenzene	106-46-7	0.051	0.051	0.051	0.051	0.098	0.098	0.098	0.098
1,1-Dichloroethane	75-34-3	0.6	0.6	0.6	0.6	0.47	0.47	0.47	0.47
1,2-Dichloroethane	107-06-2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
1,1-Dichloroethylene	75-35-4	0.15	0.15	0.15	0.15	0.05	0.05	0.24	0.24
cis-1,2-Dichloroethylene	156-59-2	2.5	2.5	2.5	2.5	1.9	1.9	1.9	1.9
trans-1,2-Dichloroethylene	156-60-5	0.75	0.75	2.5	2.5	0.084	0.084	1.3	1.3
1,2-Dichloropropane	78-87-5	0.085	0.085	0.68	0.68	0.05	0.05	0.16	0.16
1,3-Dichloropropane	10061-01-5	1.7	1.7	1.7	8.1	1.7	1.7	1.7	8.1
Ethylene Dibromide	106-93-4	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Methylene Chloride (Dichloromethane)	75-09-2	0.21	0.21	0.21	0.21	0.32	0.32	0.32	0.32
Styrene	100-42-5	19	19	66	66	16	16	42	42
1,1,2,2-Tetrachloroethane	79-34-5	0.096	0.096	0.19	0.19	0.05	0.05	0.14	0.14
Tetrachloroethylene	127-18-4	0.1	1.6	1.6	1.6	0.1	0.16	1.6	1.6
1,1,1-Trichloroethane	71-55-6	3.4	3.4	27	27	0.38	0.38	6.1	6.1
1,1,2-Trichloroethane	79-00-5	0.18	0.18	0.73	0.73	0.3	0.3	0.42	0.42
Trichloroethylene	79-01-6	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Vinyl Chloride	75-01-4	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
<b>Pesticides</b>									
Aldicarb	116-06-3	0.041	0.041	0.041	0.041	0.065	0.065	0.065	0.065
Aldrin	309-00-2	0.055	0.59	0.59	0.59	0.044	3.4	5.1	11
Atrazine	1912-24-9	0.1	0.1	0.1	0.1	0.19	0.19	0.19	0.19
Azinphos-methyl	86-50-0	0.41	0.41	0.41	0.41	0.75	0.75	0.75	0.75
Bendiocarb	22781-23-3	0.14	0.14	0.14	0.14	0.21	0.21	0.21	0.21
Bromoxynil	1689-84-5	0.18	0.18	0.18	0.18	0.35	0.35	0.35	0.35
Carbaryl	63-25-2	1.9	1.9	1.9	1.9	3.6	3.6	3.6	3.6
Carbofuran	1563-66-2	0.68	0.68	0.68	0.68	1.2	1.2	1.2	1.2
Chlorothalonil	1897-45-6	27	27	27	27	53	53	53	53
Chlorpyrifos	2921-88-2	49	49	49	49	95	95	95	95
Cyanazine	21725-46-2	0.12	0.12	0.12	0.12	0.21	0.21	0.21	0.21
2,4-D	94-75-7	0.43	0.43	0.43	0.43	0.67	0.67	0.67	0.67
DDT	50-29-3	0.7	220	340	1600	0.7	220	340	1600
Diazinon	333-41-5	2.2	2.2	2.2	2.2	4.2	4.2	4.2	4.2
Dicamba	1918-00-9	0.5	0.5	0.5	0.5	0.79	0.79	0.79	0.79
Dichlorfop-methyl	51338-27-3	12	12	12	12	22	22	24	24

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Parameter	CAS #	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Dieldrin	60-57-1	0.055	0.59	0.59	0.59	0.044	1.1	1.1	1.1
Dimethoate	60-51-5	0.077	0.077	0.077	0.077	0.12	0.12	0.12	0.12
Dinoseb	88-85-7	2.8	2.8	2.8	2.8	5.5	5.5	5.5	5.5
Diquat	85-00-7	11	11	11	11	21	21	21	21
Diuron	330-54-1	1.9	1.9	1.9	1.9	3.5	3.5	3.5	3.5
Endosulfan	115-29-7	0.19	99	99	99	0.15	190	190	190
Endrin	72-20-8	0.024	2.4	2.4	2.4	0.019	4.7	4.7	4.7
Glyphosate	1071-83-6	0.95	0.95	0.95	0.95	1.4	1.4	1.4	1.4
Heptachlor	76-44-8	0.05	0.05	0.05	0.05	0.076	0.076	0.076	0.076
Lindane	58-89-9	0.31	0.31	0.31	0.31	0.6	0.6	0.6	0.6
Linuron	330-55-2	0.56	0.56	0.56	0.56	1.1	1.1	1.1	1.1
Malathion	121-75-5	0.82	0.82	0.82	0.82	1.3	1.3	1.3	1.3
MCPA	94-74-6	0.02	0.02	0.02	0.02	0.32	0.32	0.32	0.32
Methoxychlor	72-43-5	3,500	3,500	5,300	5,700	3,500	3,500	5,300	11,000
Metolachlor	51218-45-2	1.3	1.3	1.3	1.3	2.4	2.4	2.4	2.4
Metribuzin	21087-64-9	7.8	7.8	7.8	7.8	15	15	15	15
Paraquat	4685-14-7	1.1	1.1	1.1	1.1	2.2	2.2	2.2	2.2
Parathion	56-38-2	7.2	7.2	7.2	7.2	14	14	14	14
Phorate	298-02-2	0.075	0.075	0.075	0.075	0.14	0.14	0.14	0.14
Picloram	1918-02-1	0.64	0.64	0.64	0.64	0.94	0.94	0.94	0.94
Simazine	122-34-9	0.14	0.14	0.14	0.14	0.25	0.25	0.25	0.25
Tebuthiuron	34014-18-1	2.5	2.5	2.5	2.5	3.7	3.7	3.7	3.7
Terbufos	13071-79-9	0.08	0.08	0.08	0.08	0.15	0.15	0.15	0.15
Toxaphene	8001-35-2	3.3	3.3	3.3	3.3	4.8	4.8	6.3	6.3
Triallate	2303-17-5	16	16	16	16	31	31	31	31
Trifluralin	1582-09-8	35	35	35	35	67	67	67	67
<b>Other Parameters</b>									
Polychlorinated Biphenyl (Total PCB)	various	1.3	22	33	33	1.3	22	33	33
Dioxins and Furans (TEQ) (mg TEQ/kg)	various	0.000004	0.000004	0.000004	0.000004	0.000004	0.000004	0.000004	0.000004
Pentachlorophenol (PCP)	87-86-5	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
Organotins - Tributyltin	688-73-3	3.6	3.6	3.6	36	3.6	3.6	3.6	36
Ethylene Glycol	107-21-1	60	60	60	60	68	68	68	68
Propylene Glycol	57-55-6	-	-	-	-	-	-	-	-
Phenol	108-95-2	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8

Notes:

[1] All values in mg/kg

[2] "-" = No guideline available or no guideline required

[3] Benzo(a)pyrene, BaP, Total Potency Equivalents are to be calculated following methodology shown in "Canadian Council of Ministers of the Environment, 2010 Canadian soil quality guidelines for the protection of environmental and human health: Carcinogenic and Other PAHs."

[4] Dioxins and Furans TEQ, Toxic Equivalents, are to be calculated following methodology shown in "Canadian Council of Ministers of the Environment, 2002. Canadian soil quality guidelines for the protection of environmental and human health: Dioxins and Furans"

[5] In the Tier 1 EQS soil tables, the Upper Concentration Limit (UCL) of 10,000 mg/kg in soil has been applied to any petroleum hydrocarbon calculated concentration that is >RES (residual concentrations) or exceeds 10,000 mg/kg, following Atlantic RBCA 2012.