Table 1B Tier 1 Environmental Quality Standards for Soil at a Non-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
Inorganic Parameters									
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	1,135	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
Petroleum Hydrocarbons (PHC) Parameters									
Benzene	71-43-2	2.3	2.3	33	33	0.099	0.099	2.5	2.5
Toluene	108-88-3	10000	10,000	10,000	10,000	75	77	10,000	10,000
Ethylbenzene	100-41-4	120	9,300	10,000	10,000	30	30	10,000	10,000
Xylene	various	65	210	10,000	10,000	8.8	8.8	110	110
Modified TPH (Gas)	various	210	2,100	10000	10000	74	74	870	870
Modified TPH (Fuel)	various	150	8,600	10000	10000	150	270	4,000	4,000
Modified TPH (Lube)	various	1300	10,000	10000	10000	300	1,100	10000	10000
MTBE	1634-04-4	1.1	1.1	7.4	7.4	0.05	0.05	0.57	0.57
Polycyclic Aromatic Hydrocarbons (PAH) Parameters									
PAH Compounds									
Naphthalene	91-20-3	0.75	51	370	370	0.6	2.2	25	25
1 - Methylnaphthalene	90-12-0	72	72	560	560	72	72	560	560
2 - Methylnaphthalene	91-57-6	72	72	560	560	72	72	560	560
Acenapthene	83-32-9	21.5	5,300	8,000	8,000	21.5	3,900	8,000	8,000
Acenapthylene	208-96-8	33	33	96	96	4.5	4.5	66	66
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	-	-	-	6.2	-	-	-
Pyrene	129-00-0	7.7	2,100	3,200	3,200	7.7	2,100	3,200	3,200
Carcinogenic PAH Compounds									
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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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
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	-	-	-
Volatile Organic Compound (VOC) Parameters									
Bromodichloromethane	75-27-4	130	130	180	180	130	130	180	180
Bromoform	75-25-2	2.6	2.6	17	17	2.7	2.7	6.1	6.1
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	2.7	2.7	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	-	-	-	0	-	-	-	0
Dibromochloromethane	124-48-1	7.8	7.8	76	76	0.27	0.27	2.5	2.5
1,2-Dichlorobenzene	95-50-1	4.3	230	1700	1700	3.4	10	130	130
1,3-Dichlorobenzene	541-73-1	6	420	4400	4400	4.8	420	4400	4400
1,4-Dichlorobenzene	106-46-7	4.5	14	100	100	0.67	0.67	8	8
1,1-Dichloroethane	75-34-3	11	31	39	39	3.5	3.5	56	56
1,2-Dichloroethane	107-06-2	0.055	0.055	0.37	0.37	0.05	0.05	0.05	0.05
1,1-Dichloroethylene	75-35-4	0.46	0.46	3.1	3.1	0.05	0.05	0.27	0.27
cis-1,2-Dichloroethylene	156-59-2	30	30	37	37	3.4	3.4	55	55
trans-1,2-Dichloroethylene	156-60-5	0.75	0.75	9.3	9.3	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-Dichloropropene	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	0.98	16	110	110	0.71	0.71	9	9
Styrene	100-42-5	19	19	170	170	16	16	42	42
1,1,2,2-Tetrachloroethane	79-34-5	0.096	0.096	0.94	0.94	0.05	0.05	0.19	0.19
Tetrachloroethylene	127-18-4	0.1	3.7	26	26	0.1	0.16	2	2
1,1,1-Trichloroethane	71-55-6	3.4	3.4	42	42	0.38	0.38	6.1	6.1
1,1,2-Trichloroethane	79-00-5	0.18	0.18	9.1	9.1	0.3	0.3	0.42	0.42
Trichloroethylene	79-01-6	3	3.7	9.2	9.2	0.36	0.36	1.1	1.1
Vinyl Chloride	75-01-4	0.02	0.02	0.055	0.055	0.02	0.02	0.02	0.02
Pesticides									
Aldicarb	116-06-3	22	22	34	160	22	22	34	160
Aldrin	309-00-2	0.055	3.4	5.1	44	0.044	3.4	5.1	44
Atrazine	1912-24-9	11	11	17	80	11	11	17	80
Azinphos-methyl	86-50-0	55	55	84	400	55	55	84	400
Bendiocarb	22781-23-3	89	89	130	640	89	89	130	640
Bromoxynil	1689-84-5	11	11	17	80	11	11	17	80
Carbaryl	63-25-2	220	220	340	1,600	220	220	340	1,600
Carbofuran	1563-66-2	220	220	340	1,600	220	220	340	1,600
Chlorothalonil	1897-45-6	330	330	500	2,400	330	330	500	2,400
Chlorpyrifos	2921-88-2	220	220	340	1,600	220	220	340	1,600
Cyanazine	21725-46-2	29	29	44	210	29	29	44	210
2,4-D	94-75-7	220	220	340	1,600	220	220	340	1,600
DDT	50-29-3	0.7	220	340	1,600	0.7	220	340	1,600
Diazinon	333-41-5	44	44	67	320	44	44	67	320
Dicamba	1918-00-9	280	280	420	2,000	280	280	420	2,000
Dichlorfop-methyl	51338-27-3	22	22	34	160	22	22	34	160

Table 1B Tier 1 Environmental Quality Standards for Soil at a Non-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
Dieldrin	60-57-1	0.055	3.4	5.1	44	0.044	3.4	5.1	44
Dimethoate	60-51-5	44	44	67	320	44	44	67	320
Dinoseb	88-85-7	22	22	34	160	22	22	34	160
Diquat	85-00-7	180	180	270	1,300	180	180	270	1,300
Diuron	330-54-1	350	350	520	2,500	350	350	520	2,500
Endosulfan	115-29-7	0.19	210	320	3,000	0.15	210	320	3,000
Endrin	72-20-8	0.024	10	15	130	0.019	10	15	130
Glyphosate	1071-83-6	670	670	1,000	4,800	670	670	1,000	4,800
Heptachlor	76-44-8	0.25	0.31	0.69	2.4	0.2	0.21	0.094	0.094
Lindane	58-89-9	6.7	6.7	10	48	6.7	6.7	10	48
Linuron	330-55-2	44	44	67	320	44	44	67	320
Malathion	121-75-5	440	440	670	3,200	440	440	670	3,200
MCPA	94-74-6	11	11	17	80	11	11	17	80
Methoxychlor	72-43-5	3,500	3,500	5,300	50,000	3,500	3,500	5,300	50,000
Metolachlor	51218-45-2	110	110	170	800	110	110	170	800
Metribuzin	21087-64-9	180	180	280	1,300	180	180	280	1,300
Paraquat	4685-14-7	22	22	34	160	22	22	34	160
Parathion	56-38-2	110	110	170	800	110	110	170	800
Phorate	298-02-2	4.4	4.4	6.7	32	4.4	4.4	6.7	32
Picloram	1918-02-1	440	440	670	3,200	440	440	670	3,200
Simazine	122-34-9	29	29	44	210	29	29	44	210
Tebuthiuron	34014-18-1	1,600	1,600	2,400	11,000	1,600	1,600	2,400	11,000
Terbufos	13071-79-9	1.1	1.1	1.7	8	1.1	1.1	1.7	8
Toxaphene	8001-35-2	4.8	4.8	7.3	7.3	4.8	4.8	7.3	7.3
Triallate	2303-17-5	290	290	440	2,100	290	290	440	2,100
Trifluralin	1582-09-8	110	110	160	770	110	110	160	770
Other Parameters									
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	11	93	340	1300	11	93	340	1300
Organotins - Tributyltin	688-73-3	3.6	3.6	3.6	36	3.6	3.6	3.6	36
Ethylene Glycol	107-21-1	1,100	73,000	110,000	110,000	1,100	73,000	110,000	110,000
Propylene Glycol	57-55-6	-	-	-	-	-	-	-	-
Phenol	108-95-2	20	500	1,800	2,100	20	500	1,800	2,100

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 Atantic RBCA 2012.