Table 4C Pathway Specific Standards for Commercial Soil (mg/kg)

Land Use / Receptor	Commercial Land Use				
Pathway	Soil Contact / Ingestion	Inhalation of Indoor Air		Leaching to Potable Groundwater	
Parameter	Coarse / Fine	Fine	Coarse	Fine	Coarse
Inorganic Parameters					
Aluminum	15,400	-	-	-	-
Antimony	63	-	-	-	-
Arsenic	31	-	-	-	-
Barium	15,000	-	-	-	-
Beryllium	320	-	-	-	-
Boron (Total)	24,000	-	-	-	-
Boron (Hot Water Soluble)	-	-	-	-	-
Cadmium	49	-	-	-	-
Chromium (hexavalent)	1,300	-	-	-	-
Chromium (total)	630	-	-	-	-
Cobalt	250	-	-	-	-
Copper	4,000	-	-	-	-
Cyanide	110	-	-	-	-
Iron	11,000	-	-	-	-
Lead	260	-	-	-	-
Manganese	-	-	-	-	-
Mercury (total)	24	-	-	-	-
Methylmercury	1.6	-	-	-	-
Molybdenum	1,200	-	-	-	-
Nickel	2,200	-	-	-	-
Selenium	125	-	-	-	-
Silver	490	-	-	-	-
Strontium	9,400	-	-	-	-
Thallium	1	-	-	-	-
Tin	9,400	-	-	-	-
Uranium	33	-	-	-	-
Vanadium	160	-	-	-	-
Zinc	47,000	-	-	-	-
Petroleum Hydrocarbons (PHC) Parameters					
Benzene	360	33	2.5	0.094	0.042
Toluene	31,000	>RES	>RES	0.74	0.35
Ethylbenzene	14,000	>RES	>RES	0.13	0.065
Xylene	210,000	>RES	110	22	11
Modified TPH (Gas)	22,000	78,000	870	1,900	940
Modified TPH (Fuel)	13,000	>RES	4,000	4,700	1,800
Modified TPH (Lube)	21,000	>RES	23,000	>RES	15,000
MTBE	580	7.4	0.57	0.05	0.062
Polycyclic Aromatic Hydrocarbons (PAH) Parameters					
Non-Carcinogenic PAH Compounds					
Naphthalene	2,800	370	25	28	53
1 - Methylnaphthalene	560	-	-	42	30
2 - Methylnaphthalene	560	-	-	42	30
Acenapthene	8,000	770,000	43,000	-	-
Acenapthylene	96	390	66	32	23
Anthracene	37,000	-	-	-	-
Fluoranthene	5,300	-	-	-	-
Fluorene	4,100	-	91,000	-	-
Phenanthrene	-	-	-	24	17
Pyrene	3,200	-	-	-	-
Carcinogenic PAH Compounds					
BaP Total Potency Equivalents	5.3	-	-	IACR<1	IACR<1

Table 4C Pathway Specific Standards for Commercial Soil (mg/kg)

Land Use / Receptor	Commercial Land Use				
Pathway	Soil Contact / Ingestion	Inhalation of Indoor Air		Leaching to Potable Groundwater	
Parameter	Coarse / Fine	Fine	Coarse	Fine	Coarse
Benz[a]anthracene	-	-	-	-	-
Benzo[a]pyrene	-	-	-	-	-
Benzo[b,j,k]fluoranthene isomers	-	-	-	-	-
Benzo[g,h,i]perylene	-	-	-	-	-
Chrysene	-	-	-	-	-
Dibenz[a.h]anthracene	-	-	-	-	-
Indeno[1,2,3-c,d]pyrene	-	-	-	-	-
Volatile Organic Compound (VOC) Parameters					
Bromodichloromethane	180	-	-	1.9	1.5
Bromoform	1,400	17	6.1	2.9	2.3
Bromomethane	66	0.1	0.05	0.1	0.097
Carbon Tetrachloride (Tetrachloromethane)	260	0.09	0.05	0.092	0.16
Chlorobenzene	300,000	2.7	0.22	0.61	1.1
Chloroethane	-	-	-	-	-
Chloroform	4,400	0.15	0.05	0.62	1
Chloromethane	-	-	-	-	-
Dibromochloromethane	14,000	76	2.5	0.91	1.5
1,2-Dichlorobenzene	25,000	1,700	130	0.097	0.18
1,3-Dichlorobenzene	4,400	-	-	34	24
1,4-Dichlorobenzene	6,200	100	8	0.051	0.098
1,1-Dichloroethane	8,800	39	56	0.6	0.47
1,2-Dichloroethane	4,200	0.37	0.05	0.05	0.05
1,1-Dichloroethylene	2,900	3.1	0.27	0.15	0.24
cis-1,2-Dichloroethylene	6,600	37	55	2.5	1.9
trans-1,2-Dichloroethylene	4,400	9.3	1.3	2.5	1.9
1,2-Dichloropropane	310	0.68	0.16	0.74	0.54
1,3-Dichloropropene	1.7	-	-	-	-
Ethylene Dibromide	3.1	0.05	0.05	0.05	0.05
Methylene Chloride (Dichloromethane)	1,500	110	9	0.21	0.32
Styrene	26,000	170	42	66	47
1,1,2,2-Tetrachloroethane	55	0.94	0.19	0.19	0.14
Tetrachloroethylene	9,600	26	2	1.6	1.6
1,1,1-Trichloroethane	440,000	42	6.1	27	20
1,1,2-Trichloroethane	190	9.1	0.42	0.73	0.54
Trichloroethylene	1,700	9.2	1.1	0.01	0.01
Vinyl Chloride	110	0.055	0.02	0.02	0.02
Pesticides					
Aldicarb	34	-	-	0.041	0.065
Aldrin	5.1	-	-	0.59	11
Atrazine	17	-	-	0.1	0.19
Azinphos-methyl	84	-	-	0.41	0.75
Bendiocarb	130	-	-	0.14	0.21
Bromoxynil	17	-	-	0.18	0.35
Carbaryl	340	-	-	1.9	3.6
Carbofuran	340	-	-	0.68	1.2
Chlorothalonil	500	-	-	27	53
Chlorpyrifos	340	-	-	49	95
Cyanazine	44	-	-	0.12	0.21
2,4-D	340	-	-	0.43	0.67
DDT	340	-	-	5,900	11,000
Diazinon	67	-	-	2.2	4.2
Dicamba	420	-	-	0.5	0.79

Table 4C Pathway Specific Standards for Commercial Soil (mg/kg)

Land Use / Receptor	Commercial Land Use				
Pathway	Soil Contact / Ingestion	Inhalation of Indoor Air		Leaching to Potable Groundwater	
Parameter	Coarse / Fine	Fine	Coarse	Fine	Coarse
Dichlorfop-methyl	34	-	-	12	24
Dieldrin	5.1	-	-	0.59	1.1
Dimethoate	67	-	-	0.077	0.12
Dinoseb	34	-	-	2.8	5.5
Diquat	270	-	-	11	21
Diuron	520	-	-	1.9	3.5
Endosulfan	320	-	-	99	190
Endrin	15	-	-	2.4	4.7
Glyphosate	1,000	-	-	0.95	1.4
Heptachlor	0.69	2.4	0.094	0.05	0.076
Lindane	10	-	-	0.31	0.6
Linuron	67	-	-	0.56	1.1
Malathion	670	-	-	0.82	1.3
MCPA	17	-	-	0.02	0.32
Methoxychlor	5,300	-	-	5,700	11,000
Metolachlor	170	-	-	1.3	2.4
Metribuzin	280	-	-	7.8	15
Paraquat	34	-	-	1.1	2.2
Parathion	170	-	-	7.2	14
Phorate	6.7	-	-	0.075	0.14
Picloram	670	-	-	0.64	0.94
Simazine	44	-	-	0.14	0.25
Tebuthiuron	2,400	-	-	2.5	3.7
Terbufos	1.7	-	-	0.08	0.15
Toxaphene	7.3	-	-	3.3	6.3
Triallate	440	-	-	16	31
Trifluralin	160	-	-	35	67
Other Parameters					
Polychlorinated Biphenyl (Total PCB)	33	230	45	1,100	770
Dioxins and Furans (TEQ) (mg TEQ/kg)	0.000004	0.21	0.043	0.0026	0.0018
Pentachlorophenol (PCP)	340	240,000	240,000	7.6	7.6
Organotins - Tributyltin	3.6	-	-	-	-
Ethylene Glycol	110,000	-	-	60	68
Propylene Glycol	-	-	-	-	-
Phenol	7,000	1,800	1,800	3.8	3.8

Notes:

[1] All values in mg/kg

[2] "-" = No guideline available or no guideline required; >RES means no soil criteria are shown as residual soil saturation limits may be exceeded; IACR means the Index of Additive Cancer Risk

[3] For the purposes of screening human health effects from exposure to sediment, dry weight values should be evaluated against the soil quality standards for Soil Contact/Ingestion only.

[4] 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."

[5] 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"