Table 4A Pathway Specific Standards for Agricultural Soil (mg/kg)

Land Use / Receptor	Agricultural Land Use Human Receptor Pathways					Agricultural Land Use Ecological Receptors Pathways			
Pathway	Soil Contact / Ingestion	Inhalation of Indoor Air		Leaching to Potable Groundwater		Soil Contact		Soil and Food Ingestion	Nutrient/ Energy Cycling
Parameter	Coarse / Fine	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine/Coarse	Fine/Coarse
Inorganic Parameters									
Aluminum	15,400	-	-	-	-	-	-	-	-
Antimony	7.5	-	-	-	-	20	20	-	-
Arsenic	31	-	-	-	-	17	17	380	-
Barium	10,000	-	-	-	-	750	750	400	-
Beryllium	38	-	-	-	-	5	5	-	-
Boron (Total)	4300	-	-	-	-	-	-	-	-
Boron (Hot Water Soluble)	-	-	-	-	-	2	2	-	-
Cadmium	1.4	-	-	-	-	10	10	3.8	54
Chromium (hexavalent)	160	-	-	-	-	0.4	0.4	150	-
Chromium (total)	220	-	-	-	-	64	64	-	52
Cobalt	22	-	-	-	-	20	20	-	-
Copper	1,100	-	-	-	-	63	63	300	350
Cyanide	29	-	-	-	-	0.9	0.9	11	0
Iron	11,000	-	-	-	-	-	-	-	-
Lead	140	-	-	-	-	300	300	70	723
Manganese	-	-	-	-	-	-	-	-	-
Mercury (total)	6.6	-	-	-	-	12	12	-	20
Methylmercury	1.6	-	-	-	-	1	0.8	-	-
Molybdenum	110	-	-	-	-	40	40	-	-
Nickel	330	-	-	-	-	50	50	355	146
Selenium	80	-	-	-	-	1	1	4.5	-
Silver	77	-	-	-	-	20	20	-	-
Strontium	9,400	-	-	-	-	-	-	-	-
Thallium	1	-	-	-	-	1.4	1.4	1	-
Tin	9,400	-	-	-	-	5	5	-	-
Uranium	23	-	-	-	-	500	500	33	-
Vanadium	39	-	-	-	-	130	130	-	255
Zinc	5,600	-	-	-	-	200	200	640	200
Petroleum Hydrocarbons (PHC) Parameters									
Benzene	66	2.3	0.099	0.094	0.042	60	31	-	-
Toluene	20,000	>RES	77	0.74	0.35	110	75	-	-
Ethylbenzene	9,300	>RES	30	0.13	0.065	120	55	-	-
Xylene	140,000	210	8.8	22	11	65	95	-	-
Modified TPH (Gas)	15,000	2,100	74	1,900	940	210	210	-	-
Modified TPH (Fuel)	8,600	10,000	270	4,700	1,800	150	150	-	-
Modified TPH (Lube)	14,000	60,000	1,100	>RES	15,000	1,300	300	-	-
MTBE	380	1.1	0.05	0.05	0.062	31	25	-	-
Polycyclic Aromatic Hydrocarbons (PAH) Parameters									
Non-Carcinogenic PAH Compounds									
Naphthalene	1,800	51	2.2	28	53	0.75	0.6	8.8	-
1 - Methylnaphthalene	72	-	-	42	30	-	-	-	-
2 - Methylnaphthalene	72	-	-	42	30	-	-	-	-
Acenapthene	5,300	99,000	3,900	-	-	-	-	21.5	-
Acenapthylene	78	33	4.5	32	23	-	-	-	-
Anthracene	24,000	-	670,000	-	-	2.5	2.5	61.5	-

Table 4A Pathway Specific Standards for Agricultural Soil (mg/kg)

Land Use / Receptor	Agricultural Land Use Human Receptor Pathways					Agricultural Land Use Ecological Receptors Pathways			
Pathway	Soil Contact / Ingestion	Inhalation of Indoor Air		Leaching to Potable Groundwater		Soil Contact		Soil and Food Ingestion	Nutrient/ Energy Cycling
Parameter	Coarse / Fine	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine/Coarse	Fine/Coarse
Fluoranthene	3,500	-	480,000	-	-	50	50	15.4	-
Fluorene	2,700	220,000	8,600	-	-	-	-	15.4	-
Phenanthrene	-	-	-	17	17	7.8	6.2	43	-
Pyrene	2,100	-	730,000	-	-	-	-	7.7	-
Carcinogenic PAH Compounds									
BaP Total Potency Equivalents	5.3	-	-	IACR<1	IACR<1	-	-	-	-
Benz[a]anthracene	-	-	-	-	-	0.63	0.5	6.2	-
Benzo[a]pyrene	-	-	-	-	-	20	20	0.6	-
Benzo[b,j,k]fluoranthene isomers	-	-	-	-	-	9.5	7.6	6.2	-
Benzo[g,h,i]perylene	-	-	-	-	-	8.3	6.6	-	-
Chrysene	-	-	-	-	-	8.8	7	6.2	-
Dibenz[a.h]anthracene	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]pyrene	-	-	-	-	-	0.48	0.38	-	-
Volatile Organic Compound (VOC) Parameters									
Bromodichloromethane	130	-	-	1.9	1.5	-	-	-	-
Bromoform	1,000	2.6	2.7	2.9	2.3	-	-	-	-
Bromomethane	6.3	0.05	0.05	0.1	0.097	-	-	-	-
Carbon Tetrachloride (Tetrachloromethane)	27	0.05	0.05	0.092	0.16	7.3	5.8	-	-
Chlorobenzene	16,000	0.39	0.05	0.61	1.1	7.5	6	-	-
Chloroethane	-	-	-	-	-	-	-	-	-
Chloroform	220	0.05	0.05	0.05	0.05	43	34	-	-
Chloromethane	-	-	-	-	-	-	-	-	-
Dibromochloromethane	760	7.8	0.27	0.91	1.5	-	-	-	-
1,2-Dichlorobenzene	16,000	230	10	0.097	0.18	4.3	3.4	-	-
1,3-Dichlorobenzene	420	-	-	34	24	6	4.8	-	-
1,4-Dichlorobenzene	4,200	14	0.67	0.051	0.098	4.5	3.6	-	-
1,1-Dichloroethane	840	31	3.5	0.6	0.47	11	8.4	-	-
1,2-Dichloroethane	2,800	0.055	0.05	0.05	0.05	60	48	-	-
1,1-Dichloroethylene	1,900	0.46	0.05	0.15	0.24	63	50	-	-
cis-1,2-Dichloroethylene	630	30	3.4	2.5	1.9	-	-	-	-
trans-1,2-Dichloroethylene	420	0.75	0.084	2.5	1.9	-	-	-	-
1,2-Dichloropropane	220	0.085	0.05	0.74	0.54	31	25	-	-
1,3-Dichloropropene	1.7	-	-	-	-	-	-	-	-
Ethylene Dibromide	2.2	0.05	0.05	0.05	0.05	-	-	-	-
Methylene Chloride (Dichloromethane)	990	16	0.71	0.21	0.32	0.98	0.78	-	-
Styrene	2,500	19	16	66	47	22	17	-	-
1,1,2,2-Tetrachloroethane	40	0.096	0.05	0.19	0.14	-	-	-	-
Tetrachloroethylene	530	3.7	0.16	1.6	1.6	0.1	0.1	-	-
1,1,1-Trichloroethane	42,000	3.4	0.38	27	20	22	18	-	-
1,1,2-Trichloroethane	140	0.18	0.3	0.73	0.54	100	80	-	-
Trichloroethylene	28	3.7	0.36	0.01	0.01	3	3	-	-
Vinyl Chloride	71	0.02	0.02	0.02	0.02	4.3	3.4	-	-
Pesticides									
Aldicarb	22	-	-	0.041	0.065	-	-	-	-
Aldrin	3.4	-	-	0.59	11	0.055	0.044	-	-
Atrazine	11	-	-	0.1	0.19	-	-	-	-

Table 4A Pathway Specific Standards for Agricultural Soil (mg/kg)

Land Use / Receptor	Agricultural Land Use Human Receptor Pathways					Agricultural Land Use Ecological Receptors Pathways			
Pathway	Soil Contact / Ingestion	Inhalation of Indoor Air		Leaching to Potable Groundwater		Soil Contact		Soil and Food Ingestion	Nutrient/ Energy Cycling
Parameter	Coarse / Fine	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine/Coarse	Fine/Coarse
Azinphos-methyl	55	-	-	0.41	0.75	-	-	-	-
Bendiocarb	89	-	-	0.14	0.21	-	-	-	-
Bromoxynil	11	-	-	0.18	0.35	-	-	-	-
Carbaryl	220	-	-	1.9	3.6	-	-	-	-
Carbofuran	220	-	-	0.68	1.2	-	-	-	-
Chlorothalonil	330	-	-	27	53	-	-	-	-
Chlorpyrifos	220	-	-	49	95	-	-	-	-
Cyanazine	29	-	-	0.12	0.21	-	-	-	-
2,4-D	220	-	-	0.43	0.67	-	-	-	-
DDT	220	-	-	5,900	11,000	12	12	0.7	547
Diazinon	44	-	-	2.2	4.2	-	-	-	-
Dicamba	280	-	-	0.5	0.79	-	-	-	-
Dichlorfop-methyl	22	-	-	12	24	-	-	-	-
Dieldrin	3.4	-	-	0.59	1.1	0.055	0.044	-	-
Dimethoate	44	-	-	0.077	0.12	-	-	-	-
Dinoseb	22	-	-	2.8	5.5	-	-	-	-
Diquat	180	-	-	11	21	-	-	-	-
Diuron	350	-	-	1.9	3.5	-	-	-	-
Endosulfan	210	-	-	99	190	0.19	0.15	-	-
Endrin	10	-	-	2.4	4.7	0.024	0.019	-	-
Glyphosate	670	-	-	0.95	1.4	-	-	-	-
Heptachlor	0.46	0.31	0.21	0.05	0.076	0.25	0.2	-	-
Lindane	6.7	-	-	0.31	0.6	-	-	-	-
Linuron	44	-	-	0.56	1.1	-	-	-	-
Malathion	440	-	-	0.82	1.3	-	-	-	-
MCPA	11	-	-	0.02	0.32	-	-	-	-
Methoxychlor	3,500	-	-	5,700	11,000	-	-	-	-
Metolachlor	110	-	-	1.3	2.4	-	-	-	-
Metribuzin	180	-	-	7.8	15	-	-	-	-
Paraquat	22	-	-	1.1	2.2	-	-	-	-
Parathion	110	-	-	7.2	14	-	-	-	-
Phorate	4.4	-	-	0.075	0.14	-	-	-	-
Picloram	440	-	-	0.64	0.94	-	-	-	-
Simazine	29	-	-	0.14	0.25	-	-	-	-
Tebuthiuron	1,600	-	-	2.5	3.7	-	-	-	-
Terbufos	1.1	-	-	0.08	0.15	-	-	-	-
Toxaphene	4.8	-	-	3.3	6.3	-	-	-	-
Triallate	290	-	-	16	31	-	-	-	-
Trifluralin	110	-	-	35	67	-	-	-	-
Other Parameters									
Polychlorinated Biphenyl (Total PCB)	22	190	31	1100	770	33	33	1.3	-
Dioxins and Furans (TEQ) (mg TEQ/kg)	0.000004	0.017	0.0028	0.0026	0.0018	0.00001	0.00001	0.00025	-
Pentachlorophenol (PCP)	93	66,000	66,000	7.6	7.6	11	11	-	-
Organotins - Tributyltin	3.6	-	-	-	-	-	-	-	-
Ethylene Glycol	73,000	-	86,000	60	68	1,100	1,100	-	1700
Propylene Glycol	-	-	-	-	-	-	-	-	-

Table 4A Pathway Specific Standards for Agricultural Soil (mg/kg)

Land Use / Receptor	Agricultural Land Use Human Receptor Pathways					Agricultural Land Use Ecological Receptors Pathways			
Pathway	Soil Contact / Ingestion	Inhalation of Indoor Air		Leaching to Potable Groundwater		Soil Contact		Soil and Food Ingestion	Nutrient/ Energy Cycling
Parameter	Coarse / Fine	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine/Coarse	Fine/Coarse
Phenol	1,900	500	500	3.8	3.8	20	20	-	-

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"