

Table 2 Tier 1 Environmental Quality Standards for Sediment (mg/kg)

Land Use / Receptor		Sediment Environment [1]	
Pathway		Freshwater Sediment	Marine Sediment
Parameter	Units	Value	Value
Metals (Available)			
Aluminum	mg/kg	-	-
Antimony	mg/kg	25	-
Arsenic	mg/kg	17	41.6
Barium	mg/kg	-	-
Beryllium	mg/kg	-	-
Boron (Total)	mg/kg	-	-
Cadmium	mg/kg	3.5	4.2
Chromium (hexavalent)	mg/kg	-	-
Chromium (total)	mg/kg	90	160
Cobalt	mg/kg	-	-
Copper	mg/kg	197	108
Cyanide	mg/kg	-	-
Iron	mg/kg	43,766	-
Lead	mg/kg	91.3	112
Manganese	mg/kg	1,100	-
Mercury (total)	mg/kg	0.486	0.7
Methylmercury	mg/kg	-	-
Molybdenum	mg/kg	-	-
Nickel	mg/kg	75	-
Selenium	mg/kg	2	-
Silver	mg/kg	1	2.2
Strontium	mg/kg	-	-
Thallium	mg/kg	-	-
Tin	mg/kg	-	-
Uranium	mg/kg	-	-
Vanadium	mg/kg	-	-
Zinc	mg/kg	315	271
Petroleum Hydrocarbons (PHC) Parameters			
Benzene	mg/kg	1.2	1.2
Toluene	mg/kg	1.4	1.4
Ethylbenzene	mg/kg	1.2	1.2
Xylene	mg/kg	1.3	1.3
Modified TPH (Gas)	mg/kg	15	15
Modified TPH (Fuel)	mg/kg	25	25
Modified TPH (Lube)	mg/kg	43	43
MTBE	mg/kg	-	-
Total TPH	mg/kg	500	500
Polycyclic Aromatic Hydrocarbons (PAH) Parameters			
PAH Compounds			
Naphthalene	mg/kg	0.391	0.391
1 - Methyl naphthalene	mg/kg	0.201	0.201
2 - Methyl naphthalene	mg/kg	0.201	0.201
Acenaphthene	mg/kg	0.0889	0.0889
Acenaphthylene	mg/kg	0.128	0.128
Anthracene	mg/kg	0.245	0.245
Fluoranthene	mg/kg	2.355	1.494
Fluorene	mg/kg	0.144	0.144
Phenanthrene	mg/kg	0.515	0.544
Pyrene	mg/kg	0.875	1.398
Carcinogenic PAH Compounds			
BaP Total Potency Equivalents			
Benz[a]anthracene	mg/kg	0.385	0.693
Benzo[a]pyrene	mg/kg	0.782	0.763
Benzo[b,j,k]fluoranthene isomers	mg/kg	13.4	4.5

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Benzo[g,h,i]perylene	mg/kg	3.2	3.2
Chrysene	mg/kg	0.862	0.846
Dibenz[a,h]anthracene	mg/kg	0.135	0.135
Indeno[1,2,3-c,d]pyrene	mg/kg	3.2	0.88
Volatile Organic Compound (VOC) Parameters			
Bromodichloromethane	mg/kg	-	-
Bromoform	mg/kg	0.65	0.65
Bromomethane	mg/kg	-	-
Carbon Tetrachloride (Tetrachloromethane)	mg/kg	1.2	1.2
Chlorobenzene	mg/kg	0.41	-
Chloroethane	mg/kg	-	-
Chloroform	mg/kg	-	-
Chloromethane	mg/kg	-	-
Dibromochloromethane	mg/kg	-	-
1,2-Dichlorobenzene	mg/kg	0.05	0.05
1,3-Dichlorobenzene	mg/kg	0.05	0.05
1,4-Dichlorobenzene	mg/kg	0.09	0.09
1,1-Dichloroethane	mg/kg	-	-
1,2-Dichloroethane	mg/kg	-	-
1,1-Dichloroethylene	mg/kg	-	-
cis-1,2-Dichloroethylene	mg/kg	-	-
trans-1,2-Dichloroethylene	mg/kg	-	-
1,2-Dichloropropane	mg/kg	-	-
1,3-Dichloropropene	mg/kg	-	-
Ethylene Dibromide	mg/kg	-	-
Methylene Chloride (Dichloromethane)	mg/kg	-	-
Styrene	mg/kg	-	-
1,1,2,2-Tetrachloroethane	mg/kg	1.4	-
Tetrachloroethylene	mg/kg	0.41	0.53
1,1,1-Trichloroethane	mg/kg	0.03	0.17
1,1,2-Trichloroethane	mg/kg	0.03	0.17
Trichloroethylene	mg/kg	0.22	1.6
Vinyl Chloride	mg/kg	-	-
Pesticides			
Aldicarb	mg/kg	-	-
Aldrin	mg/kg	0.08	0.01
Atrazine	mg/kg	-	-
Azinphos-methyl	mg/kg	-	-
Bendiocarb	mg/kg	-	-
Bromoxynil	mg/kg	-	-
Carbaryl	mg/kg	-	-
Carbofuran	mg/kg	-	-
Chlorothalonil	mg/kg	-	-
Chlorpyrifos	mg/kg	-	-
Cyanazine	mg/kg	-	-
2,4-D	mg/kg	-	-
DDT	mg/kg	0.00477	0.00477
Diazinon	mg/kg	2.2	2.2
Dicamba	mg/kg	-	-
Dichlorfop-methyl	mg/kg	-	-
Dieldrin	mg/kg	0.00667	0.0043
Dimethoate	mg/kg	-	-
Dinoseb	mg/kg	-	-
Diquat	mg/kg	-	-
Diuron	mg/kg	-	-

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Parameter	Units	Value	Value
Endosulfan	mg/kg	0.01	-
Endrin	mg/kg	0.0624	0.0624
Glyphosate	mg/kg	-	-
Heptachlor	mg/kg	0.05	0.05
Lindane	mg/kg	0.00138	0.00099
Linuron	mg/kg	-	-
Malathion	mg/kg	0.82	0.82
MCPA	mg/kg	-	-
Methoxychlor	mg/kg	0.05	-
Metolachlor	mg/kg	-	-
Metribuzin	mg/kg	-	-
Paraquat	mg/kg	-	-
Parathion	mg/kg	-	-
Phorate	mg/kg	-	-
Picloram	mg/kg	-	-
Simazine	mg/kg	-	-
Tebuthiuron	mg/kg	-	-
Terbufos	mg/kg	-	-
Toxaphene	mg/kg	0.005	0.005
Triallate	mg/kg	-	-
Trifluralin	mg/kg	-	-
Other Parameters			
Polychlorinated Biphenyl (Total PCB)	mg/kg	0.277	0.189
Dioxins and Furans (TEQ)	ng.TEQ/kg	21.5	21.5
Pentachlorophenol (PCP)	mg/kg	0.1	0.1
Organotins - Tributyltin	-	-	-
Ethylene Glycol	-	-	-
Propylene Glycol	-	-	-
Phenol	-	-	-

Notes:

[1] Human exposure to sediment may be assessed using Tier 2 Pathway Specific Standards tables for the soil contact/ingestion pathway

[2] All values in mg/kg, except as shown (dry weight bulk sediment concentration)

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

[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"