

TABLE 1: RISG IN-WATER SCREENING CRITERIA (mg/kg) ¹

Ross Island Screening Levels - Lagoon (May 2007)								
Compound	toxicity ²	Regional Soil BKG ³	bioaccumulation ⁴	MRL	ATL or CTL ⁴ (mg/kg-wet weight)	MRL (mg/kg-wet weight)	Basis	Comments
Metals								
Antimony	3	4	-	1.5	-	-		Background exceeds risk-based screening levels
Arsenic	6	7	(5)	1	0.0062	0.1	human (c)	Background is the bioaccumulation screening level. If bioaccumulation shown to not be a concern, toxicity value could be used.
Cadmium	0.6	1	(5)	1	0.15	0.1	CTL	Background exceeds risk-based screening levels
Chromium	37	42	-	0.1	-	-		Background exceeds risk-based screening levels
Copper	36	36	-	1	-	-		Not bioaccumulative - screening level based on toxicity.
Lead	35	17	(5)	1	0.12	0.5	CTL	Background is the bioaccumulation screening level. If bioaccumulation shown to not be a concern, toxicity value could be used.
Mercury	0.2	0.07	(5)	0.002	0.074	0.01	bird	Background is the bioaccumulation screening level. If bioaccumulation shown to not be a concern, toxicity value could be used.
Silver	4.5	1	-	0.1	-	-		Not bioaccumulative - screening level based on toxicity.
Nickel	18	38	-	0.4	-	-		Background exceeds risk-based screening level
Zinc	123	86	-	3	-	-		Not bioaccumulative - screening level based on toxicity.
Polychlorinated Biphenyls								
Total PCBs	0.034	NA	0.0018 ⁺	0.01	0.035	0.00002	bird egg development	MRL exceeds risk-based screening level for bioaccumulation. If bioaccumulation shown to not be a concern, toxicity value could be used.
Pesticides								
DDT total	0.007	NA	0.00029 ⁺	0.001	0.013	0.002	bird egg development	MRL exceeds risk-based screening levels.
Aldrin	0.040	NA	see comment	0.001	-	-		Aldrin is not listed as bioaccumulative, but is an organochlorine. Any detections should be carefully considered, and may prohibit in-water placement.
Chlordane	0.0045	NA	see comment	0.005	0.027	0.002	human (c)	Chlordane is not listed as bioaccumulative, but is an organochlorine. Any detections should be carefully considered, and may prohibit in-water placement.
Dieldrin	0.003	NA	0.000008 ⁺	0.001	0.00058 ⁺	0.002	human (c)	MRL exceeds risk-based screening levels.
Heptachlor	0.010	NA	see comment	0.001	-	-		Heptachlor is not listed as bioaccumulative, but is an organochlorine. Any detections should be carefully considered, and may prohibit in-water placement.
Semivolatile Organics								
Acenaphthene	0.290	NA	-	0.001	-	-		Not bioaccumulative, based on potential sediment toxicity
Acenaphthylene	0.160	NA	-	0.001	-	-		Based on potential sediment toxicity
Anthracene	0.057	NA	-	0.001	-	-		Based on potential sediment toxicity
Benzo(a)anthracene	0.032	NA	-	0.001	-	-		Based on potential sediment toxicity
Benzo(a)pyrene	0.032	NA	-	0.001	-	-		Based on potential sediment toxicity
Benzo(g,h,i)perylene	0.300	NA	-	0.001	-	-		Based on potential sediment toxicity
Benzo(k)fluoranthene	0.027	NA	-	0.001	-	-		Based on potential sediment toxicity
Bis(2-ethylhexyl)phthalate	0.750	NA	-	0.001	-	-		Based on potential sediment toxicity
Chrysene	0.057	NA	-	0.001	-	-		Based on potential sediment toxicity

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Dibenzo(a,h)anthracene	0.033	NA	-	0.001	-			Based on potential sediment toxicity
Dibenzofuran	5.100	NA	-		-			Based on potential sediment toxicity
Fluoranthene	0.111	NA	37	0.1	19	0.1	CTL	Toxicity screening criteria is lower than bioaccumulation screening criteria. If toxicity shown to not be a concern, bioaccumulation value could be used.
Fluorene	0.077	NA	-	0.001	-			Based on potential sediment toxicity
Indeno(1,2,3-cd)pyrene	0.017	NA	-	0.001	-			Based on potential sediment toxicity
Naphthalene	0.176	NA	-		-			Based on potential sediment toxicity
Pentachlorophenol	NA	NA	0.25	0.001	0.078	0.6	human (c)	Based on potential bioaccumulation and resulting impacts on people who eat fish.
Phenanthrene	0.042	NA	-	0.001	-			Based on potential sediment toxicity
Phenol	0.048	NA	-		-			Based on potential sediment toxicity
Pyrene	0.053	NA	1.9	0.1	1	0.1	CTL	Toxicity screening criteria is lower than bioaccumulation screening criteria. If toxicity shown to not be a concern, bioaccumulation value could be used.
Organotins								
Tributyltin (sediment)	0.003	NA	0.0023	0.01	0.055	0.01	CTL	MRL exceeds risk-based levels.
Petroleum								
Petroleum hydrocarbons	80	NA	-	0.25	-			Not bioaccumulative - screening level based on lowest upland screening criteria.

Shaded values are the appropriate screening level for the contaminant, unless testing indicates the associated pathway is not of concern.

*Detection limit exceeds risk-based value & shall be used as the screening value.

1 - All units in mg/kg -dry weight, unless otherwise specified.

2 - All sediment toxicity values from DEQ's *Ecological Risk Assessment, Level II Screening Level Values* (December 2001), unless otherwise specified.

3 - From DEQ, October 2002 memorandum to Project Managers

4 - From DEQ's *Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment* (April 3, 2007), unless otherwise specified

N/A - Not Applicable - No value available.

(c) carcinogenic basis