Northwest Regional Sediment Interpretive Guidelines.				
	Benthic Toxicity Screening Levels			
	Freshwater (Floating Percentile Method)		Marine (Apparent Effects Thresholds)	
Chemicals of Concern	SL1[1]	SL2[2]	SL1[1]	SL2[2]
Metals (mg/kg)				
Antimony	--	--	150	150
Arsenic	14	120	57	93
Cadmium	2.1	5.4	5.1	6.7
Chromium	72	88	260	270
Copper	400	1,200	390	390
Lead	360	>1,300	450	530
Mercury	0.66	0.8	0.41	0.59
Nickel	26	110	--	--
Selenium	11	>20	--	--
Silver	0.57	1.7	6.1	6.1
Zinc	3,200	>4,200	410	960
Organic contaminants (ug/kg)				
Polynuclear Aromatic Hydrocarbons (PAHs) and Carbazole				
Total PAHs	17,000	30,000	--	--
Total low molecular weight PAHs	--	--	5,200	5,200
Naphthalene	--	--	2,100	2,100
Acenaphthylene	--	--	560	1,300
Acenaphthene	--	--	500	500
Fluorene	--	--	540	540
Phenanthrene	--	--	1,500	1,500
Anthracene	--	--	960	960
2-Methylnaphthalene	--	--	670	670
Total high molecular weight PAHs	--	--	12,000	17,000
Fluoranthene	--	--	1,700	2,500
Pyrene	--	--	2,600	3,300
Benz(a)anthracene	--	--	1,300	1,600
Chrysene	--	--	1,400	2,800
Benzo(b+k)fluoranthene	--	--	3,200	3,600
Benzo(a)pyrene	--	--	1,600	1,600
Indeno(1,2,3-c,d)pyrene	--	--	600	690
Dibenz(a,h)anthracene	--	--	230	230
Benzo(g,h,i)perylene	--	--	670	720
Carbazole	900	1,100	--	--
Chlorinated Hydrocarbons				
1,4-Dichlorobenzene	--	--	110	110
1,2-Dichlorobenzene	--	--	35	50
1,2,4-Trichlorobenzene	--	--	31	51
Hexachlorobenzene	--	--	22	70
Phthalates				
Dimethylphthalate	--	--	71	160
Diethylphthalate	--	--	200	200
Di-n-butyl-phthalate	380	1,000	1,400	1,400
Butyl benzyl phthalate	--	--	63	900
bis(2)-ethylhexyl)phthalate	500	2,2000	1,300	1,900
Di-n-octyl-phthalate	39	>1,100	6,200	6,200

Northwest Regional Sediment Interpretive Guidelines.

Chemicals of Concern	Benthic Toxicity Screening Levels			
	Freshwater (Floating Percentile Method)		Marine (Apparent Effects Thresholds)	
	SL1[1]	SL2[2]	SL1[1]	SL2[2]
Phenols				
Phenol	120	210	420	1,200
2-Methylphenol	--	--	63	63
4-Methylphenol	260	2,000	670	670
2,4-Dimethylphenol	--	--	29	29
Pentachlorophenol	1,200	>1,200	400	690
Miscellaneous Extractable Compounds				
Benzyl alcohol	--	--	57	73
Benzoic acid	2,900	3,800	650	650
Dibenzofuran	200	680	540	540
Hexachlorobutadiene	--	--	11	120
N-nitrosophenylamine	--	--	28	40
Pesticides				
Dichlorodiphenyldichloroethanes (DDDs)	310	860	16	--
Dichlorodiphenyldichloroethylenes (DDEs)	21	33	9	--
Dichlorodiphenyltrichloroethanes (DDTs)	100	8,100	12	--
Aldrin	--	--	9.5	--
Chlordane (sum of cis-chlordane, trans-chlordane, cis-nonachlor, trans-nonachlor, and oxychlordane)	--	--	2.8	--
Heptachlor	--	--	1.5	--
Dieldrin	4.9	9.3	1.9	--
beta-Hexachlorocyclohexane	7.2	11	--	--
Endrin ketone	8.5	--	--	--
Polychlorinated Biphenyls (PCBs)				
Total Aroclors	110	2,500	130	1,000
Organotins				
Monobutyltin	540	>4,800	--	--
Dibutyltin	910	130,000	--	--
Tributyltin (dry-weight/porewater, ug/L)	47/--	320/--	--*/0.15	--/--
Tetrabutyltin	97	>97	--	--
Bulk Total Petroleum Hydrocarbons (TPHs) (mg/kg)				
TPH-diesel	340	510	--	--
TPH-residual	3,600	4,400	--	--
Conventional Parameters (mg/kg)[3]				
Ammonia	230	300	--	--
Total sulfides	39	61	--	--

-- no SL calculated/determined; --* the proposed dry-weight marine screening level for tributyltin is 73 mg/kg.

[1]SL1 corresponds to a concentration below which adverse effects to benthic communities would not be expected.

[2]SL2 corresponds to a concentration above which more than minor adverse effects may be observed in benthic organisms. Chemical concentrations at or below the cleanup screening level but greater than the sediment quality standard correspond to sediment quality that may result in minor adverse effects to the benthic community.

[3]Ammonia and sulfides are generally used to inform bioassay testing; sediments containing <u>only</u> elevated ammonia and/or sulfide concentrations (and no other chemical exceedances) may be determined suitable for unconfined, aquatic placement.

540 - Freshwater analysis only.