Table 8-1
Screening Levels (SL), Bioaccumulation Triggers (BT)
and Maximum Levels (ML)

CHEMICAL	CAS (1) NUMBER	SCREENING LEVEL	BIOACCUM TRIGGER	MAXIMUM LEVEL
METALS (mg/kg)				
Antimony	7440-36-0	150	150	200
Arsenic	7440-38-2	57	507.1	700
Cadmium	7440-43-9	5.1	---	14
Copper	7440-50-8	390	---	1,300
Lead	7439-92-1	450	---	1,200
Mercury	7439-97-6	0.41	1.5	2.3
Nickel	7440-02-0	140	370	370
Silver	7440-22-4	6.1	6.1	8.4
Zinc	7440-66-6	410	---	3,800
ORGANOMETALLIC COMPOUNDS (ug/L)				
Tributyltin (2) (interstitial water)	56573-85-4	0.15	0.15	---
ORGANICS (ug/kg)				
Total LPAH	---	5,200	---	29,000
Naphthalene	91-20-3	2,100	---	2,400
Acenaphthylene	208-96-8	560	---	1,300
Acenaphthene	83-32-9	500	---	2,000
Fluorene	86-73-7	540	---	3,600
Phenanthrene	85-01-8	1,500	---	21,000
Anthracene	120-12-7	960	---	13,000
2-Methylnaphthalene	91-57-6	670	---	1,900

TABLE 8-1 (CONTINUED)

CHEMICAL	CAS (1) NUMBER	SCREENING LEVEL	BIOACCUM TRIGGER	MAXIMUM LEVEL
Total HPAH	---	12,000	---	69,000
Fluoranthene	206-44-0	1,700	4,600	30,000
Pyrene	129-00-0	2,600	---	16,000
Benz(a)anthracene	56-55-3	1,300	---	5,100
Chrysene	218-01-9	1,400	---	21,000
Benzofluoranthenes (b+k)	205-99-2 207-08-9	3,200	---	9,900
Benzo(a)pyrene	50-32-8	1,600	3,600	3,600
Indeno(1,2,3-c,d)pyrene	193-39-5	600	---	16,000
Dibenz(a,h)anthracene	53-70-3	230	---	1,900
Benzo(g,h,i)perylene	191-24-2	670	---	3,200
CHLORINATED HYDROCARBONS				
1,3-Dichlorobenzene	541-73-1	170	1,241	---
1,4-Dichlorobenzene	106-46-7	110	120	120
1,2-Dichlorobenzene	95-50-1	35	37	110
1,2,4-Trichlorobenzene	120-82-1	31	---	64
Hexachlorobenzene (HCB)	118-74-1	22	168	230
PHTHALATES				
Dimethyl phthalate	131-11-3	1,400	1,400	---
Diethyl phthalate	84-66-2	1,200	---	---
Di-n-butyl phthalate	84-74-2	5,100	10,220	---
Butyl benzyl phthalate	85-68-7	970	---	---
Bis(2-ethylhexyl) phthalate	117-81-7	8,300	13,870	---
Di-n-octyl phthalate	117-84-0	6,200	---	---

TABLE 8-1 (CONTINUED)

CHEMICAL	CAS (1) NUMBER	SCREENING LEVEL	BIOACCUM TRIGGER	MAXIMUM LEVEL
PHENOLS				
Phenol	108-95-2	420	876	1,200
2-Methylphenol	95-48-7	63	---	77
4-Methylphenol	106-44-5	670	---	3,600
2,4-Dimethylphenol	105-67-9	29	---	210
Pentachlorophenol	87-86-5	400	504	690
MISCELLANEOUS EXTRACTABLES				
Benzyl alcohol	100-51-6	57	---	870
Benzoic acid	65-85-0	650	---	760
Dibenzofuran	132-64-9	540	---	1,700
Hexachloroethane	67-72-1	1,400	10,220	14,000
Hexachlorobutadiene	87-68-3	29	212	270
N-Nitrosodiphenylamine	86-30-6	28	130	130
PESTICIDES				
Total DDT (sum of 4,4'-DDD, 4,4'-DDE and 4,4'-DDT)	72-54-8 72-55-9 50-29-3	6.9	50	69
Aldrin	309-00-2	10	37	---
alpha-Chlordane	12789-03-6	10	37	---
Dieldrin	60-57-1	10	37	---
Heptachlor	76-44-8	10	37	---
gamma-BHC (Lindane)	58-89-9	10	---	---
Total PCBs	---	130	38 (3)	3,100

(1) Chemical Abstract Service Registry Number.
(2) See *Testing, Reporting, and Evaluation of Tributyltin Data in PSDDA and SMS Programs* at URL *http://www.nws.usace.army.mil/dmmo/8th_arm/tbt_96.htm*
(3) This value is normalized to total organic carbon, and is expressed in mg/kg (TOC normalized).

8.4.2 Chemicals of Special Occurrence. The following chemicals are known to be associated with specific activities or industries. They are not believed to be widespread in the Lower Columbia River. Testing for these chemicals or other chemicals will be required when there is a reason-to-believe that they might be present.

Guaiacols. Guaiacols and chlorinated guaiacols are measured in areas where kraft pulp mills are located. Only guaiacols will be measured near sulfite pulp mills (chlorinated guaiacols are not expected in processes that do not involve bleaching).

Resin Acids. May include abietic acid, dehydroabietic acid, dichlorodehydroabietic acid, isopimaric acid, and sandaracopimaric acid.

Chromium. Chromium appears to derive largely from the natural erosions of crustal rocks, but localized sources of chromium also exist in industrial locations where plating took place or in the vicinity of chemical manufacturers. Testing will be required when sources are present.

Butyltins. Butyltin testing is indicated in various areas, such as those near boat and vessel maintenance and construction. Pore water analysis is recommended over bulk sediment analysis. Details concerning TBT analysis are contained in Appendix 8-A.

Dioxin/furans. Testing will generally be required when projects are in areas potentially impacted by known sources of dioxin/furan or in areas where the presence of dioxin/furan compounds has been demonstrated in past testing. It is anticipated that those projects indicating previously low levels of concern for dioxin/furan compounds will not need to provide dioxin/furan data on a routine basis in the future unless there is a reason-to-believe that existing conditions have changed. A P450 biomarker test may be utilized in screening for the presence of dioxin/furan.

8.5 INTERPRETIVE GUIDELINES

The purpose of evaluating dredged material is to anticipate (and manage) the potential biological effects, rather than merely the chemical presence, of the possible CoCs. Biological tests serve to integrate chemical and biological interactions of contaminants present in a sediment sample, including the availability for biological uptake, by measuring the effects on test organisms through bioassays and bioaccumulation. Such testing, however, is expensive.